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Contract Formation in Open Electronic Networks

by

Eliza Mik
LLM, Warsaw, LLM, Sydney

Thesis submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy of the University of Sydney, Faculty of Law
April 2007
Abstract

This thesis examines the process of contract formation in open electronic networks, such as the Internet. It departs from usual analytical approaches, which focus on the electronic form of the transaction and focuses on the fact that the contract is formed over a network. It opposes the endless repetition of analogies and metaphors and adopts a more direct approach to on-line transacting - an approach based on an understanding of the technologies underlying networked communications. It stresses the fact that parties transact absent prior agreement in an environment, which is characterised by a number of novel risks. Most importantly, this thesis abandons the "wholesale" approach to the Internet and examines the respective methods of communication and information retrieval, which the Internet is comprised of. This thesis attempts to answer some basic questions pertaining to the existence of intention, the time of formation and the contents of the contract. Various stages in the formation process are examined from different technological angles.

The point of departure is that contract law can absorb technological change. Contract formation principles - employing concepts devised for analytical purposes - remain unchanged. It is their practical application in the novel transacting environment that may change. As the technologies enabled by open electronic networks alter the manner contractual intention is presented and transmitted, the traditional analytical tool of "offer and acceptance" becomes more difficult to apply. Despite such difficulties, it is not necessary to introduce a parallel legal regime for on-line contracting.

The concepts of functional equivalence, technological- and media-neutrality are criticized. Although they underlie most model laws dealing with electronic commerce, their utility for the application of contract formation principles is questioned. Instead of discussing the fulfilment of formal requirements on-line, be it by means of digital signatures or by the functional equivalents of "writing," the thesis focuses on the contractual implications of hypertext, the client and server model as well as the speed and reliability of on-line communications.
The thesis is based on materials valid on 31st December 2006. It contains my original work. To the best of my knowledge, the thesis contains no copy, paraphrase or summation of the published or unpublished work of any other person, except where duly acknowledged in the text and/or footnotes. No part of this thesis has been previously presented for a degree at the University of Sydney or at any other university.

Acknowledgements

The completion of this thesis would not have been possible were it not for the endless support and patience of: John and Helen, Andy, Nancy, Izabela, Julian, Taliessin, Syarif, Ivana, Radha, Iain, Peter, Fred, Michael, Sue, Barry, Nicki, Alan and Ngata.
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The Law of Contract

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Chapter 1

Introduction

_in applying our old law to cyberspace, we see matters afresh._

The Thesis

[1.1] This thesis examines the formation of contracts in open electronic networks. It submits that the technologies inherent in the operation of such networks change the manner contractual statements are presented, transmitted and attributed. Open electronic networks create a novel transacting environment, modify the indicia of contractual intention and put strain on traditional analytical models.

Contract law evolved on the basis of certain assumptions: the idealized model of face-to-face communications between humans and the existence of tangible carriers. When these assumptions can no longer be made, the application of contract formation principles encounters numerous difficulties.

_first, there are certain pre-existing problems, which were never directly confronted by the courts. Many of these problems concern subtle differentiations in the formulation of legal principles, which have not been necessary and attracted no judicial attention.

Second, there are new problems, which have no equivalents and which do not easily fit in the framework of traditional legal institutions. One set of problems relates to the lack of tangible carriers and the fact that interactions over open electronic networks are a hybrid between conduct, writing and electronic documents. Another set of problems relates to the fact

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2 *Carter on Contract* [01-080]

that contractual statements are not only transmitted but also processed by various intermediating systems and the system of the addressee. This results in a number of inherent risks, which must be allocated using traditional principles. The latter developed in an environment far less complex than the one created by open electronic networks.

Third, there is hype. The impact of certain technologies is being overstated while the importance of others is being played down or ignored. This results in misplaced focus: much legal analysis was devoted to so-called digital signatures and their role in fulfilling formal requirements. Little attention was directed to the contractual implications of hypertext or how differences between network environments affect the ability to communicate intention.

The technologies are new, but it is not suggested that new principles are required or that a parallel legal regime must be created to accommodate on-line contracting. The revolution in how people communicate and conduct business need not result in a revolution in contract law. Contract law can absorb technological change. This process, however, must be based on a sound understanding of technology and on an acknowledgement of the differences between the real world and the new environment.  

This thesis aims to distinguish between those technologies, which remain transparent and do not interfere with the contract formation process and those, which change this process. It also attempts to discern those contract formation principles, which are directly affected by the novel technologies. It does not question their impact, but examines the degree to which they change the process of contract formation.

The thesis steers clear of generalizations and broad statements relating to contract law as a whole or to the relationship between law and technology. The focus is on one area of contract law: formation. This area bears the brunt of technological change. This thesis examines the application of contract formation principles, without questioning the substantive rules of contract law. Three basic questions arise in the context of open electronic networks:

1) Who are the parties to the contract?
2) When was the contract formed?
3) What are its contents?

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To provide answers to the above questions, the thesis follows the contracting sequence and explores how the individual stages of reaching agreement are affected by technological factors.

This thesis is an *ex post factum* justification of existing practices referred to as electronic commerce. The latter term is commonly understood as the "use of digital systems to create/perform commercial transactions." Irrespective of the business model and the type of contractual subject matter, all e-commerce transactions rely on the same contract formation principles. Ultimately, "[a]llmost every question posed by business dealings in cyberspace can be reduced to a question involving contract law."6

The thesis examines first time transactions between strangers, absent prior agreement, in open, inherently anonymous and insecure networks.

**Roadmap**

[1.2] This chapter presents the concepts "open electronic networks" and "principles of contract formation." Next, it explains the difference between principle and its application. The scope of discussion is delineated by differentiating the arguments made in this thesis from the standard approaches adopted when dealing with electronic contracts. This chapter emphasizes the general reluctance to confront technological change and the resulting refusal to analyse the relevant technologies. As this thesis distances itself from the concepts of media neutrality, technological neutrality and functional equivalence, those three concepts are discussed in more detail.

To illustrate the problems inherent in contracting over open electronic networks, the predecessor of e-commerce, Electronic Data Interchange ("EDI") is presented. The chapter also briefly introduces the main model laws and e-commerce statutes, which serve as a point of reference throughout the discussion. It concludes with an overview of the thesis' general structure.

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Contract Formation

[1.3] Contract formation is the process of arriving at agreement. "Formation" is a broad term covering the initial contracting stages, including negotiations and invitations to make offers. There are many ways of forming a contract: parties may negotiate orally or in writing, they may engage in specific conduct; contracts can also be formed by signature or the exchange of written documents. As long as the requirements of consideration, intention to create legal relations, certainty and completeness are met, the law will enforce the promises made during the formation process.

Intention reflects the consensual basis of contract law, consideration is a construct invented to distinguish between those promises, which are enforceable as contracts from those, which are not. "Offer and acceptance" are conventional means by which the intention of the promisor (offeror) and promisee (offeree) are shown to coincide. Whether a particular communication is an offer or an acceptance is a question of intention, determined on the basis of the rules governing the construction of communications. It is contractual intention, or rather the objective manifestations thereof, that encounters practical difficulties when ported into a networked environment. It is the analytical tools of ascertaining contractual intention, the tools of "offer and acceptance," that become more difficult to apply.

Neither intention nor consideration is a "principle" of contract formation. They are the prerequisites of agreement. The new transacting environment changes nothing in this regard: intention, consideration, as well as certainty and completeness, are required for contracts formed over open electronic networks and for contracts formed in the real world.

The existence of intention is determined by construing the statement allegedly constituting an offer or an acceptance. Whether a particular statement constitutes an offer or an invitation to treat, whether an offer has been accepted are questions of construction. "Offer and acceptance" is an analytical model comprising a set of interpretative rules to determine when an offer is made and when a manifestation of assent is present. The rule that acceptance

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7 Carter on Contract [02-101]
8 Carter & Harland [202]
9 Carter & Harland [202]
10 Carter on Contract [02-040]
11 Carter on Contract [02-050]; Hyatt Australia Ltd v LTCB Australia Ltd [1996] 1 Qd R 260 at 264 per McPherson JA; The Law of Contract para 2.2
must correspond to the offer is no more that a statement that intention to accept cannot be found if the acceptance does not mirror the offer.\textsuperscript{12} From a practical perspective, they constitute the principles of contract formation as they identify "those circumstances in which the parties who are alleged to have become contractually bound will be regarded as having reached agreement."\textsuperscript{13} In this thesis the "principles of contract formation" are synonymous with the rules of deploying the analytical tools of offer and acceptance. They are distinguished from the substantive rules of contract law.\textsuperscript{14} Neither the offer-acceptance model, nor the substantive rules underlying its application are challenged or questioned.

The question "what did the parties really promise?" does not always require a strict analysis in terms of offer and acceptance. Contracts may also be formed by conduct or by the execution of documents. Open electronic networks render it difficult to maintain this distinction. Writing triggers specific rules of construction. Writing, however, presupposes the existence of tangible carriers: "writing" and "document" are often used interchangeably. On-line, the existence of both "documents" and "writing" appears problematic. If there is no writing, then all on-line contracts are oral or formed by conduct. If there is writing, one must acknowledge the possibility to have "writing" without "documents."

While harnessing a sequence of electronic acts into "offers" and "acceptances" may appear artificial,\textsuperscript{15} only the offer-acceptance analysis permits the establishment of the precise moment of formation. In other words, even if the division between written documents and conduct was not ambiguous, the analysis of on-line contract formation would revert to the offer-acceptance model as only the latter enables the dissection of the contracting sequence into individual components and the assessment which act constituted acceptance and when it became effective.

Establishing the exact moment of formation may be crucial.\textsuperscript{16} First, it determines where the contract is made. Second, the moment of formation has a direct bearing on the contents of the contract: if one of the parties attempts to incorporate his or her terms, those terms must generally be brought to the notice of the other party before the final act concluding the contract.

\textsuperscript{12} M A Eisenberg, *Expression Rules in Contract Law and Problems of Offer and Acceptance* (1994) 82 Cal L Rev 1127

\textsuperscript{13} Carter & Harland [2011]

\textsuperscript{14} The Law of Contract paras 2.4, 2.5

\textsuperscript{15} Carter on Contract [03-290] referring to Lord Denning's suggestion in *Butler Machine Tool Co Ltd v Ex-cell-O Corp (England) Ltd* [1979] 1 WLR 401 at 405

\textsuperscript{16} Chissick & Kelman p 79
Similarly, statements made during the formation process may become part of the contract as representations or warranties. In both instances, acceptance is the final cut-off point for establishing the contractual obligations of the parties. The latter derive from the communications exchanged during the formation process. Although the methods of incorporating terms are usually treated as a separate topic in textbooks on contract law, they form part of contract formation and are therefore included in this analysis. After all, ascertaining whether agreement has been reached and ascertaining its terms are interrelated processes. 17

While “offer and acceptance” is the best available analytical tool, its limitations must be recognized. One of them is the arbitrariness of the offeror – offeree positions. Each position has important legal implications. 18 The offeror is regarded as the master of the offer, prescribing the contracting procedure, including the method of acceptance, and retaining the power to revoke his or her offer. The offeree has the power to bind the offeror by a simple “yes.” When attempting to “fit” whatever happens on the computer screen into the slots of “offer” and “acceptance,” it must not be forgotten that the positions of offeror and offeree may be arbitrary or easily manipulated and therefore the assumptions inherent in these positions cannot be made. For example, it cannot always be assumed that the offeror imposed the method of acceptance.

It must also be remembered that the offer and acceptance model came into being with the advent of the post. 19 Its application outside the realm of paper documents will, by necessity, encounter a host of problems. The difficulties in applying this model are not indicative of its shortcomings but derive from the fact that mapping “models” onto real-life situations is inherently complicated.

This thesis does not, however, deal exclusively with the application of the offer and acceptance model on-line. It discusses broader problems of contractual intention, the existence of which must be evaluated against a new set of circumstances.

17 Carter & Harland [102]
19 The Law of Contract para 2.4
Open Electronic Network

[1.4] The first question that comes to mind when reading the title of this thesis is: why not “contract formation on the Internet?” The term “Open Electronic Network” is preferable for conceptual and technical reasons.

Conceptually, although the term “Internet” has a number of technical definitions, it has meant different things to different people. This thesis disassociates itself from the somewhat negative (at least in the author’s view) perception of the term “Internet.” The term was considered fashionable, reflecting the hype surrounding e-commerce. The term is also representative of a wholesale approach: it is the Internet as such that allegedly requires a change in the law or the creation of new law. This leads to many oversimplifications and a failure to appreciate the variety of activities enabled by the Internet and the diversity of technologies comprising it. This thesis adopts a “no-nonsense” approach to the Internet and sees it for what it is: an open electronic network, not an “information highway” or “cyberspace.”

Technically, the Internet is a network of networks, a combination of internets, an amalgam of multiple technologies, relying on the TCP/IP protocol stack. Most importantly, the Internet is an open and electronic network. The thesis uses a descriptive term instead of the slightly stale “Internet.” The focus is on its main characteristics: openness, which implies universal access from any place in the world and a “global stranger-to-stranger model.” “Open” implies reliance on a set of open standards permitting interoperability between various networks. “Open” also reflects unlimited access, the possibility to join the network without subscription to system rules. “Electronic” refers to the intangible and evanescent nature of all communications, which - by definition - are transmitted and presented in the form of electrical impulses. Being “electronic” is implicit in being networked. The term “network” indicates the interconnection of multiple computers, the existence of various networks and the deployment of technologies that can only flourish in a distributed environment.

20 see Chapter 2
21 for a discussion of the historical approaches to the Internet see: M A Geist, The Reality of Bytes: Regulating Economic Activity in the Age of the Internet (1998) 73 Wash L Rev 521 at 531-554
22 M A Geist, above at note 21 at 525
24 L Lessig, above at note 4 p 27
26 see: UNCITRAL Model Law on Electronic Commerce with Guide to Enactment, Art 2 and Guide to Enactment para 30, equating “electronic” and “optical” means
Solely for the sake of brevity, "open electronic network" is used interchangeably with "Internet." "Contracts formed in open electronic networks" is used interchangeably with "on-line contract."

**The Common Arguments**

**Principles and their Application**

[1.5] This thesis submits that contract formation principles remain unchanged but their practical application may change. The question is not: *do traditional principles apply?* but *how do they apply?*

> "There is no real conundrum as to whether contractual principles apply to Internet contracts. Basic principles of contract law continue to prevail on contracts made over the Internet. However, not all principles will or can apply in the same manner that they apply to traditional paper-based and oral contracts. It is important not to force into a Procrustean bed principles that have to be modified or discarded when considering novel aspects of the Internet." [27]

There are rules of construction deployed to establish what constitutes an offer and what constitutes an acceptance. There are rules regarding the differentiation between offers and invitations to treat and rules concerning the effectiveness of acceptances. Although principles governing the effectiveness of communications can hardly be subsumed under "rules of construction," they form part of the analytical model and are based on the expectations or implied intention of the parties. It is the practical application of these rules that is altered by the on-line environment.

An example is the differentiation between offers and invitations to treat. An offer is characterized by a definite intention to be bound by subsequent acceptance. There are rules facilitating the distinction between those manifestations that evince such intention and those, which do not. [28] A person maintaining a shop display or publishing an advertisement is generally regarded as making an invitation to submit offers, whereas a person holding out a vending machine is regarded as making an offer. How should websites be evaluated if they combine elements of advertisements, shop displays and vending machines? Similar problems arise with...

[27] *Chwee Kin Keong v Digitelandmall.com Pte Ltd* [2004] SGHC 71 at 91 per V K Rajah JC

[28] *Carter on Contract* [03-040]
the effectiveness of acceptances and the division into instantaneous and non-instantaneous methods of communication.

The intention of the parties remains paramount, both on-line and in the real world. Intention is attenuated by the objective theory of contract and based on an assessment of what the parties said or did. Intention is evaluated as it has been reasonably understood by the other party.

In the real-world, manifestations of intention take the form of words, spoken or written, and conduct. In on-line transactions, intention is manifested through electronic messages, websites and interactions with graphical user interfaces, such as "clicks," "click-drags" and the filling out of on-line forms. Conduct no longer occurs in a familiar setting, the context is not always obviously commercial, the communicative signs are new. The "circumstances" which the law treats as giving rise to agreement have changed, the indicia of intention are different. Another factor to be considered is that one of the parties acts in a self-designed transacting environment and prescribes the communication rules, while the other is limited in the range of responses and subjected to technical manipulations.

While the rules of construction remain the same, the novel environment renders it difficult to establish what the parties said or did: how can the offer and acceptance model be applied to sequences of clicks? What distinguishes a "click" expressing acceptance from a "click" serving navigational purposes?

A departure from traditional approaches

[1.6] The Internet has been mainly discussed in relation to freedom of speech, privacy, national security and intellectual property. Whereas other areas of law openly recognized the challenges posed by the Internet, or by specific Internet-based technologies, contract law maintained a

30 Carter on Contract [01-090]; The Law of Contract para 2.8
32 as per Lord Diplock in Paal Wilson & Co A/S v Partenreederei Hannah Blumenthal [1983] 1 AC 854 at 915
33 Carter & Harland [205]
34 Carter & Harland [203]
narrow focus, discussing the Internet mainly in relation to formal requirements (i.e. the validity and enforceability of electronic contracts) and jurisdictional issues. The emphasis remained on the electronic form and the trans-border character of on-line transactions.

This thesis argues that the electronic form does not pose an obstacle to valid on-line transactions as the substantive rules of contract law permit intention to be manifested in any manner.\textsuperscript{35} There being no general requirement for contracts to be in written form or to be signed, formal requirements are an exception not the rule.\textsuperscript{36} Generally, the absence of "writing" and "signatures" does not threaten the validity or enforceability of contracts or pose an obstacle to their formation on-line.

"Writing" as a formal requirement must, however, be distinguished from the existence of writing. In many circumstances writing implicitly underlies a number of principles of contract law without being a formal requirement. It is not the alleged absence of "writing" but the absence of "documents" that is the source of complications. It is not the electronic form that causes legal challenges, but the emergence of hypertext and asynchronous javascript, both of which "destabilize" and distribute contractual content. It is not the instantaneous character of electronic communication methods, but the combination of speed of transmission with uncertainty of delivery and the introduction of presence protocols, that force a re-thinking of traditional legal approaches.

A valid and enforceable contract is of little value if there is nobody to enforce it against and its terms are uncertain. There must be consistency in the application of contractual principles, certainty regarding the moment of formation and the procedures required to incorporate terms.\textsuperscript{37} This thesis is not concerned with formal requirements or with jurisdictional issues. Antecedent questions are whether and when agreement has been reached or whether its parties can be determined. It is admitted, however, that certain defects in the formation process may directly affect both the validity and the enforceability of a contract.

\textsuperscript{35} Carter on Contract [02-060]
\textsuperscript{36} Carter on Contract [01-001]
\textsuperscript{37} Carter on Contract [01-130]
Embracing Technology

[1.7] The correct application of contract formation principles is only possible if the novel technologies are examined and included in legal analysis. The point of departure can no longer consist in an endless repetition of analogies or the creation of elaborate metaphors. The "unreflective use of metaphors can lead lawyers to take for granted the 'realities' that metaphors enable,"38 while an inaccurate understanding of technology leads to inappropriate analogies. Both result in the application of the incorrect principle or - "the creation of bad law."39 Legal arguments must be based on correct technical assumptions.40 This requires an understanding of the technologies behind specific methods of attributing, transmitting or presenting information.

This thesis attempts to strike a balance between technophobes and technophiles, between those who claim that new rules are needed and those who revert to comfortable (yet incorrect) metaphors and analogies,41 such as electronic signatures or electronic agents. Many parts of the discussion are "technical." This is necessitated by the fact that many legal arguments are built exclusively on technological premises and in many instances the technical justifications are incorrect. Accordingly, this thesis confronts the existing doctrinal approaches to on-line contracting and attempts to "set things straight." While focusing on technology, it aims to avoid "dismay for history, unnecessary futurology and technophilia."42 The point of departure is always the legal principle, not the technology.

The thesis also avoids a "wholesale" approach to the "Internet." There is no such thing as "communications over the Internet." There is the world-wide-web, email, instant messengers and other methods of communicating information. Each has its own implications for contract formation. Accordingly, this thesis addresses not the Internet itself but individual technologies. Communication methods are analysed in order to determine whether an acceptance becomes

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40 See: F H Easterbrook, Cyberspace and the Law of the Horse (1996) U Chi Legal F 207: "Beliefs lawyers hold about computers and predictions they make about new technology are highly likely to be false."

41 The term "cyberspace" or the prefix "cyber-" are avoided to distance this thesis from any associations with arguments favouring the creation of a separate world governed by its own rules. See: D R Johnson & D Post, Law and Borders - The Rise of Law in Cyberspace (1996) Stan L Rev 1367

42 J Sommer, above at note 1 at 1158
Contract Formation in Open Electronic Networks

Effective upon dispatch or upon receipt, HTML files is examined to determine the contents of the contract, authentication technologies are evaluated to establish who is accountable for an electronic act, graphical user interfaces are analysed to ascertain the existence of contractual intention. The application or choice between alternative principles must be based on a sound understanding of the underlying technologies and appreciate the complexities of the novel transacting environment.

Functional Equivalence, Technological- and Media Neutrality

[1.8] This thesis departs from the principles of media and technological neutrality as well as from functional equivalence. Although these concepts underlie most legislative efforts and academic approaches, it does not assume that legal principles are media neutral, legal solutions should be technologically neutral or that functional equivalents are necessary. While their importance for the validation and enforceability of on-line contracts should not be underestimated, their limits must be recognized.

Media neutrality, technological neutrality and functional equivalence are not well defined or fully conceptualized terms. Media neutrality is often difficult to distinguish from technological neutrality.\(^{43}\) Both refer to the independence of legal principles from the technologies and media by means of which parties manifest agreement. Both assume that the same principles should apply in the same way, regardless of the medium or technology used. To complicate matters, media neutrality can be synonymous with functional equivalence.\(^{44}\)

The "Internet" is often referred to as a "medium" and as a "technology." Interestingly, "paper" is also referred to as a medium and a technology.\(^{45}\) If both the Internet and paper can be regarded as technologies, technology- and media neutrality seem too vague to provide guidance whether legal principles should apply identically irrespective of the method of transmission or the physical carrier of information. Furthermore, if the Internet is regarded as a single technology, then a technology neutral approach implies that the same principles apply uniformly to all Internet-based communications. This fails to appreciate the diversity of interactions enabled by the Internet and leads back to the "wholesale" approach. If, however, email, instant messengers and the web are regarded as individual technologies, then a technology neutral approach is impossible as different methods of communication may trigger

\(^{43}\) Report p 28
\(^{44}\) Electronic Transactions Bill 1999, Explanatory Memorandum, p 2
\(^{45}\) Report para 4.5.3
the application of different principles. Thus, a non-discerning approach can cause prejudice to the contracting parties.

The thesis also distances itself from the concept of “functional equivalence.” Functional equivalence is based on an analysis of the “purposes and functions of the traditional paper-based requirement with a view to determining how those purposes or functions could be fulfilled through electronic-commerce techniques.” It aims to replicate real-world concepts electronically and enable the uniform application of legal principles to all technologies and methods of communication.

There being no “one-for-one correspondence between cyberspace and the physical world,” functional equivalence is often impossible to achieve. Creating electronic, functional equivalents of “writing” and “signatures” forces a redefinition of these concepts and equipping them with qualities they may not originally possess. An example is the equivalence of handwritten signatures and so-called “digital signatures.” Depending on its definition, the term “signature” may encompass a biometric link between a person and the output of his or her act. Biometric association is difficult, if not impossible, to replicate on-line. Even if the definition omits the biometric link, its necessity is implicit in one of the functions allegedly fulfilled by signatures: that of identifying the signer. Accordingly, the electronic equivalent of “signature” becomes detached from the original concept and forces the adoption of a specific technology. Functional equivalence also ignores the fact that many electronic phenomena do not have real-world equivalents.

It could be claimed that if a legal principle is media neutral, functional equivalents should be superfluous, as the principle should accommodate the new method of communication without the need for separate constructs. Furthermore, prescribing the criteria for a functional equivalent indirectly imposes a technology, if only one technology can fulfil these criteria. Consequently, the co-existence of functional equivalence and technological- or media neutrality appears questionable.

46 Questions like “does the postal acceptance rule apply to email?” should not be asked by those, who support technology neutrality, as one principle should apply uniformly to all communication technologies. For a detailed discussion see Chapter 6.

47 UNCITRAL Model Law on Electronic Commerce, Introduction, para 15, see also: Report p 2, which describes functional equivalence in terms of “paper-based commerce and electronic commerce should be treated equally by the law”, and “technology neutrality” as “law should not discriminate between forms of technology”.

48 M A Lemley above at note 38 at 526

49 See Chapter 4
It can also be questioned whether there are three discrete concepts: media neutrality, technological neutrality and functional equivalence. It is tempting to say that it is the same concept couched in different terms. All three prohibit the discrimination of electronic methods of communication and prescribe treating them at par with traditional methods of conveying contractual intention. All three aim at ensuring that the formal requirements of "writing," "signatures" and the provision of documents in their "original" form can be fulfilled electronically. This thesis, however, is about formation, not formalities. Accordingly, the usefulness of the aforementioned concepts appears limited.

Media neutrality, technological neutrality and functional equivalence also ignore the differences between the new transacting environment and the "old" world of letters and face-to-face dealings. They confirm that contracts can be formed electronically but they do not facilitate the application of contract formation principles. Most importantly, they create a number of unforeseen side-effects: the requirements of "writing" can be met electronically, but does such "writing" trigger the application of the parol evidence rule? If so, what are the four corners of the document? Similarly, the functions of "signatures" can be replicated electronically, but do such "signatures" impact on the division between terms incorporated by notice and terms incorporated by signature? If a "click" can be a signature (at least under some of the model regulations), does such "signature-click" dispense with the requirement of notice? It is often overlooked that the existence of "signatures" and "writing" has wider implications than just meeting formal requirements.

Electronic and Networked

[1.9] Analyses of on-line contracting traditionally focus on the electronic form of transactions. This thesis focuses on the fact that contracts are formed on a network. Most challenges in the application of contract formation principles are unrelated to the electronic form: if all computers were stand-alone units, their only output were Word documents and if such documents were exchanged on CD-ROMs, this thesis would not be necessary. The most important implications of "being networked" are:

1) Contractual contents consists of electronic files, often distributed over multiple systems;
2) The electronic files are intangible, unstable, dynamic, interactive;
3) All communications are at a distance;
4) Communications are anonymous, in the sense that the sender cannot be easily identified from the message, parties must therefore rely on remote authentication technologies;
5) Communications are based on the client-server model;
6) Communications are fast but unreliable;
7) Senders do not know the addressee's environment: how, when and whether their information will be received and displayed by the terminating system.

The combined effect of being networked and electronic creates a new transacting environment. This "new environment" encompasses the interactive and non-linear character of the world-wide-web, the speed of email or instant messages and the automated responses generated by web-applications, to name a few.

**Electronic Data Interchange**

[1.10] The legal and technical complexity of contracting over open electronic networks cannot be fully appreciated without a discussion of Electronic Data Interchange ("EDI"), which is the electronic exchange of structured business data in standardized formats.\(^{50}\) EDI reduces paper handling and input errors, facilitates "just-in-time" delivery and decreases administrative and processing expenses.\(^{51}\) Unlike email and telex, which involve free text in human readable form, EDI communicates "coded information in a structured format."\(^{52}\) EDI eliminates human involvement and enables the exchange of information directly between computers.\(^{53}\) Not all EDI interactions result in the formation of a contract, some are made in the performance of an existing trade relationship, others are operational or administrative in nature.

The technical specifications for the electronic interchange of business data are called "standards." Standards prescribe the formats, character sets and data elements used in the exchange of documents and forms.\(^{54}\) There are two main EDI standards: the international UN/EDIFACT and the North American ANSI ASC X 12.\(^{55}\)

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\(^{51}\) B Wright, J K Winn, *The Law of Electronic Commerce*, 3rd ed, Gaithersburg 1998, para 2.05


\(^{53}\) Greenstein & Feinman p 106


\(^{55}\) B Wright, J K Winn, above at note 51 para 2.05
EDI partners may exchange information directly (e.g. by a dedicated line), or use the services of a third party provider, also known as value added network ("VAN"). VANs not only facilitate the transmission of messages but also provide storage, security, translation between standards, reformatting and conversion services. EDI partners may use different VANs, who exchange information on the basis of interconnect agreements.

EDI involves multiple contractual relationships:

- the underlying trade relationship, such as a sale of goods.
- the contract governing the electronic exchange of information, which structures the communications relationship between the partners, called "interchange agreement" or "trading partner agreement."
- the system rules or network agreements, which govern the relationships between each EDI partner and its VAN.

The interchange agreement and the network agreement are independent of the underlying commercial transaction. Interchange agreements resolve legal uncertainties existing in the absence of clear rules governing electronic contracting. They cover the technical aspects of communication, such as the standards to be used, selection of third party providers and maintenance of information systems. They also govern the practical aspects of data exchange, such as the obligation to acknowledge receipt, authentication, confidentiality, security, incorporation of terms, validity and enforceability. Interchange agreements often deal with issues of contract formation and prescribe rules governing the effectiveness of messages. Interchange agreements can be based on one of the model agreements proposed by international organizations or respective industrial sectors.

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56 Greenstein & Feinman p 104; G P Schneider, above at note 54 p 223
58 A H Boss, above at note 57 at 37, 38
60 A H Boss, above at note 57 at 63; J K Shim et al, The International Handbook of Electronic Commerce, New York 2000, p 159
61 See e.g. ICC, Uniform Rules for Conduct for International Trade Data by Teletransmission (UNCID) (ICC Publication No 452, 1988)
62 for an example of EDI used in the automotive industry see: www.odette.org
Network agreements with VANs regulate risk allocation for computer errors, network
downtime and security procedures, amongst others. VANs often provide for minimum service
levels and guarantee a certain quality of service making transmission and intermediate
processing more reliable and secure.\textsuperscript{63}

EDI does not change the nature of the underlying commercial transaction but
supplements it with what can be described as “communication rules.” The latter specifically
account for the fact that communications resulting from the underlying transactions are
conducted electronically. The communication rules identify and allocate the risks inherent in the
electronic exchange of information. The adoption of common technical standards by both
parties minimizes the risk of illegibility and failed receipt, thereby increasing the reliability of
the communication process.

EDI is a closed transacting environment. Users agree on a set of contracting practices
and communication standards.\textsuperscript{64} Legal liability and risks are allocated.\textsuperscript{65} Interchange agreements
address basic issues of contract formation and cover most of the uncertainties related to
transacting over electronic networks. In EDI, contract formation occurs within a legal
framework specifically designed for electronic, networked communications. Open electronic
networks are, as the name indicates, \textit{open}. Transactions occur absent communication rules and a
subscription to a common set of procedures.\textsuperscript{66} The transmission and intermediate processing is
not handled by VANs but left “at the mercy” of an inherently unreliable and insecure
transmission channel. In other words, not only are the communication risks greater, but due to
the absence of network- and interchange agreements they remain unallocated. Contracts formed
over open electronic networks exist in a grey zone of novel risk and unclear default rules.

\textsuperscript{63} J K Shim, above at note 60 p 153

\textsuperscript{64} J B Ritter, J Y Gliniecki, \textit{Electronic Communications and Legal Change: International Electronic
& Tech 263 at 266; see also: \textit{Report} p 109, for a comparison of risks of transacting in closed and open
networks: “In the Internet or open system context, while contracts will govern the terms of individual
transactions between the parties, generally there will be no contract which governs the ongoing rights
and responsibilities of the parties more broadly in the sense that a trading partner agreement does.”

\textsuperscript{65} Toh See Kiat p 345

\textsuperscript{66} This thesis observes the growing phenomenon of forming closed user groups and requiring subscription
to terms of use before accessing a website, which can be regarded as attempts to compensate for the
absence of communication rules. See also: Chissick & Kelman p 61
Model Laws and E-commerce statutes

[1.11] This thesis refers to two model laws, one act and one international convention. All were specifically drafted to facilitate electronic contracting.

(a) The UNCITRAL Model Law on Electronic Commerce

The UNCITRAL Model Law on Electronic Commerce ("MLEC")\(^{67}\) provides a template for national legislatures and serves as a guide for drafting contracts to overcome difficulties presented by electronic commerce. The MLEC validates contracts formed through electronic means, sets a number of default rules for contract formation, defines the requirements for electronic functional equivalents of writing, signatures and originals. In particular, the MLEC attempts to accommodate alternatives to paper-based communication.\(^{68}\) The solutions proposed by the MLEC serve as examples of early attempts to resolve legal uncertainties pertaining to transactions in the electronic environment. It identifies a set of problems, which occur in both common and civil law countries. The MLEC applies to commercial actors only.

(b) The Electronic Transactions Act (Commonwealth) 1999

The Electronic Transactions Act (Commonwealth) 1999 ("ETA")\(^{69}\) builds on the MLEC but introduces a number of modifications regarding the definition of certain key terms relating to contract formation. Most discussions regarding the MLEC also cover the ETA. The Australian legislation is examined in greater detail only where its provisions depart from the wording of the MLEC. The exact scope of ETA's application depends on the definition of "laws of the commonwealth," i.e. whether it is limited to the laws passed by the Commonwealth or includes common law and the rules of equity.\(^{70}\) The ETA applies to consumers and commercial actors, as well as to dealings with the government.

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\(^{67}\) UNCITRAL Model Law on Electronic Commerce with Guide to Enactment(1996) with additional article 5 bis as adopted in 1998

\(^{68}\) MLEC Guide to Enactment para 24


\(^{70}\) S Christensen, Formation of Contracts by Email – Is it Just the Same as the Post? (2001) 1 QUTLJ 22 at 24, citing R v Kidman (1915) 20 CLR 425 and Jackson v Gamble [1983] 1 VR 552 at 559 per Young CJ; P Knight, The Electronic Transactions Bill 1999 (2000) 6 CTLR 105 at 105; Electronic Transactions Bill 1999, Explanatory Memorandum, p 21

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(c) The Uniform Electronic Transactions Act 1999

The Uniform Electronic Transactions Act 1999 ("UETA")\textsuperscript{71} has been proposed by the North American National Conference of Commissioners on Uniform State Law (NCCUSL) and has been adopted, in varying versions, by 48 states. Its purpose is to provide uniformity in such areas as retention of paper records, validity of electronic signatures and errors in electronic communication, amongst others. Although UETA purports to be of procedural character,\textsuperscript{72} it contains provisions relating to contract formation. Is deals not only with on-line transactions but with broader issues of consumer protection and governmental filings. UETA has been criticized for the fact that it applies only if the parties agree to conduct transactions by electronic means.\textsuperscript{73} The UETA proposes alternative solutions to the problems dealt with in the MLEC. A comparative analysis of this act is, however, beyond the scope of this thesis.

(d) The UNCITRAL Convention on the Use of Electronic Communications in International Contracts

The UNCITRAL Convention on the Use of Electronic Communications in International Contracts ("CUECIC")\textsuperscript{74} contains provisions directly affecting contract formation. In particular, it deals with "invitations to make offers" (aimed at the construction of websites) as well as "errors in electronic communications." It also modifies the "time and place of dispatch and receipt" rules proposed by the MLEC. The CUECIC framework resembles the structure of the UNCITRAL Convention on Contracts for the International Sale of Goods (CISG), in terms of scope of application, principles of statutory interpretation and declaration of variations by the ratifying countries.\textsuperscript{75}

This thesis does not analyse the above model laws and Acts in detail. They serve as point of reference and as examples of possible legal solutions to problems of contract formation. Their limitations must be recognized. Their primary aim is to facilitate on-line commerce and to

\textsuperscript{71} Uniform Electronic Transactions Act (1999) available at: www.law.upenn.edu/bll/ulc/fnact99/1990s/ueta99.htm. For the purposes of this thesis the UETA has been chosen over the Uniform Computer Information Transactions Act ("UCITA"), which is tailored to a specific type of transaction and a specific type of contractual subject matter. UCITA is also a substantive law statute. For a general discussion see: R Nimmer, UCITA: Modern Contract Law for a Modern Information Economy (1999) 574 PLI/Pat 221 at 244; see also: Nimmer & Towlle par 5.02: "UCITA addresses the unique attributes of computer information and licensing."

\textsuperscript{72} UETA Prefatory Note, para A & B

\textsuperscript{73} UETA Section 5 (b); for an extensive critique see: Nimmer & Towlle para 4.07

\textsuperscript{74} Convention on the use of Electronic Communications in International Contracting, adopted on 23\textsuperscript{rd} November 2005.

\textsuperscript{75} For a detailed description of the procedural and international aspects of CUECIC see: Ch H Martin, The UNCITRAL Electronic Contracts Convention: Will it be Used or Avoided? (2005) 17 Pace Int'l L Rev 261
remove "obstacles" to the validity and enforceability of on-line contracts by (a) providing that electronic contracts are equally valid as "traditional" contracts, and (b) establishing criteria for the fulfilment of the requirements of "writing," "signatures" and "originals" in electronic form. The model laws and the Act prohibit any discrimination on the sole basis that a contract originated in electronic form. To some extent, it can be claimed that some of the problems they are trying to address are non-existent or that provisions that contracts can be formed electronically merely state the obvious. Without delving into their critique, it must be remembered that the model laws are first and foremost aimed at the removal of uncertainties that might have existed when e-commerce became a mainstream phenomenon, not with the provision of substantive rules. They generally deal with the electronic form of a statement, not with its legal effect.

The above model laws and act are discussed to the extent they deal with aspects of contract formation. Their main purpose being the ability to meet formal requirements in an electronic context, they rely on the concepts of technological- or media neutrality as well as functional equivalence. Despite aiming to promote e-commerce by providing legal certainty and confidence in electronic communications, none of the model laws or acts proposes solutions to such important matters like the time of formation. They have little (if any) regard to the fact that on-line transactions occur in a networked environment.

Structure of Thesis

[1.12] The problems encountered in on-line contract formation can be divided into three groups:

- attribution
- transmission
- presentation.

70 the objectives and scope of the MLEC are described in detail in the "Introduction" to the Guide to Enactment, paras 2-21, although the wording differs between the individual acts and conventions, the "Introduction" is representative of their general objectives and scope.

77 MLEC Art 5; CUECIC Art 8; ETA Section 8, UETA Section 7


79 A DeZilva, Electronic Transactions Legislation: An Australian Perspective (2003) 37 Int'l Law 1009 at 1012

80 See generally: Nimmer & Towle paras 4.02, 4.03[7]
Accordingly, the thesis is divided into three parts, which broadly follow the contracting sequence and examine the technologies and legal principles, which become relevant at different stages of the contract formation process. This division is introduced for analytical purposes. Individual events are analysed from different angles. For example, acceptance can be discussed in relation to the method of acceptance, the expression of assent and the time of formation. The first deals with the question whether a particular act constituted an acceptance, the second concerns methods of presentation and deals with the question whether the on-line environment requires an enhancement of the act of acceptance, the third relates to transmission methods. One technology can have multiple legal implications, one step in the contracting sequence can be analysed in relation to different technologies. Contractual intention can be presented and transmitted in multiple formats via multiple protocols. There is a clear dichotomy between web-based transactions and email, there is also a division between the web-interface and methods of interacting therewith. Depending on the communication technology used to communicate intention the contract may be formed at a different moment, its contents may be more difficult to ascertain.

Chapter 2 spells out the technological premises of the argument. Each subsequent chapter elaborates on the technologies directly relevant to the contractual issues discussed therein. The aim is to avoid repetition, relegation to footnotes or losing the reader by introducing too much detail too early.

Attribution

[1.13] “Attribution” deals with the question: to whom is a communication attributed as a matter of law? Attribution concerns issues of validity and intention. The first challenge consists in the automation of on-line transactions, which leads to (a) the alleged inability to discern human intention in the contracting process, and (b) the alleged necessity to separate the computer form its user and endow it with legal capacity. Chapter 3 examines theories developed around the concepts “electronic agent” and “autonomy.” It criticizes attempts to treat the computer as a separate legal entity and questions the correctness of theories, which force automation into the frameworks of other legal institutions. From a technical perspective, the discussion focuses on the functioning of websites and e-commerce applications.


82 UNCTRAL ICC eTerms 2004, ICC Guide to Electronic Contracting (2004) A/CN.9/WG.IV/WP.113, “How you contract – the physical means whereby you agree to be bound to another commercial party to a specific commercial engagement – is important because how can indicate when you are committed to the other party … and it also indicates the terms of your engagement to the other party…”

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The second challenge lies in the difficulty of establishing who performed a particular electronic act, i.e. who should be held accountable for its legal effects. Chapter 4 focuses on the interplay between “intention” and “identification.” It elaborates on problems of remote authentication and examines its importance for cases of so-called mistaken identity. Special attention is devoted to so-called “digital signatures.” The chapter examines their technological premises to determine their relevance for contract law. Problems of automation and remote authentication concern contractual intention and therefore very existence of agreement.

Transmission

[1.14] “Transmission” relates to the exchange of messages during the contract formation process. The aim of the analysis is to determine the exact moment of formation. Ascertaining this moment necessitates a number of separate investigations: which act constitutes an offer and which constitutes acceptance, is there a valid acceptance and when does it become effective?

Chapter 5 describes the offer and acceptance model and opposes all attempts to change this model or introduce media-specific presumptions on the basis that a transaction occurs online. It describes the difficulties of differentiating between offers and invitations to treat in the context of websites with integrated transactional platforms. Establishing the legal character of a particular website pre-determines the legal effect, if any, of subsequent user events. Next, the chapter deals with acceptances. The issue is usually discussed under the heading “method of acceptance,” and relates to the question: is there acceptance? The chapter examines whether acceptances by methods other than that requested in the offer are valid. Their validity is questioned in light of the changed communication landscape.

Chapter 6 poses the question, “when do electronic messages constituting acceptance become effective?” It examines whether the principle of receipt, which developed in a perfect communication scenario, can be transposed into an environment characterised by unprecedented risks. The main challenge consists in establishing the criteria for the application of either the principle of receipt or the postal acceptance rule. The technologies behind electronic mail, instant messengers and web-based transactions are examined and their implications for the time of formation are analysed. Technically, this part focuses on the speed and reliability of electronic communications. Special attention is devoted to acknowledgements of receipt, their (alleged) function as a tool of controlling the communication process and the possibility to substitute them for the “two-way” quality of face-to-face interactions. The relationships between choice of communication method, control of the communication process and knowledge of communication failure is explored.
Ascertaining the moment of formation also requires the definition of "dispatch" and "receipt." Chapter 7 examines these concepts, paying special attention to "deemed receipt" and the addressee's right to reject messages due to security concerns. The implications of the client-server architecture for the time of formation are examined, along with the role of intermediaries, the concepts of "designation" and "information system."

**Presentation**

[1.15] "Presentation" relates to the difficulties of establishing the contents of on-line contracts. The relevant chapters examine hypertext, methods of interacting with the graphical user interface of websites and the absence of tangible documents. The main challenges consist in establishing the basic unit of information, the electronic equivalent of a page or document, and re-creating contractual context in the on-line environment, which directly bears on the incorporation of terms and the expression of assent. The chapters discuss the problems of applying paper-based concepts in an environment made of dynamic and interactive elements.

Chapter 8 asks the question: what statements were made during the contract formation process? The answer necessitates the examination of the "raw material" that might be included in the contract, i.e. which elements of the website, or which communications in general, become part of the agreement. The focus is placed on the distributed and unstable content of websites. The question "what statements were made" is followed by an analysis of so-called "linking cases," albeit from a contract law perspective. The source and scope of contractual statement may depend on the visual and technological associations between respective elements of the website. The chapter also deals with addressee-specific factors in the objective evaluation of intention.

Chapter 9 discusses methods of incorporating terms into a contract. It attempts to map traditional incorporation methods onto the electronic environment. The relationship between incorporation "by signature" and "by notice" is elaborated on in light of the fact that the electronic equivalents of signatures carry less psychological impact than traditional handwritten signatures. The chapter also explores a number of web-specific problems: the use of hyperlinks, the inability to control the manner websites are displayed to the user and the technical manipulations from the side of the web-merchant. Last but not least, the chapter examines the risk of "invisible notices."

Chapter 10 deals with the expression of assent. The main challenge consists in the limited expressiveness of "clicks" and other methods of interacting with the graphical user interface. The chapter revisits digital signatures albeit in relation to their ability to express
contractual intention. The relationship between contract formation and the incorporation of terms is examined. The limited expressiveness of “clicks” as a method of expressing intention is discussed. A distinction between so-called “click-wrap” and “browse-wrap” agreements is made, with emphasis on those theories that require an additional act of assent for the incorporation of terms.

Caveats and exclusions

[1.16] This thesis generally does not discuss meeting formal requirements, finding functional equivalents or devising new analogies. It does not provide an exhaustive analysis of the cases making up the “law of the Internet” or revisit every aspect of contract formation. It does not attempt to trigger a regulatory response or ignite a revolution in contract law. Quite the opposite. This thesis submits that contract formation principles are sufficiently flexible to accommodate technological change.

The thesis takes a practical approach. Theoretical discussions are balanced against practicalities and the necessity to provide transactional security. Parties must be able to anticipate, which principle governs their transaction. Principles cannot be second-guessed by references to technical concepts and analogies based on outmoded technologies. The process of adapting contract formation principles to the new transacting environment does not enjoy a gradual development in the comfort of unhurried academic debate. E-commerce and on-line contract formation became mainstream phenomena within an unexpectedly short period of time.\(^{83}\)

The thesis does not deal with problems of jurisdiction and the conflict of laws. Jurisdictional issues only come into play once the place of formation is established. Problems of jurisdiction can hardly be regarded as Internet-specific. Once arguments become detached from the geographical location of the intermediating servers, problems of jurisdiction raised by the Internet are identical to those arising in contracts formed over the telephone. At the same time, the borderless nature of on-line transactions raises the importance of jurisdictional issues to a higher level.\(^{84}\) In principle, parties are free to include “forum selection” or “jurisdiction” clauses in their agreement. The operability of such clauses depends on their successful incorporation, which leads back to the offer and acceptance model. Problems of conflict of laws are beyond the

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\(^{83}\) S R Salbu, above at note 38 at 431; E Lee, above at note 39 at 1281

\(^{84}\) Chissick & Kelman p 105
scope of this thesis. For the sake of simplicity, it is assumed that all contracting parties are situated in Australia.

This thesis has also a comparative aspect. To date, most cases in the relevant area have been decided in the United States. Accordingly, this thesis refers to US cases in order to examine the manner specific problems of on-line formation have been dealt with. The cases are not “blindly followed,” but critically examined in order to determine whether the legal solutions proposed therein can be applied in Australia. Due to the relative scarcity of materials in Australia, the thesis also frequently refers to US literature. The aim of such operation is not the revision of Australian contract law, but solely the search for possible approaches to problems created by the novel transacting environment. After all, the Internet is the same - in Australia and in the United States - and therefore the problems are the same.

Last but not least, it must be noted that:

*Judges and legislators faced with adapting existing legal standards to the novel environment of cyberspace struggle with terms and concepts that the average American five-year-old tosses about with breezy familiarity.*

People who grew up using the Internet have a different approach to technology than those who acquired Internet skills (if any) later in life. On one hand, there are those who use collaborative software, upload pictures, share files over peer-to-peer networks and receive email on their mobile phones. On the other, there are those who struggle to use an ATM due to the perplexing (in their belief) user interface. The individual characteristics or the IT literacy of a person does not change the principles of contract law. It does, however, affect the way people use communication technologies, their expectations and the reasonableness of their actions.

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85 *American Libraries Ass’n v Pataki* 969 F Supp 160 (SDNY 1997) per Preska J at 160

86 J Braucher, above at note 78 at 539; *Nimmer & Towle* par 4.02[2]


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Chapter 2

The Technological Premises

Introduction

[2.1] This chapter introduces the basic technological concepts that underlie all communications over open electronic networks and form the common denominator of all arguments put forward in this thesis. While presenting the most important characteristics of the infrastructure supporting on-line contract formation, this chapter does not contain detailed descriptions of specific Internet-based technologies. More in-depth analyses are provided in the respective chapters.

Despite the fact that due to its title the thesis may raise expectations of endless recounts of servers, packets or routing technologies, the actual approach to technology is minimalist. The discussion includes technological factors only to the extent they are needed to elucidate a point, counter a particular argument or clarify a common misunderstanding.

As indicated in Chapter 1, this thesis does not adopt a "wholesale" approach to the Internet but focuses on technologies that are most commonly used for on-line transactions. As one author put it: "the whole Internet is rarely an appropriate level on which to generalize."\(^1\) It is not open electronic networks, or the Internet, as a whole, that change the process of contract formation. It is only specific technologies or characteristics thereof that affect certain aspects of this process. Some general concepts, however, pertain to all communications occurring on open electronic networks. These are: the TCP/IP protocol suite and the layered approach to networked communications and the client-server architecture. Furthermore, this chapter introduces the three main methods of transacting on-line: email, instant messengers and the world-wide-web. It also briefly mentions the source materials that deal with the functioning of the Internet.

Descriptions of technologies and communication methods given by courts and legal literature are often tainted by simplifications and imprecision. In many instances, however,

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\(^{1}\) T Wu, Application-Centered Internet Analysis (1999) 85 Va L Rev 1163 at 1164
courts have presented a detailed and correct understanding of "how things work." The functioning and characteristics of a particular communication method are factual matters. The facts must be understood in order to correctly apply the principles of contract law. This thesis predominantly relies on descriptions from textbooks on data communications, computer science and networking technologies as well as from source documents produced by the Internet Engineering Task Force and the World Wide Web Consortium.

As indicated in Chapter 1, the thesis focuses on the fact that on-line contracts are formed over a network. The fact that contractual statements travel in the form of electric impulses or packets is acknowledged but not regarded as the predominant challenge to the application of contract formation principles. Networking enables a whole range of communication methods that would not be possible if "electronic" contracts were exchanged on floppy discs or CD-ROMs. Accordingly, a number of basic networking concepts must be introduced. It is those very concepts that have been overlooked by contract law literature.

The Internet

[2.2] There are numerous definitions of the Internet. It is described as "a collection of networks that support host-to-host communications using TCP/IP" or "a collection of thousands of networks linked by a common set of technical protocols which make it possible for users of any of the networks to communicate with or use the services located on any of the other networks."

Legal articles and technical literature abound with descriptions of the history of the Internet and such recounts need not be repeated here. For current purposes, it suffices to state that the Internet was not designed with commerce and contract law in mind. Its primary purposes were to facilitate the exchange of information between academics and to survive nuclear attack. Two important dates must be remembered: in 1994 the first banner advertisements appeared on hotwired.com, in 1995 the National Science Foundation privatised

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3 E Hall, Internet Core Protocols: The Definitive Guide, Cambridge 2000, Chapter 1, An Introduction to TCP/IP, par 1.1.3


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the backbone and the "fully commercial civilian Internet was born." Either date can be regarded as the official beginning of the e-commerce era.

The Internet is neither a medium nor a technology. The "Internet" is a networking concept, which derives from internetworking – the possibility to connect computers and form networks. Connecting to the Internet means connecting to the nearest network, which attaches to a larger network, which connects to one of the high-capacity backbones that form an intercontinental web of cable- and satellite lines. In practical terms, Internet users connect their computers to a Local Area Network ("LAN"), either provided by an Internet Service Provider ("ISP") or by the corporation they work for. Both private individuals and large corporations use ISPs. The reliability of an ISP is a function of the quality and capacity of its infrastructure and its proximity to the Internet backbone. Internet connections can be broadly divided into dial-up connections and broadband. The main difference between them lies in the data transmission speeds, i.e. bandwidth.

Although not directly relevant to contract law, no discussion of the Internet would be complete without mentioning that the Internet is a packet-switched network. In circuit-switched networks data is transferred over a single connection that carries the entire transmission from sender to recipient. In packet-switched networks, the transmission is broken up into packets, each of which is independently routed to its destination. The path between the source and the destination is not known before transmission begins. The physical underpinnings of the Internet are a combination of wired and wireless connections, with telephones, television and cable sharing much of the same infrastructure. Consequently, circuit-switched and packet-switched communications often relay on the same twisted copper pair that has been around for over a century.

**A Layered Approach**

[2.3] The Internet is unified by a set of core protocols: the TCP/IP protocol stack. It is the consistent and universal use of TCP/IP that enables communications over open electronic

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7 T Wu, above at note 1 at 1172

8 T Sheldon; *Encyclopedia of Networking and Telecommunications*; Berkeley 2001; see: definition of "Internetworking" p 661

9 G P Schneider, above at note 5 p 82

10 K C Laudon, C G Traver, above at note 6 p 129

networks. TCP/IP provides a wide range of segmented functions: from application-specific, like email and web-browsing, down to low-level networking protocols like IP and TCP. In other words, it provides the functions that are commonly identified with the Internet.

The TCP/IP suite consists of five layers: application, transport, network, data link and physical. Each layer solves a set of problems involving data transmission and provides predefined services to the upper layer protocols based on services from the lower layers. Upper layers are logically closer to the user and deal with more abstract data, relying on lower layer protocols to translate data into forms that can eventually be physically transmitted. The top layer conveys information in the form of words, the lowest layers conveys electrical impulses.

To better illustrate the concept of independent layers the process of sending a letter is described in network terms: at the highest layer, a letter is written, placed in an envelope and dropped in a mailbox; at the middle layer the letter is carried from the mailbox to the post office where it is sorted and distributed; at the lowest layer the letter is delivered to a carrier and transported by truck, aeroplane, boat or combination thereof. At the addressee’s side, starting from the lower layer, the letter is transported to the post office; at the middle layer it is sorted and delivered to the addressee’s mailbox and, ultimately, at the higher layer, collected by the addressee, opened and read. A similar process occurs with email, the main difference being the existence of additional layers, which disassemble the message into packets for transportation purposes and send those packets along the best available path to their destination.

From a contract law perspective, all relevant technologies are located at the application layer. Contractual content is conveyed by email, websites or instant messengers. It is those individual applications that determine the manner information is communicated (i.e. displayed

(2003) 18 Berkeley Tech L J 1259 at 1276. The TCP/IP protocol stack is often compared to the Open System Interconnect (“OSI”) model, which was developed by the ISO and serves as a conceptual framework used to compare different networking protocols; for a comparison of the TCP/IP to the OSI model see: Hall, E, Above at note 3 para 1.2.2

12 TCP stands for Transmission Control Protocol, whereas IP stands for Internet Protocol.

13 M Froomkin, Habermas@discourse.net: Toward a Critical Theory of Cyberspace, 116 Harv L Rev 749 at 779

14 Additional layers are often singled out for analytical purposes, for example a user- or content-layer; see: E J Feigen, Architecture of Consent: Internet Protocols and Their Legal Implications (2004) 56 Stan L Rev 901 at 904; M Cooper, Open Communications Platforms: the Infrastructure as the Bedrock of Innovation and Democratic Discourse in the Internet Age (2003) 2 J Telecom & High Tech L 177 at 182

15 This is an edited example taken from B A Forouzan, above at note 5 p 27, 28

16 T Wu, above at note 1 at 1163

17 K C Laudon, C G Traver, above at note 6 p 118
and transmitted). 18 Focusing on the protocols operating at user level, this thesis disregards all arguments which are based on the functioning of the lower layers.

Although the “data link,” “network” and “transport” layers form the core infrastructure, they remain “network or system-oriented (rather than user-oriented).” 19 They deal exclusively with the physical transmission of electrical impulses and packets. To claim that that the bearer network or physical transmission channel affect the application of contract formation principles would imply the need to differentiate between fixed-line and mobile phones, between letters carried by railway, car or submarine. Such distinction is, needless to say, inadmissible. Questions regarding transmission technologies are relegated to telecommunications law and the regulatory aspects of the Internet. 20 The application of contract formation principles does not depend on cables, routers or switches and does not require an analysis of the remaining layers of TCP/IP.

Client-server Model

[2.4] The Internet provides a general-purpose infrastructure that permits applications on an arbitrary pair of computers to exchange information. 21 One application must initiate this process, whereas the other must accept it. This is the so-called “client-server paradigm” of interaction. The application that actively initiates contact and requests a particular service or resource is called client, the application passively awaiting such requests and providing services or resources on demand is called server. 22 In general, clients reside locally on the user’s computer and are directly invoked by such user, whereas servers run on more powerful remote computers. 23 Information may pass in either or both directions. The terms “client” and “server” refer to applications or processes but are often used in relation to the computers that run those processes.

18 D E Comer, Computer Networks and Internets with Internet Applications, 4th ed, New Jersey 2004, p 422
19 D Benoliel, above at note 11 at 1278
20 For a detailed discussion of the various interactions between law and the respective layers see: L B Solum, M Chung, above at note 11
21 D E Comer, above at note 18 p 421
22 Brookshear p 138
23 D E Comer, above at note 18 p 424
The three main communication methods

[2.5] The Internet enables numerous methods of exchanging, retrieving and accessing information. It would by far exceed the scope of this thesis to discuss all of them. The focus is therefore placed on the three most popular communication methods: email, instant messengers and the world-wide-web. Email and instant messengers serve as means of information exchange, whereas the web is best described as a means of information retrieval.

Email

[2.6] Email is a method of transmitting messages between users on different networks. It requires mail-servers and mail-clients. Mail-clients are used to compose, read, access, retrieve and send emails. The transfer of email usually occurs in a series of hops through multiple intermediating systems. The Simple Mail Transfer Protocol ("SMTP") is the de facto standard for email transmission across the Internet. SMTP does not deliver messages to the mail-client, or end-user computer, but only to the destination SMTP server. SMTP introduces messages into the transport environment (e.g. the Internet) and deposits them in message stores, which are subsequently accessed by mail-clients. So-called "gateway" SMTP systems receive messages from one transport environment and transmit it to another transport environment.

Email was originally ASCII text-based, it did not support binary files and could not be relied upon in an open environment. Email is often written in one format and converted into another format for transmission purposes, which is done automatically by mail-clients.

The Post Office Protocol ("POP") is used to retrieve messages from remote mail-servers. POP supports intermittent connections (such as dial-up), allowing users to download email when connected and subsequently view and manipulate messages without the necessity to stay on-line. Mail-clients using POP connect, retrieve all messages, store them on the client system, delete them from the server and then disconnect. In contrast, the Internet Message

24 for a comprehensive discussion of various Internet-based communication methods see: American Civil Liberties Union v Reno 929 F Supp 824 (ED Pa 1996)
25 Brookshear p 144
26 RFC 2821, Simple Mail Transfer Protocol, J Klensin (2001), p 5
27 RFC 2821, above at note 26 pp 4,5
28 RFC 2821, above at note 26 pp 11, 22
29 RFC 2822, Internet Message Format, P Resnick, ed; (2001)
31 Brookshear p 154
32 RFC 1939, above at note 30 p 14
Access Protocol ("IMAP")\(^{33}\) does not require messages to be downloaded, allowing mail-clients to access and manipulate messages on the server. POP or IMAP are used to retrieve or access messages, whereas SMTP is used to dispatch and transfer messages.

Web-mail is an email system without a separate email-client, messages are accessed via a web-interface with browsers. Web-mail is accessible from every Internet-connected computer. While the transfer of messages between mail-servers occurs via SMTP, the transfer of the message from the sender to the first SMTP server and from the last SMTP server to the addressee, is done via the hypertext transfer protocol, which is specific to the world wide web.\(^{34}\)

**Instant messengers**

[2.7] Instant messengers permit the text-based exchange of messages in real time.\(^{35}\) They comprise a client application that connects to an instant messaging server. Depending on the protocol, some instant messengers maintain the intermediation of the server throughout the communication process, others use it only to set-up an initial connection, subsequently exchanging messages on a peer-to-peer basis. The most important features of instant messengers are that both parties share a common view of the communication process and are usually able to monitor the successful or failed receipt of messages in real-time.

Instant messengers rely on a names and presence database ("NPD"),\(^{36}\) which lists all the participants in a system and keeps track of a participant's contacts, i.e. people from a pre-established list. The NPD records a participant's IP address and keeps track of his or her status in real-time. Most instant messengers display presence information, which indicates whether contacts are currently online. Presence information conveys the availability and willingness to communicate. Extended information on user availability is: "free for chat," "away," "do not disturb" or "out to lunch." A typical IM feature consists in visually indicating whether contacts are online or offline. Messages may be exchanged with any of the contacts who are online and/or willing to communicate.

Unlike email, there is no single uniform instant messaging system operating across all networks. There are a number of non-interoperable IM systems, each with its proprietary


\(^{34}\) B A Forouzan, above at note 5 p 718


protocol.\textsuperscript{37} Thus, a person using MSN Messenger wishing to communicate with a person using Skype, must either download the Skype client application or convince the other party to set up an account with MSN.

Email and instant messengers are discussed in greater detail in Chapter 6 and Chapter 7, which deal with the effectiveness of electronic acceptances.

\textit{The World-wide-web}

[2.8] The world-wide-web (the "web") is a "large-scale, online repository of information"\textsuperscript{38} that enables an interactive process of information retrieval. Although the web was originally text-based, nowadays it is more correct to associate it with hypermedia as the contents displayed on a user's screen comprise images, graphics and audio-files.

The web can be regarded as a collection of interconnected web-pages, which rely on a standard manner of representing content known as Hypertext Mark-up Language ("HTML"). The distinguishing feature of HTML is the ability to connect to other HTML files by means of hyperlinks.\textsuperscript{39}

An HTML document consists of a text file that contains tags embedded in the text. These tags provide instructions as to the arrangement and formatting of the contents of the file.\textsuperscript{40} HTML documents are hosted on web-servers and displayed on the user's screen by means of a web-browser, which acts as a web-client. There being no widely accepted standard regarding the creation of browsers, there are considerable differences in how browsers display HTML documents. Web-browsers interact with web-servers by means of the Hypertext Transfer Protocol ("HTTP"). HTTP requests are generated when a user types in a URL or activates a link. It must be borne in mind that webpages are not only methods of presenting information but also serve to display the output of downstream processes (i.e. the applications running on server-level). Consequently, the contents of a webpage may dynamically change in response to external input.

\footnotesize{\textsuperscript{37} See, e.g., the IETF's SIP (Session Initiation Protocol) and SIMPLE (SIP for Instant Messaging and Presence Leverage), APEX (Application Exchange), the open XML-based XMPP (Extensible Messaging and Presence Protocol), more commonly known as Jabber and the Open Mobile Alliance's IMS (Instant Messaging and Presence Service) created specifically for mobile devices.}

\footnotesize{\textsuperscript{38} D E Comer, above at note 18 p 529}


\footnotesize{\textsuperscript{40} D E Comer, above at note 18 p 530}
The web and its related technologies are described in greater detail in Chapter 8 and Chapter 9, which discuss their implications for ascertaining the contents of on-line contracts, the identification of terms and the expression of assent.

