DECO1013: Sound Design & Sonification
Assignment 1: Functional Sound

Context
The sounds were designed to aid retail check-outs at stores using the Surefire POS system. The specific store used as a case study for these sounds was the Liquorland retail chains. The sounds in the example not only aid the sales assistants but also help customers. There are three different speakers that are able to produce the sounds: the EFTPOS machines, the scanner and the workstation (see figure 0.1 on page 3). By using a specific speaker the target users can better be reached and can also help emphasise specific sounds.

Functional Sounds:
1. EFTPOS to be switched to offline mode
The “Offline mode” sounds was designed to sound when the EFTPOS systems are offline. This is caused by heavy winds, maintenance and hardware malfunctions. There is currently one visual aid, but it is not easily picked up by the operators (see figure 1.1 on page 3). To aid in alerting the operator to this the “Offline mode” sound was designed.

Whilst it is not urgent that the operator deal with this straight away it is important that the operator is alerted to it before serving customers. When the EFTPOS systems are offline it means that there is no direct connection between store EFTPOS systems and banks, so customers can potentially spend money they do not have. By alerting the operator to this problem they can ring maintenance and get the system reset before having to serve customers.

The sound is not sharp but rather a smoother sound that consists of a tone that steps down. This “Step down” gives the filling of something being disconnected. The first note is held for longer than the second note, and when the alert reaches the second note there is also a small thud, this helps in giving the sound a specific and unique function. When in use with the Surfire Pos system the sound will be repeated every 20 minutes until the operator takes actions. The long time between the sounds is because it is not urgent that the operator takes immediate action, but gives the sound an informative action rather than an urgent action.

2. Specials sound
The “Specials sound” was created to sound through the scanner whenever an item that is on special is scanned. Currently all items sound simple dull “Beep” when they are scanned. This sound is brighter than the current sound and is created to be unique from the beep in that it has a bright echo added to it. However the sound also incorporates the current beep at a higher pitch, this is to allow the users to know that the sounds are from the same family and both serve the same function.

The “Specials sound” is not an urgent sound but rather an informative sound. The need for the sound is to mainly inform the customer the product is on special. (Liquorland work stations do not have a screen that shows the customers items that have been scanned like at Coles or Woolworths). Before the creation of this sound a customer would not be aware if their product had scanned at the “special” price until they got their recite back after the transaction had taken place. This sound allows the customer to question during a transaction if a product is on special rather than after and will reduce the number of refunds done by operators. It is also important to understand the specials
change each week so it is not possible for the operator to take note of every item on special so also aids them in customer assistance.

3. Cash Payment
The “Cash Payment” is designed to sound like a coin dropping it uses the same note with small changes made to it and slight sounds added to create this feeling. The cash payment sound will sound when the operator presses the “Cash payment” button (figure 3.1). This sound is informative to the operator. It was designed to help prevent operators pressing the wrong button. Towards the end of shift the operators sometime get into a routine of pressing the same button, with this alert it will help inform them of what they have chosen. The sound was designed for a cash payment because an EFTPOS transaction can easily be cancelled after the amount is entered, where as in cash payment a refund needs to be done to if the amount is already entered. Currently the only visual aid once the operator has selected the payment type is small text in the corner of the screen (see figure 3.2). This will help reduce operator errors and improve both customer service and efficiency.

4. Swipe card
The “Swipe Card” sound was created as an audio cue to the customer. It will sound from the EFTPOS machine and it is designed to cue the customer the machine is ready for them to swipe their card. It stops the unnecessary need of customers standing around waiting for the operator to tell them to swipe their card. There is also a visual alert for the customer on the machine but this is often undescriptive and the customer usually waits for the operator to tell them to swipe it. (see figure 4.1).

The sound was designed to sound similar to a customer swiping their card. The sound is almost like a train passing, it starts quiet becomes louder then fades off again. This creates a soft smooth sound, so as not to startle the customer as it is not an alert but more a functional sound.

5. Two Key
When working in retail it is important that your till is kept at a minimum float. This is to deter robbery. A two key movement is when cash is cleared from the till to the safe. At Liquorland the maximum amount of change is between $300-500, once a till starts to go over this it is up to the operator to clear the change from the till. However when clearing change from a till the operator is not allowed to clear more then $400 at a time. During a busy period it is hard to remember how much is in an operators till. There is a visual aid to inform an operator that a two key needs to be done, however this visual alert often appears premature.
The two key noise is used to help inform the operator of how urgently their till needs to be cleared. This is done by repetition. If only a small amount needs to be cleared the alert will repeat only every 5 minutes however as the urgency for a clearance increases the time between the repeat will decrease, forcing the operator to clear their till to a safe level to stop the alert.
The two key sound is very unique but holds similarities to an alarm. The sound will come from the workstation its self. The sound fades in and is actually 2 sounds overlayed, this helps create the uniqueness of the sound. The 2 sounds consist of a shaper sound and a smother sound, this prevents startling the operator but also helps keep the urgency factor. The speed and shortness of each note also aids in creating urgency.
0.1 Speakers in the workstation, EFTPOS machine and scanner.

1.1 Offline mode visual

3.1 select cash or EFTPOS

3.2 Visual alert

5.1 Visual alert