

NordiCHI 2000 — Tutorials

Video as Design Material**Expanding the potential of video in user centred design****Jacob Buur**

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Many user centred design groups have integrated videography in their work. Video is used for documenting user trials and workshops, and in later years also for ethnographically inspired field studies in user contexts. Video documentary on work practices appears to most designers as a valuable input to the design process, but the leap from documentary to actual design is difficult and poorly explored.

In traditional usability engineering and ethnographic fieldwork, video is often seen as 'hard data', from which an objective truth can be derived through meticulous video analysis. Through our design practices, we have learned that there is much greater potential in seeing video as design material: Stories created by users and designers to frame the design problem and to establish new design solutions. When designers get their hands on camcorders and editing machines there is both a need and an opportunity to overcome the limitations of viewing video material as hard data.

In this tutorial we will use hands-on exercises to demonstrate how design groups can take video work beyond the notion of 'unobtrusive' recording and 'objective' video analysis and in particular how the video media itself can be used for creating design 'moves'. We will introduce participants to techniques for involving users and design teams in creating video scenarios and video collages, and we will explain the theory behind this approach. With real life HMI design cases participants will get the opportunity to experience video as a tool for driving innovative user centred design and to discuss relevance and opportunities in relation to their own work.

The tutorial content is divided into five sections.

1. Video as Design Material. In this introductory section the issues of video in user centred design is addressed with reference to practical examples from the instructors' own work. Participants are given time to formulate their own understanding of video work and design process and to share work experiences.
2. Improvised Video Scenarios on location. In this section participants try how users in collaboration with designers can create improvised use scenarios when in their own setting. Videotaping such improvisations is a way for users to contribute to the design process with their own design artefacts.
3. Video Card Game. Participants experience how a team of designers can work with a large amount of video material from user settings in order to understand and solve usability problems. We suggest that collaborative video editing is a way of creating a design move grounded in user work practices.
4. Video Collages. Participants experience how coarsely edited video material can stimulate design dialogue in participatory user workshops. By allowing multiple interpretations, video collages create a shared basis for users and designers to shift between collaborative activities of analysis, evaluation, and design.
5. Video Stories for Design Reflection. In the last section participants learn how designers can use video documents from design events to reflect on their own work practice as designers. We argue that video is a strong media when design teams engage in on-going learning to develop their competencies.

Benefits

Participants will gain a fundamental understanding of the role and potential of video work in user centred design processes. They will come to see the limitations of the hard data notion of video material. They will learn to use video in a number of situations including user studies, user workshops and design sessions. They will also have the chance to reflect on the potential role of video in their own work practice.

Justification for a NordiCHI audience

The tutorial builds on a Scandinavian user collaboration and action research approach to user centred design. Because of its general nature it is of interest to a broad audience of designers of user interfaces, software, graphic design and industrial design. It foremost addresses issues relevant to industrial practitioners and consultants, but educators and researchers will also find inspiration for design teaching.

The work of Binder, Buur and Brandt has been pioneered through some years of industrial

practice with the Danfoss User Centred Design Group. The exercises for this tutorial have in part been developed for a summerschool co-organised with the Danish Centre for Human Machine Interaction Research in 1999 and for master programme classes at Malmö University.

How this tutorial will be conducted

The tutorial consists of five lectures and a number of team exercises. Participants will reflect on the exercises in light of the theory and they will learn through team dialogue, presentations and plenum discussions.

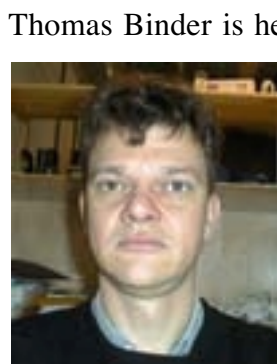
We will provide hand-out material for each lecture.

The instructors will use video and overhead projector for the lecture parts, but most of the learning will take place through team exercises, reflection and dialog. The participants will be placed at group tables in one large room.

Biography

Jacob Buur is professor of User Centred Design at the Mads Clausen Institute for Product Innovation. He did his MSc degree in electrical engineering and his PhD degree in design methodology at the Technical University of Denmark, with focus on mechatronic products, i.e. the integration of mechanics, electronics and software. He has spent 2 years in Japan studying strategies for product development - in Japanese.

Jacob was employed with Danfoss 1992-99 with the responsibility of developing human machine interaction design into a core competence for the corporation. He is presently manager of the User Centred Design Group at Danfoss.



Thomas Binder is head of the Space & Virtuality Research Studio in Malmö, which is part of The Interactive Institute in Malmö. Thomas has a MSc degree in mechanical engineering and a Ph.D. degree in Science and Technology Studies from the Technical University of Denmark. He has for more than 10 years been working with research, consultancy and design in the fields of Human-Machine Interaction, workplace learning, multimedia design and social aspects of technological innovation, with particular emphasise on the relations between design process, technology, work organisation and skill.

Helena Karasti holds a position in the Department of Information Processing Science at Oulu University and got her MSc degree from the same department in 1993. Currently she is finishing her doctoral dissertation. Since 1994 she has been involved in studying the work practices and

technology development within the medical field of radiology. In this work she has been exploring the uses of video in bridging work practice and system design.

Eva Brandt has a position as researcher in the Space and Virtuality Studio, which is part of the Interactive Institute in Sweden. She holds a MSc degree in mechanical engineering from the Department of Control and Engineering Design at the Technical University of Denmark. Eva held a position as research fellow with the User Centered Design Group at Danfoss for 4 years. She is finishing her Ph.D. on Event driven Product development: Collaboration and Learning. Eva is engaged in action research and participatory design with the focus on the design process and how to bring about collaborative inquiry in designing new technology.