

Mediaattori – Urban Mediator

A hybrid infrastructure for neighborhoods



*A design exploration around urban space, digital media
and public participation*

Master's Thesis

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Abstract

This design research project investigates the area of designing at the boundaries of digital and physical urban space. Its aim is to present cities with a direction for the future that addresses the possibilities presented by the interweaving of new digital technologies and urban space, for empowering people in shaping their own city.

The approach followed is not technologically driven but rather takes people's everyday practices (de Certeau 1984) as the grounding point for the investigation. The design process is built upon dialogues with people and the urban environment as a way of gaining understanding of urban everyday practices and designing in harmony with them. The resulting design concept, Urban Mediator, illustrates a local and people-centered perspective for our urban futures. It proposes a hybrid infrastructure for urban neighborhoods. This combined digital and physical framework gives people the possibility to engage in improving the quality of their everyday urban environments and their experience of these environments. The concept, presented through scenarios, is developed as a working tool for catalyzing discussion between different stakeholders that would be involved in a future proposal for collaborative design for cities.

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1 Introduction

Stephen Graham starts the introduction of *The Cybercities Reader* (2004), a collection of articles by various contributors on the relationship between new technologies and the city, by saying that “*information society is an increasingly urban society*”. Urban life is also becoming increasingly dependent on mobile technologies. Timo Kopomaa and Pasi Mäenpää’s research on Finnish mobile culture had already in 1997 noticed the irrefutable link between mobile communication and the city (Kopomaa 2000, Mäenpää 2001). Cities and digital technologies seem indeed to have entered an era of intense interaction, on different levels.

Finland, through its information society strategy, has been developing a wide range of public uses for information technologies. The Internet has been at the heart of many projects aiming at encouraging people’s participation in various democratic processes (Castells and Himanen 2002). In the area of urban development, cities have also adopted information technology strategies aiming at encouraging people to participate on city issues (City of Helsinki’s information technology strategy). The Internet is being used by city authorities as a channel for interaction and discussion with inhabitants, for city planning and realization works. Many urban neighborhoods have also developed their web sites and planted the seeds for the development of locally based community forums and channels for interacting with city authorities (Rantanen 2004).

At the same time, new technologies are moving to the streets. “*Information and communication technologies are starting to invade the physical world*” said Howard Rheingold in his book *Smart Mobs* (2002), an account on the social implications of new technologies. Many have already become part of the urban reality. We carry our mobile phones with us and use them everywhere. More recently, wireless networks and WiFi hot spots have appeared in many cities.

Digitally mediated interaction possibilities are no longer bound to Internet access on a desktop computer but can become part of our everyday experience of urban space: the extended context of our everyday lives. This thesis explores the possibilities presented by the new technologies that have started

to infiltrate urban space, for involving urban dwellers in developing better urban environments and better urban lives.



The urban context of everyday life.

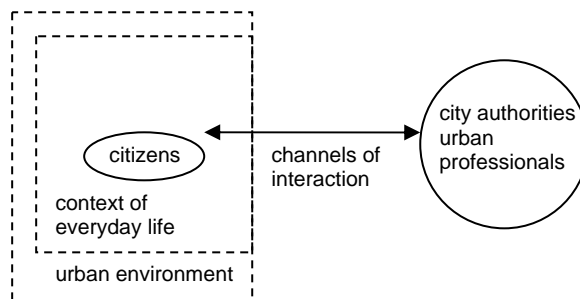
The thesis is developed as a design research project that investigates the area of designing at the boundaries of digital and physical urban space. The approach followed is not technologically driven but rather takes people's everyday practices (de Certeau 1984) as the grounding point for the investigation. The design process is built upon dialogues with people and the urban environment as a way of gaining understanding of urban everyday practices and designing in harmony with them. The resulting design concept, Urban Mediator, illustrates a local and people-centered perspective for our urban futures.

1.1 Objectives

The aim of this thesis is to present cities with a direction for the future that would make them benefit from the development of new technologies within urban space, by investigating their potential as tools for empowering people in shaping their own urban environment.

Cities of the future, with their increasing connections to the digital dimension, should nevertheless be able to possess a local identity and be a reflection of the people that inhabit their different neighborhoods. Therefore, this thesis focuses on a local approach, and does not address the city as an entity in itself, a generic concept.

The thesis also follows a people-centered approach. It strives to present average citizens with possibilities to express their interest for their everyday environments in a way that is integrative to their own experience of these spaces and to their everyday practices. The lived urban space itself becomes the locus of investigations aimed at encouraging public participation on urban issues. This thesis therefore concentrates on the urban context of people's everyday lives and how the extension of new technologies into it can facilitate interaction possibilities for public involvement in urban issues. The thesis does not ignore existing Internet-based channels of interactions between people and authorities but rather aims at presenting proposals that would 'plug' them into urban space itself.



The thesis investigates people's side of participation in urban issues. Its starting hypothesis is that integrating possibilities for action into people's everyday experience of the city might trigger more involvement from their part. I am not therefore investigating the 'receiving' side of public participation, meaning the work practices of urban professionals and authorities, and the influence of public participation on their work practices.

1.2 *Motivation*

As an architect and an urban designer, I had often been frustrated by the distance between the professionals of urban space and the people we supposedly design for. After having lived permanently in Finland for a couple of years, I became interested in the local channels of expression and communication that had started to appear on the Internet and that offered people an opportunity to interact with the city planning department or with

neighborhood websites¹. I was thrilled by these steps taken in democratizing the planning process and opening it up to public participation. Suddenly the Internet seemed to open possibilities to challenge the field's professionals' traditional top-down approach to urban issues; people could now interact with designers and vice versa.

