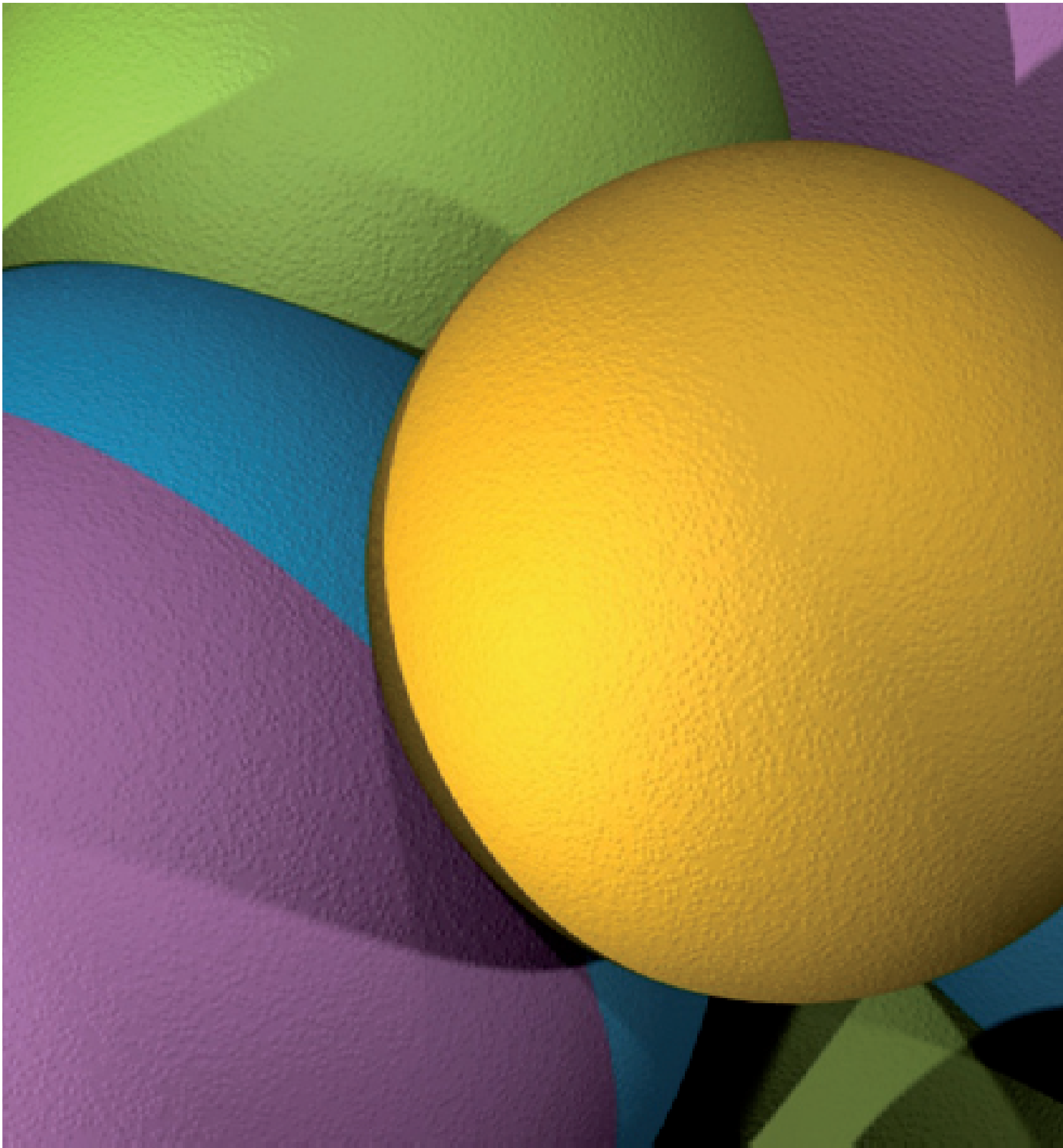
MobileLife



Content

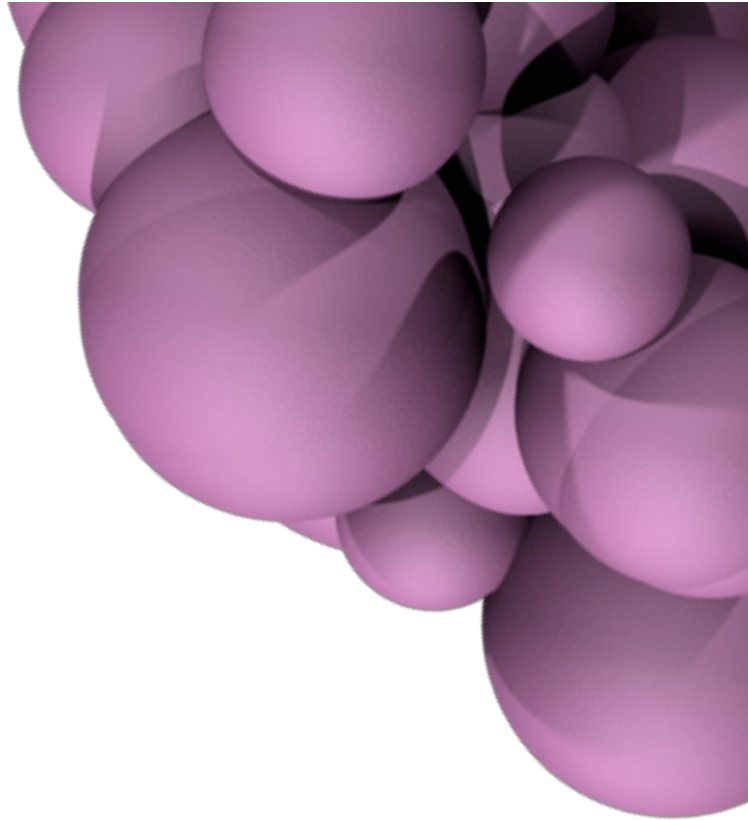
Mobile revolution

Two years ago, the Mobile Life Centre opened its doors in Kista. At the time, we talked about a coming second IT revolution, made possible by a new generation of mobile services and ubiquitous technology. The first IT-revolution, the introduction and deployment of the internet and the World Wide Web during the 1990's, had a major impact on all parts of our society. We postulated that as mobile, ubiquitous technology was becoming widespread, the design and evaluation of mobile services – i.e. information technology that can be accessed and used in virtually any setting – should represent a vital area for every aspect of the IT- and telecom industry. We wanted to help the industry to design services for the sustainable web of work, leisure and ubiquitous technology we call the mobile life.

Today, the landscape is already vastly different. For instance, when we wrote the first research plan for Mobile Life, neither Google nor Apple were in the mobile phone business. We have also seen the marketplace become more dominated by high-end phones and advanced user interfaces such as touch-screens. But two other recent developments may well have more importance for the long-term development of mobile services. First, the increased availability of flat-rate data plans will lead to users adopting mobile services much like they have already got used to having the stationary internet as an essential part of their lives. Second, the new openness for external application development, exemplified both by successful applications stores and the open-sourcing of several major operating systems, means that there is potential for a slew of new and innovative mobile services to appear. In fact, many of the applications that have recently been launched by start-ups are very similar to projects we were working on at the start of the Centre – location-based, social, high-bandwidth, media-rich and user-friendly mobile services available at the click of a button (or touch of a screen!) This does not mean our work is done – it has only started! Most of the new services we have seen so far are technically innovative, but designed based on stationary computing as the dominating interaction paradigm. In a truly mobile life, we not only need access to people and activities in other locations – we must also always consider

