DECO 1013: Sound Design & Sonification
Assignment 1: Functional Sound Design
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Context of Auditory Alerts

The 5 auditory alerts designed are intended for moments of emergency or urgency, but more specifically for an environment such as an airplane cockpit. The alarms are likely to be produced by small devices placed within the vicinity of the listener(s), which is suitable in the relatively small environment of an airplane cockpit.

The alarms do not need to be excessively loud as the pilots are essentially in the middle of the small area, but do need to be attention grabbing depending on their priority of urgency. In these moments, it is essential to consider the listeners (in this case the pilots) point of view such as his/her stress and ability to listen in a moment of panic.

Alert 1

Alert 1 is of relatively high urgency, however it has been designed so that pilot can hear other alerts occurring in the cockpit. Alarms are repetitive in nature so that they grab the attention of the listener. This alarm could be used for anything specific to any risks or dangers when flying, such as stalling, low fuel or low altitude (however this would probably require an alarm of more urgency).

All alerts were designed using the Vacuum plugin available in the ProTools software. For this alarm, there wasn't much of a design process utilised (more or less experimentation and tweaking until the desired sound was produced). The aim was to create a sound that 'felt' like it could come from an airplane cockpit of fast pace. Tweaking of the age options was essential in producing some of the alerts, however the dust option was rarely used as the sounds needed to be electronic sounding.

Alert 2

Alert 2 is a rather generic type of sound, similar to an alarm clock. The high pitch characteristics of this alarm allow it to be noticed easily, yet not too attention grabbing that other auditory alert cannot be heard. This alert is suitable for minor emergency situations. One of the presets was used (Hollowed) to have a starting base on which to tweak the sound.

Small tweaks were made to the oscillators, pitch bend and modulation wheel to create a distinctly different sound.

Alert 3

This alert is different from the other ones in that it does seem slightly out of place for an airplane cockpit. Initially conceived for a more generic alarm such as in a power station, it was created to be an almost irritating sound, making it quite attention grabbing. The sound can be rather overwhelming when used in conjunction with other alerts, so alarm 3 is probably the least fitting of the five.

Alert 4

Alert 4 is the product of an extension of the context of the sounds to not only emergency alarms but to other situations. This sound could be used by the on-board computer in the cockpit in specific events, such as invalid input. The sound's characteristics are familiar to

that of invalid input events on computers (a short ‘stubby’ and fat sound). This alarm did not need to be long, so any variations in tone were not necessary.

Alert 5

Alert 5 was created to be for a high priority/emergency situation. The sound is distinct, though based on alarm 1. Fast paced, and varying in tone, it would be used in a situation where the problem must be solved ahead of any other. Generally this would be used in cases where the flight is in danger, such as possible collision, excessive speed or extremely low altitude.

The alarm itself is rather stressful, which is one of the major issues when designing sounds for a cockpit. All decisions by the listener must be made in real-time, and the nature of the alarms designed do not aid in calming the individual.