

Visioning Studies: A Socio-Technical Approach to Designing the Future

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Abstract

It is increasingly important to understand the potential impact of future technology in complex contexts as early as possible in the research and development (R&D) cycle. Understanding the potential impact informs the design of new technology, enhancing the technology's adoption and reducing its unintended negative consequences. It also uncovers potential conflicts with current social structures, facilitating the identification of enhancements to social structures and/or practices to derive additional benefits from the technology.

To discover the potential impact of future technology we have been developing a research approach called "visioning studies." The goal of a visioning study is to understand the perspectives of potential stakeholders, and from this understanding develop socio-technical design recommendations in collaboration with computer science researchers. Two complementary approaches to visioning studies have emerged. One investigates task performance using an experimental design involving task simulation, observation, questionnaires and interviews. The other explores domain implications using a qualitative design including a video depicting the technology vision and semi-structured interviews. To date visioning studies have focused on 3D telepresence technology in collaborative emergency health care and future mobile technology in collaborative police work.