Internet Standards and Requests for Comment

[2.9] The Internet is based on a voluntary adherence to open protocols and procedures. Although the Internet is run by private companies, not by any government or centralized body, there exist a number of organizations actively participating in its development and functioning. Two are relevant for the present discussion: the Internet Engineering Task Force ("IETF"), which produces technical specifications related to networking protocols and, together with the Internet Architecture Board, provides an architectural oversight of the Internet, as well as the World Wide Web Consortium ("W3C"), which develops and maintains standards for the world wide web.\(^{43}\)

At the heart of the Internet standards process are Requests for Comments ("RFC").\(^{44}\) RFCs are working documents of the Internet research and development community, most of them contain descriptions of network protocol and services, often prescribing detailed procedures regarding their implementation. RFCs are not refereed publications but receive technical review from task forces, individual experts or the RFC editor.\(^{45}\) While RFCs contain probably the most accurate and authoritative descriptions of existing and proposed communication technologies, they do not have legal force.\(^{46}\) Their implementation is not sanctioned by a court of law: they can constitute a source of theoretical descriptions of specific technologies, not necessarily of their practical application. Furthermore, the interpretation and implementation of RFCs is not uniform. There are different types of RFCs, some of them are informational or experimental, others proceed through a complicated process of revisions and approval and become standards.\(^{47}\) Many RFCs are de facto standards and the implementation of

\(^{41}\) Internet Core Protocols: The Definitive Guide, Chapter 1, An Introduction to TCP/IP, Appendix A. A protocol is a set of rules that governs data communications and defines what, how and when something is transmitted. See also: M Maher, An Analysis of Internet Standardization (1998) 3 Va J L & Tech 5 for a more detailed discussion at 80

\(^{42}\) www.ietf.org

\(^{43}\) www.w3c.org

\(^{44}\) For a detailed explanation of the RFC process and the different types of RFCs see: M Froomkin, above at note 13 at 790 - 815


\(^{47}\) RFC 2026, The Internet Standards Process -- Revision 3, S Bradner (1996); RFC 1796, Not All RFCs are Standards, C Hulterman, J Postel, S Crocker (1995)
their basic features is a condition of successfully participating in networked communications, or, in technical terms, they must be followed to “meet the general goal of arbitrary host interoperation across the diversity and complexity of the Internet system.” RFCs are commonly referred to by technical literature as authoritative references for the functioning of specific protocols and are also increasingly cited by legal literature.

Technical standards or specifications are not blindly followed or implemented verbatim. Much discretion is left to individual network administrators, software vendors and web-developers, who may interpret the same set of requirements differently. The best example is Microsoft’s Internet Explorer, the most popular browser, which is notorious for its non-compliance with many W3C standards. To the average web-developer, Microsoft’s dominance in the browser market is more important than the W3C’s standardization efforts. Accordingly, most web-pages are designed for rendering on Internet Explorer, not in accordance with the official W3C specifications.

**Final Considerations**

[2.10] Throughout the discussion it must be borne in mind that the Internet is still “under development.” While the lower layers of the TCP/IP protocol can be generally regarded as standardized, individual communication methods at the application layer still display many differences: one email application may not be able to correctly display a message composed and sent from another email application. Moreover, the individual networks, which make up the Internet, may retain a number of idiosyncrasies. The Internet cannot be thought of as a homogenous system where everybody can seamlessly communicate with everybody.

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Chapter 3

From Automation to Autonomy

Introduction

[3.1] This chapter deals with intention, contractual capacity and issues pertaining to the general validity of on-line contracts. It attempts to dispel some persisting doubts regarding the possibility to form contracts by means of automated processes. Problems of intention and contractual capacity must be dealt with before commencing a discussion of contract formation principles. Intention is commonly regarded as a matter affecting formation, whereas capacity impacts on the validity and enforceability of a contract.\(^1\)

E-commerce is based on automated mass-market transactions,\(^2\) on-line contract formation is usually automated on one side of the transaction.\(^3\) E-commerce requires that computer-generated transactions are binding and effective in law. Customers visiting web-shops do not interact directly with people but with web-applications. There is little doubt that a contract is formed when a book is purchased on amazon.com. The only human on amazon’s side is involved in packing the books.\(^4\) This begs the question whether there is human participation at the moment of contract formation.

Allegedly, automated contracting encounters theoretical difficulties once computers not only transmit but generate output and operate without human supervision.\(^5\) It is not automation \textit{per se} but the elusive concept of “autonomy” that effectuates doctrinal discomfort: the old vending machine morphs into an “intelligent,” “unattended” system that forms decisions of its own. “Autonomy” is associated with the concept of artificial intelligence and forces contract law into heated philosophical debate regarding the personhood of computers. Intuitively, it is

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\(^1\) \textit{Carter on Contract} [02-020]

\(^2\) \textit{Ford & Baun} p 30

\(^3\) The focus of this chapter is on websites, as contracts formed via email are more likely to include two human persons on both ends of the communication channel. Technically, email messages can be sent by automated processes, e.g. order confirmations or auto-of-office replies.


tempting to ignore the sophistication of computers, treat automated contracting at par with non-automated contracting and distance oneself from such esoteric discussions. The necessity of this chapter could therefore be questioned.

A confrontation of theories accumulated around "automation" and "autonomy" cannot be avoided, though. First, problems of automation, usually couched in the term "electronic agent," form part of the legal landscape and recur in many discussions of e-commerce. Second, with the progressive sophistication of information systems, bordering on the emergence of cognitive abilities, there will always be arguments in favour of granting legal capacity to computers or questioning the existence of intention in automated transactions. Although problems of "automation" and computer-generated output have been largely solved by their explicit recognition in most model laws, theories regarding the "emancipation" of computers linger on. For all practical purposes, it is irrelevant whether the discussion centres on the generation of statements of computers, the automation of the contract formation process or the possibility of deploying electronic agents. All three relate to the existence of intention in the contract formation process, all three inquire whether offers and acceptances can be made through computers. This chapter injects some practical considerations into the discussion and proves that automated contracting does not need validation.

The problem can be described as follows: once output is not merely transmitted by computers but also generated by them, it becomes problematic to attribute such output to the person using the computer. A division is drawn between computers acting as a mere conduit for contractual statements and computers generating such statements. The main source of controversy is the concept of "autonomy." Once a system is "autonomous," i.e. attains a high level of complexity and operates in an unattended manner, it generates its own communications. "Autonomy" is used to justify the theory that machines must be separated

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6 J H Sommer, Against Cyberlaw (2000) 15 Berkeley Tech L J 1145 at 1178

7 See, e.g. recent reports about computers acquiring rudimentary self-awareness: J Bongard, V Zykov, H Lipson, Resilient Machines Through Continuous Self-Modelling (2006) 314 Science 1118

8 See: MLEC Art 11, Art 12, Art 13, which explicitly admit the validity and enforceability of data messages for contract formation and the definition of "data message" in Art 2, which encompasses the "generation" by automated processes; see also MLES Art 2 (c); CUECIC Art 4 (g) definition of "automated message system." Art 12 "Use of automated message systems for contract formation;" UETA Section 2, definitions of "electronic agent" and "automated transactions" and Section 14 "Automated transactions."


from their human operators and endowed with legal capacity. The validation of automated on-line transactions occurs through the attribution of computer-generated output to the computer.

**Roadmap**

[3.2] This chapter reiterates the simple principle that output produced by a computer is attributable to its user. This principle cannot be departed from on the basis that the computer is sophisticated and operates without human supervision. Such departure is attempted by those theories, which regard automation as a theoretical obstacle to the validity of contracts formed on-line. The theories fall into three categories: first, those that ascribe a separate existence to the computer; second, those that compare it to an agent; third, those that deny the existence of "intention" in automated transactions.

Their common assumption is that the deployment of automated systems challenges contract formation principles. Their common mistake is the separation of computers from their users in order to (a) validate automated contracting, and (b) protect computer users from unplanned computer-generated output.

Automated contracting is pigeonholed into the frameworks of other legal institutions.\(^{11}\) The relevant theories deny the validity of automated contracts or attribute them to the computer. Being a post factum justification of existing practices, the theories assume that because the law permits (or tolerates) automated contracting, it is the machine, which is contracting. Further problems derive from the terminology: "intelligence," "autonomy" and "agency." Such "humanization" culminates in attempts to justify the personhood of computers.

The chapter commences with describing the basic concepts used in discussions of automated contract formation. It presents the terms "electronic agent" and "user," "output" and "autonomy," including their practical application. Next, it raises a number of preliminary arguments relating to the relationships between "contractual capacity" and "intention," as well as between "attribution" and "liability." It critically revisits the concepts of "autonomy" and "unplanned output." The aim is to distance the discussions from a number of common arguments frequently made in legal literature and inject some common-sense into the analysis.

The chapter continues with a discussion of the main theories relating to the validation of automated transacting. Attempts at endowing the computer with legal capacity are discussed.

\(^{11}\) L E Wein, above at note 10 at 129, discussing the inadequacy of rules that apply psychological concepts such as "consent" or "promise" to cases involving automated processes.
and criticized. The chapter illustrates the pitfalls of using the “agent” metaphor. Subsequently, it examines the existence of intention in automated transactions and the possibility to subsume computer-generated contracts under the objective theory of contract.

This and the following chapter are concerned with attributing electronic acts to persons. This chapter opposes any attempts at disassociating the human person from acts performed by means of a computer. It asks: is a human person responsible (i.e. bound by) for computer-generated statements? The next chapter attempts to establish the person behind such statement. Both chapters focus on the provenance of contractual statements, not on their electronic form.

This chapter commences two threads that recur at later stages: contractual statements are not only transmitted but also processed by computers and websites can often be analogized to vending machines. The latter comparison is one of the few instances where an analogy actually assists in the practical application of contract formation principles in the novel transacting environment.

Basic Concepts

[3.3] The following sections introduce the basic concepts used in legal discussions relating to the automation of the contract formation process.

Electronic Agent

[3.4] Electronic agents can be defined as “software that assists people and acts on their behalf.”\(^\text{12}\) The terms “agent,” “intelligent agent” or “software agent”\(^\text{13}\) are also used in reference to applications like message transfer agents and browsers. Not all programs encompassed by the term are relevant for this discussion. The focus is on programs directly facilitating the transaction process. Depending on the definition, “electronic agents” range from search engines, neural networks, the Internet itself to Microsoft Word’s office assistants. “Electronic agents” are synonymous (for all legal purposes) with automation or the generation of output by computers.

There is no clear distinction between “electronic agents” and “computer programs.” All electronic agents are computer programs\(^\text{14}\) but not all programs are agents.\(^\text{15}\) It is also difficult


\(^{13}\) S Gonzalo, Electronic Commerce Legal Issues Project (“ECLIP”) A Business Outlook at Electronic Agents, Brussels 2000, at 3

\(^{14}\) see e.g. definition in UETA, Section 2 (6)

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to state whether "electronic agents" are hardware or software. Hardware affects the speed and processing power, but is not decisive for the quality and content of the output. There is not need to differentiate between hardware and software as one cannot operate without the other.

Electronic agents are contrasted with faxes and vending machines. Facsimile is a technology with preset logic,\textsuperscript{16} based on predictable computer behaviour. Apart from a minimal amount of signal processing, it is not programmed to change the transmitted data or generate communications of its own. The same can be said about vending machines, which operate in accordance with a simple set of instructions. Such "contrast" is no longer possible in the case of Automated Teller Machines ("ATMs") that consist of a relatively simple user interface, the ATM machine itself and a complex information system, which often encompasses a neural network and multiple databases. The same can be said of every payment-processing terminal at the point of sale. Individual components of information systems may not display high levels of sophistication. It may be difficult to establish whether a system as a whole is an electronic agent, or only one of its components deserves this label.

The most-cited properties of electronic agents are: social ability, reactivity, pro-activeness and -autonomy.\textsuperscript{17}

**Autonomy**

[3.5] Problems of attributing computer-generated output to the user seem to arise only in the case of "autonomous" systems.\textsuperscript{18} "Autonomy" is the most controversial characteristic: "[a]n agent's behaviour can be based on both its own experience and the built-in knowledge used in constructing the agent for the particular environment in which it operates. A system is autonomous to the extent that its behaviour is determined by its own experiences."\textsuperscript{19} "Autonomous" machines learn through experience, modify their own programs and devise new

\textsuperscript{15} S Franklin, A Greasser, Institute for Intelligent Systems, University of Memphis, *Is it an Agent or just a Program?: A Taxonomy for Autonomous Agents*; Proceedings of the Third International Workshop on Agent Theories, Architectures, and Languages, available at www.msci.memphis.edu/~franklin/AgentProg.html


\textsuperscript{17} M J Woolridge and N R Jennings, *Applications of Intelligent Agents in Agent Technology*, Heidelberg 1998, p 4-5


instructions. "Autonomy" is often linked to artificial intelligence, implying the ability to mimic human behaviour. Electronic agents can manifest attributes of a "believable" character, to the point where it may become difficult to distinguish whether one deals with a person or an automated system. When the system is so user-friendly and responsive that the counterparty has no awareness of the mediating technology, such system becomes transparent. The replication of human responsiveness and the non-deterministic mode of operation leads to theories that autonomous systems have volition and make their own decisions.

Neither "electronic agent" nor "autonomy" has a universally accepted meaning or technical definition. Legal literature and model regulations use the terms loosely and fill them with different content. Effectively, both can be used to denote the generation of contractual statements by computers, the conclusion of contracts on websites or the automation of the contract formation process in general.

User

[3.6] Users of electronic agents are usually distinct from the persons who designed and programmed them. For the purposes of the discussion, "user" refers to the person deploying the agent, i.e. deriving economic benefit from its operations. Deployment encompasses control based on ownership or licensing arrangements. "Users" of electronic agents are usually web-merchants who maintain websites with transactional capabilities. Electronic agents can be deployed at all stages of the transacting process, by both parties of the transaction. Electronic agents used by the customer, e.g. shopping bots, are usually less complex than those deployed by the web-merchant.

Output

[3.7] The term "output" denotes the product of computer operations. Computer-generated output is a function of initial programming and subsequent input. It can take the form of email messages, pop-up windows or the real-time creation of web-content. Whatever its technical manifestation, the output may constitute an offer or acceptance and bring about the formation of

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20 Allen & Widdison at 27; E Weitzenboeck, above at note 18 at 208
21 Greenstein & Feinmann pp 331-333
22 E Weitzenboeck, above at note 18 at 206
23 Toh See Kiat p 32
24 L E Wein above at note 10 at 105, 106
25 see e.g., www.mysimon.com
a contract. In practical terms, output is whatever the person interacting with the web-merchant sees on his or her screen. In legal terms, output may constitute a manifestation of intention.

**Practical example: websites**

[3.8] Most websites fit under the definition of "electronic agent." Their practical functioning illustrates the automation of the contract formation process. In on-line transactions, goods are ordered by means of email messages, order forms and virtual shopping carts. Customers browse through menus and select products by clicking their images or descriptions. After address and payment data are provided, websites calculate the price and shipping costs. Finally, confirmations presenting the items ordered and the total price are displayed or sent to the relevant email accounts.

The described interactions are not the result of large back-offices with hundreds of employees answering emails, checking the contents of virtual shopping carts and order forms. Websites are interfaces to complex, multi-tiered systems consisting of powerful servers, networking equipment and giant databases. A typical e-commerce system is composed of three types of servers: a web-server, an e-commerce server and a database server. The above structure can be described as the back-end of an electronic commerce system. The front-end is the website itself: the graphical user interface consisting of HTML files hosted on the web-server. Websites display the output of the e-commerce engine and the database, while also serving as a means of collecting user input.

Electronic agents operate on the front-end as well as at the back-end of virtual shops. At the front-end, Dynamic HTML constitutes the direct source of interactivity by controlling the behaviour of web-pages and responding to user events. Client-side scripts compute the cost of the order, taxes and shipping charges. Other examples include the display of messages when the mouse is positioned over pre-defined areas or after successful order submission.

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31 D Flanagan, above at note 30 p 12

32 Deitel, Deitel & Goldberg p 181
Websites are the product of multiple independent components operating at various levels of e-commerce systems. It could be claimed that websites consist of multiple interdependent electronic agents or the whole system can be regarded as one electronic agent. The second approach appears preferable as from the perspective of the person interacting with the website, he or she deals with one system. Technically, transactions occur via websites, not with websites. Websites are only interfaces, they display content that constitutes the output of computer operations occurring on the e-commerce server.

Preliminary Arguments

[3.9] A number of preliminary arguments is made before reviewing the three main theories used to validate automated contract formation.

Validity and Attribution

[3.10] The validity of automated, or computer-generated, contracts is being questioned on two grounds: lack of intention and/or lack of contractual capacity. The attribution of computer-generated output to the computer derives not only from the alleged need to validate the automated contracting but also from the need to protect the user of the computer from the computer’s unplanned or incorrect operations. Problems of capacity, intention, attribution and liability are therefore closely interrelated.

Capacity and Intention

[3.11] Capacity and intention are the prerequisites of a valid contract.\textsuperscript{33} The principle remains the same in on-line transactions. Computers, however, have no contractual capacity and cannot form contracts. Furthermore, “intention” is a purely human phenomenon. Allegedly, if there are no humans directly involved in automated transactions, there is no “intention” and therefore no contract.

The relationship between “contractual capacity” and “intention” must be clarified. “Capacity” and “intention” are not synonymous. A contract can be invalid either due to lack of intention or capacity. The law grants contractual capacity to all human persons of a certain age and to corporations which meet statutory requirements.\textsuperscript{34} As only human beings “have”

\textsuperscript{33} \textit{Carter on Contract} [02-001]

\textsuperscript{34} \textit{Carter on Contract} [16-470]
intention, non-human entities with legal capacity are represented by human persons: the intention of the human representative is attributed to the corporation.\textsuperscript{35}

Contractual capacity does not, however, imply the existence of intention. Similarly, the existence of intention does not imply or justify legal personality. Efforts to derive intention from the autonomous character of computers are therefore pointless because (a) intention is not a prerequisite of capacity and (b) for a contract to be formed and enforceable, intention must be accompanied by capacity. Capacity and intention are two separate prerequisites; one does not derive from the other. The absence of intention cannot be "cured" by the grant of legal personality.

\textit{Attribution and Accountability}

[3.12] The "unattended" operation of computers often leads to the conclusion that agreements are no longer generated through computers but by computers.\textsuperscript{36} The question, "are computer-generated contracts legally binding?" is followed by "if so, on whom are they binding?" The intermediation of the autonomous computer implies that its operations are no longer regarded as acts of its user. Accordingly, their output cannot be attributed to their users. This raises questions of accountability: one is responsible only for one's own acts, unless the law prescribes liability for the acts of third parties. As computers cannot be parties and be liable for the results of their operations a curious situation arises: if the user of the computer user is not automatically liable for the operations of the computer, who is?

It could be assumed that the person who deserves protection from the operations of automated systems is the person interacting with the system, not the person deploying it. Interestingly, literature focuses on protecting the latter, not the former.\textsuperscript{37} If the e-commerce engine malfunctions and displays the incorrect price for a product, can the web-merchant escape liability by claiming system malfunction or computer error? The protection of the user is achieved by attributing the computer-generated output to the machine, which leads to attempts to separate the machine from its human operator.\textsuperscript{38} Such separation is accompanied by a grant of

\textsuperscript{35} R P Austin, \textit{Ford's Principles of Corporations Law}, 12\textsuperscript{th} ed, Sydney 2005, paras 13.010 - 13.050


\textsuperscript{37} see: UETA Section 10, CUECIC Art 14; L E Wein, above at note 10 at 106, 107; \textit{Allen & Widdison} at 36

\textsuperscript{38} 1 R Kerr, above at note 36 p 16

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legal capacity. Theories that sever the link between incorrect computer-generated output and the computer’s user encounter difficulties in re-associating the correct output to such user.

This reasoning forms a vicious circle: if the computer is regarded as a separate entity, the user is protected from all incorrect computer-generated output, but (a) it becomes necessary to grant legal personality to the computer (otherwise there is nobody to be held accountable for unplanned output) and (b) it becomes difficult to attribute the correct input to the user.

Confining “Autonomy”

[3.13] Descriptive terms like “intelligent,” “autonomous” or “unattended” overshadow the fact that electronic agents are nothing but computer programs. Before proceeding with the discussion, four points must be made.

First, electronic agents deployed in on-line transactions must not be compared to software operating planes or pacemakers. The focus is on the contractual aspects of electronic agents, not on “their” liability in tort. Theories built around the disastrous consequences of intelligent machines “gone mad” are described elsewhere.39

Second, irrespective of the non-deterministic character or sophistication of a computer, “autonomy” derives from original programming. A system is autonomous because it was programmed to be autonomous. It did not self-acquire this feature. The same argument applies to the “unattended” manner of operation. Computers may operate on the basis of self-learning algorithms, those algorithms, however, were created by humans. Systems are “autonomous” only in the sense that they operate without the necessity of constant supervision. It is a human person who controls, operates, initiates and ultimately deactivates an electronic agent.40

Third, regarding “intelligence” and the resulting ability to interact with their environment, it must be remembered that electronic agents are designed to be user friendly and mimic certain human behaviours. Interactivity and complexity of response are not synonymous with intelligence. For a system to possess real intelligence, it must pass the Turing test,41 i.e. it

39 I R Kerr, above at note 36 p 9
41 Toh See Kiat p 47; Turing proposed that a machine, in order to be regarded as a functional equivalent of a human being, would need to be able to converse remotely in such a way as to make it impossible for a
must *understand* the underlying transaction and the reactions of the other party. Most importantly, intelligence is not a prerequisite for intention.

*Fourth*, for contract law purposes, one must distance oneself from all arguments based on concepts like *respondeat superior*, vicarious liability, slavery, employment or any other institutions that impose liability for the acts of *another person*. It is irrelevant, whether a “human master is indispensable to assigning legal liability to an automated system.” The adoption of any of the aforementioned institutions would constitute an implicit recognition of the computer’s personhood.

**Risk of “Unplanned” Output**

[3.14] Software is by nature unreliable. Correct programming and error-free input do not always produce correct output. Malfunctions are statistically inevitable. It is also impossible to control all input and the environment computers operate in. The risk of malfunction and the difficulty of establishing its source increase proportionately with the sophistication of the system.

Computers provide product data, calculate prices and shipping charges, exposing their users to potential errors each step of the way. As one author commented on e-commerce: “the speed with which a retailer can lose several million pounds can be matched in no other retail medium.” Three cases serve as an example. Argos refused to honour orders made through its on-line shop for television sets on sale for £2.99 instead of 299.99. Eastman Kodak advertised a digital camera on their UK website at £100 rather than £329. Digilandmall.com offered professional printers for 66 S$ instead of S$3000.

Incorrect output must be distinguished from unplanned output. Computer-generated output may be incorrect, it may also be correct but unplanned or unwanted in that it does not

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42 L E Wein above at note 10 p 105
43 C Karnow, above at note 39 at 161
44 R Kerr, above at note 36 at 10
45 Ph Rees, R Calleja; *News Update – E-commerce – Offers you can’t refuse*, (2002) 3 IJECL & P Ecom 1.4 at 1
46 D Thompson, *Contracting over the Internet – Argos’s Failure to honour internet Orders* (2000) 53 IJECL & P Ecom 1.1 at 1
47 Ph Rees, R Calleja, above at note 45 at 1
48 Chwee Kin Keong v Digilandmall.com Pte Ltd [2004] SGHC 71
reflect the original intention of its user and results in an unfavourable transaction. Unplanned output may derive from programming errors or from unpredicted input. It may also be the yield of a correct operation of the program, especially in the case of non-deterministic, distributed systems. Unplanned output need not be the product of a malfunction.\(^{49}\) From a third party perspective, output produced by a malfunction may be indistinguishable from output produced by the correct operation of the program. The display of an "incorrect" price may be the result of a programming error but may also be the product of a self-learning algorithm, which "decided" to grant discounts to all customers. Unplanned output is therefore not synonymous with incorrect output.

Revision of Existing Theories

[3.15] The following sections critically examine the three main theories used to validate automated contracting. The first attempts to separate the computer from its user and endow it with legal capacity, the second takes recourse to principles of agency law and implicitly regards the computer as a separate entity, the third denies the existence of intention in computer-generated transactions.

The computer as a separate entity

[3.16] No attempts were made to treat vending machines as persons. The situation remained unchanged with the emergence of EDI, which not only introduced a greater complexity of interactions but involved automated systems on both ends of the transaction. Only once computers became able to generate complex output and automation became common outside of closed networks, some concluded that it is time to acknowledge the separate existence of the machine.\(^{50}\) Such conclusion was usually based on autonomy, which justified a quantum leap from machine to personality:

"When computers are given the capacity to communicate with each other based upon pre-programmed instructions, and when they possess the physical capability to execute agreements on shipments of goods without any human awareness or input into the agreements beyond the original programming of the computer's instructions, these

\(^{49}\) I R Kerr, above at note 36 p 32

\(^{50}\) Allen & Widdison at 39
computers serve the same function as similarly instructed human agents of a party and thus should be treated under the law identically to those human agents. 51

Or, as electronic agents are given greater autonomy

"there could become a point where it would be legally appropriate to give autonomous agents the status of legal persons, particularly if it becomes more easy to attribute some form of identity to the intelligent agent." 52

In sum, computers deserve a separate existence upon attaining a certain level of complexity. 53

Unquestionably, theories based on moral and social considerations are "jurisprudentially exciting." 54 From a contract law perspective, a philosophical discussion as to when computers should be recognized as separate entities is not necessary. Technical sophistication translates into the capability to execute complex transactions. It does not, however, translate into legal capacity. The electronic agent's "capacity" is limited to following instructions. Complex output or unattended operation is not synonymous with intention or capacity. It is not a question of establishing what computers must be able to do for the law to treat them as persons. 55 There is no degree of autonomy that would enable the computer to become a separate person and generate its own acts and no threshold beyond which computers deserve legal recognition. The existence of such "threshold" is inconsistent with the view that the law must remain technology neutral. Capacity would effectively become a function of technology. The fact that electronic agents can perform the same functions as human agents, does not imply that they should be treated like human agents.

Moreover, as computers do not "have" assets, it does not matter whether they have legal personality and whether they can be sued. 56 The only asset susceptible of economic evaluation is

52 E Weitzenboeck, above at note 18 at 214
53 see also: L B Solum, Legal Personhood for Artificial Intelligences (1992) 70 NCL Rev 1231
54 L E Wein, above at note 10 at 152
55 M Bain, E-commerce Oriented Software Agents: Legalising Autonomous Shopping Agent Processes (2003) 19 CLSR 5; Allen & Widdison at 37
56 J-F Lerouge, above at note 40 at 410
the software and/or hardware, which is difficult to identify in the case of distributed systems or multi-agent environments.\textsuperscript{57} After all, computers are owned by their users...

Separation theories are based on a misunderstanding. Allegedly, entities become legal persons when the law attributes legally meaningful communications to them: “[l]egal persons are those entities that produce legal acts.”\textsuperscript{58} The law does not, however, attribute the output to the computer - it only establishes that such output is valid and enforceable.\textsuperscript{59} The validity of automated transactions does not imply the legal capacity of the automaton. Computer-generated output is attributed to the merchant who operates the website, not to the e-commerce server.

The validity of automated contracting must be distinguished from capacity. Capacity would assume importance only if the accountability for the computer’s unplanned operations had to be established. Questions of accountability, however, could only arise if the computer was a separate person. Separation theories create circular reasoning: computer-generated output must be attributed to the computer, therefore the computer must be endowed with legal personality. Problems of attribution arise only if the computer is regarded as a separate person and therefore a justification for the attribution of its output to its user is needed. If there is no separate legal entity, problems of validity and attribution...disappear!

Separation theories also disregard the fact that capacity is not synonymous with intention. To form contracts, the computer would have to be represented by a human person: on-line contracts would be made “through the instrumentality of human beings.”\textsuperscript{60} A human agent would be acting on the computer’s behalf. The absurdity of this outcome requires no further comment.

The Computer as an “Agent”

[3.17] Comparisons with the agency relationship rely on the fact that “computers only replace what human agents are normally doing.”\textsuperscript{61} Human agents often perform tasks in a perfunctory

\textsuperscript{57} Greenstein & Feinman p 335
\textsuperscript{58} Allen & Widdison at 38
\textsuperscript{59} MLEC, CUECIC, UETA acknowledge the validity of automated contracting without subsuming the “electronic agent” or the “automated system” under the definition of “person” or “intermediary”, see: MLEC Art 2 definition of “originator” and “intermediary” and Guide to Enactment para 35; CUECIC Art 4 definition of “originator” and “automated message system;” UETA Section 2, definition of “electronic agent” as “computer program”
\textsuperscript{60} Carter & Harland [857]
\textsuperscript{61} J-F Lerouge, above at note 40 at 408
and stereotypical way, electronic agents can be programmed to respond with a complexity close to human. Agents act on behalf of principals and have the power to alter the legal position of the principal. References to agency principles remain a persistent trend.

Agency appears to provide a perfect theoretical framework for the automation of contracts: agents are instruments of the principal, intention and contractual capacity belong to the latter, not the former. As agency relationships may arise by operation of law the agent’s consent or the principal’s willingness to have his or her position changed by its actions are not absolute prerequisites.

Numerous theoretical objections can be raised against such approach, starting with the statement that there being no two separate persons, there can be no agency relationship. Temporarily disregarding this fallacy, the following sections proceed on the assumption that agency principles do apply. This operation demonstrates the pitfalls of separating computer-generated output from the computer-user. Attribution and validation based on agency principles are only possible if the computer is regarded as a person, which leads back to separation theories.

Authority

[3.18] Proponents of agency principles support their arguments with the constructs of actual and apparent authority. “Authority” is a legal power held by the agent to perform acts directly affecting the principal’s legal position. “Actual authority” derives from a principal’s consent, “apparent authority” results from the operation of law. If a person who by words or conduct has

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62 L E Wein, above at note 10 at 147
67 G H L Fridman, above at note 64 pp 98, 119
69 I R Kerr, above at note 36 p 35
70 Bowstead & Reynolds, above at note 66 p 6
allowed another to appear to be his agent is treated "as if he had in fact authorised the agent to act in the way he has done."\(^{71}\)

Applying the above rules to automated contracting, users confer power by putting computers into operation.\(^{72}\) "Authority" is compared to original programming: if the computer is programmed to accept certain input and produce certain output it can be said that it has authority to perform operations to produce this output. If the agent is equipped with a self-learning algorithm and operates "autonomously," its operations can be compared to actions performed on the basis of a general authority. The principal decides how much discretion to leave to his representative. By creating the appearance that computers are operating under their authority, they effectively confer power to represent them.

As "apparent authority" relies on the perception of third parties,\(^{73}\) the agent's acts can be attributed to the principal only if third parties think that they are transacting with an agent. The more sophisticated the agent, however, the more transparent its operations. Customers associate websites with the merchants who operate them. Websites are not perceived as separate entities. Third parties have no reason to believe they are transacting with an agent, it is therefore counter-intuitive to assume that they are analysing websites in terms of authority. Confining the application of agency principles to the external aspects of the agency relationship is problematic: third parties must assume the existence of two entities, principal and agent. If there is no perceived division into principal and agent, there can be no appearance of authority.

Unplanned Output

[3.19] Agency theories display further shortcomings when users attempt to limit their liability for unplanned output. The latter is compared to an excess of authority: "[w]hat happens if the electronic agent has operated in excess of its implied authority when it functioned in a particular manner so as to execute the instructions of the person who initiated his use?"\(^{74}\) This statement is illogical: if an electronic agent executes the instructions of its user it cannot be exceeding its authority. If it operates on the basis of its programming, it remains within the bounds of its authority. The conclusion of unplanned or unfavourable transactions is therefore not synonymous with an excess of authority.

\(^{71}\) G H L Fridman, above at note 64 at 99; see also: Freeman & Lockyear v Buckhurst Park Properties (Mangal) Ltd [1964] 2 Q B 480 at 503 per Lord Diplock

\(^{72}\) I R Kerr, above at note 36 p 35 "All that matters is that the person initiating the device had in fact consented to the operations of the electronic device."

\(^{73}\) Bowstead & Reynolds, above at note 66 p 8

\(^{74}\) E Weitzenboeck, above at note 18 at 213

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It is, however, contended that the user’s responsibility for computer-generated output should be excluded where the computer operations “did not result in representations that allowed it to appear to the outside world as though the device was operating on her behalf.” On whose behalf was it operating then? If it is posited that the agent was operating on its own behalf, one returns to separation theories. Assumedly, the aforementioned statement refers to apparent authority: the agent-generated output must appear to be within the scope of authority. This approach, however, imposes the burden of investigating back-office operations on the person least able to do so. As long as the output “fits” the commercial character of the website, the web-merchant is liable. Only when the output precludes reliance on the appearance of authority can the web-merchant’s liability be excluded.

The ability to change a principal’s legal position is not a question of the agent’s autonomy. A simple bot can bind a web-merchant as effectively as an application comprising a self-learning algorithm. The only difference may lie in the difficulty of establishing whether the unplanned output was the product of a malfunction or an unexpected but correct operation. The principal’s liability does not depend on the intelligence or education of its human representative. The characteristics of the agent do not change the liability of the principal. If the principal grants a general authority he or she is responsible for all resulting transactions. An identical result should be achieved when the user employs a sophisticated system and leaves it discretion as to how to transact. Principals must bear the risk of inadequate representation. After all, it is easier to limit the scope of permitted operations of a computer than of a human being. It is in the user’s interest to ensure correct programming and the incorporation of technological safeguards precluding contracts above a certain value or on particular terms.

Ratification

[3.20] While the focus is generally placed on attributing incorrect or unplanned output to the computer, the attribution of correct output to the user is justified on the basis of ratification. This can result in abuse: the user/principal can decide whether the output is advantageous in retrospect and selectively ratify some transactions. Practical considerations aside, ratification

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73 I R Kerr, above at note 36 p 38
76 J Sommer, above at note 6 at 1184
77 Bowstead & Reynolds, above at note 66 p 3
78 Greenstein & Feinmann p 346
79 I R Kerr, above at note 36 p 38
80 Bowstead & Reynolds, above at note 66 p 54
assumes the existence of two separate entities and requires that the existence of the principal is known to the third party.

A theoretically correct solution must acknowledge that computers do not perform acts of their own. If there are no two independent legal entities, there is no need to establish a link between them – whether in the form of apparent authority or along ratification principles. Human agents are responsible for their actions and warrant their authority: if they exceed their authority, they are personally liable.\(^{81}\) Agency theories are based on wrong premises: that computers are a separate rights-and-duty bearing entities and that persons transacting with computers perceive them as separate from their users.

Search for Intention

[3.21] The automation of the contract formation process may lead to the conclusion that there is no human intention in the transaction or that intention is that of the computer. Allegedly, computer output is the product of human intention only when the computer is a passive conduit or when it acts upon “pre-programmed instructions, which can only be altered by the human trader.”\(^{82}\)

Three arguments can be raised to counter these theories. The first acknowledges the intermediation of the computer but focuses on the “remote,” or prior, intention of its human user. The second relies on the objective approach to contractual intention. The third regards the computer as a tool. All three treat the operations of the agent as actions of its user thereby obviating the artificial process of attributing computer-generated output to computer users.

Remote Intention

[3.22] Allen and Widdison provide examples of human involvement in automated transactions.\(^{83}\) In their scenario, the seller makes a computer available in a way that prospective parties can place orders with it. When asked the price of widgets, the computer calculates the price on the basis of a self-designed algorithm. The buyer places an order. The computer generates words that evince an intention to accept. But whose intention? The authors suggest three possibilities:

\(^{81}\) G H L Fridman, above at note 64 p 219
\(^{82}\) Allen & Widdison at 48
\(^{83}\) Allen & Widdison at 31
1. the seller’s computer,
2. the seller’s, or
3. the intention of the seller albeit embodied in the computer program.

Regarding option (1), the authors contend that as computers cannot be parties capable of expressing intention, there can be no contract. One can agree without further comment. Option (2) is discarded on the ground that the seller never knows of the transaction. Countering this argument: the seller *does not want to know* of the transaction. The very purpose of automation is to relieve web-merchants from personally overseeing the contracting process. The fact that the seller does not know about a particular transaction does not mean that he or she had no intention of entering into it.84 The same accusation could be made with regards to contracts formed by human agents. Principals need not be aware or specifically intend *every* contract concluded by the agent.

Option (3) is criticized as unrealistic when agents operate autonomously. The authors ask: is it “more problematic to deem that an autonomous computer is capable of forming a relevant intention, or claim that the human trader has a specific intention when that claim is demonstrably untrue?”85 This view must be strongly opposed. Reminiscent of attempts to associate autonomy and legal capacity, it ties the existence of intention to the technical complexity of a computer. Intention relates to the user’s ability to operate and control the computer. In that sense, it is embodied in the computer program or manifested by the operations of the computer.

Most importantly, intention exists at the moment of formation. Although the minds need not meet in perfect simultaneity,86 it can be assumed that the problem does not arise as intention persists as long as the computer or vending machine is held out.

To further explain the point, it must be noted that “intention” is often equated with “decision.”87 The term “decision” is also used in technical literature in reference to the execution of commands based on the occurrence of a condition.88 Electronic agents are allegedly “entirely free to decide when transactions may occur and to negotiate the terms of the

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84 *Nimmer & Towle* para 5.03[3]
85 *Allen & Widdison* at 34
86 *Kennedy v Lee* 36 Eng Rep 170 (Ch 1817); J M Perillo, *The Origins of the Objective Theory of Contract Formation and Interpretation*, 69 Fordham L Rev 427 at 439, 440
87 L E Wein, above at note 10 at 122
88 *Deitel, Deitel & Goldberg* p 194
contract according to the way they were programmed.\(^{50}\) [my emphasis] This statement is illogical: how can a computer be "free to decide" if it operates in accordance with earlier instructions?

Electronic agents do not make their "own" decisions, but execute earlier human decisions within the limits of pre-set parameters.\(^{90}\) The original decision consists in programming and deploying the agent and need not relate to all discrete future transactions.\(^{91}\) Technically, computers "make" individual decisions as to whether and when to enter into particular transactions. Despite the absence of human involvement at the time of formation, intention is traced back to an earlier moment. Computers are programmed to dynamically react to specified input. Automation "enables transactions to be made precisely at the size and exactly at the time needed for the particular transaction."\(^{92}\)

The "remoteness" of intention is a consequence of the interval between the programming and the generation of the final output. Programming can be equated with the making of a decision to enter into transactions. The parameters of the transaction are set at the time of programming and consist in the repetition of a specific sequence or vary in accordance with future events. The remoteness of human involvement does not sever the link between the user of the computer and the output generated by the computer. The "autonomy" of the agent's operations does not change anything in this regard. Irrespective of its complexity, every operation of the computer derives from an earlier human act.\(^{93}\)

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\(^{50}\) J-F Lerouge, above at note 40 at 405 The same author, while commenting on section 112 (b) of UCITA, critically observes that "speaking of assent by electronic agent is a heresy" at 423


\(^{91}\) See UETA section 14 and comment 1 thereto: "When machines are involved, the requisite intention flows from the programming and the use of the machine." A similar view was expressed by A Liegl, P Brautigam, A Leupold, in: Law of International On-Line Business, A Global Perspective, London 1998, p 394


\(^{93}\) M Gimmy, Vertragsschluss im Internet, in: D Kroeger, M Gimmy, Handbuch zum Internetrecht, Berlin 2000, p 86; "A declaration that is generated automatically in accordance with fixed rules may always be viewed as a declaration of intention on the part of the operator." German scholars recognize so-called "computer-declarations" ("Computererklärung"): manifestations of intention generated by information systems.
Objective Intention

[3.23] The search for intention can be called off if technological complexity and remoteness of human involvement are disregarded. The existence of agreement is determined on the basis of external manifestations of intention.\(^\text{94}\) Courts wont explore the human mind or trace back the statement’s mental origin.\(^\text{95}\) The test is objective: apparent intention suffices to bind the alleged offeror. The existence of intention cannot be questioned on the ground that the decision to contract was formed with the assistance of a computer. The initial programming or the complexity of the algorithm are equally irrelevant as the subjective state of mind.

A reasonable addressee of a statement does not analyse it in terms of authority or autonomy. The output generated by an autonomous super-computer may be identical to output created without any computer participation. The origin of a statement need not be apparent from its contents. Quite the opposite: super-computers will most likely generate statements identical to those “generated” by humans! The question is whether a reasonable person would think the other party intends to contract on the terms provided.\(^\text{96}\) A reasonable person will not be able to tell whether the computer only served as a conduit, a means of manifesting intention or whether it generated the statement on the basis of a self-learning algorithm.

Intention may be expressed in any manner – also by means of automated systems. The objective theory disregards the decision-making process behind the statement and – most importantly – the fact that a statement was not only transmitted but also generated by a computer. Both occurrences are transparent to the other party and therefore irrelevant.

The computer as a tool

[3.24] An alternative approach regards computers as tools. It relies on the objective theory of contract, disregards technological complexity and preserves technological neutrality. Automation and autonomy do not change the fact that it is the human user who initiates and controls the computer.\(^\text{97}\) This reasoning underlies the approach adopted in UETA\(^\text{98}\) and reflects in the scarce case law on the subject. Two observations must be made with regard to the latter. First, the validity of automated transactions was never questioned. Second, it must be admitted that the cases concerned relatively simple automatons, not highly complex “contracting

\(^{94}\) E Weitzenboeck, above at note 18 at 219

\(^{95}\) Cheshire, Fifoot & Furmston p 29; Carter on Contract [01-090]

\(^{96}\) P Atiyah, Essays on Contract, Oxford 1990, p 21

\(^{97}\) Allen & Widdison at 46

\(^{98}\) see: UETA Section 2, comment regarding subsection (6) “electronic agent”.

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machines.\textsuperscript{99} Most cases derive from the US and involve insurance companies, ATMs, coin operated lockers and ticketing machines.\textsuperscript{100}

In \textit{State Farm Mutual Insurance Co v Bockhorst}, computer errors were regarded as errors of its human controllers.\textsuperscript{101} The fact that the data processing was carried out by a computer did not affect the company’s responsibilities for errors and oversights. As it is human beings who instruct computers, “if the computer does not think like a man, it is a man’s fault.”\textsuperscript{102} Because the defendant company failed to provide correct input, the resulting output was not the consequence of a computer error.\textsuperscript{103} If the human operator fails to program the computer appropriately or fails to provide correct data, he or she cannot claim that his or her action was the result of “unyielding and unimaginative processes of a computer.”\textsuperscript{104} Similarly, without any attempts at anthropomorphosis, the court in \textit{Thornton Shoe Lane Parking}\textsuperscript{105} stated that the machine was nothing else but a presenter of the defendant’s offer. All arguments converged on the same conclusion: law protects those who reasonably rely on the communications emanating from the computer.

Remaining under the permanent control of their users, they are tools deployed for the purpose of entering into transactions of varying degrees of complexity.\textsuperscript{106} The electronic agent is nothing more than a “booking clerk in disguise.”\textsuperscript{107} From a contract law perspective, it should not matter whether merchants conduct business with the assistance of human employees or via computerized systems. Treating the computer as a tool “puts the risk of unpredicted obligations on the person best able to control them – those who program and control the computer.”\textsuperscript{108} This approach encourages diligent programming and supervision.\textsuperscript{109} Anticipating objections that it

\textsuperscript{99} Cushing v Rodman 82 F 2d 864 n29 (DC Cir 1936); Child’s Dinning Hall Co v Swingler 197 A 105 (Md 1938); Seattle v Dencker 108 P 1086 (Wash 1910)

\textsuperscript{100} See: Bernstein v Northwestern National Bank in Philadelphia 41 A2d at 462; American Meter Co v McCaughn 1 F Supp 753 (E D Pa 1932); Marsh v American Locker Co 72 A 2d 343 (NJ Super Ct 1950); Ellish v Airport Parking Co of America 345 NYS 2d 650 (NYAD 1973); Lachs v Fidelity & Casualty Co of NY 118 NE 2d 555 (NY 1954)

\textsuperscript{101} State Farm Mutual Automobile Insurance Co v Bockhorst 453 F 2d 533 (USCA 10th Circuit 1972)

\textsuperscript{102} State Farm Mutual Automobile Insurance Co v Bockhorst 453 F 2d 533 at 536

\textsuperscript{103} A similar situation arose in Chwee Kin Keong v Digilandmall.com Pte Ltd [2004] SGHC 71

\textsuperscript{104} State Farm Mutual Automobile Insurance Co v Bockhorst 453 F 2d 533 at 537

\textsuperscript{105} Thornton v Shoe Lane Parking Ltd [1971] 2 QB 163

\textsuperscript{106} Chissick & Killman p 77

\textsuperscript{107} Thornton v Shoe Lane Parking Ltd [1971] 2 QB 163 at 169

\textsuperscript{108} Allen & Widdison at 46; see also: M J Radin, \textit{Humans, Computers and Binding Commitment} (2000) 75 Ind L J 1125 at 1128

\textsuperscript{109} I R Kerr, above at note 36 p 31
effectively equates a hammer with a neural network, it can be assumed that this is a small price to pay for contractual certainty, the preservation of the basic theories underlying contract law and, last but not least, the avoidance of creating a separate legal regime for automated transactions. Most importantly, the law focuses on the output of the tools operations, not on the complexity of the tool. The user is responsible for the computer – even if the computer "behaves badly."\footnote{eBay Inc v Bidder's Edge Inc 100 F Supp 2d 1058 (ND Cal 2000)}

**Protective Mechanisms**

[3.25] Computer users must bear the consequences of malfunctions and programming errors. By initiating the computer, they accept that contracts concluded by the computer are binding on them. Such approach is reflected in most model regulations: acts of the computer are attributed to its user.\footnote{MLEC Art 13, this approach is also implicit in CUECIC and UETA, which do not provide special attribution rules apart from admitting the possibility of forming contracts by automated means, see UETA Section 14 and CUECIC Art 12} None of the model regulations creates a special liability regime for automated transactions. Is it fair, however, to hold users liable for all unplanned or incorrect computer-generated output? The risk of malfunction and propensity of input errors create the necessity to provide protective mechanisms for both users of the computer and the persons transacting with them.

**Protecting the User**

[3.26] The protection of the user does not require the separation of the computer or recourse to agency principles. Protection is granted by the principles of unilateral mistake,\footnote{Hartog v Colin Shields [1939] 3 All ER 566; Smith v Hughes (1871) LR 6 QB 597} which can be adopted to encompass computer errors\footnote{J Sommer, above at note 6 at 1184} or, alternatively, on the basis of lack of contractual intention.\footnote{Hartog v Colin Shields [1939] 3 All ER 566 at 568; Taylor v Johnson (1983) 151 CLR 422} Where the other party should be reasonably aware that a statement does not represent the intention of its maker, that party is in the best position to reduce the costs of unexpected obligations.\footnote{Allen & Widdison at 46} One cannot legitimately expect to take advantage of appearances when the "actual reality of the situation is starkly obvious"\footnote{Chwee Kin Keong v Digilandmall.com Pte Ltd [2004] SGHC 71 at 105} or "snap up" offers which cannot reasonably represent the intention of their makers.\footnote{Tamplin v James (1880) 15 Ch D 215; see generally: Ter Kah Leng, Legal Effects of Input Errors in eContracting (2006) 22 CLSR 157-164}
Problems arise when computer-generated output remains within the bounds of commercial reasonableness. The Internet is famous for commercial offers bordering on absurdity. It may be impossible to draw a line as to what constitutes a reasonable transaction. If the output is such that the other person has no reason to know that it was not intended (i.e., incorrect), the user should be liable. The decision turns on the question: was the mistake apparent to a reasonable man? It was recently noted that the tendency is to extend actual knowledge to deemed or constructive knowledge. It is also claimed that users of electronic agents assume the risk of incorrect or unplanned output, including the cost of “unwanted contracts being concluded by mistake and the cost of the technical tools and procedures employed to reduce the probability of mistakes.” In sum, a difficult balance must be struck between the objective evaluation of contractual intention and the imposition of a minimal investigative burden whether the price displayed is “too good to be true.”

Protecting the other party

Certain mechanisms aim at protecting parties transacting with automated systems. Web-merchants using automated contracting procedures are often required to provide so-called “confirmation screens.” The latter constitute an opportunity to prevent or correct errors from the side of the person visiting the website.

UETA deals with errors in transmission only, errors in the generation of messages are relegated to the principles of mistake. CUECIC, in contrast, specifically addresses input errors in communications exchanged with automated message systems. Absent an opportunity to correct the error, the person interacting with the automated system has a right to withdraw the communication containing the input error, provided a number of conditions are met. CUECIC limits the right to withdraw to input errors only and relegates errors made in the

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118 Corbin para 105


120 see: Chwee Kin Keong v Digilandmall.com Pte Ltd [2004] SGHC 71 per V K Rajah JC at 109

121 S Cavanillas & A Martinez Nadal, ECLIP Project Deliverable 2.1.7 bis “Research Paper on Contract Law,” para 1.2.5 available at www.jura.uni-muenster.de/eclip/eclip_1.htm


123 UETA Section 10

124 CUECIC Art 14
formation process, such as computer malfunctions, to other rules of law. Neither UETA nor CUECIC deal with errors in the generation of contractual statements.

ETA does not introduce the concept of “generation” and does not define “originator” as a person on whose behalf a message might have been generated. Automated contract formation must therefore be validated on the basis of general principles.

The mechanisms of protecting persons transacting with automated systems constitute a subtle modification of the formation procedure. In real-world transactions, parties are generally bound by their manifested intention and are not given the opportunity to correct or retract previously made statements. The provisions dealing with input errors can be regarded as a recognition of the dangers posed by the novel transacting environment, particularly of the cognitive difficulties of web-based transactions. The position of user of the automated system remains unaltered.

Conclusion

[3.28] Automation comports with the objective evaluation of contractual intention and with the possibility to express such intention in any manner. The introduction of “autonomy” as a primitive in establishing the existence of intention and the legal capacity of computers would imply that such intention and capacity come in varying degrees. Contractual capacity cannot be based on computing power or the complexity of an algorithm. There can be no threshold beyond which there is a necessity to establish a link between the computer and its user in order to attribute computer-generated output to the user. No matter how sophisticated, computers are tools, with no possibility of ascribing their output to anyone but those who use them.

Liability for a contractual statement cannot be avoided on the ground that such statement is the output of an incorrect or unplanned computer operation. Disassociating the computer-generated output from the user of the computer creates the need to grant legal personhood to the machine, which in turn necessitates the representation of the machine by a human agent.

Computers may be used to arrive at a particular decision, the resulting output may be communicated by a human person. As humans can manifest computer-generated output, the distinction between generation and manifestation is unwarranted. Contract law is indifferent to the fact that a message was not only transmitted but also generated by an information system.
Contracts cannot be denied effectiveness because of the medium on which they were concluded or because of the way contractual statements originated.\textsuperscript{125}

The term "agent" adds unnecessary complexity resulting from the fact that agency presupposes the existence of two entities. Web-merchants are bound by the output produced by their computers not because the computers are their agents but because they deployed them.

The validity of automated transactions need not result in the separation of machines from their human users. Contract law can accommodate automated contracting by adhering to the objective approach to contractual intention. Users of automated systems can be protected from incorrect or unplanned, output by classic principles of mistake, without the necessity to emancipate the computer.

From a contract law perspective it is irrelevant whether a statement is:

- Generated by a computer, i.e. it is the product of a computer operation
- Manifested by a computer, i.e. the computer acts as a conduit only
- The output of:
  - a correct operation of the computer program
  - an incorrect operation of the computer program
  - a correct but unplanned operation of the computer program.

None of the above circumstances need be apparent from the contents of the statement. It is objectively impossible to determine the existence of an error in generation or transmission, as well as the provenance of the contents displayed on websites.

\textsuperscript{125} This principle underlies practically all model laws: see MLEC Art 5, CUECIC Art 8, UETA Section 7, ETA Section 8
Chapter 4

Identification and Attribution

"... commerce, on a large scale, can prosper only when people can deal confidently with people they have never met and have no reason to trust." ¹

Introduction

[4.1] The previous chapter dealt with intention and automation. It established that computers cannot be parties to a contract and that computer-generated output is always attributable to a person. ² It stated that the automation of the contract formation process does not prevent the existence of intention. This chapter deals with intention and identification. It examines to what extent, if any, contractual intention is affected by the difficulties of ascertaining the identity of the other party. ³

Persons have the right to choose with whom to contract. Such choice is often based on the creditworthiness or special skill(s) of the other party. Consequently, intention may be directed at a particular person. Such intention can be evaluated as part of the offer and acceptance model or from the perspective of the doctrine of mistake, assuming such exists. ⁴ Questions of intention relate to contract formation whereas mistake is generally considered a vitiating factor affecting the validity or enforceability of a contract. ⁵ In certain circumstances, however, a mistake as to the identity of the other party prevents formation. Irrespective of the approach, the intention to contract with a specific person is evaluated objectively and presumes the possibility of identifying this other person. This is where the idiosyncrasies of the novel transacting environment come into play.

² This chapter replaces “user” with “person,” “computer-generated output” with “message.”
³ A distinction between “person” and “party” may be warranted: a message is always sent by a “person.” In that sense there is also a party. It is questionable whether such person is a party in the contractual sense if he or she never intended to bear the legal consequences of a message.
⁴ For a detailed discussion see: S Smith, P Atiyah, An Introduction to the Law of Contract, 6th ed, Oxford pp 76, 77, who speak of mistakes in formation; see also: Law of Contract para 4.73
⁵ Carter on Contract [02-030]
Problems of identification are not new but become exacerbated by the online environment. Strangers transact with strangers, they deal at a distance, the information about the other party is scarce and unreliable. Moreover, persons often assume different identities for their on-line activities.

Problems of identification are usually discussed in relation to attribution. Absent statutory provisions or agreement, open electronic networks do not change the basic principle of attribution: a person is responsible for the legal effects of an act, if he or she performed or authorized such act. Problems of attribution are therefore not Internet-specific. Attribution, however, remains a favourite topic of legal literature. It is often discussed in the context of recreating trust in on-line commerce: knowing who one is dealing with and knowing that the contract will be performed. Attribution focuses on accountability for an act, intention relates to the existence and contents of a contract. Both attribution and the intention to contract with a specific person are premised on the possibility to identify this person. Problems of attribution can generally be reduced to problems of identification.

Just as no thesis on on-line contract formation can be complete without a discussion of electronic agents, it must include a discussion of digital signatures. The latter constitute the most heralded method of identification and unquestionably the most popular topic of early "Internet-Law" literature. This chapter approaches the topic of digital signatures with some scepticism. They can be regarded as an example of misplaced focus and hype, a dubious solution to a problem that may not exist – as in the case of automation and electronic agents. Despite the temptation to exclude them from the thesis altogether they must be mentioned to set the stage for some later discussions and to clarify their limited role for contract law.

Roadmap

[4.2] The introductory part continues with a number of caveats and clarifications which delineate the scope of discussion. Attribution and identification are distinguished from the search for functional equivalents of signatures and the fulfilment of formal requirements. The basic concepts used in the discussion are presented. The relationships between "person," "name" and "identity" are examined.

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Subsequently, the chapter analyses digital signatures. If digital signatures cannot reliably identify the sender of a message, then *a fortiori*, identification based on less advanced technologies is questionable. The model law approaches to digital signatures and attribution are discussed. The emphasis is placed on the unauthorised use of signature creation data.

Finally, so-called mistaken identity cases are revisited. The possibility of holding a contract void due to a mistaken belief as to the other party’s identity is analysed in light of the difficulty of ascertaining such identity and the diminished value of identities as means of identifying persons. The focus is taken off the person misrepresenting his or her identity and placed on the mistaken party. The chapter also examines some distinctions traditionally made in mistaken identity cases. The most recent in the line of cases, *Shagun Finance Ltd v Hudson*, is examined. How would this case be resolved if the party purporting to be somebody else used the digital signature issued in the name of the party he or she purports to be?

**Caveats and Clarifications**

[4.3] Before abandoning the topic of attribution and commencing a discussion of digital signatures a number of clarifications must be made.

**Attribution and proof**

[4.4] There is no attribution chapter in any textbook on contract. The principle that one is responsible for one’s actions requires no elaborations. The output of electronic acts, such as emails or clicks, should only be attributed to the person who undertook or authorised those acts. Consequently, one of the challenges of on-line contracting consists in determining this person or *actual* identity of the other party. Usually, “identifying the person with whom you are dealing also identifies who is liable (responsible) in law. But it is not always so.” The practical question is whether the risk that the purported sender is not who he claims to be is sufficiently high to merit further inquiry. It is the recipient who must prove that the sender dispatched the email. Attribution is therefore a question of proof, not contract formation. Attribution can be discussed in the context of the difficulties of determining the actual sender, or – in broader terms - the originating computer. As information pointing to specific computers or users is

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8 *Shagun Finance Ltd v Hudson* [2004] 1 AC 919
9 *Nimmer & Towle* para 6.02
10 *Nimmer & Towle* para 6.02
11 *Nimmer & Towle* para 6.02
12 *Nimmer & Towle* para 6.01
easily spoofed, hidden or manipulated\textsuperscript{14} the recipient of message or the user of a website has little guarantee that the other party is who he or she claims to be or – more importantly – that such party can be held accountable. Internet-specific problems related to attribution are, however, related to questions of proof and evidence – not contractual intention.

\textit{Attribution and Signatures}

[4.5] Attribution is often discussed alongside digital signatures, which in turn are analysed in the context of formal requirements. The arguments usually commence with a description of the functions performed by traditional signatures and demonstrate that digital signatures can perform these functions.\textsuperscript{15} This chapter does not follow this sequence. Analysing digital signatures for identification purposes differs from analysing their use for the fulfilment of formal requirements. Determining whether a “signed” electronic document meets formal requirements is distinct from determining who signed the document. Assuring enforceability is pointless if there is no-one to enforce the contract against.

The functions of signatures need not be recited.\textsuperscript{16} Neither is there a need is to compare traditional signatures to digital ones or determine whether the latter can satisfactorily perform the functions of the former. Such descriptions have been made elsewhere.\textsuperscript{17} The significance of traditional signatures for attribution purposes is limited. Signatures do not automatically attribute a document to the person bearing the name contained in the signature. They do not carry a presumption of authenticity and do not reverse the burden of proof.\textsuperscript{18} If traditional signatures do not automatically burden the purported signer with whatever he or she purportedly signed, neither can their functional equivalents. At least not in Australia.

Attribution in the real world is, however, often performed on the basis of handwritten signatures. This is so despite the fact that the latter need not be legible and identify the


\textit{See MLEC Art 7 and Guide to Enactment paras 38, 39; MLES Guide to Enactment para 19; ABA Digital Signature Guidelines pp 5-7}

\textit{J K Winn, The Emperor’s New Clothes: the Shocking Truth about Digital Signatures and Internet Commerce} (2001) 37 Idaho L Rev 353 at 359: “[I]rving to use asymmetric cryptography as a signature on a contract is like trying to fit a square peg into a round hole.”

\textit{See: Report para 4.5.77}
signatory. Handwritten signatures are, however, specific to the signatory. There is a unique, biometric association between a person and her signature. A discrepancy between the name in the signature and its biometric characteristics prevents the attribution of the signed document to the person bearing that name. Due to the liberal approach as to what can constitute a signature, neither a biometric link nor a name are required. Open electronic networks break all biometric links between a person and the output of his or her acts and alter the quality and quantity of information available to the recipient.

**Terminology**

[4.6] Analysing problems of identification requires a precise and consistent terminology. It also requires a clear sequence of analysis. In particular, the relationship between identification, attribution and authentication must be explained. As in the case of electronic agents, many "legal" problems are created by wrong or confusing terminology.

**Authentication**

[4.7] To "authenticate" means, amongst others, "to establish as genuine." The term can be used in multiple senses: to authenticate a document means to "associate oneself" with its contents, as in "to sign." "Authentication" may also involve the validation of documents. For attribution purposes, "authentication" refers to the verification of a person's identity. Authenticating documents must therefore be distinguished from authenticating persons. The meaning depends on which side of the transaction is examined: senders authenticate messages, recipients authenticate the senders of messages.

"Authentication" must be set apart from "identification." To "identify" means to recognise as a particular person. Identification is the process of presenting an identifier to a

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20 MLEC Guide to Enactment para 54
22 See: GUIDECC II Glossary p 31
24 Macquarie Dictionary
system so that the system can recognize an entity and distinguish it from others. Identification answers the question: who are you? Authentication consists in proving who you are.

Authentication comprises two steps: identification and verification. The second step involves the presentation of authentication information that corroborates the association between the person and the identifier. Authentication information consists in something a person knows (password, PIN), possesses (token, smartcard) or is (biometric data). Access to authentication information often enables the assumption of the identity verified by this information.

In real life, identification and authentication occur concurrently, traditionally taking the form of recognizing a person's facial features and/or voice. On the Internet, authentication is performed remotely. Authentication technologies produce evidence of different probative value in establishing that messages came from the purported source. The quality of an authentication procedure depends, amongst others, on the security of authentication information.

Non-repudiation

Legal literature often uses the term "non-repudiation." Repudiation is the false denial of responsibility for an act. Non-repudiation provides evidence of the signer's identity thereby preventing him from successfully disavowing the message. It consists in the ability to prove that a message originated with a certain person. Non-repudiation can be regarded as either a prerequisite or a consequence of attribution. Both deal with the question: can a message be indisputably linked to a sender? Both are technology-dependent and come in varying degrees. Non-repudiation concerns proof, attribution — accountability.

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25 RFC 2828, p 75
27 RFC 2828, p 15
28 Schneier, above at note 26 p 184
29 H K Towle, above at note 19 p 947
30 "non-repudiation" must be distinguished from "repudiation" in the sense of anticipatory breach of contract, see: Carter & Harland [1928]
31 Ford & Baum p 333
32 ABA Guideline 1.20 and comments 1.20.1 and 1.20.2
33 Ford & Baum p 336
Person, Identity and Name

[4.9] Attribution goes beyond determining whether a person is who he or she claims to be. It encompasses the question: who is the other person? This is not a matter of semantics only. A name-holder cannot be attributed with the message only because his or her name was used. Only persons, not names or identities, are parties to a contract. Persons are identified by names.34 Ideally, names should be uniquely attached to persons, pointing to the accountable person.35 Names, however, are not unique.36 Once taken on an open global network, they start losing their association with persons.37

"Persons" must be distinguished from "identities." It is always a person who assumes an identity - that of an existing person or a fictitious one. It is always a person who enters a shop, writes a letter or sends an email. Persons assume different identities for different roles. Transacting under a different identity is not prohibited and need not constitute a misrepresentation or impersonation of a third party.

"Identities" must be distinguished from "names." Both names and identities point to persons. As persons cannot be distinguished by names alone, they are co-defined by their attributes. Space does not permit a more detailed elaboration of the relationship between "name" and "identity." "Identity" can be regarded as a construct of a name and one or more attributes.38 This interpretation underlies the common understanding of "identity theft", i.e. the theft of identifying information in order to engage in transactions as the person whose identifying information was stolen.39 In many instances "identity" can be used interchangeably with "name." In others, legal analysis requires the separation of these concepts.

34 N Ferguson, B Schneier, Practical Cryptography, Indianapolis 2003 ("Ferguson & Schneier") p 323
35 See also: RFC 2693, SPKI Certificate Theory, C Ellison et al; (1999) p 8
36 B Schneier, above at note 25 p184
37 Ferguson & Schneier p 324. To illustrate the point: The uniqueness of identifiers is easier to achieve in closed systems. Information systems require uniqueness. Email addresses can be designed to be unique. Email addresses, however, do not point to persons. There is only one email account issued to "liz.mik" at hotmail.com. There is also one "liz.mik" at yahoo.com. "Liz.mik" is locally unique within the hotmail and yahoo namespaces respectively but due to its association with different web-mail providers, (i.e. address information appended to the name) it attains global uniqueness - there is only one liz.mik@hotmail.com and only one liz.mik@yahoo.com. The problem remains: anyone can assume the screen name "liz.mik" and register the relevant email account. There is no authentication process upon sign-up at hotmail or yahoo. Unless identity escrow is used, the real identity of the person registering the account remains unknown. See: A M Froomkin, Flood Control on The information Ocean: Living with Anonymity, Digital Cash and Distributed Databases (1996) 15 J L & Com 395 at 422
38 See: MLES Guide to Enactment para 117, discussing "identity" and "identification"
While identification always precedes attribution, the core concept is authentication – the verification of an identity. When analysing attribution or identification, one always encounters problems of authentication.