Having also worked as a web designer for a while, I became interested in how interactive digital systems function as communication channels. I experimented with ways of presenting some of my own urban design project proposals on the Internet as an exercise in creating a public website for people to join in and share their proposals, ideas and information about a specific urban area².

Enrolling in Media Lab's MA program in New Media in 2002 finally gave me the opportunity to engage fully in my area of interest, following a cross-disciplinary approach³. I followed my initial interest in working towards more open design processes in designing and planning for public space, while at the same time opening up my horizon to what was currently happening in the field of digital media, from varied perspectives: technological, cultural and artistic.

Through my studies, I became acquainted with the ARKI research group at Media Lab (<http://arki.uiah.fi>). I got the opportunity to join them as a research assistant and prepare my final thesis under the umbrella of their ADIK project (Finnish acronym for Emerging Digital Practices of Communities). ARKI is a multidisciplinary research group that focuses on understanding digitalization in society; the potentials as well as the drawbacks it creates in the context of everyday life. ARKI's perspective on technological development is through human and social points of view. It is also a *"long term vision for the future that can inform near term development"* (Kommonen 2004). ARKI has been working in collaboration with communities of practice such as a kindergarten and a group of active seniors,

¹ For example the City Planning department's online forum (<http://www.hel.fi/ksv>) and the Netti Maunula website for the area of Maunula in Helsinki (<http://www.kaupunginosat.net/maunula>).

² I am referring to a website I have created around one of my own urban design student project: Tales from the Beirut River (<http://www.seittipaja.fi/joanna/beirutriver/index.html>). Through this website I experimented with ways of creating a web based forum for others to share projects and ideas about the Beirut river area in Beirut, Lebanon.

³ Media Lab's work is characterized by cross-disciplinary collaboration in the field of new media

as well as with leading Finnish technological development and telecommunication companies.

1.3 *Framework of the thesis*

This thesis lies on the boundaries of disciplines and fields of investigations. It reflects my own background in architecture and urban design as well as my interest in the potential of new technologies for opening up these fields to people's participation. The thesis also reflects my involvement with a multidisciplinary research group dealing with technological research and development from a design perspective.

The ARKI framework was particularly interesting to me because it emphasized people-centered approaches to design research: people's everyday practices are taken as starting points for developing design and service concepts for the future. It made sense to me to follow this approach as I could use it to address urban environments as one context of people's everyday practices. This opened ways for me to start linking possibilities for participation on issues concerning the urban environment to people's everyday experience of the environment itself.

The fact that ARKI, and especially the ADIK project I was involved in, had partners in the mobile technology and telecommunication development industry, expanded my own design considerations towards the area of innovative technological development. I was therefore no longer limited by one existing tool, the Internet and the desktop computer, but could project my research interest further into the future, linking urban design and planning interests to considerations for future applications and services. At the same time, ARKI's approach stemming from a desire to understand social implications of digitalization, made it possible for me not to limit myself to come up with a technological proposition, but rather work on a social system proposition that can exist across disciplinary boundaries and is open to growth in different directions.

The thesis investigation was carried out as a personal exploration in what I will call *design for urban hybrid space*: urban space where digital and physical dimensions meet. I therefore want to present it as a first step I have taken in laying the ground for future proposals for action. The research and design proposal that emerged through this thesis is grounded in 'real-life'

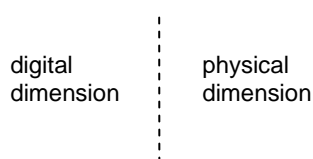
considerations and background, and I hope to use them as a discussion tool with parties who I believe could be interested in future collaboration. I would first address city authorities and neighborhood associations in Finland because they are interested in getting people to be more involved in the future of their urban areas. At the same time I would also address technology development industries because they possess the technological development capability and expertise to implement such a concept. Addressing the different possible audiences has been one of the difficulties in developing this thesis, but at the same time, it has permitted me to look beyond my own personal investigation and come up, as a conclusion for the thesis, with a proposal for further design possibilities at the boundaries between fields of activities not currently allied.

2 Terms and concepts

2.1 *The hybrid dimension and urban hybrid space*

*Hybrid: something heterogeneous in origin or composition
(Merriam-Webster Online Dictionary)*

In this thesis, I use the term *hybrid* to refer to a combination of digital and physical dimension, a blurring of boundaries between them.



A hybrid dimension has appeared in urban space through the different digital technologies that have appeared in it: from mobile phones, to digital screens, to wireless networks, and location based information. I will be referring to this hybrid dimension of urban space as *urban hybrid space*: physical urban space extended to the digital dimension and vice versa. The use of the term *space* also hints to its understanding beyond mere physicality but as a space of social practices⁴. Urban hybrid space therefore includes the physical, digital and social dimensions.

2.2 *Mediation*

Mediate:

- *to transmit as intermediate mechanism or agency*
- *to act as intermediary agent in bringing, effecting, or communicating*

(Merriam-Webster Online Dictionary)

⁴ Henri Lefevre (1974) uses the concept of *Social Space* to explore space as a complex social phenomenon.

In the new media discourse, mediation refers to the role of computing devices as mediating agents. Digitally mediated interaction and digitally mediated communication between different parties happens through these intermediary agents.

I link the concept of digitally mediated communication to the one of *asynchronous telepresence*, as referred to by William Mitchell (2000b). Mitchell presents the “new economy of presence” as one where people have the choice between different ways of carrying out a variety of human transactions.

	<i>Synchronous</i>	<i>Asynchronous</i>
Presence	Talk face-to-face	Leave note on desk
Telepresence	Talk by telephone	Send email or leave voice mail

Communication alternatives. (Mitchell 2000b, 124)

In this thesis, I have chosen to use the brackets around the prefix (*tele*) in order to emphasize the fact that I’m referring to a specific form of presence in the urban environment (a way for people of being represented in the urban environment) that happens to be possible through digital mediation.

