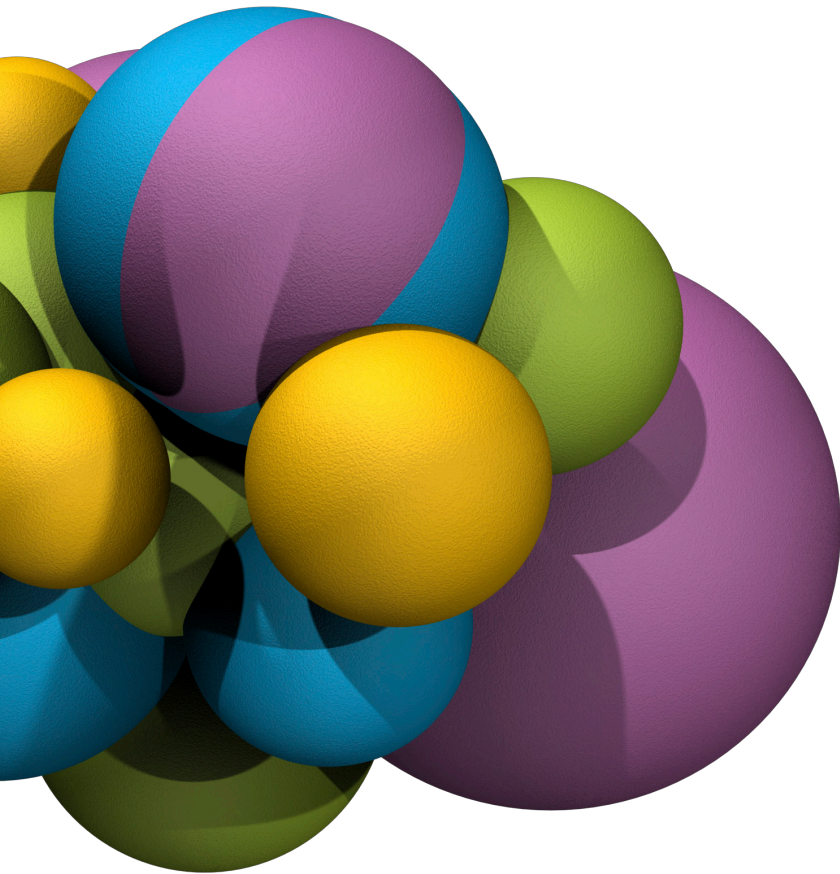


# Mobile@IT

VINN Excellence Centre



.....the next step



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## Mobile Life.....the next step

*The Mobile Life Centre has quickly established itself as an internationally recognised research locus in the area of mobile services. Our influence is visible in the way our research gets to be presented in a number of academic venues, our spin off company and our close relationships with all partners. It is also evident in how we are approached by many different organisations and individuals, ranging from commercial organisations to political parties.*

Mobile Life started out as doing research, which combine traditional work-oriented approaches with more consumer oriented practices. After three years, it has become a research endeavour that engages fully in experiential, leisure oriented and playful topics. From a strategic perspective, which takes into account the demands of users and consumers as well as the need from industry, it has become clear that we must concentrate on generating knowledge and technical concepts. These results are informed by the success of e.g. social media, gaming, and app stores with their inherent focus on hedonic and ludic practices. The Centre's strategic importance lies in making serious research on social activities, which are by their very nature both truly meaningful and somewhat ephemeral. In this report we present many important steps towards establishing such an arena. Our results range from publishing ambitious books on new playful activities, such as pervasive games, to generating and demonstrating innovative mobile and leisure oriented applications. We also contribute in many other ways, such as presenting keynotes at international conferences and discussing the future of mobile services in public media.

The Centre has recently been evaluated by both the funding body (VINNOVA) and by our own distinguished scientific board. Through these activities we have generated even more ideas on how to strengthen the collaboration between the academic partners and the industrial partners further. We have already, during the previous year, established project based reference groups. Now, the idea is that we utilise the model of partner meetings, developed together with the City of Stockholm, also with other partners. Second, we can at this stage make our various research positions more salient. We believe that by allowing and supporting even more vivid discussions we create new forms of collaborations within the Centre, as well as improve the research. We have also taken on the task of arranging *Mobile HCI 2011*, the leading international conference on mobile human computer interaction.

In all, the Centre has already achieved many important things, but there is still much more to be done in the upcoming years.

Oskar Juhlin, Centre Director



## Introduction

*The Mobile Life VINN Excellence Centre provides a neutral arena where researchers and industrial partners work together. We focus on creating new interaction models; finding efficient and user-oriented methods for developing mobile services; gaining a deepened understanding of the unique properties of the future mobile life; creating a future mobile service eco system where we explore alternative universes for infrastructure, business models and the industry's new roles; and finally a range of novel mobile services for mobile media creation, play, social interaction and bodily awareness.*

We have expanded our research area to cover more ground in the mobile service area. We have doubled the size of the centre through funding from European and national funding organisations in different constellations of partners. We participate in national strategic funding and in European initiatives such as the European Institute of Technology. Finally, we have increased the involvement of international researchers in the Centre. Through individual and joint studies of experimental services, we will further our understanding of how mobile services shape our everyday life. This knowledge is embodied both in concrete service examples, which include six mobile services that we have designed, implemented and tested, that could be deployed with a short term to market (GeoChat, Columbus, Portrait Catalogue, Subway Friendfinder, Instant Broadcasting System and The Instant Mixer). We have also implemented three mobile services with a longer time to market (Lega, Affective Health and Mobile ActDresses). Our knowledge is also embodied in published academic books, articles and conference papers. Since we started we have published 21 journal and 60 conference papers in highly renowned venues. In the academic world, Mobile Life has quickly established itself as a vibrant and interesting research centre, as can be seen from the following example activities:

- The newly formed Horizon centre in Nottingham has sought collaboration with Mobile Life
- We have given several keynotes at major international conferences based on Mobile Life most notably at Interact 2009 in Uppsala.
- In 2011 we will organise the Mobile HCI conference in Stockholm.

The Centre has also become an important player as a representative of Sweden in this area, as can be seen from the following example activities:

- An invitation to speak at the most important Swedish event at Expo2010 (Innovation Day 24th of May) in Shanghai, in the presence of the Swedish Minister for Enterprise and Energy, the Swedish King, and a delegation of all the major heads and chairs of major Swedish companies.
- Kristina Höök's talk at the local TEDx Stockholm event.
- The invitation from KTH to participate in the successful European Institute of Technology proposal named ICTlabs as well as their strategic research proposal named Internet of Things.
- An invited talk to the Swedish Parliament, as well as several regional political venues

The Centre works tightly with our main partners including Ericsson, Sony Ericsson, Microsoft, TeliaSonera, The City of Stockholm and Kista Science City. The last year we also welcomed Nokia as partner in the Centre. Additionally, we have attracted substantial interest from industry outside the dedicated partners of the centre. In subprojects we work with Philips Research, P AB, Bambuser, Street Media 7, and Do-Fi AB. Through Kista Science City we also have access to many SME:s in the mobile services field.

## Centre Partners

*Stockholm University is the principal of the consortium that is formed by partners from the major companies in the mobile industry, together with research organisations, public sector representatives and innovation system actors. Here, we present the partners that are currently active in the centre.*

### Research organisations

Stockholm University. Mobile Life is organised as a unit under the Department of Computer and Systems Sciences (DSV) in Kista. The Centre is physically located in the Kista campus in the Electrum building. Through Stockholm University, the research in the Centre is well connected with undergraduate and graduate educations and the general social science faculty. Students employed the Centre will be enrolled in the masters and doctorate programs within the University, primarily in the Computer- and Systems department. Senior researchers will be actively involved in the formation of such programs, primarily in this department but also in other departments within Stockholm University and the Royal Institute of Technology (KTH).

SICS and Interactive Institute AB (II). The role of SICS and Interactive Institute AB in Mobile Life Centre will be that of a co-executor of research together with Stockholm University. SICS and II have their main offices in Kista. During the upcoming period, SICS and Interactive Institute will get 50% of the VINNOVA funding (3.5 MSEK/year) and will co-fund the Centre with an equal amount. The funding and co-funding is equally divided between Interactive Institute and SICS.

### Industry partners

**Ericsson AB** - Ericsson is a world-leading provider of telecommunications equipment and related services, to mobile and fixed network operators globally. Ericsson has deep knowledge in present and future telecommunications systems, including content and communication oriented services for mobile devices and the connected home. Ericsson will provide the Centre with concrete technology as well as deep knowledge in present and future telecommunications systems, including content and communication oriented services for mobile devices and the connected home.