Identification and Privacy

[4.10] Problems of authentication intersect with privacy concerns posed by the Internet.\textsuperscript{40} E-commerce requires methods of establishing accountability, which in turn requires the identification of the other party. Privacy protection, on the other hand, aims at hiding the real identities of persons and preventing any association between them and their electronic activities.\textsuperscript{41} The more personal information is revealed and the easier the access to such information, the greater the risk of unauthorized use.\textsuperscript{42} “Personal information” can often serve as “authentication information”\textsuperscript{43} and be used to assume the identity of its subject.\textsuperscript{44} Attempts to authenticate the other party may also violate privacy laws.\textsuperscript{45} Accordingly, it may not be possible to request any additional authentication information to ascertain the identity of the other party.

Remote Authentication – Digital Signatures

[4.11] The following sections describe the practical problems of remote authentication using digital signatures as an example. The analysis delves into some technical detail to establish the extent, if any, digital signatures can serve as a method of on-line authentication. The reason for including a discussion on digital signatures in a thesis on contract formation is that they occur in practically all analyses of on-line contracting, creating the impression that on-line contracts are premised on their use.\textsuperscript{46} Furthermore, their deployment may, in certain circumstances, alter attribution principles creating a parallel regime for on-line contracting. To narrow the scope of discussion, three preliminary points are necessary.

\textsuperscript{40} W Diffie, S Landau above at note 1 p 125; for practical illustrations see: G M Schober, Colloquium on Privacy and Security (2002) 50 Buss L Rev 703

\textsuperscript{41} for a discussion of anonymity on the Internet see: A M Froomkin, above at note 37


\textsuperscript{43} See also definition of “personal information” in the Privacy Act (Cth) 1988 Section 8

\textsuperscript{44} J Griipink, Biometrics and Identity Fraud Protection (2005) 21 CLSR Com 254

\textsuperscript{45} Nimmer & Towle para 6.03[3]

\textsuperscript{46} see e.g. A McCullagh, Legal Aspects of Electronic Contracts and Digital Signatures, in A Fitzgerald ed, Going Digital 2000, Legal Issues for E-commerce, Software and the Internet, 2\textsuperscript{nd} ed, Sydney 2000
First, digital signatures rely on asymmetric cryptography. Cryptography is used for the preservation of confidentiality, key exchange and for authentication purposes, amongst others.47 This paragraph deals solely with the use of digital signatures for authentication.

Second, digital signatures are the subject of numerous model regulations48 and statutes.49 Focusing primarily on formal requirements, the regulations distinguish between electronic and digital signatures. The former relate to any electronic representation of a name, such as letters or digitised handwritten signatures, the latter rely on one technology, asymmetric cryptography. The regulations can be divided into three categories: minimalist, prescriptive and hybrid.50 The first facilitate the use of electronic signatures without imposing a specific technology and define the requirements electronic signatures must meet to fulfil the functions of traditional signatures. The minimalist approach focuses on the intention of the signor and the signature’s ability to identify him.51 The second approach establishes a legal framework based on a public key infrastructure and adopts asymmetric cryptography as the means of creating digital signatures. The third combines the minimalist and the prescriptive approach and endows digital signatures with specific legal effects while also recognising less sophisticated technologies.52 All three acknowledge the general permissibility of electronic or digital signatures and prohibit any discrimination on the ground that a document was signed electronically. They differ to the extent that some equate digital or electronic signatures with handwritten signatures, without reversing the burden of proof, while others create technology-dependent presumptions.53 It is beyond the scope of this thesis to analyse these approaches in detail.54 The regulations are mentioned to the extent they introduce different attribution rules.


48 UNCITRAL Model Law on Electronic Signatures (“MLES”) American Bar Association Digital Signature Guidelines; International Chamber of Commerce, General Usage for International Digitally Ensured Commerce II (“GUIDEC II”)

49 Utah Code Ann par 46-3-101 et seq.; German Digital Signature Law 1997; Electronic Signatures in Global and National Commerce Act” (Public Law 106-229); see also: Nimmer & Towle para 6.10

50 see GUIDEC II, p 55

51 see. e.g. Electronic Signatures in Global and National Commerce Act (Public Law 106-229)

52 see e.g. Directive 1999/93/EC of 13 December 1999 on a Community Framework for Electronic Signature prohibits any discrimination on the grounds that the signature is in electronic form while at the same time requiring member states to give legal effect to “advanced electronic signatures” which are created by “secure signature creation devices.”

53 For a detailed discussion of the distinction between “pure” facilitation and the provision of specific legal effects, see: A H Boss, above at note 7 at 600-609

Third, digital signatures are one of many authentication technologies. Another method
relies on biometrics, the individual traits of a human body. Only biometric-based methods of
authentication can establish the actual person who performed an act. Such technologies are,
however, still in their infancy. Apart from high costs of implementation, they encounter
numerous problems related to the process of enrolment and subsequent matching. Biometric-
based technologies also introduce a trade-off between reliability and convenience on one end
and intrusiveness and privacy concerns on the other. Their use in open systems being
practically non-existent, they are not included in the discussion.

A Cryptographic Solution

[4.12] Cryptography is the science of keeping information secret. The need to encrypt arises
whenever information must be shared at a distance and there is risk of third party interception.
Encryption requires an algorithm and a key. Encryption algorithms, or "ciphers," are
mathematical procedures; keys are alphanumeric characters that initiate the encryption or
decryption process. Only the key must be kept secret, the cipher is widely available. The
longer the key, the more difficult it is to guess. Length of key aside, once it must be transmitted
over an insecure network there is a risk of compromise.

The main challenge in cryptography is key exchange. This problem is prominent in
symmetric key cryptography, where the same key is used to encrypt and de-encrypt. Asymmetric
key cryptosystems, on the other hand, use a public and a private key. A message encrypted
with the public key can only be decrypted with the private one – and the other way round.
Because asymmetric algorithms are significantly slower than symmetric ones, data is usually
encrypted with a symmetric algorithm. Subsequently the symmetric key is encrypted with the
recipient’s public key. The recipient uses his private key to decrypt the symmetric key. In other
words, the private and public keys are only used to exchange the symmetric key.

55 M Crompton, Biometrics and Privacy (2002) PLPR 32
56 Ford & Baum p101
57 Ferguson & Schneier p 23
58 Greenstein & Feinman p 233
59 M E Hellman, An Overview of Public Key Cryptography, IEEE Communications Magazine, 50th
Anniversary Commemorative Issue, 2002, originally published in (1978) 16 IEEE Communications
Magazine 6
60 For a detailed description see: Ferguson & Schneier p 26; B Schneier, Applied Cryptography:
61 This is a “hybrid cryptosystem,” see: Ferguson & Schneier p 28,
Digital Signatures

[4.13] Digital signatures are an application of asymmetric cryptography and rely on the indisputable mathematical correspondence between the private and the public key. They are a derivative of the private key and a so-called “hash function.” The latter reduces a message of any length to fixed length output, termed message digest. Identical texts run through the hash function produce the same message digest. The message digest is encrypted with the private key; the output of this operation is the digital signature. The hash ties the private key to the message, ensures message integrity and renders it impossible to re-use the digital signature. Digital signatures guarantee that a specific message was transformed with a specific private key.

Assumptions of the model

[4.14] The digital signature model requires that the public key be accessible to everyone and the private key exclusively to its authorized user. It also requires that a trusted third party guarantees the association between the public key and such user. The correspondence between the key-pair is worthless unless there is a method to verify that it belongs to a given person. There is, however, no natural association between a person and a key-pair. As “anyone with a set of keys could potentially assume another party’s identity,” it must be attested that a given public key belongs to a specific person. Consequently, digital signatures cannot function as a stand-alone application but must be supported by a public key infrastructure (“PKI”) or a web of trust (as in the encryption program Pretty Good Privacy, “PGP”).

PKI & PGP

[4.15] The cornerstone of PKI is a Certification Authority (“CA”), which generates and manages Digital Certificates (“DCs”). CAs can be part of an institutionalised structure or private companies. A DC is a digital document containing information about the person it was

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62 Ford & Baum p 109
63 W Stallings, above at note 47 pp 262, 380
64 H Dobbertin, Secure Hashing in Practice (1999) 4 ISTR 53; see also ABA Digital Signature Guideline 1.12
65 Ford & Baum p 113; J K Winn, above at note 17 at 386
67 Ch Sundt, PKI – Panacea or Silver Bullet? (2000) 5 ISTR at 54
68 H M Deitel, above at note 66 p 206
69 Ford & Baum pp 251, 275
70 see: Ferguson & Schneier p 29, Ford & Baum p 182
71 see: www.agimo.gov.au/infrastructure/gatekeeper, the Australian Government’s PKI strategy
issued to ("subscriber")\(^{72}\) and the public key. Usually the key-pair is generated during the procedure of issuing the DC, in other models keys are generated by the subscriber and subsequently submitted for certification.\(^{73}\) The DC binds the identity of a subscriber to a key-pair. CAs confirm the identity of applicant before issuance. The authentication process ranges from simple verifications that an email belongs to a particular person,\(^{74}\) to elaborate procedures entailing notarised documents.\(^{75}\) The less comprehensive the authentication process, the weaker the assurance that the subscriber is who he or she claims to be.\(^{76}\) PKI encounters multiple problems in its implementation: a complex infrastructure, the lack of interoperable standards and an inherent suitability for closed environments, amongst others.\(^{77}\) A comprehensive critique of the PKI model is presented elsewhere.\(^{78}\)

PGP replaces the centralized CA\(^{79}\) with a so-called "web of trust" - a group of users that cross-certify each other's certificates by vouching for the validity of the association between a public key and a person.\(^{80}\) The DC is published on a public server and everyone who is convinced of its authenticity can give it a stamp of approval in the form of his/her digital signature. The more signatures on a DC, the more trustworthy the public key of its owner.

**The Quality of Associations**

[4.16] To identify a sender (and to attribute the message to the sender) a number of associations must be established. The first is between a name and a person. This association is verified during the issuance of the DC and forms the basis for the second, the one between the DC and the subscriber. The quality of the authentication procedure performed by the CA determines the quality of the association between the subscriber and the key-pair. The DC only links a key-pair to an identity - not to a physical person. The associations between the private key and the digital signature as well as between the private key and public key are based on a mathematical relationship. They are therefore unquestionable.

\(^{72}\) the public-key certificate format is defined in the ITU X.509 standard, see: *Ford & Baum* p 198

\(^{73}\) for key generation see: K G Patterson, G Price, *A Comparison Between traditional Public Key Infrastructures and Identity-based Cryptography* (2003) 8 ISTR 57 at 57,58

\(^{74}\) P Landrock, *Challenging the Conventional View of PKI - Will it Really Work?* (1999) 4 ISTR 36


\(^{76}\) for an explanation of identity verification upon certificate issuance see: D S Anderson, *What Trust is in These Times? Examining the Foundation of On-line Trust* (2005) 54 Emory L J 1441


\(^{78}\) For a comparison of PKI theory and practice, see: *Ferguson & Schneier* p 326

\(^{79}\) *Ford & Baum* p 275

\(^{80}\) See: *An Introduction to Cryptography*, PGP Corporation White Paper (2005) p 25
It is the association between the subscriber and the digital signature that is problematic. A private key is not like a pen, a tool producing different yield depending on who used it. Anyone who gains access to the private key can produce a valid digital signature.\(^1\) There is no natural link between the digital signature and the subscriber, comparable to the biometric link between a person and her handwritten signature or the mathematical correlation between the public and private keys. Legal discussions often mistake the strength of the cipher, the length of the key or the trustworthiness of the CA for the quality of the association between the digital signature and the subscriber.

It is misleading to focus on the reliability of the technology, when the weakest element of the model is outside the CA’s control.\(^2\) While the public key is stored in a publicly accessible repository managed by the CA, the private key is “at the mercy” of the subscriber,\(^3\) usually stored on a networked computer, sometimes on the very system which hosts the digital signature application. Networked computers can be accessed remotely by both authorized and unauthorized persons.\(^4\) The question is not one of forging (i.e. cracking) the private key but accessing it. Access control, (i.e. the prevention of unauthorized use of a resource)\(^5\) involves the presentation of authentication information.\(^6\) The security of a resource depends on the access control measures protecting it. The computationally intensive discovery of the private key is usually unnecessary if the key is protected by a password or PIN, which can be hacked with little effort.\(^7\) If the private key can be accessed by anyone who knows a 4 digit PIN, the security of the key depends on the ability to guess or intercept the PIN.\(^8\) The key is the protected resource, the PIN is the authentication information required to access the resource. In sum, digital signatures are not forged but private keys are used without authorization.


\(^2\) Feinman & Greenstein p 151

\(^3\) S Garfinkel, E Spafford, above at note 77 p 90; Ford & Baum p 188

\(^4\) B Schneier, above at note 20 p 176

\(^5\) RFC 2828, p 7

\(^6\) Greenstein & Feinman p 231

\(^7\) B Schneier, above at note 26 pp 104, 105

\(^8\) See e.g. ABA Guideline 4.3: “To safeguard the private key, access to it should require entry of a personal identification code, or the presentation of some other fact uniquely within the knowledge or control of the subscriber rightfully holding the private key.”
The identification of the sender of a digitally signed message, requires that the CA correctly authenticated the applicant during the certification procedure, the CA is trustworthy, the information contained in the DC is correct\(^89\) and the private key remains under the exclusive control of the subscriber.

The last factor depends on the access control measures to the computer where the private key is stored. The security of the key is a function of the security of the authentication information. A message signed with a digital signature can be repudiated by the subscriber on ground that:

a) "This is not my key-pair" - incorrect authentication upon issuance, and/or
b) "I did not use my digital signature" – the private key or the authentication information necessary to access the private key were use by an unauthorised person.\(^90\)

Model Approaches to Attribution and Digital Signatures

[4.17] Model laws confirm that the legal effects of a message are borne by the sender if it was sent by him or her or with his or her authority.\(^91\) Some regulations, however, modify this principle: messages can be attributed to persons even if these persons did not send them. Recipients, in turn, may be entitled to rely that a message is sent by the purported sender, \(^92\) if it is reasonable of them to do so. In the real world, attribution does not occur solely because somebody forged a person’s signature or used a person’s name. Once digital signatures (or other authentication technologies) are deployed, some provisions protect the recipient’s reasonable reliance and “punish” the person whose “signature” was used. Attribution can be based on the loss or unauthorized use of the private key. The following sections briefly review the attribution rules proposed by some model laws.

MLEC & MLES

[4.18] The MLEC and the MLES introduce modified attribution rules. MLEC Art 13 (“Attribution”) establishes a presumption that under certain circumstances a message is

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89 i.e. represents the association of key-pair and subscriber, the validity of the DC relates to suspension and revocation
90 Ferguson & Schmeier p 337; Nimmer & Towle para 6.03[3]
91 MLEC Art 13 (“Attribution of Data Messages”), UETA Section 9 (“Attribution and Effect of Electronic Record and Electronic Signature”), ETA Section 15 (“Attribution of Electronic Communications”)
92 MLEC Guide to Enactment para 85

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considered as that of the purported sender.\textsuperscript{93} The recipient is entitled to regard the message as coming from the sender, if the message resulted from the "actions of a person whose relationship with the [sender] enabled that person to gain access to a method used by [the sender] to identify messages as its own."\textsuperscript{94} It is unclear, whether the "relationship" covers unauthorized access and use of the method. As unauthorized use is generally synonymous with the lack of any relationship between the owner of a resource and its actual user, the provision may not cover situations where the private key is obtained by "hacking" into the sender’s computer.\textsuperscript{95} The presumption is qualified, however, if the recipient knew or should have known, "had it exercised reasonable care,"\textsuperscript{96} that the message was not that of the sender.\textsuperscript{97} Separate provisions regulate situations where the sender agreed to be bound by messages “signed” with the use of the authentication procedure. This could be an agreement between the contracting parties or system rules, such as between a subscriber and a certification provider.

The MLEC separates attribution from “signature.” Taking into account, however, that unlike in the case of traditional signatures, Art 7 ("Signature") requires not only an intention to sign, but also the identification of the signatory, electronic signatures under the MLEC can serve attribution purposes. Accordingly, the MLES does not elaborate on Art 13, but continues the topic of attribution with regards to Art 7, focusing on the reliability of the authentication method.\textsuperscript{98}

Despite claims that the MLES is neutral with regards to the authentication technology used,\textsuperscript{99} it is drafted “with PKI in mind.”\textsuperscript{100} The signatory is expressly obliged to protect the private key and notify the relying party and the CA, if any, of its compromise.\textsuperscript{101} The signatory’s obligations are mirrored by those imposed on the relying party. The latter must take

\textsuperscript{93} S Mason, Electronic Signatures – Evidence (2000) 18 CLSR 242 at 243
\textsuperscript{94} MLEC Art 13 (3) (b)
\textsuperscript{95} MLEC Guide to Enactment para 87 states, however, that either the sender or the addressee can be responsible for “any unauthorized data message that can be shown to have been sent as the result of negligence of that party.”
\textsuperscript{96} MLEC Art 13 (4) (b)
\textsuperscript{97} See: MLEC Art 13 (3) (b), (4) (b), Guide to Enactment para 83; similarly (5) precludes the sender from disavowing the message, unless the addressee knew or should have know that the message was not that of the sender.
\textsuperscript{98} For an explanation of the relationship between Art 6 MLEC and the MLES, see MLES Guide to Enactment paras 68 & 71
\textsuperscript{99} MLES Guide to Enactment para 5
\textsuperscript{100} MLES Guide to Enactment para 28; see also Art 2, which define “certificates” and “certification service providers.”
\textsuperscript{101} MLES Art 8 ("Conduct of the Signatory")

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reasonable steps to verify the reliability of an electronic signature, and, where such signature is supported by a certificate, verify the validity of such certificate.\textsuperscript{102} It is ignored that even a thorough examination of the certificate does not reveal whether the private key was used by the subscriber and that the reliability of the technology does not give a guarantee that it was used by an authorized person.

Despite the above, the MLES directs member states to establish a presumption or substantive rule based on the technical characteristics of the signature.\textsuperscript{103} Going beyond the simple recognition of electronic signatures, it attaches consequences to the signatory’s failure to fulfil the obligations under Art 8. These may range from the signatory being liable for damages or estopped from denying the binding effect of the signature.\textsuperscript{104}

The MLEC and MLES impose a high IT literacy on both transacting parties. Subscribers must be aware of the security risk of storing private keys. Recipients must examine the contents of digital certificates and evaluate the reliability of the respective technologies. The reasonableness of the recipient’s reliance must be balanced against the subscriber’s ability to safeguard the private key. From the subscriber side, the main difficulty is protecting of the private key from unauthorized use, from the relying party’s side – establishing whether the private key was used by the subscriber.

\textit{ETA, UETA and CUECIC}

[4.19] Unlike the UNCITRAL regulations, ETA and UETA do not introduce any special attribution rules associated with the use of authentication technologies. The ETA provides that a person is attributed with a message if it sent the message.\textsuperscript{105} UETA provides that electronic signatures have an identical legal effect as traditional signatures.\textsuperscript{106} UETA introduces the concept of “security procedure,” which serves the purpose of verifying that an electronic signature is that of a specific person.\textsuperscript{107} The use of such procedure, however, is not accorded any special legal effect. Security procedures can facilitate the burden of proof, but do not reverse it

\textsuperscript{102} MLES Art 11 ("Conduct of relying party") para 73
\textsuperscript{103} MLES Guide to Enactment para 119
\textsuperscript{104} MLES Guide to Enactment para 141
\textsuperscript{105} ETA Section 15
\textsuperscript{106} UETA Section 9, comments 2 and 4.
\textsuperscript{107} UETA Section 2 (11)
and do not impose any special obligations on the transacting parties. The CUECIC does not contain any provisions on attribution.\footnote{The ABA Guidelines contain a clear presumption of attribution when a digital signature was used. Apart from stating that a digitally signed message is "written" and satisfies signature requirements, they impose the obligation to safeguard the private key and list the factors to be taken into account when establishing reasonable reliance; see: paras 5.1, 5.2, 5.4, 5.6.}

Modified attribution rules for on-line transactions expose the sender's of digitally signed messages to more risks than senders of messages, which have not been signed digitally thereby indirectly discouraging the use of this particular authentication technology. They also necessitate the establishment of a complex technical and legal infrastructure.

\textbf{Mistaken Identity}

[4.20] The difficulties of identification in the on-line environment shed new light on cases of so-called mistaken identity. The latter are a type of unilateral mistake, where only one party is mistaken. The other knows of the mistake or caused it. Contracts are rarely void for mistake.\footnote{Carter & Harland [1248]; Carter on Contract [22-130]} A buyer's mistake as to the quality and value of the acquired goods is inconsequential, so is the seller's mistake regarding the creditworthiness of the buyer.\footnote{Carter & Harland [1213]} The impact of mistake on the contract formation process can only be debated if the mistake is "operative."\footnote{Carter & Harland [1201]} A detailed discussion of "mistake" would by far exceed the scope of this thesis, particularly in light of the fact that each textbook on contract law approaches the problem differently. This chapter "carves out" one problem and maps it onto the on-line environment. In certain circumstances, if a party is mistaken as to the identity of the other party – there may be no contract (i.e. it may be void \textit{ab initio}). As mistake concerns the subjective intention of a contracting party, there is an inherent tension between "mistake" and "objectivity."

Problems of mistaken identity have recently been revisited in \textit{Shogun Finance Ltd v Hudson}.\footnote{Shogun Finance Ltd v Hudson [2004] 1 AC 919} A discussion of \textit{Shogun} would require nothing short of a separate thesis. The following paragraphs focus on its implications for contract formation, or in broader terms – on the existence of contractual intention. The discussion does not aim at providing a new taxonomy
of “mistake” or criticizing the existing doctrine on the subject.\textsuperscript{113} It focuses on its practical aspects in light of the difficulties of on-line identification.

*Shogun* deals with the scenario where “crook (C) fraudulently represents to the owner of goods (O) that he is another identifiable person (X) and on that basis O parts with goods to C by way of sale.”\textsuperscript{114} Is there a contract between O and C? If a contract exists but is voidable, C passes good title to an innocent purchaser. If the contract is void, such purchaser cannot obtain valid title. The protection of innocent third parties plays a prominent role in all mistaken identity cases. The issue is less relevant between O and C, as the mistaken party can rescind for misrepresentation.\textsuperscript{115} Little attention is usually devoted to the carelessness of O, not to mention X, the person C purports to be. The majority in *Shogun* held that no contract was formed between the finance company *Shogun* (O in the model example) and C. The decision was predominantly based on the construction of the written contract between Shogun and the person named in the contract.

**Basic principles**

[4.21] Before *Shogun*, the leading authority on mistaken identity was *Lewis v Averay*,\textsuperscript{116} where Lord Denning MR held that a mistake as to identity renders a contract voidable, not void. The inconsistent case law distinguishes between dealings face-to-face\textsuperscript{117} and instances where the parties are contracting via correspondence.\textsuperscript{118} In the first scenario, the owner is presumed to intend to deal with the person in front of him, in the latter, the parties are described in the document. The principles are not applied consistently, the “blurring” factors being the protection of innocent purchasers, the exact moment the representation is made, and the actual intention of the mistaken party. In practical terms, the division is between making a contract with the person one intends to deal with or with the person one actually deals with. Problems arise when intention is directed towards a person one has never met before. While in *Cundy v Lindsay*\textsuperscript{119} the contract was held void because O only intended to contract with the person.

\textsuperscript{113} see: D W McLauchlan, *Mistake of Identity and Contract Formation* (2005) 21 JCL 1

\textsuperscript{114} *Shogun Finance Ltd v Hudson* [2004] 1 AC 919 at 930 per Lord Nicholls

\textsuperscript{115} *Treitel* p 342

\textsuperscript{116} [1972] 1 QB 198

\textsuperscript{117} *Lake v Simmons* [1927] ACN 487; *Ingram v Little* [1961] 1 QB 31; *Phillips v Brooks Ltd* [1919] 2 KB 243; *Lewis v Averay* [1972] 1 QB 198

\textsuperscript{118} *Cundy v Lindsay* (1878) 2 App Cas 459; *King's Norton Metal Co Ltd v Edridge Merrett & Co Ltd* (1897) 14 TLR 98

\textsuperscript{119} *Cundy v Lindsay* (1878) 2 App Cas 459
named in the correspondence, in *King's Norton Metal*, O was held to intend to contract with the writer of the letter. In the latter case, there existed no other entity of the assumed name, in the former, O knew of a company dealing under the name assumed by C.

The above distinctions, although upheld by *Shogun*, seem difficult to maintain in transactions conducted on-line.

**Identity and attributes**

[4.22] A distinction is drawn between mistake as to identity and mistake as to attribute(s). The prevalent view is that the former renders a contract void, the latter - voidable. A further refinement is that certain attributes are so important that they form part of a person’s identity and a mistake as to them can render the contract void. Creditworthiness, however, is not one of them. Accordingly, O who parted with goods on the basis of a fraudulent misrepresentation is interested in proving the fundamental importance of the buyer’s identity. If the contract is void, O retains title to the goods.

A general point first. Contracts are formed with persons - not with identities or attributes. An identity need not be unique to a person: a person can have multiple identities, the same identity can be lawfully used by multiple persons. What can be unique, though, are attributes, or rather combinations thereof. Even when identity is claimed to be of fundamental importance, such as in contracts for specialized services, it is important only because it points to a person with specific attributes. After all, “identity is but an amalgam of various attributes.”

In on-line transactions, the “fundamental importance” of identity may be difficult to establish. This relates to the fact that the assumption of a different identity for on-line transactions is more widespread than in the real-world. People assume various electronic identities, be it due to privacy concern or as an expression of personal freedom. The web abounds with “George Bushes.” Nobody can believe that he or she is contracting with the president of the United States and later claim that the identity of the other party was fundamental because he or she wanted to purchase the president’s coffee mug.

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120 *King's Norton Metal Co Ltd v Edridge Merrett & Co Ltd* (1897) 14 TLR 98
121 *Cheshire, Fifoot & Furmston* p 279
122 *Treitel* p 277, 267
123 *Treitel* p 278; *The Law of Contract* para 4.106
124 *Cheshire, Fifoot & Furmston* p 280
It may also not be clear whether a misrepresentation of identity occurred. The existence of a real person using a given identity may be accidental and unknown to both O and C. C might be assuming what he or she thinks is a fictitious identity. If C does not pretend to be X, C is X. There is no prohibition to adopt a different identity, as long as its use is not designed to escape liability or impersonate another entity. "Fundamental importance" of identity aside - there is no possibility of holding a contract void ab initio.

To illustrate: when someone transacts under the name Pussycat, the other party cannot claim that: a) "I intended to contract with another Pussycat," or, b) there is no Pussycat and therefore there should be no contract. There is a Pussycat. It is the person who sent the message signed "Pussycat." Similarly, if one assumes the name John Smith, one is John Smith. Pussycat and John Smith are equally valid electronic identities, although there is probably no credit card issued in the former name. The association between person and name occurs only in O's mind. O's accidental knowledge of a person bearing a particular name demonstrates that the importance of identity is purely subjective.

When differentiating between identity and attributes, the difference between "name" and "identity" comes into play. There are a numerous motivations to contract with one particular person. It is illogical, however, to assume that one intends to contract with a person because of her name. Names constitute a pure reference, without regard to any attributes. Only some names (such as Bill Gates) imply the existence of certain attributes. If it was the actual person that was of fundamental importance - one should speak of mistake as to name or person, not identity.126

The importance of "identity" is limited to cases where the performance of the contract is specific to a given person.127 This would be the case of professionals with particular skills or situations described in Boulton v Jones,128 Said v Butt129 or Sowler v Potter.130 The identity-attribute distinction must be approached with caution whenever the transaction is of mass-

125 Treitel p 274
126 the difficulty of defining "identity" is stressed by S Smith above at note 4 p 77; it must be noted that S Smith speaks of mistake as to person and mistake as to identity, p 76. It is unclear whether this division was introduced intentionally.
127 The Law of Contract para 4.109
128 (1857) 2 H & N 564, 157 ER 232
129 [1920] KB 497
130 [1940] 1 KB 271
market character, the seller is willing to contract with anybody and the contract can be performed by anybody.131

**Method of communication: face-to-face and “in writing”**

[4.23] On-line transacting renders it difficult to maintain the division between contracts formed face-to-face and those formed in writing. The legal explanation is that the mistake is identical in both situations:132 O deals with one person but intends to deal with another. O deals with the writer of the letter or email, the person in front of him or on the other end of the telephone line. The technical explanation is that transactions are often a mixture of face-to-face dealings and correspondence. As not all on-line communications meet the requirements of “writing”133 or enable a real-time communication approximating the qualities of “face-to-face” interactions,134 they may be difficult to categorize as one or the other. The effect of the mistake - and ultimately the existence of a contract - cannot depend on the communication method or the distance between the parties.135 In particular, it cannot depend on the fact whether a particular statement appeared on screen or on a paper document.

The communication method does, however, determine the quality and quantity of authentication information.136 In *Phillips v Brooks*, the face-to-face scenario is described as enabling the identification of the other party by sight and hearing.137 When dealing at a distance, via email or instant messengers, O is limited to validating the digital certificate of the purported sender, if any, or verifying the address information. “Authentication across a network ... is more difficult than authenticating someone standing in front of you, simply because the authentication mechanisms are easier to fake and harder to verify.”138 Accordingly, the method of communication bears on the difficulty of authenticating C.

**Carelessness of mistaken party**

[4.24] C is not the only person responsible for the mistake. C misrepresented who he or she is, but it is O who relied on this misrepresentation. As the intention to contract with a specific party is evaluated objectively, the party pleading mistake as to identity should have taken reasonable

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133 see Chapter 8
134 see Chapter 6
135 S Smith, P A Atiyah, above at note 4 p 84
136 *Chissick & Kellman* p 73
137 *Phillips v Brooks* [1919] 2 KB 243 at 247
138 B Schneier, above at note 26 p 191, see also: H K Towle, above at note 39 at 238
steps to authenticate the other party.\textsuperscript{139} Most cases are characterized by some carelessness on the side of O. Being concerned with risk allocation, today’s courts may proceed as if they had to decide whether a person has been negligent.\textsuperscript{140} Holding the contract void rewards the careless O and punishes an innocent purchaser.

O’s intention is evaluated on the basis of his or her behaviour: were O’s efforts to authenticate C reasonable in light of the available information? According to Treitel: “[i]f a party takes the risk that the facts are not as he supposed them to be, or if he is simply indifferent as to the matter to which the mistake relates, the validity of the contract cannot be affected.”\textsuperscript{141} If O would not have contracted with C, had O not believed C to be X, why didn’t O verify who he was dealing with, i.e. establish that X is X? In Cundy v Lindsay,\textsuperscript{142} O verified neither the signature nor the actual address of the person ordering the goods. Taking into account that C did not forge O’s signature and gave his own address, a simple inquiry could have revealed the fraudulent misrepresentation. In Ingram v Little,\textsuperscript{143} O verified that X lived at the stated address but did not verify whether C was X, i.e. failed to authenticate C. Such authentication was performed in Lewis v Averay,\textsuperscript{144} where C produced an “impressive looking pass” describing him as X. Unfortunately, O failed to validate the pass.

In Shogun, C produced the driving license of a Mr. Patel. Assuming that the driving licence contained a photo of the real Mr. Patel, C must have resembled him or replaced the picture with his own. C also forged the signature on the licence. The complicating factor was that C did not deal with O directly but via a car dealer. While the interactions with the latter can be described as face-to-face, the relationship with the former was embodied in a written contract. On the basis of a fax copy of the drivers licence, O confirmed the creditworthiness of Mr. Patel. O never verified whether the person presenting the licence was Mr. Patel.\textsuperscript{145} In other words, no authentication of C and no validation of the document took place. The claim that the identity of the purchaser was of primary importance should only be upheld if any steps were

\textsuperscript{139} Cheshire, Fifoot & Farnston p 274, 280


\textsuperscript{141} Treitel p 279

\textsuperscript{142} Cundy v Lindsay (1878) 2 App Cas 459

\textsuperscript{143} Ingram v Little [1961] 1 QB 31

\textsuperscript{144} Lewis v Averay [1972] 1 QB 198

\textsuperscript{145} C Elliot, No Justice for Innocent Purchasers of Dishonestly Obtained Goods: Shogun Finance v Hudson (2004) 5 JBL 381 at 386
taken to verify this identity, alternatively, if the reliance on C’s representations was reasonable and required no further proof. By verifying the attribute of creditworthiness of X, without confirming that C is X, Shogun’s actions indicated that identity was irrelevant. Shogun was willing to contract with anyone creditworthy. Identity was only a means of verifying creditworthiness.

Contract formation perspective

[4.25] Mistaken identity can also be approached from a contract formation perspective. Allegedly, O’s intention to contract with X prevents the meeting of minds if the other person is not X. O’s mistake negatives the correspondence between offer and acceptance. By the same token, as C knows of O’s actual intention (to contract with X), no contract can be formed. Many arguments speak against such approach. As indicated, O’s intention to contract with X only, injects a subjective element into the discussion. Furthermore, O’s intention can be negated only if it is clear that O intended to contract exclusively with X. Consequently, there should be external indicia of such intention, e.g. efforts to authenticate X.

The principle that an offer directed to X can only be accepted by X remains debatable and can be regarded as an example of one of the rare cases where identity becomes a contractual term. It must also be appreciated that O intends to deal with C and with X. Such a distinction, however, does not enter his mind. O believes that C is X and intends to contract with C in this belief. The question remains: is O’s belief reasonable? Applying the reasoning in Lord Birkenhead’s dissenting judgment in Shogun, fraud does not negative intention or vitiate consent. Intention induced by fraud “is regarded by law as sufficient to found a contract.”

146 The Law of Contract para 4.107
147 The Law of Contract para 4.73; Carter on Contract [22-070]
148 Cheshire, Fifoot & Furmston p 274, see also Lake v Simmons [1927] AC 487
149 Carter on Contract [22-330]
150 Taylor v Johnson [1932] AC 161 at 217; see also: Cheshire, Fifoot & Furmston p 274
151 Boulton v Jones (1857) 2 H& N 564, see also Carter on Contract [22-319]
152 Carter & Harland [1248]
154 Shogun Finance Ltd v Hudson [2004] 1 AC 919 at 932; see also: Whittaker v Campbell [1984] QB 318
155 Shogun Finance Ltd v Hudson [2004] 1 AC 919 at 932

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The test as to how the promisee understood the words spoken to him\(^{156}\) cannot be applied as it was the promisee who induced the mistaken belief as to his or her identity. Without claiming that the test of “detached objectivity”\(^{157}\) is more amenable to evaluating O’s intention, O’s subjective state of mind cannot negative agreement and render the contract void.\(^{158}\) Furthermore, C’s knowledge of O’s intention cannot destroy the correspondence between offer and acceptance as C’s identity is not a term of the contract and remains external to its content.\(^{159}\) Identity becomes a term when it implies certain unique attributes. Otherwise, the contract has the same terms and subject matter,\(^ {160}\) irrespective of the other party’s identity. It is intentionally made and does not cease to be an agreement “because it has been actuated by a mistaken motive.”\(^ {161}\)

**Accountability of X**

[4.26] An issue that never arose in the mistaken identity cases was the potential accountability of X: the person whose identity was used. X was never held liable on the ground that somebody used his or her identity or on the ground that O’s reliance on the information about X (as presented by C) was reasonable. The situation could change if the transaction included the use of digital signatures - if X was the subscriber named in a DC. If the *Shogun* scenario was mapped onto an electronic setting and decided in line with the rules established in the MLEC, MLES or the ABA Guidelines, O behaviour would be evaluated in light of the reasonableness of his or her reliance on the authentication information provided by C. Similarly, the position of X would differ, as the latter would not only have the duty to safeguard the information that permits the replication of his identity but would also be obliged to inform a third party of any compromise of such information. In the *Shogun* scenario, the mistake as to C’s identity could have been avoided if there existed a duty to inform the motor vehicle register of the loss of a driver’s license and if there was a possibility for O to validate the status of the license against a centralized database. In sum, modified attribution rules would bring X into the discussion and burden him or her with the risk of unauthorized use of his or her identity.

\(^{156}\) *Ashington Piggeries Ltd v Christopher Hill Ltd* [1972] ACN 441 at 502

\(^{157}\) *Solle v Butcher* [1950] 1 KB 671, 693 CA as per Lord Denning; *Leaf v International Galleries Ltd* [1950] 2 KB 86 at 89; *Carter on Contract* [22-180]; see also: E Stern, *Objectivity, Legal Doctrine and Law of Mistaken Identity* (1995) 8 JCL 15 at 19

\(^{158}\) *Carter & Harland* [1248]; *Carter on Contract* [22-180]

\(^{159}\) *Carter on Contract* [22-340]

\(^{160}\) *Bell v Lever Brothers Ltd* [1932] AC 116 at 227

\(^{161}\) *Cheshire, Ffoot & Furmston* p 271
Conclusions

[4.27] Problems of authenticating the other party to the contract concern mainly issues of proof and evidence. As in the case of attribution, they need not be included in discussions of on-line contract formation. At the same time, the difficulties of remote authentication shed new light on the distinctions drawn in mistaken identity cases. These distinctions have accumulated critique even before the emergence of on-line transactions. It is questionable whether contracts should be treated as void for mistaken identity if the value of "identity" as a means of distinguishing between persons can be doubted. The fundamental importance of "identity" can only be sustained on the assumption that the party claiming mistake as to identity has undertaken reasonable efforts to authenticate the other party. As Internet-based methods of communication change the quality and quantity of authentication information, this "reasonableness" becomes more difficult to evaluate. On a practical level, on-line authentication efforts are doomed from the outset as there is no method of reliably establishing the identity of the person at the other end of the communication channel - notwithstanding the deployment of remote authentication technologies based on digital signatures.

Digital signatures do not identify the sender. The existence of a trusted third party does not change anything in this regard. Digital signatures can function as a reliable authentication mechanism only if the end user computer was secure, i.e. if the subscriber had exclusive access to the private key. The reliability of any remote authentication technology depends on the security of the network or the security of the authentication information required to deploy such technology. The security of the network and the computer of the end-user are almost impossible to achieve in open environments, such as the Internet. Just like a person cannot be made accountable for all calls made from his or her equipment, a subscriber named in a digital certificate cannot be held accountable for the unauthorized use of his or her private key.

Endless recounts of Alice and Bob exchanging secret keys with the help of certification authority Carol should be abandoned and replaced with the simple observation that identification on open electronic networks is difficult - if not next to impossible. Digital signatures can only function in secure environments or closed networks. They can serve as tools of identification (and attribution) on the basis of an agreement, where subscribers agree to bear the legal effects of messages "signed" with the private key. In sum, unless the subscriber agrees to be bound in the event of an unauthorized use of a private key, the risk is borne by the recipient of the digitally signed message. A digital certificate, a certification authority or a

complex encryption algorithm do not provide any assurance that the private key was used by the subscriber.

As in the case of electronic agents, digital signatures are a misnomer and unnecessarily blur legal analysis. Digital "signatures" are not signatures but a remote authentication technology built on a hybrid cryptosystem. Last but not least, even if some model laws provide that digital signatures can fulfil the same functions as traditional signatures, their importance from a contract law perspective is limited, as the existence, validity or enforceability of a contract rarely requires a signature.
Chapter 5

Offer and Acceptance

The ordinary rule is, that to constitute a contract there must be an offer, an acceptance, and a communication of that acceptance to the person making the offer.¹

Introduction

[5.1] This chapter deals with the basic tool of analysing the process of contract formation, the offer and acceptance model. It aims to answer two seemingly simple questions: “is there an offer?” and “is there an acceptance?” It examines which of the rules developed around the “offer and acceptance” model face Internet-specific challenges in their application.

The previous two chapters dealt with some preliminary questions related to the existence of intention. Chapter 3 disposed of the arguments that on-line contracts must be treated differently because one or both sides of the transaction are automated. Chapter 4 discussed the difficulties of identifying the other party and their impact on contractual intention. This chapter deals with the actual process of contract formation and some problems related to the manifestation of intention on-line. It provides the background for all subsequent discussions relating to the time of formation and the determination of contractual contents.

The contracting parties generally do not structure their interactions in terms of “offer and acceptance.” Accordingly, “to insist on the presence of a genuine offer and acceptance in every case is likely to land one in sheer fiction.”² This “sheer fiction”, however, provides a framework for analysing the interactions leading to a contract. The law places the labels of “offer” and “acceptance” on specific words, documents or conduct in order to determine the existence of contractual intention, the moment of formation and the contents of the contract.³ As a result

¹ Henthorn v Fraser [1892] 2 Ch 27 at 35; Brogden v Metropolitan Railway Co (1877) 2 App Cas 692
² Atiyah p 55
³ The Law of Contract para 2.7
The outcome of a case may turn on whether a party did or said anything the law will interpret as an “offer,” and if so, whether the other party did or said anything that the law will interpret as an “acceptance.” The law will also ask whether the “acceptance” took the proper form and whether it came at a proper time (had the offer already been withdrawn? had it lapsed?).

The “offer” and “acceptance” model assumes a particular chronology of events and assigns specific roles to the transacting parties. One party, the “offeror,” prescribes the terms of the contract, the time the offer remains open and the method of acceptance. The other party, the “offeree,” has the power to form the contract by a simple “yes.” Acceptance can only occur in response to an offer - if there is no offer, there can be no acceptance.

Sophisticated analysis is usually required to determine whether and when a contract has been formed. Even in the world of paper documents and everyday transactions it is difficult to map the offer and acceptance model onto multiple events occurring sequentially or simultaneously. It is in those very cases, however, that the offer and acceptance model proves its value. At the expense of some artificiality, it provides a framework for analysing the intention of the parties. This chapter examines how this framework can be transposed onto online transactions, where contractual intention is manifested by means of clicks, websites and emails.

Roadmap

[5.2] This chapter commences with some general considerations delineating the scope of discussion. It aims to establish, in broad terms, how the changed communication landscape affects the practical application of the offer and acceptance model. The basic principles relating to “offer” and “acceptance” are revisited. Next, the chapter asks: is there an offer? and attempts to distinguish between offers and invitations to treat in the case of websites with integrated

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4 R Craswell, Offer, Acceptance and Efficient Reliance (1996) 48 Stan L Rev 481 at 482
6 see also: A L Corbin, Offer and Acceptance, and Some of the Resulting Legal Relations (1917) 26 Yale LJ 169 at 181
7 see: Furmston, Norisada & Poole p 4, citing Australian Woollen Mills Proprietary Ltd v The Commonwealth (1955) 93 CLR 546; Harvey v Facey [1893] AC 552
8 WA Dewhurst & Co Pty Ltd v Cawse 2 FLR 184 at 190; MacRobertson Miller Airline Services v Commissioner of State Taxation (WA) (1975) 133 CLR 125
9 The Law of Contract para 2.2
10 New Zealand Shipping Co Ltd v A M Satterwaite & Co Ltd, The Eurymedon (1975) AC 154
transactional platforms. The solution suggested in the CUECIC is critically examined. The chapter proceeds to discuss the technological factors that may affect this distinction and tests the possibility of applying real-world analogies to determine the existence of an offer. Additional considerations flow from analysing the positions of "offeree" and "offeree." The assumptions underlying each position are compared with the actual mechanics of web-based transacting.

Subsequently, this chapter analyses the act of "acceptance" and asks: is there acceptance? The discussion relates to the choice of communication method. Is it possible to maintain a liberal view regarding the construction of offers, which prescribe a particular method of acceptance without stating its exclusiveness? The effectiveness of acceptances, which do not conform to the prescribed method is questioned in light of the changed communication landscape.

Preliminary Considerations
[5.3] Before approaching the main questions posed in this chapter, a number of preliminary points must be made.

Applicability of the "offer and acceptance" model
[5.4] As indicated in Chapter 1, this thesis does not attempt to revise the offer and acceptance model and opposes theories aiming at modifying this analytical approach. The latter derive from the misconception that on-line contracts are inherently different from real-world contracts and are therefore not susceptible to traditional legal analysis. This thesis does not investigate whether the offer and acceptance model applies to contracts formed on-line. It assumes that this model remains the best analytical tool available - irrespective of whether a contract is concluded on-line or in the real world.

Technology-specific problems
[5.5] All principles pertaining to "offers" and "acceptances" need not be recited. The aim is to identify technology-specific problems pertaining to their application. One could examine the table of contents in a textbook on contract law and ask: which elements, or stages, in the contract formation process are affected by the novel transacting environment? An intuitive, common sense analysis reveals that very few are. The basic building blocks of agreement

11 See e.g. Cheshire & Fifoot "[A] new contract formation rule may emerge for electronic transactions - the 'last act' rule whereby the last act is equivalent to acceptance." [3.44] See also the preparatory works of the UNCITRAL Working Group IV on Electronic Commerce, which lead to the adoption of the CUECIC. It was debated whether electronic contracting requires the developments of new rules or whether the rules applied to traditional contracts can respond to the needs of novel communication techniques. A/CN.9/WG.IV/WP.91

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remain the same: intention and consideration. Offers are binding and can be revoked before acceptance. They are terminated by rejection, the death of the offeror or by the occurrence of a condition subsequent. Acceptances must be communicated within the timeframe prescribed by the offer. The same principles apply on-line. The intention of the parties remains decisive, the offer and acceptance analysis aims at determining such intention by construing the statements made or conduct engaged in during the contracting process. Not every aspect of “offer and acceptance” needs to be discussed for the simple reason that not every aspect is affected by the novel communication possibilities.

Multiplicity of communication methods

[5.6] On-line contracts can be formed in many different ways. To speak of “Internet communications” or “electronic communications” in general over-simplifies the matter and does not reflect the multiplicity of communication methods enabled by the Internet. Parties communicate via email, instant messengers and websites, to name a few. All those communication methods rely on the Internet. The Internet itself, however, is not a method of communication but an infrastructure underlying various methods of information exchange. Each of those methods serves different communication needs and displays its own characteristics. Each method differs with regards to its intrusiveness, immediacy of communication and the ability to reach the other party in real-time. It is therefore not just a question of the underlying technology but of the different ways (and reasons) people use a given communication method.

The dichotomy between email and instant messengers on one side and web-based interactions on the other must be emphasized. People exchange emails and instant messages. People do not “exchange” websites but interact with them. Communications via email or instant messengers can be compared to traditional correspondence. Problems of identifying an offer and an acceptance are similar - irrespective whether one analyses written documents or electronic messages circulating between the parties. The sequence and content of each message must be examined to discern, which contains an offer and which constitutes an acceptance. The most likely scenario for mass-market e-commerce, however, are transactions occurring on websites, where the owner of the website (hereinafter referred to as “web-merchant”) presents goods or services for purchase.

Persons visiting websites (“users”) browse through the presented information, fill out forms, tick boxes and activate scroll-down menus. At some stage, they are presented with

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12 Butler Machine Tool Co v Ex-Cell-o Corp [1979] 1 WLR 401 at 404
13 Gibson v Manchester City Council [1979] 1 WLR 294
buttons or links to indicate their willingness to purchase a product or service. Additional elements in the contracting sequence may be the provision of payment information or the display of terms governing the transaction. Web-based transactions are less transparent than a simple exchange of emails. On the web-merchant's side, contractual intention is manifested by setting up a website, on the user's side - by activating different elements of the web-interface.

Communication: presentation and transmission

[5.7] The rule that intention may be manifested in any manner holds true both in the real world and on-line. Whether the parties negotiate by email, EDI or via the telephone, the legal effect of their communications depends on their intention - the contents of their statements or the meaning of their acts. The analytical tool of offer and acceptance remains the same irrespective of whether intention is manifested by means of an instant message, a website or a "click." It must be admitted, however, that a number of factors affect its application depending on the method used to manifest, that is communicate, intention.

At this stage the division into "presentation" and "transmission" must be introduced. Both constitute components of the term "communication:" a statement is presented (assumes a particular form, an arrangement of text or graphic material) and transmitted (conveyed from one party to the other). Different technologies affect different aspects of the contract formation process. While the manner of presenting content (apart from the content itself) bears on the differentiation between offers and invitations to treat, the establishment of contractual contents and the incorporation of terms, problems related to the time of contract formation arise mainly with regards to methods of transmission. The division between presentation and transmission does not, however, fold neatly along technological lines. For example, email can raise problems relating to the presentation of its contents, such as in the case of illegible messages or the impossibility to retain original formatting. Websites may also be analysed from a data transmission perspective. Some generalizations and simplifications are made for analytical purposes. The respective stages in the contract formation process are analysed from different angles: manifestations of intention can be examined either with regards to how the on-line environment changes the manner intention is presented or transmitted. Each communication

14 P Quirk, J Forder, Electronic Commerce and the Law, 2nd ed, Milton 2003, p 65
16 See Chapter 3
17 See Chapter 10

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method creates a different set of problems and each stage in the contract formation process faces different challenges resulting from the changed communication possibilities.

Discussing various aspects of the contract formation process in isolation may appear artificial. Such "isolation" is, however, necessary in order to examine how this process is affected by technological factors.

**General Principles**

[5.8] On-line and in the real world, the intention of the parties remains paramount. The primary purpose of the offer-acceptance analysis is ascertaining this intention. The communications of the parties are construed in order to determine whether their minds have met.\(^{18}\) The following paragraphs briefly revise the basic principles related to "offers" and "acceptances."

**Offers and invitations to treat**

[5.9] An offer indicates a willingness to enter into a contract without further negotiations.\(^{19}\) Offers bind the offeror and can be accepted by a simple "yes.\(^{20}\) Offers are distinguished from invitations to treat ("invitations"), which are non-binding indications of a general willingness to contract.\(^{21}\) The distinction depends on the intention of the maker of the statement and is inferred from the words in the context in which they are used. Intention is evaluated objectively from the perspective of a reasonable addressee.\(^{22}\) In sum, offers are binding, whereas invitations indicate a commencement of the contract formation process.

Offers can be accepted by a single act of acquiescence because they contain all the contents of the contract, i.e. they are certain and complete.\(^{23}\) Determining the contents of the offer is often concomitant with establishing the contents of the contract.\(^{24}\) The required completeness depends on the type of goods or service. There may be elements remaining to be

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\(^{18}\) *Carter & Harland* [2011]

\(^{19}\) *Carter & Harland* [207]

\(^{20}\) *Carter on Contract* [03-001]

\(^{21}\) *The Law of Contract* para 2.193

\(^{22}\) *Carter on Contract* [03-020]

\(^{23}\) *May and Butcher Ltd v R* [1934] 2 KB 17a

\(^{24}\) *The Law of Contract* para 2.152
determined, but such determination must not depend upon the agreement between the parties.\textsuperscript{25} Much depends on the complexity and the parties' familiarity with the subject matter.\textsuperscript{26}

Invitations lack the required completeness and can be regarded as requests to submit offers. Designing one's market appearance as an invitation serves protective purposes. Invitations shield the maker of the statement from the risk of "over-acceptance," i.e. the inability to perform when the number of acceptances exceeds the number of items on stock\textsuperscript{27} and also give him or her the ultimate choice whether to contract or not.\textsuperscript{28}

The differentiation between offers and invitations is more than a theoretical exercise. This initial division has important practical implications. In order to determine the obligations of the parties, the contents of the contract must be known. Have the terms been validly incorporated? What statements were made during the contract formation process? When was the contract formed? The answers to any of these questions can only be found after determining which act constituted acceptance. As acceptance can only occur in response to an offer,\textsuperscript{29} the analysis must commence with establishing the existence of an offer.

Acceptances

[5.10] An acceptance constitutes a sign of agreement to an offer and concludes the contract formation process. Acceptance must correspond with the offer and be unequivocal.\textsuperscript{30} It must take the form of an external act and be communicated to the offeror.\textsuperscript{31} The offer may also dispense with the communication of acceptance. Such is the case of unilateral contracts, where the performance of an act obviates the need to separately communicate acceptance.\textsuperscript{32} In bilateral contracts acceptance takes the form of a counter-promise, in unilateral – the performance of an act.\textsuperscript{33} Depending on the construction of the offer, the same act may constitute acceptance or the

\begin{itemize}
\item \textsuperscript{25} May and Butcher Ltd v R [1934] 2 KB 17n per Viscount Dunedin at 21
\item \textsuperscript{26} Carter on Contract [03-050]; Howard Smith & Co Ltd v Varawa (1907) 5 CLR 68
\item \textsuperscript{27} Grainger & Son v Gough (Surveyor of Taxes) [1896] AC 325 at 334; Partridge v Crittenden [1968] 2 All ER 421; proposal likely to be considered an invitation, if it does not limit quantity, see: Kelly v Caledonian Coal Co (1898) 19 LR (NSW) 1
\item \textsuperscript{28} Esso Petroleum Ltd v Customs and Excise Commissioners [1976] 1 WLR 1 at 11
\item \textsuperscript{29} Williams v Carwardine (1833) 5 Car & P 566; R v Clarke (1927) 40 CLR 227
\item \textsuperscript{30} Carter on Contract [03-220]
\item \textsuperscript{31} Felthouse v Bindley (1862) 11 CBNS 869
\item \textsuperscript{32} Carter on Contract [03-320]
\item \textsuperscript{33} Carter on Contract [03-020] [03-170]
\end{itemize}
actual execution of the contract (i.e. consideration).\textsuperscript{34} To complicate matters further, the same act can also be an offer if the expression of intention preceding such act is considered to be an invitation. The legal meaning of the act in question depends on its language, the context and the surrounding circumstances. Not every response to an offer constitutes an acceptance.\textsuperscript{35} Acceptances must also be distinguished from acknowledgements of receipt or order tracking messages.\textsuperscript{36} In sum, the last act from either party’s side need not constitute acceptance.

Generally, no rules prescribe the contents or form of offers or acceptances. To repeat the obvious: intention can be manifested in any manner. Offers may, however, state the time during which acceptance must occur as well as the method of acceptance. Accordingly, offerees may be limited in the range of responses, as their acceptance must take a specific form. Furthermore, in the majority of circumstances, offers and acceptances are implied rather than express. The use of the words “offer” and “acceptance” is not compulsory and by itself not determinative.\textsuperscript{37} Even in the case of a formal exchange of documents it is not always clear, which document constituted an offer and which was an acceptance. Mapping the offer and acceptance model onto real-life situations carries not only signs of artificiality but also some arbitrariness as the same act may be interpreted in many ways. The web-merchant can accept by enabling a download or permitting the user to remain on the site.\textsuperscript{38} The user can accept by activating a download or staying on the site. The performance of the contract can be indistinguishable from the act of acceptance.

\textbf{Is there an “Offer”?}

[5.11] Different technologies create different challenges for the contract formation process. Most problems of ascertaining whether one of the parties has made an offer concern web-based transactions: one party manifests his or her intention by setting up a website, the other party visits the website and activates various elements of the web-interface. To say that “everything is a matter of construction” does not solve the problem, when manifestations of intention take the form of dynamic HTML files and sequences of “clicks.”

\begin{itemize}
\item \textsuperscript{34} \textit{Australian Woollen Mills Proprietary Ltd v The Commonwealth} (1954) 93 CLR 546
\item \textsuperscript{36} \textit{Corinthian Pharmaceutical Systems Inc v Lederle Laboratories} 724 F Supp 605 (1989)
\item \textsuperscript{37} \textit{Carter on Contract} [03-001]
\end{itemize}
When does a website constitute an offer?

[5.12] This question could be paraphrased: when is a person who set up a website bound by its contents? When can a simple “click” turn the contents of a website into the contents of a contract? Websites may be offers or invitations.\(^{39}\) It is impossible to mechanically subsume them under either category.\(^{40}\) Such attempts were made during the preparatory works for the CUECIC. It was stated that websites should be regarded as invitations because they are “like advertisements” and they are addressed to the world at large.\(^{41}\) Consequently, CUECIC Article 11 established a presumption that websites are invitations.\(^{42}\) During the discussions leading to the adoption of the CUECIC, it was also observed that: “Internet transactions may not easily fit into the established distinctions between what might constitute an “offer” and what should be interpreted as an “invitation to treat.”\(^{43}\) This statement illustrates a common misunderstanding for three reasons:

First, to claim that Internet transactions do not easily fit the traditional analytical model implies that real-world transactions do. This is obviously not the case. Most difficulties in transposing the offer and acceptance model to novel transacting scenarios result from the fact that it is a model. Applying models against real-life situations is inherently difficult. The difficulties are more pronounced in the case of on-line transactions because manifestations of intention take an unusual form. There are also more “acts” crammed into the small space of the computer screen.\(^{44}\)

Second, as further discussed below, the “distinctions” between offers and invitations are by no means “established.” The interpretation of certain stereotyped situations as indications of final intention is not consistent and does not provide universal rules. Despite the fact that the

\(^{39}\) The discussion concerns websites enabling contract formation without recourse to other media.

\(^{40}\) Squires, *Some Contract Issues Arising from Online Business-Consumer Agreements* (2000) 5 Deakin LR 95 at 104; see also *Treitel* p 12, who states that where a supplier indicates the availability of goods or services on a website, “the offer would seem to come from the customer (e.g. when he clicks the appropriate “button”) and it is open to the supplier to accept or reject that offer.” *Chissick & Kelman* p 75

\(^{41}\) See: A/CN.9/WB.1V/ WP.91 paras 47, 48; A/CN.9/484 para 125

\(^{42}\) CUECIC Article 11 reads:

“A proposal to conclude a contract made through one or more electronic communications which is not addressed to one or more specific parties, but is generally accessible to parties making use of information systems, including proposals that make use of interactive applications for the placement of orders through such information systems, is to be considered as an invitation to make offers, unless it clearly indicates the intention of the party making the proposal to be bound in case of acceptance.”

\(^{43}\) A/CN.9/WG.1V/WP.95 para 53

\(^{44}\) See Chapter 8

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interpretation of certain kinds of expressions appears standardized, care must be taken not to generalize.

Third, it appears contrary to the spirit of practically all model regulations to introduce media-specific rules. Why should a statement made on a website be interpreted any differently than the same statement made in a newspaper or verbally? It is the content of a statement, not the method of its communication that must be construed to determine its legal effect.

Websites are subject to the same rules of construction like any other manifestation of intention. The fact that a statement is posted on a website does not automatically prejudice the outcome of the analysis. The question whether a website constitutes an offer or an invitation must be approached like any other manifestation of intention. It is incorrect to ask whether websites are offers or invitations. The question is always whether a particular website constitutes one or the other.

The following paragraphs examine what factors can be taken into account in making this differentiation.

Informational and transactional

[5.13] Some websites are established solely for informational purposes. Others are equipped with transactional capabilities. In case of the latter, contracts be can formed and performed on the website. The most common examples are downloads of software or music. Another popular service is access to information, where the website itself forms the subject matter of the contract. Performance may also occur in the real-world, such as with purchases of tangible goods (books on amazon.com) or services (tickets on virginblue.com.au).

While the current discussion relates to transactional websites, it must be remembered that this thesis is not about e-commerce but about contract formation. It is not confined to sales transactions, where consideration takes the form of payment information on one side, and the delivery of a product on the other. The imagery of the sales contract must therefore be abandoned. The subject matter may be information, the consideration may not be monetary. It

46 Willmott, Christensen & Butler [3.4] [3.130]
can take the form of staying on the site and permitting the web-merchant to study the user's browsing behaviour. The provision of payment data is therefore not an indispensable element. Furthermore, the fact that access to a website is "free" does not imply that there is no contract. On-line contracts are not built exclusively around the classic sales transaction and the there are many alternative income models, predominantly based on advertising revenue. While the changed subject matter of the contract is not a distinguishing criterion \textit{per se}, it further complicates the analysis.

\textit{Interactivity and number of addressees}

[5.14] Two potential criteria of differentiating between offers and invitations in the case of websites must be discarded at the outset: interactivity and number of addressees.\footnote{A/CN.9/WG.IV/WP.91 par 47} Some websites present static content, others present content in an interactive and dynamic manner. The legal characterization of a website cannot depend on the degree of interactivity.\footnote{The "passive/active" criterion was used in a number of US cases concerning "purposeful availment," an element required to establish personal jurisdiction. The likelihood of personal jurisdiction being exercised depends the nature of the commercial activity conducted over the Internet. See: \textit{Zippo Manuf Co v Zippo Dot Com,Inc} 952 F Supp 1119 (WD Pa 1997); \textit{Eileen Weber v JOLLY Hotels} 977 F Supp 327 (DNJ 1997); \textit{Bensusan Restaurant Corp v King} 937 F Supp 295 (SDNY 1996); see also: R D Shultz, \textit{www. International_shoe.com: Analyzing Weber v Jolly Hotels' Paradigm For Personal Jurisdiction in Cyberspace} (1998) BYUL Rev 1663. The "non-interactive"/"interactive" division is also mentioned in the CUECIC preparatory works. See: A/CN.9/WG.IV/WP.95 para 54. It was stated that websites containing interactive applications enable the immediate conclusion of a contract and may therefore be regarded as offers. It was not explained why the possibility to conclude a contract should predetermine the legal character of websites.} While "passive" websites require additional steps to contact the merchant and do not enable on-line performance they may constitute an offer if a contract can be formed exclusively on the basis of the contents presented thereon. The presence of an interactive interface does not imply that the terms are certain and complete. And the other way round: the absence of interactivity does not imply that the contents of the websites are not sufficiently certain and complete to bind the web-merchant.

The differentiation between offers and invitations cannot be justified by the number of addressees of a statement. If an offer is made to the public at large the offeror becomes liable to the person who accepts, not to everyone.\footnote{Carter \textit{on Contract} [03-020]; \textit{Cartili v Carbolic Smoke Ball Co} [1893] 1 QB 256 at 268} The unlimited number of addressee's does not preclude a statement from being binding.
Virtual shop, advertisement or vending machine?

[5.15] Absent clear language of commitment or disclaimers to the contrary, a number of rules assist in differentiating between offers and invitations. It must be examined whether websites fit under one of the stereotyped situations, which are commonly regarded as constituting one or the other.

The goods were “displayed on shelves in packages (…), with the price marked on each. A customer, on entering the shop, was provided with a wire basket, and having selected from the shelves the articles which he wished to buy, he put them in the basket and took them to the cashier’s desk (…), where the cashier stated the total price and received payment.” This passage stems from Pharmaceutical Society of Great Britain v Boots Cash Chemists,52 a landmark case concerning the legal characterization of self-service shops. Focusing on the issue when the sale is completed, the court decided that although “the customers should go and chose what they want, the contract is not completed until the customer, having indicated the articles which he needs, the shopkeeper (…), accepts that offer.” The offer was made by the customer and no sale was effected until the shopkeeper accepted the price.53 The self-service system was an invitation to treat. The position is no different if goods are obtained with the intermediation of a shop assistant.54

Replace the wire basket with a virtual shopping cart, the shelves with a scroll-down menu, the act of placing the goods in the basket with a “click-drag” and the cashier with an electronic checkout. Welcome to Amazon.com.

