



what is undersound

undersound is a new way of experiencing the city, an interface that uses your mobile phone to connect you to people, music and the underground stations you pass through every day. It is part personal, part public and all about the tube. **undersound** is a way of listening to, distributing and affecting the flow of music in the underground that goes beyond just the music itself. It allows you to see your journeys, the people around you, and the tube itself in a new light.

undersound, which is currently at the stage of a conceptual design, will be implemented on an innovative and dynamic wireless network which is being developed within the EU-funded project Bionets. Bionets seeks inspiration from biological systems to provide a fully integrated network and service environment that dynamically scales to large amounts of heterogeneous devices.



sense of place

undersound will be spatially distributed at individual stations and throughout the wider tube network. I can add music to the system at upload points in the ticket halls, and I can download tracks on the platforms. Architectural configuration of the stations affects my experience of contributing and downloading music as the proximal nature of the interaction with these situated points requires myself and other **undersound** users to congregate at certain locations within the station for the purpose of interacting with the system. Each track in the **undersound** system will be tagged with its place of origin (the station where it was uploaded) and I can see this information as the track is being played. This may trigger memories and musings around my personal relationship to that place.

Is there also a correlation between the flow of people around the tube network and the flow of music tracks around the **undersound** network? What might a sense of place be for these digital artefacts be? Do they care about geographical location too or might their sense of place revolve around the quality and type of network and the technological devices they pass through?



localised interactions

While in the carriages of the tube, I can browse **undersound** music of other people in range. Because the system will be gathering metadata on the stations where the track has been (via uploading/downloading at the transfer points) and thus its spread within the network, the time it has been in the system, the number of times it has been played, the number of people who have played it, and so on, I will be able to see this information when I look at other people's music. I can browse through other's tracks anonymously, but if I decide to download a song from someone else an alert will be triggered on their phone letting them know that I am grabbing one of their tracks. In this way, I cannot take a track from another passenger without them knowing—there is a social cost. It is possible for them to ignore the act altogether, but in keeping with much of the tacit interaction which tube riders engage in, we hope that this will provide an acceptable social opportunity to connect with another person. This sharing of music would not violate current social practices and would ideally afford new ones.



emergent large-scale flows

Each of our local interactions contributes to a broader trend, and **undersound** embraces that fact. Every time I listen to a track, drop one off at transfer point or download music from someone else, I have an effect on the overall state of the system. Not only is this reflected in the rankings of the tracks that I see as I browse through the lists of available music from download points and people's mobile phones but it will also be incorporated into public displays which are installed in each of the stations. These displays will serve to convey the most recent state of the **undersound** network - the journeys and lifetimes of the tracks. Each station's display will uniquely reflect information pertinent to that station so that users are presented with a quick visual overview of what the station has to offer. The display will function as a visual representation of the sum of all the individual actions that shape the **undersound** network. Through the stories that each of the tracks tells us, I can now see that my personal choices have a global effect and, if I so desire, I can alter my course of action with this new knowledge in hand.

