

Functional Sound Design

The design I made for this particular assignment is sound alert for submarine environment. I have designed five different types of alert based on its own scenario, which I will explain in detail how it works, functionality, research for each sounds and technical justification. The alert I designed mostly when the submarine facing critical condition such as battlefield and technical issue.

Entering Battlefield Alert

The first sound alert I designed was in the situation when the submarine entering battlefield to engage its enemies. The function of this alert is to inform the crew to standby on their own sector and prepare to engage dangerous situation. The sound I created for this particular situation consists of three short high pitch alert followed by a long one. It starts off with a low fade in and it climbs up. The reason being I'm using a fade-in feature is to prevent panic. Psychologically human brain will think that there's a danger happening and they need to move fast and take action. How fast they will react it depends how fast is the signals repetition and how fast the pitch climbs up. I took consideration in this issue and applied it to my alert. I set the FINE control to maximum and RANGE to 8. The DEPTH I turned it all the way down to - to give the fade in at the beginning of each signal. How I created this sound is basically manually clicking on the very right button three times and hold. With this alert, my assumption is that it will not last longer than 15 seconds to prevent annoyance.

Lock-On Torpedo Alert

For this alert, I divide it into two different stages. The first few seconds beep of this alert is to inform the submarine that they have been locked-on by the enemy and the second stage is when an object with high speed heading towards the submarine. This alert will create the atmosphere that danger is closing in and as it comes closer the beeping will speed up and create a very intense situation. The reason being is the captain has to make a quick decision to prevent the object from colliding. The sound I created for the lock-on warning begins with powerful and heavy beeping. As for the object closing in, I made a strong two different pitch beep (high and low) continuously beeping one after another. As the object closing in, the beep will pick up the pace that indicates the time limit.

Intra-Call Alert

I decided to create this communication alert based the environment of the simulation that requires people to work together as a team. And I believe communication holds an important issue. Undelivered message can be crucial therefore we need a properly design alert that stands out even with loud background noise. The sound is very distinctive and very repetitive with less than a second gap each time. It has two different pitches, which starts off with high then followed by low pitch. This is the only alert that I added vibration to

distract people and gain their attention. I'm assuming that this alert will be set to maximum volume to be able to break the other alert in the background.

Attention Required Alert

This alert only plays up in the area that requires attention. Specifically designed only for a certain area that critically damaged during an attack. This particular sound has an extremely high pitch noise that stands out from all the loud background noise. In the scenario this alert will remain for a certain period of time until the incident has been overcome or has been turned off by the team leader. The sound starts from a very low powerful pitch and followed by an extremely high pitch. It is in the scenario can be a very surprising alert that may cause panic but that serves its purpose to convey the message that the incident can be fatal if its not taken care of as soon as possible. Assuming the submarine has speakers near all the doors and intersection, this alert will only be played on a certain speaker that will lead to the incident area to give the crew some sort of a guide.

Evacuation Alert

This alert is a signal when the submarine sustains heavy damage and it might endanger the crews inside it. Therefore it when this alert is playing, all the crews have to go towards the evacuation area and be ready to evacuate. The alert will work the same was as the "Attention Required Alert" which helps the crew to navigate to the evacuation area just by following where the sound comes from. I designed the alert to be more powerful than the other alerts but not as repetitive as the others to prevent panic during the evacuation process. The alert has a strong long background noise with repetitive sirens. This alert is the only alert that has 2 different notes playing at the same time to make it easier for the crew to differentiate between the rest of the alert.