**TeliaSonera AB** - TeliaSonera is the leading telecommunications company in the Nordic and Baltic region. TeliaSonera bring to the Centre its vast experience of service provisioning, both from a cultural and business technology but also on multiple platforms including both fixed and mobile telephony, hot spot wireless communication, portals and communities.

**Sony Ericsson Mobile Communications AB** - Sony Ericsson is a top, global industry player with sales of around 97 million phones in 2008. Diversity is one of the core strengths of the company, with operations in over 80 countries. Sony Ericsson was established as a 50:50 joint venture by Sony and Ericsson in October 2001, with global corporate functions located in London. The company has identified the Mobile Life Centre as a key initiative to foster innovation within the research community focusing on future mobile services, and is committed to contribute with associated technology and know-how.

**Microsoft Research Ltd** - Microsoft Research Ltd has identified three key domains in which support from Microsoft will enable University researchers to achieve the greatest progress: the emerging computing environment, transformation of science through computing, and advancing computer science curriculum. Through its focus on social and mobile services, the Mobile Life Centre targets the first of



these areas. The researchers of the Centre have a well-established collaboration with Microsoft Research Ltd in Cambridge, furthering in particular the deep understanding of information technology use in everyday life activities.

**Nokia** - Nokia is a world leader in mobility, driving the transformation and growth of the converging Internet and communications industries. They make a wide range of mobile devices with services and software that enable people experience music, navigation, video, television, imaging, games, business mobility and more. The Centre focus its research on similar areas, which allow high level articulation of design oriented research, addition to skills in Scandinavian design, commercialisation of services and applications, as well as seniority in design oriented research on mobile applications.

### **Public sector representatives**

**City of Stockholm Municipality** - Within Sweden as a whole, the Stockholm region and Kista play a crucial role in the establishment of a consumer-oriented service industry. This role has been recognised by the City of Stockholm that has chosen to establish and participate in several initiatives focused on this sector, the Kista Mobile Showcase, and to participate in the Mobile Life Centre. The City of Stockholm plays a natural central role in the Mobile Life Centre, through providing multiple channels for local collaboration, dissemination, and take-up with both small and large companies.

The City of Stockholm contributes to the Centre by being prepared to be test-users representing the public sector in several domain projects. Furthermore the City strives at coordinating and cooperating regarding the various mobile initiatives in the city.

**Kista Science City AB** - Kista Science City brings to the competence Centre its project 'Kista Mobile Showcase' as well as several contact networks for small- and medium sized service development companies in the Stockholm area. The Kista Mobile Showcase is a physical test- and demonstration platform for the concrete presentation and dissemination of results, where the industry partners have provided both hardware and software for demonstration purposes. Kista Science City will set up a framework which enables its showcase partners and network members to participate in the Mobile Life Centre activities, further strengthening the dissemination and take-up potential for the Centre.

### **Innovation system partner**

**STING** - Stockholm Innovation & Growth (STING), founded 2001, is a support 'system' for technology start-ups. The ambition is to generate more technology start-ups through a well-designed extensive support system. STING provides support for entrepreneurs at a very early stage continuing throughout the growth process. The aim of STING is to commercialise ideas from the IT-university, research institutes and spin-offs from company employees. STING offers support for entrepreneurs in four sequential programs named Startup, Business Lab, Business Accelerator and Go Global. STING also offers pre-seed capital via Sting Capital, a new venture capital company for technology start-ups.

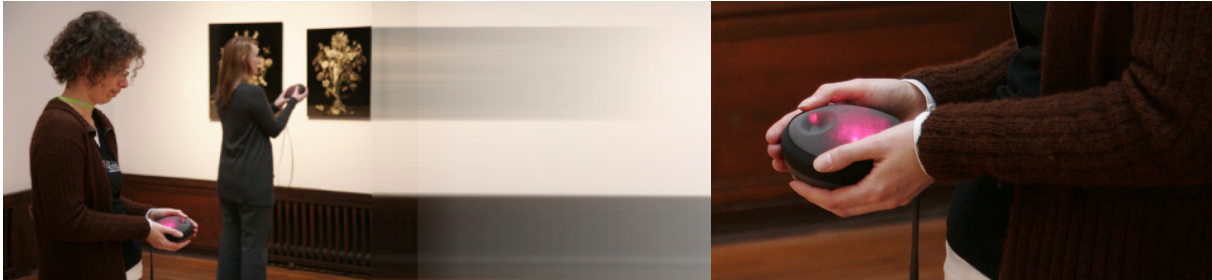


## Projects

*During the first two years, 2007 -2009, Mobile Life organised the research in seven projects. For the next three year period the centre has expanded and so has the number of research projects. There are currently ten projects running in the centre. Short presentations of the projects follows below.*

### Designing systems for supple interaction

*A supple system is a device that combines custom-built hardware, sensor technology, and wireless communication, to interact with end-users and create a physical, emotional, and highly involving interaction. The experience of interacting with a **supple** system is best characterised as a dance that is as fluent, malleable, playful, simple and painless.*



Photographer: Marcus Lundén

Creating such systems is challenging as it requires a holistic view of design and development that assigns equal importance to hardware, software, and design aspects of the process. Mistakes in, or mismatches between, any of the areas can make a system fail to provide a supple experience.

Within the project we aim to learn more about the process of designing supple systems hands-on by going through such a design process several times. Since its start in April 2009 one prototype has already been completed, a second one has been started, and a third one will be completed before the project ends in July 2011. Learnings from each iteration feeds into the next one making it more efficient and less error prone.

LEGA, the first prototype, was developed for the annual *Vårsalongen* exhibit at Liljevalchs art-hall in Stockholm. The LEGA is a system for tactile, bodily sharing of experiences within a group of friends. Its form and function encourages tactile and gestural interactions and provides vibration and light displays which are open to interpretation and appropriation. By touching and moving their device in various ways users create traces of their experience which are left at their approximate location. There they can be discovered and experienced as vibration and light patterns by others in the group.

Currently, we are evaluating the results from the Liljevalchs deployment of the LEGA system. Early results indicate the enthusiastic appropriation of this rich interface by all visitor types - school children to retirees. Tactile interaction (squeezing, stroking) has been especially evocative in a rich, emotional setting such as an art exhibition; however, gestural expressions (shaking) are most frequently used during explicit expression creations. The development of the LEGA prototype gave valuable insights about possibilities and pitfalls when developing supple systems. The upcoming prototypes will explore those further.

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## Generalised interaction models

*Much interaction with mobile phones and mobile devices relies on the legacy of “the desktop metaphor”, inherited from PC-based interaction. This can be problematic since mobile interaction differs fundamentally from desktop interaction. Mobile interaction is essentially social in character, with communicative action rather than information handling at the core.*

To address this we have focused on investigating some of the basic actions and interaction qualities that people see with mobile technologies, and look at how these can be generalised to aspects of interaction models for mobile technology. We have explored this along two main lines.

The first regards line designing for how an expanded range of human capabilities can get involved in engagement with mobile technology, through what may be called whole body interaction. In this work we have conducted studies around how to involve physical and bodily aspects in interaction with and around mobile devices. To open up this problem space in a novel and creative fashion we have started out by looking at skateboarders and golfers as case studies of bodily-engaging activities with non-digital artefacts, activities that for many people are much loved and deeply engaging. This has provided us with a number of insights into how to design for an increased bodily involvement with mobile technology. These insights regard the importance of designing in a fashion that lets users connect to the physical circumstances, the importance of balancing between perceptual modalities used to engage users in the interaction, and to focus on fine-tuning the response from the artefacts to provide users with a broad space of possible interpretations and consequential actions. We have developed ways incorporating understanding of bodily actions into design work through a method called body-act cards.



The second line regards research evolving around a design ethnography conducted at in the Melanesian country Vanuatu situated in the South Pacific. Vanuatu has a particular situation in what concerns mobile phone usage. It is composed of 85 different islands, a couple of hundred different languages, which makes it an interesting case study of communication, both inter-island and intra-island. The aim was to conduct ethnographic studies in places with existent and non-existent mobile phone coverage and usage, as well as workshops in order to get inspiration for new possibilities for developing mobile technologies. In preparation for this a number of design workshops was conducted with MobileLife researchers and partner representative to investigate ways of teasing out interesting design qualities from user groups without any experience from desktop style interaction. From the study conducted in Vanuatu there is data from communities where mobile phones had just become prevalent and where mobile phones were still only a future. Interesting findings that question some current assumptions about mobile technologies and the communal aspects of ownership, and the role of communicative patterns and practices.

