



Expanding the 'Mobility' Concept

INF5261 – Utvikling av mobile informasjonssystemer

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Outline

Miljøkalkulator

- Problemstilling
- Fremgangsmåte
- Forespeilinger
- Dialog med med sluttbrukere

Expanding the 'Mobility' Concept

- Introduction
- Spatial Mobility
- Temporal Mobility
- Contextual mobility
- Concluding remarks





Bakgrunn

- Interesse for miljøbevisste løsninger i forhold til reisemåte
- Eksisterende mulighet for internettsøk på reiseruter på f. eks trafikantens nettsider
- Denne gir valg mellom flere mulige reiseruter
- Vi tenker oss en applikasjon der man vil kunne se mulig reiserute i forhold til en miljøfaktor.





Mål

- Målet vårt er å gjøre en undersøkelse av et mulig grensesnitt.
- Fokus ligger på brukerundersøkelse i form av et optimalt grensesnitt for en miljøkalkulator
- Vi vil undersøke muligheten for en slik applikasjon på håndholdte enheter.
- Undersøkelse av prototype, eller en “mockup”.





Målgruppe

- Miljøbevisste mennesker
- Alle som kunne tenke seg å ta i bruk en slik håndholdt applikasjon.





Fremgangsmåte

- Trafikanten har mulighet for å finne reiserute fra et mål til annet.

Vennligst velg hvor du vil reise fra:

Områder:	Kommune	Sone
Utne/Li station	Oslo	

Stoppesteder:	Kommune	Sone
Utne/Li station (Sjonesveien)	Oslo	01
Utne/Li station (Strindveien)	Oslo	01
Utne/Li station (T-bane)	Oslo	01

Adresser:	Kommune	Husnummer
Nordre Lillestrøm	Oslo	Ving
Stasjonsveien	Nike (Hærhus)	Ving
Utne/Li/Li/Li	Oslo	Ving
Utne/Li/Li/Li/Li	Oslo	Ving
Utne/Li/Li/Li/Li	Oslo	Ving



Fremgangsmåte

- Reiseplanleggeren har rutetabeller og sanntidsdata tilgjengelig i XML format.
- Disse dataene er tilgjengelige for oss.
- Det gjenstår utfordringen å beregne den såkalte miljøfaktoren.
- Vi ønsker å undersøke tilsvarende løsninger hos NSB og Flytoget, samt andre steder som måtte ha denne type informasjon tilgjengelig.



Fremgangsmåte

- Google Maps, og kart på Gule Sider, har mulighet for å beregne reiseruter og antall kilometer denne ruten er.
- Så vidt vi vet får vi bare tiden for reisen, og ikke distansen, fra Trafikanten.
- Det er en mulighet for å bruke disse kartene til å beregne forurensningen til andre alternative reisemåter (bil eller sykkel).





Fremgangsmåte

- Undersøkelser basert på brukere.
- Vi vil her forsøke å kartlegge interessen for en eventuell miljøkalkulator, og eventuell interesse for en slik applikasjon på en håndholdt terminal.
- Helt til slutt vil vi presentere brukerne for en prototype i form av et brukergrensesnitt og be dem evaluere dette.





Verktøy

- Vi vil forsøke å lage en prototype.
- I utgangspunktet kan denne være papir eller som et (eller flere) HTML-dokument(er)
- Dersom mulig forsøke å implementere prototype med Java ME. (Java Mobile Edition)





Forespeilinger

- Det er gode grunner for å anta at det vil være interesse for miljøløsninger i forhold til reiseplanlegging
- Det er et åpent spørsmål om brukerne vil ha interesse for å ha det på en mobiltelefon f. eks “gadgetfreak” eller “teknofob”.





Dialog med med sluttbrukere

- Vi ønsker å bruke personer fra kurset som forsøkskaniner.
- Vil vil presentere forskjellige designutkast for sluttbrukerne og la dem evaluere dette.
- Tilbakemeldingene vil være av stor interesse for prosjektet.





Expanding the 'Mobility' Concept

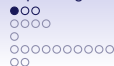


Masao Kakihara and Carsten Sørensen

Expanding the Mobility Concept.

SIGGROUP Bull., ACM, 2001.

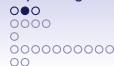




Introduction

- The fundamental nature of technological revolution in the late twentieth century
 - Dynamic and complex interplay between old and new technologies
- This paper concerns the concept of mobility, which manifests such a transformation of our social lives combining new and old technologies.