the things at hand. We believe that next generation of mobile services should provide better means for exploring and engaging with unplanned activities, unfamiliar places, and brief encounters – in other words the world as it is right here and right now. As work, leisure and social activities blend together, this shift to services that provide both global and local access become important both to support work-oriented tasks and to emerging leisure-oriented activities. This requires a new approach to how mobile services are designed and evaluated – not remote and disconnected, but right here, right now.

As you will see at this Open House, The Mobile Life VINN Excellence Centre has, together with our partners, already become a hotbed for research and development of this next generation of mobile services. Welcome to the mobile revolution!



Mobile Life VINN Excellence Centre

The Mobile Life Centre at Stockholm University in Kista, Sweden, does research in mobile services and ubiquitous computing. The topic of the Centre includes research on consumer-oriented mobile and ubiquitous services spanning all areas from entertainment and socialization to work and society. The Centre joins forces with local research organization such as SICS and Interactive Institute. It has major partners from the IT and telecom industry, including Ericsson Research, TeliaSonera, Sony Ericsson and Microsoft Research Ltd. Partnerships in the public sector, including City of Stockholm Municipality and Kista Science City secure societal relevance, and collaboration with Stockholm Innovation and Growth ensures that results are integrated in the innovation system. In the Centre, this academic, industrial and public partnership will be able to jointly work on strategically important projects that can provide a sustainable growth for Sweden. The Centre is funded by VINNOVA on a 10-year grant, 2007 - 2017.The Centre adopts a fundamentally user-oriented perspective on services for the future mobile life.
It provides a neutral arena where researchers and industrial partners together develop:

- New interaction models and platforms that provide a unified interface across different applications and terminals
- Efficient and user-oriented methods for developing mobile services
- A deepened understanding of the unique properties of the future mobile life
- A future mobile service eco-system where we explore alternative universes for infrastructure, business models and the industry's new roles
- New mobile and ubiquitous services in areas such as pervasive games, social, emotional and bodily com munication and new mobile media.