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## mFashion

*The increasing emphasis on experiences within mobile interaction design has put the selection of colours, materials and form to the fore. However, the discussion of such aspects in design research has not yet accounted for how users themselves, as well as industry, pay attention to those aspects e.g. as forms of fashion and in relation to peoples' complete outfits.*

Thus, we argue that fashion logics is part of users' context in which they select colour and material. A neglect of understanding, and relating to, fashion dynamics might lead both to missed opportunities, as well as a decrease in the take up of new applications. We suggest that teasing out the difference between consumption of mobile experiences as some sort of de facto products and symbolic fashion oriented experiences is of critical importance for the design oriented research in the mobile area. In which ways do we need to account for fashion logics in mobile interaction design? In which ways can we understand purchase and use of mobile technology as a form of fashion consumption? Where and when do mobile designer overlap with fashion design and fashion industry? What are the unexplored fashion areas that would be interesting to combine with mobile design and where do they come from?

Yanqing Zang, or Celia, has during the year finalised a master thesis on this subject, and she works full time on it since January 2010. The project has started with an analytical phase where we will tease out similarities and differences between the fashion industry and the mobile industry. The methods consist of interview studies with e.g. handset designers within the telecom sector. Here we have already interviewed eight participants. We have also studied how the mobile phone is discussed within the fashion texts, such as blogs and magazines. A corpus on entries about mobile phones on such fashion blog websites have been built, and is currently analysed. In a second phase, the project will then exploit fashion mechanisms in the design of mobile applications in collaboration with other researchers in the Centre.

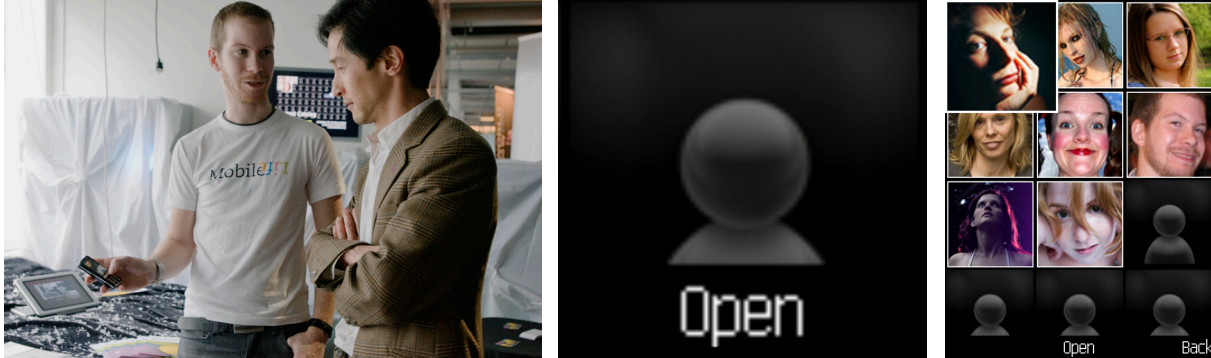
We assume that this project will be of relevance both for the Human Computer Interaction research community (HCI, DIS; Mobile HCI etc.) as well as for social science. We are therefore currently discussing collaboration with the Centre for Fashion studies at Stockholm University.

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## Mobile 2.0: Mobile-in-the-world

*Future mobile services will make use of advanced capabilities of mobile terminals, such as location, near-field communication, accelerometers and other sensors, the proximity of other users or services, etc. At the same time, we are seeing how the phone becomes much more than an isolated terminal.*



Photographer: Torkel Engström

Every phone is part of a complex social and technical network, made up of the owner and other users, the data on the phone and in the cloud, the information available through the phone's sensors, and the network infrastructure that supports it. This means that creating truly mobile services requires a completely different approach than just moving existing stationary Internet services to the mobile platforms. We call services that take into account these unique properties of the mobile setting Mobile 2.0 services.

A number of Mobile 2.0 services have been designed and implemented in the project:

- GeoChat - a map-based chat application (available for Java, iPhone, and Android)
- Portrait Catalog - a system for exchanging pictures with Bluetooth (Java)
- Subway Friendfinder - a lightweight social location-aware service (mobile web)
- Columbus - a location-based photo game (Symbian)
- ActDresses - a set of concepts for integrating digital and physical interaction in mobile phones

We have performed user studies on several of the services, including Portrait Catalog, Columbus and Subway Friendfinder. The Portrait Catalog study was intended as a pilot study in preparation for a true large-scale deployment. We therefore deployed the service in an external environment (a youth club) and carefully monitored the reactions of the intended users. One important experience was that the young users had a hard time understanding the value of testing a research prototype, and were skeptical to researchers in general! In the future it might be better to give the impression that a prototype is actually a commercial product. We also have a close collaboration with several industry partners on making use of their technologies in our demonstrators such as Ericsson Research's Webconnect, a platform for creating communicating web applications. Another example of industry collaboration is our work on GeoChat, which was originally developed during an internship at Sony Ericsson. GeoChat was subsequently re-implemented by Ericsson Research as an example application using one of the service enablers provided at labs.ericsson.com. Thus we are now seeing how the Mobile 2.0 services are being deployed both in real-world situations with public sector partners such as the City, and used as examples of cutting edge technology developed by industry partners such as Ericsson.

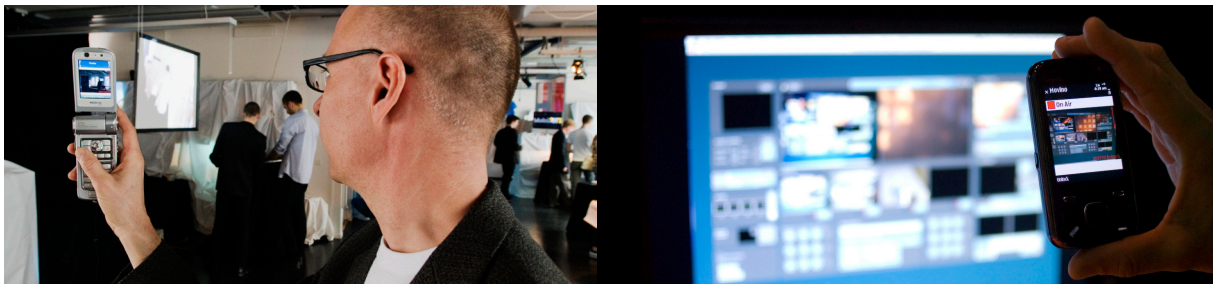
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## MoreVideo! - Mobile Collaborative Video Production

*We invent and investigate mobile collaborative live video mixing. A first generation of applications, in this genre, make it possible to broad-cast live video streams from various types of use contexts over mobile networks such as 3G (see for example [bambuser.com](http://bambuser.com) and [qik.com](http://qik.com)). We explore a second generation of such applications, where professional techniques for collaborative live video editing are made available on mobile platforms.*

Using networked camera phones, we show how it is possible to mix live concurrent video streams from multiple users for public display on internet and locally. The design space includes adapting these new possibilities, previously only available to professional TV-production teams, to amateurs in various contexts of use. Such situations might include the broadcast of multiple live images of soccer matches by parents or, as demonstrated by the Instant Broadcasting System, to visitors at night clubs, and to visitors of public exhibitions. The domain project aims at exploring a number of issues ranging from: (1) gaining an understanding of today's mobile media usage, (2) based on this knowledge we will formulate, design and evaluate new services, as well as (3) develop business models for the proposed future services for mobile TV.

In order to realise the vision, we will inform the research with studies of salient case studies containing critical characteristics of importance for the generation of new applications. The project method incorporates ethnographic field and technical reviews in settings where people are involved in collaborative and mundane socialising at geographically distributed locations. By combining empirical findings with our knowledge on technology, and by seeking inspiration from professional TV-production, we argue that such research may uncover interesting findings that inform the design, and by that broadening the scope, complementing current initiatives on mobile media/mobile video. The result will inform the design process in which new application will emerge, become implemented and then evaluated.



During the year we have continued to study and publish articles on professional TV-production. Recently, we have unpacked how replay production in sports broadcasts is achieved. It is an important, yet particularly challenging, media feature in live production. We show how it depends, not just on technical dexterity, but also on social arrangements and practices. We have also during the year studied the media content at commercial live broadcasting sites, such as bambuser and qik. The paper, which will be presented at Mobile HCI 2010, shows that live video struggles to become a new important social media. During this year, we have also finalised our desktop application for mixing between live video stream from mobile phones (called the Instant Broadcasting System), and demonstrated it at the conference SIGGRAPH Asia in Japan.

