

# Silent Information

Almarzooqi, Khalid (School: Emirates Science Club)

Science has already proven that Noise (i.e. Sound Pollution) in public spaces is not limited to the sound originating from other space users but also from administrative audio warnings & notifications. We decided to follow the route of Selective Audio Messaging. In our research, we realized that speed of propagation of sound varies based on the source power, as well as nature of material. In this project, we have conducted multiple experiments on different materials to explore this area. In this project, you can find a documentation of our procedures & results in order to reach a prototype for a system that communicates audio warning messages & directions in public spaces, by the use of directional speakers that communicates the message in selective regions / spaces. The system is complemented by a series of sound transducers that transmit sound through solid material (rather than air), thus allowing for humans to selectively listen to the transmitted sound messages by approaching the physical material; e.g. train window, signage pillar, airport, etc.