Partner descriptions

Research organisations

Stockholm University
Mobile Life is organized 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. Students employed at the Centre are 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 new 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, some of the research will be contracted to SICS and Interactive Institute. Both have their main offices in Kista.

Industry partners

The group of industry partners for the Centre is expected to grow during the Centre lifetime, reflecting that the industry for mobile services will grow and to some extent mature during this period. Here, we describe the set of partners that are involved from start.

Ericsson AB
Ericsson is a world-leading provider of telecommunications equipment and related services, to mobile and fixed network operators globally. Ericsson Research will provide the Centre with concrete technology as well as deep knowledge in the opportunities and limitations of future telecommunications systems and their interaction with other technology such as WiFi and peer-to-peer networking.

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 AB
Sony Ericsson Mobile Communications is a global provider of mobile multimedia devices, including feature-rich phones and accessories, PC cards and M2M solutions. Sony Ericsson brings to the Centre both the technical, practical, and business requirements associated to the development of novel and innovative mobile devices.

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.

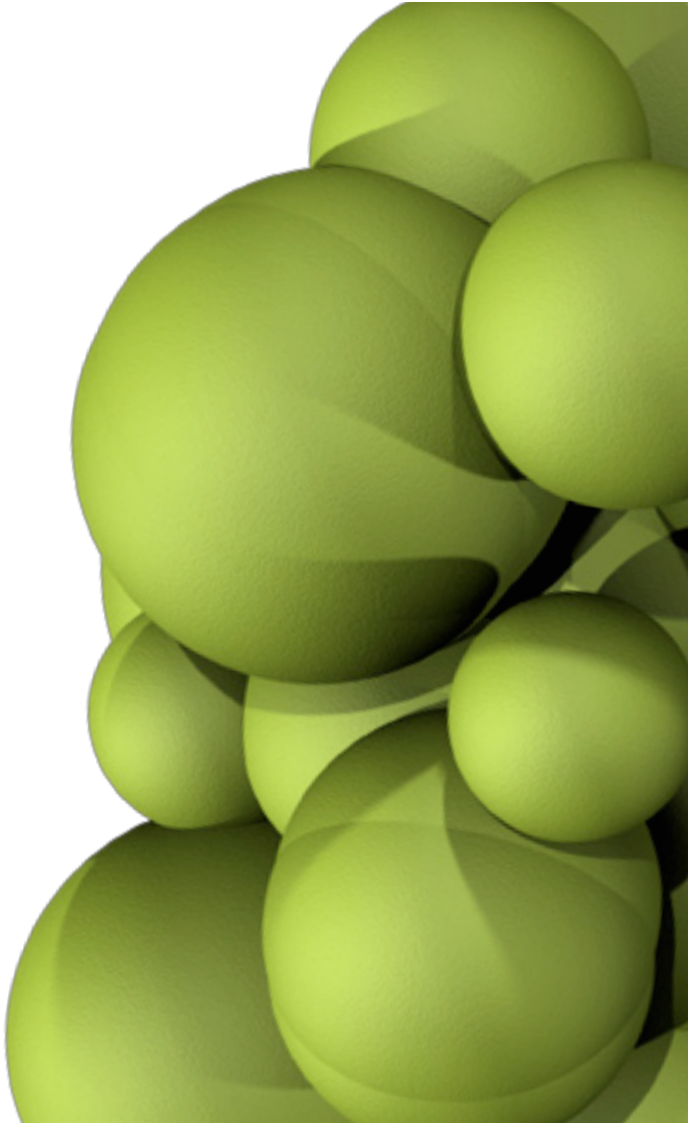
Public sector representatives

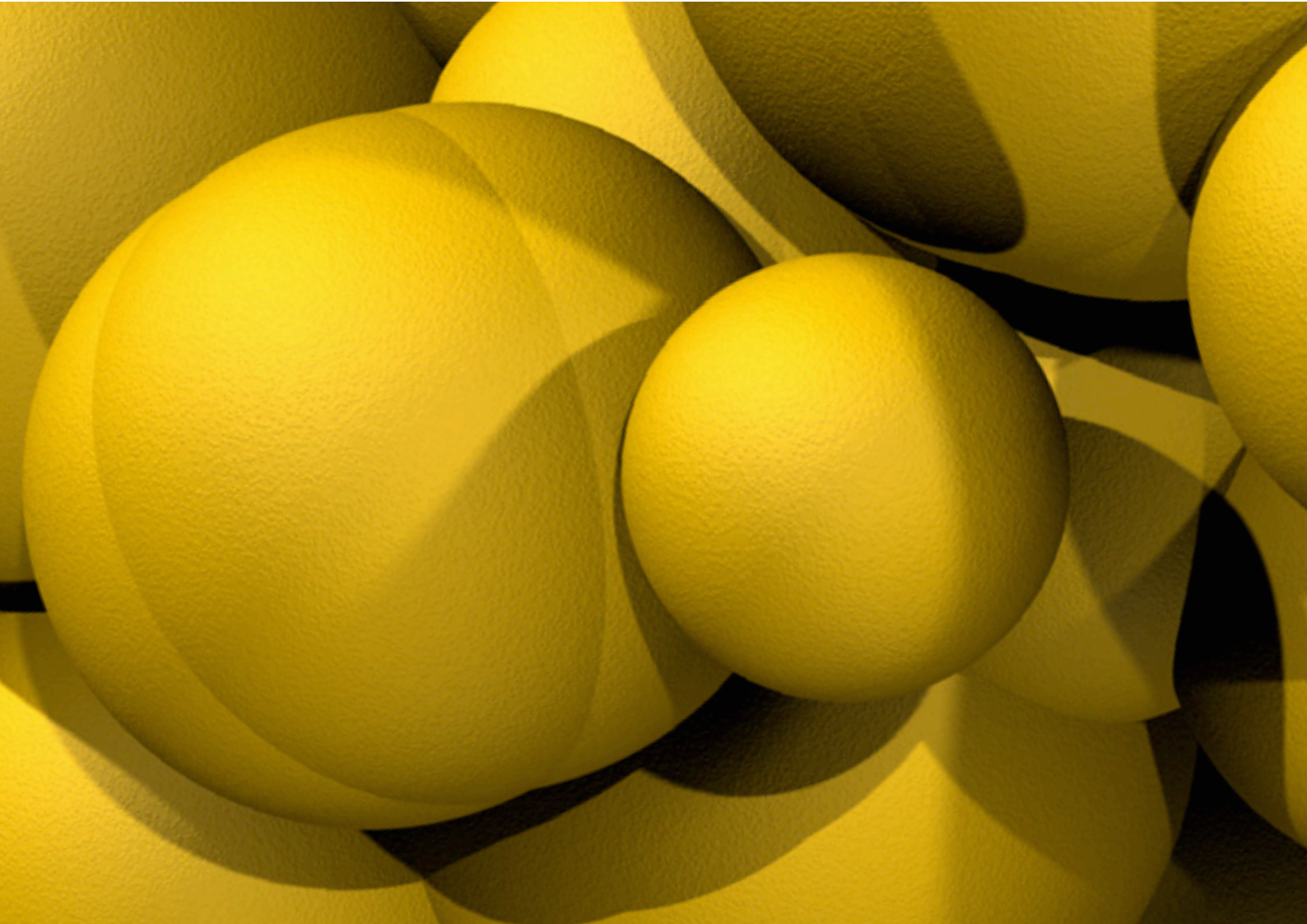
City of Stockholm Municipality
Within Sweden as a whole, the Stockholm region and Kista play a crucial role in the establishment of a consumer-oriented service industry. This role has been recognised by the City of Stockholm that has chosen to establish and participate in several initiatives focused on this sector, including the Mobile City Initiative (MCI), the Kista Mobile Showcase, and now 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. Furthermore the City strives at coordinating and cooperating regarding the various mobile initiatives in the city.