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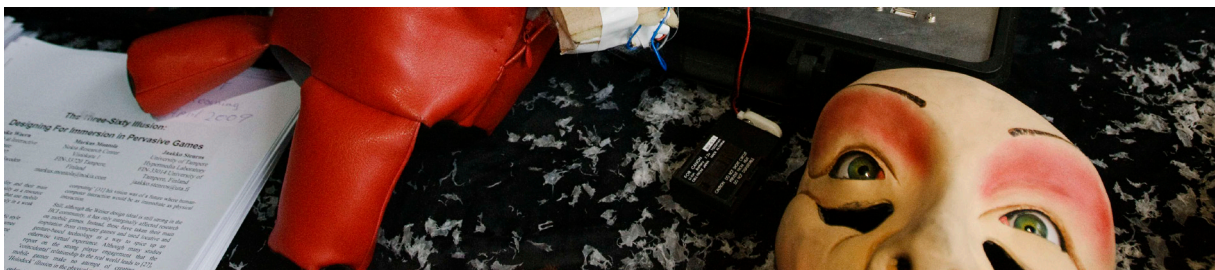


## Pervasive Games

*Pervasive games are games that are played in the world around us, rather than on a computer, mobile phone or on a prepared playground. The main attraction of pervasive games is that they are reality-based, drawing upon a real world which is richer, more varied, and emotionally and historically more interesting than any made-up game world can be.*

Some forms of pervasive games, especially location-aware mobile games and cross-medial productions with TV and Internet parts, form very rapidly growing forms of entertainment. They are always played among people that are not themselves playing, and players will often interact with other players as well as with bystanders. This can be potentially problematic when bystanders are scared or confused by the game, but it is also an excellent introduction route to participation. Another challenge for pervasive games is that they seldom are run as fully automatic mobile games, but rather tend to be game-mastered.

We explore play in public space, deliberately emphasizing play activities that are publicly visible and leave public traces. We also explore play in mass media, studying the emergent interaction between pervasive games and TV, film, books and daily newspapers. During its first two years, the Pervasive Games project focused primarily on the development and testing of tools for staging, running and evaluating pervasive games. Two such systems were developed. The Creator is a system for rapid design and development of Pervasive Games, that supports semi-automatic games and rapid re-scripting of running games. The Creator was brought to beta stage during the autumn of 2009 and is planned to be commercialized by a spin-off company from Mobile Life during 2010. The Babylon system is a tool for studying the player experience in pervasive games while games are on-going, through allowing players to self-report on their current experience. Both systems were used in staging and studying the game Interference during 2009, a game that was previously developed by Interactive Institute within the IPerG project.



Photographer: Torkel Engström

In the beginning of 2010, the project shifted focus to the co-creation of games with external partners. *I'm Your Body* is a collaboration project with Kista theatre and the city museum of Stockholm. The purpose of the project is to create new ways to collect stories about daily life in Stockholm, and retell these stories in different forms. Mobile Life contributes with the design and development of a pervasive story sharing application under artistic lead from Kista Theatre. *We Run Free* is run in collaboration with a small company in Uppsala, Street Media 7, and a freerunner (parkour) group Air-Wipp. The purpose of the project is twofold: to create a community site for freerunners, and to develop a game where the athletic runners collaborate with amateurs. Mobile Life contributes with developing support for on-street sharing of experiences and the design and development of a 'level up' game designed to bring in newcomers to the sport in a safe and fun way. Both projects are now in an intense development phase, and will present their first designs during the second half of 2010. In addition to these two projects, the Pervasive Games project is also collaborating with its industrial partners to study a commercial pervasive game *TEVA*, which will be staged during June and July of 2010.

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## Playful experiences

*This project explores playfulness - what constitutes enjoyment of using a product, what kinds of experiences the product can elicit, and how to design something that evokes certain kind of experience. This theme has been a central topic since the beginning of Mobile Life, and is already integrated in several of the projects in the centre. This project serves to further integrate the research in the centre around a shared discourse on playful experiences.*



Playful, spontaneous and joyful experiences are an increasingly important theme in HCI – drawing on a vision of a society where enjoyment, experience and play are essential and important for human well being. Moreover, in empirical studies, the increased focus on natural use settings have repeatedly shown that enjoyment is often impossible to neglect from how people use technology.

Play and playfulness are ambiguous concepts with many and overlapping meanings. By playful we here refer to aspects of interactions that provide pleasure or amusement. However, rather than an intrinsic property of an activity this is to a large extent a matter of human attitude. An open question is how to study and evaluate a phenomenon that is experiential, context dependent and different for each person.

Mobile devices are especially interesting in terms of playful experiences. They include a range of sensors, including GPS and cameras, which enable extended possibilities for playful interaction. In social settings mobile devices are used as mediators in social interaction, both remotely and locally. Play and playful use can emerge during daily routines, in transitional ‘non-places’, and while waiting, in a broad range of activities, environments, and social constellations.

The project formally began in January 2010, and has up till now been structured around a preparatory study. During this phase each member of the project has worked on individual studies based on their other ongoing research activities. Another main activity during this phase has been activities of shared reading on theoretical aspects of playful experiences, and a general inventory of past and ongoing research at mobile life that in different ways connect to the theme of playful experiences.

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## Social properties of mobile leisure

*Research in the Centre explores on the one hand leisure and playful experiences, and on the other hand new opportunities that arise from mobile services that exploit intrinsic properties of mobility, such as access variability, ad-hoc meetings with other devices, context awareness, access to information dependent on geographical location, and positioning relative to other users or resources.*



In this project, we generalise on this work as well as the research among our partners to provide a theoretical framework for future research and design. The project will investigate social practices of relevance for design oriented mobile applications research. Specifically it will study selection principles for topics, as well as discuss appropriate methods to inform design. Based on the studies, the project will also address the role of mobile applications in shaping a desired society.

The work will be organised as a mixture of workshop with all partners, more basic investigations into social studies related to mobile life. The project will result in identification of new topics; increased understanding of how to move from social studies to design as well as identification of interesting social properties through new studies of mobile social practices.

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## **Mobile Ecosystems: An Abundant Marketplace**

*The Mobile Eco system project explores a future market where operators, device producers and mobile service providers may have different roles than what exists today. The focus is on the users' experience of the future mobile ecosystem and an abundant market of services.*

The main method of the project has been to organise thematic workshops, in which researchers from the Mobile Life centre meet with industry researchers and practitioners, to share experiences. Through a combination of prepared presentations and carefully chaperoned discussions, the goal has been to create a shared understanding of obstacles and opportunities, as well as to sharpen our methods to research mobile user experiences from this holistic perspective.

During the first two years of the project, the project identified some of the major societal and technological changes that bring about the changes in the mobile ecosystem, and identified major obstacles on the route to an abundant marketplace. These results were compiled into a Mobile Eco-systems 'white paper'. During its third year, the project has focussed on developing methods and focus issues for studying ecosystem issues within mobile life. The goal is to develop some guidelines to this purpose during 2010.

From April forwards, the project will be coordinated with the 'Wireless Foresight' project in the Wireless@KTH centre.

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## Method development and transfer

*Researchers and industry work under different conditions. In research, there is often plenty of time to perform and analyse studies, with few set deadlines and little regard for external factors, such as changes in the marketplace. Industry, on the other hand, needs to ship products, are limited by time constraints and resources to what they can spend on development and studies, and ultimately have to adapt to what the market wants. At the same time, there is benefit from learning from both sides.*

This theme project acts as an interface between the methods used by researchers in Mobile Life and our partners. Instruments for sharing and learning about methods between researchers and industry partners include workshops, internships and collaborative projects. A number of Mobile Life researchers have spent time in industry internships, where they have learned about the methods used by our partners for design, implementation and evaluation. We have also performed a number of workshops where we used various methods, for instance a design workshop that used Bootlegging (semi-random combination of brainstorm elements) to produce a set of mobile services that were later implemented in collaboration with partners.

The most recent method-oriented workshop had participants from Ericsson Research, Nokia Research, Sony Ericsson, TeliaSonera and Microsoft Research, as well as researchers from Mobile Life. The workshop consisted of presentations from various partners, both academic and industrial, on how they use methods in their work, as well as joint group work, where we discussed different specific project from different viewpoints. We found that it seems that the methods that we are using are not very different in industry and academia respectively, but the resources at hand (mainly time) and external factors vary greatly. Eventually, the biggest difference between academia and industry is that in industry there is a user (end-user, operator, etc) at the end of the process who is going to use the system/service/product, whereas academic research produces knowledge for the own research community. This obviously puts very different demands on what methods could be used and what kind of result is needed.