Websites can be likened to virtual shop displays, mail-order catalogues, traditional advertising in mass media, such as TV commercials and billboards.55 The latter are routinely regarded as invitations.56 The fact that a given website can be subsumed under either category does not preclude it from being binding as both advertisements and shop displays can constitute offers if they are sufficiently certain to allow the inference of intention.57 Websites can also be

52 [1953] 1 QB 401
53 Pharmaceutical Society of Great Britain v Boots Cash Chemists (Southern) Ltd [1953] 1 QB 401 at 407; see also: Lasics v Cashmarts [1969] 2 QB 400
54 Fisher v Bell [1961] 1 QB 394
56 The Law of Contract para 2.196
57 Carlill v Carbolic Smoke Ball Co [1893] 1 QB 256 at 262, see also Lefkowitz v Great Minneapolis Surplus Store 86 NW 2d 689 (Minn 1957); Lexmead (Basingstoke) Ltd v Lewis [1982] AC 225; see also
compared to vending machines, which are generally regarded as offers.\(^{58}\) This is so because "in that case the seller has waived any right to object to the particular customer or to say that he has already sold the goods."\(^{59}\) A person expresses an intention to be bound by making the vending machine publicly available and delivering the product or service to anyone who inserts the required coin and selects the product or service. The party choosing to form a contract is the person inserting the coin into the machine.

Websites do not easily fall into one of the pre-established categories. Each website can be placed somewhere on the spectrum between "advertisement" and "vending machine." How would a dispute involving an e-commerce website be resolved under the rules derived from cases such as *Boots, Cartill* or *Thornton*? When does a website bear more resemblance to a shop display than to a vending machine? Whenever the delivery of a digital "product" or service occurs directly on the website, the resemblance to a vending machine is unquestionable.\(^{60}\) Neither advertisements nor billboards enable the immediate execution of a contract: products cannot be obtained directly from a TV commercial or magazine ad. Websites reduce the distance between advertising and contracting. There is no separate act of leaving the site, contacting the merchant and ordering the product. Whoever inserts payment information or "clicks" the appropriate button is provided with the service, be it remaining on the website, downloading software or obtaining another benefit.

It is questionable whether the differentiation between offers and invitations should depend on the product sold, i.e. on the ability to form *and perform* the contract on the website. After all, the same music can be downloaded from iTunes or bought in the form of a CD on amazon.com. At the same time, it is difficult to maintain that ticket machines are offers while websites selling tickets are invitations - just because they are websites and not tangible machines displayed in public places. Websites may provide more content (i.e. be more certain and complete) and user input in both instances (payment and/or product selection) are identical. The web-merchant is willing to contract with everyone, the choice lies with the user. The resemblance to vending machines is particularly prominent in single-click purchasing scenarios.

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\(^{58}\) *The Law of Contract* par 2.199; *Thornton v Shoe Lane Parking Ltd* [1971] 2 QB 163

\(^{59}\) *Atiyah* p 58

Analysis of positions

[5.16] Additional insight into the division between offers and invitations may be gained by analysing the positions of the contracting parties. The offer-acceptance model assumes that one party is the offeror and the other party is the offeree. Numerous assumptions flow from this “allocation” of roles. The position of an offeror carries both dangers and advantages. Being the “master of the offer”, he or she prescribes the contents of the contract and the method of acceptance. At the same time, the offeror is bound by the offer and the ultimate choice whether to form a contract rests with the offeree.

Web-mERCHANTS are traditionally advised to design websites as invitations to treat. Such advice seems logical in light of the protective function of invitations and the ability to retain control over the formation process. Legal factors aside, some practical considerations must be taken into account. Due to the high risk of abandonment, web-mERCHANTS attempt to finalize on-line contracts in as few clicks as possible: the shorter the interaction with the user, the higher the likelihood of completing the transaction. Thus, web-mERCHANTS design the contracting procedure and prescribe the permissible user input to reduce the steps necessary to form a contract.

Consequently, the user’s responses are limited. The web-interface predetermines the form and content of their input. Websites may also “recognize” users form previous visits and display personalized content. This may further limit the required input and shorten the formation process. In sum: web-mERCHANTS impose the contracting procedure and control user behaviour. The likelihood of negotiations or battle-of-forms situations is negligible: the contents of the contract are predetermined, users are technically precluded from modifying the terms. Negotiations and the battle-of-forms are more likely in the case of email, where both parties can present their content.

It must be admitted that the possibility to negotiate is not a prerequisite of a valid contract. In the world of standard terms and mass-market transactions users rarely have the opportunity to propose their own terms. Furthermore, terms are often accepted by the party who

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61 Carter & Harland [208]
62 M Yamaguchi, above at note 5 at 364
63 Chissick & Kelman p 75, 76; S Jones, Forming Electronic Contracts in the United Kingdom (2000) 11 ICCLR 301
65 Extreme situations, such as the injection of malicious code, are excluded from this discussion.
initially proposed them. The limitations imposed on the other party become particularly visible in web-based transactions but are not necessarily Internet-specific. The inability to respond in any other manner than that prescribed by the web-merchant and the limited user input brings to mind vending machines.

Web-merchants generally reap the benefits of both positions: offeree and offeror. They effectively retain mastery of the offer by imposing the terms of the contract, the method of acceptance and the whole contract formation process. They also retain the final choice whether to contract. If a website is regarded as an invitation, it is the user who assumes the position of the offeror. He or she, however, may not enjoy any of the advantages inherent in this position.

Moreover, web-merchants do not necessarily require the protective function of invitations: the risk of over-exposure can be prevented by technological means. E-commerce applications can be programmed not to accept orders of goods low or stock and dynamically change product information in real-time to reflect the number of items available. Furthermore, as digital products or the contents of the website never run out of stock, the risk of over-acceptance is often absent. It can also be assumed that in the majority of circumstances the final choice regarding whether to contract need not be retained: why would the web-merchant refuse to contract in a mass-market transaction where the identity of the other party is generally irrelevant and almost impossible to verify? The reservation of such choice is only necessary when the creditworthiness of the other party must be examined.

Due to the multiplicity of transacting mechanisms and interface designs, it is impossible to state one universal rule. Websites fit under different categories and their comparison to advertisements or virtual shops often leads to opposite results. The general reluctance to hold manifestations of intention as binding must be weighed against the fact that many websites operate like vending machines. The contracting procedure is automated, user input is restricted, both the terms of the contract and the contracting process are strictly controlled by the web-merchant. The risks of overexposure can be counterbalanced by technological protections.

Provided the contents are certain and complete and the transacting procedure does not require recourse to external methods of communication, the intention to be bound derives from the immediate ability to execute the transaction:

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66 Carter & Harland [212]; Treitel p 31
67 see Chapter 3 [3.8] [3.19]
Where a web site offers services to be supplied ‘on-line,’ such as down-loadable software, or information services, in return for a customer’s agreement to the supplier’s terms and/or provision of credit card details, so that it appears that the supplier is willing to contract with anyone who fulfils its terms, the Web site may be construed as an offer in law.\(^8\)

Is there an “Acceptance”?

[5.17] The next step in the discussion is determining the existence of an acceptance. The preceding paragraphs analysed websites. The following sections concern communication methods in general. Traditionally, legal analysis focuses on acceptances in relation to the time of formation. The latter depends on whether acceptance is effective upon dispatch or receipt.\(^9\) The choice between these options largely depends on the method chosen to communicate acceptance. The anterior question is: is there an acceptance? The choice of method bears not only on the time of formation but also on the existence of the contract. The following paragraphs focus on whether the act performed in response to an offer is in fact an acceptance. The answer to this question can only be obtained by construing the offer.

Method of Acceptance

[5.18] An offer may stipulate that acceptance be communicated by a particular method.\(^70\) Absent explicit instructions, the circumstances of the offer may indicate what method should be used.\(^71\) The offeror can prescribe any act to constitute acceptance.\(^72\) Situations where acceptance is communicated via the prescribed method and where both offer and acceptance are communicated in the same manner lend themselves to straightforward analyses. Complications arise where (a) the offeree accepts via a method that is different from that requested by the offeror ("alternative acceptance") and (b) where the offer is silent as to the method and acceptance is communicated via a different method than the offer. Two questions arise: Are alternative acceptances legally effective? When can acceptance be communicated by electronic means?

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\(^8\) The Law of Contract para 2.198

\(^9\) See Chapter 6

\(^70\) Manchester Diocesan Council for Education v Commercial and General Investments Ltd [1970] 1 WLR 241 at 245

\(^71\) The Law of Contract para 2.226

\(^72\) A L Corbin, above at note 6 at 199
The above questions acquire additional complexity in the changed communication landscape. When the leading cases were decided the methods of communication were few: addresses and numbers were tied to specific devices or locations, letters, telegrams or telexes were delivered to an office or home address. Nowadays, contracting parties are exposed to many different channels and methods of communication. The average person has several communication terminals, such as mobile phones, fax machines, desktop and laptop computers. Apart from a home and an office address, people have multiple electronic addresses and usually two phone numbers, fixed line and mobile. The multiplicity of addresses and communication devices creates potential confusion for both contracting parties.73

Acceptance can be sent by post, via sms, instant messenger, email, to name a few methods. Acceptance can be received in multiple formats on various devices. Electronic addresses are not tied to specific devices or locations. Emails may be received on mobile phones, voice calls can be terminated on computers. Some devices and addresses introduce problems of availability, reliability and cost. The offeror may request acceptances to be sent to a web-mail account due to its universal accessibility, ease of monitoring and generous storage. Other correspondence can be directed to a secure corporate account, which is accessible only from within the company network.

The effectiveness of the act done in response to the offer depends on the construction of the offer.74 The on-line environment does not change anything in this regard, but introduces new elements into the discussion. The offeree’s convenience must be weighed against transactional security and any potential prejudice to the offeror. The latter chooses the method of acceptance based on the required immediacy of response and its intrusiveness.

Prescribing a method of acceptance is reminiscent of communication rules in EDI trading partner agreements, where parties agree on the method of communicating contractual statements. “Communication rules” can also be found in option contracts, where the exercise of an option is often prescribed, with regards to both form and content,75 or in other long-term arrangements where contractual notices must be made in a specific format or manner.76 Although the exercise of an option or notification occur on the basis of a pre-existent

73 see, e.g. E Wilson, Email becomes just one tool among many, The Australian, October 10, 2006, IT Business, p 1: “users are having difficulty managing uncoordinated voice calls, email, SMS, instant messaging, wireless email and voice over the internet protocol.”
74 Cheshire, Fifoot and Furmston p 55
75 Bowman v Durham Holdings Pty Ltd (1973) 131 CLR 8
76 Mannai Investment Co Ltd v Eagle Star Life Assurance Co Ltd [1997] AC 749
agreement, both are useful for the discussion. The contents of an offer are construed identically as the contents of a contract.

Similar problems arise in the case of "designation" of information systems or electronic addresses, where the effect of an acceptance may be delayed or conditional depending on whether the offeree complied with the offeror's request and sent the electronic message to a specific account or information system.\(^77\) Two situations are analysed: first, the offer prescribes the method of acceptance; second, the offer is silent.

**Offer prescribes the method of acceptance**

\([5.19]\) The offeror may request any method of acceptance and demand compliance.\(^78\) Acceptance is effective as soon as the offeree performs the stipulated act.\(^79\) If the offeror insisted on a particular method, "a purported acceptance in any other manner is not an acceptance."\(^80\) A popular view, however, is that where an alternative method is as timely and not less disadvantageous to the offeror, that method will suffice.\(^81\) If an offeror requests a reply "by return of post," a reply by telegram, or some other means that is received no later than the letter by post, is effective.\(^82\) Accordingly, even when the method is prescribed, the offeree may use a different method, which is "just as good."\(^83\) It is claimed that in order to preclude other methods, clear words must be used - the method must be indicated as exclusive.\(^84\) Only in the latter instance can alternative acceptances be regarded as ineffective.\(^85\) The problem was discussed mainly in relation to option contracts, where the exercise of the option did not comply with the prescribed manner.\(^86\) The controversy boils down to whether precise observance of the

\(^77\) see Chapter 7

\(^78\) *Manchester Diocesan Council for Education v Commercial and General Investments Ltd* [1970] 1 WLR 241 at 245

\(^79\) *Manchester Diocesan Council for Education v Commercial and General Investments Ltd* [1970] 1 WLR 241 at 245; *Dunlop v Higgins* (1848) 1 HLC 381 at 400; *Household Fire and Carriage Accident Insurance Co Ltd v Grant* (1879) 4 Ex D 216 at 236

\(^80\) *Carter & Harland* [228]

\(^81\) S Christensen, *Formation of Contracts by Email – Is it Just the Same as the Post?* (2001) QUT LJJ at 29; Willmot, *Christensen & Butler* [3.435]

\(^82\) *Tinn v Hoffman & Co* (1873) 29 LT 271

\(^83\) *The Law of Contract* para 2.226

\(^84\) *Carter & Harland* [228]

\(^85\) *The Law of Contract* para 2.226

\(^86\) *White Trucks Pty Ltd v Riley* (1948) 66 WN (NSW) 101; *Yates Building Co Ltd v R J Pulley & Sons (York) Ltd* (1975) 119 Sol Jo 370; *Mobil Australia Ltd v Kosta* (1969) 14 FLR 343; *Spectra Pty Ltd v Pindari Pty Ltd* [1974] 2 NSWLR 617

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method of acceptance is necessary and whether an indication of exclusivity is required to preclude the effectiveness of alternative acceptances.\textsuperscript{87}

The effectiveness – or permissibility – of alternative acceptances concerns the very existence of a contract. This discussion is therefore more than an academic exercise concerning the construction of offers. The permissibility of alternative acceptances raises practical and theoretical objections.

Practical Considerations

\textbf{[5.20]} Account must be taken of the multiplicity of electronic addresses, accounts, telephone numbers and devices by which a person can be reached. Statements that the method needs to be “just as fast or faster” must be approached with caution. Speed alone is not determinative. Convenience, cost and accessibility must also be taken into account. If it were speed alone, the offeror would request acceptance by phone. It cannot be claimed that acceptances by phone or instant messengers are admissible by default. Accordingly, arguments to the effect that offerees can protect themselves against revocation by reverting to faster methods of communication are inherently flawed.\textsuperscript{88} It is also proposed that a request for a reply ‘by return’ post should be interpreted as indicating the need for a “prompt reply rather than as stipulating that acceptance must be by letter and no other means.”\textsuperscript{89} This argument holds true if the acceptance arrives no later than a letter would normally reach its destination. It does not, if the acceptance is sent via a method, which is equally fast but arrives at a device or location, which are not monitored or accessible by the addressee.\textsuperscript{90}

Regarding “more advantageous” methods, the prescribed method is the most advantageous. There can be nothing more advantageous than what the offeror requested. The offeror prescribes a particular method of acceptance in order to monitor only one communication channel, address or device.\textsuperscript{91} The liberal view disregards the fact, that the

\textsuperscript{87} Cheshire & Fifoot p 134
\textsuperscript{88} B A Eister, Default Rules For Contract Formation by Promise and the Need for Revision of the Mailbox Rule (1990/1991) 79 Ky LJ 557 at 567
\textsuperscript{89} Carter & Harland [228]
\textsuperscript{90} Eliason v Henshaw (1819) 4 Wheaton 225, offeror requested acceptance by wagon, which brought the offer. Offeree thinking the post would be speedier, accepted by mail. He was wrong. No contract was formed. See also: Frank v Knight (1937) OQPD 113
\textsuperscript{91} see Treitel p 31, who states that the offeror prescribes the method of acceptance with a particular object in view.
offeror's request may be based on a willingness to accept the risks inherent in a given method. 92 Even if electronic methods are fast they are often less reliable. Certain methods imply the use of a particular format and may therefore be stipulated for evidentiary purposes. 93

Taking into account that the offeror knows his or her whereabouts and communication facilities at the stipulated time of acceptance, prescribing a specific method may be the only means of ensuring actual communication. An alternative acceptance may not be received or may be received with an undesirable delay: anticipating that his or her mobile phone will be out of range, the offeror requests acceptance by fax, which guarantees delivery to the office and immediate handling by relevant staff. Similarly, the offer may require the firing of a cannon knowing that the offeror will be in a particular area where the shot can be heard. Ultimately, the motives for the request are irrelevant. A liberal approach was easy to maintain in cases like George Hudson Holdings Ltd v Rudder, 94 where the personal delivery of the letter occurred to the same address as indicated in the request for a mailed acceptance. The effectiveness of the acceptance would have been questionable had it been delivered to a branch office or broadcast on the radio.

Another illustration are websites, where users order goods by filling out forms. 95 A liberal approach to alternative acceptances would imply that users may disregard the web-based transacting process and use a different channel to place their orders. A number of undesirable consequences would follow. First, the benefits of automation would be lost as email and some other communication methods are generally more cumbersome to manage on a mass-market scale. Web-mERCHANTS would be forced to acquire additional resources, both human and technical, to handle incoming communications. The existence of many smaller web-merchants would be threatened. After all, the success of e-commerce lies in automation and the facilitation of the shopping experience. E-commerce giants like amazon.com provide email addresses for customer relationship management, not for ordering books. The possibility to abandon the web-based transacting process generates confusion for both parties and reduces the benefits of automation. Users who communicate "outside" of the prescribed procedure risk that their orders are never processed or processed with considerable delay.

92 D H Evans, The Anglo-American Mailing Rule: Some Problems of Offer and Acceptance in Contracts by Correspondence (1966) 15 ICLQ 553 at 560, see also: Financings Ltd v Stimson [1962] 1 WLR 1184 at 1186, offeror not bound by oral acceptance if acceptance in writing was requested.
94 (1973) 128 CLR 387 at 392, 395
95 Assuming for the moment that the ordering form constitutes an acceptance.

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Theoretical Considerations

[5.21] The adequacy of the offeree's response can also be evaluated from a theoretical perspective. The following arguments can be raised against the permissibility of alternative acceptances.

First, the offeror is entitled to insist that he or she is not bound unless acceptance is communicated in the requested manner. It is argued, however, that as the instruction is for the offeror's benefit, he or she may waive it and recognize another method by making no objection to a non-complying acceptance. Unquestionably, the offeror may waive the right to insist on the stipulated method. The offeror may also decide not to. Consequently, the existence of the contract is left to his or her discretion: the legal effect of the act purporting to be "acceptance" is not automatic but conditional on its (explicit or implied) recognition by the offeror.

Second, it can be claimed that if acceptance occurs otherwise than by prescribed method, the offer is "never accepted in accordance with its terms." The method can be regarded as part of the offer and acceptance should mirror the offer unconditionally. An "alternative acceptance" can also be regarded as a counter-offer, which is then accepted by the original offeror. Acceptance of the counter-offer is left to the discretion of the original offeror. Offerors may be estopped from denying formation or their insistence on the prescribed method may be regarded as unreasonable. Both the "waiver" and the "counter-offer" approach encourage speculation at the expense of the offeree.

Third, a liberal approach necessitates the establishment of principles regarding the moment of effectiveness of alternative acceptances: are they effective on dispatch, receipt or on coming to the offeror's actual attention? While only the latter solution appears fair to the offeror, it is disadvantageous to the offeree as actual notification is difficult to prove and injects subjective elements into the discussion.

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96 Manchester Diocesan Council for Education v Commercial and General Investments Ltd [1970] 1 WLR 241 at 246
97 Cheshire & Fifoot [3.42]; Treitel p 31
98 Manchester Diocesan Council for Education v Commercial and General Investments Ltd [1970] 1 WLR 241 at 245; see also: United Dominion Trust (Commercial) Ltd v Eagle Aircraft Services [1968] 1 All ER 104 per Lord Denning at 107; Phillips Fox (A Firm) v Westgold Resources NL & Ors [2000] WASCA 85
99 Carter on Contract [03-220]
100 Carter & Harland [228]; Gilbert J McCaul (Aust) Pty Ltd v Pitt Club Ltd [1959] SR (NSW) 122; Duncan Properties Pty Ltd v Hunter [1991] 1 Qd R 101
101 See Chapter 7
Fourth, if offerors can prescribe any sign to constitute acceptance or request acceptance within a specified time, it must be assumed that they can also request - and insist on - a specific method of acceptance. Prescribing the method can be regarded as a way of stipulating the time and the sign. The request for the offer to be accepted within a specified time is interpreted strictly: if acceptance occurs after the expiry of the offer, there is no contract. The prescribed method of acceptance should be treated identically. Acceptance must be expressed in accordance with the offeror's request: a notice delivered on pink paper is not effective if it was to be delivered on blue paper. After all, the offeror may have trouble reading text from specific background colours.

Ultimately, what is the difference between prescribing a method and stating its exclusivity? Offers rarely expressly prescribe a method as exclusive for the simple reason that the average offeror does not realize the legal complexity of the problem. A liberal approach forces the offeror to monitor all communication devices and addresses - even those, which are not held out for contracting purposes. If the offer is not clear, the offeror must bear the risk that the offeree accepts by an unexpected or uninvited method. If, however, the offer prescribes the method, the offeree must comply.

A liberal approach provides no transactional security to either party. Instead of leaving effectiveness to the offeror’s discretion, be it in the form of waiver, acceptance of counter-offer or making acceptance conditional upon coming to his or her actual attention, alternative acceptances should be regarded as ineffective from the outset. Otherwise, one is left to a post factum evaluation whether the offeror’s insistence on a particular method or the exercise of his or her discretion were reasonable and whether the method actually chosen by the offeree caused prejudice to the offeror.

When the offeror prescribes the method of acceptance and the offeree accepts via a different method, it can be questioned whether such act constitutes acceptance. Alternative acceptances should be ineffective, they cannot conclude the contract formation process. The offeror is entitled to recognize solely those acceptances, which are communicated via the requested method.

105 Willmot, Christensen & Butler [3.435]
Offer does not prescribe method of acceptance

[5.22] If the method is not prescribed, “acceptance can be given by the same or an equally expedient method”\textsuperscript{104} as adopted for the offer. Acceptance sent by ordinary post was held ineffective where the offer was made by telegram, as the use of telegram was an indication that a prompt reply was expected.\textsuperscript{105} Absent instructions, the method must be “reasonable.”\textsuperscript{106} It is safest to accept via the same method as used by the offeror.\textsuperscript{107} The practical questions are: how far can the offeree depart from the offer? When is it reasonable to accept by electronic means?

The post is usually perceived as reasonable.\textsuperscript{108} Facsimile has been afforded similar treatment.\textsuperscript{109} Where an offer is made electronically and no form of acceptance is specified, acceptance must generally be by electronic means.\textsuperscript{110} If, however, the offer is not made electronically, it can be doubted whether email or an instant message can be regarded as reasonable. “Factors to be considered are the speed and reliability of email, the prior course of dealing between the parties and the usage of trade.”\textsuperscript{111} The issue is part of a larger problem: when can it be assumed that the other party agreed to communicate by electronic means?\textsuperscript{112} Absent prior dealings, responding to an offer made by traditional means with an electronic “acceptance” raises objections. Everything depends on the terms of the offer and the communication information (such as address, telephone number) provided by the offeror.

If the offer is oral and it is clear that an oral acceptance is expected, the offeree must ensure that acceptance is understood by the offeror.\textsuperscript{113} If the offeror desires actual

\textsuperscript{104} S Christensen, above at note 81 at 29

\textsuperscript{105} Quennerduaine v Cole (1883) 32 W R 185

\textsuperscript{106} see also Restatement (Second) Contracts par. 65 (1981); Polhamus v Roberts, 175 P 2d 196 (NM 1946); holding that authorized methods of acceptance are determined by what can reasonably be expected by the contracting parties; Farley v Champs Fine Foods Inc 404 NW 2d 493 (ND 1987), holding that any “reasonable and usual” mode of acceptance may be used where the mode of acceptance is not specified by the offeror.”

\textsuperscript{107} Hayne v Cook 109 NW 2d 188 (Iowa 1961); S A Williston, A Treatise on the Law of Contracts, 4\textsuperscript{th} ed, New York 1991, para 6.35

\textsuperscript{108} In Parks Enterprises v New Century Realty Inc 652 P 2d 918 (Utah 1982); acceptance by mail was held unreasonable where vendor’s agent personally delivered offer to vendor and counteroffer to purchaser and where counteroffer required acceptance within 48 hours.

\textsuperscript{109} Hofer v Young 45 Cal Rptr 2d 27, 29 (Ct App1995)


\textsuperscript{111} P Fasciano, Internet Electronic Mail: A Last Bastion for the Mailbox Rule (1997) 25 Hofstra L Rev 971 at 995

\textsuperscript{112} The problem is particularly prominent in the UETA, which does not apply unless the parties have agreed to transact by electronic means; see UETA Section 5

\textsuperscript{113} Cheshire, Fifoot & Furmston p 55

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communication then any method requiring additional steps, such as retrieval from a mailbox or mail-server, is undesirable. Unless specifically instructed or where prior communications originated in electronic form, the choice of an electronic method of communication cannot be regarded as reasonable.

**Conclusion:**

[5.23] This chapter described some preliminary problems of applying the offer-acceptance model in the on-line environment. It opposed attempts to modify this model or to introduce media- or technology specific presumptions based on the fact that a statement was made, for example, on a website.

On-line transactions are different to the extent that intention is manifested differently. Should on-line contracts, however, be analysed differently than real-world contracts? Do the differences warrant a change in the analytical tool? The answer to both questions is negative. One must resist the temptation to exaggerate the differences and to create a parallel legal regime for on-line transactions.

The question whether a website constitutes an offer or an invitation to treat must be approached like any other manifestation of intention. Intention is always determinative. It is evaluated on the basis of the contents presented in the body of an email or posted on a website. Additional factors must, however, be taken in to account: the technical restrictions imposed on the user and the technological protections available to the web-merchant. If the contents of a website are sufficiently certain and complete to evince an intention to be bound, the website constitutes an offer. If the transaction can be executed on-line in its entirety and the final choice whether to contract rests with the user, websites display more similarity to vending machines than to shopping displays.

If the method of acceptance is prescribed, alternative acceptances should be ineffective and preclude contract formation – even absent an indication of exclusivity. If the method of acceptance is not prescribed, the use of electronic methods of communication may not always be perceived as reasonable, especially if the offer was expressed by traditional means. The increasing complexity of the communication landscape, particularly regarding the multiplicity of terminating devices, addresses and communication risks, dictates a more strict approach to the offeree’s choice of method of acceptance.
Chapter 6

Effectiveness of Acceptance

Introduction

[6.1] The previous chapter described the basic problems related to the application of the offer and acceptance model in on-line transactions. Focusing on the differentiation between offers and invitations to treat in the case of websites and on the methods of communicating acceptance, it attempted to establish which of the acts performed or statements made by the parties constituted an offer and which constituted an acceptance. A central part of analysing the contract formation process and therefore a central part of this thesis is ascertaining the time of formation. Assuming that it has been determined which act constitutes acceptance, it must be examined when it becomes effective. Effectiveness on receipt is regarded as the principle, while effectiveness on dispatch, called the “postal acceptance rule” (the “FAR”), is regarded as the exception. This chapter attempts to make the choice between the principle and the exception in the case of acceptances communicated by electronic means (“the choice”). The next chapter continues the theme by attempting to define the terms “dispatch” and “receipt.”

Contracts can be formed face-to-face or at a distance. Determining the moment of formation does not generally raise problems in the paradigm situation: in face-to-face dealings, one party speaks the other listens, the moment words are spoken, the other party hears them. Communication is actual and immediate. Acceptance is effective the moment it is manifested, there is no distinction between dispatch and receipt, or between receipt and notification.

When parties deal at a distance, the dispatch of acceptance may be distinct from its receipt. The delay is the result of spatial remoteness, its length derives from the method of communication. The implications of delay are twofold. First, generally an offer may be revoked until acceptance is received. The longer the delay, the greater the risk of revocation. Second,

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1 Corbin para 3.25
2 Carter on Contract [03-150]
the delay creates a state of uncertainty for both parties, as neither knows whether and when a contract came into being.\(^3\)

When dealing at a distance the parties must use an intermediary or device in order to communicate. Dealings at a distance can be subdivided into those occurring with the intermediation of the post and those occurring with the intermediation of devices, which render the interaction similar to either dealings face-to-face or to dealings occurring through the post. When the post is used acceptance is generally effective upon dispatch of the letter. If the dealings are regarded “as if” occurring face-to-face, acceptance is effective on receipt. Whenever a specific method or device is used to facilitate communication at a distance, attempts are made to place it either in the “postal” or in the “as if” face-to-face category. Accordingly, the choice between the principle and the exception depends on the method used to communicate acceptance.\(^4\)

When the existing rules were conceptualised, the methods of communicating at a distance were few. Apart from personal delivery, or the use of agents, the post was the only viable means of conveying acceptance. The distance between the parties always implied a delay between dispatch and receipt of the letter. The communication landscape has changed. Distance is no longer synonymous with delay. Internet-based methods of communication can reduce the interval between dispatch and receipt to the point of non-existence. This lack, or brevity, of delay is often accompanied by a high risk of non-delivery. Neither the principle, nor the exception, was designed to address such scenario. Despite the accumulated body of case law there are few decisive guidelines that could be applied to novel communication scenarios.

The judges in the leading cases, *Entores Ltd v Miles Far East Corporation*\(^5\) ("Entores") and *Brinkibon v Stahag und Stahlwarenhandelsgesellschaft mbH*\(^6\) ("Brinkibon") did not anticipate that their reasoning would form the basis for evaluating the expansion of the PAR to email, instant messengers and web-applications. Although the above cases are cited in practically all discussions regarding the time of formation, it must not be forgotten, that “there is no absolute rule as to the time when an acceptance by fax, telephone or telex takes effect, but the question depends in each case on the facts and reasonable expectations of the parties.”\(^7\) In

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\(^3\) *Carter & Harland [235]*

\(^4\) See Restatement (Second) Contracts, para 64

\(^5\) [1955] 2 QB 327

\(^6\) [1983] 2 AC 34

\(^7\) *Brinkibon v Stahag und Stahlwarenhandelsgesellschaft mbH* [1983] 2 AC 34 at 42; see also: B Coote, *The Instantaneous Transmission of Acceptances* (1971) 4 NZULR 331
his famous speech, Lord Wilberforce stated that cases must be resolved "by reference to the intention of the parties, by sound business practice and ... by a judgement where the risks should lie."\(^8\)

This chapter opposes the wholesale approach submitting *all* electronic methods of communication under one rule. It attempts to establish which methods should be subsumed under the principle and which should be governed by the exception. For the sake of brevity, whenever a differentiation between the respective communication methods is not necessary, the term "electronic acceptance" is used.

It is suggested that the moment of formation should depend on the *type* of interaction provided by a given method. There are only two types of dealings: "at a distance" and "face-to-face." Different methods enable a communication process resembling one or the other.

Throughout the discussion it must be remembered that the principle of receipt derives from face-to-face dealings, whereas the exception developed specifically around the post.\(^9\) It can also be assumed that a principle that originated from a perfect communication scenario cannot be automatically applied to govern different situations.

**Roadmap**

[6.2] This chapter further analyses the practical application of the offer and acceptance model in the on-line environment. Focusing on the effectiveness of acceptances, it commences with describing the principle of receipt and analyses the basic concepts used in its formulation. Attention is devoted to the tension between the "meeting of minds" and the objective theory of contract as well as to the division between dealings at a distance and face-to-face. Subsequently, the chapter presents the exception: the postal acceptance rule. A brief look is taken at its origins, justifications and criticism. The discussion of the principle and the exception is aimed at establishing the premises of their application to novel communication scenarios.

The discussion must be preceded with some general considerations: which technological factors must be included in the discussion? Should the effectiveness of electronic acceptances depend on specific elements of the communication infrastructure or on the devices used by the contracting parties?

\(^8\) Brinkhöon v Stahl und Stahlwarenhandelsgesellschaft mbH [1983] 2 AC 34 at 42


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Determining the moment of effectiveness of electronic acceptances is usually presented in the form of the question “does the PAR apply to email?” The arguments are therefore based on a reverse operation: “should the exception apply to electronic acceptances?” instead of “should the principle apply?” It might be argued that only the first question merits attention as the principle of receipt applies by default. Although it appears more appropriate to examine effectiveness in relation to the principle, not the exception, this chapter follows the “traditional” line of argumentation and tests the validity of the popular arguments against the application of the PAR to email. After analysing the technical assumptions underlying most arguments, some novel elements are introduced into the discussion. Email is compared to the post, to establish whether there are sufficient similarities to subsume it under the PAR. The relationship between reliability and risk allocation is explored.

Next, it is examined whether emailed acceptances “fit” under the principle. The focus is placed on the characteristics of face-to-face dealings. It is analysed, which methods of communication can replicate those characteristics. The solution provided in the Restatement (Second) of Contracts is analysed in some detail. Email is contrasted with instant messengers and web-based interactions.

The discussion centres around email as to-date legal analysis has focused almost exclusively on this method. Email also constitutes a useful point of comparison with other Internet-based communication methods. The chapter concludes with a summary of the analysis and combines it with the conclusions of the previous chapter.

Caveats and Clarifications

[6.3] While most of the theoretical ground has been covered by years of legal analysis, there are some “dormant” problems in the formulation of the principle. This chapter explores the grey area created by unexpected permutations of old elements in novel communication scenarios. It is not attempted to provide universal rules. As in the case of differentiating between offers and invitations, the moment of effectiveness depends on the intention of the parties. The question is one of identifying the additional factors that should be taken into account when making the choice between effectiveness on receipt and effectiveness on dispatch.

It could be expected that in light of the novel communication landscape, the PAR is facing its demise. If the PAR developed around letters and the post, why even examine the possibility of its application on-line? Upon closer examination, it turns out that the PAR may be facing its revival in relation to some electronic methods of communication. It cannot be discarded solely on the ground that everything on the Internet “happens fast.” Because messages
are transmitted in the form of electrical impulses, the contract formation process is generally accelerated. Speed of transmission alone is not decisive. Moreover, the PAR forms part of the legal landscape in the United States, which are the biggest e-commerce economy.\textsuperscript{10} Effectiveness on dispatch remains a valid option. Similarly, it does not suffice to state that the PAR is based on convenience. This view disregards the historical background of the rule and does not provide any guidance as to its potential application or rejection.

This chapter deals only with “effectiveness.” It does not attempt to define either “dispatch” or “receipt.” Such separation is dictated by the increased complexity of the communication methods and the necessity to isolate certain problems. The effectiveness of electronic acceptances raises different questions than the definition of “dispatch” or “receipt.” To date, such separation was not necessary as neither dispatch nor receipt warranted a separate legal analysis.

The communication landscape has not only changed but is still changing. It is often impossible to make broad statements about how things work in general. Such assumptions can only be made in relation to the division between email, instant messengers and web-based interactions.\textsuperscript{11} Even this division can be accused of some artificiality. A recurring thread in the discussion is the observation that it is often too soon to make certain assumptions, too soon to regard certain behaviours as reasonable. It is important not to over-exaggerate the exceptions, or treat certain exceptional situations as a rule. Both e-commerce and the Internet itself are still in their formative period. Different people use Internet-enabled communication methods differently. Different people have differing expectations as to the speed and reliability of the chosen method.

Determining the precise moment of contract formation has important implications.\textsuperscript{12} All on-line contracts are formed at a distance, with the contracting parties often being in two different jurisdictions. Absent agreement, the moment of formation may determine the applicable law of the contract, including its implied terms. As the place of formation depends on the place acceptance became effective, establishing where? must be preceded by establishing when?\textsuperscript{13} The moment of formation also directly affects the contents of the contract. It


\textsuperscript{12} Carter & Harland [236]

\textsuperscript{13} J Hogan-Doran, \textit{Jurisdiction in Cyberspace: the When and Where of On-line Contracts} (2003) 77 ALJ 377
determines such contents “according to what the offeree knew or had notice of at the time of sending the letter of acceptance.”¹⁴

This chapter does not discuss any of the model laws or conventions. None of them contains substantive rules governing the time of formation. Only Art 18 (2) CISG provides that acceptance becomes effective “at the moment the indication of assent reaches the offeror.” International uniformity or compliance with the CISG, however, are not the purpose of this analysis and would prejudice its outcome.

The Principle

[6.4] The principle can be formulated as follows: “acceptance must be communicated.”¹⁵ This statement is open to a wide interpretation, as communication can be tied to a number of events and does not indicate the specific moment that concludes the formation process.¹⁶ A further refinement of the term is required. The definition of “communication” depends on how far one departs from the classic “meeting of minds” and how much focus is placed on the objective theory of contract. On one hand, agreement is reached when the offeror knows that the offer has been accepted.¹⁷ On the other, offerees may not be able to ensure anything beyond the receipt of the letter or telegram and acceptance must be tied to an objectively ascertainable event.

When parties deal at a distance, communication need not be actual, it suffices that the offeree enables the offeror to take cognisance of acceptance, such as by delivering it to his address or telex machine, even if the latter are unattended.¹⁸ The requirement to communicate acceptance is therefore not absolute.¹⁹ Communication is actual and immediate only in face-to-face dealings. While a popular textbook statement is that acceptance must be communicated, it is common to refer to the principle of receipt. The principle appears more intuitive but is also

¹⁴ P Goodrich, above at note 9 p 15
¹⁵ Carter on Contract [03-310]
¹⁶ see: P H Winfield, Some Aspects of Offer and Acceptance (1939) 55 1.QR 499 at 506 for a review of different systems of determining the moment of formation
¹⁷ Carter on Contract [03-310]; P Goodrich, Habermas and the Postal Rule (1996) 17 Cardozo L Rev 1457 at 1463
¹⁹ Carter on Contract [03-310]; it is unclear whether “actual communication” requires that acceptance is brought to the offeror’s mind, see: Bressan v Squires [1974] 2 NSWLR 460 at 461
more difficult to formulate in light of the objective theory of contract. A closer look must be taken at its constituent parts.

"Communication"

[6.5] "Communication" is the imparting or interchange of information, the process of conveying information especially by electronic or mechanical means and the act of transmitting information by telephone, radio, etc.20 "Communication" can therefore denote notification or transmission. This distinction becomes important when comparing dealings at a distance with dealings face-to-face. "Communication" is traditionally associated with "receipt." "Receipt" can imply knowledge (bringing the fact of acceptance to the offeror's mind)21 or the end of transmission (arrival at a machine).22 Hereinafter, when italicised, the term communication means notification.

"Means," "method" and "medium"

[6.6] The term "medium" indicates an intervening substance through which an effect is produced or the channel of communication, such as speech or writing.23 "Medium" can also be a means of conveying information, a carrier of information, like paper or electric impulses. "Method" is described as a mode of procedure.24 In common parlance "medium" and "method" are synonymous with "means." The above terms are also used interchangeably with "device." As a result, it is unclear whether the choice depends on the devices, methods or media used to communicate acceptance.

Although used interchangeably, the above terms refer to different things. When the post is used, the letter is the physical carrier, the medium. The post is the method of transmission; there is no intermediating device. In the case of electronic messages the carrier of information takes the form of copper wires or fibre optics, the means, or devices, are computers and various network elements. The method can be described as one of the communication services like email, instant messengers or web-based communications. Sometimes the Internet itself is described as a medium. Hereinafter, "method" is used in its widest sense, without reference to any particular carrier, device or protocol.

20 Macquarie Dictionary

21 Holwell Securities Ltd v Hughes [1974] 1 All ER 161 at 164; Cartilli v Carbolic Smoke Ball Co [1893] 1 QB 256 at 256, 269; Tallerman & Co Pty Ltd v Nathan's Merchandise (Victoria) Pty Ltd (1957) 98 CLR 93; Tenax Steamship Co Ltd v The Brimnes (Owners) [1975] Q B 929 at 970

22 Shelf Delta Shipping BV v Astarte Shipping Ltd (The Pamela) [1995] 2 Lloyd's Rep 249; Tenax Steamship Co Ltd v The Brimnes (Owners) [1975] QB 929

23 Macquarie Dictionary

24 Macquarie Dictionary
"At a distance" and "face-to-face"

[6.7] Despite its importance, the distinction between dealings "face-to-face" and "at a distance" is not clear. How far apart should parties be to remain "at a distance"? Is "distance" synonymous with "absence"? The "shouting across the river with planes passing overhead" example, crucial to Lord Denning's reasoning in *Entores* illustrates the difficulty of drawing the above distinction. His Lordship described the situation as parties making a contract in the presence of each other.\(^{25}\) How wide was the river? Not wide enough to prevent the parties from hearing each other and perceiving each other's presence. It can be assumed that distance turns into absence when the parties can no longer monitor the communication process and require devices to enable communication. It could also be claimed that absence requires not only a spatial but also a temporal separation. This lack of a clear-cut distinction becomes important when attempting to compare dealings at a distance with those occurring face-to-face.

As the principle has always been approached in an intuitive fashion, rather than based on consistent criteria, it proves difficult to transplant onto novel communication scenarios.

**The Exception**

[6.8] When parties deal at a distance and acceptance is communicated through the post, it becomes effective when the letter is posted.\(^{26}\) A contract is formed even though the letter is delayed, lost and never delivered.\(^{27}\) For the PAR to apply the letter must be properly addressed and deposited.\(^{28}\) Effectiveness on dispatch does not depend on subsequent successful delivery,\(^{29}\) the PAR does not have a retrospective effect from the moment of receipt to the moment of dispatch.\(^{30}\) Furthermore, dispatch need not occur at a time that would enable the letter to be received before expiry of the offer.\(^{31}\) Any occurrences after dispatch, including receipt itself, are

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25 *Entores Ltd v Miles Far East Corporation* [1955] 2 QB 327 at 332

26 *Carter & Harland* [231]; *Henhorn v Fraser* [1892] 2 Ch 27 at 33; *Dunlop v Higgins* (1848) 1 HLC 381 at 409

27 *Carter & Harland* [231]

28 *Re London and Northern Bank: Ex parte Jones* [1900] 1 Ch 220; *Re Imperial Land Co of Marseilles, Townsend's Case* (1871) LR 13 Eq 148 at 150. In the United States, depositing a letter with prepaid postage with the post office raises a presumption that it reached its destination, see: *Re Cameron Estate* 130 A 2d 173 (Pa 1957). In England and Australia such presumption is absent.

29 *Re Imperial Land Company of Marseilles (Harris' Case)* (1872) 7 Ch App 587 at 592, 597; *Household Fire and Carriage Accident Insurance Co Ltd v Grant* (1879) LR 4 Ex D 216 at 223

30 *Re Imperial Land Company of Marseilles (Harris' Case)* (1872) 7 Ch App 587 at 592; *Potter v Sanders* (1846) 6 Hare 1

31 for opposite approach see: *Equity Fire & Casualty Co v Traver* 953 SW 2d 565 (1997)
irrelevant. The application of the PAR is, however, confined by the construction of the offer: it cannot lead to undesirable or absurd results, such as in cases where the requirement of actual communication must be presumed.32

Is it the post or the letter that invoke the exception? The letter is the physical carrier, or medium, the post is the method of transmission and delivery. The PAR does not apply when letters are delivered in person or by courier,33 or when parties deal face-to-face, even if they exchange letters. Assumedly, it is not the letter but the post, which underlies the exception. At the same time, in the early days telephones were in the domain of the post office and both telexes and telegrams were sent from the post. Yet, no attempt was made to extend the PAR solely on the basis of postal intermediation.34

Effectiveness on dispatch can also be regarded as a derivative of distance and the resulting delay. Consequently, the PAR could be considered whenever parties a) deal at a distance and b) use a method that involves an interval between dispatch and receipt. When the PAR was first conceptualised, distance always implied delay. There was also a direct relationship between the two factors: the greater the distance between the contracting parties, the longer the delay.

The PAR continues to generate academic debate and criticism. Admittedly, it is only in the area of its potential adoption to "more recent technologies where justifications for the rule retain their importance."35 It was also observed that "the postal exception may well be more significant than the standard rule."36 Despite being the exception, the PAR commands more academic attention then the principle and forms the basis of most analyses regarding the effectiveness of electronic acceptances.

32 Tallerman & Co Pty Ltd v Nathan's Merchandise (Vic) Pty Ltd (1957) 98 CLR 93 at 111-112; Holwell Securities Ltd v Hughes [1974] 1 All ER 161; Nunin Holdings Pty Ltd v Tullamarine Estates Pty Ltd [1994] 1 VR 74; see also Corbin para 3.24
33 But see: Household Fire and Carriage Accident Insurance Co Ltd v Grant (1879) LR 4 Ex D 216 at 237
34 P H Winfield, above at note 16 p 14
35 P Goodrich, above at note 17 at 1462

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The PAR was applied to telegraph,\textsuperscript{37} but not to telephone,\textsuperscript{38} telex\textsuperscript{39} or facsimile.\textsuperscript{40} It is argued that "this reluctance to extend the rule any further ... is proof that the law recognises what a radical departure from the fundamental principles of contract law this rule is."\textsuperscript{41} It must be noted, however, that in the US the PAR applies to communication scenarios that in Australia are governed by the principle of receipt.\textsuperscript{42}

Justifications

\textbf{[6.9]} Textbook explanations of the PAR are often "straightforwardly cynical in tenor."\textsuperscript{43} The PAR is based on convenience,\textsuperscript{44} the provision of a sense of finality\textsuperscript{45} or simply regarded as arbitrary.\textsuperscript{46} It avoids an endless exchange of confirmations of receipt\textsuperscript{47} and concludes the contract at the earliest possible moment.\textsuperscript{48} Historically, the justifications of the PAR have varied: the post office has been regarded as the common agent of the parties\textsuperscript{49} or the appointed agent of the offeror.\textsuperscript{50} Thus, communicating acceptance to the post equated communication to the offeror.\textsuperscript{51} The latter argument was replaced with the view that the post is only a carrier of

\textsuperscript{37} Cowan v O'Conner (1888) 20 QB 640 at 642. PAR also extended to telegram, with little analysis in Island Properties Ltd v Entertainment Enterprises Ltd (1983) 146 DLR (3d) 505 (Nfld TD); Bruner v Moore [1904] 1 Ch 305; Re Viscount Supply Co (1963) 40 DLR (2d) 501 (Ont SC) at 505

\textsuperscript{38} Eniores Ltd v Miles Far East Corporation [1955] 2 QB 327; Aviet v Smith and Sears Pty Ltd (1956) 73 WN (NSW) 274

\textsuperscript{39} Eniores Ltd v Miles Far East Corporation [1955] 2 QB 327; Express Airways v Port Augusta Air Service (1980) Qd R 543; Brinkibon v Stahag und Stahlwarenhandelsgesellschaft mbH [1983] 2 AC 34

\textsuperscript{40} Reese Bros Plastics Ltd v Hamon-Sabelco Australia Pty Ltd (1988) 5 PBR 97325 (NSW CA), Egis Consulting Australia Pty Ltd v First Dynasty Mines Ltd (A Company incorporated in Canada) [2001] WASC 22; Eastern Power v Azienda Communale Energia & Ambiente (1959) 178 DLR (4th) 409 (Ont CA); Modernski v Vema Australia Ltd (1989) NSW Conv R 55-446; Twynham Pastoral Co Pty Ltd v Anburn Pty Ltd unreported SC NSW 15 Aug 1989

\textsuperscript{41} S Hill, Flogging A Dead Horse – The Postal Acceptance Rule and Email (2001) 17 JCL 2 at 14

\textsuperscript{42} Corbin para 3.25

\textsuperscript{43} P Goodrich, above at note 17 p 1464

\textsuperscript{44} Carter & Harland [235]; see also: K N Llewellyn, Our Case-Law of Contract: Offer and Acceptance II (1939) 48 Yale L.J 779 at 792-798; but see D H Evans, The Anglo-American Mailing Rule: Some Problems of Offer and Acceptance in Contracts by Correspondence (1966) 15 ICLQ 553 at 556-561, who cites 11 reasons for the rule.

\textsuperscript{45} Adams v Lindsell (1818) B & Ald 681 at 683


\textsuperscript{47} Adam v Lindsell (1818) B & Ald 681

\textsuperscript{48} Carter on Contract [03-390]

\textsuperscript{49} Dunlop v Higgins (1848) 1 HLC 381; Wright v Bigg (1852) 15 Beav 592

\textsuperscript{50} Byrne v Leon van Tienhoven (1880) 5 CPD 344

\textsuperscript{51} Dunlop v Higgins (1848) 1 HLC 381; Household Fire and Carriage Accident Insurance Co Ltd v Grant (1879) LR 4 Ex D 216 at 221

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letters. Another justification was the fiction of continuing assent but this view has long been abandoned.

Most explanations of the PAR combine choice, control and risk allocation: the offeror (who is the addressee of the acceptance) chose the post and should therefore bear the resulting risks. He or she could have protected him- or herself by stating that acceptance is effective upon communication. Furthermore, the offeree (who is the sender of the acceptance) has done all he or she can by posting the acceptance as instructed by the offeror. The justification for posting being the decisive moment is that the offeree has put the letter out of his or her control and done an extraneous act, which shows that each side is bound. An important explanation is the protection of the offeree: the PAR terminates the offeror's power to revoke upon the occurrence of an event under the offeree's control. Effectively, it extends the duration of the offer.

The PAR places the risk of transmission and receipt on the addressee. Once the letter is dispatched, the sender is "not answerable for casualties occurring at the post-office." Logically, if control ceases, risk should cease. The risk borne by the offeror is small: he or she

52 Henthorn v Fraser [1892] 2 Ch 27 at 25-36
53 Cooke v Oxley (1790) 3 Times Reports 653
55 Dunlop v Higgins (1848) 1 HLC 381 at 398
56 A H Hudson, Retraction of Letters of Acceptance (1966) 82 LQR 170
57 Dunlop v Higgins (1848) 1 HLC 381 at 398; Re Imperial Land Co of Marseilles (Wall's case) (1872) LR 15 Eq 18 at 25
58 Brogden v Metropolitan Railway Co (1877) 3 App Cas 666 at 669, 691. The assumption that a letter can be retracted formed the basis for dispensing with the mailbox rule in two controversial US Court of Claims cases. See Rhode Island Tool Co v United States 128 F Supp 417 (Ct Cl 1955); Dick v United States 82 F Supp 326 (Ct Cl 1949). These cases have not been followed. It is now generally accepted that the possibility of withdrawal alone is not a sufficient basis for dispensing with the P.A.R. Sec: P Fasciano, Internet Electronic Mail: A Last Bastion for the Mailbox Rule (1997) 25 Hofstra L Rev 971 at 982; see also: C L Pannam, Postal regulation 289 and Acceptance of an Offer by Post (1960) 2 MULR 388. In Morrison v Theolke 155 So 2d 889 (Fla CA 1963) it was stated that the change in postal regulations allowing withdrawal of a letter is an insufficient basis for dispensing with the mailbox rule. The issue is of little relevance for electronic communications since they cannot be retracted.
59 Household Fire and Carriage Accident Insurance Co Ltd v Grant (1879) LR 4 Ex D 216 at 220; Re Imperial Land Co of Marseilles (Harris' Case) (1872) LR Ch Ap 587 at 594; for an interesting explanation of the historical origins of the PAR see: P Goodrich, above note 5, who traces the rule to ecclesiastical law and the protection of the female offeree.
60 R Craswell, Offer, Acceptance and Efficient Reliance (1996) 48 Stan L Rev 481 at 519
61 Re Imperial Land Co of Marseilles; Townsend's Case (1871) LR 13 Eq 148 at 150; see also Dunlop v Higgins (1848) HLC 381
62 Dunlop v Higgins (1848) HLC 381 at 398
trusts a method, which in principle does not fail. Historically, posting was equated with certainty of delivery based on the reliability of the post.

Two general observations must be made before proceeding. First, effectiveness on dispatch can hardly be regarded as an arbitrary choice: dispatch is the first objective manifestation of intention by the offeree. It is therefore fair to ascribe legal meaning to this particular event. Second, due to the difficulty in formulating the principle, the PAR can be regarded not as an exception to the principle of communication but only to the requirement of receipt. Due to the reliability of the post, the PAR assumes that the letter will be received and its contents communicated.

Without delving into the numerous criticisms of the PAR, which are described elsewhere, a number of arguments are made upfront. General criticism must be distinguished from arguments against its extension to electronic acceptances.

Offeree protection?

[6.10] Protection against revocation cannot be used as an argument against the PAR's potential applicability to electronic acceptances. Unquestionably, the offeree can protect himself or herself by purchasing an option. At the same time, it can be the offeree who chose the method of acceptance and controls the communication process. As indicated earlier, a party can maintain the position of the offeree and prescribe the transaction procedure. The roles of offeror

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63 Household Fire and Carriage Accident Insurance Co v Grant (1879) LR 4 Ex D 216 at 223

64 Stidolph v American School in London Educational Trust Ltd (1969) 20 P & R 802 at 805; S Gardner, Trashing with Trollope: A Deconstruction of the Postal Rules in Contract (1992) 12 Oxford J of Legal Stud 170 at 184; see also: I R Macneil, Time of Acceptance: Too Many Problems for a Single Rule (1964) 112 U Penn LR 947 at 958 speaking of likelihood of receipt; see also: Morrison v Thoelke 155 So 2d 889 (Fla App D2 1963), "...delay or misdirection of a letter of acceptance is beyond the realm of possibility."

65 R A Samek, A Reassessment of the Present Rule Relating to Postal Acceptance (1961) 35 ALJ 38 at 40

66 B Coote, above at note 7 p 337; nothing in the wording of Adams v Lindseil (1818) B & Ald 681 suggests that the PAR is an exception or derogation.

67 S Williston, above at note 46 para 6.32

68 Household Fire and Carriage Accident Insurance Co Ltd v Grant (1879) LR 4 Ex D 216 at 235 by Bramwell J; P Goodrich, above at note 18 at 1473

69 B Eisler, Default Rules for Contract Formation By Promise and the Need for Revision of the Mailbox Rule (1991) 79 Ky L J 557 at 566

70 Treitel p 25

71 See Chapter 5 [5.16]

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and offeree are often difficult to discern and arbitrary.\textsuperscript{72} Protection is unwarranted if the offeree retains mastery of the offer.

Despite this arbitrary role allocation, it can be assumed that one of the parties chose the method of acceptance. Admittedly - with the full realization of the implications of such choice, including the probability of successful receipt. It can be assumed that the other party deserves protection against the risks inherent in the method imposed by the other. In sum, it not necessarily the offeree who requires protection and the event one must be protected against is not necessarily revocation.\textsuperscript{73}

It is also claimed that the offeree can protect him- or herself by instantaneously communicating the acceptance to the offeror.\textsuperscript{74} This view disregards the question whether communicating acceptance by an instantaneous method is permissible. If \textit{all} acceptances could, by default, be communicated by phone or instant messengers, offerees would be entitled to ignore requests regarding specific methods of acceptance. Furthermore, instantaneous methods of communication may be expensive or unavailable. There being no single widely accepted standard for instant messaging or Internet telephony and no centralized directory mapping names onto electronic addresses, offerees may be unable to accept by instantaneous means.

\textit{Intention?}

\textbf{[6.11]} The time of contract formation depends on the intention of the parties, in particular, on the construction of the offer.\textsuperscript{75} The search is, however, for a default rule - absent a clear expression of intention by the offeror.\textsuperscript{76} The only objective indication of intention is the choice of communication method. Arguments that the offeror could have protected him- or herself by requiring actual communication\textsuperscript{77} are therefore futile. They assume the offeror's knowledge that a given method invokes the PAR.\textsuperscript{78} The PAR applies only where the post is "contemplated."\textsuperscript{79} It

\begin{itemize}
\item\textsuperscript{72} \textit{W A Dewhurst & Co Pty Ltd v Cawrse} (1960) VR 278 at 284
\item\textsuperscript{73} P Goodrich, above at note 9 p 15
\item\textsuperscript{74} B Eisler, above at note 69 at 567; A H Hudson, above at note 57 at 172
\item\textsuperscript{75} \textit{Carter & Harland} [231]
\item\textsuperscript{76} M A Eisenberg, \textit{Expression Rules in Contract Law and Problems of Offer and Acceptance} (1994) 82 Cal L Rev 1127
\item\textsuperscript{77} A H Hudson, above at note 56 at 172
\item\textsuperscript{78} \textit{Carter on Contract} [03-360]
\item\textsuperscript{79} \textit{The Law of Contract} par 2.230; \textit{Household Fire and Carriage Accident Insurance Co Ltd v Grant} (1879) LR 4 Ex D 216 at 217, 227
\end{itemize}

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applies because the post is used, not because effectiveness on dispatch is intended.\textsuperscript{80} It is questionable whether the offeree would have chosen the post if he or she realized the implications of such choice. Furthermore, intention cannot be imputed if the method of acceptance is imposed.

In sum, neither the protection of the offeree nor the intention of the offeror can serve as decisive criteria in applying or rejecting the PAR.

General Considerations

[6.12] Which technological factors merit attention in making the choice between the principle and the exception? The aim is to establish universal criteria that could withhold technological change and avoid the necessity of re-examining problems of effectiveness whenever a new method or communication device is introduced. Only non-variable factors can constitute such criteria. Factors that refer to the physical transmission itself and remain transparent to the contracting parties must be distinguished from those, which directly affect the communication process and serve to ascertain whether it resembles one of the default communication scenarios, i.e. face-to-face or at a distance.

As indicated in Chapter 2, email, instant messengers and the web "operate" on the application layer of the TCP/IP protocol stack and are independent of the connection type, intermediating hardware or transmission method.\textsuperscript{81} Most Internet users are only aware of the application layer, especially the web and email. From the user's perspective, the Internet is transparent – except when network congestion calls it to his or her attention.\textsuperscript{82} While technological factors specific to the remaining layers could be ignored, some recur in legal arguments; others have a minimal impact on the quality of the communication process.

The following paragraphs examine whether the time of formation should depend on the communication devices, connection types, transmission media, communication methods or protocols.

\textsuperscript{80} Bressan v Squires [1974] 2 NSWLR 460

\textsuperscript{81} See Chapter 2


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Transmission

[6.13] It is often stated that email travels in packets. So do all other messages on the Internet. After all, the Internet is a packet-switched network and the disassembly of the payload into packets at the transport layer is its inherent characteristic. Email, instant messengers and web-based interactions, however, provide different communication possibilities, which are unrelated to the manner of transmission. The claim that the "packetized" transmission of messages affects contract formation principles implies that different rules should apply depending whether the postal service carried a letter by train, submarine or spaceship. Such differentiation has, of course, never been made. Similarly, no-one has ever questioned the comparison of telephone conversations to face-to-face dealings on the ground that the parties used mobile phones. Although there are substantial differences between the manner voice is carried over traditional telephone networks and mobile networks, the communication process is identical.

Depending on which layer of the TCP/IP stack is examined, electronic acceptances take the form of text, strings of 1s and 0s or electrical impulses. Arguments cannot be constructed on the basis of an arbitrary selection of technical features, which are either layer-specific or apply to all Internet-based communications. To the contracting parties, packets are transparent and have no impact on the communication process. Arguments that email is instantaneous because it travels in packets are inherently flawed and must be rejected.

Furthermore, electrical impulses travel at different speeds over copper, coaxial or fibre-optic lines. The discussion of transmission speeds, popularly referred to as "instantaneity," disregards issues of network latency. The physical carrier does not influence the communication process or the division into dealings at a distance or "as if" face-to-face. Differences of microseconds are not taken into account.

Connection type

[6.14] Parties may use dial-up or broadband connections. Each connection type provides different bandwidth thereby indirectly affecting the communication process. Not every connection is suitable for every communication method. For example, GPRS and dial-up connections may be inappropriate for VoIP as the bandwidth is too small for real-time voice applications. Both are, however, suitable for the use of instant messengers. Small bandwidth does not automatically preclude real-time interactions.

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Intermediation

[6.15] All on-line communications are indirect. Indirectness can refer to the existence of multiple intermediaries, such as telecommunication carriers, or to the multiplicity of intermediating devices operating on various layers of the TCP/IP stack, like routers, switches, bridges and servers. The number and type of intermediating devices remains transparent to the parties and generally does not affect the communication process. Intermediaries closer to the end user may, however, influence the reliability and quality of the connection, as some ISPs guarantee a higher quality of service and more bandwidth. Similarly, the ownership of incoming and outgoing mail-servers affects the ability to dispatch and retrieve email messages as it implies control over server configuration.

Most importantly, the moment of formation cannot depend on the communication devices used by the parties. The reasons for this bold statement are numerous. First, one communication process can combine multiple devices: a message may originate on the phone and terminate on a telex machine. The originating device may differ from the terminating device.84 Which side of the transaction should be decisive: the offeree’s or the offeror’s? Second, due to a growing trend for convergence, one device can combine the functionalities of multiple devices. The distinction between phones and computers becomes blurred: most mobile phones carry the computing power of early personal computers. Telephone calls can originate on personal computers and terminate on fixed lines or mobile phones, email and instant messengers can be sent and received from mobile phones. As a result, the traditional focus on the communication devices used in contract formation must be abandoned.

Method and Protocol

[6.16] The resemblance of the communication process to either dealings at a distance or face-to-face depends on the method used to exchange contractual statements. The characteristics of such method depend on its underlying protocol(s). The relationship between “method” and “protocol” must be briefly explained. Email, Instant Messengers and web-based communications can be regarded as “methods,” whereas SMTP, OSCAR, XMP and HTTP are protocols. Each communication method relies on one or more protocols: Internet email uses SMTP, web-based communications are based on HTTP. Instant messengers lack a single standardized protocol, but share common features and provide an identical communication process. Moreover, email may use HTTP and web form input can be transmitted via HTTP or

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84 See: Express Airways v Port Augusta Air Services [1980] QdR 543, where acceptance was sent by telegram to the Post Office and then via telex to the offeror; Douglas J held, without a detailed explanation, that acceptance was effective on receipt; see also Leach Nominees Pty Ltd v Walter Wright Pty Ltd [1986] WAR 244 at 431 for explanation of possible combinations of telex, telegram and telephone.
SMTP. The choice between the principle and the exception cannot be based on the protocol alone because different protocols can yield the same type of communication and some methods combine protocols underlying other methods. Protocols remain transparent to the user, whereas the method is chosen depending on the specific communication goal at hand, including the urgency of reply or the ability to reach the other party in real-time. Despite the foregoing, protocols must be examined to determine the characteristics of the respective methods.

In sum, the moment of contract formation cannot depend on the type of connection, medium of transmission, protocol or the intermediating devices. These factors are transparent to the contracting parties, unpredictable or purely random. Senders have no control over how their messages are transmitted and received. Addressees may not know how a message originated. All communications over open electronic networks occur in packets. The moment of contract formation cannot depend on the computer or device used for a particular transaction. Most importantly, this moment cannot be based on variables: the transfer of an acceptance may involve multiple devices, protocols, connection types and transmission media. The permutations between the aforementioned factors are numerous and can be different on each side of the communication channel. While bandwidth and network latency have a minimal impact on the quality of the communication process, they are not determinative of the type of communication: whether it resembles face-to-face or at a distance interactions. The focus remains on the application layer and the three main methods of exchanging contractual statements.

Does the PAR apply to Email?

[6.17] It is commonly stated that the receipt rule applies to instantaneous methods of communication, the PAR, where acceptance is communicated by a non-instantaneous method. Arguments against the application of the PAR to electronic acceptances are usually based on “instantaneousness” and “control.” It is unclear, however, whether instantaneousness refers to transmission or communication. It is also unclear to what extent the application of the exception depends on the communication devices used by the parties. Control relates to the sender’s ability to ensure receipt, which in turn is associated with knowledge of successful or failed receipt. Additional factors are risk allocation and reliability.

85 L Davies, Contract Formation on the Internet, Shattering a Few Myths, in L Edwards, Ch Waelde ed., Law & the Internet, Oxford 2000, p 106
86 Entores Lid v Miles Far East Corporation [1955] 2 QB 327 at 327, Brinkkon v Stahag und Stahlwarenhandelsgesellschaft mbH [1983] 2 AC 34 at 41; Fasciano, above at note 58 at 986; see also: Eisler, above at note 69 at 583
The following paragraphs test the technical assumptions of the arguments against the extension of the PAR to email. Following the traditional line of reasoning, the answer to the question "does the PAR apply to email?" requires the examination (a) whether email is instantaneous, and (b) whether the sender has control of the communication process.