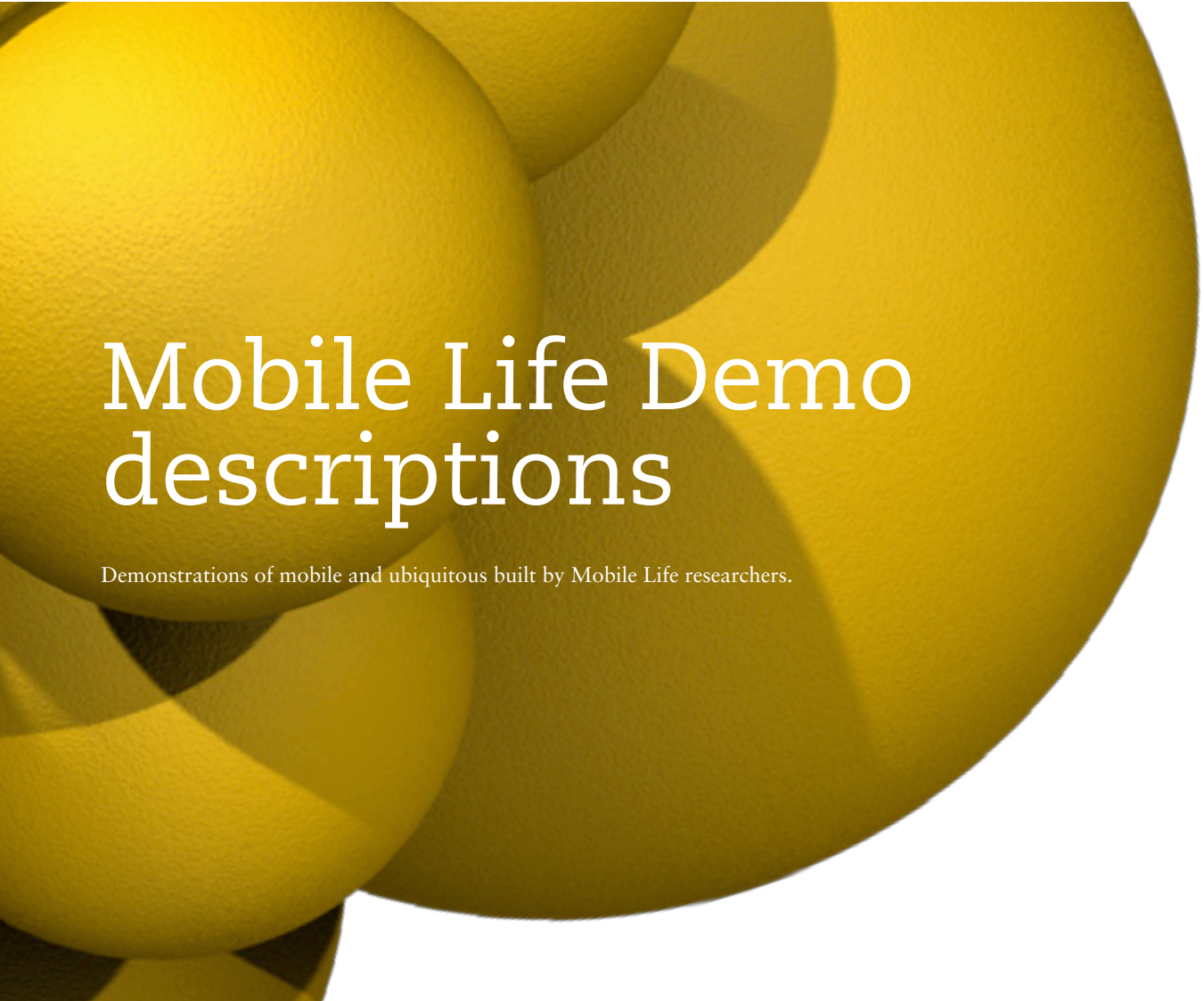
Kista Science City AB
Kista Science City brings to the competence Centre its project 'Kista Mobile Showcase' as well as several contact networks for small- and medium sized service development companies in the Stockholm area. The Kista Mobile Showcase is a physical test- and demonstration platform for 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 startups. The ambition is to generate more technology startups 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 commercialize 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 startups.







Mobile Life Demo descriptions

Demonstrations of mobile and ubiquitous built by Mobile Life researchers.

Affective Health

The Affective Health project explores mobile services that empower people to monitor and understand their own stress levels vis-à-vis their everyday activities. The current prototype aims to provide users with easy to grasp visualizations of data captured from body sensors and mobile devices. When bio-data and mobile events are mirrored back to users, they can create meaningful mappings between activities in the world and how they respond to them. Over time users will be able to discover patterns, hidden characteristics and trends, leading to a better understanding of their own behavior. This in turn empowers them to take control of and cope with stressful situations, increase activities that promote their well being, or simply change their attitude towards certain aspects of their lives, thereby reducing their negative impact.

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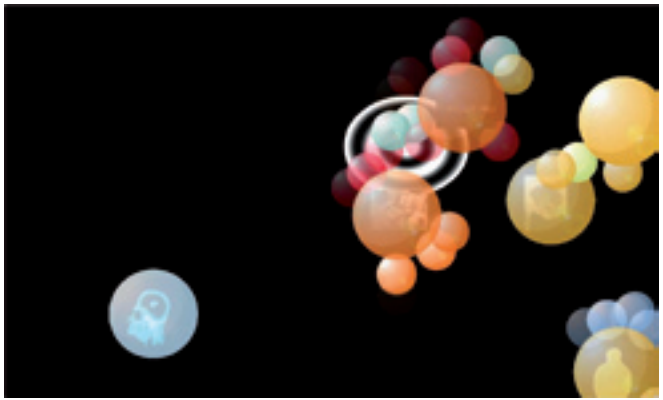

FriendSense

FriendSense is a technical probe, a method to make users “live the experience” in early phases of prototyping, exploring physical, emotional expressions of closeness within groups of friends. The first prototype was created for work colleagues. Users express themselves through physical interactions performed with a sensor-node. The sensor-nodes could pick up on vibrations and temperature that was translated into individual expressions on a large ambient display that all the co-workers could see. Users’ could make their expression be close or far away from others’ expressions. Thereby they showed and in some ways acted out their closeness to (or conflicts with) their colleagues.