Contact: Lars Erik Holmquist, [larserik@mobilelifecentre.org](mailto:larserik@mobilelifecentre.org)

# Publications

## Book

Montola, M., Stenros, J. and Waern, A. (2009). *Pervasive Games: Theory and Design*. Morgan Kaufmann.

## Journal publications

Höök, K. (2009). Affective Loop Experiences: Designing for Interactional Embodiment. *Phil. Trans. R. Soc. B* December 12, 2009 364:3585-3595;

Höök, K. (2009). Knowing, Communicating and Experiencing through Body and Emotion. *IEEE Transactions on Learning technologies*, 4(1), 248—259.

Jonsson, M., Tholander, J., Fernaeus., Y. (2009). Setting the Stage. Setting the stage – Embodied and spatial dimensions in emerging programming practices. *Interacting with Computers* Volume 21, Issues 1-2, January 2009, Pages 117-124.

Kocher, M., Denward, M. and Waern, A. (2009). Sanningen om Marika – The Interplay of Reality and Fiction. In eds. Sorg, J. and Venu, J.S. *Erzählformen im Computerspiel. Zur Medienmorphologie digitaler Spiele*, Transcript. Bielefeld, April 2009.

Laakolahti, J., Isbister, K. and Höök, K. (2009). Using the Sensual Evaluation Instrument. *Journal of Digital Creativity* Volume 20, Issue 3 September 2009 , pages 165 – 175.

Ståhl, A., Höök, K., Svensson, M., Taylor, A. and Combetto, M. (2009). Experiencing the Affective Diary. In *Journal of Personal and Ubiquitous Computing: Volume 13, Issue5 (2009)*, Page 365.

## Peer-reviewed conference papers

Brunnberg, L., Gustavsson, A. and Juhlin, O. (2009). Games for passengers - Accounting for Motion in location based applications. In *Proceedings of International Conference on the Foundations of Digital Games (ICFDG)*, April 26-30 on Disney Wonder Cruiseship, Florida, pp 26-33.

Chalmers, M. and Juhlin, O. (2009). New uses for mobile pervasive games - Lessons learned for CSCW systems to support collaboration in vast work sites. To appear in *Mobile Games: The Expanding Scope*, Icfai University Press.

Denward, M. and Waern, A. (2009). On the Edge of Reality: Reality Fiction in Sanningen om Marika. In *Proceedings of DIGRA conference*, September, Brunel University, United Kingdom.

Engström, A., Juhlin, O., Perry, M., Broth M. (2010). Temporal hybridity: Mixing live video footage with instant replay in real time”. In *Proceedings of CHI 2010* Atlanta Georgia, April, Full paper.

Engström A., Brunnberg L., Juhlin, O. (2009). Tiny Broadcast Systems. *ACM SIGGRAPH Asia 2009 Emerging Technologies* Yokohama 17-19th December.

Fernaeus, Y. (2009). Human Action and Experience As Basis for the Design and Study of Robotic Artefacts. In *Proceedings of RO-MAN 2009: 18th IEEE International Symposium on Robot and Human Interactive Communication*, 27 Sept - 2 Oct 2009, Toyama, Japan.

Fernaeus, Y. and Jacobsson, M. (2009). Comics, robots, fashion and programming: outlining the concept of act-Dresses. In *Proceedings of Tangible and Embedded Interaction (TEI'09)*, 16-18 Feb 2009, Cambridge, UK.



Höök, K. (2009). Mobile Life – innovation in the wild. 12th IFIP TC 13 International Conference (Gross, T, Gulliksen, J., Kotzé, P, Oestreicher, L., Palanque, P., Prates, R. O., Winckler, M. (eds.)) IFIP TC 13, Uppsala, Sweden Volym: Part I Sidor: 1-3, Springer-Verlag.

Isbister, K., and Höök, K. (2009). On Being Supple: In Search of Rigor without Rigidity in Meeting New Design and Evaluation Challenges for HCI Practitioners. In *Proceeding of the twenty-seventh annual SIGCHI conference on Human factors in computing systems*, pp. 2233-2242, ACM Press, Boston, USA, 2009.

Jacobsson, M. (2009). Play, Belief and Stories about Robots: A Case Study of a Pleo Blogging Community. In *Proceedings of RO-MAN 2009, IEEE International Symposium on Robot and Human Interactive Communication*, Toyama International Conference Center, Japan.

Laakolahti, J., Isbister, K, and Höök, K. (2009). Using the sensual evaluation instrument. LCEA09 - Completing the Circle: Incorporating Evaluation Methods in Creative Work. 19 Jan 2009, London, UK.

Ljungblad, S. (2009). Passive Photography from a Creative Perspective. In *Proceedings of ACM International Conference on Human factors in computing Systems CHI'09*, Boston, Ma.

Perry, M., Juhlin, O., Esbjörnsson, M. and Engström, A. (2009). Lean collaboration through video gestures: coordinating the production of live televised sport. In *Proceedings of CHI 2009*. ACM Press. CHI Honorable Mention!

Sundström, P., and Höök, K. (2010). Hand in Hand with the Material: Designing for Suppleness. In *Proceedings of CHI 2010: 28th ACM Conference on Human Factors in Computing Systems*, Atlanta, USA, April 2010, ACM Press.

Sundström, P., Jaensson, T., Höök, K. and Pommeranz, A. (2009). Probing the Potential of Non-verbal Group Communication. In *Proceedings of Group 2009*, May 10-13, Florida, USA.

Vold, T., Marzo, R., and Waern, A. (2009). Play Style Survey. In S. Dijkers, C. Steinkuhler, K. Squire, and E. Zimmerman (Eds.) *Real-Time Research: An Experiment in Design*. Pittsburg: ETC Press.

Waern A., Montola, M. and Stenros, J. (2009). The Three-Sixty Illusion: Designing For Immersion in Pervasive Games. In *Proceedings of ACM International Conference on Human factors in computing Systems CHI'09*, Boston, Ma.

Waern, A., Ahmet, Z. and Sundström, D. (2009). An In-Game Reporting Tool for Pervasive Games. In *Proceedings of ACM Conference on Advances in Computer Entertainment Technology (ACE) 2009*, November, Athens, Greece.

Wetzel, R., Waern A. Jonsson, S., Lindt, I., Ljungstrand, P. and Åkesson, K-P. (2009). Boxed Pervasive Games: An Experience with User-Created Pervasive Games. In *Proceedings of International Conference on Pervasive Computing Pervasive 2009*, Nara, Japan.

## Workshop papers

Belloni, N. Holmquist, L.E. and Tholander J. (2009). See You on the Subway: Exploring Mobile Social Software. Work in progress at CHI 2009, April 4-9, Boston, USA.

Cramer, H., Belloni, N., and Rost, M. (2010). On not being a stranger: Making sense of the sociable media landscape. To be presented at the 'Designing and Evaluating Affective Aspects of Sociable Media to Support Social Connectedness' workshop at CHI 2010, Atlanta, GA, USA.

Cramer, H., Mentis, H. and Fernaeus, Y. (2010). Serious work on playful experiences: a preliminary set of challenges. To be presented at the 'Fun, seriously?' workshop at CSCW 2010, Savannah, GA, USA.

Holmquist, L E., Ju, W., Jonsson, M., Tholander, J., Ahmet, Z., Sumon, S I., Acholonu, U., Winograd, T. (2010). Wii Science: Teaching the laws of nature with physically engaging video game technologies. To be presented in the workshop "Video Games As Research Instruments" at the ACM CHI 2010 Conference, Atlanta GA, USA.

Höök, K., Sundström, P., Tholander, J., Ferreira, P., Ståhl, A., Laaksolahti, J., Kosmack Vaara, E., Karlsson, A., Sanches, P., Johansson, C., Sjölander, M., Weymann, C., and Jaensson, T. (2010). Design Processes for Bodily Interaction. At the workshop Artifacts in Design: Representation, Ideation, and Process to be held at CHI, Atlanta, USA, April 2010.

Kosmack Vaara, E., Höök, K., and Tholander, J. (2009). Mirroring bodily experiences over time. Work in progress at CHI 2009. Boston, USA.

Rost, M. and Belloni, N. (2009). Experiencing Mobile 2.0 with Context-Aware Applications. In *Proceedings of MobileHCI 2009* workshop on “Context-Aware Mobile Media and Mobile Social Networks”, MobileHCI 2009, 15-18 September 2009, Bonn, Germany.

