

Talk and sound : audible phenomena and the design of novel technologies for collaboration

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Aims & objectives

- To understand the practices of researchers and practitioners
- To develop qualitative methods and models to inform the design of new technologies
- To build innovative technologies to support collaboration

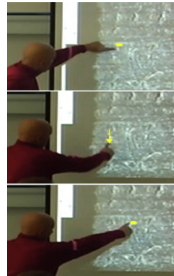
Approach

- Interdisciplinary studies: social and computer sciences
- Video based ethnographic studies of work and technology
- Range of settings
- Talk, the visual, the material and sound
- Prototypes and technical interventions

Case studies

The study of ancient documents and manuscripts

- Scholars practices for understanding ancient writing
- Animating how the stylus may have been used through talk and visual conduct
- Sounds for emphasising the activities around carving writing into a wooden tablet



Animating the handling of the stylus.

"He stabbed his stylus in – and then gone down – BOMP – And then he's done it again"

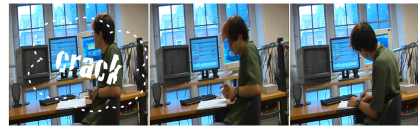


Tracing letters with the new system.

"So there and then curling to the left and then back – It's very – I've never seen an 'F' like that before"

Conducting hybrid earthquake experiments

- Importance of sounds for monitoring progress of experiment
- Recording properties of sounds
- Awareness of different qualities of sounds

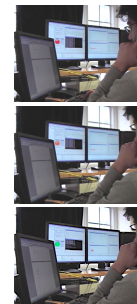


An audible indication of cracking.

Good (.) good to go
(31.0)
>You alright<
You alright (in) there?
Yea, yea we're good to go now

Interleaving audible & visual activities

- Visual - cracking of specimen
 - graphs "tell you what's happening" and visual inspection verifies the graph
- Audio - sounds suggest breaking
 - researchers note the time of cracking
 - assess how smoothly the hydraulics and actuators are operating
- Ambulatory - checks around the test rig
 - walking around the rig to check for unwanted rig movement



Coordinating a distributed experiment.

Talk and collaboration in work practice

- Complex and noisy work setting
- Multiple sound resources
- Monitoring relevant talk and sounds in the local environment
- Implicates actions for colleagues
- Distinguishing sounds from noise



Overhearing other's activities.

S: Hanson twenty of an eighth (forty by fifteen)
Shearson on the bid
T: Do you want to hit them?
R: Um Yes
R: Who's that? Rene?
S: Yes
R: Do we want to sell forty
We want to sell forty five don't we?
T: Give them the lot

"The howling of the wolf, the grunting of the hog, the braying of the ass, the nocturnal wooing of the cat, all these in unison could not be more hideous than the noise which these beings make in the Stock Exchange"

Anonymous commentator
London 1695

Further research

Analysis

- Embedding sound in talk and visual conduct
- How sounds facilitate collaboration
- Utilising different qualities of sound

Methods

- Developing technological interventions in settings that rely on audible phenomena

Design

- Supporting distributed collaboration through sound

References

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