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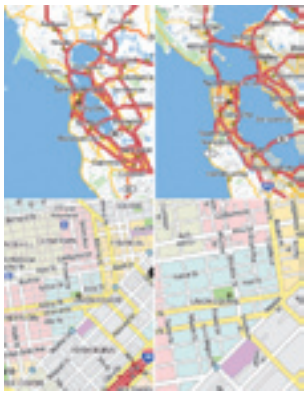

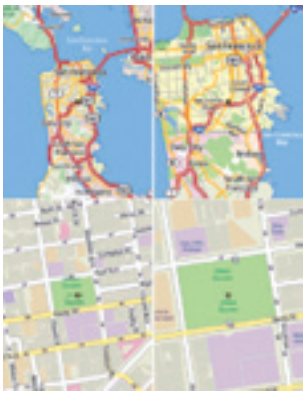

Mobile 2.0

In Mobile 2.0 we are developing new mobile services that use location, connectivity, and other mobile context to create new opportunities for interaction. The Portrait Catalog, developed in collaboration with Sony Ericsson, is a mobile Java application for collecting photos of friends that are sent to you over Bluetooth. The application is inspired by the event occurring in school after the yearly class photos and portrait photos arrives, at which time students eagerly exchange portrait photos with their friends. Open Geo Channel, also in collaboration with Sony Ericsson, is a mobile map-based chat application written in Java. Using a map view you can find or create a chat-room at your current location, or somewhere else in the world, e.g. at your house, the beach, the football arena, etc. The Subway Friend Finder is a light-weight web based application that helps you connect with friends travelling on the same subway train. Finally, Columbus is a GPS-based mobile application for physically exploring the world of geo-tagged photos, where users must go to a photo's physical location to discover it.

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ActDresses

With actDresses you can change the behaviour of a robot by putting on different physical accessories – in other words by dressing it up! For instance, if you want your robot to “go to sleep” you put on a pyjama. In the demo you can try programming our small robots to adapt different behaviours. The work is part of a European project, LIREC, where we are exploring how to develop technology that supports long-term relationships between humans and robotic companions.

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Babylon

Babylon is a tool used to study the experience in pervasive games. It allows players to report their game experience while a game is ongoing, and then debrief the experience after the game. It consists of an experience reporting tool running on an IPhone, and a post-game visualization tool running in a web interface. Although the tool has been developed with a specific focus on pervasive game, the setup is useful for a wide range of real-world experiences and the interface is very easy to adapt to other domains.

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TheCreator 2.0

As part of the IPerG project, we also developed a tool Gamecreator to support the development and game mastering of pervasive games. This tool was used in no less than five different development projects including a commercial project. We demonstrate a new version of the tool based on the experiences from those projects.

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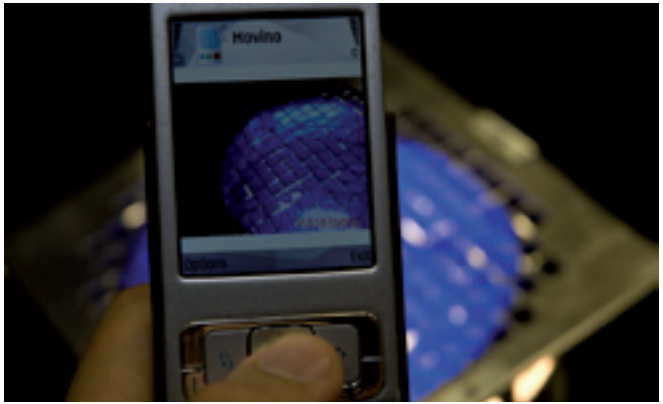

SwarmCam

We present the SwarmCam application, which has been implemented to investigate the possibilities of mobile collaborative live video mixing. A first generation of mobile applications make it possible to broad cast live video streams from various types of use contexts over mobile networks (such as 3G). 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, such as the Nokia N-series, 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 motor sports by fans or of soccer matches by parents. Or, as demonstrated by the Swarm Cam, to visitors at night clubs and VJs, as well as visitors to public exhibitions.