**Being "instantaneous"**

[6.18] The alleged instantaneousness of email is the predominant reason most commentators refuse to subsume it under the exception. The term is used with little precision: email is called "absolutely,"[87] "not completely,"[88] "nearly,"[89] "almost,"[90] "virtually,"[91] "more or less"[92] or "in fact"[93] instantaneous. Only few commentators suggest that email is not instantaneous.[94] As the term is used to justify the choice between the principle and the exception and has important legal consequences a more clear and consistent meaning is desirable.[95]

Is "instantaneous" a legal or a technical term? A legal definition permits a liberal approach and the adaptation of the term to the purposes of a given argument.[96] A technical approach forces a more disciplined analysis. Interestingly, even if a purely "legal" definition is adopted, it must be admitted that instantaneousness is a question of fact. Maintaining a division between instantaneous and non-instantaneous methods of communication implies that at some stage courts will have to justify this division. A *technical* confrontation is unavoidable.

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83 Entores Ltd v Miles Far East Corporation [1955] 2 QB 327 at 337
91 Carter & Harland [232]
92 Carter on Contract [03-360] [03-390]
93 Brinkibon v Stahag und Stahlwarenhandelsgesellschaft mbH [1983] 2 AC 34 at [ ]
94 P Fasciano, above at note 58 at 973; D Capps, Electronic Mail and the Postal Rule (2004) 15 ICCLR 207 207 at 208; VWatnick, above at note 83 at 182; L Davies, above at note 85 at 102
95 P Fasciano, above at note 58 at 1000
96 S Hill, above at note 41 at 24; Wilmot, Christensen & Butler [3.475], stating that certain methods will be regarded as instantaneous communication for the purposes of contract formation.
The term *instantaneous* means "occurring with no delay."\(^{97}\) Another definition states: "occurring, done or completed in an instant."\(^{98}\) *Simultaneous*\(^{99}\) refers to events "existing, occurring, or operating at the same time."\(^{100}\) "Delay" and "instantaneousness" can be regarded as different sides of the same coin: if communication is instantaneous there is, logically, no delay. Qualifiers like "virtually," "almost" or "more or less" permit the existence of some delay. How much delay is tolerable for communication to remain instantaneous?

The delay between dispatch and receipt comes in varying degrees. It ranges from days, in the case of horse-carts, to microseconds in the case of some electronic communications. Premising the PAR exclusively on the length of delay necessitates a gradation: if the delay is longer than "x" acceptance is effective on dispatch, otherwise acceptance is effective on receipt.

**A technical analysis**

[6.19] Technically, email is an asynchronous, non-real-time, delayed access, store-and-forward method of communication.\(^{101}\) Email messages are exchanged independently of each other, without establishing a simultaneously contiguous end-to-end traffic path between the contracting parties. Email systems comprise mail-clients, which are the originators and final destinations for messages, and mail-servers, which relay messages along the transmission path. The protocol underlying email, SMTP, is characterised by intermediate storage, message queuing, delays, retransmission and delivery attempts, which are usually abandoned after 4-5 days.\(^{102}\) The transmission between intermediating mail-servers may be very fast or "almost instantaneous." There is, however, no instantaneous transmission between the originating and the destination mail-clients: email messages do not travel instantaneously from the computer of the sender to the computer of the addressee.\(^{103}\) Instantaneity can only refer to the speed of transmission between some of the relaying mail-servers. Furthermore, email is both a "store-

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\(^{97}\) WordNet® 2.0 (2003) Princeton University

\(^{98}\) Macquarie Dictionary

\(^{99}\) As mentioned by Lord Wilberforce in *Brinkibon v Stahag und Stahlwarenhandelsgesellschaft mbH* [1983] 2 AC 34 at 42

\(^{100}\) Macquarie Dictionary


\(^{103}\) Messages can travel from the sender's mail-server to the addressee's mail-server if they are in the same transport service environment, which is not the case if the parties communicate over an open electronic network; see: RFC 2821, p 6
and-forward” and a “store-and-retrieve” transmission mechanism. In store-and-forward, the network stores the message, until the receiving machine is ready to receive the message. In store-and-retrieve, the network (or the machine) stores the message until the user retrieves it.  

Email communications are characterised by a number of delays. The first occurs between the moment the message is composed on the mail-client and the moment it is dispatched from the mail-server. The dispatch from the mail-server onto the transmission path is periodic, similar to placing a letter in a mailbox and subsequent collection by a postal employee. The frequency of dispatch depends on the configuration of the mail-server. The second delay relates to the transmission process itself. The transmission may be delayed by network congestion or mail-server unavailability. Although the transfer between the first and the last mail-server is unlikely to occur without any delay, such delay may in fact be minimal. The third relates to the interval between the message entering the final mail-server and the moment it is accessed or retrieved by the addressee. It resembles the interval between the moment the letter is placed in the addressee’s mailbox and the moment it is retrieved.

It must also be noted that mail-clients request (i.e. pull), messages from mail-servers. This operation is performed automatically, by configuring mail-clients to poll mail-servers at pre-determined intervals, or manually. An example is the “send/receive” function in the mail-client “Outlook.” Similarly, Apple Mail can be set to “check for new email” from one minute to one hour. Even with always-on broadband connections, retrieval occurs periodically, as there is no permanent open session between the mail-client and the incoming mail-server resulting in the immediate display of new messages. It is the addressee who determines the frequency and manner of receipt.

The client-server architecture impacts on the instantaneousness of communication in the sense that there is no direct client-to-client transmission of messages and in that messages must

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104 See: Toh See Kiat p 51
105 J Hogan-Doran, above at note 13 at 384
106 RFC 1123, Requirements for Internet Hosts – Application and Support, R Braden ed, (1989) p 58
107 Technologies like blackberry or so-called push-email, enable the “pushing” of messages to the terminating device. They rely on the classic architecture but interpose an additional server between the incoming mail-server and the end-user. The message is pushed to the terminating device because the addressee previously configured a server or device to do so.
108 Commentators claiming that email is instantaneous may have been mislead by the speed of intracompany communications, when messages are transmitted within the same LAN. See: Fasciano, above at note 58 at 1001
be requested and retrieved by mail-clients from mail-servers.\textsuperscript{109} In light of the characteristics of the underlying protocols and the practical functioning of email it appears technically incorrect to call it a method of instantaneous \textit{communication}.

\textbf{Being “in control”}

\textbf{[6.20]} The second argument against subsuming email under the PAR relates to “control.” The PAR assumes that upon posting the letter, senders lose control and cannot be held liable for any subsequent events.\textsuperscript{110} If senders retained control and were able to guarantee receipt, there would be no justification for making acceptance effective on dispatch.\textsuperscript{111} “Control” need not consist in the possibility to influence transmission by determining the exact route of a message or the moment of its delivery. It relates to the outcome of the communication process: knowledge whether receipt occurred or not.

Treitel combines “control” with “instantaneousness”: the PAR cannot apply to instantaneous methods of communication because “the acceptor will often know at once that his attempt to communicate was unsuccessful.”\textsuperscript{112} Citing \textit{Entores} and \textit{Brinkibon}, he states that the sender is responsible to make a proper communication, “[b]ut a person who accepts by letter which goes astray may not know of the loss or delay until it is too late to make another communication.”\textsuperscript{113} As a result, “control” is premised on the ability to ensure receipt or, at least, the possibility of knowing whether receipt occurred.\textsuperscript{114} It remains unclear, whether such knowledge should relate to successful or to failed receipt. Ensuring receipt presumes notice of communication failure, whereas confirmation of receipt appears to be a question of proof and non-repudiation.\textsuperscript{115} It effectively absolves the sender of any further obligations relating to the communication of acceptance.

\footnotesize\textsuperscript{109} The implications of the client-server architecture for the time of formation are discussed in Chapter 7. The purpose of this discussion is not establishing \textit{when} receipt occurred but \textit{whether} email is instantaneous.

\footnotesize\textsuperscript{110} \textit{Household Fire and Carriage Accident Insurance Co Ltd v Grant} (1879) LR 4 Ex D 216; see also: Chiswick & Kelman p 79

\footnotesize\textsuperscript{111} S Hill, above at note 41 at 17; \textit{Brinkibon v Stahag und Stahlwarenhandelsgesellschaft mbH} (1983) 2 AC 34 at 43 per Lord Fraser of Tullybelton

\footnotesize\textsuperscript{112} \textit{Treitel} p 26

\footnotesize\textsuperscript{113} \textit{Treitel} p 26

\footnotesize\textsuperscript{114} “Unlike in the case of post the sender does not conclude their participation in the sending of a message at the time of first dispatch.” See: S Hill, above at note 41 at 25, \textit{Entores Ltd v Miles Far East Corporation} (1955) 2 QB 327 at 333; J Hogan-Doran, above at note 13 at 381

\footnotesize\textsuperscript{115} Greenstein & Feinman p 157; \textit{Ford & Baum} pp 340, 341 for a discussion of non-repudiation of delivery and confirmation of receipt.
A preliminary question arises: can the fact of receipt be determined without the addressee's participation? This problem is illustrated in Lord Denning's example of two clerks sending telex messages between offices in London and Manchester.\footnote{Entores Ltd v Miles Far East Corporation [1955] 2 QB 327 at 333} It is assumed that both parties are present at their machines and that the addressee co-operates in ensuring receipt. Lord Denning insists that the sender knows, or has reason to know, that his or her acceptance has not been received. Lord Denning fails to note that once the message leaves the originating machine, the "reason to know" must be provided by the addressee or by the addressee's machine in the form of an automatically generated notification. Addressees may not be able to detect communication failures even if they await acceptances.\footnote{J D Gregory, Receiving Electronic Messages: Eastern Power v Azienda Communale Energia & Ambiente (1999-2000) 15 BFLR 473 at 476} It is not a question of correctly maintaining or attending the terminating device, there can also be a problem in the transmission channel. In such scenario, the addressee will not inform the sender of the communication failure. Senders can learn of communication failures, only if notifications to that effect are generated automatically, without the participation of the addressee. The "control" argument loses much of its force when the sender's knowledge of failed or successful receipt depends on the discretion of the addressee or on the technical capabilities of his or her terminating device.

As the control argument seems to rely on the ability to obtain confirmations of receipt or failure notifications,\footnote{see also: Household Fire and Carriage Accident Insurance Co Ltd v Grant (1879) LR 4 Ex D 216 at 224} it must be established whether such notifications are generated in the case of electronic methods of communication.

It is often claimed that in the case of email senders know within a short period of time whether a message has been received. This argument assumes that an inherent feature of email communications is the generation of acknowledgements of receipt or failure notifications. The following paragraphs test the veracity of this assumption by examining the protocols underlying email.

**SMTP & Delivery Status Notifications**

[6.21] Theoretically, SMTP requires that the relevant mail-server or gateway issue a failure notification whenever a message cannot be delivered.\footnote{RFC 2821, pp 4, 61} A detailed analysis of the protocol and
its extensions reveal a slightly different picture. Delivery Status Notifications ("DSN" or "notification," popularly called "bounce message") indicate conditions like: failed, delayed, or successful delivery, temporary failure or the gatewaying of a message into an environment that may not support DSNs. It is incorrect to assume that DSNs are always issued by the addressee's mail-server. It is also incorrect to assume that notifications are generated automatically.

First, a notification is not issued if it was not requested. Senders may not be able to issue such requests as their email applications or mail-servers may not provide this feature. Second, the addressee's mail-server may not support the generation of DSNs or may not be configured to do so. Technical capability must be distinguished from actual configuration. Notification requests may not be honoured. Furthermore, even if a mail-gateway supports the relevant SMTP extension, the mail system on the other side may not generate positive delivery notifications. A "relayed" notification is produced, indicating that no DSN can be sent. It cannot be overemphasized that SMTP does not always deliver the message to its final destination, i.e. the mail-server of the addressee. It may relay it into a different transport environment in which messages are no longer transported via SMTP. Effectively, senders are informed that their message reached some point in the transmission channel and that no DSN can be issued. Third, a notification may not be delivered because of a non-functional return address. Fourth, DSNs may be forged as easily as ordinary email. Most importantly, notifications are generally not issued because of security reasons, as they enable the validation of hosts on a network.

Interesting situations arise when delay notifications are issued. As they can be received immediately after dispatch of the original message, it could be claimed that communication is instantaneous. The very notification, however, informs that the message is delayed and therefore communication cannot be instantaneous. DSNs may also be issued with substantial

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121 RFC 3461, p 6
122 RFC 3461, p 21
123 RFC 3464, p 16
124 RFC 3464, p 21
125 RFC 3461 p 11
126 RFC 3464 p 22
delay after the inability to deliver is discovered.\textsuperscript{128} What is the status of an acceptance when a
delivery failure notification arrives after 2 days? To complicate matters, Apple Mail offers a
"bounce message" option, enabling recipients to return messages: "it will appear that the
message was sent to an incorrect address."\textsuperscript{129} Addressees can generate failure notifications and
deny receipt in order to prevent the formation of a contract. DSNs appear to be more an
instrument of abuse than a method of controlling the communication process.

\textit{Message Disposition Notifications}

[6.22] Message Disposition Notification ("MDNs" or "read receipts") are sent by mail-clients or
mail-gateways to report the disposition of a message after successful delivery.\textsuperscript{130} They can
inform of several conditions: display, printing, deletion or refusal to provide an MDN.\textsuperscript{131} MDNs
are generated only upon specific request. Not all mail-clients provide the option to issue such
request.\textsuperscript{132} This begs the question: should the time of formation vary depending on the email
application used? Only those senders who can request MDNs could be said to control the
communication process.

MDNs can be generated manually or automatically.\textsuperscript{133} In the former case, recipients
consent to the generation of the MDN on a per-message basis, in the latter, by setting a global
preference.\textsuperscript{134} In other words, MDNs are not self-generated by the receiving system by default.
The recipient's consent is always required.\textsuperscript{135} Most importantly, the recipient is always free to
ignore or deny such a request.\textsuperscript{136}

In sum, the generation of both DSNs and MDNs depends on recipients acquiescing to
requests for such notifications and on the technical ability of their systems to generate such. For

\textsuperscript{128} RFC 3461, p 14
\textsuperscript{129} Apple Mail 1.3.11 (v622/623), option available from "Message" menu
\textsuperscript{131} RFC 3798, p 2
\textsuperscript{132} See IMP version 2.2. The receipt of a confirmation depends on many factors outside of IMP’s control.
For example, some mail-servers remove return receipt requests from mail before it reaches the recipient, some mail-clients allow users to select if return receipts should be honoured. Available at:
www.horde.org/faq/user/IMP/index.php#2
\textsuperscript{133} RFC 3798, p. 13, note that if it is impossible to obtain such consent, e.g. the user is not online, an
MDN should not be sent; p 4. In the case of IMAP, MDNs may not be sent if the same message store is
accessed from different locations, see: RFC 3503, \textit{Message Disposition Notification (MDN) profile for
\textsuperscript{134} RFC 3798, p 4
\textsuperscript{135} RFC 3798, p 6
\textsuperscript{136} RFC 3798, p 3
"knowledge of receipt" to support the control argument, all senders would have to be able to request and all delivering mail-servers or mail-clients would have to automatically, immediately and unconditionally generate notifications or confirmations. There is, however, no universal rule that DSNs and MDNs are generated whenever messages cannot be delivered or are delivered. Due to increasing security concerns\(^{137}\) and differences between mail-clients and mail-servers it is impossible to make any general assumptions.\(^{138}\)

A final point must be made in relation to the "control" argument. The purpose of the PAR was to prevent an ad infinitum exchange of confirmations of receipt. Introducing MDNs and DSNs into the discussion creates the very situation the exception was designed to avoid. Apart from extending the contract formation process,\(^{139}\) acknowledgements of receipt raise a number of additional problems.\(^{140}\) Absent prior agreement, recipients have no obligation to confirm receipt. They can speculate at the sender’s expense by refusing to acknowledge receipt of what would otherwise be a valid acceptance. Much depends on whether the effectiveness of the acceptance is conditional upon being acknowledged. What is the status of an “unconfirmed” acceptance? Depending on the answer to this question, effectiveness may shift to the moment of acknowledgement or create a state of uncertainty for both parties.\(^{141}\) Acknowledgements may also be issued with a substantial delay or in a form, which is different from that of the acceptance. In sum, the offeree’s request for the offeror to acknowledge receipt of acceptance in a specific form within a specified time, distorts the contract formation process and gives the offeror the possibility to manipulate the moment of formation by delaying or refusing to acknowledge the receipt of acceptance.

There being no general obligation to confirm receipt or notify of failed receipt on the addressee’s side, it cannot be assumed that such acknowledgements or notifications will be issued. It is incorrect to claim that the sender of an email controls the communication process.

\(^{137}\) mainly due the possibility of discovering hosts on the network, see: RFC 3334, Recommendations for Automatic Responses to Electronic Mail, K Moore (2004) p 15


\(^{139}\) D Capps, above at note 94 at 207

\(^{140}\) See: MLEC Art 14, “Acknowledgement of receipt” and the commentary thereto. See also: Cheshire & Fifoot [3.48]

\(^{141}\) See: MLEC Art 14 (3): “where the originator has stated that the message is conditional on receipt of the acknowledgement, the data message is treated as though it has never been sent, until the acknowledgement is received”. Art 14 (4) deals with the situation where the originator has not stated that the message is conditional upon receipt of an acknowledgement. In the latter situation, he must perform a number of steps, such as requesting the other party to confirm within a specified time, before he can treat himself as relieved from the legal implications of his message, if any. See: Guide to Enactment para 96.
Reliability and Risk Allocation

[6.23] The two assumptions underlying the arguments against extending the PAR to email depend on a number of technical factors. While it remains debatable whether email is instantaneous, it can be assumed that senders are not in control of the communication process—at least with regards to the possibility to establish successful or failed receipt. It could therefore be claimed that the PAR should apply to email. Before arriving at this conclusion it must be examined whether email communications resemble those occurring via the post.\textsuperscript{142} The latter constitute the default scenario underlying effectiveness on dispatch. A comparison with the post reveals that there are other factors, apart from “control” and “instantaneity,” that must be taken into account.

Email and postal communications are structurally similar in the sequence of events: dispatch, transmission, intermediate storage and retrieval. Both are characterized by delayed access: an interval between the moment the message is received (end of transmission), and the moment the message is retrieved or accessed (notification).\textsuperscript{143} Both require the performance of an additional step to read the message or letter. The difference between them consists in the duration of transmission between the originating and the destination distribution platform. As email is transmitted in the form of electrical impulses, not carried by trains and aeroplanes, the delay between dispatch and receipt is shortened.

The most important difference, however, is reliability. Reliability is a function of the risks inherent in the communication method and the ability to manage those risks. Unlike in the case of the post, the sender of an email does not trust a means which as a rule does not fail. The risk of receipt was placed on the offeror if such risk was minimal. Does this allocation remain justified if the risk increases? While not every properly addressed letter reaches its destination, the likelihood of successful receipt of an email is smaller than in the case of a posted letter. The post is associated with reliability and a quality of service prescribed by statute.\textsuperscript{144} The number of

\textsuperscript{142} Cheshire & Fifoot par 3.44, who state that electronic communications have some parallels with old-fashioned letters: "perhaps the postal rule will have a renaissance"; see also: S Christensen, Formation of Contracts by Email – Is it Just the Same as the Post? (2001) QUT LJ at 23, who describes email as an "electronic version of the postal system."

\textsuperscript{143} S Hill, above at note 41 at 21

\textsuperscript{144} Carter & Harland [232]; see also: Australia Post Annual Report 2004/05, p 19. Reliable, on-time delivery is a regulated performance standard prescribed by the Australian Postal Corporation Act 1989, section 28 (c). In 2004/2005 Australia Post delivered 94.9 % of domestic letters on time or early - against the regulated 94 % target. "Of the letters that did not meet our timetable standard, nearly all were delivered by the following day." Independently monitored results show that 98.3 % of domestic letters were delivered on time or within one extra day. As stated by Lord Fisher MR in Kemp v Wanklyn (1894) 1 QB 583 at 585: "The Post Office is the authority which, under its statutory powers, determines the ordinary course of the post - that is to say, how the letters shall be carried, and at what time they shall, as a general rule, be delivered within any particular district to the persons taken as a
reasons precluding an email from reaching the intended mail-server by far exceeds the number of reasons that might preclude a letter from reaching its destination mailbox.\textsuperscript{145} While transmission speeds and general Internet accessibility increase, the reliability of email is decreasing.\textsuperscript{146}

The more risks are involved in a specific communication method, the less reliable the method and the more important it is to establish rules of risk allocation.\textsuperscript{147} The risk of failed communication can be borne by either the offeree (sender) or the offeror (addressee). These risks are non-existent in face-to-face dealings. Whereas the principle of receipt is not designed to allocate risks, the PAR was conceived to deal with situations where due to the reliability of the post those risks are minimal. Both are difficult to map onto communication scenarios characterized by numerous novel risks.

Knowledge of successful or failed receipt is less important when a method is reliable.\textsuperscript{148} The fewer the risks involved, the greater the likelihood of receipt and the smaller the need for acknowledgements or failure notifications. If a method is reliable, arguments built around the "ability to ensure receipt" become redundant. If the method is less reliable, the risk of failed receipt increases. So does the necessity to confirm receipt or notify of communication failures.

The PAR is based not only on the possibility to commence performance at the earliest moment, but also on the need to avoid an exchange of acknowledgements. Effectiveness on dispatch is fair to the offeror (addressee) if the method is reliable. It seems less fair to the offeror if the likelihood of receipt decreases. Effectiveness on receipt combined with unreliability is not fair to the offeree (addresssee). The only way to protect the latter is to require offerors to acknowledge receipt or notify them of communication failures. Otherwise, the offeree cannot commence performance or re-send the acceptance. This, however, leads to the

body who reside in that district.” See also: Bowman v Durham Holdings Pty Ltd (1973) 131 CLR 8 at 13

\textsuperscript{145} See Chapter 7 [7.11]

\textsuperscript{146} T Moors, \textit{Email Dependability}, School of Electrical Engineering and Telecom, University of New South Wales, Australia, available at: www.eet.unsw.edu.au/~timm; K Martin, \textit{The Time Has Come to Ditch Email}, The Register, SecurityFocus Published 1st June 2006: “[E]mail is a terrible mess. It's dangerous, insecure, unreliable, mostly unwanted and out-of-control.” available at: http://www.theresister.co.uk/2006/06/01/ditch_email/print.html; J E Dunn, Yahoo accused of poor email service Tests find half its servers are shut down, Techworld 13 April 2006, available at www.techworld.com

\textsuperscript{147} H B Thomsen, B S Wheble, \textit{Trading with EDI, The Legal Issues}, London 1989, p 141

\textsuperscript{148} J D Gregory, above at note 117 at 489
very situation the PAR was designed to avoid: circular communications.\textsuperscript{149} It also requires that offerors be able to detect failed communication attempts and/or that their terminating devices automatically generate failure notifications. As indicated earlier, these technical requirements are difficult to fulfil. Furthermore, acknowledgements of receipt and failure notifications, unless generated \textit{entirely without the participation of the addressee}, enable speculation and distort the contract formation process. Neither the principle nor the exception produce a result that is fair to both parties.

Ultimately, the time of formation cannot depend exclusively on the statistical probability of receipt or on the length of the interval between dispatch and receipt. This would imply that the longer the delay or the more reliable a method in terms of delivery statistics, the greater the justification for effectiveness on dispatch. The length of delay and delivery statistics are subject to change and difficult to quantify. Both "reliability" and "instantaneity" constitute variable factors and necessitate the introduction of a gradation. Neither can form a decisive criterion for choosing between the principle and the exception.

It remains questionable whether email is instantaneous. The sender of an email has no control over the communication process, unless a number of technical conditions are met. Although structurally similar to postal communications, email is not as reliable as the post and increases the need for acknowledgements of receipt and failure notifications.\textsuperscript{150} It is difficult to state with confidence whether it can be subsumed under the exception. How does it fit under the principle?

**Does the Principle apply to Email?**

[6.24] The principle of receipt derives from the paradigm situation of face-to-face dealings. There is no justification for effectiveness on dispatch if the communication process displays the same characteristics as dealings between parties who transact in each other’s presence. These characteristics must therefore be established. Subsequently, it must be determined which communication methods enable a communication process that is similar to face-to-face dealings.

\footnote{\textsuperscript{149} Sh Christensen, above at note 142 at 30}

\footnote{\textsuperscript{150} Chissick & Kelman p 80}
Dealings face-to-face provide instantaneous communication: the manifestation of acceptance is concurrent with its notification. There is no delay between “dispatch and receipt” and between “receipt and notification.” The communication process is interactive: bidirectional, synchronous, imparting not only immediate knowledge of receipt but also ensuring a communication process without the dependencies inherent in dealings at a distance.\(^{151}\) No acknowledgements are necessary, senders know about receipt without the addressee’s participation. Both parties monitor and control the communication process, neither requires protection from the possibility of failed receipt. This is illustrated by Lord Denning’s examples in *Entores*: shouting across the river, with planes passing overhead, and talking over the phone with the line going dead in the middle of the conversation.\(^{152}\) In both instances the “sender” knows of the miscommunication without the participation of the other party because failures in transmission become immediately apparent. Face-to-face dealings are characterized by a parity in the communication process.

Are email communications sufficiently similar to face-to-face dealings to apply the principle? On one hand, email can be compared to the post, the main similarity being the existence of intermediating distributing platforms, periodic transfer and the mechanics of message dispatch and retrieval. On the other, email does not involve a substantial delay between dispatch and receipt\(^{153}\) in the way the post does, such interval being one justification for the PAR.\(^{154}\) Furthermore, if both contracting parties attend their computers and regularly poll their mail-servers for new messages, it could be claimed that they can exchange messages “as if” they were having a conversation.

To determine which communication methods resemble dealings face-to-face, a number of issues must be examined. First, the difference between “transmission and “communication” is revisited, including their dependence on devices; second, the two-way nature of face-to-face dealings is discussed.

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\(^{151}\) “In a two-way communication, one party can determine readily whether the other party is aware of the first party’s communication, through immediate verbal response or, when the communication is face-to-face, there are nonverbal cues. When the communication is not instantaneous and is not face-to-face, there is much greater uncertainty as to whether the other party is aware of a particular transaction.” M S Baum, H H Perritt, Jr. *Electronic Contracting, Publishing and EDI Law*, New York 1991, p 321

\(^{152}\) *Entores Ltd v Miles Far East Corporation* [1955] 2 QB 327 at 333, 334

\(^{153}\) assuming that the relevant points in the communication infrastructure between which the delay is measured are the mail-servers, see Chapter 7

\(^{154}\) *Brinkibon v Stahag und Stahlwarenhandelsgesellschaft mbH* [1983] 2 AC 34 at 48 per Lord Brandon
Transmission and communication

[6.25] Communications over the phone are treated like face-to-face dealings.\textsuperscript{155} This treatment, however, is only justified if both parties simultaneously use the device. When messages are left on answering machines it cannot be claimed that the communication process approximates the quality of face-to-face dealings.\textsuperscript{156} Communication is delayed due to the very fact that the other party is not present and only later accesses the message, assuming such technical possibility exists.\textsuperscript{157} According to Coote, the mere use of an instantaneous mode of transmission is never decisive by itself. “It would always be necessary to know in addition whether the parties were thereby placed in \textit{instantaneous communication} with each other.”\textsuperscript{158} Devices providing instantaneous transmission need not provide instantaneous \textit{communication}. Instantaneous transmission does not endow the communication process with the characteristics of face-to-face dealings as it does not provide one of the most important characteristic of such dealings: simultaneous awareness.\textsuperscript{159} While simultaneous awareness is not a prerequisite of a valid contract, it can serve to distinguish dealings at a distance from dealings face-to-face. The delay between receipt and \textit{communication} is inherent in methods that do not require the presence of the addressee.

Communication devices can be used in multiple ways. Devices that operate automatically, like telex, can be attended by both parties thereby rendering the communication process similar to face-to-face dealings. Devices like the telephone, which is traditionally associated with the simultaneous presence of both parties, may also be used in a way that delays \textit{communication}, such as when one party leaves a message on the answering machine for later retrieval.

In the case of email, instantaneity relates to the speed of transmission to the addressee’s mail-server, it does not imply that the addressee \textit{immediately} accesses or retrieves the message. When an emailed acceptance arrives at the mail-server, the addressee need not be present at his computer and the computer need not be on-line.\textsuperscript{160} The message need not be automatically and immediately delivered to the mail-client. Instantaneous \textit{communication} is only possible on the

\begin{footnotesize}
\textsuperscript{155} Aviet v Smith & Searle Pty Ltd (1956) 73 WN (NSW) 274; Express Airways v Port Augusta Air Services [1980] Qd R 543; W A Dewhurst & Co Pty Ltd v Cawse [1960] VR 278

\textsuperscript{156} Furninston, Norisada, Poole p 55; H B Thomsen, B S Wheble, above at note 147 p 133

\textsuperscript{157} R Nimmer, above at note 10 at 223, who implies that delayed access prevents to application of the face-to-face analogy.

\textsuperscript{158} B Coote, above at note 7 at 342

\textsuperscript{159} D M Evans, above at note 44 at 555

\textsuperscript{160} See: SMTP Internet Draft, \textit{Internet Mail Architecture}, D Crocker (2005) pp 3, 4
\end{footnotesize}
assumption that both parties attend their machines and regularly request messages from their respective mail-servers.

An important clarification must be made. It is beyond doubt that receipt can occur outside of business hours or if the device is unattended or malfunctions. The present discussion, however, is not aimed at establishing when receipt occurs, but on determining when dealings at a distance can be equated with dealings face-to-face and whether such equation can be based on a specific intermediating device. If receipt is the legally relevant event, occurrences precluding receipt on the addressee’s side are disregarded. Receipt is either deemed or the addressee is stopped from denying it. If, however, acceptances are effective on dispatch, receipt is irrelevant altogether.

Two-way

[6.25] An important characteristic of face-to-face dealings is their two-way nature. This is reflected in the Restatement (Second) of Contracts: “[a]cceptance given by telephone or other medium of substantially instantaneous two-way communication is governed by the principles applicable to acceptances where the parties are in the presence of each other.” “Substantial instantaneity” requires transmission without any substantial lapse of time, “two-way,” an interaction among the parties, so that “ambiguities and misunderstandings, if perceived, can be cleared up on the spot.” Accordingly, instantaneity is only one of two necessary elements for the interactions to resemble face-to-face dealings. Despite the use of the term “medium” in relation to the telephone, it must be assumed that the Restatement refers to communication devices or methods in general.

The Restatement applies the PAR to situations where the parties are not in each other’s presence and the means of communicating acceptance involves a delay between dispatch and receipt. As in the case of “control,” the two-way characteristic is related to the possibility to obtain a confirmation of receipt or failure notification: “[a]n important premise upon which those rules are predicated is the notion that delayed media, such as mailed writings, do not provide either party the ability to verify in a timely fashion that receipt of a message has

161 Brinkibon v Stahag und Stahlwarenhandelsgesellschaft mbH [1983] 2 AC 34 at 42
162 Entores Ltd v Miles Far East Corporation [1955] 2 QB 327 at 333
163 Restatement (Second) Contracts, Par 64
164 Restatement (Second) Contracts, Par 64 comment a; see also: R Nimmer, above at note 10 at 222
165 Restatement (Second) of Contracts Par 64 comment b

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occurred and that the message as received is without errors."166 The receipt rule should apply where the means of communication is instantaneous and bi-directional, the postal exception - where communication is time-delayed and unidirectional.167

This approach is also reflected in Lord Wilberforce's reasoning in Entores, who mentioned telephone alongside radio communications, not telex.168 Although in the case of radio, the parties cannot speak simultaneously on the same channel, every disruption is detected immediately and a repeat can be requested while the communication is still in progress.169 In the case of e-mail, the sender does not know whether the message has been received.170 As with letters, there is no feedback from the addressee or automatic notification of successful or failed receipt. Technically, email is a one-way method of communication. The two-way characteristic can be "re-created" if both parties attend their computers, regularly poll their mail-servers and automatically and immediately generate confirmations of receipt. The generation of notifications or confirmations presupposes certain technical capabilities of the addressee's system and the addressee's general willingness to co-operate, that is - communicate in real-time. The re-creation of the two-way quality may therefore not be possible.

Email compared to Instant Messengers and Web-applications

[6.27] The difficulty in treating email communications at par with face-to-face dealings becomes apparent when email is compared to instant messengers and web-applications.

Instant Messengers

[6.28] In principle, dealings via instant messengers occur in real-time as both parties must be on-line to exchange messages. A message is typed and immediately appears on the screen,


167 S M Waddams, The Law of Contracts, 3rd ed, Toronto 1993, pp 73, 74; A A Macchione, Overview of the Law of Commercial Transactions and Information Exchanges in Cyberspace – Canadian Common Law and Civil Law Perspectives (1996) 13 CIPR 129 at 133,134; see also Vocabulary of Terms for Broadband Aspects of ISDN, ITU-T Recommendation 1.113 (06/97) which distinguishes between conversational services and messaging services. The former are characterised by a bi-directional exchange by means of real-time (no store-and-forward) information transfer, whereas the latter offer communication via storage units with store-and-forward message handling.

168 Brinkibon v Stahag und Stahlwarenhandelsgesellschaft mbH [1983] 2 A C 34 at 41

169 In the case of radio communication, which are technically one way at a time, custom has developed a distinctive way of communicating: every sentence after which a reply is expected is finished by the word "copy" or "over." Parties often re-confirm by "do you read me?" questions.

170 Fasciano, above at note 58 at 1002
becoming visible to both parties at the same time. Dispatch and receipt are simultaneous; communication is instantaneous. Both parties monitor the communication process in real-time: if a message cannot be delivered, there is an immediate notification to that effect or the message does not appear on the screen. The communication process is interactive, instantaneous and two-way. Not only can senders ensure receipt, assuming that the immediate failure notification is interpreted as such, but also actual communication.

A number of clarifications must be made to avoid oversimplifications of the communication process via instant messengers and to illustrate the difficulty of replicating the characteristics of face-to-face dealings.

First, virtually all IM applications display so-called presence indicators, which inform whether a person is on-line or off-line. Users can also design their own descriptions. Status information indicates whether a particular person can or desires to be contacted. Some indicators change automatically, i.e. when a person is inactive for a predefined time the status turns to “idle” or “away,” others are changed manually, such as “do not disturb.” As a result, senders can tailor their communication behaviour to the addressee’s presence information. To complicate matters, whenever an addressee is on-line then – irrespective of his or her status as “away,” “idle” or “busy” – some IM applications can still technically receive messages. “Away” does not automatically imply that the addressee is “off-line.” As many computers remain on-line for months and parties do not log-off their IM applications, the “away” or “busy” status can be interpreted as an unwillingness to communicate. In other words, despite the technical ability to receive messages, the addressee’s status indicates delayed communication. Much depends on the wording of the specific status indicator.

Furthermore, some applications provide the option of “deliver now” or “deliver later” in the event the addressee is not online. Another variation is the possibility to send messages despite the addressee’s off-line status. Although a failure notification is displayed instantly, the message is delivered once the addressee returns on-line. In principle, senders know whether their messages are received and whether the addressee is on-line.

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171 Differences of micro-seconds are disregarded.
172 Ch P Morrison, Instant Messaging for Business: Legal Complications in Communication (2004) 24 J L & Com 141 at 142, 143; see also: R Nimmer, above at note 10 at 222
Second, IM applications differ in their treatment of addressee inaction. It may be the case that when a message appears on the screen, no failure notification is issued, yet no reply from the addressee is forthcoming. Some IM applications display information when the other party is typing, others don’t. Accordingly, absent failure notification the sender may not know why the addressee is not replying. The sender knows, however, that the message has been successfully delivered. Situations like these illustrate the inability to fully replicate the qualities of face-to-face dealings absent actual physical presence. As mentioned above, the latter is not a prerequisite of receipt, but an assumption of face-to-face dealings.

Third, most popular instant messaging applications provide video conferencing as well as the possibility to place voice calls. In both cases, the communication process displays even more resemblance to face-to-face dealings. With increasing bandwidth it will become easier to fully replicate the characteristics of such interactions by ensuring visual contact.174

Although there are technical differences between email and instant messengers, either method can be used in ways resembling the other: email can be used to exchange messages in real-time, when both parties attend their computers, instant messengers can be used for delayed communications when senders type messages for later delivery. Despite such possibilities and the numerous permutations introduced by presence information, it can be assumed that as a general rule, instant messaging applications provide instantaneous two-way communication, whereas email is one-way and its instantaneous character depends on a number of variables, including the length of permitted delay as well as mail-server and mail-client configuration. The communication process enabled by instant messengers unquestionably resembles face-to-face dealings.

Before moving on to web-based interactions, some further observations about the relationship between email and instant messengers must be made. Email is instantaneous in comparison to the post. It is not, in comparison to instant messengers. Its speed is relative and depends on what it is compared to. There are also two groups of users. Those who are familiar with Internet-enabled communication methods and those who have acquired Internet skills later in life and are generally not comfortable with new technologies. The latter group perceives email as fast and essentially does not use instant messengers; the former regards email as slow and prefers instant messengers and text messaging.175 Taking into account today’s fast paced business environment, a delay of even five minutes may appear unacceptable to many. The

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174 H B Thomsen, B S Wheble, above at note 147 p 139
focus of the business community and software suppliers, like IBM or Microsoft, is shifting to those methods of communication that enable instant communication. They key words are “online,” “presence detection” and “real-time” – the instantaneity of transmission is taken as a given.

Last but not least, it is possible to combine email and instant messengers. Gmail.com can serve as an example: being a web-based application it is accessible from any browser, without the need to download a separate email or instant messaging client. Users can chose between email and instant messaging from the same interface, depending on the specific communication goal at hand (e.g. urgency of reply, necessity to ensure immediate notification) and the communication status of the addressee, which is permanently displayed.

Web-based interactions

[6.29] As indicated in Chapter 5, web-based communications differ from to email and instant messengers and, due to the inherent immediacy of response, raise few problems with regards to effectiveness. The web was designed not as a method of communication but as a system of information retrieval. The interactivity of many websites is the result of applications running on the server- or client side. A distinction between downloading a website and interacting with a website must be made. “Downloading” consists of requests for a particular resource and a response in the form of delivery of that resource. If the resource, generally in the form of a website, cannot be delivered, an error code is displayed. If the request in the form of typing in a URL or activating a link is treated as the dispatch of a message, then the response from the mail-server must be regarded as immediate. The process can be described as two-way: users requesting web-sites can monitor the responses from the web-server in real-time. Depending on the bandwidth, the requested resource “appears” on the screen with varying speed.

In the case of server-side or client-side applications, the process is not confined to information retrieval but bears signs of interactivity. Users not only request websites but provide input by filling out forms or activating buttons thereby actively modifying the contents of websites displayed (i.e. sent) in response to their requests. Irrespective of whether user input is processed on the client- or on the server-side, the response from the website is immediate and can be monitored by the user in real-time. Most importantly, as the transmission of user input and the manner of its processing are prescribed and controlled by the web-merchant, it must be

176 See Chapter 3 [3.8], Chapter 8 [8.24]
178 J Hogan-Doran, above at note 13 at 384
assumed that the latter bears all the risks of failed receipt. Although responses may be delayed by seconds, or even minutes in cases of server overload or slow connections, the interaction can still be described as instantaneous and two-way. The delay may be perceptible, but the communication process can still be monitored.

A comparison of email, instant messengers and web-applications demonstrates the difficulty of subsuming all three under one rule.

Conclusions

[6.30] The question "should the PAR apply to email?" must be replaced with "which electronic communication methods resemble dealings face-to-face and which fit better under the at a distance category?" Instantaneity and control can be regarded as two of many characteristics of face-to-face dealings and are not the only factors to be taken into account when making the choice between the principle and the exception. The focus must be shifted from the speed of transmission and the control of the communication process to the question whether the communication process is interactive and real-time. If the interaction resembles face-to-face dealings, the application of the principle is unquestionable. The PAR can only be debated if the interaction between the parties does not resemble face-to-face dealings and one of the parties deserves protection from the risks of the communication method chosen by the other.

If email was instantaneous, opponents of extending the PAR should be indifferent to what rule applies, because dispatch would be simultaneous with receipt. The differentiation would matter only with regard to the place of formation. Due to the un-reliability of email the choice between the principle and the exception is crucial not because of the length of delay but because the increased risks of miscommunication. Placing the risk of receipt on the sender is unfair whenever receipt depends on the unpredictable workings of the transmission channel and the participation of the addressee. Acceptances should therefore become effective on dispatch when the sender cannot guarantee receipt and the method of acceptance is imposed by addressee.

The "traditional" classification into "instantaneous" and "non-instantaneous" must be abandoned. As all Internet-based communication methods can be described as instantaneous, the choice between the principle and the exception must be based on other criteria. The focus should be shifted from communication devices to the characteristics of the communication process. The latter resembles either dealings face-to-face or dealings at a distance. Due to the increasing complexity of the communication landscape, this simple division should remain the
starting point for all analyses. The decisive factors are the characteristics of the communication process, not the means of achieving such.

Neither the principle nor the exception fit the new permutations introduced by email – speed of transmission coupled with unreliability and lack of control. An important consideration is the “reliability” of a given method of communicating acceptance as well as the fact who chose or imposed such method. The party who chose a particular method of communicating acceptance should bear the risks inherent in its operation, including that of failed receipt.

If the method of acceptance is prescribed and indicated as exclusive, the offeror should bear the risks inherent in this method. The offeree is protected as acceptance becomes effective once the requested act is done. If there is a technical possibility to immediately learn of a communication failure, as in the case of web-based interactions or instant messengers, the offeree must re-send the acceptance. If the method is not prescribed but the circumstances of the offer indicate that acceptance must be communicated, offerees should chose a method that guarantees communication. Offerees may take into account the offeror’s presence information and select the method of communicating acceptance accordingly. The choice will also be based on the time left to communicate acceptance.

If the method is not prescribed, then – assuming it is reasonable in light of the offer – the offeree should ensure that the offeror knows that acceptance has taken place. It is in the offeree’s interest to commence performance at the earliest moment and avoid doubts as to the precise time when acceptance becomes effective.

The method of acceptance is chosen with the specific communication goal at hand. If the offeror must be reached in real-time and communication must be ensured, the offeree is likely to chose the phone or an instant messaging application, provided such methods are permissible. As Internet-based technologies enable the detection of the offeror’s presence and communication status, offeree can tailor their response to this information. If an immediate response is required, it is questionable whether the offeree would email the acceptance.

It is impossible to state one universal rule encompassing all acceptances communicated via email. The latter, although technically not instantaneous, can provide a communication process resembling face-to-face dealings. The ultimate decision lies in how much weight is given to such factors as “reliability” and who chose email to communicate acceptance. In the case of instant messengers and web-based interactions, however, it can be stated with confidence, that there is no other option but effectiveness on receipt.
Chapter 7

Determining “Dispatch” and “Receipt”

The formation of a contract is a conceptual construct and not a physical fact.¹

Introduction

[7.1] This chapter discusses the basic concepts used in determining the moment of contract formation: “dispatch” and “receipt.” “Receipt” is the main component of the principle, “dispatch” - of the exception. Either term can be tied to various events in the transmission of an electronic acceptance from the system of the sender to the system of the addressee. Determining the moment of “receipt” or “dispatch” must be distinguished from determining whether electronic acceptances become effective on receipt or on dispatch. Chapter 6 attempted to establish the legally relevant event; this chapter attempts to select specific elements in the communications infrastructure, which can be used to establish when this event is deemed to occur.

Dispatch and receipt are questions of fact. It can be objectively ascertained when a message enters or leaves the transmission channel or network, when it reaches a mail-server or when it becomes available for retrieval. It is by no means clear, however, which of these events bears legal significance.² Consequently, the application of the simple principle that “acceptance must be communicated” encounters unprecedented difficulties.

It may seem unusual to “dissect” the time of contract formation into two separate chapters and deal with effectiveness separately from “dispatch” and “receipt.” Such differentiation is necessary: defining the above terms raises different issues than those involved in making the choice between the principle of receipt and the postal exception. While the latter mainly relates to the speed of transmission, reliability and choice of communication method, the former concern the client-server model and the fact that messages traverse multiple networks. To date, such division was not necessary. Neither “dispatch” nor “receipt” was given much

¹ Corbin para 3.26
consideration or analysed in terms of accessibility, legibility or ability to process. Similarly, there was no need to dissect the individual components of the communication infrastructure. Such analyses are required once contracts are formed on-line.

“Dispatch” and “receipt” raise two sets of problems. First, open electronic networks are characterized by a number of risks, which have no counterparts in traditional communications. Second, due to the increased complexity of communication systems and the multiplicity of terminating devices, it becomes more difficult to select the particular point in time where dispatch or receipt is deemed to occur.

Practically all Internet-based methods of communication can be regarded as instantaneous. Substantial delays may, however, occur between specific stages in the communication process. The length of these delays depends on which element of the infrastructure is regarded as the point of dispatch or receipt. The moment of contract formation and - in some instances - the very existence of the contract depends on which point is selected.

Apart from establishing the precise time of contract formation, “dispatch” and “receipt” allocate communication risks. While the principle of receipt and the postal exception constitute basic tools of risk distribution, the latter requires further refinement in light of the increased risk of on-line communications. Messages are not only transmitted over an unreliable communication channel but also processed. “Processing” encompasses trans-coding, translation and reformatting. Each of these operations aims to adapt the message to the requirements of the next step in the transmission. Each time processing occurs there is a risk that the contents of the message will be interfered with and/or rendered illegible.

Even if an offer provides when acceptance becomes effective, it is doubtful that it specifically defines which events constitute dispatch or receipt. While intention remains decisive, parties rarely allow for the increased complexity of the communication landscape. Applying the offer and acceptance model to on-line transactions requires the development of default rules that reflect the intricacies of communications over open electronic networks, especially with regards to the client-server model. This is one of the instances where the novel transacting environment creates problems with few equivalents in the real world.

Roadmap
[7.2] This chapter commences with some general considerations, highlighting the main differences between traditional communications and those occurring on-line. It proceeds with an overview of the principles relating to “dispatch” and “receipt” and emphasizes the relative
simplicity of the communication scenarios, which serve as the basis for the existing legal framework.

Next, the chapter describes a number of novel problems inherent in on-line communications. Taking email as an example, it describes the risks inherent in its transfer. The relationship between "receipt" and "notification" is revisited with regards to the difficulties of ensuring the legibility of messages on the side of the addressee. The chapter continues with a discussion of "deemed receipt" in those cases where the communication failure is attributable to the addressee, but the rejection of the message is justified or reasonable.

Subsequently, the chapter critically analyses the provisions relating to "dispatch" and "receipt" contained in the MLEC, the CUECIC, the ETA and the UETA. The focus is on how those regulations approach the distribution of communication risks in client-server architectures and to what extent, if any, they create Internet-specific rules for the time of contract formation.

Email remains the point of reference as it creates the most complex problems. Web-based interactions and instant messengers are mentioned only marginally because they raise a different set of issues. The problems presented in this chapter are common to all electronic messages, not just acceptances.

**General Considerations**

[7.3] The following paragraphs present a number of general considerations, which must precede any discussion relating to "dispatch" and "receipt" in open electronic networks.

**Simplifications**

[7.4] The technical complexity of communications over open electronic networks defies easy description. Numerous simplifications are therefore unavoidable. The discussion cannot include each possible client application, terminating device and network architecture. Even the most basic scenarios, however, illustrate the difficulties in applying the offer and acceptance model in an environment consisting of multiple interconnected networks. Discussing the client–server model alone conveys the complexity of the problems. The aim of this chapter is to be illustrative, not exhaustive. Any attempt to encompass all possible permutations is doomed from the outset and broad generalizations are unavoidable. Such generalizations may lead to unfair results in specific situations. Rather than looking for universal rules, it is better to focus on the
additional factors that must be taken into account in determining the precise moment of contract formation. While some ground principles can be established, an in casu examination of the particular situation is always required. This chapter deals only with the basic communication scenarios but points to potential complications that inevitably arise when additional elements are included in the analysis.

Network Environments

[7.5] Being a network of networks, the Internet is a heterogenous communication environment where each network retains some individual characteristics.3 The Internet is not like the post or like the telephone. Despite its ubiquity, it does not (yet) have the uniformity of one global system where all participants can seamlessly exchange messages. Apart from a set of core protocols, which are a condition of transmitting data over the Internet, the application layer (i.e. the layer closest to the user)4 is characterized by a multiplicity of competing protocols and standards. Not all of them are interoperable. The basic unit in a networked environment is a LAN, which generally consists of a collection of computers in a single building or area.5 LANs often employ proprietary protocols that differ from the transport environment of the Internet. Routing from one environment to another may involve a conversion between the “idiosyncrasies of the two original networks”6 and require significant “repackaging” of messages. Such conversions are not always successful.

An electronic acceptance travels from the network of the sender to the network of the addressee. Senders do not know and generally cannot anticipate the receiving environment, i.e. the addressee’s mail-server, security policies, if any, the client application and the terminating device used to access, retrieve and display messages. The question arises: to what extent, if any, should senders allow for the idiosyncrasies of the addressee’s environment?

Physical and conceptual divisions

[7.6] It is often impossible to draw a physical line as to when risk should pass or to pinpoint the specific network element or device where certain processes occur. Both the Internet and the client-server architecture are networking concepts that may not readily translate into physically separable pieces of hardware. It can always be debated where transmission starts or where the Internet “begins:” at the dial-up modem, telephone socket or the outgoing mail-server?

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4 See Chapter 2
5 Brookshear p 136
6 Brookshear p 138
Similarly, the division between the user environment and the message-handling environment, although obvious from a technical perspective, does not translate into clear demarcation lines relating to specific machines. Determining the network element a message must pass through or arrive at for dispatch or receipt to occur, is therefore ridden with difficulties. Even the terminology used in this chapter would raise the eyebrows of some computer scientists: is it correct to speak of “devices,” “servers,” “networks” and “information systems”? Technically, servers and clients are processes, not discrete pieces of machinery. The following discussion often treats those processes as if they were spatially separable, whereas in many instances their separation is only logical.

Terminological Sensitivity

[7.7] When attempting to define “dispatch” and “receipt,” the implications of the terminology must be fully understood. There may be significant differences in the time of formation depending on whether a message “reaches,” “enters” or “becomes available.” It is not only the network element that must be selected but also the verb, which describes the relationship between the message and the given element. Consequently, the existence of the contract may hinge on the selection and/or construction of a single word. It could be claimed that such situation not uncommon in the real-world. This time, however, this single word must derive from an understanding of the technologies underlying communications over open electronic networks.

The Existing Principles

[7.8] To date, the terms “dispatch” and “receipt” were subject to little legal analysis. Textbooks on contract do not contain a separate chapter or section discussing either term. Unlike in Chapter 6, where the paragraphs dealing with the “general principles” pertaining to the time of formation occupied multiple pages, the “general principles” pertaining to “dispatch” and “receipt” require far less space. The principle can be simply stated as: to be effective, acceptance must be communicated. As indicated in Chapter 6, the term “communication” carries many possible meanings and can be tied to numerous events in the contract formation process.

7 For a detailed explanation of Mail User Agents, Mail Transfer Agents and the Mail Handling Environment, see: D Crocker, Internet Mail Architecture (2005) SMTP Internet Draft
8 Chapter 6 [6.5]
When the PAR applies, acceptance is effective when a properly addressed letter is posted. Dispatch is associated with “posting”: placing a letter in a letterbox of the postal service or handing it to a postal employee. If dispatch is proper, it is generally irrelevant whether the letter ever reaches the addressee. Upon posting, the offeree loses control and is not responsible for “accidents happening at the post office.” The post does not act as the agent of either the sender or the addressee; it only transmits letters and is regarded as an independent third party. Postal communications involve at least two distributing platforms, the post offices of the sender and the addressee respectively, as well as two mailboxes, the sender’s and the addressee’s. The addressee’s mailbox can be located at his or her address or, in the case of PO boxes, at the post office. All these “components” are regarded as forming one system and no distinction is made between the delivery of a letter to the post office or its placement in a mailbox in the street. When the PAR applies, addressees bear the risk of all accidents during the time letters remain in the sender’s mailbox, as well as during their subsequent transfer to the sender’s post office. Even if a letter is lost during these initial stages, there is a valid acceptance and a contract is formed. If the PAR does not apply, letters are received when they come into the addressee’s possession, or when they are deposited in a place designated for that type of communications. Despite an early English case, where a letter sent in a sealed envelope was not considered received until it was opened by the addressee personally, it is not necessary that the letter be read or even opened.

In the case of telegrams, dispatch occurs at the telegraph office where the machine is located. It is not clear whether the message must leave the machine or whether typing the message “into” the machine suffices. Unlike telegrams, telexes can be received directly in the

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9 Carter on Contract [03-350]
10 Household Fire and Carriage Accident Insurance Co Ltd v Grant (1879) LR 4 Ex D 216 at 219
12 Corbin para 3.2
13 See: CISG Art 24, which states that a message is received when it is delivered to the offeror personally, to the offeror’s place of business or mailing address, or to the offeror’s habitual residence. P Fasciano, above at note 11 at 997
14 Arrowsmith v Ingle (1810) 3 Taunt 234
15 Henkel v Pape (1870) LR 6 Exch 7; Bruner v Moore [1904] 1 Ch 305; Cowan v O’Conner (1888) 20 QBD 640 at 642; Brinkibon v Stahog und Stahlwarenhandelsgesellschaft mbH [1983] 2 AC 34 at 38
office. In *Entores Ltd v Miles Far East Corporation*\(^\text{17}\) and *Brinkbon v Stahag und Stahlwarenhandelsgesellschaft mbH*,\(^\text{18}\) the contracting parties operated their own telex machines.\(^\text{19}\) No additional steps to send or access messages were necessary and there was no dependence on intermediaries. In *Leach Nominees Pty Ltd v Walter Wright Pty Ltd*,\(^\text{20}\) the telex machine used by the sender was operated by third parties and acceptance was considered dispatched when the offeree committed the message to a public telex operator, not when the message was sent from the telex machine.

Slightly more analysis has been devoted to "receipt," mainly in relation to the receipt of notices after office hours and the malfunctioning of the terminating device. Generally, receipt is associated with the arrival of the message at the addressee's machine, for example, when the telex is physically reproduced in the recipient's office during business hours.\(^\text{21}\) If arrival occurs after business hours, receipt is deemed to take place only once the office is re-opened on the following business day.\(^\text{22}\) The law deems certain occurrences as constituting receipt, presumably because they enable communication in the normal course of events. Thus, there may be a difference between *technical* receipt and *legal* receipt. For receipt to occur, the addressee's terminating device need not be attended and need not be maintained in proper working order. If the terminating device malfunctions due to the addressee's fault, the latter is deemed to have received the message or estopped from denying receipt.\(^\text{23}\) Although *technically* the message is never received, acceptance is effective and a contract is formed. If, however, a given communication failure is not the fault of the addressee, there is no receipt and therefore no contract.\(^\text{24}\) The existence of a contract may hinge on a technicality — the reason of the communication failure.

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\(^{17}\) [1955] 2 QB 327

\(^{18}\) [1983] 2 AC 34

\(^{19}\) In both instances, the interactions were taking place between principals who operated their own telex machines, *Brinkbon v Stahag und Stahlwarenhandelsgesellschaft mbH* [1982] 2 AC 34 at 42

\(^{20}\) [1986] 85 FLR 427 at 434

\(^{21}\) *Tenax Steamship Co Ltd v Owners of the Motor Vessel 'Brinnes' (The Brinnes)* (1974) 3 All ER 88 at 93

\(^{22}\) *Tenax Steamship Co Ltd v Owners of the Motor Vessel 'Brinnes' (The Brinnes)* (1974) 3 All ER 88; *Scheide Delta Shipping BV v Astarte Shipping Ltd (The 'Pamela')* [1995] 2 Lloyd's Rep 249

\(^{23}\) *Carter on Contract* (03-410)

\(^{24}\) *Entores Ltd v Miles Far East Corporation* [1955] 2 QB 327 at 333

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Existing principles relating to dispatch and receipt developed around simple communication scenarios. As a result, apart from logic and a general sense of fairness, there is little guidance how to apply the offer and acceptance model in more complex situations.

**Novel Problems**

[7.9] The following paragraphs describe a number of novel factors that must be included in the discussion when messages can be considered “dispatched” or “received.” None of these factors, taken in isolation, introduces the need for detailed legal analysis. It is their combined effect that creates a host of legal problems.

**Number of originating and terminating “devices”**

[7.10] When communicating over the phone, fax or telex there is only one machine on each side of the communication channel: the sender’s originating and the addressee’s terminating device. Even if the communication process is mediated by the post or a telecommunication provider, it is generally clear when a message is dispatched or received. Only the originating and the terminating devices are taken into account, not the underlying communications infrastructure, that is - the intermediating devices. From the perspective of the transacting parties, communication is from phone to phone or from fax-machine to fax-machine.

Most communications over open electronic networks are based on the client-server architecture. In the case of email, there are at least two originating devices, the sender’s mail-client and the outgoing mail-server, and two terminating devices, the addressee’s incoming mail-server and the mail-client. Each of these devices could constitute the point at which acceptance become effective. Does dispatch occur when a message leaves the mail-client or the mail-server? Does receipt occur when a message reaches the mail-client or does arrival at the mail-server suffice? The decision has important implications for the time of formation, as there may be substantial delays between the moment a message arrives at the server and the moment it is transferred to the client.

In traditional communications one could examine the underlying telecommunications infrastructure, for example, switches or branch exchanges in the case of telephones. This infrastructure, however, has never been the subject of analysis from a contract law perspective and such need does not arise now. When parties talk over the phone, “dispatch” and “receipt” occur at their respective telephones and not at their public branch exchanges. The number of
switches, intermediating carriers and interchange points involved in an international call is inconsequential. In communications over open electronic networks, different devices operate on various layers of the TCP/IP protocol. As this thesis focuses on processes occurring at the application layer, the discussion excludes devices or network elements operating at lower layers, such as routers, switches or bridges. In both instances, the intermediating devices remain transparent to the communicating parties and irrelevant from a contract-law perspective. As clients and servers operate at the application layer each of them can be regarded as a terminating or originating device.

To add complexity to the discussion, all communications at a distance involve multiple intermediaries. Some of them form part of the transmission channel, others can be regarded as belonging to the respective spheres of control of the sender or the addressee. Telecommunication carriers and the post are independent third parties and can be regarded as part of the communications infrastructure. Problems arise in evaluating the legal position of ISPs, which often provide some of the infrastructure used by the communicating parties, usually mail-servers. It is difficult to decide whether a particular device should be regarded as an originating/terminating device or as part of the general transmission channel. The time of formation may depend on the answer to this relatively simple technical question.

Communication Risks

[7.11] Open electronic networks introduce a number of risks that differ from those involved in traditional communications. These risks are illustrated by an example. RFC 3463 “Enhanced Mail System Status Codes” describes the reasons why an email may not be delivered or be delivered in unreadable form. Below is a non-exhaustive list of conditions precluding the receipt or legibility of an email. Problems may concern:

1) the recipient’s address, mailbox, or mail system,
2) the delivery system,
3) the protocol used to send the message,
4) failures in translation, trans-coding or otherwise unsupported message media,
5) security restrictions on the side of the receiving mail server,

In sum, the risks inherent in email communications include:

(a) transmission risk, the risk of travelling over the Internet from the sender’s mail-server to the recipient’s mail-server. The transmission path is “assumed to be under the control of the destination or intermediate system administrator.”

(b) storage risk at the receiving mail-server. The mail system is “assumed to be under the general control of the destination system administrator.”

(c) access/retrieval, risks of the recipient accessing the mail-server and downloading the message.

(d) reproduction risks resulting from the processing of the message by the recipient’s mail-client. “Message content or media issues are under the control of the sender and the receiver, both of which must support a common set of supported content types.”

Most of the above risks have equivalents in traditional communications and are comparable to technical failures or bad maintenance. Some, however, are novel. It is difficult to

31 RFC 3463 p 7; e.g. mail system full, available storage has been exceeded. Recipient may not be able to delete material to make room for additional messages; system not accepting network messages, message too big for system, larger than per-message size limit; system incorrectly configured.
32 RFC 3463 p 8; e.g. no answer from host, connection attempt was not answered, remote system busy or down.
33 RFC 3463 p 9, e.g., result of wrong protocol version.
34 RFC 3463 p 10; e.g. media not supported, conversion required and prohibited – content of the message must be converted before it can be delivered; such prohibitions may be the expression of the sender in the message itself or the policy of the sending host, conversion required but not supported – the message content must be converted in order to be forwarded but such a conversion is not possible or practical by a host in the forwarding path.
35 RFC 3463 p 11, e.g. delivery not authorized.
36 RFC 3463 p 4
37 RFC 3463 p 4
38 RFC 3463 p 4
find real-world analogies for "wrong protocol version" or "failure in transcoding." Telephones belong to the same universal system of circuit switched communications. It may be impossible to terminate a call or the quality of the call may be too low to discern the words spoken by the other party. The inability to communicate will not, however, be the result of any of the parties using the wrong phone or the incorrect transmission protocol. Similarly, letters are sent by the post, which is part of a universal postal system. The latter regulates the size of envelopes, parcels and mailboxes.

It is possible to allocate each of the above communication risks to one of the parties or to one of the intermediaries. If an electronic acceptance does not arrive at its destination due to the fault of an intermediary, the question arises which of the parties should bear the risk. The intermediary at fault may not be in contractual relationship with either contracting party and cannot be regarded as belonging to either party's sphere of control. It may also be difficult to regard it as part of the general transmission infrastructure. For example, should the risks inherent in the operations of the "intermediate system administrator" mentioned under point (a) be borne by the sender or by the addressee? Even those risks that cannot be prevented or mitigated by either party must be placed on one of them. Any distribution of communication risks will therefore contain an element of arbitrariness. A communication failure must be attributed to an intermediary; the intermediary must in turn be allocated to the sphere of control of either party.

A number of broad assumptions can be made: there are only two possible risk-bearers, the sender (offeree) and the addressee (offeror). Intuitively, risks relating to dispatch should be borne by the sender, risks relating to receipt - by the addressee. It must further be assumed that (a) risks that can be prevented or mitigated by a party should be borne by that party; (b) intermediaries who remain in a contractual relationship with one of the parties should belong to this party's sphere of control, i.e. the risks inherent in their operation should be borne by this party; (c) each party should be responsible for the part of the infrastructure it owns or controls.

The general transmission risks are roughly apportioned by the principle of receipt and the postal exception. The risks inherent in the operation of the originating and terminating information systems are allocated by defining "dispatch" and "receipt." The moment of contract formation must be established with the full realization of its implications for the distribution of communication risks between the contracting parties. In particular, it must be remembered that the earlier the risk is transferred from the sender, the more risk is borne by the addressee.
Receipt and legibility

[7.12] Despite the fact that for receipt to occur addressees need not attend or maintain their devices or open each letter that arrives in the mailbox, it can be assumed that they do so at their own risk and that, generally, receipt implies the ability to learn about the contents of the message. While actual knowledge of acceptance is not required for its effectiveness, the ability to gain such knowledge by reading the message is presumed. The offeror should be informed whether the offeree decided to accept or reject the offer. 39

In Internet-based communications, “receipt” (in the sense of arrival at the addressee’s mail-client or server) does not imply that the message can be read. The reason for this unusual situation is that the addressee’s mail-client may not be able to process and display a message composed on the sender’s mail-client. Addressees may not be able to read messages in certain formats or from certain sources. 40 Senders, in turn, cannot always anticipate the addressees’ client application. Its characteristics may not be apparent from the email address.