2.3 *People-centered approaches to design*

The contemporary design discourse and especially the field of information and technology design and research is developing approaches that aim at taking people’s social context into consideration during the design process.

Different alternatives to technology and product-driven approaches have been developed. User-centered approaches have limited their understanding to people as users and have therefore just adapted product-driven approaches to user testing and usability considerations. People-centered approaches consider people in their everyday social context, and not just as task-centric users, to be important actors in the design process.

The field of Participatory Design has recently gained a respected place in contemporary design discourse and has laid the ground for people-centered

approaches, especially in fields related to ICT design. Participatory design began in the political context in the 1970's Scandinavian workplace democracy movement (Muller 2002). Important projects of that time were UTOPIA in Sweden and DEMOS in Denmark. Both projects were related to introducing computer systems at workplaces. The designers in these projects worked on involving people in the design process, at their workplace.

In participatory design endeavors, people are considered as partners in the design process. Some participatory design practitioners and researchers are still driven by its original democratic value. Others however consider it simply as a good approach to designing products that address people's needs and aspirations. (Muller 2002)

Co-design is participatory design that aims at engaging all stakeholders in the design endeavor in collaborative dialogue building, and through this dialogue, in the design process itself. Co-design addresses people as designers. All people design; it is a basic human characteristic (Kommonen 2004).

2.4 *The practices of everyday life*

Michel de Certeau (1984) uses the expression "*the practice of everyday life*" (*le quotidien*) to refer to the daily ordinary activities; the ways of doing things or "*ways of operating*." In his book by the same name he builds a theoretical framework around the understanding of the *quotidien* and presents it as the people's sphere of action and of tactical adaptability. De Certeau celebrates the ordinary, the mundane, but is aware of the difficulty of pinpointing it.

"The challenges of digital technology design need to be addressed with transdisciplinary competences that include that of the practice of everyday life." (Botero et al. 2003) It becomes important for participatory and people-centered approaches to work on ways of revealing practices of everyday life by engaging people, the experts of their everyday life, in the design process.

Many approaches have been inspired by qualitative research and ethnography: observations and interviews are ways, among others, to approach people and their lived experience of the everyday. Participatory approaches also try to create dialogues between designers and people and it has therefore been important to develop common languages between them. Games, props, scenarios and drama are all examples of ways for laying a common ground and for engaging people.

3 Existing framework

Digital technologies have opened new ways for people to express themselves publicly and interact with others. This has created a democratic potential in societies open for it and has resulted in the exploration of new democratic and participatory tools for citizens. In Finland, Internet-based services for citizens stand at the heart of national and local information society strategies. Cities are also developing their own online forums and channels of participation.

At the same time, digital technologies are moving to the space of the city. Technology developers are forming an interest in urban space, the new locus of computing. Various artistic and research-based experiments are exploring potential uses for the new digitally mediated interactions possibilities in urban space.

3.1 *Digital technologies for the city*

Cities as political organizations are, in certain countries, looking at new technologies' potential for developing their democratic aspirations. Finland is a good case study because it has been actively developing a national strategy for developing the Finnish information society (Sitra 1998). The Finnish model of the information society strives to serve the ideals of the Finnish welfare state and to strengthen democracy by taking its citizens needs and wellbeing as a starting point (Castells and Himanen 2002). The national strategy has influenced both local projects for developing virtual communities as well as cities' own information technology strategies.

3.1.1 *Citizens' networks*

The Finnish information society strategy addresses the local scale and one of its spearhead project areas is the "*local information society*" (Castells and Himanen 2002). One important project addressing regional development has been OSKU, the Learning Regions information society project (oppivat seutukunnat – tietoyhteiskuntahanke), funded by the Finnish National Fund for Research and Development, SITRA. OSKU's goal was to offer citizens the possibility to acquire the basic skills required for an information society: computer literacy and Internet use. These skills would help people interact with citizens' networks: virtual community environments on the Internet.

OSKU had pilot projects in eight different regions of Finland. The Maunula region of Helsinki was the most urban region. The Nettimaunula project's community network developed as a web environment (www.maunula.net) that provides inhabitants who register to it with a free email address, access to local news and discussions, and the possibility to make and publish their own web pages (Rantanen 2003). The Nettimaunula website has since its launch in 2002 been used as a central tool for inhabitants to discuss, among themselves, and with authorities and urban professionals, the new proposal for Maunula's center and the fate of its existing shopping mall (<http://www.kaupunginosat.net/maunula/ostari/index.htm>).

Other neighborhoods in Helsinki have also developed their own websites. Not all have followed the concept of a citizens' network, but they have nevertheless aimed at developing locally based community forums for inhabitants and channels for communicating with municipal authorities⁵.

3.1.3 *City strategies - example of Helsinki*

The city of Helsinki has developed its own strategy for information technologies (Helsinki City Office 2002). It follows the general lines of the Finnish information society strategy as well as the EU's strategy of "*An Information Society for All*" (eEurope 2005). This strategy emphasizes the importance of creating channels of interaction between city authorities and citizens, and using these channels during planning and realization works.

City authorities such as the Helsinki City Council and the Helsinki City Planning Department have developed their own online discussion channels, for citizens to use and to contact authorities⁶. The City Planning Department sees these channels as a way of facilitating the application of the Land Use and Building Act of 2000 that asks for involving inhabitants in the urban planning process (Antila-Lehtonen 2004).