Introduction

- Current research perspectives define the notion of mobility quite narrowly, exclusively in terms of humans' independency from geographical constraints.
- The article reconsiders the notion of mobility and trying to expand our perspective towards it.
- “Being mobile” is not just a matter of people traveling but, far more importantly, related to the interaction they perform
 - the way in which they interact with each other in their social lives.





Introduction

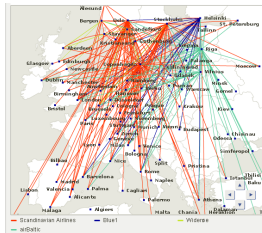
- The article suggests expanding the concept of mobility by looking at three distinct dimensions of human interaction; namely,
 - spatial,
 - temporal
 - and contextual mobility.





Spatial Mobility

- Refers to the way we move around the world.
- Travel increase with the advent of modern communication.





Mobility of Objects

- Often associated with people
- Objects are designed to be moved
 - Laptops
 - Mobile phone
 - PDA/Palmtops





Mobility of Symbols

- Modern communication allow for immediate transport of symbols.
- Billions of people can receive the same image, virtually at the same time.



Mobility of Space

- Computers connect millions of people
- There is no “Here” or “There”
- It is possible to connect from anywhere, at any time





Temporal Mobility

- Technology influences temporality in our social activities
- Temporality in a labouring context may be divided into structural and interpretative aspects
- Temporality is characterized by
 - “monochronicity”
 - “polychronicity”
- Information- and communication technology leads to increasing growth of “polychronicity”
 - We are able to do several things at the time



Contextual mobility

- Stationary and mobile ICT applications → people can organize and manage their work activities with fewer constraints
 - → the work environment flexible and independent from geographical and temporal constraints
- → increase of “contextual mobility”





Contextual mobility

- Human situatedness - widely accepted as a fact
- May determine action
 - “in what particular circumstance”
 - “towards which actor(s)”
 - “where”
 - “when”
- Modern technologies, especially ICTs → increase of “contextual mobility”





Interaction Modality

- unobtrusive vs. obtrusive
- ephemeral vs. persistent





Interaction Modality

- Interaction can be “more or less obtrusive dependent on how strictly it imposes obligations to notice or react”
- At the same time, interaction can range from ephemeral interaction, which “only exists in the flux of unfolding activities,” to persistent interaction, which “leaves behind a trace for further inspection and discussion”





Interaction Modality - an example

- A Post-It Note discretely place on a desk or a telephone message recorded on an answering machine can be characterized as unobtrusive-persistent interaction.
- An incoming email urgently requiring a receiver's reply and/or displaying an alert box notifying the user of the email can be seen as obtrusive-persistent interaction.





Contextual mobility and ICT

- ICT → relatively freed from contextual constraints on interaction.
 - Cyberspace transforms the contextual constraints amongst those interacting.





Contextual mobility and ICT

ICT may alleviate many difficulties for people to interact

- Electric bulletin boards
- Mailing list services

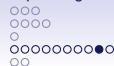




Contextual mobility and ICT

- Unfamiliarity or weak social relationships among people can hamper natural face-to-face interaction.
- ICT → provides people with access to information and resources, such as job information, beyond those available in their own strongly tied social circles.

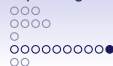




Contextual mobility and ICT

- Traditionally contextuality plays a critical role in constituting human interaction just as spatiality and temporality do.
- In face-to-face interaction among people, conformity of such contextual aspects is very important; same cultural background, shared mood and high degree of mutual recognition are preferable.





Contextual mobility and ICT

- ICT → people nowadays can easily interact with others relatively freed from contextual constraints, interacting with people in largely different contexts.
- → relationships between interaction among people and contexts in which they are is becoming mobilized in terms of flexible patterns of interaction across different contexts.
- Societal mobilization
- “mobilized situatedness of interaction”

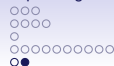




Concluding remarks

- Various dimensions of mobility in human interaction.
- To summarize, the authors argue:
 - What has been and will be further mobilized is not just human corporeal movement but more importantly interaction among people;
 - the notion of mobility should be addressed in three distinct dimensions: spatial, temporal and contextual aspects of mobility in human interaction.





Concluding remarks

- Current understanding of mobility, especially in the CSCW field, is rigidly confined in human geographical movement.
- We need to go beyond such a confined and functionalistic understanding of mobility and to capture multiple dimensions of mobilisation of our social interaction.