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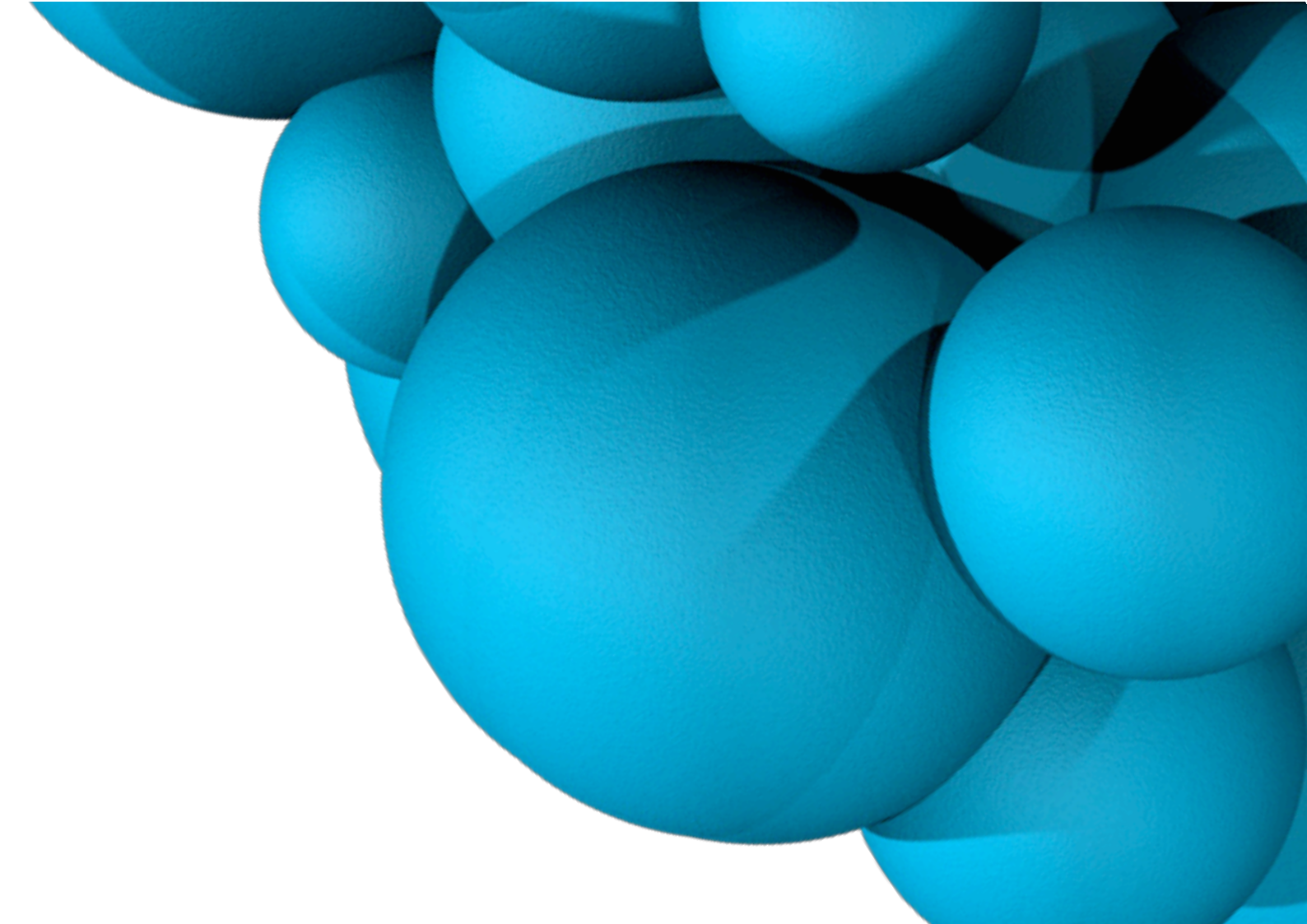

Partner demo description

Demonstrations of mobile and ubiquitous built by Mobile Life partners.

Ericsson

Ericsson Labs is an Ericsson-initiative for open innovation. It is a portal and a way of working with beta applications and API's and resources published by Ericsson and its partners. The beta applications are for users who want to try early experiments. The target groups for the API's and resources are long-tail developers, researchers and students that want to experiment with new ideas and implement and deploy test version.

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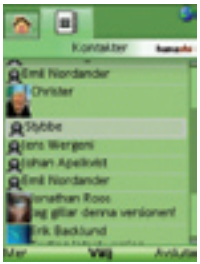

Sony Ericsson Hanashi

The client Hanashi includes sharing of text, pictures and voice as well as positioning on maps. One mobile user can invite another mobile phone even if that phone does not have the application, a link will lead to download of Hanashi.

Hanashi also works in off-line mode since it auto start at an invitation. Thus, the users do not need to be logged in to be addressable. Users address each other by mobile phone numbers! Virtually, all Sony Ericsson´s phones from K750 and on forwards can use Hanashi today. Hanashi work in other brands. Hanashi is downloadable at Fun& Downloads. You can read more on www.hanashi.nu where you can download Hanashi and try it out.