The problem differs from the failure to maintain a terminating device. In the current situation, both the originating and the terminating device function correctly. The addressee’s mail-client, however, is unable to trans-code or translate a message, resulting in its illegibility or different arrangement of its contents. 41 Neither party is at fault or unreasonable, both the sender’s and the addressee’s client applications are widely used. Senders cannot be blamed for composing and dispatching messages from Microsoft Outlook or Eudora, addressees cannot be blamed for receiving messages on hotmail.com. Yet, one mail-application may not be able to display a message composed on the other. Similar problems arise in the case of email attachments. If an attachment is sent in a proprietary format, such as the latest version of Microsoft Word, the addressee may not be able to view the file unless he or she obtains converting software or installs the same version.

In paper-based communications the “format” of a letter is not problematic. What is placed in an envelope is identical to what is delivered to the addressee. Letters can be lost or

39 Carter on Contract [03-310]

40 The problem is practically non-existent in instant messengers, as both parties must use the same system.


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damaged, but are not rewritten by postal employees or by the addressee’s mailbox. Letters may be written in foreign languages and necessitate a translation or encrypted and require decryption. In both instances the addressee obtains “unreadable” content. In both instances, however, it is the sender who intentionally dispatched the letter in an “unreadable” form, most likely to preserve the confidentiality of its contents. The contents were not rendered unreadable in transit or altered by the addressee’s system. With electronic communications, illegibility may be the result of processing by one of the intermediating systems, most probably the addressee’s client. It cannot be assumed that proper dispatch and successful transmission result in receipt enabling communication.

The problem of illegible acceptances must be acknowledged but not over-exaggerated. Garbled, altered or incomplete email messages occur frequently enough to warrant legal attention and are statistically more likely to occur than in the case of traditional communications. The mere fact that there is no single case on “garbled acceptances” speaks for itself.\footnote{Chissick & Kelman pp 76, 81}

The addressee’s inability to process messages originating from the sender’s system raises two issues: is there receipt if a message cannot be read (i.e. does not enable communication) and are senders obligated to ensure that messages are readable (i.e. do they bear the risk of illegibility)? There are two possible approaches.

First, it is commonly understood that if receipt fails without the fault of the addressee, there is no contract. As in the case of traditional communications, senders should not bear the risk of the proper functioning of the addressee’s terminating devices, in this case - the mail-server and/or mail-client. The “ability to process” cannot, however, be subsumed under the category of “proper functioning” as there is nothing improper about the addressee’s system and the inability to read a message is most likely the result of incompatibilities between mail-client software, not bad maintenance. If both parties use popular systems, neither party is at fault. As it is impossible to fairly allocate the risk of illegibility, it is safest to assume that there is no receipt and therefore no contract. Accordingly, as long as there are differences in email applications, on-line transactions will increase the number of instances where no contract was formed due to the fact that the addressee was not at fault. At the same time, recipients of

\footnote{In Henkel v Pope [1870] 23 LT 419, the offeror sent the offeree a telegraphic message offering to buy three rifles, the word “three” was transcribed as “the.” The offeror was held liable to purchase fifty rifles.}
illegible messages should be obliged to immediately notify the sender about such occurrence to enable them to re-send the message.

Second, it is possible to adopt an "orthodox" approach and regard receipt as more than a mechanical fact, such as the arrival at a specific machine. Consequently, it could be claimed that senders must ensure that messages are readable. While this approach is consistent with the classic theory of the meeting of minds and the requirement of communication, it also implies that the sender's risk extends to the moment the recipient can read the message. As a result, senders would bear the risks of the message's retrieval from the addressee's mail-server, the risk of intermediary storage as well as the risks inherent in the processing and reproduction by the addressee's mail-client. Senders would bear risks of events over which they do not have any control and which they cannot predict. To mitigate those risks, they would be forced to provide messages in multiple formats or inquire about the characteristics of the addressee's system prior to the dispatch of the email containing acceptance. This would, however, require a relatively high level of IT literacy on both sides of the transaction and possibly the installation of additional email applications to provide for multiple possibilities.

Alternatively, all emails could be sent in plain text. Although only the latter possibility guarantees universal legibility, it seems unrealistic as most email relies on the enhanced formatting capabilities of HTML. It is just as unrealistic to require that everybody exchanged email in plaintext, as it is to require that everybody used the latest versions of an email application, which supports multiple formats and message content encodings. Requiring that senders ensure legibility would not only extend their risk beyond those encountered in traditional communications but have far-reaching implications for the general usage of email in on-line contracting.

The risk of illegibility becomes easier to apportion when one party uses an outdated, proprietary or uncommon email application. While it remains difficult to speak of fault, at least the problem becomes attributable to one of the parties. In practice, courts will face difficult situations with the answer to the question whether there was receipt hinging on a technicality. Legal analysis will include an examination of email applications used by the parties.

**Deemed Receipt**

[7.13] The previous sections focused on the increased risk of failed receipt and the risk of illegibility. This section discusses the addressee's right to reject a message and preclude receipt. A situation rather uncommon in traditional communications.
Generally, if failed receipt is not the addressee’s fault there is no contract. If failed receipt is attributable to the addressee, for example, due to bad business practice or failure to maintain the terminating device, the addressee is estopped from denying receipt. A contract is formed. Open electronic networks create a number of situations where receipt fails due to reasons attributable to the addressee but the latter cannot be estopped from denying receipt. The addressee may reject a message, such rejection may, however, be justified or reasonable. Justified restrictions placed on incoming communications must be distinguished from bad maintenance, such as failure to empty one’s mailbox or update the email application.

While the offeror’s “right to reject” a message containing an acceptance may appear incomprehensible at first, it can be explained on the basis of the growing security concerns created by viruses, trojan horses, worms and unsolicited commercial email, otherwise known of spam. Individually and collectively, these phenomena pose a threat to any resource or application hosted on mail-servers and mail-clients, or to the network as a whole. It must be assumed that any person connected to the Internet has the right - and sometimes a legal obligation - to protect his or her network resources from the above threats by appropriate technical measures.

Protective measures, such as spam filters, firewalls and anti-virus software, operate on various points in the network. For example, anti-virus software and spam filters may be implemented on servers or on client machines. The individual settings of these methods depend on the security policy of the addressee. Depending on the type and configuration of a given measure, messages may be precluded from entering the mail-server, the mail-client or the network. There is always a risk of so-called false positives - the rejection of messages that carry legitimate content. Security measures are justified but create the risk that they will occasionally “filter out” an acceptance. Who bears the risk of rejected acceptances?

In deciding whether the rejection of a particular message is permitted, it must be considered whether the security measures are reasonable in light of the resources being protected. As a security policy that appears conservative and restrictive on one day, may turn

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44 Entores Ltd v Miles Far East Corporation [1955] 2 QB 327 at 333 by Denning LJ
45 Tenax Steamship Co Ltd v Owners of the Motor Vessel 'Brimnes' (The Brimnes) (1974) 3 All ER 88 at 113 per Megaw LJ; Car and Universal Finance Co Ltd v Caldwell (1965) 1 QB 525, see also: S Hill, Flogging A Dead Horse – The Postal Acceptance Rule and Email; (2001) JCL, vol 17, p. 157
46 E Zwicky, S Cooper, Building Internet Firewalls, 2nd ed, Sebastopol 2000, par 16.1.2.1, 16.1.2.2
47 C Hunt, TCP/IP Network Administration, 2nd ed, Sebastopol 1997, Chapter 12
48 Ford & Baum p 144

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out to be lenient and permissive three months later, courts will find it difficult to determine the reasonableness of the individual settings of a protective measure. If the rejection of a message is unjustified or unreasonable (i.e. if the security setting were too high), the default situation is reverted to — deemed receipt and the formation of a contract. This places the risk of unjustified or unreasonable security measures on the addressee. The latter must regularly monitor so-called “quarantined” messages, i.e. emails that have not been permitted inside his or her network or mail-server but kept in an external repository for inspection before final deletion.

The addressee’s protective measures must, however, also be taken into account by senders. The latter should make certain basic assumptions regarding the addressee’s ability to receive messages. Care must be taken not only with regards to the correct address, but also regarding the format of messages, the address the message is send from, the size of messages and the text in the subject line. Sending a 300MB file to an email account which is generally known to provide little storage is as unreasonable as putting the words “sex” or “$$$$” in the subject line or sending corporate communications from a hotmail account. In both instances, the sender faces a high likelihood of failed receipt - even the least conservative security software will reject messages containing the said words, many corporate networks reject messages dispatched from hotmail and similar services.

Where the rejection is justified or reasonable in light of the prevailing security practices, addressees cannot be estopped from denying receipt and no contract is formed. As the evaluation whether rejection was justified or reasonable occurs post factum, in many instances there will be uncertainty as to whether receipt occurred and a contract exists. Legitimate messages carrying acceptances may fall victim to conservative filter settings and firewalls. There will be no receipt unless the rejection of the message was unreasonable, such as in the case of misconfigured filter software49. Determining whether the addressee is “at fault” will require a consideration of multiple additional factors. As in the case of problems relating to legibility, a more nuanced approach must be developed.

Proposed Solutions

[7.14] The following sections examine the provisions relating to the time of formation proposed by the MLEC, the CUECIC, the ETA and the UETA. They illustrate the difficulties in providing simple rules that could be universally applied to all on-line communication scenarios.

49 Greenstein & Feinman p 276

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Historically, the MLEC constitutes the first attempt to define "dispatch" and "receipt" and is therefore analysed in greater detail. The CUCIC is discussed in parallel with the MLEC. The ETA is examined to the extent its provisions differ from those of the MLEC. UETA provides an example of a North American solution, which slightly diverges from the MLEC approach. The regulations propose default rules absent agreement.\(^{30}\)

Three observations must be made before proceeding. First, to avoid interference with existing legal principles, none of the model regulations contains substantive rules prescribing whether electronic acceptances become effective upon dispatch or upon receipt.\(^{31}\) They try to electronically replicate the tests used for dispatch and receipt in paper-based communications, namely: "the moment when the communication left the sphere of control of the sender and the moment when it entered the sphere of control of the recipient."\(^{52}\) Second, none of them acknowledges the client-server model, which constitutes the common denominator of most Internet-based communications. Third, the regulations stop short of prescribing that messages must be received in legible form and do not establish a general obligation to adequately maintain or monitor information systems.

For the sake of clarity, the terms "message," "sender" and "addressee" are used throughout the discussion although the above regulations may use different terminology.\(^{53}\)

**Defining "Dispatch"**

[7.15] The following paragraphs review the definitions of "dispatch." The main problem relates to determining whether, assuming that the PAR applies, electronic acceptances are effective upon leaving the mail-client or the mail-server. Two common threads in the discussion are the loss of control and the placement of the message in the transmission channel.

Under MLEC Art 15 (1) dispatch of a message occurs "when it enters an information system outside the control of the originator or the person who sent the message on behalf of the originator." The definition relies on three keywords: "control," "entry" and "information system." The latter is defined as "a system for generating, sending, receiving, storing or

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\(^{30}\) E.g. MLEC Art 15 (1) and Guide to Enactment para 20

\(^{31}\) See: *Carter on Contract* [03-430] on the lack of substantive rules regarding contract formation in the ETA

\(^{52}\) A/CN.9/528 para 149

\(^{53}\) E.g. MLEC Art 2 uses "data message" and "originator," UETA Section 2 (7) uses "electronic record"
otherwise processing data messages.\textsuperscript{54} It remains unclear whether "information system" refers to clients, servers or the whole network.\textsuperscript{55}

\textbf{Control}

[7.16] The MLEC associates loss of control with the start of transmission.\textsuperscript{56} Technically, transmission commences when the outgoing mail-server introduces the message into the transport environment.\textsuperscript{57} Pressing the "send" button only transfers the message from the mail-client to the mail-server.

The mail-client is on the sender's computer and therefore generally under his or her control.\textsuperscript{58} Mail-servers are generally operated by ISPs. In many instances there is a discrepancy between the loss of control and the start of transmission. If senders do not operate their own mail-server and choose an ISP to provide this service, they exercise no control over the mail-servers. In such situation, dispatching the message from the mail-client is synonymous with "loss of control."

Art 15 states that loss of control encompasses situations where senders use the services of "persons who send messages on their behalf." Consequently, the moment of dispatch depends on whether the ISP is regarded as acting on the sender's behalf or as an independent third party.

It has been suggested that this moment should depend on the actual control of the mail-server and on the possibility to retract the message.\textsuperscript{59} The ability to retract is illusive even if the mail-server is controlled by the sender\textsuperscript{60} and need not be discussed any further. The moment of dispatch raises a general question about the role of intermediaries in the communication process. Some intermediaries are chosen by the parties, others are implicit in the functioning of the communications infrastructure and form part of the transmission channel. Are ISPs like the

\textsuperscript{54} MLEC Art 2 (f)
\textsuperscript{55} See: P Knight, The Electronic Transactions Bill 1999 (2000) 6 CTLR 105 at 110
\textsuperscript{56} Guide to Enactment para 101
\textsuperscript{57} RFC 2821, Simple Mail Transfer Protocol, J Klensin, ed, (2001) p 11
\textsuperscript{58} For the sake of simplicity we disregard whether the sender uses a shared computer, e.g. in an Internet café. It is also irrelevant whether the mail-client takes the form of a browser, as in the case of web-mail, or a dedicated email application, such as Outlook.
\textsuperscript{59} P Fasciano, above at note 11 at 996; see also: Chissick & Kelman p 82
\textsuperscript{60} If a mail-server is configured to pass messages onto the Internet at short time intervals, the only way of retracting a message is to immediately disconnect the mail-server. If the sender uses an ISP, the ability to retract generally does not exist.
post or telecommunication carriers? In the case of the post, "transmission" commences when letters are placed in the mailbox, not delivered to the post office. The mailbox, however, constitutes part of the postal system. The latter, in turn, is not considered as an agent of either the sender or the addressee but an independent third party. It could be claimed that if both Internet connectivity and mail-servers were provided exclusively by Australia Post or a single government-owned telecommunications provider, such "ISP" would bear more similarity to the post and the mail-server could be regarded as part of the transmission infrastructure. Leaving the mail-client would be synonymous with the loss of control, similar to placing a letter into a mailbox.

Such view must be opposed. Mail-servers are not mailboxes and ISPs are not independent third parties. ISPs are chosen by and remain in contractual relationships with senders. ISPs provide the sender's part of the communication infrastructure. Even if senders exercise no technical control over mail-servers, they must be taken to assume the risks of their operation (i.e. uptime, configuration, frequency of dispatch). The fact that a person chose to use an ISP instead of running his or her own mail-server should not be determinative for the moment of formation. Furthermore, the latter should not depend on the particular system the message was dispatched from. After all, a sender might dispatch the acceptance from his or her home computer (where the mail-server is provided by the sender's ISP) or from an Internet café (where the mail-server is provided as part of the general service). If the moment of dispatch depended on the actual control of the mail-server, it would occur when leaving the mail-server in the first scenario and, possibly, when leaving the mail-client in the second. It would be in the sender's interest (assuming the PAR applied) not to use his or her ISP or in fact, any infrastructure owned or controlled by them.

Most importantly, the earlier the sender’s risk ceases, the sooner it is transferred to the addressee. If "dispatch" depended on the actual control of the mail-server and the ISP was not regarded as acting on the sender's behalf, the addressee would bear the risks of operation of the sender's mail-server. It appears more correct to treat the mail-client and the mail-server as one device. Although, technically, they perform two independent operations, their "common goal" is to place the message in the transport environment.

The comments to Art 15 complicate matters by stating that systems outside the sender's control may be systems of an intermediary or the addressee.\textsuperscript{61} The assertion that the intermediary's system is outside the control of the sender appears to contradict Art 15 (a) where

\textsuperscript{61} MLEC Guide to Enactment para 101
“control” relates to the sender or to persons acting on his or her behalf. The definition of “intermediary” focuses on the relationship between originators and addressees, not on relationships with intermediaries, who only receive, transmit or store messages. It could be assumed that the MLEC draws a distinction between intermediaries acting on the sender’s behalf and intermediaries forming part of the general transmission infrastructure. Art 15 and the definition of “intermediary” suggest otherwise. Consequently, the MLEC appears to differentiate the moment of dispatch depending on the actual control of the mail-server. If the PAR applied to email, the time of formation would depend on the sender’s control of the outgoing mail-server.

Entry

[7.17] The term “entry” is used to define both “dispatch” and “receipt.” “Entry” denotes the availability for processing within an information system. The “availability for processing” does not, however, relate to or imply legibility.

Dispatch does not occur if the message reaches the addressee’s system but fails to enter it either because the system does not function properly, or, “while functioning properly cannot be entered into by the data message.” An addressee is not placed under “the burdensome obligation to maintain its information system functioning at all times.” It appears questionable why the addressee’s obligations relating to system maintenance are discussed under “dispatch” not “receipt.” Assumedly, the comment relates to ‘bounce back’ notifications: dispatch does not occur if senders are informed of delivery failure. In such scenario, senders are obliged to re-send the message.

“Entry” should be consistent with “loss of control.” As the MLEC does not clarify whether control is lost when messages leave or enter outgoing mail-servers, “entry” can relate to the transport environment or to the mail-server. In the latter situation, dispatch would occur despite the message being queued on the outgoing mail-server. This would mirror the traditional

62 MLEC Guide to Enactment para 38
63 See MLEC Art 2 (e) and Art 15 as well as paras 38, 39 and 40, where the term “intermediary” points to third parties other than senders and addressees and encompasses persons dealing “on behalf of another person.”
64 MLEC Guide to Enactment para 103
65 MLEC Guide to Enactment para 103
66 MLEC Guide to Enactment para 105
67 MLEC Guide to Enactment para 104
68 MLEC Guide to Enactment para 104
principle that letters are considered sent when placed in a mailbox. Mailboxes, however, form part of the postal system and can be regarded as part of the transmission channel whereas the mail-servers are either operated by the sender, or persons acting on his or her behalf.

[7.18] The CUECIC replaces “entry” with “leave.” As the definition of “information system” is identical to the one in the MLEC, it remains unclear whether messages must leave the mail-client or the mail-server.

[7.19] The ETA presents an even more intricate approach. According to Section 13 (1) if a message “enters a single information system outside the control of the originator,” dispatch occurs when it enters that system. According to section 13 (2) if a message “enters successively two or more information systems outside the control of the originator,” dispatch occurs “when it enters the first of those information systems.”

By definition, messages travelling over the Internet pass through multiple information systems. ETA does not define “control” or explain the relationship between the successive systems. The concept of single information system does not facilitate the distinction between mail-clients and mail-servers, or between mail-servers and the transmission environment. It is irrelevant how many systems a message passes through if all those systems are beyond the sender’s control. To complicate matters, mail-servers and mail-clients can often be regarded as part of the same information system.

The Explanatory Memorandum to the Electronic Transactions Bill 1999 associates dispatch with the beginning of the electronic communication. It also states that dispatch occurs when the message “enters the originator’s Internet service provider’s system.” As a result, the ETA regards the sender’s outgoing mail-server as remaining outside his or her control and associates the commencement of transmission with dispatch from the sender’s mail-client. This solution is not only inconsistent with the technical functioning of email but also, as discussed above, implies an earlier commencement of risk for the addressee. The Explanatory Memorandum to the Electronic Transactions Bill 1999 states that the commencement of transmission with dispatch from the sender’s mail-client.

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69 CUECIC Art 10.1
70 CUECIC Art 4 (g)
71 A/89/528 para 149: The preparatory works elaborate that information systems must be distinguished from “information service providers or telecommunication carriers that might offer intermediary services or technical support infrastructure for the exchange of data messages.”
72 see below at [7.25]
73 Electronic Transactions Bill 1999, Explanatory Memorandum p 12
74 Electronic Transactions Bill 1999, Explanatory Memorandum p 12
Memorandum does not provide for the possibility that the mail-server might be under the sender’s control.

[7.20] UETA Section 15 (a) establishes that a message is sent when it:

1. is addressed properly or otherwise directed properly to an information processing system that the recipient has designated or uses for the purpose of receiving messages of the type sent and from which the recipient is able to retrieve the message;
2. is in a form capable of being processed by that system; and
3. enters an information system outside the control of the sender or of a person that sent the message on behalf of the sender or enters a region of the information processing system designated or used by the recipient, which is under the control of the recipient.

Apart from the loss of control, UETA emphasises that dispatch must be “proper.” Senders must have “specific information, which will direct the [message] to the intended recipient.” Messages must also be capable of being processed by the addressee’s system. It is in the interest of both parties to refrain from using proprietary or less popular formats. In other words, messages must be sent to the right system in the right format, thereby increasing the likelihood of receipt and legibility. Messages that cannot be processed by the addressee are not dispatched. The level of detail can be explained by the fact that the effectiveness of electronic acceptances on dispatch is more likely in the US.

UETA Section 15 (a) (3) recognizes that messages may technically never leave the information system under the sender’s control. It is unclear whether “information system” refers to a network, computer or service provider. Absent an explanation whether the term relates to a physical or logical division, the control test is difficult to apply. It can be claimed that when parties communicate on the same LAN or intranet they remain within a closed network and are therefore beyond the focus of this analysis. Similarly, popular service providers like hotmail.com can be regarded as one logical entity, one information system - despite its distributed architecture.

75 UETA Section 15, comment 2
76 UETA Section 15, comment 2; see also: S Williston above at 11 para 6:35
77 UETA Section 15, comment 2
79 see definition of “information system” in UETA Section 2
Defining “Receipt”

[7.21] The following sections examine the definitions of “receipt,” which determines the moment of contract formation whenever electronic acceptances are subsumed under the principle. The length of time messages may spend on the addressee’s incoming mail-server can be considerably longer than the length of time messages generally spend on the sender’s outgoing mail-servers. The implications of the definition for the exact moment of formation are therefore wider reaching than in the case of “dispatch.”

According to MLEC Art. 15 (2), “receipt” occurs

(a) if the addressee has designated an information system for the purpose of receiving messages, receipt occurs:

(i) when the message enters the designated information system; or

(ii) if the message is sent to an information system of the addressee that is not the designated information system, when the data message is retrieved by the addressee;

(b) if the addressee has not designated an information system, receipt occurs when the message enters an information system of the addressee.

The provision raises a number of interrelated problems. The terms “entry” and “retrieval” cannot be understood without narrowing down the definition of “information system.” Further complexity is added by the term “designation.”

Information System

[7.22] The moment of receipt depends on whether a message is sent to a designated or non-designated information system. The scope of the term is unclear. A broad meaning implies an early cessation of the risks borne by the sender. For example, if “information system” encompasses the whole network, entry occurs when a message enters the router or gateway, or any first point that is considered as belonging to the network.80 The sender would not bear the risks of any occurrences within the network, including protective measures placed before the mail-server. A narrower meaning exposes the sender to the risks occurring before the message arrives at a particular point within the network. The existence of a contract or the moment of its formation, may hinge on the definition of “information system.” The MLEC is inconclusive -

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80 The choice of computer network device would also depend on which layer of the TCP/IP protocol is examined.

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"information system" can include a communications network, an electronic mailbox or even a tele-copier.\textsuperscript{81}

\textit{Entry and retrieval}

[7.23] In the case of designated information systems receipt occurs upon entry. It is unclear which part of the system must be "entered." Messages pass through and enter a number of network elements before becoming available to the addressee. There are many possible points of entry that could be regarded as decisive for the time of formation. Depending on the definition of "information system," it could be mail-servers, mail-clients, firewalls, proxy servers and routers.

Absent designation, receipt occurs on retrieval. What element of the information system does "retrieval" point to? As described earlier,\textsuperscript{82} messages are generally delivered to incoming mail-servers, not mail-clients. Mail-clients retrieve messages via POP3 or access them through IMAP. Assuming that the MLEC does not differentiate between protocols, any method to view the message is included in the term "retrieval." Technically, however, messages may not be transferred onto the mail-client and remain on the mail-server. Consequently, the relevant point seems to be the mail-server, as this is where messages can be retrieved from.

It can be assumed that "entry" also relates to the mail-server. Such interpretation is dictated by the fact that this is the earliest moment when a message becomes available for retrieval and therefore the earliest point in time when the sender's risk could cease. Sending messages to non-designated systems extends the sender's risk: receipt occurs only when the message is actually retrieved. The delay between "entry" and "retrieval" may be substantial. Messages may remain on the mail-server for extended periods of time before being retrieved. The provision is open to manipulations as addressees may know about the message and intentionally fail to retrieve it.

With non-designated systems, senders bear the risks inherent in the delay between entry and retrieval, between the moment a message becomes available (i.e. retrievable) and the moment it is retrieved. During this period, the offer may still be withdrawn even if the acceptance is already on the mail-server, technically available to be retrieved and read. Even if the mail-server crashes due to a fault of the addressee (for example, due to bad maintenance), there is no receipt. This would constitute an alteration of the traditional principles, where the

\textsuperscript{81} See definition in MLEC Art 2 (f) and Guide to Enactment para 40
\textsuperscript{82} See Chapter 2 [2.6], Chapter 6 [6.19]
malfuctioning of the terminating device due to the fault of the addressee does not preclude receipt. This argument could be countered with the observation that the mail-server need not be regarded as the terminating device but part of the transmission channel. In sum, the lack of clarity with regards to what constitutes designation is exacerbated by the lack of clarity regarding whether it is the addressee’s client or mail-server that constitutes the terminating device.

[7.24] CUECIC abandons the distinction between “entry” and “retrieval.” According to Art 10.2, receipt occurs when messages become “capable of being retrieved by the addressee at an electronic address designated by the addressee.” Receipt at a non-designated address occurs when messages become “capable of being retrieved by the addressee at that address and the addressee becomes aware that the message has been sent to that address.” The provision raises two sets of problems.

First, in non-designated addresses, the objective component (availability) is supplemented by a subjective element (awareness). It is unclear why awareness relates to the message’s dispatch, not receipt. It can be assumed that once the addressee knows that a message has been sent, he or she must monitor the relevant system for incoming communications – even if such system is not designated.

Second, “awareness” raises problems of proof. “Awareness” was considered more “equitable than holding the addressee bound by a message sent to an information system that the addressee could not reasonably expect would be used in the context of its dealings with the originator or for the purpose for which the data message had been sent.” At the same time it was admitted that “awareness” gives power to the addressee to effect receipt and places a heavy evidential burden on senders. Considering the vagueness of “designation,” in many instances receipt could exclusively depend on “awareness.” This would constitute an alteration of the traditional principles which regard “receipt” as an objective event, unrelated to any subjective occurrences on the addressee’s side.

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83 A/60/17 para 78
84 A/60/17 para 82 During the preparatory works it was admitted that the provision created legal uncertainty as “awareness” is a subjective circumstance not easily proven by the sender. It was held, however, that awareness “could be proven by other objective evidence”.
85 A/CN.9/528 para 143
86 A/CN.9/528 para 144
Third, messages are presumed to be capable of being retrieved (i.e. available) when they reach the addressee’s electronic address.\(^{87}\) Messages need not enter. The CUECIC disregards the fact that, technically, messages may reach the system, be rejected by a protective measure and not become retrievable. Receipt would occur despite such rejection,\(^{88}\) even if the latter was justified.\(^{89}\)

Designation

[7.25] The implications of "designation" are far-reaching. The delay between entry and retrieval may be considerable and defer the moment of contract formation - even if the communication method is instantaneous. Absent a general obligation to monitor information systems, new messages may remain unretrieved for extended periods. In non-designated system, receipt depends exclusively on the addressee’s discretion or awareness.

Despite its significance the MLEC does not define "designation."\(^{90}\) Designation is not synonymous with ownership or control; the designated system need not be a system of the addressee.\(^{91}\) The term covers a system specifically designated, for example, "where an offer expressly specifies the address to which acceptance should be sent". The comments state that the mere indication of an email or telecopy address on a letterhead does not constitute designation.\(^{92}\) One must ask: what does? Contract formation may be precluded or delayed on the basis that an acceptance was sent to a non-designated system. The problem brings to mind "alternative acceptances" – an "acceptance" communicated via a method other than that requested may not be regarded as acceptance.\(^{93}\) In Chapter 5, the issue concerned the offeree choosing the wrong method of communicating acceptance, in this discussion, the issue concerns choosing the wrong address or information system.

While the CUECIC uses "designation" in relation to "electronic address," not "information system," the MLEC appears to use these terms interchangeably.\(^{94}\) The relationship

\(^{87}\) CUECIC Art 10, see also CISG Art 18
\(^{88}\) A/CN.9/528 para 80, concerns were expressed over technologies restricting receipt.
\(^{89}\) For general discussion see: Ch H Marin, The UNCITRAL Electronic Contracts Convention: Will it be Used or Avoided? (2005) 17 Pace Int’l L Rev 261 at 294
\(^{90}\) It was stated difficulties in applying Section 15 cannot be overcome by defining "designated information system. A/CN.9/528 para 148
\(^{91}\) MLEC Guide to Enactment para 102
\(^{92}\) MLEC Guide to Enactment para 103
\(^{93}\) Chapter 5 [5.20][5.21]
\(^{94}\) See also: Carter on Contract [03-430], where it is assumed that the designation of an information system is synonymous with the provision of an email address.
between "information system" and "electronic address" must be briefly examined. Electronic addresses generally refer to accounts on mail-servers. One mail-server can host multiple accounts. Multiple mail-servers may be part of the same information system. This can be explained by looking at the structure of an email address. The latter consists of a character string identifying the individual account, the symbol @ and the name of the mail-server that should receive the message. The name of the mail-server is specific to the domain in which it is located, i.e. the network to which the server belongs. The second part of an email address could be regarded as pointing to an information system, whereas the first part as indicting an individual account.

Under the MLEC it is unclear whether "designation" refers to the whole information system (i.e. all machines in the domain) or to the individual accounts. Due to the breadth of the term "information system," designation could imply that all email accounts hosted on a mail-server being part of the domain are designated. Taken to the extreme, the MLEC solution would permit acceptances to be sent to any account belonging to the information system or domain. The problem is solved in the CUECIC, which limits "designation" to individual accounts.

These problems do not arise in postal communications: there is usually one address per entity and a direct correlation between "address" and "mailbox." Unquestionably, in larger companies each department or branch may have its own, physical mailbox. There is no division, however, into designated and non-designated mailboxes. Whatever address is published or made known as the address of a company or person, all letters sent to it are effective - unless specifically indicated otherwise in the offer. Distribution to the respective persons and departments is handled internally. "Designation" obliges senders to investigate the correct address without imposing an equivalent obligation on addressees to clearly designate their systems. If a system, address or device is held out to receive communications, its designation should be implied - regardless of whether such system, address or device is regularly checked for new messages. This would mirror the traditional rules of receipt. Under the regime created by the MLEC and the CUECIC receipt may not occur even if an information system held out – as long as it is not expressly designated.

While addressees should not be expected to monitor all of their information systems or electronic accounts, they should monitor those systems that are being held out, such as by

\[95\] Brookshear pp 141 -142
\[96\] A/CN.9/528, para 145

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providing an email address on a website or business card.\textsuperscript{97} If addresses of particular information systems or accounts are disseminated or made public, addressees should not be permitted to claim that such systems or accounts are not designated. How does designation occur absent a specific provision in the offer or prior communications, if not by providing an address or number? While messages of a particular business nature should not be addressed to information systems that senders know or ought to have known are not used for messages of such nature,\textsuperscript{98} it appears questionable whether the development of special addressing rules facilitates on-line contracting.

[7.26] According to UETA Section 15 (b) a message is received when:

1. it enters the information processing system that the recipient has designated or uses for the purpose of receiving messages of the type sent and from which the recipient is able to retrieve the message; and
2. it is in a form capable of being processed by that system.

Associating “receipt” with “entry” precludes recipients from “leaving messages with a server or other service in order to avoid receipt.”\textsuperscript{99} Receipt is synonymous with availability for retrieval and does not depend on the addressee’s awareness.\textsuperscript{100} Receipt is precluded, however, if a message is sent to an address that is neither designated nor used for a given purpose. UETA leaves open the question whether receipt occurs upon the addressee’s actual knowledge of the message. \textsuperscript{101} It does, however, specify that the message must be “processable” – short of prescribing legibility, it requires that senders take into account the characteristics of the addressee’s mail-client.

Most importantly, UETA introduces \textit{de facto} designation. In first time transactions between strangers establishing the “designated” or “used” system is difficult. Acceptances occur in response to offers and it could be assumed that the offer or any previous correspondence may provide an indication of which address is to be used. The moment of receipt will largely depend on the source from which a given address was obtained.

\textsuperscript{97} See: D Giles, \textit{You’ve Got Mail...or Have You?} (2000) 3 Internet Law Bulletin 12 at 14, who suggests that to avoid the consequences of designation people may use disclosures like “nothing in this email constitutes designation for the purposes of....”

\textsuperscript{98} A/CH.9/528, para 145

\textsuperscript{99} UETA Section 15 (b) comment 3

\textsuperscript{100} UETA Section 15 (e) comment 5

\textsuperscript{101} UETA Section 15 comment 3
[7.27] The ETA Section 13 (3) states that in the case of designated information systems, receipt occurs upon entry. If no system was designated, receipt occurs when the message comes to the addressee’s attention.\textsuperscript{102} The Explanatory Memorandum presumes that designated systems are regularly checked for messages.\textsuperscript{103} Absent designation, however, receipt is tied exclusively to a subjective event.\textsuperscript{104} It is unclear whether “coming to the attention” requires knowledge of the message’s existence or knowledge of its contents.\textsuperscript{105} “Existence” does not imply that the message can be retrieved or read and could be limited to a general awareness that the message is available on the mail-server. “Contents” assumes that the message can be retrieved and displayed.

**Web-based interactions and instant messengers**

[7.78] Problems of defining the exact moment of contract formation are less prominent in the case of Instant messengers and websites. As described in the previous chapter with regards to the effectiveness of electronic acceptances, both web-based interactions and dealings via instant messengers occur “as if” face-to-face. Consequently, their effectiveness is tied to receipt. It can also be claimed that in face-to-face dealings dispatch is concurrent with receipt therefore the division is not justified. Moreover, both in the case of web-based interactions and instant messengers, it could be claimed that the parties exchange messages within the same system. This approach is reflected in CUECIC Art 10.1. The latter provides that if the message has not left the information system under the control of the originator, dispatch occurs when the message is received.\textsuperscript{106} This provision applies to situations “such as the posting of information on a website.”\textsuperscript{107} Although in the case of web-based interactions effectiveness would occur upon receipt, the “receipt” provisions of any of the model regulations to not readily fit the mechanics of downloading websites. This process involves the addressee requesting websites from web-server, which are made available by the sender. Under the MLEC, ETA or the UETA a website is received when it enters the addressee information system, under the CUECIC – when it is capable of being retrieved. Despite such differences in wording, the only common-sense interpretation is that websites are “received” when they are displayed to the addressee. Problems of designation or retrieval do not occur as it is always the addressee who requests (i.e. retrieves) websites from web-servers. Most importantly, the definition of “receipt” is simplified as there is

\textsuperscript{102} UETA Section 13 (3) ETA

\textsuperscript{103} Electronic Transactions Bill 1999, Explanatory Memorandum p 12

\textsuperscript{104} Electronic Transactions Bill 1999, Explanatory Memorandum p 12

\textsuperscript{105} Wilmot, Christensen & Butler [3.9.4]

\textsuperscript{106} CUECIC Art 10 par 1

only one client (the browser) and one server (the web-server). The addressee retrieves messages directly from the sender – not from its own server.

A similar, common-sense approach must be adopted with regards to instant messengers. As indicated, some instant messengers involve the intermediation of a server throughout the communication process; in others, the server "drops out" after the initial connection is established and parties communicate on a peer-to-peer basis. Receipt occurs when both parties can see the message on the screen. Due to the lack of one standardized instant messaging platform, it is impossible to discuss all possible permutations. In both instant messengers and web-based interactions there is virtually no delay between dispatch and receipt, furthermore, it is generally impossible to "split up" dispatch or receipt into a process involving delays between its respective stages. The user requests a website from a web-server and downloads it onto his or her client, a sender types an instant message which immediately becomes visible to both parties of the communication process.

Conclusion

[7.29] The difficulties in determining the time of formation of contracts formed via email relate primarily to the delays occurring in the initial and final stages of the communication process, between the sender’s originating mail-client and the outgoing mail-server and - most importantly - between the addressee’s incoming mail-server and the mail-client. The client-server model of communications renders it difficult to apply principles, which developed around postal communications.

Attempts to define "dispatch" and "receipt" also shed new light on the concept of instantaneousness. Email can only be described as instantaneous if it is the mail-server that is regarded as the point of dispatch and receipt. Model laws, however, favour a principle based on the actual control of the communication infrastructure. Their verbatim reading implies that it is the mail-client that must be taken into account when determining the moment of dispatch. At the same time, "receipt" is associated with "availability," which in turn points to the addressee’s mail-server. As a result, the mail-server is separated from the mail-client in the case of dispatch but treated as one device for the purposes of receipt: dispatch occurs when a message leaves the mail-client but is received when it reaches, or enters, the mail-server.

The role of ISPs remains unclear. Attempting to map paper-based principles onto the on-line environment, model laws seem to treat ISPs like the post, i.e. like part of the
transmission channel. It is forgotten that – unlike the post – the sender has a choice whether to run his or her own mail-server. The sender has also a choice in the selection of ISPs. It remains unclear whether the mail-server should be regarded as part of the transmission channel or as a terminating or originating device. A common-sense and technically correct approach would treat mail-clients and mail-servers as one device, i.e. disregard message transfers between mail-clients and mail-servers. The transmission of the message would commence only after it left the mail-server.

Client-server model aside, additional problems arise from the heterogeneity of the networked environments and possible incompatibilities between the client applications of the transacting parties. Two factors which are often overlooked by legal literature. The definition of “receipt” raises issues pertaining to the legibility of messages and the addressee’s right to reject due to security concerns. Model regulations introduce additional complications by failing to narrow the scope of the term “information system,” associating receipt with “designation” and introducing subjective elements into the discussion, such as “awareness” of receipt.

Despite the existence of detailed provisions in the model laws, determining the time of dispatch and receipt occurs in the absence of clear rules. This adds to the uncertainties related to whether “electronic acceptances” should be effective on “dispatch” or “receipt.”
Chapter 8

The Contents of On-line Contracts

The contents of a contract depend primarily on the words used by the parties in entering into the contract.1

Introduction

[8.1] This chapter deals with the process of ascertaining the contents of contracts formed in open electronic networks. The previous two chapters focused on the time of formation and involved an analysis of how messages are transmitted across networks. This chapter shifts the focus from how messages are transmitted to how contractual intention is presented. All preceding chapters relied on the assumption that the parties’ intention remains decisive, this chapter aims at establishing what intention was manifested. The Internet-specific problems that arise in this regard can be reduced to one word: hypertext – a technology of organizing and displaying information.2

This chapter examines the implications of hypertext for the application of contract formation principles. Hypertext has never been the subject of academic debate from a contract law perspective. On-line contracts are usually discussed with regards to their electronic form and their alleged inability to meet formal requirements. Hypertext, in turn, is analysed mainly in relation to copyright, trademark infringement and unfair competition.3

As indicated in Chapter 1, this thesis distances itself from the concepts of media neutrality and functional equivalence. The provision of a functional equivalent of “writing” and the general declaration that electronic transactions are valid and enforceable do not facilitate on-line contracting and create a host of controversies. Contract formation principles implicitly

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1 Treitel p 191

2 HTML has gone through four major standards and is currently in version 4.1. Related technologies are Dynamic HTML ("DHTML") and Extensible HTML ("XHTML"), which enrich the original language with additional features, such as interactivity and dynamic content display. Technically, it would therefore be more correct to refer to all three languages. For the sake of brevity, this thesis uses HTML. It discusses additional features only where necessary. See generally: S M Schafer, Web Standards Programmer’s Reference: HTML, CSS, JavaScript, Perl, Python and PHP, 2005 Indianapolis, p 7

3 See, e.g. Nimmer & Towle para 9.03
assume a three-dimensional world of walls, doors and paper documents. It is one thing to state that intention can be manifested in any manner; it is another to evaluate such intention when it is expressed in by means of an HTML file or a “click.” It is another thing altogether to apply contract formation principles in the two-dimensional environment created by the world-wide-web. Especially if some of those principles were built around the paper-paradigm.

As in the case of contracts formed by traditional means, it may be unclear what was actually promised. The validity and enforceability of on-line contracts seems of little value if it is unclear what can be enforced. Both in the real-world and on-line it must be established, “how much of what [the parties] have said or written has been caught up into the contract.” When ascertaining the contents of on-line contracts it must not only be determined which of the statements made by the parties have contractual force, but which of the communications passing between the parties should be included in the analysis. The question turns on establishing which of the contents displayed on-screen during the formation process become part of the contract.

Again, the role of the offer and acceptance model cannot be underestimated. First, the contents of a contract often depend on the moment of formation. As indicated in Chapter 5, the offer and acceptance model enables the determination of the beginning and end of the contract formation process. Assuming that the parties have not embodied their agreement in a written document to the exclusion of any prior communications, their respective obligations derive from the statements made during this process. Subsequent conduct and words are principally irrelevant, as no terms can be introduced after acceptance. Second, as an offer must be certain and complete (i.e. capable of being accepted by a simple “yes”), establishing the existence of an offer is generally synonymous with establishing the contents of the contract. In on-line transactions the problem lies in determining what the other party consented to, what contents were encompassed by the acceptance.

The problems discussed in this chapter resemble those in Chapter 7, where the determination of the time of formation required that additional questions be answered after completing the traditional analysis. This chapter aims at ascertaining which of the contents presented on-screen constitute the “raw material” the contractual terms will emerge from. Additional questions arise before the traditional analysis can commence. As in Chapter 7, the

\(^4\) Air Great Lakes Pty Ltd v KS Easter (Holdings) Pty Ltd [1985] 2 NSWLR 309 at 337 per McHugh J A “[i]ntention to be bound is a jural act separate and distinct from the terms of [the] bargain.”


\(^6\) Treitel p 176
discussion does not occur against a background of existing literature on Internet-based contracting. Consequently, there are few arguments to counter and few sources to draw from.

The on-line contract formation process "takes place" on the computer screen. Screen displays are generally built around the concept of windows. Windows are generated by various applications resident on the user’s computer. One of those applications is a browser, which displays content retrieved from the world-wide-web ("the web"). The web constitutes an information intensive environment combining graphics, text, audio and video, streaming and animation. A website may contain the description of the contractual subject matter, the (standard) terms, obligatory disclosures as well as advertising and marketing material. The proximity and dynamic nature of these elements may create cognitive difficulties. In the case of paper it is clear where the information ends and where it begins, the association between the pages is clearly delineated, their contents are stable. Paper pages do not change depending on who looks at them and do not bombard their readers with personalised messages, moving pictures and real-time information. Similarly, shop displays do not change within the duration of the visit and customers are rarely unaware that they walked from one shop into another. In the case of websites, the difficulty of distinguishing between the respective elements is compounded by the ease of transition to other parts of the same website and to external sites.

Neither the browser menu nor messages generated by local applications need to be taken into account when ascertaining the contents of the contract. They are mentioned only to emphasize the density of information displayed on the computer screen. At the same time, despite the physical limitations of the screen, websites are unlimited geographically: their contents can originate from various HTML files hosted on multiple web-servers. Furthermore, individual HTML files are often too large to be displayed in the browser window. Users visiting websites may find it difficult to fully appreciate the informational dimensions of the web’s multilayered structure. One window can display multiple files, one screen can display multiple windows.

Although this chapter covers a wide spectrum of legal and technical issues, the point made is simple: it is not the electronic form or the alleged lack of writing on the Internet that are the source of difficulties in applying contract formation principles on-line. It is HTML and its related technologies that:

- create confusion as to the source and the contents of a statement,
- render it difficult to objectively evaluate manifestations of intention,
• prevent the direct application of those contract formation principles, which are built around the concepts of "writing."

Roadmap
[8.2] This chapter confronts some basic problems of applying contract formation principles in a hypertext environment. It provides the background for all further discussions relating to the incorporation of terms and the expression of assent. The most important technological aspects are described to present the difficulties created by HTML. The chapter proceeds to discuss how this technology affects traditional principles or the assumptions underlying their application.

The structure of this and the following chapters has been chosen with great difficulty and to many readers a different sequence may appear preferable. Following the traditional textbook order is particularly difficult as the principles of establishing of contractual contents are "scattered" over multiple chapters and cover such disparate topics as express terms, incorporation, rules of construction, formal requirements as well as the offer and acceptance model. It can also be doubted whether a "traditional" textbook sequence exists, as different books handle this topic in different ways. As a result, the "glue" that holds this chapter together is HTML and not a set of general principles of determining contractual contents. HTML is the reason this chapter needs to be written in the first place. If it was not for HTML there would be no world-wide-web and no e-commerce as we know it.

After some preliminary explanations, the chapter describes the basic principles of ascertaining the contents of a contract. It discusses the technical aspects of HTML and points to a number of practical problems created by this novel method of presenting and associating information. After formulating some questions relevant to contract law, it describes the existing legal approaches to HTML, the so-called linking cases, and some regulatory responses to the challenges created by the hypertext environment. It emphasizes the difficulties of evaluating intention in an environment where the manner a statement is manifested is often beyond the control of the person making such statement.

Next, the chapter examines the concepts of "writing" and "documents" in the on-line environment. While this thesis is about formation, not formalities, discussing the contents of on-line contracts forces an analysis whether on-line communications can be regarded as "writing." The relationship between "writing" and "document" is examined, as well as the definitions of

\footnote{Compare Carter & Harland with Cheshire, Fifoot & Furmston and Willmont, Christensen & Butler. The latter two contain separate chapters on content.}
"writing" proposed by the model laws. Does "writing," as it exists on the Internet, enable the application of those contract formation principles that presume that writing is inscribed on a tangible carrier?

The chapter concludes with a broad "impact assessment" - the identification of those principles, which are directly affected by hypertext.

This chapter focuses on web-based transactions; email and instant messengers are discussed only marginally. The legal problems related to email and instant messengers predominantly pertain to the manner messages are transmitted, whereas problems of presentation mainly concern websites. It also returns to the terminology introduced in Chapter 5, the parties are called "web-merchant" and "user."

Preliminary Considerations

[8.3] To set the stage for all subsequent discussions a number of explanations seem in place.

First, to some readers the existence of a separate chapter on the contents of on-line contracts may seem unjustified. The choice was between writing one long chapter, covering a multitude of legal and technical issues, or separating these issues at the expense of some artificiality. Only the second solution seemed to account for the fact that different aspects of the process of ascertaining contractual obligations raise different questions. Determining the contents of on-line contracts relates to the challenges created by hypertext, or the world-wide-web in general. The problems lie in the distribution of contents over multiple files and the dynamic and interactive character of some files. The challenges lie in establishing the source and scope of the statements made during the formation procedure. Despite a certain overlap, the process of incorporating terms raises separate questions, mainly relating to the concepts of "notice," "availability" and "signature."³

Second, the problems described in this chapter are not novel as the concept of referencing predates the Internet. In the real world the solutions to these problems are generally straightforward and intuitive. Not so in the on-line environment. It is always possible to devise analogies or conceive of a real-world situation that resembles an on-line phenomenon. Such analogies would, however, be stretched and artificial. Most importantly, in the real-world certain situations are highly unlikely or exceptional, whereas their occurrence in the on-line environment is the rule, not the exception. Instead of looking for on-line functional equivalents

³ See Chapter 9
of real-world concepts or devising new analogies, it is better to acknowledge the differences and focus on the practical application of contract formation principles in a world made-up of HTML files. As one author put it: "[t]here are no analogous systems in the world of brick and mortar.""9

Third, the contents of a contract emerge from the statements made during the contract formation process. Some of them become terms, others are irrelevant from a contractual perspective. The term "statement" includes any "representation of fact or opinion whether made in words or otherwise"10 and can take the form of text, audio or graphical elements capable of conveying meaning. For all practical purposes, "statement" is synonymous with "manifestation of intention." "Statement" must be, however, distinguished from "contents of the statement." If the website is regarded as a "statement," then it is logical to inquire about its contents. If the website is regarded as containing multiple statements from different sources (as is often the case), it preferable to ask what statements were made on the website and examine the contents of each respective statement. The choice between the two questions depends on what is regarded as the basic unit of analysis: the website, the webpage, the screen, the browser window or the HTML file hosted on the web-server. The problem is less prominent in the case of email or instant messengers, where information takes the form of discernible messages coming from one source. The problem re-emerges when an email or instant message contains a hyperlink. The confusion regarding the basic unit of analysis introduces a terminological difficulty: should the discussion centre on websites or webpages?

General Principles

[8.4] The following sections describe the basic rules of ascertaining the contents of a contract. As most principles remain unaffected by the on-line environment it is not necessary to recite whole portions of textbooks.

The guiding principle is that the obligations assumed by the parties derive from the statements made during formation. Alternatively, such statements may be embodied in a contractual document. Intention can be manifested in any manner and is evaluated objectively from the perspective of the addressee. Traditionally, a number of distinctions are made to structure the analysis of the contractual obligations of the parties.

9 Nimmer & Towle para 9.01
10 J D Heydon, Cross on Evidence, 7th Australian ed, Sydney 2004 [35245]
Express and Implied Terms

[8.5] Contracts consist of express and implied terms. Express terms derive from the statements made during the contract formation process or from the document(s) the parties have adopted as contractual or as evidencing their agreement. Implied terms become part of the contract by operation of law, by custom or usage or by the intention of the parties. This chapter deals with express terms as it is assumed that the principles relating to the implication of terms remain unaffected by the on-line environment. Furthermore, implied terms supplement the express terms only after the contract has been formed and it is found that the latter do not cover all relevant issues.

Terms and representations

[8.6] Not all statements made during the formation process become part of the contract. Statements may be “mere puffs,” “representations” or “terms.” The distinction depends on the intention of their maker. Only terms become part of the contract. Consequently, damages for breach of contract are only available if the given statement is a “term.” “Non-promissory” statements may create liability for negligent misrepresentation, promissory estoppel or under the Trade Practices Act 1974 (Cth) but not to an action for breach of contract.

A statement becomes a “term” if its maker must be regarded as having guaranteed its truth, whereas a “representation” is a statement of fact that induces the addressee to enter into a contract but lacks contractual intention. “Puffs” and “representations” do not give rise to contractual obligations as they are regarded as non-promissory. While “puffs” are not intended to be taken seriously, the distinction between “terms” and “representations” raises numerous difficulties. Certain factors are traditionally taken into account to facilitate this distinction, such as: the time the statement is made, its contents, the existence of a written memorandum and whether the statement has been included in the memorandum as well as the respective positions of the parties. None of these factors is by itself decisive.

11 On-line contracts may be subject to different implied terms depending on the law of the country where acceptance took place.
12 Carter on Contract [10-030]
13 JLR Davis ed, Contract: General Principles, Sydney 2006 [7.4.160]
14 Carter on Contract [10-040]
15 Carter on Contract [10-030]
16 See, e.g.: Byers v Dorotea Pty Ltd (1986) 69 ALR 715
"Terms" in the sense of "promissory statements" are distinguished from "terms" as in "standard terms," i.e. a list of express terms governing the transaction. All "standard terms" are terms (assuming valid incorporation), but not all terms are "standard terms." To add confusion, not all "terms" are strictly promissory but may serve to define or qualify the promissory terms of the contract. Such is the case with conditions precedent or definitional clauses.

Identification, Incorporation and Construction

[8.7] The determination of the contents of a contract can be divided into multiple interrelated stages: the identification, incorporation and construction of terms. Identification consists in evaluating, which statements constitute terms and which are representations. The identification of terms is closely related to incorporation, although the latter term specifically relates to various procedures of including a set of (usually) standard terms into the contract. Identification encompasses the process of analysing whether the terms (or a specific term) have been successfully incorporated. Internet-specific problems concerning incorporation are discussed in the following chapter.

Identification and incorporation precede the process of construction, the determination of the meaning of the terms. The construction of terms and the tripartite division into "conditions," "warranties" and "intermediate terms" do not relate to the process of formation and are therefore omitted from this analysis.

Identifying the words

[8.8] Intention always refers to expressed intention, "to be ascertained by the words used." As contractual intention can be manifested in any manner, contracts can be made in writing, orally, inferred from conduct or be partly in writing and partly oral. While written documents are generally not a prerequisite of validity or enforceability, they facilitate the process of ascertaining the obligations of the parties. Documents confine the scope of the writing, the words that must be taken into account when determining the terms of the contract. The identification of terms may, however, be complex even if contracts are in writing. When the

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17 See also Carter on Contract [10-020]
18 Tricontinental Corp Ltd v HDFI Ltd (1990) 21 NSWLR 689 (CA)
19 Goldsworthy Mort & Co Ltd v Carter (1914) 19 CLR 429 at 447; see also: E Peden, J W Carter, Incorporation of Terms by Signature: L'Estrange Rules! (2005) 21 JCL 1 at 9
20 Carter on Contract [09-001]
21 Treitel p 176
terms are in one or more documents, the problem lies in ascertaining which documents should be read together. It may also be difficult to establish the “contractual document,” whether it embodies the whole agreement and, if not, which additional statements must be taken into account. When the contract is in writing the so-called “parol evidence rule” precludes the admission of any external evidence to clarify the meaning of the words used in the written document. The parol evidence rule relates to the construction of terms, not their identification and need not be included in the analysis. In sum, although the embodiment of the contract in a written document may facilitate the establishment of the relevant words, there are many instances where the contents of the contract must be “pieced” together from multiple sources, such as notices, tickets, purchase orders and brochures.

The identification of the relevant words becomes more important in on-line transactions, where users cannot physically inspect the contractual subject matter. Many on-line transactions can be characterized as sales of goods “by description.” Websites describe goods by means of graphical representations and text. Contracts for the sale of goods by description contain an implied term that the goods correspond with the description. The required degree of correspondence depends on the type of contract. To establish correspondence, the relevant words must first be identified. As the parol evidence rule does not apply to the identification of the contractual subject matter, even when a contract is embodied in a written document external evidence may be brought forward to establish what the parties contracted for.

In sum, irrespective of whether a contract is made in writing or orally, the first step in ascertaining the obligations of the parties consists in identifying the words that describe such obligations. The “raw material” from which the terms will emerge may be scattered among

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22 Treitel p 191
23 Carter & Harland [515]
24 Carter on Contract [13-010]
25 Chissick & Kelman p 66; JLR Davis, above at note 13 [7.2.300]
27 D McBurnie, E Levinson, Contract: Sales of Goods over the Internet, Published as Special Report 1 of the Series E-commerce: the Implications for the Law, Sydney 2001, p 35
28 e.g. Sale of Goods Act (NSW) Section 16; Sale of Goods Act (Qld) Section 13; Trade Practices Act 1974 (Cth), Section 70.
29 Reardon Smith Line Ltd v Hansen-Tangen [1976] 1 WLR 989 at 998 per Lord Wilberforce
30 Walls v Pratt [1911] AC 394; Elder Smith Goldsbrough Mort Ltd v McBride [1976] 2 NSWLR 631; Ashington Piggeries Ltd v Christopher Hill Ltd [1972] AC 441
multiple documents. The on-line environment aggravates existing difficulties by providing an overabundance of such "raw material" and rendering it difficult to identify the relevant words.

**HTML and Hyperlinks**

[8.9] The following paragraphs describe the technology which constitutes the main source of difficulties. Its different aspects become relevant at different stages in the discussion: the interconnected character of HTML files creates problems in determining the scope and source of a statement; the dynamic and interactive character of some web-pages raises questions regarding the existence of "writing" and "documents" on-line. The need to incorporate HTML into legal analyses derives from the fact that e-commerce relies primarily on web-based transactions.

**The Technology**

[8.10] The web is a collection of interconnected HTML files hosted on thousands of web-servers. Individual web-pages are the output of HTML files, transmitted from the web-server via HTTP and rendered by web-browsers on the user's computer. The source of interconnection and the main characteristic of the web are so-called hyperlinks (or "links"), a mechanism of connecting two files or two parts of the same file. Any file placed on the web can be linked to without the need to request permission.31 HTML files generally consist of plain ASCII text that contains so-called tags, instructions how to display the contents of a file. Hyperlinks are embedded within the text of the HTML file and consist of an address of another file, usually in the form of a uniform resource locator ("URL").32 Upon activation, the hyperlink displays the contents of the file. Hyperlinks are fundamental to the operation of the web.

Hyperlinks take the form of "text, logos, buttons, banners, modules, and fixed or rotating links. The most common form of links is a highlighted word or picture that can be selected by the user and results in the immediate view of another file."33 While the convention for expressing a hyperlink is blue underlined text, links can also be hidden in the form of graphic elements. Hyperlinks can be positioned on the side, bottom or top menu-bar or

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32 S M Schafer, above at note 2 p 4
33 *Nimmer & Towle* para 9.02

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embedded within the text. There are outbound links, which connect to another page, and inbound links, which are links from a different page to the viewed page. Web-merchants control the links they place on their website, but have no control over links that connect to their website. Web-merchants also have no control over how users enter their website: a user can type in the URL in the browser window, or access it from another page, via a hyperlink. In the second scenario, users may bypass the homepage and access the site via a so-called deep link.34

Hyperlinks enable a seamless transition from one page to another.35 The new page may be displayed in the same window and replace the web-page that contained the link, or open in a separate window, retaining the original page. Another type are frames, which divide the browser window into multiple, independently scrollable areas with content from different sources.36 The third type are inline images that enable graphics to be displayed in the same window even though they originate from a different page. In the case of frames and inlined images, content from different sources appears on the same webpage. In both instances the URL is that of the original page, not that of the page containing the foreign content.37 Only an inspection of the HTML code can reveal the different source of the content.

The challenges created by hypertext relate to the discrepancies between how contractual intention is manifested on the client- and on the server-side the as well as to the distribution of contractual contents over multiple HTML files. The following sections examine these two sets of problems. The impact of hypertext on the existence of “writing” and “documents” is discussed separately.

Objective evaluation of Intention

[8.11] Intention is evaluated objectively from the perspective of the addresssee. This fundamental rule assumes that what the maker of the statement says or writes is what the addressee hears or reads. The person manifesting intention can ensure that the expressed

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intention mirrors the person's actual intention and prevent any misunderstandings by appropriately choosing the words or editing the contents of a written statement. This simple assumption cannot be made when manifestations of intention take the form of web-pages. The problems presented in this paragraph resemble those discussed in Chapter 7, where the contents of an email may not be displayed or be displayed differently due to incompatibilities between the email applications of the contracting parties. The main difference to the Chapter 7 scenarios lies in the fact that the contents viewed by the user are not necessarily illegible or garbled, but presented differently than intended. In both instances, the content sent differs from the content received. This is caused by the fact that electronic communications are not just transmitted but also processed. Such processing usually occurs on the side of the addressee. Chapter 3 mentioned that web-merchants deploying electronic agents are liable for all output generated by such agents, even if such output is the result of an incorrect operation. In sum, the web-merchant is liable for whatever contents are displayed on his or her website. The problem lies in the fact that web-merchants generally cannot control how websites are displayed to the users.39

Generally, the author controls the layout and contents of the document, the shop owner controls the display of the goods, the speaker tailors the language and the tone of his or her voice to the needs of the addressee. Not so in the web environment. Setting up a website consists in placing an HTML file on a web-server. HTML files contain text that represents the content of a document and instructions that specify a document's structure. The manner the content is presented (and sometimes whether it is presented at all) depends on how a specific browser interprets these instructions. Each browser displays HTML files differently. Not every feature that works well in Internet Explorer will render satisfactorily in Mozilla's Firefox. Ensuring a consistent look on the client-side is one of the great challenges of developing websites.43 Browsers are available in many versions and for many different operating systems.

38 See Chapter 7 [7.12]
39 "...your page is at the mercy of the software and hardware configuration of each individual user. A page that looks great on you machine may look radically different, or perhaps even ghastly, when viewed on another user's setup. This is partly due to the browser's functionality and the individual user's preferences (font size, colors, etc.) but the display device itself also plays a large part in the success of the page's design." J Niederst, Web Design in a Nutshell, 2nd ed., safari online version, part 1, p 1
40 Additional requirements are the registration of a domain name, which serves as an address pointing to the specific HTML file(s).
41 Deitel, Deitel & Goldberg p 83
43 Deitel, Deitel & Goldberg p 14

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Each new version adds features that increase cross-platform compatibility problems. In sum, while the HTML file hosted on the web-server remains the same, every user accessing such file may see something different.\textsuperscript{44} No realistic real-world analogy comes to mind.

To complicate matters further, websites may also display unsolicited third party content.\textsuperscript{45} While intrusive advertising techniques in the form of pop-up windows are unlikely to create confusion as to the source of the displayed content, they interfere with the flow of information and may obscure legal notices or disclaimers.\textsuperscript{46} Neither the owner of a website nor the user control the appearance of such adds, although technically they are generated by software on the user's side. Even if a website is carefully designed to display in a particular way, users may not see what the web-merchant intended them to see.

**Source and Scope of Statements**

[8.12] Apart from difficulties in retaining control of how a statement is presented to the addressee, hyperlinks create confusion as to the scope and the source of the statement. Not everything said and done during the contract formation process becomes a term; not everything printed in a mail-order catalogue or prospectus becomes part of the contract. In the latter two instances, it is clear where the document begins and where it ends, i.e. which contents must be taken into account when commencing the analysis. It is also clear who makes the statement. In on-line transactions it is difficult to establish which contents should be analysed in the first place. In fact, it may become difficult to state what the contents of a given website are.

Does the content behind every link need to be taken into account when evaluating the intention of the web-merchant? Are web-merchants responsible for the contents of the websites they link to? If an email contains a link to the homepage of a website, should the content behind the link be analysed as if it was displayed inside the email? If so, is it also necessary to examine the content behind the links contained on the website? In sum: when file A contains a hyperlink

\textsuperscript{44} The discussion of this problem continues in Chapter 9
\textsuperscript{45} See generally: J E C Yung, *Virtual Spaces Formed by Literary Works: Should Copyright or Property Rights (or Neither) Protect the Functional Integrity and Display of a Web Site?* (2004) 99 Nw U L Rev 495
\textsuperscript{46} *Washingtonpost.newweek Interactive Co v Gator Corp* 2002 WL 31356645 (ED Va July 16, 2002) (No Civ A02-909-A), where on-line advertiser, The Gator Corporation, was enjoined from "[c]ausing its pop-up advertisements to be displayed on any Web site owned by or affiliated with the Plaintiffs" and from "[a]ltering or modifying, or causing any other entity to alter and modify, any part of a any [sic] Web site owned or affiliated with the Plaintiffs, in any way, including its appearance or how it is displayed..."; in *U-Haul International Inc v WhenU.com Inc* 279 F Supp 2d 723 (ED Va 2002) the court ignored the negative impact pop-ups have on web-sites because WhenU prominently displayed its brand on the pop-up windows and therefore was distinguishable from the original website. See also: K M Beyatchner, *See Ya Later, Gator: Assessing Whether Placing Pop-up Advertisements on another Company's Website Violates Trademark Law* (2003) 11 J Intell Prop L 87
to file B, should they be read together? If B contains a hyperlink to C, should C also be included in the analysis?

