

Doplor

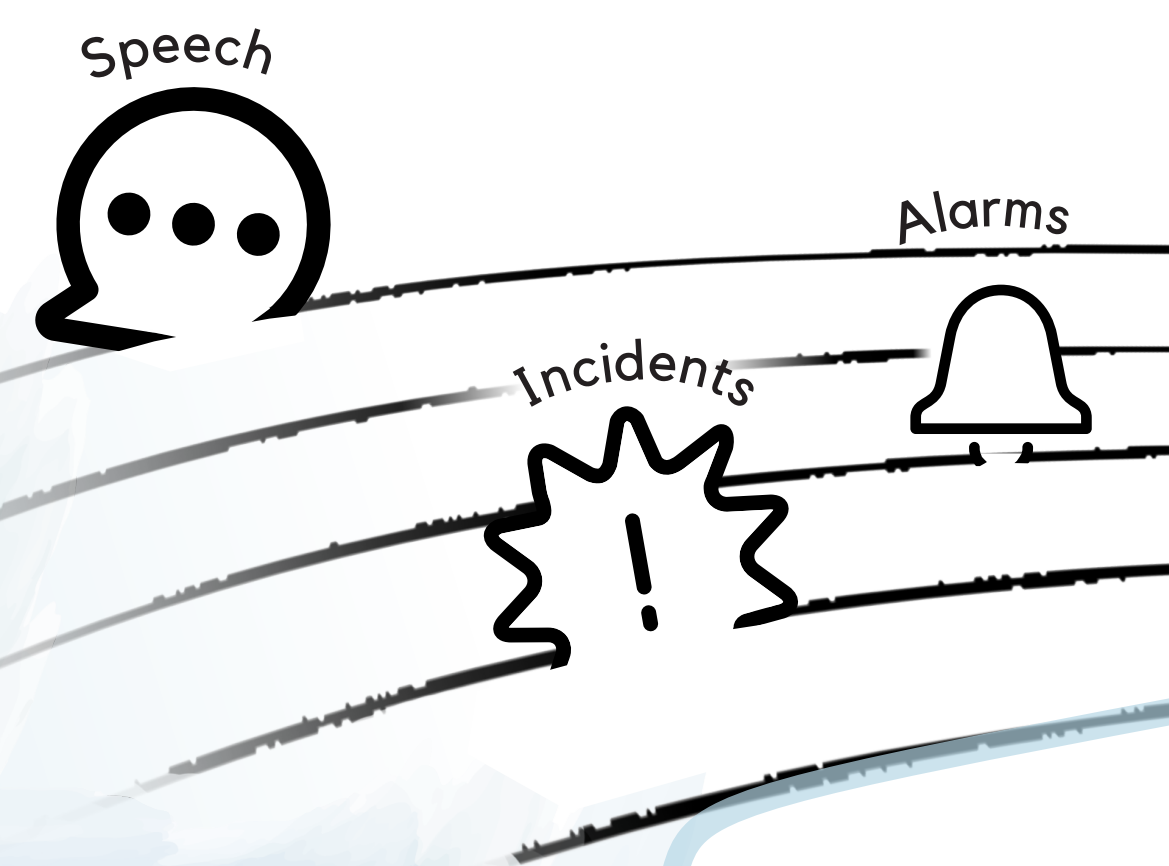
translating disturbing sounds into artful warnings.

Most noises in the Intensive Care are caused through nurse behaviour, but the nurses are unaware of that themselves.

Being a patient in the Intensive Care is a chaotic and uncertain experience. During this time it is important to sleep properly, only then the recovery from a critical state becomes more effective. Unfortunately sleeping is not always possible. Alarms and other sounds prevent patients of getting into deep-sleep, even though nurses were aware that sleep in patients is of great importance.

When investigating the sounds in the Intensive Care, a total of four different sources were found: background noises, alarms, speech, and incidents. Interestingly enough, three of the four causes of

auditory disturbances were found to be induced by nurse behavior. It was not the case that nurses deliberately were loud, they simply did not hear the sounds of the IC anymore. Nurses were continuously surrounded by noises of all sorts, making them immune to disturbing sounds. Instead of only suffering from alarm fatigue, nurses seemed to suffer from a complete sound-fatigue. This unawareness of what interactions caused noises showed that nurses were in need of a reminder, indicating the auditory quality.

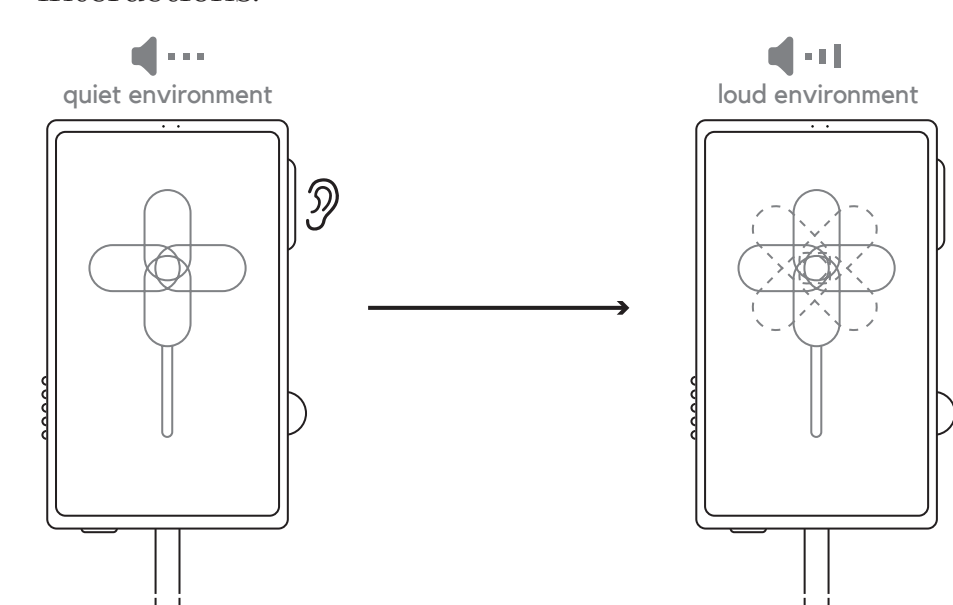


Introducing artful warnings is envisioned to increase nurses' auditory awareness.

To get the nurses' sensitivity for sounds back, Doplor was designed. Doplor is like an artork, showing how the auditory environment has been.

Sensors measuring decibels in the IC environment are implemented inside of Doplor. Streams of decibel-data are sent to Quietyme, an American company, where an algorithm calculates how many conversations, incidents and alarms occurred during the past hour.

Using these calculations, Doplor decides what sort of artwork to display. Generally speaking the artwork gets more hostile as the environment gets louder. Except when an emergency has occurred, then patient safety is obviously prioritized over auditory quality. By introducing Doplor in the IC environment, nurses understood that sound is an important aspect of patient recovery. When tested the nurses also expected themselves to be more mindful in their interactions.



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