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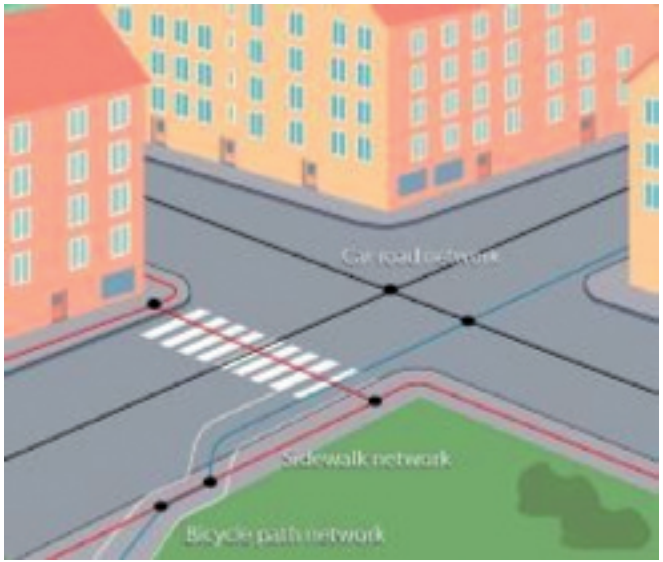

Stockholm Stad
e-Adept

e-Adept is a unique cooperative project within the areas of personal navigation, travel planning and safety. The aim of the project is to provide a mobility enabling solution to increase pedestrian accessibility for elderly people and people with disabilities. The service facilities are offered via a mobile telephone or PDA with integrated telephony capabilities. Positioning equipment is connected to the hand unit. The positioning unit is based on GPS and inertia navigation equipment. The combination of these technologies allows for navigation in both urban areas and indoors.

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TeliaSonera Innovation World

Meet TeliaSonera's Innovation World Team representatives to discuss and try current as well as upcoming service trials, such as SkyFire Mobile Browser - bringing a true PC-web experience to your phone.

TeliaSonera's Innovation World puts the end-users in the driver seat to test and innovate new mobile services together with TeliaSonera's R&D team and best in class partners. It enables faster time-to-market for innovative end-user proven services. It also gives community power for partners to test and market their services cost efficiently combined with an inspiring forum open for innovative ideas. Through Innovation World, TeliaSonera is offering a meeting place where mobile enthusiasts and service providers can try, review and develop new exciting mobile services. Create the mobile future at InnovationWorld.com!

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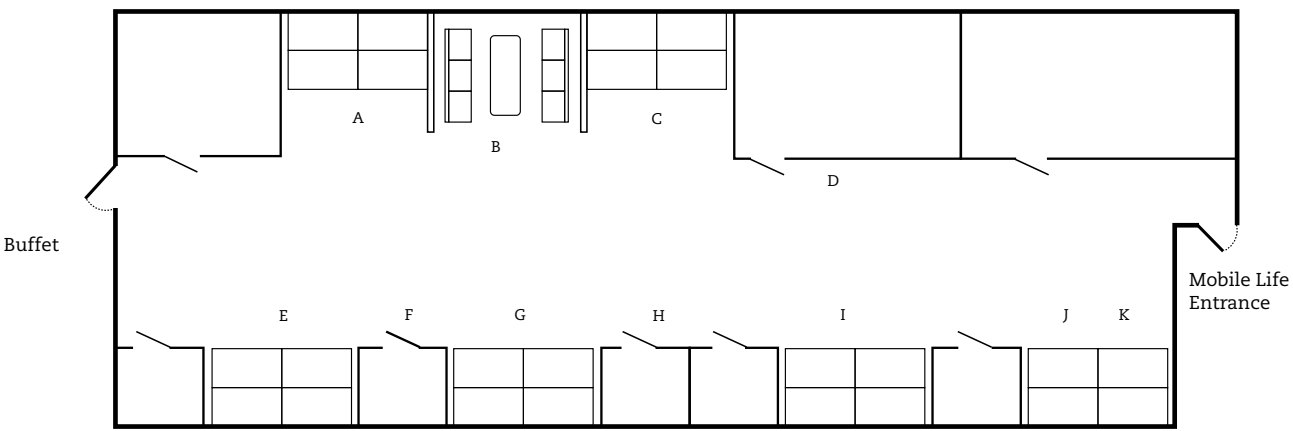

A Friend Sense
B Ericsson
C SwarmCam
D ActDresses
E Affective Health
F Sony Ericsson
G Stockholm Stad
H Telia Sonera
I Mobile 2.0
J The Creator
K Babylon

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