Sanches, P., Vaara, E., Sjölander, M., Weymann, C. and Höök, K. (2010). Affective Health – designing for empowerment rather than stress diagnosis. Workshop presentation in the ‘Know thyself: monitoring and reflecting on facets of one’s life’ workshop at CHI 2010, Atlanta, GA, USA.

Tholander, J., Laaksolahti, J., Kosmack-Vaara, E., Ferreira, P., Jaensson, T., and Fernaeus, Y. (2009). Engaging the whole body in mobile interaction. Workshop on Whole-Body Interaction at CHI2009, Boston, USA.

Tholander, J. and Johansson, C., (2010). Bodies, boards, clubs and bugs: A study of bodily engaging artefacts. in CHI 2010. Extended Abstracts, Work-in-progress.

Tholander, J. and Johansson, C., (2010). Bodies, boards, clubs and bugs: A study of bodily engaging artefacts. in CHI 2010. Extended Abstracts, Work-in-progress.

## Popular articles

Håkansson, M. (2009). On the move - sharing music, inspiration and fun. To be published in Vodafone receiver magazine, #22 Seizing the moment issue, May 2009.

## Doctoral Thesis

Håkansson, M. (2009). Playing with Context: Explicit and Implicit Interaction in Mobile Media Applications. Doctoral thesis in Man-Machine Interaction, Stockholm University, Sweden.

## Master Theses

Bäckström, A. and Danell, E. (2009). Authoring tools for interactive narratives - an interface design of a script editor for the pervasive game Backseat Playground. Master thesis. Computing Science. Umeå University.

Larshammar, M. (2009). Mobile usage at the community site Playahead. Ms. Sc. thesis, Computer and System Sciences Dept., Stockholm University.

Weymann, C. (2009). Development of an Affective User Interface for Mobile Phones. Diploma Thesis at University of Koblenz-Landay, Germany.

## Keynote talks

Höök, K., Royal Society London April 2009.

Waern, A. Talk at ITU, Denmark May, 2009.

Höök, K. Interact 2009 in Uppsala. The conference had about 450 attendees.



## Activities

*The centre aims to organise a variety of activities for disseminating the results and research that are conducted within Mobile Life, besides peer-reviewed publications in international conferences. These activities are in the form of invited talks to conferences, industry and organisations. They are also in the form of workshops and seminars. Listed below are both external and internal activities that have been arranged during the year.*

### External activities

Liselott Brunnberg was invited to talk at the European Location Based Entertainment Summit, May 2009.

Kristina Höök was invited to speak at KVIT, the 16th Cognitive Science Symposium in Linköping, May 2009.

Annika Waern was the external examiner of Leif Opperman's PhD thesis presented at Nottingham University in June 2009.

Mobile 2.0 - Creating and Evaluating New Mobile Services in the Wild, Panel presentation by Nicolas Belloni about Ambient Sweden at the FIRE and Livings Labs - Future of Internet by the People, Luleå, Sweden, July 2009.

Collaborative Live Streaming from UNG08 with Instant Broadcasting System in Kungsträdgården, August 2009.

Workshop: Beyond Gray Droids: Domestic Robot Design for the 21st Century. Workshop at HCI 2009 co-chaired by Laurel D. Riek (University of Cambridge), Ginevra Castellano (Queen Mary University of London) and Lars Erik Holmquist, Cambridge, UK, September 2009.

Kristina Höök was invited to speak at TEDx Stockholm, the local TED conference, September, 2009.

Oskar Juhlin presented the Mobile Life Centre at IBM's TEC Institute agenda in September, 2009.

Arvid Engström was invited to speak at TU, the Swedish Newspaper Associations Conference in October, 2009.

Oskar Juhlin was invited to talk about "the Interactive Road" at Usability in Vehicle Information Systems Seminar in October, 2009.

Demonstrations of Affective Health, Geochat and Portait Catalog at Mobilgalan, the annual fair for Mobile companies in Stockholm at Kista Science Tower, November, 2009.

Demoing at the reception of Future Internet Assembly (FIA) meeting in Kista Science Tower, November 2009.

Arvid Engström, Oskar Juhlin and Liselott Brunnberg successfully demonstrated the Instant Broadcasting System at SIGGRAPH Asia, in Yokohama, in December, 2009.

Oskar Juhlin was invited to speak at a seminar organised by Region förbundet in Kalmar. The title of the talk was "Mobile life as social media." Asia in Yokohama, December 2009.

Oskar Juhlin acted as opponent at Rikard Harr's Ph D defense at Umeå University in December, 2009.

Oskar participated in "Regiondagarna" in Kalmar in January, 2010.

Kristina Höök gave a seminar in the Visiting Speaker Programme at University of Nottingham in January 2010.

Kristina Höök gave a presentation at the SSF annual seminar day on "Forskningspolitik" on the 10th of March.

Kristina Höök was invited to speak at the "Sydney Michaelson Memorial Lecture" in Edinburgh April 7th, 2010, followed by a talk in Glasgow on the 8th of April.

## Visits in the centre

*The centre welcomes industry, research organisations and government officials among others. During the year Mobile Life arranged a number of visits when we presented the centre and showed demos. A few examples are listed below.*

The research group *SPIDER* visited in April 2009.

The Head of Administration at Stockholm University, June 2009.

In connection with Volvo Ocean race, Ericsson invited international journalists to Kista and 35 journalists visited the centre. June 2009.

Hazel Glover and Sophie Dale from the University of Nottingham and the Horizon centre, visited Mobile Life to exchange experiences in August 2009.

A delegation from EIT (European Institute of Technology) visited the centre in connection with a visit to Kista in November 2009.

Judith Bishop from *Microsoft Research* visited Sweden and the Mobile Life centre.

INGVAR-fellows visit arranged at SICS by Lars Erik Holmquist and Kristina Höök. The group saw demos and listened to a presentation of the centre in February 2010.

## Workshops

*As a means for knowledge transfer the centre is working very actively to meet and work together with our industry partners. One such excellent knowledge transfer arena are the workshops that the centre arranges. During the year 12 workshop have been organised.*

Generalized Interaction Model project organised a design workshop in the Mobile Life Centre. Participants: Mobile Life researchers, TeliaSonera, Sony Ericsson and Ericsson. April 2009.

Generalized Interaction Model project organised a design methods workshop in the Mobile Life Centre. August 2009.

IPR-workshop at Mobile Life with Ericsson, Sony Ericsson, SU Holding, SU Innovation and Mobile Life. September 2009.

The Playfulness Experience project organised a two day workshop to kick-off the project at Nokia Research in Tampere. September 2009.

Generalized Interaction Model and Mobile 2.0 organised a workshop on the topic New Interaction and distribution models for mobile services. September 2009.

The Mobile Ecosystems project organised at Nokia research in Tampere. September 2009.

IPR-workshop at Mobile Life with Ericsson, Sony Ericsson, SU holding and SU Innovation. October 2009.

Workshop on methods for user studies and design in industry and academia at Ericsson. December 2009.

Pervasive Game project organised a two day workshop with Mobile Life researchers and Nokia at Frescati. February 2010.

Pervasive Game project organised a two day workshop with Mobile Life researchers, Nokia and several external companies at Frescati. February 2010.

Mobile Life organised a workshop with Stockholm Municipality at Liljevalchs with a tour of Vårsalongen and demo of the Lega project. March 2010.



Mobile Life organised a workshop with Mobile Life's Academic Advisory Board at Mobile Life and at Grinda in the Stockholm archipelago. March 2010.

## Seminars

*Mobile Life arranges a series of open seminars. The seminars are held in the premises of the centre's partner Kista Science City in Kista Science Tower. During the period 17 seminars have been organised with external speakers as well as speakers from the Mobile Life Centre.*

*Lean Collaboration through Video Gestures:* Co-ordinating the production of live televised sport. Arvid Engström, Mobile Life, Interactive Institute, April 2009.

*Invisible Emotions in Critical Work.* Helena Mentis, Penn State University, May 2009.

*Study of locationbased search behavior.* Alia Amin from Centrum Wiskunde & Informatica, Amsterdam, August 2009.

*Mobile Inclusion.* Konrad Tollmar, KTH/Lund University, September 2009

*Helping Citizens help each other?* Susanne Bødker, Professor at University of Aarhus, October 2009.

*Students' digitalization of higher education.* Johan Lundin, University of Gothenburg. October 2009

*An introduction to Digital Anthropology.* Dr Paula Uimonen. October 2009

*Design for all design for me.* Charlotte Magnusson och Bodil Jönsson, CERTEC. November 2009.