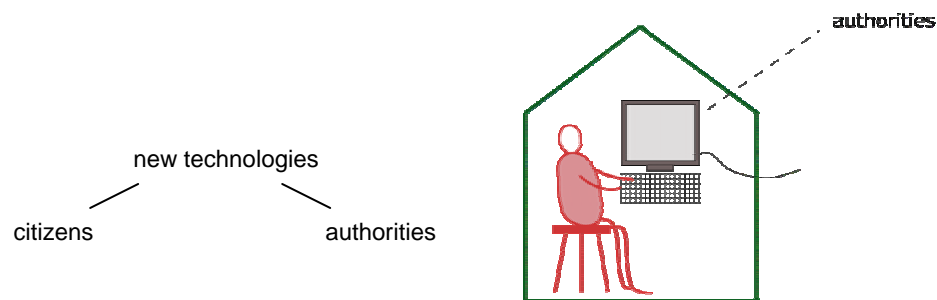
⁵ A comprehensive list of different Internet websites for Finnish cities' neighborhoods can be found on the Kotikatu website: <http://www.kaupunginosat.net/linkit/kauposat.htm>. Kotikatu (home street in English), was one project initiated by researchers from the Department of Architecture at Helsinki University of Technology. It is currently managed by HELKA, the Federation of the Association for Helsinki City Quarters.

⁶ The City of Helsinki's web site is found at <http://www.hel.fi/>, and the City Planning Department's website at <http://www.hel.fi/ksv/>.

3.1.3 *The Internet as mediator*

The Finnish information society strategy has supported projects aiming at creating channels of information and communication between the public sector and citizens. These tools offer citizens a better possibility to influence social decision making and be active partners in the welfare state (Sitra 1998). This has been carried out by developing public services on the Internet.

Effort has been put to ensure citizens' equal access to information technologies: free Internet access is available in public libraries and many publicly funded local projects have targeted citizens' education in information technologies, mainly the use of computers and the Internet (Vehviläinen 2001).



New technologies and especially the Internet are seen as a possible mediator between citizens and authorities.

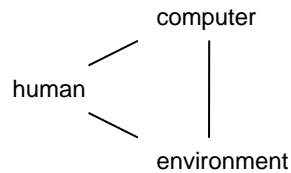
3.2 *Digital technologies in the city*

The new technologies that are infiltrating urban space bring new tools and new possibilities for digitally mediated interactions. Urban space is the new locus for computing and digitally mediated interactions can therefore happen through people's daily experience of the city.

The field of technology development and research is 'discovering' the urban environment as wireless, ubiquitous, pervasive, proximity and locative technologies can all exist in urban space. Various fields of activity and research are also currently exploring ways for people to use these new technologies and interact with and in urban space. These experiments bring forth the most important features and the potentials of these new technologies.

3.2.1 Brief overview of new technologies in urban space

In an article for Praxis, Anthony Townsend refers to “*human-computer-environmental interactions*”⁷ in cities to indicate the new synergies made possible by the diffusion of new technologies in urban space.



Townsend has divided new technologies that manifest themselves in some way or another in urban space into four groups: *communications, positioning, display and expression, documentation*. These different technologies can also combine together and enrich urban space with various “*human-computer-environmental interactions*” (Townsend 2004).

- *Wireless communications technologies* have opened up urban space to digital technologies. GSM and wireless networks have enabled people to be connected, through portable digital devices, anytime and almost anywhere. GSM is more ubiquitous, WiFi is still more confined to specific spots: hotspots.
- *Personal positioning systems* are being integrated to personal devices. Mobile devices that first developed as mobile phones using GSM networks are now benefiting from the developments in positioning systems: both Global Positioning Systems (locative media) as well as proximity-based positioning techniques based on radio frequency (Bluetooth enabled devices and RFID tags) have enabled them with location awareness. The cost of these technologies has been reduced to that of a single chip; less than 5\$.
- *Technologies for display and expression* consist mainly of screens that can be used outdoors. Such screens are usually LED (light-

⁷ The usage of the terms ‘human’ and ‘computer’ derives from the field of usability or HCI (Human Computer Interaction). This field has developed a great deal during the last decade and has brought forth the importance of taking into consideration people’s (as users) relationship to machines.

emitting diode) displays for large screens or LCD (liquid crystal) displays for smaller ones. Prices for such technologies are dropping and they are beginning to show up in different public environments.

- *Documentation* refers to geographic information systems (GIS) that enable us to document our urban environments ever more accurately. Such technology enables for example to digitally annotate urban spaces and therefore augment them through information attached to them.⁸

3.2.2 Existing interest

Technology research and development is expressing interest in urban space as the new locus of computing. It is opening up, through its more and more multidisciplinary teams, to considerations related to the fields of social sciences, anthropology, communication studies and philosophy. These fields have developed their own approaches to understandings of urban space and these are being used as inspiration in technological research. In 2004, the 6th annual Ubiquitous Computing⁹ conference, usually mostly oriented towards research in computing, both in academic and corporate settings, held a workshop entitled “*UbiComp in the urban frontier*”. The workshop’s syllabus mentioned the importance of “*capturing a unique, synergistic moment – expanding urban populations, rapid adoption of Bluetooth mobile devices, and widespread influence of wireless technologies across our urban landscapes*” and coined the term “*Urban UbiComp*” in order to bring forth the specificities of this particular field of UbiComp and the need for specific methods to explore it. (Paulos et al. 2004)

The field of new media art has also been active in exploring the potentials of this new hybrid space. Artists are using and exploring new technological tools in innovative ways with emerging social implications. The latest ISEA (International Symposium on Electronic Art) conference in 2004 had “*Mobile Urbanism: A Wireless Experience*” as its main theme.

(<http://www.isea2004.net>)

⁸ Refer to Glossary for explanations of the technical terms.

⁹ The concept of ubiquitous computing, also known as UbiComp, was first articulated by Mark Weiser in 1988 at the Computer Science Lab at Xerox PARC. It is characterized by deeply embedding computation in the world.