The above problems are not the result of HTML alone, but HTML deployed in a networked environment. If multiple interconnected HTML files were placed on a CD-ROM, the number of files to be examined would be finite. In the case of the web, the number of interconnected files is virtually unlimited. This is not to say that determining the contents of an online contract requires the examination of every web-page that links to or is linked from the website in question. This is to say, however, that rules must be established as to which web-pages should be read together, i.e. how to interpret references made by means of hyperlinks. In many circumstances paper documents are read together if they expressly or impliedly refer to each other.\(^{47}\) Whether certain documents should be placed side-by-side is a matter of construction and involves in the identification of those words “which are capable of being construed as referring to another document.”\(^{48}\) The concept of “referencing” is therefore not new, but its application in an environment made of interconnected HTML files encounters difficulties due to the number of references and the sheer amount of material being referenced.\(^{49}\) A real world analogy is discerning contractual contents from various documents, where all the documents cross-refer or are physically attached to each other, with pages being continually added from unknown sources. The construction of the referring document would be rendered somewhat difficult.\(^{50}\) As further discussed below, hyperlinks are more than a simple reference.

A minimal level of perceptiveness on the side of addressees must be expected and that addressees should not regard two graphically distinct web-pages as coming from one source just because they are “separated” by a single click. At the same time, the cognitive difficulties created by web-technologies must be appreciated, especially regarding the lack of spatial distance between graphical and textual elements, the information overload and the ease of transition between files.

The following sections review how hyperlinks have been treated by courts and regulators.

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\(^{47}\) Carter & Harland [516]

\(^{48}\) Thomson v McInnes (1911) 12 CLR 562 at 569

\(^{49}\) A M Balloon, From Wax Seals to Hypertext: Electronic Signatures, Contract Formation, and a New Model for Consumer Protection in Internet Transactions (2001) 50 Emory L J 905 at 915, 932

\(^{50}\) for an illustration of the difficulties of construing references see: Riverwood International Australia Pty Ltd v McCormick [2000] FCA 889

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The Linking cases

[8.13] A number of cases have dealt with the implications of hypertext for copyright, trademark infringement and unfair competition.\textsuperscript{51} Their common thread is the difficulty in determining the relationship between two or more hyperlinked web-pages. The question "when does B become part of A" often takes the form of "when is the person who linked from A to B liable for the contents of B" or "when can a person be confused whether A and B come from the same source."\textsuperscript{52} Despite different formulations, the problem is the same.

While web-mERCHANTS cannot be held responsible for all content they link to\textsuperscript{53} and while hyperlinks only identify the location of specific content and are not the content themselves,\textsuperscript{54} some cases suggest that there may be little difference between directly posting content on a website and linking to such content.\textsuperscript{55} Technically, the content linked to does not become part of the HTML file containing the link and does not involve its inclusion into the web-page containing the link.\textsuperscript{56} Being a method of associating two files or two parts of the same file, hyperlinks by themselves do not carry meaning. Only the content of the linking document or the language of the link do.\textsuperscript{57} It must be acknowledged that although a hyperlink is only an address of the information, it "has the functional capacity to bring the content of the linked web page to the user's computer screen."\textsuperscript{58}

\textsuperscript{51} Nimmer & Towe para 9.04

\textsuperscript{52} See e.g., the first and most famous case regarding hyperlinking, \
\textit{Shetland Times v Shetland News} 1997 S L T 669 (Sess Cas 1996), where the court recognized the potential for confusion as to the source of the statement.

\textsuperscript{53} \textit{DVD Copy Control Ass'n v McLaughlin} No 786804, 2000 WL 48512 (Cal Super Ct Santa Clara Cty 2000); see also: \textit{Bernstein v JC Penny Inc} 1998 US Dist Lexis 19048 (CD Cal Sept 29, 1998)

\textsuperscript{54} E A Cavazos, Z F Miles, \textit{Copyright on the WWW: Linking and Liability} (1997) 4 Rich J L & Tech 3

\textsuperscript{55} \textit{Intelectual Reserve, Inc v Utah Lighthouse Ministry Inc} 75 F Supp 2d 1290 (D Utah 1999); \textit{Universal Studios Inc v Reimerdes} 111 F Supp 2d 294 (SDNY 2000). See also MLEC Art 5 bis ("Incorporation by Reference") and Comment 46-1, which imply that hyperlinking to information may have the same legal effect as providing the text in full in the data message.

\textsuperscript{56} \textit{Ticketmaster Corp v Tickets.com} 2000 WL 525390 (CD Cal)

\textsuperscript{57} In the words of T Berners-Lee: "[I]f one writes 'see Fred's web pages (link) which are way cool' that is clearly some kind of endorsement. If one writes 'We go into this in more detail on our sales brochure (link)' there is an implication of common authorship. If one writes 'Fred's message (link) was written out of malice and is a downright lie" one is denigrating (possibly libelously) the linked document. So the content of hypertext documents carry meaning often about the linked document, and one should be responsible about (sic) this. In fact, clarifying the status of the linked documents is often helpful to the reader." Above at note 13, p 2

\textsuperscript{58} \textit{Universal City Studios Inc v Corley}, 272 F 3d 429 (2nd Cir 2001); see also: M A Lemley, \textit{Place and Cyberspace} (2003) 91 Cal L Rev 521 at 525

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A famous case stated that hyperlinks serve as a tool of transferring users from one webpage to another, analogous to a library card index but faster and more efficient.\textsuperscript{59} Comparing a hyperlink to a simple reference fails to appreciate the cognitive difficulties of differentiating between interconnected documents. In the words of one author:

\begin{quote}
If linkages were considered in the context of traditional scholarly footnoting, a claim that reference to other materials confuses readers as to the origins of the referenced material seems absurd. Indeed, the traditional purpose of such references is to make clear the origins of the material drawn upon in the preparation of the referencing document. To be sure, in non-hypertext referencing, the time required for manual location and retrieval of the referenced material, as well as the physical space between the referencing material and the referenced material, makes clear that they are separate documents – in a hypertext environment, such temporal and physical spaces between the documents collapse. Additionally, in non-hypertext referencing, the information displayed in the reference itself differentiates referencing and referenced material, because complete reference and location information are necessary to enable the reader to locate the referenced materials. In a hypertext environment, however, the reference may be embedded behind a single word, a number or an icon, which may not convey the distinct origins of the referenced work.\textsuperscript{60}
\end{quote}

In sum, describing hyperlinks as “simple” references does not take into account the ease and speed of bringing the referred contents to the screen of the user. Hyperlinks may navigate the visitor to a completely different website, giving little or no warning that he or she has exited the first website. Users may view a picture of “an item available for sale by clicking on a graphic image of the item. That item may be for sale at the current site or at another site.”\textsuperscript{61} It may be unclear that a product is no longer displayed by the original site. The transfer can be imperceptible, especially when the contents of the second site are framed by the transferring site and the link bypasses the home-page. The ease of transition between different websites may create confusion as to whose contents are displayed on-screen. This is rarely the case in the real-world where the “transfer” from one shop to another requires physical effort and cannot pass unnoticed. Similarly, the pages of paper documents are clearly distinct and separate.

\textbf{Specific Regulatory Approaches}

\textbf{[8.14]} Numerous regulatory bodies have recognized that presenting information in a hypertext environment raises problems when, for example, providing obligatory disclosures in the

\footnotesize
\textsuperscript{59} Ticketmaster Corp v Tickets.com 2000 WL 525390 1344 (CD Cal) at 1346
\textsuperscript{60} D L. Burk, Proprietary Right in Hypertext Linkages (1998) 2 JILT at 10
\textsuperscript{61} Nimmer & Towle para 9.02

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marketing of financial products. The following sections review specific regulatory approaches to adapting paper-based requirements to the characteristics of the web. The presented solutions derive from heavily regulated fields of commerce and are therefore tilted towards consumer and investor protection. Their limited applicability notwithstanding, they illustrate how to prevent confusion as to the source of a statement. They create liability for third party content on the basis of visual associations: the scope of a statement made on a website may extend to the contents of a website being linked to.

The Envelope Theory

[8.15] The North American Securities and Exchange Commission ("SEC") stated that federal securities laws apply in the same manner to websites as to any other statements made by or attributable to an issuer. 62 While it is logical to assume that issuers are responsible for whatever statements they make, they may also be liable for statements made by third parties on the basis of the design of their websites. Hyperlinks may imply an association or adoption of the other document, so that two websites are regarded as forming part of the same document or that one incorporates the other by reference. In line with the envelope theory, documents in close proximity on the same website menu or linked to each other are considered delivered together, as if they were in the same paper envelope. 63 When a prospectus is posted on the website the envelope theory causes everything on the site to become part of that prospectus.

Similarly, hyperlinks embedded within documents to be delivered under federal securities laws, cause the linked information to be part of a document. 64 Issuers must assume responsibility for the linked information “as if it were part of the document.” 65 In contrast, inbound links to a prospectus result in both documents being delivered together but the external document does not form part of the prospectus. The SEC also provides a non-exhaustive list of factors relevant in deciding whether an issuer has adopted, i.e. is accountable, for information on a third-party website. 66

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63 SEC Interpretation p 7
64 SEC Interpretation p 4
65 SEC Interpretation p 24
66 SEC Interpretation pp 9, 10: E.g. context: what is said about the link or what is implied by the context in which it is placed; risk of confusion: information on a third-party website should be accessible only after presenting a disclaimer or intermediate screen indicating that the visitor is leaving the issuer’s website, presentation: the prominence the link may imply adoption.
Shared Electronic Space

[8.16] The Office of the Comptroller of the Currency introduced a rule designed to reduce the risk of customer confusion as to who is providing a particular product or service in those instances where banks share co-branded websites with subsidiaries, affiliates or other third parties. 67 As "access to the third party is through the bank's website, customers are likely to associate the bank with the third party."68 This is particularly important if the third party provides financial products and it is unclear whether the deposits are federally insured.

Banks sharing electronic space are required to take reasonable steps to clearly and conspicuously distinguish between products and services offered by the bank and those offered by a third-party. "Reasonable steps" depend upon the specific product and context, and include page formatting, the "look and feel" of the website and other audio or visual clues.

Links to promotional material

[8.17] The Australian Securities and Investment Commission's ("ASIC") Policy Statement 10769 deals with the preparation and distribution of electronic prospectuses. ASIC permits links from the prospectus to external documents only if no reasonable person is likely to confuse the linked document with the electronic prospectus. A paper prospectus must be a single bound document and be distinguishable from any accompanying advertising material. In the electronic environment, there is greater risk of confusion whether the information is of promotional character or part of the prospectus.70 Issuers should not link from the electronic prospectus directly to promotional material. The latter must be published in a way that a reasonable person would be unlikely to confuse it with the prospectus,71 e.g. by using separate files and including prominent statements in both documents indicating whether the information constitutes part of the prospectus. The policy statement also prohibits any form of customisation or dynamic adaptation of content: the same information must be available to all users.72

The envelope theory focuses on the delivery aspects of electronic documents, the shared electronic space theory recognizes the spatial confusion absent in real-life shops and ASIC's policy statement aims to prevent misunderstandings as to the scope of the document. They all

68 OCC Bulletin 2001-31, p 7
70 PS 107.85
71 PS 107.86
72 PS 107.70
recognize that two separate files may be treated as one due to the fact that one links to the other. Apart from providing rules of "construction" specifically adapted to hypertext, they appear to create on-line functional equivalents of doors, walls, envelopes and – paper documents. They all aim to electronically replicate the spatial confinement provided by the aforementioned real-world concepts. Such "replication" counterbalances the distributed character of the presented contents as well as the ease of transition between them. It must be clear where the statement begins and where it ends, where one web-site/web-shop is exited and where another one is entered. It must also be obvious who makes the statement.

Writing and Documents

[8.18] "Writing" and "documents" are usually discussed in the context of formal requirements. This chapter does not examine the fulfilment of formal requirements on-line, as the latter "have nothing to do with the contents of an agreement."73 "Writing" as formal requirement is distinguished from "writing" as a method of manifesting intention, or - as one commentator put it - informal writing.74

If formal requirements are left aside and if most contracts are formed without any formalities, why mention "writing" at all? The reason "writing" must be included in the discussion is that its existence implicitly underlies the application of many contract formation principles and triggers different mechanisms of construction and analysis. As an example, the parol evidence rule does not presume a formal written document but "writing" in general.75 When the contract is reduced to writing there is also a rebuttable presumption that the writing includes all its terms.76 Principles pertaining to the incorporation of terms presume the existence of tickets, documents and signatures, all of which are related to "writing." Furthermore, even if a contract is formed orally or inferred from conduct, its terms may be "in writing."77 In other words, formal requirements aside, numerous contract formation principles are associated with written manifestations of intention. Are websites, emails and instant messengers "writing"? If so, is it possible to apply the traditional contract formation principles to such "writing"?

73 Treitel p 176
74 Law of Contract para 2.246
75 State Rail Authority of New South Wales v Heath Outdoor Pty Ltd (1986) 7 NSWLR 170 at 191
76 Gillespie Bros & Co v Cheney, Eggar & Co [1896] 2 Q B 59 at 62, see also: Treitel p 193
77 Clipper Maritime Ltd v Shirlstar Container Transport Ltd (The "Anemone") [1987] 1 Lloyd's Rep 546
The existence of "writing" and "documents"

[8.19] Communications over open electronic networks are predominantly based on text. The words "I accept" can be placed in the body of an email, on a website, on a button or typed into a web-form. No distinction should be made between a statement typed by the author and a statement that was pre-made as the difference would lie solely in the input method.78 The question remains whether the text in emails, web-forms and websites constitute "writing." If so, are there documents? The answers to these questions depend on the definition of the two concepts.

General Approach

[8.20] While “writing” generally does not include notions of permanence or tangibility79 it often presupposes the existence of a document, which delineates its scope. Although an acceptance could easily be “written” with smoke in the sky, legal principles built around the concept of “writing” assume a minimal degree of durability. Accordingly, the terms “writing” and “document” are often used interchangeably, a popular expression is “written document.” Documents do not, however, consist of writing but are made of physical substances, such as paper, and are intuitively associated with tangibility.80 The definition of document has expanded to allow for technological advances and includes anything “in which, or on which” information is stored or recorded.81 As a result, the concept of “document” appears somewhat blurred. Absence of a strict legal definition notwithstanding, its main characteristic is that it contains or embodies certain content.

Analyses of “on-line writing” traditionally focus on the fleeting nature of electronic files and their imperceptibility without the intermediation of a computer.82 This chapter does not join the discussion on whether electrical impulses constitute writing. The answer to this question is simple: electronic impulses are not writing – just as ink is not synonymous with the

78 See also: Atiyah p 73
79 But see: UCC Section 1-201 (46), which defines “writing” to include “printing, typewriting or any other reduction to tangible form.”
81 Victor Chandler International Ltd v Customs and Excise Commissioners and Another [2000] 1 WLR 1296; see also: Acts Interpretation Act (CTH) 1901, Section 25, which defines “document” as (a) any paper or other material on which there is writing; ...and (c) any article or material from which sounds, images or writings are capable of being reproduced with or without the aid of any other article or device”; S Odgers, Uniform Evidence Law, 7th ed, 2006 Sydney [1.2.5060]
words written in ink.\textsuperscript{83} According to current definitions, however, the text displayed on the computer screen is.\textsuperscript{84} As long as the text is perceivable – there is writing.\textsuperscript{85} Without any analysis, the Federal Court of Australia stated that contracts formed on websites are in writing.\textsuperscript{86} In sum, the general approach is liberal: perceptible text is synonymous with writing.

\textit{Model Approach}

[8.211] A different approach is taken by model regulations. The latter generally associate “writing” with accessibility for subsequent reference.\textsuperscript{87} Questions of integrity and permanence are relegated to the provisions dealing with record retention and originals.\textsuperscript{88} As the length of such “accessibility” is not prescribed, both the HTML file on the web-server \textit{and} the webpage displayed on the screen technically constitute “writing.”\textsuperscript{89} To explain the point: once downloaded and displayed, web-pages may remain on-screen for as long as the user does not close the browser window or load another page into the same window. Electricity supply permitting, the web-page remains available.\textsuperscript{90} Downloading creates a transient copy in the computer’s RAM\textsuperscript{91} and a copy in the browser’s cache.\textsuperscript{92} Depending on whether the webpage is

\textsuperscript{83} See: Victor Chandler International Ltd v Customs and Excise Commissioners and Another [2000] 1 WLR 1296, where Chadwick LJ stated that the transmission of electronic impulses is “nothing more or less than the transmission of electronic impulses,” at 1309

\textsuperscript{84} Act 2 Interpretation Act 1901 (Cth) Section 25 states that “writing,” “includes any mode of representing and reproducing words, … in a visible form.” See also: Howley v Whipple 48 N H 487 (1869): “[i]t makes no difference whether that operator writes the offer or the acceptance … with a steel pen an inch long attached to an ordinary penholder, or whether his pen be a copper wire a thousand miles long. In either case the thought is communicated to the paper by use of the finger resting upon the pen; nor does it make any difference that in one case common record ink is used, while in the other case a more subtle fluid, known as electricity, performs the same office.”


\textsuperscript{86} eBay International AG v Creative Festival Entertainment Pty Limited [2006] FCA 1768 at 48,49

\textsuperscript{87} See MLEC Art 6; CUECIC Art 9 (2), ETA Section 9; UETA Section 7

\textsuperscript{90} Pages may also remain minimized in the browser menu or behind a tab. In both instances, although they are not directly displayed on-screen, they remain available for immediate retrieval with a single click.

\textsuperscript{91} The status of transient copies is traditionally discussed in relation to copyright infringement, see: MAI Systems Corp v Peak Computer Inc 991 F 2d 511 (9th Cir 1993).

\textsuperscript{92} For an explanation of the differences from a legal perspective see: J Band, J Marcinko, A New Perspective on Temporary Copies: The Fourth Circuit’s Opinion in Costar v Loopnet (2005) Stan Tech L Rev 1 at 3; for a technical explanation see: Deitel, Deitel & Goldberg p 669

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retained in the RAM, the cache or saved on the hard-drive of the computer, the length of such availability differs. As HTML files on the web-server are, by definition, accessible for subsequent reference, the writing requirement is met both on the client and on the server side of the transaction. Similarly, both email and instant messages are stored in at least one place on the network: email can be downloaded to the client machine or accessed on the mail-server, instant messenger applications save chats automatically or provide the option to do so.

Taking into account their text-based character as well as the fact of their inherent storage on the network, most on-line communications can be regarded as “writing.” This is the position under the model regulations. It must be remembered, however, that the primary purpose of these regulations is to enable the fulfilment of formal or regulatory requirements by on-line communications.\footnote{See generally: Electronic Transactions Bill 1999, Explanatory Memorandum, pp 22, 23}

The actual legal effect or the “usability” of the functional equivalents of “writing” for contract formation are beyond their scope.

Applicability of principles based on the existence of “writing”

\[8.22\] This overabundance of “writing” in the on-line environment is an unexpected side-effect of enabling legislation and the breadth of its general definitions, which - apart from perceivability - do not require any degree of tangibility. Due to the liberal definition of “document,” the HTML file hosted on the web-server and possibly the screen of the computer can also be regarded as “documents.” Does the HTML file, however, constitute a \textit{memorandum}, is the website a contract “evidenced in writing” or “in writing”? Does everything that appears on the computer screen raise the presumption that it is a term, just because the screen may be regarded as writing? Despite the fact that most of the text appearing on-line appears to meet the definition of “writing” and/or “document” it is questionable whether such “documents” and “writing” enable the application of those contract formation principles that are built around the original concepts. The reasons are manifold.

\textit{Intention and content}

\[8.23\] When a contract is made “in writing” or is “evidenced in writing” it has contractual effect because the parties \textit{intend} so. The parties \textit{adopt} a particular document as embodying or evidencing their agreement. The existence of “writing” as a matter of contract law must be regarded as a question of intention.\footnote{D W McLauchlan, \textit{Parol Evidence and Contract Formation} (2005) 121 LQR 9 at 11} Furthermore, “writing” is generally discussed not in relation to its form, but the information conveyed thereby.\footnote{Carter & Harland [513]} Written notes or memoranda must
contain all the terms of the contract or at least the essential terms. While the information conveyed by the writing seems more important than the writing itself, circular reasoning must be avoided: it is not the content that turns the text into writing.

The existence of writing for contract formation purposes also depends on who created that writing. To illustrate: if someone makes a video recording of two parties reaching agreement by means of writing in the sky, such recording does not constitute "writing" or a "written document" from a contract law perspective, although it meets the requirements of both definitions. Although the concepts of "writing," "document" and "record" indicate basically anything distinct form the memories of the contracting parties, it can be tentatively assumed that in most instances the term "record" is more appropriate to describe the text in emails, websites and server-logs. It indicates the occurrence of certain events without necessarily implying their legal effects. The fixation of contractual statements is a question of evidence—not a premise of their legal effect. Just because a word has been recorded and is therefore available for subsequent reference does not mean that it is "in writing."

Form and Stability

[8.24] "Writing" is traditionally associated with "document," it assumes a minimal permanence and stability of its contents. For example, the MLEC prescribes the functional equivalent of "writing" but focuses on paper-based writing and associates this equivalent with functions commonly performed by paper documents. It enables messages to "enjoy the same level of recognition as corresponding paper documents." Before the emergence of computer-based communications, the carrier of the "writing" was rarely, if ever, the subject of analysis. Even the output of electronic transmission generally took the form of paper. In the case of on-line transactions, one deals with screen-to-screen communications. This lack of a tangible carrier has implications not only for the existence of "writing" but for the information conveyed thereby and therefore its legal effect.

On-line equivalents of written documents may display different contents depending on who and when looks at them. To illustrate the point: the contents of a simple HTML file are

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90 Sinclair Scott & Co Ltd v Naughton (1929) 43 CLR 310 at 318; JLR Davis, above at note 13 [7.2.340]
91 Harvey v Edwards Dunlop v Co Ltd (1927) 39 CLR 302 at 307
92 MLEC Guide to Enactment paras 16 & 48
93 MLEC Guide to Enactment para 18
100 See J D Gregory, above at note 89 at 442; E T Laryea, Paperless Shipping Documents: An Australian Perspective (2000) 25 Tul Mar L J 255
static, each time the file is requested the same contents are downloaded.\textsuperscript{101} In the case of dynamic documents, a fresh document is created by an application run by the web-server for each request. Its contents "vary from one request to another"\textsuperscript{102} despite the fact that the URL in the browser window remains the same. As indicated in Chapter 3, websites can display the output of the operation of a complex structure of e-commerce servers and databases.\textsuperscript{103} In the case of active documents, the contents of a website are determined by scripts run on the client-side.\textsuperscript{104} The contents of some web-pages can be generated differently for each user or depend on specific variable events (e.g. time, exchange rates, stock indices). From a contract law perspective, it is irrelevant whether such "content generation" is the result of server-side or client-side scripting. The problem is also not one of integrity, which relates to the preservation of contents and protection from alteration by third parties. The problem lies in the fact that dynamic and active web-pages are \textit{designed} to change in accordance with pre-set parameters. It is pointless to speak of "accessibility for subsequent reference" if each reference returns different content.\textsuperscript{105}

The ETA also requires that "writing" be capable of retention.\textsuperscript{106} Such retention logically assumes that the content originally viewed is the content that is retained for future reference. Technically, preserving the original content may be difficult.\textsuperscript{107} Furthermore, different saving techniques preserve different contents.\textsuperscript{108} A web-page printed on Friday morning may have different contents than the same web-page printed on Friday afternoon. Even the retention of applications, which generate the contents of websites may not enable the return of the contents viewed during the formation process, as they may be generated in response to external input.

\textsuperscript{101} B A Forouzan, \textit{Data Communications and Networking}, 3\textsuperscript{rd} ed, Sydney 2004, p 740

\textsuperscript{102} B A Farouzan, above at note 101 p 745

\textsuperscript{103} See Chapter 3 [3.8]

\textsuperscript{104} for a description of how active documents are created, compiled and executed see: Farouzan above at note 101 p 745

\textsuperscript{105} e.g. in the case of AJAX (Asynchronous JavaScript and XHTML) it may even be impossible to view the previous page by pressing the "return" button. See also: C Coteanu, \textit{Cyber Consumer Law and Unfair Trading Practices}, 2005 Aldershot, p 30; note that MLEC Art 5 prohibits the discrimination of data messages on the sole ground that they are electronic and that Art 11 permits contracts to be formed by means of data messages. According to MLEC Guide to Enactment para 32, data messages are presumed, however, to have "fixed information content."

\textsuperscript{106} \textit{Explanatory Memorandum}, p 16; see also UETA Section 8 ("Provision of Information in Writing") which requires that the sender must ensure that recipient can retain the information.

\textsuperscript{107} see also: ETA Section 11 ("Production of Document"), which requires the integrity of the information contained in the document, i.e. that the information be retained unaltered and complete; no formatting changes can be made where the formatting is an important elements of the document.

\textsuperscript{108} webpages may be "bookmarked", saved as a PDF file, an HTML file or saved by means of services like "save-this" or "de.li.cio.us."

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Under the model regulations, only static web-pages meet the requirements for writing. The distinction depends exclusively on the language in which the website was coded. It must be remembered that even in case of dynamic and active content generation, the underlying HTML file on the web-server remains unchanged. Only static websites and the HTML files on the web-server meet the writing requirement as defined by the MLEC and ETA, as only in those instances the same contents remain available for subsequent reference. Even in the case of static websites, however, each subsequent reference may return different content depending on the browser used to view the website.

Last but not least, even if it is assumed that some websites are “writing”, the scope of such writing is not clear. While the legal effect of a statement depends on its contents, not on its form, the form often determines the scope of the contents without being a formal requirement. The legal effect of a statement is difficult to determine if it is unclear which word must be taken into account. It remains to be decided whether the HTML file or the web-page include the web-pages it links to. This problem practically does not occur in the real world, where “writing” is usually accompanied by a “document,” i.e. it is confined and stable. To illustrate the difficulties of applying contract formation principles to the functional equivalents of “writing” created by the MLEC and the ETA one can ask: could the parol evidence rule be applied to construe the meaning of on-line contracts? The certainty, which the parol evidence rule is supposed to provide, assumes the confinement of contractual contents by the “four corners” of the document. What are the four corners of a website? The rule cannot exist without an element that limits the writing and contains the words. Similarly, how would the concept of integration be applied? Integration presumes that the written document embodies all terms of the contract.

With the disassociation of “writing” from tangible carriers it becomes difficult to apply principles that were built on the assumption that writing is contained in a paper document. Even if some on-line communications fulfil the definitions of “writing” or “document,” such functional equivalents of “written documents” do not facilitate the determination of the contents of on-line contracts. Absent spatial confinement, it is unclear which words should be taken into account when embarking on the process of establishing the terms. The answer to the question whether websites, emails and “clicks” constitute “writing” seems largely irrelevant as even if

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110 Law of Contract para 3.4
they do, they do not enable the direct application of those contract formation principles, which
preserve tangible embodiments of writing.

**Impact Statement**

[8.25] The previous paragraph described the inability to confidently state whether on-line
communications constitute "writing." Existing approaches to hypertext demonstrate the need to
examine the wording of hypertext references, the context they are made in as well as the
interlinked contents themselves. While this may not seem like be a grand departure from
existing principles of referencing documents, it must be remembered that hyperlinks are more
than a simple reference. In some circumstances, the contents being linked to may be treated at
par with the contents containing the hyperlink.

The following paragraphs explain the modified sequence of analysis when ascertaining
the contents of on-line contracts and summarize the additional considerations to be taken into
account when distinguishing between terms and representations. The objective theory of
contract and the basic unit of analysis are also briefly mentioned.

**Modified sequence of analysis**

[8.26] There are several additional questions to be answered when ascertaining the contents of
on-line contracts. The traditional inquiry "which statements become terms?" must be preceded
with "what statements were made" or, depending on the unit of analysis adopted, "what were
the contents of these statements" as well as "which statements are attributable to the other
party?"

There is a difference between the questions: "what statements were made?" and "which
of those statements are attributable to the other party?" To illustrate the point: when a notice is
displayed at the point of sale, legal analysis normally concerns its sufficiency or reasonableness
for incorporation purposes. Its existence is not in question, neither is the fact that it was made
by the other party. In the case of web-based transactions it may not be obvious who placed the
notice as there may be confusion as to the source of the displayed information. An analogy
would be audio statements regarding extended warranty periods coming from loudspeakers in
David Jones. Customers would logically assume that all announcements are made by David
Jones and would not suspect that the loudspeakers were secretly placed in the store by Meyer,
David Jones' main competitor. Any analogy appears stretched and unlikely to occur, whereas
problems of discerning the source of a statement on-line are quite common. Logically, a party
should only be liable for the statements made by him or her during the formation process. A
party may, however, be held liable for statements made by others on the basis of a visual association created by a hyperlink.

The question “what statements were made” concerns the distributed and dynamic nature of the contents displayed within the browser window as well as the difficulties of capturing such contents. The question “what statements are attributable to the other party” concerns the seamless transition between websites, the display of third party content within the original content of the website and third-part interference, which render it difficult to determine the source of a statement.

**Terms and representations**

[8.27] The differentiation between terms and representations encounters a number of Internet-specific problems. Traditional distinguishing factors must be supplemented with additional considerations.

*First*, the proximity of the statement to the moment of formation increases the likelihood that it was intended as a term. Taking into account the more “condensed” character of the on-line transacting process, which often consists of sequences of clicks in response to the contents presented on websites, it can be assumed that an abundance of factual information designed to induce the user to click the final “I Agree” button is presented within a small space, within a short time. The existence of animo contrahendi in an information intensive environment requires a more careful analysis of the respective statements. It can be assumed that all statements are made close to the moment of contract formation.

*Second*, the position of the maker of the statement may turn it into a “term.” Evaluating the knowledge and expertise of the other party, presumes that it is possible to identify the other party (i.e. determine the source of a statement). It may not, however, be clear that a particular statement is made on a different website, by a different entity. The identity of a web-merchant may also be an important feature of the goods or services sold on the website.

*Third*, the evaluation of the content of the statement must take into account the manner of its presentation and the way it interacts with the user. Most importantly, as

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111 Dick Bentley Productions Ltd v Harold Smith (Motors) Ltd [1965] 1 WLR 623
112 Leaf v International Galleries [1950] 2 KB 86 at 89; Ellul v Oakes (1972) 3 SASR 377
114 Couchman v Hill [1947] KB 554; Hospital Products Ltd v United States Surgical Corp (1984) 156 CLR 41
indicated above, the contents of the statement may be difficult to determine due its undefined scope.

Fourth, if there is a memorandum, the fact that a statement has not been recorded speaks against its inclusion as a term.\footnote{See generally: W A Effross, The Legal Architecture of Virtual Stores: World Wide Web Sites and the Uniform Commercial Code (1997) 34 San Diego L Rev 1263} The inclusion of a statement in a written record of the contract creates a presumption that it was intended as a term.\footnote{Oscar Chess Ltd v Williams [1957] 1 WLR 370 at 376} The existence of written memoranda or, in fact, any written evidence, raises the question whether websites, and the interactions occurring thereon, can be regarded as “in writing.” Absent a clear answer, it can be assumed that this factor must be omitted from the analysis altogether. Alternatively, the analysis must start with determining whether a particular website is “in writing.”

Objective evaluation of intention

[8.28] Despite the potential discrepancies between the manifestation of intention made by the web-merchant and the manifestation presented to its addressee, it must be assumed that in accordance with the objective theory of contract the addressee’s side must prevail. Accordingly, the HTML file on the web-server is not taken into account when determining the intention of the web-merchant. Such intention is evaluated exclusively on the basis of what the addressee saw on his or her computer screen, i.e. the processed version of the HTML file. While only this approach reflects the traditional principles of contract law, its limitations must be recognized.

It must be acknowledged that web-merchants have effectively no control over the way their statements are displayed. The only way they can protect themselves from “unexpected” or “incomplete” manifestations and fully convey their contractual intention (especially with regards to obligatory disclosures) is by providing static websites specifically designed for older web-browsers. The deployment of advanced web-technologies risks the alienation of many users. Alternatively, web-merchants can provide multiple versions of the same site for different browsers. This solution is, however, only available to more affluent companies.

On one hand, only the addressee’s side is taken into account when evaluating the intention of the web-merchant and the latter must allow for the fact that not every addressee uses the most recent version of the most popular browser type. On the other hand, it must be taken into account that browser software is available for free and therefore each Internet user
could, theoretically, upgrade his or her browser and view the website the way it was designed to be viewed. Then again, users may be limited in their ability to install new browser versions in shared environments, such as within a corporate network. While web-merchants bear ultimate responsibility for the displayed contents, it must always be examined whether the user’s browser is outdated, whether a user has fallen so far behind in upgrading his or her software that the use of the specific browser version cannot be regarded as reasonable. While web-merchants cannot bear the risks of outdated or malfunctioning software at end-user level, users cannot be expected to immediately upgrade their browsers whenever a new version becomes available.

**Basic Unit of Analysis**

[8.29] Assuming that the original expression of the web-merchant is irrelevant and that the user need not examine the source code of the HTML file on the web-server, certain concessions must be made to the web-merchant. The latter cannot be held liable for *all* contents displayed on the screen. In other words, while the HTML file cannot be regarded as the basic unit of analysis of the statements made during the contract formation process, neither can the screen. The later may display information which is entirely unrelated to the visited website and may not even originate from the Internet. A desktop cluttered with multiple windows from different applications should not interfere with the evaluation of contractual intention. As in the real-world analogy of untidy desks, it is the user’s risk to lose track of the relationships between documents scattered in front of him.

Persons venturing onto the Internet must adapt their cognitive abilities to the idiosyncrasies of the web-interface. While they cannot be required to examine the source code of web-pages, they can be expected to monitor the URL appearing in the browser window, i.e. they should be aware that they are leaving a particular web-site or web-page. It remains unclear whether the basic unit of analysis should be a web-page or a web-site. A web-site is, after all nothing but a collection of web-pages appearing under a common URL. As users never see the whole web-site, only individual web-pages, they may remain unaware of the informational dimensions of the web-site. Unlike in the case of real-world shops or paper documents, the user does not know the extent of the information provided. There is also a higher risk of becoming disoriented and lost.

**Industry practices**

[8.30] In light of the persisting uncertainties regarding the existence of writing and the discrepancies between how web-pages are displayed by different browser versions and types, the market has responded with a number of adaptive mechanisms designed to overcome such. It
is relatively common for websites to contain information regarding the fact that they have been designed for a specific browser version, e.g. "optimised for viewing in IE v 6.0."

It is also increasingly popular for website terms of use to include specific disclaimers for third party content that is linked to. Such disclaimers expressly provide that the "owner" of a particular website is not liable for any content presented on websites being linked to or displayed within its contents by means of inbound linking technologies.118

Last but not least, an increasing number of websites provides "printable versions" of its contents. Such versions usually provide a stripped down version of the original web-page, without the dynamic and interactive elements. These static versions can be easily saved and printed, retaining their contents intact for subsequent reference.

The following two chapters continue the examination of the process of establishing the contents of on-line contracts.

118 see, e.g. americanexpress.com.au
Chapter 9

Incorporation of Terms

Introduction

[9.1] The central theme of this chapter is the adaptation of contract formation principles pertaining to the incorporation of terms. The existing methods of incorporation must be mapped onto an environment without tickets, counters, walls, paper and reverse sides of attached notes. This chapter assumes that it is impossible to directly apply these principles in an environment missing the very elements they were built around. It does not attempt to create their functional equivalents but focuses on using web-technologies to achieve that same purpose as traditional methods of incorporating terms.

The previous chapter dealt with the broad implications of HTML for ascertaining the source and scope of contractual statements. It focused on the additional factors to be taken into account when distinguishing between terms and representations as well as on the existence of writing and documents. Even if websites are regarded as "documents" and "writing," such functional equivalents do not facilitate the application of contract formation principles. The latter developed in a three-dimensional world, predominantly around the concept of paper. This chapter attempts to map various methods of incorporating terms onto the two-dimensional environment of websites.

The previous chapter asked what representations were made? This chapter asks whether those representations were made in a manner warranting their inclusion in the contract. It focuses on how contractual terms are presented. Most importantly, it examines how users are notified about the existence of terms in an environment that is not always obviously transactional and how terms are made available. Emphasizing the procedural aspects of determining which terms have become part of the contract, the various methods of incorporating terms are referred to as "incorporation procedures."

The incorporation of terms in on-line contracts has not been the subject of much academic debate in Australia. Despite the absence of clear guidelines, e-commerce developed
numerous "click-trough" patterns, or transacting interfaces, which can be regarded as practical implementations of the traditional principles. With all doubts concerning the validity and enforceability of on-line transactions removed, web-merchants want to contract on their terms. Accordingly, there are many practical examples of how web-merchants adapted incorporation procedures to the on-line environment. As demonstrated by recent case law, not all of those "adaptations" are successful.¹

Nowhere does the relationship between contract law and technology become as prominent as in this chapter. The incorporation of terms, and sometimes the very existence of the contract, hinges on the design of the web-interface, or – to be more precise – the contracting sequence.² Throughout the discussion it must be remembered that the subject of analysis are not lengthy negotiations where parties gradually reach agreement, be it face-to-face or by correspondence, but sequences of clicks occurring in response to dialog-boxes, pop-up windows and interactive screens. The aim of the analysis, however, is the same as in contracts formed by traditional means: ascertaining the intention of the contracting parties. What terms have been proposed by the web-merchant? What terms did the user assent to?

The starting point is the assumption that a valid and enforceable contract has been formed. The question is: what are its terms? The problem is usually approached in a post factum manner: have the terms become incorporated? Theoretically, a forward-looking question could be asked: how to incorporate terms in on-line contracts? This chapter acknowledges the need to look-backward when determining the effectiveness of any incorporation procedure and avoids sounding like "how-to" guide, but also suggests possible solutions. While these solutions must be grounded in legal principle, not technology, the latter can be put to good use to preserve or reinforce the principle. As stated by one author: the Internet can be used for good and for ill.³

The question whether terms have become incorporated is strictly related to the moment of formation. The difficulties in determining which act constituted acceptance and when it became effective must constantly be borne in mind. An acceptance can only occur in response to an offer. This leads back to the necessity to differentiate between offers and invitations to treat. Chapter 5 discussed websites in search for distinguishing factors between offers and invitations; this chapter narrows down the analysis and focuses on the manner of presenting contractual

¹ eBay International AG v Creative Festival Entertainment Pty Limited [2006] FCA 1768
² see e.g. Register.com Inc v Verio Inc 356 F3d 393 (2nd Cir 2004)
terms. This chapter analyses the web-merchant's side, especially with regards to the adequacy of notice and availability of terms, while the next chapter, on electronic assent, discusses the user's side, the "click." The next chapter asks is there a contract? It focuses more on the method of acceptance than on the contents of the offer. Each element of the contract formation process is interrelated and all separations are, by definition, artificial. Such "separations" are, however, necessary as different technologies create different problems; different sides of the transaction raise different questions.

Roadmap

[9.2] To place the discussion into context, the chapter commences with an explanation of the importance of terms in the on-line environment and continues with a note on the impact of consumer protection regulations. Next, it presents the general principles of incorporating terms, including a brief discussion of recent developments in US cases pertaining to this subject. Without attempting to present a comparative analysis of incorporation procedures, it aims to establish the extent, if any, to which guidance can be obtained from US approaches.

The chapter proceeds to describe a number of Internet-specific factors, which must be taken into account when adapting incorporation procedures to the on-line environment. The discussion centres on the intricate relationships between user dependence and technical manipulations of the web-merchant, between e-commerce business models and the limited space available to present information. It aims to present the complexity of the novel transacting environment and the need to steer clear form oversimplifications.

The chapter revisits the traditional principles in light of the Internet-specific factors discussed above. The question is not whether these principles hold true in the novel transacting environment but how to apply them. The question is also not one of constructing suitable analogies or modifying the offer and acceptance model for on-line transactions. The discussion centres on how to use web-technologies to fulfil the purposes of incorporation procedures.

The importance of terms

[9.3] Incorporation procedures can only be discussed as part of the transactional landscape of e-commerce. Four general observations must be made.

First, the importance of terms in on-line transactions must be emphasized. This may sound confusing: why should terms be more important on-line than in the real world? As indicated throughout this thesis, on-line contracting creates many uncertainties, regarding both the manner the contract is formed as well as the contractual subject matter. In the former case,
terms may provide default rules filling out the "grey areas," such as when acceptance becomes effective. This type of provisions resembles the communication rules found in EDI trading partner agreements, which prescribe the form and legal effects of the parties' interactions.

Regarding the contractual subject matter, the latter may consist in traditional goods or services or take the form of virtual goods, i.e. information. The legal status of such virtual subject matter is unclear. The same information has a different value depending on what rights are granted to the transferee. To use a popular example: the difference between a single user license and a 1000 person network license lies solely in the terms accompanying the code. The contractual subject matter is shaped by the terms of the contract. Absent default rules governing transactions in information terms gain importance by defining the rights of the parties. Furthermore, even traditional goods and services often come with a set of standard terms that co-define their value. Without going into a detailed discussion of the "contract-as-product" theory, it must be assumed that buyers have the right to know the product they are acquiring and the terms accompanying the product.

Second, on-line contracts are often subject to two sets of terms: one governing the use of the website ("terms of use"), the other - the specific transaction ("terms of transaction"). The former may contain a number of Internet-specific provisions, such as the exclusion of liability for website errors (i.e. the malfunctioning of the electronic agent deployed by the web-merchant) as well as communication rules prescribing that, for example, by staying on the site the user accepts all its terms. The terms of the transaction resemble those governing the same type of transaction in the real world, possibly with the addition of provisions regulating distance contracts. The division disappears whenever the website itself constitutes the subject matter of the contract. The communication rules contained in the terms of use may also prescribe the manner the main transaction is entered into, creating an intersection between the two sets.

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4 see Chapter 1 [1.10]
5 see generally: Nimmer & Towle para 5.02[2]
8 M J Radin, Online Standardization and the Integration of Text and Machine (2002) 70 Fordham L Rev 1125 at 1139
Third, as mass-market e-commerce leaves little room for individually negotiated transactions, most terms encountered in web-based transactions are standardized.\textsuperscript{11} Standard terms are less likely in consumer-to-consumer transactions, where parties negotiate via email. Standard terms are often discussed in relation to what conditions are unfair (content control) and what requirements standard terms must meet to become incorporated (inclusion control).\textsuperscript{12} Assuming that issues pertaining to the fairness of standard terms are not Internet-specific, this chapter focuses on the mechanics of incorporation.\textsuperscript{13} The reasons for employing standard terms remain the same, on-line and in the real-world.\textsuperscript{14} The ability to negotiate is not a prerequisite of a valid agreement, neither is the existence of actual choice. Care must be taken not to suggest that certain problems are created by the Internet. Generally, web-merchants impose their terms and limit the manner the other party can assent to them. The problem is not that standard terms cannot be negotiated but that they are encountered in an unfamiliar environment.

Fourth, historically most of the information on the Internet was available for free and without any restrictions. People generally do not expect that any terms govern the browsing of websites, not to mention that their behaviour may result in the formation of a contract.\textsuperscript{15} While most of the information remains available free of charge, the absence of payment does not mean that there is no contract. The user's consideration may consist in the permission to study his or her browsing behaviour.\textsuperscript{16} Surprisingly, incorporation procedures lie at the heart of many fraudulent on-line practices, such as spyware.\textsuperscript{17} To illustrate: users are presented with sequences of screens or pop-up windows but quickly click-through to close them, not realising that some of those pop-ups contain a provision stipulating that further progression within the site constitutes an acceptance of the terms which are provided behind a hyperlink at the bottom at the page and that – in consideration for the ability to use the website - the user agrees for the merchant to study his or her browsing behaviour. Users can also be presented with scroll-though windows containing license agreements for free software. Users click the "I agree" button

\textsuperscript{11} Nimmer & Towle para 5.03[4][b]

\textsuperscript{12} Nimmer & Towle para 5.07[2] discussing procedural and substantive unconscionability.

\textsuperscript{13} The fairness of a particular provision can impact on the effectiveness of incorporation or the enforceability of a specific provision. It may be easier to declare a particular term unincorporated than unfair or unreasonable.

\textsuperscript{14} One Internet-specific reason for using standard terms is the deployment of electronic agents. Standard terms are easier to process by a machine, see: M J Radin, Humans, Computers and Binding Commitment (2000) 75 Ind LJ 1125 at 1150; see also ProCD, Inc v Zeidenberg 86 F 3d 1447 (7th Cir 1996) at 1451

\textsuperscript{15} A Joint, Regulating the Message (2002) 20 ITLT 11.1

\textsuperscript{16} J K Winn, Contracting Spyware by Contract (2005) 20 Berkeley Tech L J 1345 at 1349, 1354

\textsuperscript{17} J M Blake, "Robust Notice" and "Informed Consent: " The Keys to Successful Spyware Legislation (2006) 7 Colum Sci & Tech L Rev 2
without realizing the existence of a provision that allows the provider to install additional software on the user’s computer and collect personal information. In both situations, users are unaware of the consequences of their actions and of the product they are acquiring. In both situations, however, it can be claimed that a contract was formed and that the terms became incorporated. After all, the objective approach requires appearances of intention. Websites can be designed to take advantage of the objective theory of contract, without actually informing the other party of the terms. One can speak of an abuse of the procedural aspects of incorporation and the objective approach to evaluating contractual intention. The minimal legal requirements have been met because, theoretically, the terms were presented and the user “clicked” in agreement. The web-merchant could always claim that had the user paid more attention to what is displayed on his or her screen, he or she would have noticed the link to the terms or the text on the pop-up window.

**Consumer aspect**

[9.4] Business-to-consumer e-commerce constitutes a large part of on-line transactions. While consumer protection regulations are not directly relevant to the principles of contract formation, it must be appreciated that they have been the fastest to respond to the changed transacting environment. Accordingly, they provide examples of protective mechanisms tailored to its idiosyncrasies. Different regulatory bodies focus on different aspects of on-line transactions. They all explicitly recognize the dangers of on-line contracting, particularly regarding its perceptive deficiencies and the information asymmetry between the parties. The OECD stresses the necessity to ensure that on-line consumers are informed about their rights and obligations, the FTC focuses on the practical aspects of presenting information in a hyperlinked environment, Australian regulations not only require that web-merchants provide the terms of the transaction, but also that such terms be clearly distinguishable from advertising material; the European Directive on E-commerce prescribes that web-merchants clearly

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19 *Guidelines for Consumer Protection in the Context of Electronic Commerce*, approved on 9 December 1999 by the OECD Council C (99)184/FINAL


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explain the steps necessary to conclude a contract, amongst others. Consequently, there is an informational and a procedural aspect to consumer protection. Consumer protection regimes may also require that web-merchants disclose specific terms, such as the minimal length of the contract, or display them in a specific manner, such as on the same screen where the contractual subject matter is presented. All regulations aim at enabling consumers to make informed choices – both regarding the contractual subject matter and the fact of entering into a contract. The distance between the parties is compensated with more and better information.

Consumer protection rules may override or supplement contract formation principles in individual circumstances. Care must be taken, however, not to assume that certain on-line procedures reflect contract law principles and construct arguments on that basis. Contract law is antecedent to consumer protection regulations and remains unchanged – irrespective of who are the parties of the transaction. At the same time, courts adopt a less liberal approach to incorporation procedures whenever the other party is a consumer thereby indirectly counterbalancing the negative effects of standardization or the unfairness of specific terms. A more liberal approach, often labelled as “facilitating” e-commerce, favours web-merchants, as it is them who impose terms on the other party. Broader policy implications of incorporation procedures are beyond the scope of this thesis.

“Distortions” by consumer protection rules notwithstanding, incorporation procedures are nothing but an application of the offer and acceptance model. Despite their inevitable overlap, contract formation principles are separate from consumer protection issues. This chapter is about adapting incorporation procedures to the on-line environment, not about consumer protection in e-commerce.

General Principles

[9.5] The adaptation of incorporation procedures to the on-line environment must commence with a discussion of basic principles. The aim is not to recite textbooks or re-open old discussions but to distil the main premises of effective incorporation. The key principle of

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22 Directive 2000/31/EC on Certain Legal Aspects of Information Services, in particular Electronic Commerce in the Internal Market, Art 10 (a); See also: Directive 97/7/EC on the Protection of Consumers in Respect of Distance Contracts, Art 4 & Art 5

23 for a detailed discussion see Nimmer & Towe paras 5.04, 5.05


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determining whether a term has been effectively incorporated is whether a positive answer would be given to the question:

*Would a reasonable person, in the position of the party who denies that the term has become incorporated, understand that the other person intends to contract exclusively on the basis that the term is part of the contract?*

In applying this principle, the courts focus on the basis on which the term is alleged to be incorporated. Just like in the case of differentiating between offers and invitations to treat, the courts have developed a number of methods of analysing the effectiveness of incorporation procedures in typical transacting scenarios. Although incorporation procedures can be roughly divided into those with a signature and those without a signature,\(^2^5\) a more detailed division is presented for analytical purposes. Accordingly, terms may become part of the contract:

(a) by signature on a contractual document;
(b) by reasonable notice;
(c) under the principles established in the ticket cases;
(d) by sufficient course of dealing; or
(e) by reference.\(^2^6\)

As this thesis examines first time transactions between strangers, arguments assuming the existence of previous dealings are excluded. In light of the relative novelty of on-line contracting it is also difficult to speak of general usages of trade or reasonable expectations. Moreover, in the predominant number of situations the question is not whether a set of terms has become part of the contract, but whether a particular term has been incorporated, such as an exclusion clause or a choice-of-law provision. Although the incorporation of terms is traditionally discussed under the heading "express terms," some procedures are more correctly referred to as incorporation by implication because the terms are not always expressly spelled out in the contractual document, if any.

**Incorporation by signature**

[9.6] If a document is signed, then "in the absence of fraud, misrepresentation or a plea of *non est factum,"*\(^2^7\) the signatory is bound, regardless whether he or she has read the document or has

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\(^{25}\) *Law of Contract* paras 3.9, 3.10

\(^{26}\) *Carter on Contract* [10-140]

\(^{27}\) *Law of Contract* para 3.9

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knowledge of the terms contained therein. A misrepresentation of the effect or the contents of the document may prevent incorporation. The most important qualification is that the document be contractual in character: "[j]ust as not all contracts are embodied in documents, so also not all documents signed at the conclusion of negotiations are contractual in character." 

The legal character of the document and therefore the effectiveness of a signature as a method of incorporation depend on the knowledge (actual or assumed) of the person being presented with the document. This knowledge usually derives from the circumstances, such as when parties interact in a commercial setting. The situation is less clear when the context is not prima facie transactional and the party being handed the document is not required to provide payment. The title of the document is not decisive. The party relying on a signed document need not bring the contractual character of such document or its terms to the attention of the signatory — unless it contains unusually onerous provisions. In principle, however, "signature" and "notice" are separate and notice is generally not required when terms become incorporated by signature. Terms may not become incorporated when a document is signed only after the parties have orally agreed on the terms or after the contract has been performed.

It is irrelevant that the signatory did not read, understand or expressly agree to the terms. From an objective perspective, the only two relevant questions are: was the document contractual and was it signed. The signature binds its maker almost absolutely. Being regarded as evidence of assent, it constitutes a representation of willingness to be bound by the contents of the document. Despite the broad understanding of the term "signature," its many functions

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28 Carter on Contract [10-150]; L'Estrange v F Graucob Ltd [1934] 2 KB 394; Parker v South Eastern Railway Co (1877) 2 CPD 416
29 Curtis v Chemical Cleaning and Dyeing Co [1951] 1 KB 805
30 Carter on Contract [10-150]; see also: Joseph Grogan v Robin Meredith Plant Hire and Triact Civil Engineering Ltd (1996) 15 Tr LR 317
31 L'Estrange v F Graucob Ltd [1934] 2 KB 394; Roe v Naylor (No1) [1917] 1 KB 712 at 716 per Lord Atkin; Toll (FGTC) Pty Ltd v Alphapharm Pty Ltd [2004] HCA 52
32 Le Mons Grand Prix Circuits Pty Ltd v Iliadis [1998] 4 VR 661
33 see: E Peden, J W Carter, Incorporation of Terms by Signature: L'Estrange Rules! (2005) 21 JCL 1 at 15
34 D J Hill & Co Pty Ltd v Walter H Wright Pty Ltd [1971] VR 749, Full C; Eggleston v Marley Engineers Pty Ltd (1979) 21 SASR 51
35 For an opposing view see: J R Spencer, Signature, Consent, and the Rule in L'Estrange v Graucob (1973) 32 CLJ 104
36 J R Spencer, above at 36 at 117; McCutcheon v MacBrayne [1964] 1 WLR 125 at 134 per Lord Devlin
37 E Peden, J W Carter, above at note 34 at 13
and possible manifestations, it must be noted that the "classic" cases relating to incorporation by signature dealt with handwritten signatures on documents that were evidently contractual.

Incorporation by notice

[9.7] Another incorporation procedure consists in giving the other party notice of the terms. Notice must be reasonable in light of the accompanying circumstances or likely to bring the terms to the other party's attention.\(^{38}\) More notice is required in the case of particularly onerous or unusual provisions.\(^{39}\) Accordingly, the degree of notice depends on the contents of the provision to be incorporated.\(^{40}\) To cite a famous statement:

*Some clauses which I have seen would need to be printed in red ink on the face of the document with a red hand pointing it before the notice could be held to be sufficient.*\(^{41}\)

The sufficiency of notice is evaluated objectively, with the reasonable addressee in mind. Individual characteristics of the addressee, such as illiteracy, are irrelevant\(^{42}\) unless the person making the notice should have known of them.\(^{43}\) Notice need only relate to the term's existence, not their contents.\(^{44}\) It is also assumed that people must know that certain contracts are generally governed by terms.\(^{45}\) Even in case of signed documents, which are not obviously contractual in character, the terms contained in the document will not be incorporated absent sufficient notice.\(^{46}\) Needless to say, notice must be given before or at the time of contract formation.\(^{47}\)

\(^{38}\) Chapelton v Barry Urban District Council [1940] 1 KB 532; Balmain New Ferry Co Ltd v Robertson (1906) 4 CLR 379;


\(^{40}\) M Clarke, *Notice of Contractual Terms* (1976) 35 CLJ 69

\(^{41}\) Spurling Ltd v Bradshaw [1956] 1 WLR 461 at 466

\(^{42}\) Thompson v London, Midland and Scottish Ry Co [1930] 1 KB 41

\(^{43}\) Geier v Kujawa Weston and Warne Bros (Transport) Ltd [1970] 1 Lloyd's Rep 364

\(^{44}\) Law of Contract para 3.13

\(^{45}\) See generally: M Clarke, above at note 40 pp 51-81; Cockerton v Naviera Aznar, SA [1960] 2 Lloyd's Rep 450

\(^{46}\) Carter on Contract [10-150]

\(^{47}\) Olley v Marlborough Court Ltd [1949] 1 KB 532

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The ticket cases

[9.8] A large body of case law has developed around so-called "ticket cases." The latter refer to situations where one party offers to contract on the terms contained in or referred to in a document given to the other party during the contract formation process. Such document may take the form of a simple ticket. The retention of the ticket indicates assent to the terms of the contract. While the ticket is usually regarded as a written offer containing or referring to contractual terms, it may also be provided in execution of an existing agreement. Its legal effect depends on the moment of delivery and the manner the party providing the ticket has structured his or her contracting procedure. As courts often engage in hair-splitting analyses regarding the exact moment the ticket was handed over, it can be assumed that the time of delivery may be decisive for successful incorporation. Tickets delivered after formation are irrelevant for the contents of the contract.

The effectiveness of incorporation also depends on whether the recipient knows or should know that there is writing on the ticket. The recipient is deemed to know that the writing refers to terms if the circumstances so indicate or if it was reasonable to assume so. Incorporation by means of tickets depends on whether there was sufficient notice that the ticket contained or referred to terms or, again, the nature of the document was obvious. In principle, a non-contractual document will not incorporate terms.

Incorporation by reference

[9.9] Space constraints often prevent the inclusion of the full text of the terms in the contractual document. The contracting parties may record "the bare essentials" of the agreement and refer to another document containing terms. Usually reference is made to the standard terms of one of

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48 Carter on Contract [10-170]
49 MacRobertson Miller Airline Services v Comm of State Taxation (WA) (1975) 133 CLR 125
51 eBay International AG v Creative Festival Entertainment Pty Limited [2006] FCA 1768
52 Thornton v Shoe Lane Parking Ltd [1971] 2 QB 163 at 169
53 Parker v South Eastern Railway Co (1877) 2 CPD 416
54 Hood v Anchor Line (Henderson Bros) Ltd [1918] AC 837; Thornton v Shoe Lane Parking Ltd [1971] 2 QB 163; see also: Aiyah p 186
55 Law of Contract para 3.15
56 Carter on Contract [10-190]
the parties or a particular industry. The party seeking to incorporate terms must specifically refer to the document containing such or to the place where it can be found. Successful incorporation may depend on the specific wording of the reference and/or the construction of the incorporating document. The courts have tolerated references to terms available in remote locations, such as references on tickets made to terms in offices. A mere reference may not, however, constitute sufficient notice.

General observations

[9.10] In attempting to distil the premises of successful incorporation a number of observations can be made:

First, despite the above divisions, incorporation procedures often combine multiple methods: tickets may contain references, references may constitute notices, notices may refer to the location where the terms can be found. "Notice" may be regarded as common to all methods, except for incorporation by signature. Even then, however, it may be required with regards to specific terms or in relation to the character of the document. The notice may constitute the term itself, such as when the relevant provisions are directly presented on the ticket or poster.

Second, the subjective knowledge of the other party (i.e. the party not seeking to include terms) is irrelevant. The other party need not know, understand or read the terms. Once the existence of terms is brought to his or her attention, the party is expected to make inquiries regarding their actual content. As their existence most likely derives from the transactional context, the minimal requirement appears to be that the other party must be aware that he or she is about to enter into a contract.

Third, some manipulations on the part of the person seeking to incorporate terms are implicitly permitted: terms may be presented in small black print on brown paper or cross-

\footnote{see, e.g. ABA Digital Signature Guidelines, par. 1.15 and comment 1.15.2 relating to the incorporation of certification practice statements}


\footnote{Hong Kong Borneo Services Co Ltd v Pilcher [1992] 2 Lloyd's Rep 593}

\footnote{Hollingworth v Southern Ferries Ltd ("The Eagle") [1977] 2 Lloyd's Rep 70}

\footnote{Hollingworth v Southern Ferries Ltd ("The Eagle") [1977] 2 Lloyd's Rep 70 at 78}

\footnote{L'Estrange v F Graucob Ltd [1934] 2 KB 394}
referenced between multiple documents and locations. As the other party bound by appearances, persons seeking to incorporate terms can reduce the likelihood of their actual review by providing minimal yet sufficient notice or making it cumbersome to obtain them.

Fourth, terms must be available - a requirement that is usually lost in discussions regarding the reasonableness of notice. Such availability may be purely theoretical, as in the case of references to remote locations. In ticket cases, the contract is regarded as complete only after the recipient had a chance to examine its contents and acquaint him/herself with the terms. Both in L'Estrange and in Toll, the signature was placed on a document, which contained the full text of the terms. The signatories were given an opportunity to read them but took the chance of being bound by terms they did not know. Even if the opportunity to read is rarely availed of it must be assumed that the terms must be available to become incorporated.

The purpose of the notice must be remembered: to inform the other party that terms exist and, in combination with availability, enable a decision whether to enter into a particular transaction or not. The party seeking to incorporate terms must actively bring them to the attention of the other party, then it is the other party who actively inquires about their contents.

A US Perspective

[9.11] A number of observations must be made with regards to recent developments in the US. These broadly relate to issues of terminology and to the availability of terms. It is not intended to engage in a comparative analysis but to establish the “usability” of those solutions for Australian on-line transactions.

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63 McCutcheon v David MacBrayne, Ltd (1964) WL 19517 (HL)
64 See: Atiyah p 188 who stresses that notice, which is sufficient in law, may in fact be fictitious; see also: Toll (FGTC) Pty Limited v Alphapharm Pty Limited [2003] NSWCA 75 at 112 by Young CJ: “In a system where contractual intentions are judged objectively, doing what was reasonably sufficient is enough.”
65 M Clarke, above at note 40 at 72
66 Baltic Shipping Co v Dillon (The Mikhail Lermontov) (1991) 22 NSWLR 1 at 159.
67 L'Estrange v F Graucob Ltd [1934] 2 KB 394
68 Toll (FGTC) Pty Limited v Alphapharm Pty Limited [2003] NSWCA 75
69 MacRobertson Miller Airline Services v Comr of State Taxation (WA) (1975) 133 CLR 125 at 137

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Terminology

[9.12] US cases and literature discusses incorporation procedures in terms of enforceability. The question is not whether or what terms have become incorporated but whether terms, or a particular term, are enforceable. As only terms that have been incorporated can be enforced, this difference in terminology can be disregarded for all practical purposes. Both analyses, (i.e. whether a term is incorporated or enforceable) aim at establishing whether a term became part of the contract. It must further be noted, that incorporation procedures are often discussed in relation to the “manifestation of assent.” The relationship between “manifestation of assent” and “incorporation” is examined in the following chapter.

US cases and literature also speak of “notice,” “reason to know” and “opportunity to review.” These concepts easily translate into the common law concepts, whereby the “opportunity to review” can be equated with availability and the “reason to know” with the assumption that in certain circumstances users are deemed to know that terms exist – be it due to adequate notice or the clearly transactional context.

Availability

[9.13] A relatively recent phenomenon is the concept of “rolling,” “layered” or “terms later” contracting. Without engaging into a historical analysis, it can be pointed out that it developed in parallel to the concept of “shrink-wrap” licenses. Leaving aside issues pertaining to the general enforceability of shrink-wrap licenses or the correctness of these approaches in light of the UCC, the most prominent decision in this area must be briefly mentioned.

ProCD v Zeidenberg (“ProCD”) concerned the purchase of off-the-shelf software. The software was accompanied by a license the terms of which were displayed only once the purchaser started using it. The license provided that the purchaser may return the software within a prescribed period if he or she did not agree with its terms. The retention of the software beyond this period indicated their acceptance. In its famous ruling, Judge Easterbrook held that

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70 see e.g. Moore v Microsoft Corp 293 AD 2d 587 (2nd Dep't 2002); Register.com Inc v Verio Inc 126 F Supp 2d 238 (SDNY 2000); Pollstar v Gigmania Ltd 170 F Supp 2d 974 (ED Cal 2000),
71 Nimmer & Towlie para 5.03
74 ProCD Inc v Zeidenberg 86 F 3d 1447 (7th Cir 1996)
the contract did not occur when the software was purchased in the shop but only after the user had a chance to read the terms and failed to return the software. Relying on the practicalities of mass-market standard contracting, he argued that the licensor, being the master of the offer can prescribe acceptance in any manner and that intention can be expressed in any manner. The notice of the term's existence was not in question. The ProCD reasoning was followed in numerous cases.

Although ProCD was technically a case about contract formation, not incorporation, it concerned the enforceability of terms disclosed after an event that would commonly be regarded as the moment of formation: the exchange of money and goods. Three points arise regarding the applicability of the ProCD reasoning in Australia:

*First*, the provision of terms after formation, or, alternatively, the artificial extension of the contract formation process by deferring the act of acceptance is inadmissible. The end of the contract formation process is marked by acceptance - not by the provision of terms. Theoretically, any incorporation procedure could be manipulated to enable the claim that the contract was formed only after the terms became available.