*Sustainable life experiments in the wet.* AnneLise DeJong, Associate Professor at University Delft , Netherlands. November 2009.

*Using Prototyping and Evaluation Methods in Iterative Design of Innovative Mobile Games.* Ph D. Elina Ollila, Nokia. November 2009.

*PhD research at the University of Amsterdam on people's interaction with adaptive and autonomous systems.* Henriette Cramer, ERCIM postdoctoral fellow. December 2009

*Bluetooth as a Design Medium.* Petra Sundström, Ph. D. student, Mobile Life. January 2010.

*Microstudy of mobile technology in use.* Associate professor Alexandra Weilenmann. February 2010.

*Artefacts in Design Processes for Bodily Interaction?* Kristina Höök, Professor in Human-Machine Interaction at Stockholm University. February 2010.

*Social media on the road - The future of car based computing.* Oskar Juhlin, Associate professor at Stockholm University. February 2010.

*Playful experiences in the design of interaction.* Ylva Ferneaus, Mobile Life. March 2010.

*Designing digital artifacts.* Lars Erik Holmquist, Mobile Life, Professor at Södertörn University. March 2010.



## Doctorates

*Maria Håkansson (2009). Playing with Context: Explicit and Implicit Interaction in Mobile Media Applications. Doctoral thesis, Department of Computer & Systems Sciences, Stockholm University.*



The thesis contributes with insights into how aspects of the surrounding physical and social context can be exploited in the design of mobile media applications for playful use. In this work, context refers to aspects of the immediate surroundings – outside of the device – that can be identified and measured by sensors; for instance environmental aspects like sound, and social aspects like co-located people. Two extensive case studies explore the interplay between users, mobile media, and aspects of context in different ways, and how it can invite playful use. The first case study, Context Photography, uses sensor-based information about the immediate physical surroundings to affect images in real time in a novel digital camera application for everyday creativity. The second, Push!Music, makes it possible to share music both manually and autonomously between co-located people, based on so-called media context, for spontaneous music sharing.

The insights gained from the designs, prototypes, and user studies, point at the value of combining explicit and implicit interaction – essentially, the expected and unexpected – to open for playful use. The explicit interaction encouraged users to be active, exploratory, and creative. The implicit interaction let users embrace and exploit dynamic qualities of the surroundings, contributing to making the systems fun, exciting, magical, ‘live’, and real. This combination was facilitated through our approach to context, where sensor-based information was mostly open in use and interpretation, ambiguous, visible, and possible to override for users, and through giving the systems a degree of agency and autonomy. A key insight is that the combination of explicit and implicit interaction allowed both control and a sense of magic in the interaction with the mobile media applications, which together seems to encourage play and playfulness.



## Media

*Since the start, Mobile Life has been in national and international media more than 65 times. Most notably TV4 news, Computer Sweden, SvD, SR P1, Metro Teknik, Ny teknik, Veckans Affärer, Fo & Framsteg, SVT as well as international media. We have won prizes for media productions with SVT (Sanningen om Marika), been voted most influential IT-women in Sweden (Annika Waern and Kristina Höök), and nominated to Guldmusen (Kristina Höök). A list of the press- and media appearances follows:*

*Metro Teknik* featured several of the demos from the Mobile Life Open House event in their television programme (TV9): <http://www.metro.se/2009/03/05/58296/tv-skaka-dig-narmare-dina-vanner/>

The Swedish weekly magazine *Ny Teknik*, April, Issue 14, featured a two-page article which thoroughly presents the idea of mobile collaborative video mixing and Swarmcam, [http://www.nyteknik.se/nyheter/it\\_telekom/tv/article548546.ece](http://www.nyteknik.se/nyheter/it_telekom/tv/article548546.ece)

Ericsson's internal newspaper *Kontakten* featured some of the Mobile Life activities.

Ericsson's Telecom report – *The Future of Telecoms*, featured some of Mobile Life's results: [http://www.ericsson.com/ericsson/corpinfo/publications/telecomreport/archive/2009/future\\_of\\_telecoms/article1.shtml](http://www.ericsson.com/ericsson/corpinfo/publications/telecomreport/archive/2009/future_of_telecoms/article1.shtml)

*Swedish Radio* (SR). Maria Håkansson talks about the Push!Music system and music sharing on mobile phones in the weekly music documentary "Mitt i musiken", broadcasted on April 3 in P2:<http://www.sr.se/sida/artikel.aspx?programid=1012&artikel=2745547>

Oskar Juhlin was interviewed in *SPRF*, membership magazine for "Sveriges Pensionärers Riksförbund" (4/2009) on the benefits of new mobile live video technologies for kins and families.

Kristina Höök appeared on the radio, *VVR Vetandets värld*, Thursday 3rd of September, 2009: <http://www.sr.se/cgi-bin/p1/program/laddaner.asp?ProgramID=412>

Annika Waern's research was portrayed in *Forskning & Framsteg*. The articles was named "EU funds new game genres" and portrayed work both from IperG (the EU-project Annika lead prior to the Mobile Life centre) and Mobile Life.

An article in *SINC* in Spain mentioned the Royal Society discussion and the work of professor Höök, 26th of May 2009: <http://www.plataformasinc.es/index.php/esl/Reportajes/Inteligencia-Artificial-mi-robot-me-entiende>

Mobile Life was portrayed in the Ericsson internal newspaper: [http://www.ericsson.com/ericsson/corpinfo/publications/telecomreport/archive/2009/future\\_of\\_telecoms/article1.shtml](http://www.ericsson.com/ericsson/corpinfo/publications/telecomreport/archive/2009/future_of_telecoms/article1.shtml)

Mobile Life was portrayed in the *Silicon Networks* newspaper in 20090626: <http://networks.silicon.com/mobile/0,39024665,39445481,00.htm>

Oskar comments on the future of Internet on the mobile phone in the October 2009 issue of the Journal *Internetworld*. <http://internetworld.idg.se/2.1006/1.263329/nu-ar-natet-hetast-i-mobilen>

Oskar Juhlin also appeared on Swedish public service radio first in the program *Fråga barnen*, where he got to ask the children at "barnpanelen" questions on the 25th September 2009.

Oskar commented on a new game from Microsoft on *Vetenskapsnyheterna* SR P1 on the 14th September, and specifically on the play experience of a global warming learning game.

Kristina Höök was interviewed on *Vetenskapsradion* P1 after her Interact-keynote presentation.

The magazin *Leva* appointed hundred Swedish women that inspire. Krstina Höök was appointed under category Science Fiction. <http://www.mynewsdesk.com/se/view/pressrelease/omoejliggoeraren-david-lega-och-farsgrisen-hanna-hellquist-tvaa-av-levas-100-inspiratoerer-345552>

Kristina Höök is still on the list of most powerful IT-women in Sweden according to *Computer Sweden*, December 19th, 2009. <http://csjobb.idg.se/2.9741/1.279120/sveriges-maktigaste-it-kvinnor>

Maria Håkansson has been interviewed in *New Scientist* about our long-term study of the robotic toy dinosaur Pleo in the homes of families. <http://www.newscientist.com/article/mg20427385.600-learning-to-love-to-hate-robots.html>

Sara Ljungblad appeared in *Metro Teknik*, Nov 30, 2009, describing “Autonomous wall-paper” as a playful photography application that illustrate changes in the use of cameraphones. <http://www.metro.se/2009/11/30/87614/hennes-tapet-ar-fyllt-av-digitala-blo/>

Kristina Höök participated in *P1*, Swedish radio, in a panel on social media, 12th of January, 2010. The program was also transmitted via Bambuser. <http://sverigesradio.se/sida/artikel.aspx?programid=3391&artikel=3366367>

Kristina Höök gave a talk at *TEDx Stockholm*, September 19, 2009. Her talk can be found on YouTube.

Oskar Juhlin comments on “Därför är kvinnorna mest framåt på nätet” in *Metro* 2010-01-29.

Judith Bishop from MSR visited Sweden and came to see Mobile Life. Judith was interviewed by *Computer Sweden* together with Kristina Höök: <http://computersweden.idg.se/2.2683/1.299976/ensam-inte-stark>

Ylva Ferneaus was interviewed by *Metro Teknik*, 23rd of March, on the idea of ActDresses – by dressing up robots in different clothes their behaviour is changed. <http://www.metro.se/2010/03/26/14021/roboten-som-somnar-nar-den-far-pyjamas/>

Annika Waern was interviewed in *Forskning & Framsteg*, March 2010, on “augmented reality”. <http://www.fof.se/tidning/2010/3/forstarkt-verklighet>

Annika Waern was interviewed by *Uppsala Nya Tidning* when she turned 50 years old 22nd of March. She spoke about her Mobile Life research on pervasive games. <http://www.unt.se/familjeliv/hon-ar-en-baddare-pa-dataspel-734944.aspx>

Riu Xue Xia was interviewed by *Studentguiden* on her experiences of studying and then doing research in Sweden.