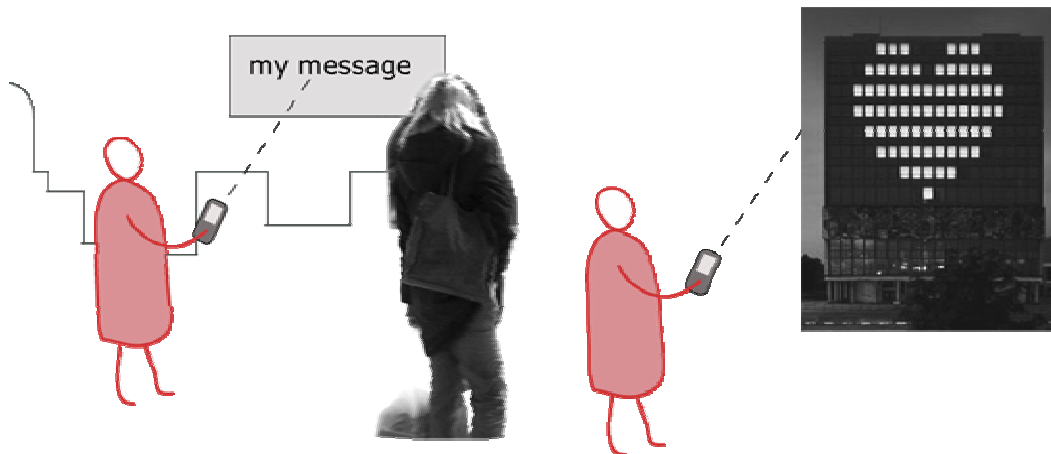
Fields traditionally related to urban space, mostly architecture and urban design, are also, though slowly, opening up to the importance of this new digital layer in cities. Some practicing architects and urban designers are trying their hand at integrating the digital dimension to their designs and some have produced or proposed hybrid concepts in urban environments.

3.2.3 *Examples of experiments*

The following examples present four experiments that use new digital technologies in urban space. They are the works of different fields of activity or research. I will refer to them in the following paragraphs to illustrate the main features and the potentials of new technologies in urban space.

Urban diaries and Blinkenlight: two interactive artistic projects in Berlin

Urban Diary (<http://www.urban-diary.de>) was an interactive installation that ran in Berlin between 14.11.2001 – 22.02.2002 (100 days). Diary entries could be sent by SMS and were later projected onto a pair of screens in a subway station at Alexanderplatz (Berlin), 24 hours after the message had been sent and according to the sequence of the messages' arrival. Participation was anonymous.



Urban Diary

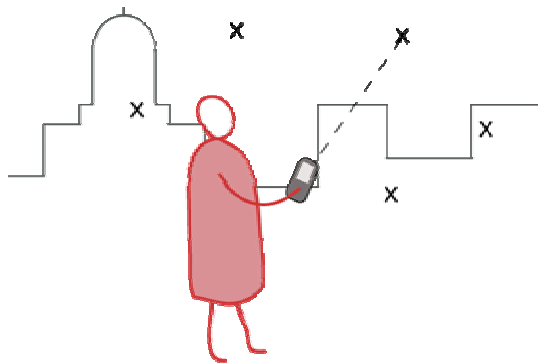
Blinkenlights

Blinkenlights (<http://www.blinkenlights.de/>) was an interactive project by the hackers' group Chaos Computer Club. It transformed a building on Alexanderplatz into a huge computer screen. This project also involved displaying in a public urban context messages sent by people via personal devices. The building used for Blinkenlights was the "Haus des Lehrers"

(house of the teacher) office building. It had been emptied because it was awaiting complete renovation works. Its façade acted as an 18 by 8 pixels matrix, with lit windows acting as active pixels. Mobile phones could be used to play Pong on the façade of the building. Participants could play among themselves or against the computer if there was no “partner” available at the same time. Short animated movies could also be sent to be displayed on the building. CCC had provided free software tools (Blinkentool) to be downloaded from their websites, for anyone wishing to easily create a short animation.

Urban Tapestries: a trans-disciplinary research project

Urban Tapestries is an ongoing research project carried out by the Proboscis research group. It is presented as “*public authoring in the wireless city*” (<http://urbantapestries.net>). It explores ways of annotating the urban environment in order to share experience and knowledge with others. The project has produced an experimental software platform that allows people to author their own virtual annotations of the city using mobile phones and PDAs. Prototypes trials have been run in areas of London. Urban Tapestries is developed in partnership with different telecommunication and technology development companies.

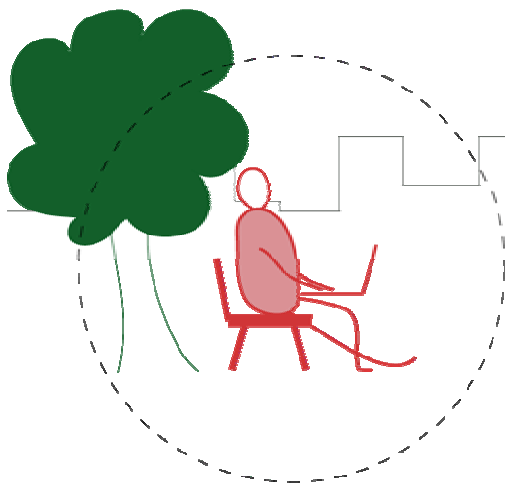


Urban Tapestries

This project explores ways to enrich people’s experience of urban space and also give them the possibility to themselves add information to it. It allows ordinary citizens to “*embed social knowledge in the new wireless landscape of the city.*” (<http://urbantapestries.net>)

Bryant Park: WiFi access in an urban public space

Free WiFi access has mostly been confined to semi-public spaces such as public libraries, coffee shops, hotels or airport lounges. Bryant Park in Manhattan is one of the few large scale examples of free WiFi access provided in an outdoor public space, a public park. Anthony Townsend describes the Bryant Park project in his PhD thesis *“WIRED/UNWIRED: The Urban Geography of Digital Networks”* (2003). The project was carried by Townsend himself and a group of grassroots activists from NYCwireless in partnership with the Bryant Park Restoration Corporation, a non-profit organization contracted by the city of New York to manage the park. In order to gain free access to the WiFi network, one had to view a splash page containing information about the park then accept the Acceptable Use Policy. Access was free of charge. The WiFi service was available throughout a year, starting July 2002, and proved to be very successful among the people working in the area.



