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## Methods for applying Activity Theory to HCI Design

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# Methods for applying Activity Theory to HCI Design

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**Abstract:** Activity Theory (AT) has been a recognised framework for enhancing design practices in HCI and related disciplines for a couple of decades. In most cases, AT has been deployed as an analytical framework for conceptualising user and contextual perspectives during systems design. However, the popularity of this framework has not yet resulted in operational methods and techniques that can easily and readily be applied in HCI design. The purpose of this workshop is to examine current methods and techniques based on AT so as to establish the feasibility of using this framework in HCI for practical design purposes. Given this remit, the term 'HCI design' is used in a much broader sense so as to incorporate the whole range of activities involved in the systems development process.

**Keywords:** Design Methods, HCI Design, Activity Theory

## 1 Background

For a couple of decades, Activity Theory (AT) has been a recognized conceptual framework in HCI and related disciplines (Bertelsen and Bødker, 2000; Bødker, 1991; Nardi, 1996). However, whilst methods and techniques based on AT have been introduced, e.g. the focus shift analysis (Bødker 1996), and the activity checklist (Kaptelinin et al, 1999), AT has mostly been deployed as an analytical framework for conceptualizing user and contextual perspectives during systems design. In general the popularity of the framework has not yet resulted in many operational methods and techniques that can easily and readily be applied in HCI design (Mwanza, 2001).

## 2 Objectives

The key aim of this workshop is to explore how the potentials of AT as a practical and methodological framework can be operationalized in HCI-design.

Therefore, the workshop is specifically designed to facilitate a collective exploration of AT methods based on views and experiences of participants from various communities. The idea is to share perspectives on the usability and relevance of such methods to HCI design; and to identify and address challenges of applying such methods. We will exchange and discuss specific AT-based methods and techniques as well as experiences of applying AT-based frameworks in concrete development and research projects. Furthermore, we will discuss possible strategies for and limitations to the operationalization of AT in HCI design. Therefore, the workshop will inclusively address design practices from early phases of analysing and gathering system requirements, prototyping, usability evaluation, testing functional aspects of system components, right up to system implementation, etc. Questions to be addressed will include the following:

- How to apply AT when gathering and analysing contextual and user perspectives for systems

design purposes e.g. during requirements capture?

- How to apply AT in formative and summative usability evaluation?
- How and in what form to communicate AT based design insights?
- How to validate that the method used adheres to basics of AT and the design practice of HCI?

## 3   Target Audience

The workshop is targeted towards researchers and practitioners from both industry and academia who are interested in methodological aspects of using AT in HCI design. Participants are expected to have basic knowledge about AT and methods for HCI design.

### 3.1   How to participate

Participants will be selected from contributors of position papers. We invite position papers on the workshop theme, outlining experiences and novel ideas for applying AT in HCI design. Position papers should be no longer than 2 pages (approximately 1000 words) presented in the conference format and emailed in PDF to Daisy Mwanza ({ HYPERLINK "mailto:D.Mwanza@open.ac.uk" }) by 1$^{st}$ August 2003.

Accepted position papers and other relevant materials will be published on the workshop website at {HYPERLINK "http://www.daimi.au.dk/~olavb/athci2003"} prior to the workshop to stimulate advance community building.

## 4   Workshop Schedule

The workshop will be a full day event organized as a mix of plenary presentations, discussions and small group sessions organized in a manner that enhances creativity and openness. The focus will be on the categorization of current methods and emerging issues according to perceived significance and relevance to HCI design. The workshop will conclude in a plenary discussion about methods and challenges of applying AT to HCI design.

The final program for the workshop will be based on issues raised in position papers.

## 5   Expected Outcomes

By bringing together a consortium of researchers and practitioners interested in methodological aspects of applying AT to HCI design, the workshop will articulate the feasibility and practical implications of such approaches. It is hoped that results of these deliberations will influence future research agenda by drawing recommendations for developing and validating practical AT-based methods for HCI design. We will also aim at publishing outcomes in an edited book or special issue of an HCI related journal.

Outcomes will also be reported on the workshop website at {HYPERLINK "http://www.daimi.au.dk/~olavb/athci2003"}

## 6   Organisers

The order of organisers' names has been decided upon arbitrary.

Daisy Mwanza is a Research Fellow at The Open University's Institute of Educational Technology (IET) in the United Kingdom. Daisy is the author of the Activity-Oriented Design Method (AODM) for HCI research and practice developed as part of her PhD. (See http://kmi.open.ac.uk/people/mwanza/)

Olav W Bertelsen is an associate professor at the University of Aarhus' Department of Computer Science in Denmark. AT has been his main theoretical reference in HCI, CSCW, PD and Aesthetic Computing. He has organized several workshops on AT in IT-design. (See http://www.daimi.au.dk/~olavb)

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