Nicklas Lundblad wrote an essay on the death of the idea of mobility as a state separate from normal use, in *Computer Sweden*, March 2010. He referred to Mobile Life and our research agenda. <http://computersweden.idg.se/2.2683/1.294897/mobil-ar-det-normala>

Annika Waern was interviewed in the Sunday-appendix of *Dagens Nyheter* 21st of March, 2010, on Pervasive Games.



## The organisation

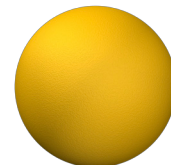
### People in the centre

Oskar Juhlin, Associate Professor, Centre Director  
Annika Waern, Associate Professor, Co-Director  
Lars Erik Holmquist, Professor, Research leader  
Kristina Höök, Professor, Research leader



Photographer: Karl-Petter Åkesson

Alexandra Weilenmann, ITU Göteborg, Associate professor, guest researcher  
Alex Hanif, KTH/SICS/Phillips, Master student  
Anna Ståhl, SICS, Ph.D. Student  
Anna Karlsson, SICS, Project employee  
Annelie Schwanecke, SICS, Master student  
Arvid Engström, II, Ph.D. Student  
Barry Brown, USDC, Associate Professor, guest researcher  
Carolina Johansson, SU, Research assistant  
Caroline André, Umeå Institute of Design/SICS, Master student  
Celia Yanqing Zhang, II, Junior researcher  
Claus Weymann, SICS, Project employee  
Daniel Sundström, II, Project employee  
Elena Marques-Segura, SU/II, Master student  
Elin Önnvall, II/SU, Junior researcher, coordinator assistant  
Elisa Ziegler, II, Bachelor student  
Elsa Kosmack-Vaara, SICS, MA Interaction designer  
Farnaz Zangouei, KTH/SICS/Phillips, Master student  
Franc Aleo, SU/SICS, Master student  
Fredrik Hernegren, KTH/SICS, Master student  
Goranka Zoric, SU, Ph. D. Student  
Helena Mentis, SICS, ERCIM post doctoral fellow  
Henriette Cramer, SICS, ERCIM post doctoral fellow  
Iuliana Silvasan, Ph. D. Student, guest researcher  
Jakob Tholander, SU, Ph. D. Project leader



Jarmo Laaksolahti, SICS, Ph. D. Project leader  
Jon Back, SU, Ph. D. Student  
Jordi Solsona, KTH/SICS, Ph.D. Student  
Karl-Åke Pettersson, II, Senior researcher  
Kim Nevesteen, II, Ph. D. Student  
Liselott Brunnberg, II, Ph. D.  
Maja Lapidus, SU/SICS, Master student  
Marcus Lundén, SICS, Master student  
Maria Holm, Coordinator  
Maria Håkansson, SICS, Ph. D.  
Marie Denward, II, Ph.D. Student  
Marie Sjölander, SICS. Ph. D. Project leader  
Mark Perry, Brunel University, Ph. D. guest researcher  
Mattias Jacobsson, SICS, Ph.D.Student  
Mattias Rost, SICS, Ph.D. Student

Nicolas Belloni, SU, Master student  
Pedro Ferreira, SU, Ph.D. Student  
Pedro Sanches, SICS, Project employee  
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Ramin Toussi, KTH/II, Master student  
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Roger Moret Gabarr, SU/II, Master student  
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Tove Jaensson, SU/TeliaSonera, Ph.D. Student  
Ylva Fernaeus, SICS, Ph. D. Project leader  
Zeynep Ahmed, SU/II, Bachelor student

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Chair, Martin Körling, Ericsson

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Bo Larsson, Sony Ericsson  
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Jyri Huopaniemi, Nokia  
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### Deputies:

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Mikael Anneroth, Ericsson  
Troed Sångberg, Sony Ericsson  
Pekka Markkula, TeliaSonera  
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Karin Öhlander, Stockholm City  
Mats Danielsson, Stockholm University

## The Academic Advisory Board

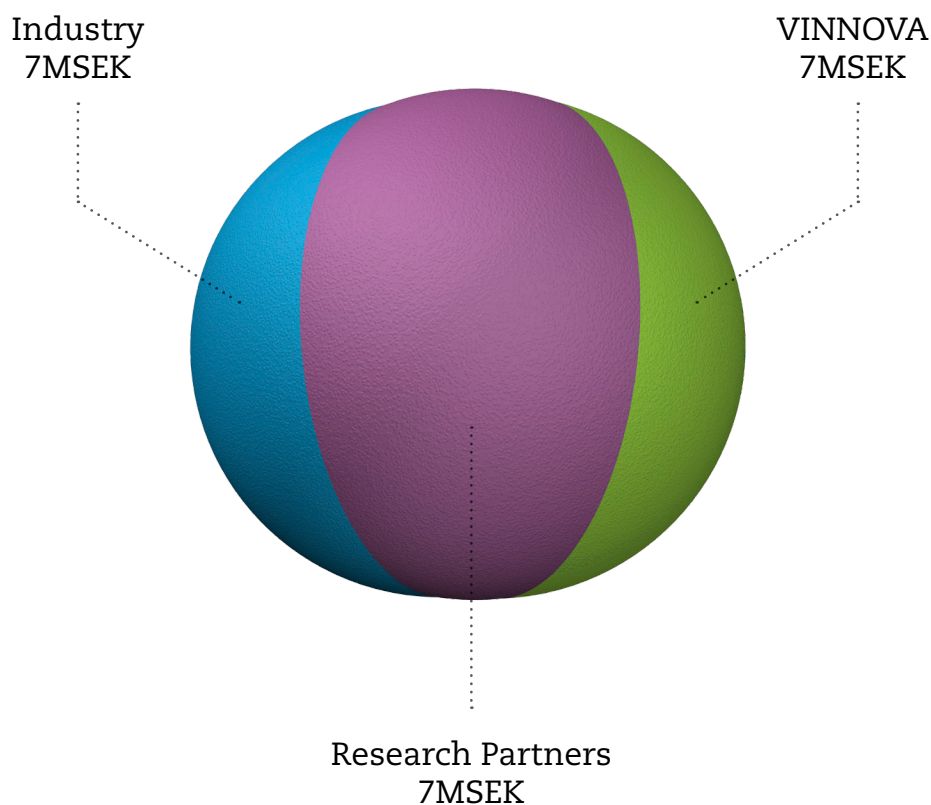
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William Gaver, Professor, Department of Design, Goldsmith University of London, UK  
Masa Inakage, Dean, Graduate School of Media Design, Keio University, Japan  
Katherine Isbister, Associate Professor, Polytechnic University of NYU, USA  
Tom Rodden, Professor, School of Computer Science and IT, Nottingham University, UK



## Funding

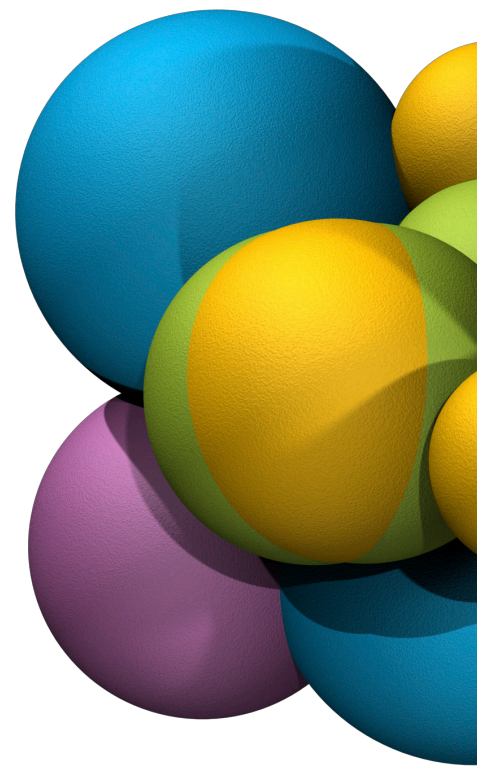
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..... the next step



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Mobile Life VINN Excellence centre at Stockholm University.  
Partners: SICS and Interactive Institute AB, Ericsson AB, TeliaSonera AB, Sony Ericsson AB,  
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