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Assignment 1: Functional Sound Design

Deco1013

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The Context: Overclocking/Computer alert system

The five sounds are designed as an alert system to assist an overclocker, or a hardware technician in troubleshoot the reasons why the computer is not stable. The five functions I have decided to go with are: Overheating warning, Loose component, Water leak, Unstable overclock and Stable overclock. When I refer to overclocking I refer to pushing a processor past its factory limits. These five sounds will allow the user to identify the problem with their computer or overclock as well as alert the user to any serious issues such as their water cooling solution leaking.

Sound 1: Overheating

The overheating alert sound is designed to warn the user that their processor has overheated. Although this can be a major problem, it is an issue that comes up for every overclocker on a regular basis, as a result the sound alert has to be noticeably, but not irritating to the person's ears. The goal of the sound therefore is to be audible enough and obtrusive enough to be heard and noticed, but must be able to be listened to for periods upwards of a minute without driving the user crazy.

The way I have designed the sound is at a relatively low pitch, as well as a slow rate, in combination with a dull sound as to achieve my goals for this sound. The sound is also four notes then a pause, rather than a continuous irritating sound. Its characteristic is a fast attack to a slower release.

Sound 2: Loose Component

The loose component warning alert's purpose is to explain to the user why their computer is not starting. If this alert sounds the user will immediately know that a component is not connected properly and must immediately take action to correct this problem. In contrast to the overheating alert, this sound is designed to be obtrusive and irritating until it is turned off. The reason for this is simple, a loose component can result in damage to the computer, the component and even the user themselves.

As a result the sound is a high pitch, with a fast rate. The sound also has a pause between segments of beats like the Overheating alert, but its rationale for being so is different as it is used so the user does not ignore the alarm allowing it to become background noise. The attack and release are both very fast, with the decay and sustain relatively stable.

Sound 3: Unstable

The unstable alert refers to when the user has overclocked the computer's components too far, or has not compensated the voltage to allow for it. It notifies the user that a computer crash is imminent. However this is an alert that an overclocker has to deal with on a regular basis much like overheating. As a result its function is simply to notify them with a simple sound that doesn't recur when they are running diagnostics.

The sound starts high and goes low in three tones, it is designed to create a negative feeling that the overclocker has failed. Its design sounds very synthesized to represent it being a problem with the computer.

4: Stable

The stable alert has a similar function to the unstable alert, but the difference is obvious. The sound notifies the user that there overclock is stable, and successful.

The sound ends on a positive note, that is designed to reward the overclocker, the sound will eventually be associated with success, and will be what the overclocker is striving to hear. In contrast to the unstable sound, the stable sound, sounds almost instrument like and creates a pleasant sounding chime.

Sound 5: Water Leak

A water leak is the worse case scenario that an overclocker, or computer enthusiast has to face. What it means is that the water cooling system has sprung a leak, this could result in the entire system being fried, as well as the user being electrocuted. On hearing this alert the user would have to cut the power immediately and find the leak before thousands of dollars of equipment are destroyed.

The sound will be the loudest and most obtrusive of the 5 alerts, it is designed so the user immediately recognises that the water is leaking. The sound is a two toned high pitched alarm, that is not too different to the sound of an ambulance as it symbolised emergency. The sound also gradually gets louder forcing the user to respond. I have also added noise in the background of the sound to help make it stand out from the other alerts.

The Simulation

In the simulation first the user has a loose component warning, after this is solved and the computer is rebooted, they find it is unstable, followed by an overheating warning. Once this is solved and the computer is rebooted again, a water leak occurs. Finally when all the problems have been solved the stable sound sounds. The simulation is designed to recreate a basic overclocking process. The simulation includes commentary.

It was created by bouncing the sounds out of Pro Tools, as well as the commentary which was recorded in pro tools, and edited in soundtrack pro. The overclocking process is simulated through the use of recorded key strokes.