INTERACTION SPACE

How can interaction spaces be described to help the design of Experience Labs?

BACKGROUND

The health and care environment is subject to many new technology developments supporting patients and families, and health professionals. An interesting aspect of these developments is the role and position of new technologies within the interaction space between humans.
Current understanding of the interaction space is strongly influenced by the philosophy of phenomenology as first described by Edmund Husserl and Martin Heidegger in the early 20th century. According to French philosopher and phenomenologist Maurice Merleau-Ponty perception is inherently (inter-)active; it is a reciprocal interplay between perceiver and perceived [1]. Interaction in that sense can be interpreted as a conversation unfolding, where the live experience of being in the world is providing the means to interact.

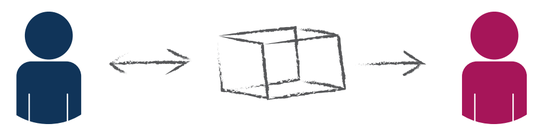
In design theory this phenomenological view is deeply embedded in Designing for Quality in Interaction [5]. Interaction design is shifting from designing for a cognitive model of goals to design for intuitive and engaging interaction [2,6].

PROJECT CASE STUDIES

A number of projects which have been undertaken by the Experience Labs illustrate the potential role a 'technology' can have in interpreting and facilitating interaction between humans. The project case studies presented here are simplified to focus on the interactive element.

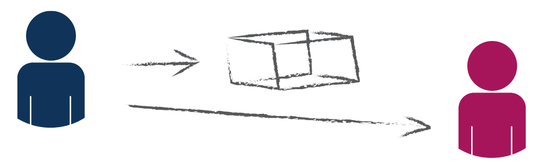
Diagrams below show a proposed solution-space or a combination of proposals within a project. Generally the problem-space in these projects exist without a form of technology. The Experience Labs are creating the environment for people to articulate experiences of the current interaction space as well as help them understand the effect of proposed new technologies. The Experience Labs help to unpick the 'conversation unfolding' with a goal to come to intuitive and engaging interaction spaces.

1 **Game Jam**
Project goal: co-design a game to raise awareness about online behaviour for young people with learning difficulties.



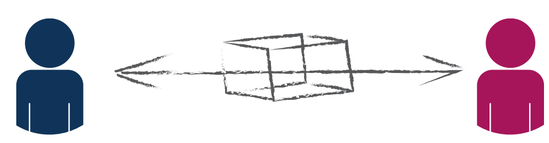
Interaction: Young person ( ) engages with fictive characters expressing human activities and/or consequences. Trainer ( ) can observe answers.

2 **Directory App [3]**
Project goal: explore the potential of a directory app for on the road use of ambulance personnel.



Interaction: ambulance personnel ( ) could access the directory when in need of support, potentially connecting them to despatch ( ).

3 **Digital empathy**
Project goal: to learn about the experience of empathy in video conferencing consultations, and how to enhance this experience.

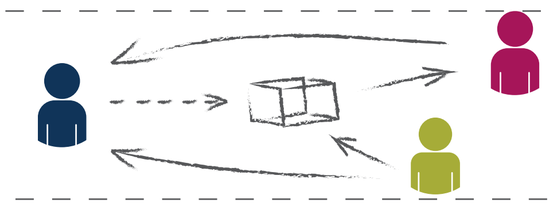


Interaction: patient ( ) and consultant ( ) are connected via video conferencing and the system is merely in between facilitating the conversation.

4 **Digital brokering service**
Project goal: to explore a system aimed at facilitating brokering of small services between residents of rural communities through a digital platform.

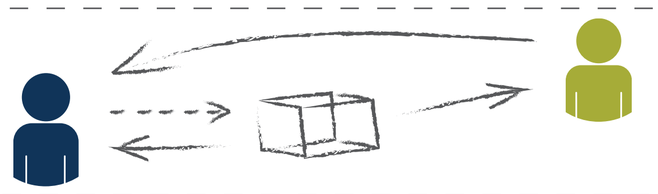
Interaction: multiple persons actively engage with a digital platform, to express ability of providing services ( ) or request services ( ). Organization ( ) monitors platform and provide training to service providers.

5 **Indoor tracking of people with dementia**
Project goal: to explore the potential of a system, tracking people with dementia in an indoor environment and how this can support professional and personal carers.



Interaction: the system is tracking data on the behaviour of the person with dementia ( ). The system would potentially send data, continuous or in alerts, to professional ( ). Personal carer ( ) can observe registered behaviour.

6 **Assisted living for older adults [4]**
Project goal: to explore how a sensor system could support older adults in their needs, to live independently at home for longer.



Interaction: sensors are observing the environment in the house and potentially sending an alert or reminder to the older adult in the house ( ), and to a loved one ( ).

These examples show different relations between people and technology, or between people through technology. The examples described above can be categorized by the role the technology takes in the interaction space.

The least complex interaction space can be found in projects that focus on an information source: project 1 and 2. This involves information support from technology towards the user, and there are few other streams of interaction involving other people or input to the system. However this does not mean the system to interact with will be easy or straightforward to design.

A second interaction space can be described by passive facilitation of human-to-human interaction as illustrated by projects 1 and 4. Both are essentially a platform where humans connect and engage with each other, and the technology only takes the role of passive facilitator.

The third space is described by the technology taking an active engaging role in the interaction space. The technology can be adaptive or responsive to the animate world. It can observe events or behaviour and pro-actively initiate interaction with the primary user or invite a secondary user in the conversation.

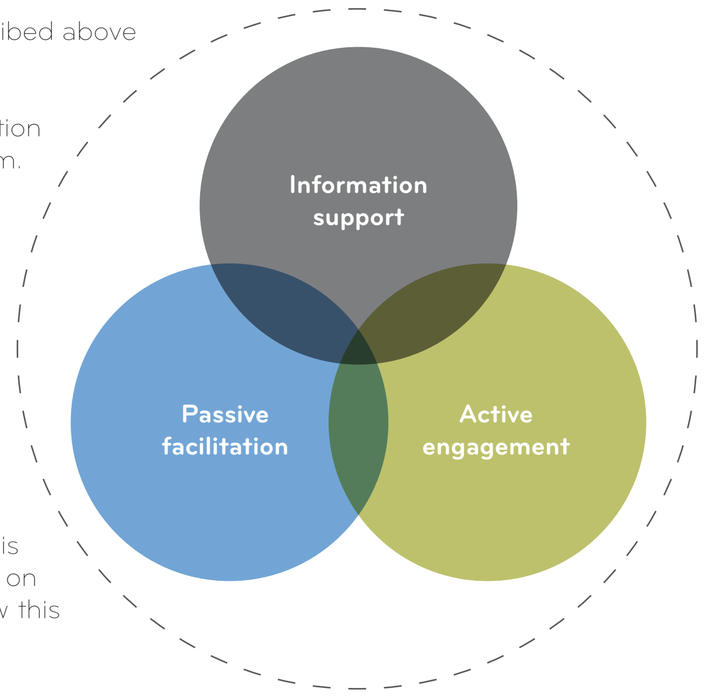


Figure.1 Proposed model of interaction spaces

NEXT STEPS

Experience Lab projects encompass a range of potential interactions between primary and secondary users and technology. Analysis of a selection of projects lead to a proposed model to describe three types of interaction spaces (Figure 1). The next steps will focus on exploring the relation between the different potential interaction spaces, how proposed technologies move between spaces and how this understanding can help the design of future Experience Labs.

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