*Second*, the case separates notice of the terms’ existence from their availability. Such separation is concomitant with providing the terms after contract formation and goes against the basic idea that parties must agree on all the terms of the contract. To repeat the obvious: one cannot agree to terms provided after acceptance. Assent cannot be manifested if there is no reasonable opportunity to review the terms. Especially when the terms co-define the product. The right to return the software after reading the terms does not change anything in this regard. From the perspective of the reasonable addressee, the contract was formed in the shop.

*Third*, the offeror's power as the master of the offer does not extend to prescribing acceptance by silence, an involuntary act or by rejecting the purchased goods. An additional complication in ProCD was that the licensor was not a party to the sales transaction. A non-

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75 ProCD, Inc v Zeidenberg, 86 F 3d 1447 at 1452
76 Hill v Gateway 2000 Inc 105 F 3d 1147 (7th Cir 1997); Bower v Gateway 2000 Inc 676 NYS 2d 569 (NYAD 1998); I.Lan Systems Inc v Netscout Serv Level Corp 183 F Supp 2d 328 (D Mass 2002)
77 Earlier shrink-wrap cases precluded the enforcement of terms, which were disclosed after the purchaser obtained the software, see: Step-Saver Data Systems Inc v Wyse Technology 939 F 2d 91 (3d Cir 1991); Arizona Retail Systems, Inc v Software Link Inc 831 F Supp 759 (D Ariz 1993)
78 In the words of R C Bern: such practice is a "deceptive strategy under the guise of efficiency to bind customers to adverse terms concealed from them until after they have made the purchase decision and parted with their money;" above at note 73 at 696
party cannot impose terms on the purchaser and prescribe in those very terms how acceptance is to take place. A party should know from the beginning of the contract formation process, which of his or her acts will constitute acceptance or how to express acceptance.

In light of the foregoing, the approach to US case law must be cautious and selective. In Australia, the general rule remains that the offeree can only accept what was offered and that terms must be available before acceptance. The introduction of any terms after acceptance is a proposal for the modification of the original contract. Simply continuing with the agreement does necessarily imply acceptance of such proposal. Furthermore, the offeror cannot prescribe acceptance by an act of rejecting the goods.\textsuperscript{79} The practical application of the offer and acceptance model is difficult enough to warrant any further distortions.

\textbf{Internet-specific Factors}

\textbf{[9.14]} The following sections describe the main differences between the real-world and the on-line transacting environment. The adaptation of incorporation procedures must occur with a number of Internet-specific factors in mind. Their implications for contract law may not be apparent at first glance. Chapter 5 emphasized that the on-line environment changes the manner contractual intention is presented; Chapter 8 drew attention to the difficulties in objectively evaluating the web-merchant’s intention from the perspective of the addressee. Incorporation procedures require an even more fine-grained evaluation of both sides of the transaction.

\textbf{User Dependence}

\textbf{[9.15]} The focus is traditionally placed on users of websites, the addressees of the web-merchants’ manifestations of intention. A common theme is that web-merchants should use the available technologies to effectively communicate their terms. While this view is correct, the difficulties encountered by the web-merchant must also be appreciated. It is also correct to assume that the web-merchant’s manifestation of intention must be objectively evaluated from the side of the addressee. A balance must be struck, however, between objectivity and the \textit{reasonableness} of the addressee. The problems are reminiscent of those discussed in Chapter 7, which dealt with the allocation of risks for terminating devices and the degree to which senders should allow for the idiosyncrasies of the addressees’ network environment. In evaluating the addressee’s reasonableness, the differences in how people use specific technologies come into

\textsuperscript{79} \textit{Carter \& Harland} [229]
play again. These differences pertain to the IT literacy of the user: his or her selection of the browser type, his or her ability (or willingness) to upgrade or customize the browser.

Web-merchants design websites with certain assumptions regarding how they will be viewed. They expect a popular browser type, a reasonably recent browser version and default settings. In evaluating the web-merchant's manifestations of intention and the effectiveness of incorporation procedures a number of additional factors must be allowed for. All of those factors are beyond the web-merchant's control. Throughout the discussion it must be remembered that incorporation procedures should aim at communicating terms. This translates into the provision of reasonable notice and the availability of terms. The fulfillment of these basic requirements encounters numerous "technical problems."

**Display size and scrolling**

[9.16] The "amount" of content presented on a website depends on the size of the computer display. The whole web-page may not fit onto the screen – even when the browser window is maximized. Users may be required to scroll horizontally or vertically to see all of its text and graphical elements. Courts often emphasize that scrolling reduces the likelihood of viewing the remainder of the page.\(^8^0\) Even in the case of large displays users may keep several windows open simultaneously, none of them “maximized.” Consequently, only a small amount of a webpage is visible by default, generally the upper left area. The latter must convey all the important information, both legal and promotional. The displayed content is even more limited when websites are viewed on so-called alternative browsing agents, such as mobile phones or PDAs. In one of the most prominent cases on on-line contracting, *Specht v Netscape Communications*,\(^8^1\) the visibility of the hyperlink depended exclusively on the size of the display and on the necessity to scroll down to the bottom of the page. The hyperlink constituted notice of the terms and provided the terms upon activation. In another case, however, the court did not perceive the necessity of scrolling through the terms as a factor preventing their effective incorporation.\(^8^2\)

**Browser version, type and customization**

[9.17] As indicated earlier, the same website renders differently (i.e. displays different content or a different arrangement of the same content) depending on the browser type and version. It is an oversimplification to assume that web-merchants bear all risks resulting from the users’

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\(^8^0\) *Specht v Netscape Communications*, 306 F 3d 17 at 23, 24

\(^8^1\) *Specht v Netscape Communications* 306 F 3d 17 at 23

\(^8^2\) *Novak v Overture Services Inc* 309 F Supp 2d 446 (EDNY 2004) at 452
browser version or type. The problem must be looked at from both sides - the web-merchant's and the user's.

From the side of the web-merchant, the question is: which browser type should web-pages be designed for? It appears reasonable to code websites in accordance with applicable standards, the web-development specifications published by the W3C. At the same time it is common knowledge that the most popular browser, Microsoft's Internet Explorer ("IE"), does not adhere to W3C standards. Web-merchants face a difficult choice: design web-pages for display on Internet Explorer or follow the W3C. The choice of browser type has a direct bearing on the functionality of the site and the manner its contents are displayed. The implications of this problem for contract law are surprising: effective incorporation often hinges on the reasonableness of notice. This reasonableness generally translates into the visibility or conspicuousness of the notice. Colours and fonts may not survive a specific browser type. The visibility of a notice or the positioning of a hyperlink providing the terms may depend on the specific browser type or version. A notice may not be displayed because the addressee's browser does not support the required technology, terms may not be available because the relevant link is not visible.

Looking at the problem from the addressee's side: is it reasonable to use a browser other than IE? IE is the most popular, not the best browser. It is common knowledge that some other browsers are more advanced than IE. An additional factor is security. As IE is notorious for being prone to security breaches, it is reasonable to use a different browser – especially if a user stores sensitive data on his or her computer. Users of such different browsers, however, may not see all of the contents that would have been visible on IE. Have the terms been incorporated if the notice or terms were not displayed? Or: who should bear the risk of "invisible notices"? Chapter 7 comes to mind. It posed the question which party should bear the risk of failed receipt or illegible messages in the event of incompatible mail-applications. Leaving aside issues of outdated versions and failure to upgrade, it may be impossible to state whether the use of a particular browser is reasonable. Persons who are sufficiently IT literate to use a browser other than IE will most likely be able to explain such choice by technical considerations. In sum, not using the browser which most websites have been designed for cannot be regarded as unreasonable. The more IT literate the user, the higher the likelihood that he or she will use the Mozilla, Opera or Safari browsers. An additional consideration is that IE does not exist for Mac computers. Is it unreasonable to use Mac computers? The latter are

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83 Nimmer & Towle para 5.05[5]
generally regarded as superior to mainstream PCs. Yet, the differences between how Safari (the native Mac-browser) and IE display the same content can be quite dramatic.

Designing for IE can be considered reasonable for the web-merchant, avoiding IE may be reasonable for the user. The only practical solution is to design multiple versions of the same web-site for different browsers or, as is often the practice, specifically indicate which browser type and version the website is designed for. In the latter scenario the risk is clearly placed on the user/addressee – unless a certain browser type is not available for a specific platform.

To inject further complexity into the discussion, browsers can be customized. User settings override default settings. Users can adjust the size and colour of fonts, they may turn off basic functionality, such as image display, JavaScript, or Java and ActiveX support. It is an oversimplification to state that users customize their browsers at their own risk because they change the manner a website was intended to display. Again, security aspects enter the discussion. Chapter 7 indicated that addressee’s have the right to reject messages carrying potentially dangerous content. In the case of browsers, it may be reasonable to deploy high security settings and permit unrestricted content solely from trusted sites. While such customization cannot be regarded as unreasonable it may prevent the display of certain elements of a website, including notices. These problems will not disappear anytime soon. A general trends in browser design is endowing the user with more options – and therefore more choice – regarding the display of contents. Consequently, the risk of invisible notices will remain difficult to apportion. Courts will face increasingly difficult decisions involving not just a legal analysis of the reasonableness of notice, but a technical analysis of the reasonableness of browser choice and settings.

Connection type

[9.18] Depending on the type of connection, users may choose not to load graphics and thus will not see links embedded in imagemaps. Users with dial-up modems are less likely to view complex graphic elements, pictures and flash animations than users connected via broadband. The type of connection may impact on the manner the site is displayed. It must be borne in mind that broadband penetration in industrialized countries has only now passed the 50% mark.

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Sequence of presentation and points of access

[9.19] Websites are a pull medium - it is the user who requests the contents and decides on the sequence in which to view them. As HTML "destroys" the linearity of print,\(^{85}\) pages may be viewed non-sequentially,\(^ {86}\) there being no logical order determined by the physical constraints of a book or real-world shop. Websites are non-linear, the user’s navigational patterns are unpredictable, web-pages may be accessed out of context. As each web-page has multiple points of access,\(^ {87}\) users may bypass the homepage and "enter" the transactional part of the website directly. This has little precedent in the real world, where shops have one entry point and a number of fixed or unavoidable elements, such as doors and counters. This very problem arose in *Specht v Netscape Communications*\(^ {88}\) where one of the plaintiffs accessed the page where the product could be obtained not from the homepage but through a shareware site that deep-linked straight into the transactional part.\(^ {89}\) Accordingly, he was not able to see the hyperlink indicating the existence of terms.

Web-merchant manipulations

[9.20] While web-merchants have little control over the manner users view and navigate their websites, they also have novel ways of manipulating user behaviour:

"[E]-businesses ... have more avenues for tinkering with the presentation format of their electronic boilerplate. Businesses can collect information as to which presentation formats induce customers to visit the link to the 'terms and conditions' of their agreements, and which deter them from doing so. This information could allow businesses to experiment with different ways of presenting the boilerplate and to relay on those designs that reduce the number of consumers who read them. Just as businesses utilize fine print and hidden terms in the paper world to increase the costs of finding and reading terms, certain methods of presentation of the terms ... can also discourage e-consumers from reading the boilerplate."\(^ {90}\)

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\(^{86}\) P Lynch, J Horton, above at note 84 p 2


\(^{88}\) *Specht v Netscape Communications* 306 F 3d 17 at 24

\(^{89}\) See also Chapter 8 [8.10]

\(^{90}\) R A Hillman, J J Rachinski, *Standard Form Contracting in the Electronic Age* (2002) 77 NYULR 429 at 479

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Manipulative merchants need only provide a theoretical possibility to learn about the terms' existence,\(^91\) while applying techniques, which minimize the likelihood of review. The problems are similar to those in the real world, where terms are often contained in small print. The difference to the real world lies in the fact that both courts and customers are used to standard terms and disclaimers in small-print, know that they exist and where to expect them, whereas on-line such expectations may not exist – usually due to the lack of obvious transactional context. Furthermore, web-merchants act in a familiar, "self-designed" environment, while users must adapt their cognitive abilities to the web-interface.

**Internet Advertising**

[9.21] Websites are designed primarily from a marketing perspective.\(^92\) Business models are largely based on the sale of advertising space and on the number of times the site is accessed per day (so called "hits" or "eyeballs"). Websites are designed to attract and retain attention. Immediate graphic impact takes precedence over the logical organization of information. Pop-up windows, floating adds and banner advertisements of various shapes and sizes distract from the main flow of information and often interfere with the displayed contents. The battle for the user's attention is compounded by the pressure to complete the transaction in as few clicks as possible.\(^93\) The reasonableness of notice must always be evaluated against multiple distracting factors: notice often "competes" with a multitude of graphical and textual elements presented on computer screen.

What is new about that? After all, the layout of products in supermarkets and the arrangement of advertisements in magazines are also directed at attracting attention and ultimately selling a product. The problem lies in the unfamiliarity of the environment, in the compounded effect of hypertext, dynamic and active content, the spatial confinement of the screen and the unpredictability of where terms might be found. In the real world, many situations are perceived as contractual and terms are expected – even if they are not read. In the real world, people are also generally aware of the traditional "manipulations" because over the last century they have remained relatively constant.

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\(^93\) W Effros, above at note 87 at 1284
Adaptation of Incorporation Procedures

[9.22] Incorporation procedures assume a three-dimensional environment where the person seeking to incorporate terms controls the manner they are presented. Principles from the world of paper transactions "apply equally to the emergent world of online product delivery, pop-up screens, hyperlinked pages, clickwrap licensing, scrollable documents, and urgent admonitions to "Download Now.""\(^{94}\) Traditional incorporation procedures must be mapped onto an environment lacking those very elements that form their basis in the real world. The following sections examine the possibility of using web-technologies to achieve the main purpose of incorporation procedures: creating actual or constructive knowledge of the terms, so that acceptance or any act of assent can encompass them.

Adaptation or Modification?

[9.23] The point of departure is the assumption that no new methods need be developed or new elements introduced into the contract formation process. Full account must, however, be taken of the novelty of the environment and the resulting impossibility of a direct application of the principles pertaining to the incorporation of terms. "What was a valid application of the principles in Parker's\(^{95}\) day and in Hood's\(^{96}\) day may not be a valid application today."\(^{97}\) A slight modification in the application of those principles must therefore be proposed. The suggested solutions do not constitute a modification of the principles themselves. They can be regarded as a shift in emphasis or an adaptation of the analysis regarding the effectiveness of incorporation. The only principle that must be unconditionally followed is that acceptance occurs in response to an offer and can only encompass the terms of the offer. The principle is too obvious to be repeated: parties must know what they are agreeing to. Combined with the objective evaluation of intention, the premises of all effective incorporation procedures can be reduced to notice, availability and/or signature.

The divisions of incorporation procedures into "by signature," "by notice" etc., need not and cannot be maintained. Maintaining such divisions would necessitate the creation of functional equivalents of, for example, tickets. The creation of such equivalents was described as futile, failing to enable a direct application of those contract formation principles that require

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\(^{94}\) Specht v Netscape Communications 306 F 3d 17 at 31, see also: In re RealNetworks Inc No 00 C 1366, 2000 WL 631341 (ND Ill May 8, 2000)

\(^{95}\) Parker v South Eastern Railway Co (1877) 2 CPD 416

\(^{96}\) Hood v Anchor Line (Henderson Bros) Ltd [1918] AC 837

\(^{97}\) Hollingworth v Southern Ferries Ltd ("The Eagle") [1977] 2 Lloyd's Rep 70 at 78

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tangible embodiments of writing. To continue the ticket example: rather than replicating the contracting sequence involving the provision of tickets on-line, the focus should be placed on achieving the purpose of the ticket – informing the other party of the existence of terms and, possibly, indicating the location of the full text. The main function of tickets, namely being a “voucher or receipt for the money that has been paid” can still be fulfilled. In on-line purchases of airline and concert tickets the “electronic ticket” is generally provided after the contract formation process is completed: it is sent to the purchaser’s email address, displayed in a printable window, alternatively the “real” paper ticket is delivered by mail. In these instances, the ticket is provided too late to introduce terms and cannot be considered a written offer or affect the terms of the antecedent contract. Accordingly, it cannot serve incorporation purposes.

*A Perfect Information Environment?*

[9.24] The web appears to be the perfect information environment, where any imaginable piece of information is readily available. In the words of one author: “Could the cyber consumer argue the lack of information within the context of an environment, which by definition is synonymous with ‘wealth of information’?” Despite the abundance of information, there are still no widely accepted standards of presenting and organizing the content of websites. While some conventions are slowly emerging, each shopping experience may differ, the contents of every website may be arranged differently. On-line contracting remains in a transitional period, where trade usages, user expectations and business models are still being formed. It is difficult to state when and where users should expect terms. It is not a question of being or buying on-line for the first time but visiting a specific web-site for the first time. Consequently, users still face disorientation and difficulties in finding the

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98 see Chapter 8 [8.22]


100 Thornton v Shoe Lane Parking Ltd [1971] 2 QB 163 at 169; see also *Oceanic Sun Line Special Shipping Company Inc v Fay* (1988) 165 CLR 197 at 228

101 *eBay International AG v Creative Festival Entertainment Pty Limited* [2006] FCA 1768

102 *Oceanic Sun Line Special Shipping Company Inc v Fay* (1988) 165 CLR 197 at 227; *eBay International AG v Creative Festival Entertainment Pty Limited* [2006] FCA 1768 at 45, 53


104 C Coteanu, above at note 18 p 17

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required information. These problems are mirrored on the side of web-merchants: how to effectively communicate with users, i.e. how to bring specific contents to their attention?

Web-technologies can be used both to facilitate on-line contracting and to make it more difficult; they can create informed consent but they can also create underinformed and overwhelmed users. Although users have the possibility to transact in the comfort of their own homes and read the terms at their leisure, they often display a sense of urgency and haste, impatiently clicking through numerous screens. None of the transacting parties seems to take full advantage of the available technologies of communicating information: web-merchants are more interested in selling advertising space and counting “eyeballs” than communicating the terms of the contract; web-users, on the other hand, seem more interested in quickly clicking through numerous screens rather than studying the content of specific web-pages. If something does not retain their attention, they “click-away.”

Some technologies appear tailor-made for incorporation purposes, with regards to both notice and availability. Their deployment, however, turns out to carry risks. Push technologies, which could serve to provide terms or notices, are perceived as intrusive and distracting. User’s often install pop-up blockers to prevent their display. Similarly, there are methods to create the “red hand pointing to words printed in red ink.” Users may, however, disable active content thereby preventing the execution of scripts – the very technology required to display the moving hand. Consequently, technologies that could provide better notice and availability than the traditional methods of displaying terms and notices, cannot be relied on.

**Incorporation “by Hyperlink”**

[9.25] The only technology that generally “survives” browser types, versions and user-settings are hyperlinks. While it must be acknowledged that not all hyperlinks are displayed by every browser, they can be regarded as the best available technology for incorporation purposes. There is always a trade off between the effectiveness of a given method and the practical possibilities of its deployment: pop-up windows can be blocked, scroll-bars can be ignored and hyperlinks require minimal user activity.

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107 *Novak v Overture Services Inc* 309 F Supp 2d 446 (EDNY 2004 ), where the court stressed that the plaintiff had an opportunity to read the terms and conditions with no time limitation, at 452; see also: *Real Networks, Inc Privacy Litigation No 00 C 1366, 2000 WL 63 1341 (ND Ill May 8, 2000)*

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Terms must be made available. Theoretically, taking into account the non-linear character of websites and the different access paths to the transactional parts, the text of the terms should be placed on every page of a website. This, however, would require scrolling — a technique not always perceived favourably by the courts. The only acceptable solution appears to be the provision of terms behind hyperlinks.

Despite claims to the contrary, terms need no be unavoidable. Minimal user activity seems admissible. Users can be expected to activate a hyperlink in order to view terms. There is no justification, however, to make users search for terms or revert to a different communication method. The temporal or spatial separation of notice from availability, justifiable in the real world on practical grounds, can be compared to placing the text of terms behind multiple clicks. There is no justification for such separation on-line. While the actual place of the text of the terms is irrelevant, they should be no more than a click away.

Hyperlinks are ideally suited to combine notice with immediate availability. They also combine two incorporation methods: by notice and by reference. The first concerns the visibility of the link; the second, like in the real-world, focuses on the wording of the link or the incorporating document, i.e. the context in which it is placed. It must be assumed that the “incorporating” link should be clear and conspicuous, or — as prominent as possible under the given circumstances. Cases abound with practical guidelines about the positioning and colour of links. Bearing in mind their importance as a method of providing notice of the terms and the terms themselves, there is little choice in positioning: to ensure universal visibility it must be placed on every page of a website in the upper left area. At the same time, a convention is emerging to provide a “legal link” on the bottom of every page, together with copyright notices and links to privacy policies. Despite the fact that the Specht court specifically stated that the

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109 See also CUECIC Art 13
110 See, e.g. MLEC Art 5bis, “Incorporation by reference”: Information shall not be denied legal effect, validity and enforceability solely on the grounds that it is not contained in the data message purporting to give rise to such legal effect, but is merely referred to in that data message. A D Murray, Entering into Contracts Electronically: The Real WWW, in L Edwards, C Waelde. ed, Law & the Internet, Oxford 2000, p 30
112 Kilgallen v Netwokk Solutions Inc 99 F Supp 2d 125 (D Mass 2000)
113 See: Comp/USA Agrees to Discontinue Practice of Placing Disclosures behind Several Links (2001) Electronic Com & L Rpt (BNA) 562
114 V Gautrais, above at note 108 at 210
115 Pollstar v Gigmania Ltd 170 F Supp 2d 974 (ED Cal 2000); Caspi v Microsoft Network LLC 723 A 2d 528 (N J Super CAD 1999)
presence of a scrollbar does not imply the need or create the obligation to actually scroll down the page,\(^{116}\) it is becoming increasingly difficult to claim ignorance of those links as they are present on practically all e-commerce websites.

Last but not least, the permanent positioning of the incorporating hyperlink in one of the above areas on every page of the website solves problems of timing and enables the preservation of the classic contracting sequence, which assumes the provision of terms before acceptance. This "permanent availability" ensures that terms are available throughout the contract formation process and counterbalances the difficulties in establishing which act constituted an offer and which can be regarded as acceptance.

**Incorporation by Electronic Signature**

[9.26] While the on-line environment appears to accommodate incorporation by notice and by reference, more problems arise with incorporation by signature. This method of incorporation hinges on the existence of a "signature" and a contractual document. As described in Chapter 8, both the server- and the client-side of a website can be regarded as documents. So can screens. Leaving aside the distributed character of their contents and whether they constitute writing, the more urgent question is what makes them **contractual**? Is it the mere fact of placing terms thereon? Is it the fact of signing? It is easy to succumb to circular reasoning: because something is signed it must be contractual, therefore it incorporates terms.\(^{117}\) Or, because a document contains terms, it must be contractual. Obviously, terms must be contained or referred to in the document if the signature is to incorporate them. Their existence, however, cannot be regarded as **prima facie** evidence of the contractual character of the document.

It is difficult to find the correct sequence of argumentation. What comes first: the contractual character of the document or the signature? Although the two requirements appear difficult to separate, the first question regards the existence of a signature. It was never posed in the context of cases like *L'Estrange\(^{118}\) or *Toll\(^{119}\) as the character of the handwritten name seemed beyond doubt. The legal effect in the form of incorporation could follow.

\(^{116}\) *Specht v Netscape Communications* 306 F 3d 17

\(^{117}\) see, e.g. "If the document is signed it will normally be impossible or at least difficult, to deny its contractual character, and evidence of notice, actual or constructive, is irrelevant." in *Cheshire, Fifoot & Furmston* p 179

\(^{118}\) *L'Estrange v F Graucob Ltd* [1934] 2 KB 394

\(^{119}\) *Toll (FGTC) Pty Ltd v Alphapharm Pty Ltd* [2004] HCA 52

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In the on-line environment, one can only speak of functional equivalents of signatures. Model regulations generally state that where the law requires a signature, that requirement is met if a method is used to identify the person and to indicate a persons approval of the information contained in a message.\(^{120}\) As no technology is prescribed, practically any method of interacting with the web-interface can constitute a signature.\(^{121}\) Although functional equivalents of signatures pertain first and foremost to formal requirements, it is also accepted that they cannot be discriminated against on the sole basis that they are electronic. The “side-effect” of such approach is that a simple “click” can constitute a signature or produce the legal effects of a signature. Consequently, it could be assumed that any click that meets the requirements of the model laws regarding the functional equivalent of a signature, can also incorporate terms. This assumption must, however, be approached with caution.

The general validity and enforceability of electronically signed on-line contracts does not imply that electronic signatures produce the same range of legal effects as handwritten signatures. The latter are not only more expressive psychologically but also generally perceived as a sign of intention. The signature binds the person to the contents of the contract, regardless of whether it was read, because the person knows that he or she is signing a contract. Furthermore, in the real world, the legal effects of a handwritten signature depend on the intention of the signatory. Such intention is evaluated on the basis of the context or circumstances in which the signature occurred.\(^{122}\)

The legal character, or effect, of a click can only derive from the context: it is the content and construction of the website that distinguishes a click for navigational purposes from a click, which can be regarded as a signature. The signature has an incorporating effect if the document is contractual, at the same time, the signature itself seems to be a product of the contractual context.\(^{123}\) After all, model laws and enabling legislation deal with the form of electronic acts, not with their legal effect.

Mapping the “incorporation by signature” method onto the on-line environment requires the existence of a clear contractual context. In the real world, the contractual nature of

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\(^{120}\) MLEC Art. 7, see also: ETA Section 10 (1) (a); CUECIC Art 9.3 (a)

\(^{121}\) See also Chapter 10 [10.8]

\(^{122}\) Le Mans Grand Prix Circuits Pty Ltd v Iliadis [1998] 4 VR 661 at 99 666-667 per Tagdell JA; It is also argued that if the signing party has reasonable grounds to believing that the document is not contractual, it should not be bound by its contents, see: D W Greig & JLR Davis, The Law of Contract, Sydney 1987, p 611

\(^{123}\) See: MLEC Guide to Enactment para 53: The function of an electronic signature depends on the nature of the signed document.
the situation is usually beyond doubt. Not so in the on-line environment. Due to the ease of transition between websites, the changeover between a commercial and non-commercial environment may not be apparent. This problem is unprecedented in the off-line world: people are rarely kidnapped from a library and "teleported" into a bookstore. If users do not perceive the environment as transactional, they will not anticipate terms. If the website is not of contractual character the electronic signature cannot incorporate terms because it appears questionable whether it constitutes a signature or whether it is performed with the requisite contractual intention.\(^{124}\) In sum, an electronic act cannot constitute a signature if it does not occur in a context that is objectively contractual. Analyses of the incorporation of terms by means of electronic signatures must therefore, first and foremost, focus on the existence of the contractual context. The latter may only be obvious due to the existence of a prominent notice about the terms.

**Conclusion**

[9.27] The characteristics of the novel transacting environment leave no room for a liberal approach to incorporation procedures. Quite the opposite: the potential information overload combined with the restrictions of the web-interface requires a strict adherence to the basic principles of contract law. There is not room for any distortions of the offer and acceptance model, such as the provision of terms after the act objectively constituting acceptance. Bearing in mind the cognitive difficulties created by the web environment, the propensity for disorientation and the potential lack of contractual context, it appears necessary to introduce the requirement of enhanced notice: a notice that not only informs about the existence of terms, but *creates* the contractual context. Enhanced notice requirements need not necessarily be perceived as a modification of incorporation procedures. After all, the reasonableness or sufficiency of notice must be tailored to all the circumstances and the situation of the parties.\(^{125}\)

It is unnecessary to maintain the traditional methods of analysing incorporation procedures, such as "by notice" or "by signature." Ultimately, the incorporation of terms in on-line contracts hinges on making the website user aware of their existence, i.e. providing notice, and enabling the user to familiarize him- or herself with their contents, i.e. ensuring availability.

As hyperlinks enable the combination of notice with availability, on-line contracting can provide a more compact contract formation process: parties need not run around parking lots or ferry stations to find the text of the terms. Web-technologies provide all the tools

\(^{124}\) For more detailed discussion see Chapter 10 [10.8]

\(^{125}\) *Hood v Anchor Line* [1918] AC 837 at 844
required to provide both notice and availability. While hyperlinks constitute the main source of problems in establishing the contents of on-line contracts, they also provide a perfect method to ensure that terms are communicated.

A number of design considerations force web-merchants to provide hyperlinks in specific places. Achieving the purpose of incorporation procedures has direct implications for the design of websites, leaving web-merchants little flexibility over how to structure their contracting procedure. There is also a number of additional factors to be taken into account when evaluating the reasonableness of notice, the most important being the differences in how a website may be displayed by the user’s browser application. As long as there are discrepancies between browsers, courts will face the technical question whether the risk of “invisible notices” should be apportioned to the web-merchant who designed the website for Internet Explorer or to the user who - due to security concerns - opted for a different browser.
Chapter 10

Electronic Assent

Introduction

[10.1] This chapter deals with the expression of assent in an electronic environment. The previous two chapters focused on the contents of on-line contracts and the incorporation of terms. This chapter focuses on the existence of the contract. The question is not: what are the terms of the contract but is there a contract? Chapter 9 discussed notice and availability requirements, especially regarding the necessity to provide enhanced notice as to the term's existence whenever the contractual context is not obvious. The emphasis was on the side of the web-merchant, the discussion centered on hyperlinks. This chapter looks at the side of the user and focuses on methods of interacting with websites. When manifestations of intention take the form of websites, problems relate to the overabundance of displayed contents and the intricate relationships between the elements presented on-screen. When intention is manifested by clicks, the difficulties consist in establishing the legal effects, if any, of an act which is devoid of any inherent meaning.

The discussion links together some threads from previous chapters, such as the method of acceptance, the incorporation of terms, communication rules and - most importantly - the principle that contractual intention can be expressed in any manner and is evaluated objectively from the perspective of the addressee.

In all previous discussions the overreaching assumption was that the intention of the parties remained decisive - both for the time of contract formation and for the scope of the parties' obligations. This chapter examines intention from a different perspective: the focus is taken off the contents of a statement or the moment of its effectiveness and placed exclusively on the manner of expression. Just as Chapter 5 opposed the introduction of any special rules based on the fact that contractual intention was manifested by or on a website, this chapter opposes attempts to modify contract formation principles on the basis that assent is expressed with a click. It proves that contract law can seamlessly accommodate novel methods of manifesting intention.
Roadmap

[10.2] The chapter briefly revisits the basic premises of contract formation, methods of manifesting intention and the relationship between the formation of a contract and the incorporation of terms, amongst others. Next, the chapter introduces the “click,” the main method of navigating websites and expressing assent in on-line transactions. The focus is on the value of the click as a communicative sign and on the objective approach to evaluating contractual intention.

Various “problems” allegedly posed by click are discussed. Accordingly, the chapter inquires whether clicks can serve as a method of manifesting intention and also whether clicks can constitute signatures.

Next, the discussion shifts to “accidental clicks” and the possibility to be bound despite a lack of intention. It is necessary to strike a balance between objectivity, or appearance of intention, and actual intention. The chapter also inquires whether contract formation principles require that all transactional websites be equipped with an “I agree” button. Normally, the problem is discussed under the heading “are browse-wrap agreements enforceable?” The relevant paragraphs revisit incorporation procedures and examine whether guidance can be obtained from US caselaw.

Intention Revisited

[10.3] Contract law presumes choice and voluntariness, the ability to determine whether to accept a set of obligations.¹ The cornerstone of agreement and, next to consideration, the main premise of contract formation is intention. Intention derives from outward expressions such as words and conduct.² Intention is always evaluated objectively from the perspective of a reasonable addressee. Despite the fact that intention may in some circumstances be overridden by appearance,³ it remains an indispensable requirement.⁴ Consequently, courts often face a dilemma of choosing between what the parties really intended and what they appeared to

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¹ Carter on Contract [01-040]; Australian Woolen Mills Pty Ltd v Commonwealth (1954) 93 CLR 546 at 457
² Carter & Harland [205]
intend. Despite the fact that such terms as the “meeting of minds,” “agreement” or “promise” carry subjective and emotional undertones, contract law is concerned with identifying the circumstances in which parties are regarded as having reached agreement.\(^5\)

**Offer, Acceptance and Intention**

[10.4] “Offer” and “acceptance” are only tools of analysing intention, not prerequisites of agreement.\(^6\) Accordingly, manifestations of intention need not fit into the offer and acceptance model.\(^7\) Given the difficulties and artificiality of placing the labels of offer or acceptance on individual acts, “assent” can be regarded as a more neutral term relating to contractual intention in general. It can denote an offer or an acceptance.

Apart from offer and acceptance, other methods of contract formation are the adoption of a contractual document by signature and conduct.\(^8\) The fact that contracts can be inferred from conduct\(^9\) reflects the principle that intention can be manifested in any manner. Conduct must, however, be able to objectively convey an intention to be bound. Silence is generally regarded as too equivocal to permit an inference of assent.\(^10\)

**Incorporation and formation**

[10.5] When discussing assent it is necessary to distinguish between the formation of a contract and the incorporation of terms. This distinction is dictated on three grounds:

*First,* a contract can be formed but certain terms may not become incorporated. There may be intention to contract, there may be no agreement as to its exact terms or the party seeking to impose its terms may fail to successfully incorporate them. In such cases, the law may fill the gaps by implying a set of terms.\(^11\)

*Second,* assuming that the terms have been sufficiently brought to the other party’s attention and made available, formation and incorporation occur in one act. There is one act of assent that brings the contract into existence *and* incorporates its terms.

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\(^5\) Carter & Harland [201]

\(^6\) Carter on Contract [01-001]

\(^7\) Hyatt Australia Ltd v LTB Australia Ltd [1996] 1 Qd R 260 at 264 per McPherson JA

\(^8\) Carter on Contract [02-040]

\(^9\) Brogden v Metropolitan Railway Co (1877) 2 App Cas 666; Emprinall Holdings Pty Ltd v Machon Paul & Partners Pty Ltd (1988) 14 NSWLR 523

\(^10\) Carter & Harland [111]

\(^11\) Ninmer & Towle para 5.03 [1]
Third, incorporation procedures can play a role in the formation of a contract as the terms may prescribe the method of acceptance or the manner of expressing assent.\textsuperscript{12} If terms are not communicated, the other party does not know how to express assent. For example, if the offeree “accepts” by a method other than that requested, there may be no contract. The more unusual the requested expression of assent, or the greater the likelihood that such “assent” could be given accidentally or involuntarily, the greater the necessity to inform the other party what signs are regarded as denoting acquiescence. Consequently, the effectiveness of incorporation may affect the contract’s very existence.

The Click

[10.6] The world-wide-web is popular because it is easy to use. This “user-friendliness” is a consequence of the of the Graphical User Interface, or “GUI.” Before the GUI, the predominant method of interaction was the Command Line Interface (“CLI”), which required users to type in sets of instructions that had to be learnt in advance. The CLI left no room for ambiguity or misunderstandings: if users wanted to perform a specific action they had to input the correct command. With the shift to GUIs the interaction became more simple and intuitive. Simplicity came at the cost of a limited range and expressiveness of possible actions - usually taking the form of “clicks.” Users can also fill out forms, i.e. provide textual input of pre-defined length.

Clicks are a method of initiating HTTP requests for HTML files and invoking responses from client and server-side applications.\textsuperscript{13} Clicks activate various elements of the GUI: hyperlinks, icons, buttons, scroll down menus or scroll bars. Clicks can resemble picking goods from shelves, nodding one's head in response to verbal offers or placing signatures on documents – depending on what is clicked. Sequences of “clicks” do not lend themselves to easy analysis, as each click can carry a different meaning and be executed for a different purpose. From the user’s perspective, the required action is the same - irrespective whether he or she clicks a button labeled “I Agree,” “Download” or simply moves forward within the website.

\textsuperscript{12} See Chapter 9 [9.3]

\textsuperscript{13} The protocol specifications differentiate between “clicks:” some methods, e.g. HEAD or GET are intended for information retrieval, others, e.g. POST, PUT and DELETE, submit data to be processed by the server or upload specific resources and should be displayed in a special way, making the user aware of possible consequences. See: RFC 2616, Hypertext Transfer Protocol –HTTP/1.1, R Fielding, et al, (1999)
Can Clicks express assent?

[10.7] The answer to this question is simple: clicks can serve as a method of manifesting intention - they can be acceptances, offers, signs of promise and agreement. Consequently, clicks can express assent. To hold otherwise is to annihilate e-commerce No one questions the validity or enforceability of contracts formed on Amazon.com – despite the fact that from the user's side intention is expressed by placing a pointer (conventionally a small black arrow that transforms into a little hand) on a graphical element and pressing the left button on a mouse. The theoretical justification is that intention can be manifested in any manner and that contracts can be inferred from conduct. Clicks can constitute an element in the circumstances that contract law regards as giving rise to agreement. An additional justification derives from all model laws and regulations: an act cannot be denied legal effect solely on the ground that it is in electronic form. \(^{14}\) Furthermore, all technologies are equal. \(^{15}\) Clicks are placed at par with websites, emails and paper documents. Assent can be expressed by typing "I AGREE" in an email, an instant message, posting on a website – or clicking a button with these words.

The discussion does not end here, however. The fact that assent can be expressed by clicks raises a number of problems. The latter derive from the limited expressiveness and simplicity of this method of communication.

Can Clicks be Signatures?

[10.8] Generally, where a contract is reduced to writing but not signed there must be evidence independent of the agreement to prove assent. \(^{16}\) Although signatures are rarely a prerequisite of validity or enforceability, \(^{17}\) they constitute proof of assent. If there is a signature, there is assent, without need for further proof. Can clicks be signatures? The following sections are mainly a theoretical exercise, as contract formation rarely requires a signature. To some extent, the illustrate the misplaced focus on early "Internet law" literature and model regulations, which often seem to imply that on-line contracting requires the creation the functional equivalents of signatures.

Just as intention can be expressed in almost any manner, signatures can take many forms, ranging from handwritten names to "Xs." \(^{18}\) The legal effect of a signature is not

\(^{14}\) See Chapter 1 [1.11] and Chapter 5 [5.12]

\(^{15}\) See Chapter 1 [1.8]

\(^{16}\) Parker v South Eastern Railway Co (1877) 2 CPD 416

\(^{17}\) Signatures as a formal requirement are distinguished from signatures as expressions of assent.

\(^{18}\) Report para 2.7.30
contingent on its form but the intention with which it is made.\textsuperscript{19} The specific intention and therefore their legal effect depend on the context or on the nature of the document signed.\textsuperscript{20} Traditional signatures express assent only if executed with the required intention. Given the liberal “form requirements,” a signature could take the form of a click – provided the click occurred with the intention to sign.

The fact that clicks can be signatures is, however, of little value. Their legal effect turns on the intention of the “clicker:” the click can be made with the intention to assent or with the intention to sign. In the latter circumstance, the effect of such “click-signature” would - again - depend on the intention of its maker. It is easier to prove that a click was performed with the intention to assent than to prove that it was performed with an intention to sign and assent. The object of analysis is the same: not the act itself but the context in which it was made. Clicks and signatures are equally valid communicative signs and their legal effect depends entirely on the surrounding circumstances. The only difference between them is that signatures are generally perceived as expressions of intention and raise a presumption of assent. Proving that a click expressed assent or constituted a signature boil down to proving the intention of their maker.

Model regulations state that electronic signatures can have the same effect as traditional signatures and can fulfil the formal requirement of a signature.\textsuperscript{21} Electronic signatures can take any form: the legal effect does not depend on the method or technology used – clicks and digital signatures bear equal value.\textsuperscript{22} Practically all model regulations require, however, that electronic signatures not only express the signer’s approval\textsuperscript{23} but also identify the signer (a requirement absent in the real world and difficult to fulfil in a networked environment).\textsuperscript{24} Model regulations admit that traditional signatures perform a variety of functions and that their legal effect depends on what was signed.\textsuperscript{25} The legal effect of an electronic signature always depends on the context created by the web-interface.

\begin{thebibliography}{9}
\bibitem{20} Chapter 9 [9.26]; see also: T J Smedinghoff, \textit{Creating Enforceable Electronic Transactions} (2001) 649 PLI/Pat 85 at 100
\bibitem{21} MLEC Art 7, MLES Art 6, ETA Section 10, UETA Section 9, CUECIC Art 9; See also: J M Moringello, \textit{Signals, Assent and Internet Contracting} (2005) 57 Rutgers L Rev 1307 at 1324
\bibitem{22} MLES Guide to Enactment para 82
\bibitem{23} MLEC Art 7, MLES Art 6, ETA Section 10, UETA Section 9, CUECIC Art 9; see also Electronic Transactions Bill 1999, Explanatory Memorandum, p 28, 29
\bibitem{24} see Chapter 4 at [4.5]
\bibitem{25} MLES Guide to Enactment para 29; \textit{Report} paras 2.7.27-2.7.33
\end{thebibliography}
Similarly, the value of digital signatures as methods of manifesting intention does not depend on the underlying technology but solely on the manner the digital signature application is activated. Appendixing a digital signature to a document can take the form of typing in a PIN, placing a thumbprint on a reader or — clicking a “SIGN” icon. Digital signatures may be used for multiple purposes — not necessarily expressing assent. Again, the legal effect of a digital signature depends on the intention with which it was made.

According to model regulations, a click constitutes a signature if it was made with the requisite intention and identifies the signatory. Either way, one ends up examining the website on which an act was performed or the interface of the relevant application. Proving that a click was made with an intention to sign is, however, more cumbersome than proving that a click was made with an intention to assent. In the former scenario, intention relates to the fact of signing and assenting. Ultimately, it must be remembered that clicks are nothing but methods of initiating HTTP requests from web-servers. They can, however, have the same legal effect as handwritten signatures. The question whether they can constitute signatures is therefore generally irrelevant.

Intention and Objectivity — “Accidental Clicks”

[10.9] Even if clicks can validly express assent and, provided certain requirements are met, constitute functional equivalents of signatures or have the same legal effects as signatures, they are a novel communicative sign and lack the “expressiveness” or psychological impact of certain real-world actions. Many behaviours are universally perceived as expressions of assent. In the real world, parties negotiate in a familiar environment, “against a background of commercial or local usage whose implications they have tacitly assumed.” In contrast, clicks are detached from trade usages and devoid of any inherent meaning.

The imagery of a well-designed website, such as amazon.com must be abandoned. Web-mERCHANTS often take advantage of the impatience of click-happy web-surfers and design web-interfaces to “trick” them into transactions. The problem was touched upon in the previous chapter, where incorporation procedures were used to “introduce terms through the back door.” Objectively, sufficient notice is given and terms are available behind hyperlinks. The minimal requirements are met, yet the website is not designed to inform that terms exist or a

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26 It must be assumed that the complexity of the technology impact on the reliability of identification.
27 Cheshire, Fifoot and Furmston p 133
29 See Chapter 9 at [9.3]
contract is being formed. As a result, users activate an element of the GUI that was designed to carry a particular meaning, such as agreeing to a set of terms, without actually intending to agree to any terms, in fact - without realizing that a transaction is taking place. Although the user clicked the “I agree” button and a hyperlink provided the terms, he or she pleads ignorance of any transaction – he or she intended to click a button but did not intend any legal effects. Is there a contract? Who should prevail: the user or the web-merchant?

A brief point must be made regarding the scope of required intention: having entered a shop, people do not necessarily perceive the situation as contractual and do not realize the full legal implications of their behaviour, for example that taking goods to the register will result in a contract of sale and that terms will be implied by relevant legislation. It is beyond doubt, however, that they are in a shop and that a purchase may be contemplated. Similarly, the implications of signing a document, raising one’s hand at an auction or placing goods at the counter are generally known. While all legal consequences of a particular act may not be envisaged or intended, transactions are rarely entered into involuntarily or documents signed accidentally.

The same cannot be said about websites. Not every website is commercial and not every user surfs the web with a “purchase” in mind. “[C]onsumers have little or no background expectations against which to measure their assent experience.”30 Unlike in the real world, where the shopping experience differs only minimally between shops, each web-site can have a different transacting procedure and use different communicative signs. Due to the ease of transition between websites, the fact of “entering a shop” may pass unnoticed. What started out as a search for information about a particular singer may lead directly to an on-line shop offering his tracks for download. Absent a commercial or transactional setting, intention to create legal relations cannot be presumed. 31

The objective test requires that if a person manifests intention to induce another party to act upon it in forming a contract “he will be estopped from denying that the intention he manifested was his real intention.”32 The objective test does not, however, apply in favour of a person who knows the truth.33 It is the web-merchant who created the appearance of intention, not the user who clicked through a number of screens. The web-merchant cannot take advantage

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31 Carter & Harland [403]
32 J P Benjamin, A Treatise on the Law of Sale of Personal Property, London 1868, p 357-358; see also Smith v Hughes (1871) LR 6 QB 597
33 Carter on Contract [01-080]; Treitel p 9
of such appearances if he or she has no belief that the other party intended to contract.\textsuperscript{34} Assent may be denied if it is the addressee’s fault that the person allegedly manifesting assent appeared to agree to something he or she did not intend to assent.\textsuperscript{35} Assent can also be denied if the person allegedly expressing assent did not intend to assent at all.

Transposing the problem to the offer and acceptance model, acceptance must occur with knowledge of the offer and with the intention to accept.\textsuperscript{36} Generally, the accidental performance of the required act cannot form a contract.\textsuperscript{37} If an offeror stipulates a mode of acceptance that could result in mistaken acceptance, the occurrence of the stipulated act need not result in formation.\textsuperscript{38}

Although the full legal implications of an act need not be realized, users must understand what they are doing\textsuperscript{39} and have a choice not to do it - the click must be voluntary and intentional.\textsuperscript{40} A click serving navigational purposes must be distinguishable from a click serving to express intention or obtain a benefit. Its consequences must be obvious.\textsuperscript{41} In some situations it may be difficult to determine whether a particular click was intended as an act of assent or “only” as a method of obtaining a benefit, such as downloading software. The latter act could constitute assent to a transaction, similar to the act of selecting goods at a supermarket. If, however, the user does not know that a transaction is taking place, the click cannot express assent.

US doctrine speaks of a “reason to know” that an act will indicate assent to the other party.\textsuperscript{42} Again, absent a clear transactional context it may be difficult to establish whether a reason to know exists. The legal effect of a click, if any, will always depend on the objective evaluation of context in which it occurred.\textsuperscript{43}

\textsuperscript{34} Carter & Harland [111]
\textsuperscript{35} Scriven v Hindley [1913] 3 K B 564
\textsuperscript{36} Carter on Contract [02-080], Treitel pp 18, 36
\textsuperscript{37} Carter on Contract [03-270]
\textsuperscript{38} Cheshire & Fifoot [3.43] citing Magnum Photo Supplies Ltd v Viko New Zealand Ltd [1999] 1 NZLR 395
\textsuperscript{39} R A Hillman, J J Rachlinski, above at note 28 at 463
\textsuperscript{40} R Nimmer, Contract Law in Electronic Commerce (2000) 587 PLJ/Pat 1127 at 1155
\textsuperscript{41} See e.g. Federal Trade Comm v The Crescent Publishing Group Inc 129 F Supp 2d311 (SDNY 2001), where the fact that progressing within the site will result in charging the user’s credit card was not made obvious.
\textsuperscript{42} Nimmer & Towle para 5.03[1]
\textsuperscript{43} R Nimmer, above at note 40 at 1157
It must be remembered that contract law treats certain circumstances as giving raise to agreement – absence of subjective intention notwithstanding. Users should not be able to deny assent if they should have known what they were doing, web-merchants should not be able to take advantage of appearances they themselves created. Everything depends on the context: users may not perceive the situation as transactional when browsing a website, yet, the latter may contain terms regulating the use of the information posted thereon. As indicated in Chapter 9, whenever the context is not clearly transactional, web-merchant must meet enhanced notice requirements: the notice not only alerts to the terms but creates the transactional context.

When a person rushes into the supermarket and fails to note a sign placed on the door that the owner reserves the right to inspect bags as a condition of entry, this note may still be considered as sufficiently brought to the person’s attention and therefore legally effective. When a user impatiently clicks through multiple screens without paying any attention to their contents, he or she risks missing important legal information, such as notices. If one of those screens warns the user that the next click will be deemed an expression of assent to the terms of the website and if such screen can be regarded as reasonably bringing the terms to the user’s attention, the letter will be taken to have communicated assent by remaining on the website. In other words, the next click – theoretically performed for navigational purposes – may constitute assent. The enhanced notice requirements imposed on the merchant must be accompanied by the user’s obligation to slow down and read what is displayed. If the notice is prominent and the transactional context is clear, the user cannot deny the legal effect of his or her click on the ground that he or she was “just clicking through” and did not see the notice.44

A final point before proceeding: as clicks can (theoretically) constitute the functional equivalents of signatures, it may be tempting to apply the non est factum doctrine (i.e. the doctrine pertaining to documents mistakenly signed)45 to instances of accidental clicks. Such temptation can be justified by comparing the lack of familiarity with the meaning of a click to illiteracy – many users do not understand the “language” of the web-interface. In non est factum cases, however, the person signing knew that he or she was signing. The lack of knowledge related to the nature or effect of a document.46 In the current scenario, the person clicking is not aware that one click in a sequence of clicks constitutes assent. Absent intention there can be no signature, absent signature there can be no non est factum.

44 See also Chapter 3 [3.27] for a discussion of CUECIC Art 14 “Error in electronic communication”
45 The Law of Contract [4.111]
The Additional Click

[10.10] The limited expressiveness of clicks and the (alleged) risk of "accidental contract formation" gave rise to theories requiring an additional act of assent or enhancing the act itself.\(^{47}\) Allegedly, remaining on the site or downloading software are insufficient to express agreement. As the aforementioned acts are too ambiguous to constitute assent, a separate button labeled "I agree" (or similar) is required. There must be an additional act, separate from the expression of desire to obtain the product or service.\(^{48}\)

"Additional assent" theories derive from a series of US cases differentiating between so-called "click-wrap" and "browse-wrap" agreements. Click-wrap agreements are descendants of shrink-wrap licenses. The latter originate from the practice of packaging software in cellophane-covered boxes. The outside of the package often states that breaking the seal constitutes assent to the license terms; alternatively, the package contains a notice that terms are inside therefore retaining the software constitutes assent.\(^{49}\)

In click-wrap licenses, breaking the cellophane seal is substituted with clicking a button, which must be activated in order to proceed. Clicking the button constitutes a manifestation of assent. Furthermore, the button cannot be activated or, alternatively, the service cannot be used unless the terms are viewed. Browse-wrap agreements do not contain a separate "I agree" button and terms are usually accessible through a hyperlink. Allegedly, browse-wrap agreements do not invite any outward and unambiguous manifestation of assent: the terms are not unavoidable and no separate act of assent is required. Therefore, browse-wrap agreements are not enforceable.\(^{50}\)


\(^{48}\) In Specht v Netscape Communications 306 F 3d 17 (2nd Cir 2002) the court held that clicking "Download" did not indicate assent in the same way that clicking "I Assent" does, downloading being "hardly an unambiguous indication of assent." The primary purpose of downloading was obtaining a product, whereas "clicking on an icon stating 'I assent' has no meaning or purpose other than to indicate such assent."

\(^{49}\) ProCD Inc v Zeidenberg 86 F 3d 1447 (7th Cir 1996)

Some US cases and literature suggest that for on-line contracts to be enforceable the website must require an additional act of assent, preferably in the form of an "I agree" button, and the terms of the contract must be unavoidable. US cases do not always explicitly distinguish between formation and incorporation, the problem is usually discussed in terms of enforceability. There also seems to be a closer relationship between assent and the incorporation of terms – assent cannot be manifested absent notice and opportunity to review. Some cases if decided in Australia may have led to the result that a contract was formed but its terms did not become incorporated. For the purposes of this chapter, the only point of interest is whether under Australian law assent must be explicit or enhanced and whether terms must be unavoidable.

Proponents if click-wraps appear to discard any method of presentation, which requires minimal user activity. Unquestionably, terms that self-display are more likely to come to a user's attention than terms "hidden" at the bottom of the page. There is no principle of contract law, however, that requires that terms be unavoidable. A prominent hyperlink is equally effective as a self-display mechanism. Availability suffices. The bias against browse-wraps can be explained by the fact that in many browse-wrap cases the link to the terms was inconspicuous and their existence was not obvious. The problem was one of inadequate notice and lack of a clear transactional context, not unavoidability or lack of assent.

Allegedly, clicking the "I agree" button creates awareness of the contractual situation. Following this line of reasoning, the more acts must be performed, the clearer their meaning and legal effect. If, however, the legal effect of the click is not communicated prior to the click, users may activate the "I agree" button without contractual intention. It is not a question of enhancing or duplicating the manner of assent but of notifying the user about the existence of terms, which prescribe the act of assent. The latter may provide that remaining on the site, or using the service, constitutes assent to the terms and to the contract. While clicks are unquestionably less explicit than signatures or handshakes, it is the less explicit transactional context or the failure to communicate terms that is the main concern – not the form of assent.

51 See Chapter 9 [9.25]

52 In Polistar v Gigmania Ltd 170 F Supp 2d 974 (ED Cal 2000) the notice was in small gray text on a light gray background and provided a link to the terms, the link was not underlined; in Specht v Netscape Communications 306 F 3d 17, the link to the terms was placed on the bottom of the page and required scrolling. See also: Ticketmaster Corp v Tickets.com Inc 2000 WL 525390 (CD Cal 2000) assent was held inadequate as the hyperlink to the terms was not prominent.


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Just as there is no legal requirement that terms be unavoidable, there is no legal justification based on *contractual* principles for an “additional” act of assent: on-line contract formation does not hinge on the existence of an “I Agree” button.\(^{54}\) The act of downloading can be executed in order to obtain the product and express assent. Remaining on the website and clicking and “I agree” button constitute equally valid manifestations of intention. In both instances, assent takes the form of a “click,” in both instances, its meaning derives from the context or the terms. The click must be performed with a reason to know that it will be objectively interpreted to mean something other than navigation.\(^{55}\) Terms need not be read, viewed or understood. It must be clear, however, that contract formation is taking place. The fact that the user knows about the terms and proceeds with the transaction indicates that he or she accepts them.\(^{56}\) Assent must be informed - not only in the sense that a person must know what he or she is consenting to but how to express assent.\(^{57}\)

The topic of “clicks” cannot, however, be abandoned without admitting that in some circumstances an enhancement of the click is warranted. Such will be the case when a click aims to replicate the functions of a signature for the purpose of meeting a *formal* requirement. Laws establishing formalities seek to alert the signatory to the potential consequences of his or her acts.\(^{58}\) Signatures often perform a cautionary function.\(^{59}\) The fulfillment of the ceremonial or protective functions of signatures may require that assent be explicit and involve a more complex action, such as typing in a code.\(^{60}\) Similar requirements may be dictated on consumer protection grounds.

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\(^{54}\) *Nimmer & Tolwill* para 5.03 [4][a]

\(^{55}\) D Davidson, *Click and Commit: What Terms are Users Bound to When they Enter Web Sites?* (2000) 26 Wm Mitchell L Rev 1171


\(^{57}\) See e.g., E-commerce Directive Art 10 (2) that “Member states shall provide in their legislation that the different steps to be followed for concluding a contract electronically shall be set out in such a way as to ensure that parties can give their full and informed consent.”

\(^{58}\) See V Gautrais, *The Colour of E-consent* (2003-2004) I UOTTL T J 189 who stresses that while a click can constitute a valid expression of assent, “it is wrong to accept it without addressing the medium’s particular features,” at 200 and suggests that assent should be “explicit.” at 210


\(^{60}\) such requirement may also result from the provisions of model regulations which require that functional equivalents of signatures deploy reliable methods of identification and of expressing intention.
Conclusion

[10.11] There is no need to duplicate the act of assent or require that it be explicit solely on the ground that transactions are taken on-line. Intention can be expressed by any method of interacting with the GUI. The legal effect of such method will always derive from the surrounding context. Clicks are as valid a method of expressing intention as emails and websites. There is no need to create novel rules for online contracting. At the same time, the dangers of the novel transacting environment must be acknowledged: the transactional context may not be obvious, be it due to the ease of transition between websites or the novelty of online business models. It is a question of enhancing the notice of the terms' existence, not one of enhancing the act of assent. Terms need not be unavoidable. They must, however, be brought to the attention of the other party – especially if they prescribe the form of assent. In the latter instance, the failure to incorporate terms may be synonymous with the failure to form a contract: if the web-site user did not see the terms, it can be assumed that he or she did not know that one click in a sequence of clicks will be taken to constitute assent. The validity - or existence - of assent is therefore closely related to the effectiveness of the incorporation procedure. Remaining on the website can constitute as valid an expression of assent as a signature provided that the user knows that his or her continued browsing is subject to a set of terms. There is not justification based on contract formation principles to introduce a division into browse-wrap and click-wrap agreements.

Due to the objective evaluation of intention, users may not be able to deny that their clicks constituted assent to an agreement. While web-merchants must not take advantage of appearances they themselves created, users must exercise more caution when browsing the web, especially if the context is transactional.
Chapter 11

Conclusions

This thesis discussed the implications of Internet technologies for the process of contract formation. It attempted to present a more realistic view of networked communications based on the client-server model. It also attempted to determine what additional factors must be taken into account when applying the offer and acceptance analysis in the on-line environment.

The conclusions arrived at in this thesis are simple: the idiosyncrasies of open electronic networks must be taken into account when establishing the existence of agreement, its contents and its parties. The differences between the traditional methods and the on-line contracting process must be acknowledged. These differences, however, do not necessitate a new taxonomy of contract law, the introduction of new principles or any major modification of the offer and acceptance model. Textbooks on contract law need not be rewritten. The basic principles of contract law remain intact – irrespective of whether the contract was formed in a brick-and-mortar shop, at the negotiating table or by means of an interactive website equipped with server-side scripts.

Intention and consideration remain as the foundations of agreement. Analysis in terms of offer and acceptance remains a viable analytical tool. Contracts formed in open electronic networks are valid and enforceable because intention can be manifested in any manner and because formal requirements are in the modern law of contract the exception, not the rule; issues such as what constitutes “writing” are therefore of marginal significance. Although open electronic networks enable new methods of communication, they do not require the establishment of a parallel legal regime of contract formation.

The novelty of the transacting environment must, however, be both acknowledged and accounted for. The fact that textbooks on contract law need not be rewritten does not mean that the specific features, which characterise the on-line contract formation process can simply be ignored. These features relate to how contractual intention is communicated, or - to be more precise – transmitted and presented. Additional considerations arise with regards to the process of attribution.
Lawyers need not study textbooks on networking and data communications in greater detail in order to analyse the on-line contract formation process. They must, however, understand the client-server model, the concept of "layers" and the basic functioning of the communication methods enabled by open electronic networks. Above all, lawyers must not make assumptions which are based on a misunderstanding of the features of the on-line contract formation process. Analogies drawn by reference to the postal or the telephone systems may lead to incorrect results and cause prejudice to the contracting parties. Lawyers and judges must be more "technology-sensitive" in order to determine which technological factors merit attention from a contract law perspective. The skill lies in being selective and not over-inclusive. The challenge lies in recognizing those aspects of networked communications that must be included in legal analyses. Another challenge is not getting carried away by technology.

Many of the existing problems, relating mainly to the incompatibilities between client applications and network environments of the contracting parties, will in time disappear. The Internet is still in its early days and many aspects of networked communications are still in their formative phases. In many instances it is too early to generalize or to give definitive answers.

To date, courts and legal literature have often failed to show any genuine appreciation of the complexity of issues arising with regards to networked communications. There has been a tendency to throw "all things Internet" into a single intellectual bin, with no distinctions being drawn between the various communication methods. From a contract law perspective, there is no Internet. There is email, there is the web, there are instant messengers. There are clients and servers; there are differences between the network environments and there are security concerns, which often translate into increased risks of non-delivery and the right to reject communications. All these factors introduce an additional layer of analysis.

In the majority of circumstances analogies are possible but somewhat futile because they do not facilitate the application of contract formation principles. Functional equivalents share a similar fate, the best example being digital signatures. The energy used to create analogies and functional equivalents is better spent on developing rules for allocating communication risks in heterogeneous network environments or determining the legal status of ISPs — part of the transmission infrastructure or part of the originating/terminating information system?
The automation of the contract formation process does not warrant any change to the law of contract. Theoretical "obstacles" to the validity of computer-generated contracts are easily removed or non-existent. A person is liable for any output, which originated from his or her computer. The protection from unplanned output and the limitation of the computer user's liability are achieved on the basis of the objective theory of contract or the principles of mistake – without recourse to agency or separation theories.

Difficulties of remote authentication and the resulting problems of attribution can be relegated to questions of proof and evidence – not contract formation as such. Digital "signatures" are not signatures but a remote authentication technology based on a hybrid cryptosystem. Their role in identifying a contracting party is limited. Most importantly, their relevance to the success of e-commerce is negligible – at least from the perspective of individual users contracting on an inherently insecure network absent pre-existing agreement that would allocate risks for the unauthorized use of the private key.

The speed of transmission and the general acceleration of the contract formation process in the on-line environment should not be mistaken for presence. The fact that a message travels at a fast speed does not imply that the interactions between the parties are, as a matter of law, between parties dealing face-to-face. The over-zealous approximation of communications at a distance with those occurring face-to-face must be criticized. It takes more than instantaneous transmission to create a functional equivalent of presence. Additional factors are reliability, risk allocation and the two-way nature of face-to-face interactions. The simplistic division into instantaneous and non-instantaneous methods of communication is unhelpful. The focus must also be taken off the device used in the communication process and placed on the characteristics of this process. The key words are "on-line" and "real-time," not "instantaneity" or "control." As each Internet-based method of communication differs in terms of immediacy, reliability and accessibility it is impossible to subsume them under one rule. It is also unhelpful to adopt a wholesale approach and speak of "electronic communications" in general.

The web-environment often increases the likelihood that contracting parties will be in disagreement as to what was actually said and done during the formation process. The differences in how intention is manifested introduce more uncertainty or complexity into the process of ascertaining the contents of a contract. The distributed nature of the contents presented on the web renders it difficult to determine the words that define the obligations of the parties. The interlinked character of HTML files makes it difficult to determine the source
and scope of particular statements. The overabundance of “writing” - an unforeseen side-effect of broad definitions and a liberal approach as to what can constitute a “written document” – does not facilitate the application of those contract formation principles that assume that writing is accompanied by a tangible carrier. In the absence of a statutory definition, ultimately, whether a given website, email or instant message constitutes “writing,” is a question of fact and intention and – according to the model laws – the code the message was written in. On-line contracts create challenges not because of their electronic form but because many contract formation principles pre-suppose the existence of paper and assume minimal permanence or stability of their contents.

In light of the cognitive difficulties created by the web and the ease of transition between different environments (i.e. from purely informational to transactional) the transactional context must often be created by a notice that the use of a particular website is governed by a set of terms. Notice must be adequate, terms must be available. A separate (or additional) act of assent is, however, not required. Both “notice” and the “availability” of terms must be tailored to the novel environment. Web-technologies provide the perfect tools to ensure both. Accordingly, instead of demonizing the “electronic form” of on-line communications, the focus must be placed on those technologies which can serve to better communicate contractual terms.

Last but not least, the importance of incorporation procedures must be appreciated. The communication of terms often determines the existence of the contract. The effectiveness of incorporation presupposes not only “notice” and “availability” but also the ability to determine the precise moment of contract of formation. The close interrelationship between the effectiveness of acceptance, the incorporation of terms and the existence of a contract becomes more visible in the on-line environment. The introduction of communication rules into terms governing on-line transactions can be regarded as an attempt to counterbalance the “openness” of the on-line environment and the multiple novel risks introduced thereby.

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