Bryant Park

3.2.4 Tools for interaction

The previously mentioned experiments highlight the most important elements that come into play through new technologies in urban space: personal handheld mobile devices, interfaces (personal and public) and wireless networks.

Personal mobile devices are being loaded with different possibilities to ‘read’ the environment and catch different information that would be attached to it or to objects or devices in it:

- Through proximity technologies that enables devices to ‘speak’ to one another (Bluetooth, RFID tags)
- Through different positioning systems like GPS
- Through access to WiFi hotspots

Interfaces can be public, for example like public displays, or private and belong to personal digital devices¹⁰. Interaction with augmented environments can happen via personal devices that ‘read’ the augmented or annotated environment. Public mediated communication can therefore be visible for all in the environment if it is projected onto public displays. It can also be attached to certain locations in the environment (spatial annotation or access through hot spots) but in that case will only be accessible through a device that can read it or make it apparent, either for all or for specific individuals.

3.3 Potentials of new technologies in urban space

Urban Diaries, Blinkenlights and Urban Tapestries, show how new technologies have made it possible for ordinary people’s voices to gain a presence in the cityscape. People could post messages on screens or leave notes at specific locations in the environment, directly from their own digital devices. Most importantly, digital technologies have integrated the interaction possibility to the larger spectrum of everyday urban life.

3.3.1 (Tele)presence¹¹ on the street integrated to urban life

Advertisements make up the most visible part of existing information in the urban visual landscape. Corporations and commercialism are agencies of power in the cityscape. Michel Foucault has called these agencies of power

¹⁰ In his book e-topia, William Mitchell mentions the different sizes of screens that have come to proliferate in our environments. He pinpoints the difference between the privacy resulting from “the screen that faces us” versus the screen that is turned outwards and that functions as a “a powerful means of self-representation.” (Mitchell 2000)

¹¹ I want here to refer back to Chapter 2 where I clarify my terminology and my choice for using brackets around the prefix (tele).

“managers of public space”¹² (Foucault 1980). Other information present in the city space include that provided by the city itself (mostly through the rules it makes visible in the city), by artists (often sponsored by the city of corporations), and by ‘underground culture’ (through graffiti, stickers and flyers). The average person belongs to the group less represented in the space of the city and the one with least possibilities for expression.

There are examples of possibilities presented for people to express themselves in the urban context, with non digital tools. In autumn 2003, the biggest newspaper in Finland, Helsingin Sanomat, launched an advertising campaign where it provided empty white posters at the JCDecaux bus stop advertising billboards. Black markers were also attached to the billboard. The poster had only one pre-written message: “Helsingin Sanomat – Mielipide – Tästä elämästä” (Helsingin Sanomat – Opinion – From this life).

In summer 2004, during the Helsinki Week, an artists’ collective, the Casagrande lab, launched a series a public art projects in Helsinki. Two of them offered passers-by the possibility to ‘post’ messages. “*Keskus*”, by artist Ilkka Törmä, was a circular structure, made out of some thick plastic, with a huge quantity cylindrical film boxes attached to it. Pens and small pieces of paper were provided in the center of the circular structure for people to write messages and place them in the film boxes.

These two projects were successful and people interacted with them. They were also temporary localized experiments. The ‘analog’ nature of these latter experiments has limited the possibility for interaction to a specific location and time. It couldn’t follow people’s larger locus of everyday life.

Blinkenlights, on the other hand, not only addressed the specific urban moment of interacting with the public display, but allowed integration of the interaction possibilities to the extended context of everyday life: the fact that messages could be sent from mobile phones and from the Internet offered flexibility in choosing the time and place for (inter)action. It was also possible for people to decide when they wanted them to be displayed on the Haus des Lehrers by ‘activating’ their message: the author of the message could choose

¹² At one time it was doctors who were the managers of public space because they were the ones who regulated the use of the space.

the right time for displaying his/her message and send a request for activation via his/her digital device¹³.

The Bryant Park project also shows the potential of new technologies in urban space to integrate to people's everyday practices. People working in the neighborhood used the 'augmented' park as an alternative working environment, taking advantage of sunny days. Bryant Park also presented an example of new digital technologies' potential to encourage a sense of belonging to the environment. Providing citizens with WiFi access in the park raised people's interest in the physical environment; they even started cleaning up any rubbish left there (Townsend 2003). Urban Tapestries also aims at reinforcing people's sense of belonging to urban environments by exploring the possibility to have people's own voices appear in their daily environments and let them be a part of the effort to present this environment to others.

3.4 *Emerging practices*

New digital technologies infiltrating urban space facilitate the integration of digital interaction possibilities to everyday practices. It is important to note that they have also given rise to new practices that have spontaneously emerged in cities. These new practices reflect the interweaving of the digital and physical dimensions in urban space.

In several cities it has been possible to gain access to unprotected 'overflowing' WiFi networks. The practice of *warchalking* has developed in some cities. It consists of marking up on sidewalks or walls spots where it is possible to connect to a wireless network. *Warchalking* is a parasitical practice; one ends up tapping on networks that are not public, and this brings forth legal concerns.

Toothing relies on Bluetooth technology, permitting devices to connect to others that are in their neighborhood. This has led people to use them in public spaces to send messages to those around them in attempts to find (sexual) partners. *Toothing* exemplifies the new range of possibilities

¹³ One proposed theme by the Blinkenlights makers was that of love letters. People sending them could plan and organize a special romantic moment somewhere in the city where the Blinkenlights building is visible, and 'activate' their love letters at the right moment.

presented through Bluetooth as means to 'communicate' with the 'familiar strangers' around us.

Flash mobs are gatherings of people that have received 'instruction' by email to go to a certain public place and do a specific task there (for example lying on the floor at a specific place and a specific time). Flash mobs have not been created for any political or ideological purpose, even if they are inspired by protest type of gatherings. Flash mob is mostly about something 'different' in a public space, with a bunch of people (most might be strangers to one another). What seems to be important for 'organizers' of such mob events is to find a spot that wouldn't disturb others or cause any problems, but still be in a public space where there would be a 'audience'.

4 Building a focus

“Ultimately it comes down to a basic social and political choice. What will we use the multifaceted and sometimes contradictory affordances of digital technology for?” (Mitchell 2000a, 82)

The new technologies that have infiltrated urban environments have made it possible to ‘be connected’ as one goes about daily activities in the urban space itself. Digitally mediated interactions are no longer bound to Internet access on a desktop computer, but can become part of people’s everyday experience of urban space, the extended context of everyday urban life. Couldn’t cities themselves invest in exploring the new technologies present in their own space? Could they offer a possibility for extending the channels of interaction between people and those working for the city into the experience of urban life?

4.1 *Our voices, in our city, for our city*

Existing Internet-based channels of public expression and interaction for the city and urban neighborhood offer a possibility for people to participate in issues concerning their urban environment. I believe that a virtual network alone does not motivate people enough to take action. The process to reach the web site and to interact with it is detached from the actual experience of urban space. Just as an example, consider Nanna, a dog owner, who notices every time she takes her dog for a walk around the neighborhood, that the missing trash cans on her street have not been replaced¹⁴. If she decides to do something about, she’ll have to make the effort to remember, once she comes home from her walk, to search the Internet for a website where she can send her complaint. It could be the neighborhood association site, or the city planning department site, or the city of Helsinki’s various websites.

¹⁴ In Helsinki, dog owners are expected to pick up their dog’s droppings and throw them in the trash.



As mentioned previously, digitally mediated interaction possibilities can now become part of our everyday experience of urban space, the extended context of our everyday urban lives. I propose to consider these new digitally mediated interaction possibilities in urban space as possible tools for engaging people in shaping the future of their everyday environment: *digital technologies in our cities, for our cities.*

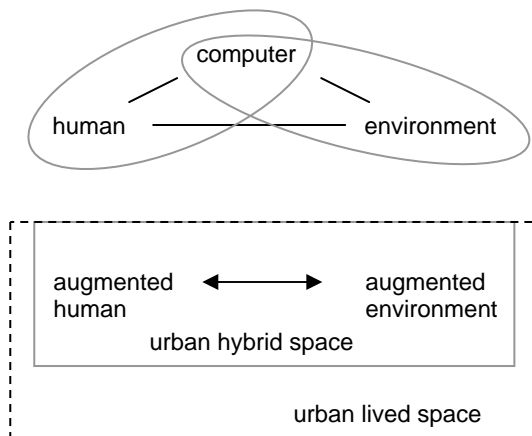
By existing in urban space itself, possibilities for shaping one's environment become more visible and integrated to people's everyday experience of these urban spaces. Information and participation are no more only open to groups of active 'netizens' as in the case of purely virtual systems, but to all those who share the urban space. This does not mean that these technologies should be enforced for specific uses but rather that there exists a new sphere of possibilities: the fact that digital interaction can exist in urban space itself makes it possible to take the new context of these new technologies (urban

space and urban life) as a starting point for investigating ways of facilitating people's possibilities to shape their own city.

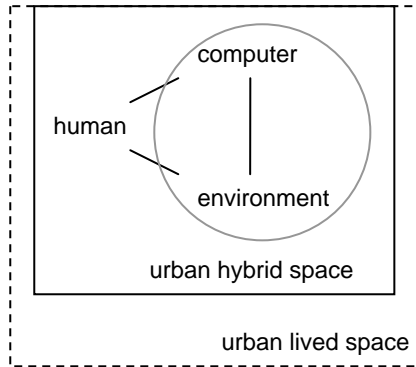
Information and communication technologies are also providing people with possibilities to express themselves and share their thoughts, opinions and indeed their own digital productions, like never before. The projects mentioned in the previous chapter; Urban Diaries, Blinkenlights and Urban Tapestries, show how these new technologies have made it possible for ordinary people's voices to gain a presence in the cityscape. These possibilities presented by the new technologies in urban space can lead to a revitalizing of ordinary people's (tele)presence on the street: *our voices in our city, for our city*.

4.2 *A hybrid mediation layer in urban space*

The blurring of boundaries that occur between the digital and physical dimensions of urban space is reflected in the possibility for interaction between people and the environment they are experiencing. In other words, augmented humans can interact with augmented environments.

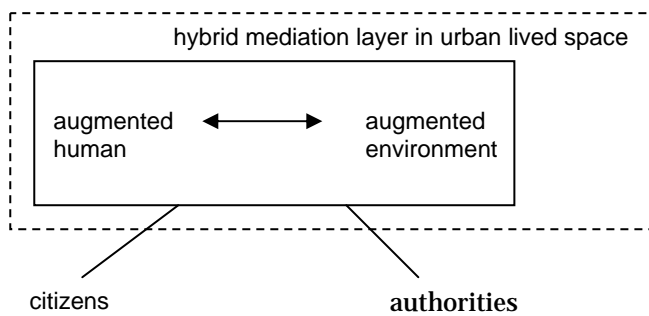


I will use the term *urban hybrid space* to refer to this combined physical-digital dimension of urban environments. It is important to note though that this space *comes to existence through people's interaction with it*. A purely augmented environment (computer – environment) does not make sense if it doesn't engage in a relationship with people.



New technologies in urban space have created a mediation layer between people and the urban environment, or more accurately, between the augmented human and the augmented environment. This mediation layer can impact cities and the ways people experienced them in many ways, depending on how and by whom it will be designed.

The proposal I have presented for *‘our voices, in our city, for our city’* is based on using this mediation layer for public participation. This will add another mediatory aspect to the existing hybrid mediation layer: it becomes a mediator between people and city authorities. Hybrid space consequently becomes a possible locus for designing for better democratic cities for the future.



4.3 *A hybrid future for cities*

“When I zoom back to a wide view of an urban area in the age of mobile and pervasive technologies, I can envision meshes of private and public devices, beacons, kiosks, appliances, place-based information sources and bulletin

boards, traffic sensors, and transit services – citywide systems, some designed from the top down, others grown from the bottom up” (Rheingold 2002, 98)

In the case of Finland, its information society strategy has influenced various areas of democratic participation. This has been reflected by various projects, often supported by the Finnish National Fund for Research and Development, SITRA, for developing “citizen channels” on the Internet. Not much has been done though to investigate the potential of using the space of the city itself and the new technologies appearing in it, for working on the same goals.

I propose, as a bigger framework for my thesis, to consider what I have named *urban hybrid space*, as area of investigation for the future of cities.

The growing relationship between ICTs and cities has already fed different kinds of considerations for future of cities. Some cities and urban areas decided to work on promoting themselves as cities of the 21st century. Some have simply used different kinds of prefixes before their names like “e”, “cyber”, “intelligent”, “digital”, “information”, as marketing slogans based on the hype surrounding ICTs, often without a solid strategic vision to back them up (Marvin & Graham 2004). On the other hand, others have built solid bases for their future roles as cities of the digital age. Singapore, for example, is working on becoming an e-commerce node in the “*global space of flow*”¹⁵ (Castells 2004). Others, like Seoul Digital City, are putting effort on urban design considerations in order to project their belonging to the information age onto the cityscape: building facades are planned to embed LED screens and an obelisk called the Urban Odometer will display the digital information, mostly monetary flows, that would indicate Seoul DMC’s status as a “*local micro-economic stock ticker*” (Townsend 2004).

While it is a valid for cities to develop their economic position in the “*global space of flows*” and it is also valid to want to express this in the urban space, one should not forget that cities are also very much about the people who work and live in them. By proposing to take urban hybrid space as an area of

¹⁵ The global space of flows refers to the global informational economy based on “*transterritorial networks*” of technological movement and flow. It “links up electronically separate locations in an interactive network that connects activities and people in distinct geographical contexts.” (Castells 2004) According to Castells cities are experiencing an interplay between the space of flows and the space of place (based on geographical location).

investigation, I hope to bring forth considerations related more to information society's impact on people's empowerment than its impact on global markets: local information society rather than the "*global space of flows*" – both considerations can indeed coexist. I also choose to take the case of Finland whose own information society strategy already works on developing local democratic initiatives. The information age offers tools for revitalizing local democratic aspirations. I propose that this specific potential be reflected in the space of cities themselves.

Hybrid space exists through people's interaction with the combined digital-physical aspect of the urban environment. This interaction can be extended to possibilities for interaction between people and the political city. The city itself, as a physical and socio-political entity can become interactive for its citizens. Such as city of the future would be a reflection of the people that inhabit it and not only a reflection of global markets.

This thesis focuses therefore on a local approach to cities and addresses its neighborhoods, where people live and work, rather than addressing the city as a whole, a generic concept.

5 A design approach

Nelson and Stolterman (2003) refer to design as a “*tradition of inquiry and action.*” It is very much about an interest in the real: understanding and acting upon what makes up the real world. A design approach is neither scientific nor artistic. It doesn’t approach the world in a way that seeks universal truths nor does it seek to provoke. Design has the particularity of being a service relationship (Nelson & Stolterman 2003); we design for people: for ourselves as well as for others. Viktor Papanek (1991), the author of *Design for the Real World*, goes right to the point when he says: “*The only important thing about design is how it relates to people.*”

This design approach I have decided to follow is influenced by ARKI’s people-centered design research approach: envisioning the future by presenting design opportunities that are reflective and responsive to people’s everyday practices. Whereas ARKI’s goal is to engage people in a co-design process in order to propose digital application and services concepts, my own research dealing with urban space has lead me to consider more hybrid proposals and not only digital ones. I believe that it is a relevant perspective to address a possible future for cities; one that would reflect the people that inhabit these cities and that would offer them the opportunity to participate in shaping them.

5.1 *Urban hybrid space as design space*

Urban hybrid space, with its combined digital and physical dimension, can be approached as a design space. It is a space for investigation for the future of cities and it belongs to the context of the everyday urban life.

5.1.1 *Addressing an envisioned future*

I decided to go through a design process that would in itself constitute a research exploration of urban hybrid space as a space of investigation for the future of cities. The activity of designing and immersing oneself in a design process is a way of exploring the (uncertain) future and proposing directions through which further investigations can be undertaken. Through a design process one can use the ability to “*imagine that-which-does-not-yet-exist*” (Nelson & Stolterman 2003) and build on it.

Investigations on the relationship between digital technologies and the city are still scarce. People like William Mitchell, Stephen Graham and Anthony Townsend who come from architecture and urban studies background can be considered as pioneers in what Graham has called the “*new urban-ICT field*”. Mitchell’s first book on the subject, *City of Bits*, came out in 1995. The *Cybercities Reader* edited by Stephen Graham, came out in 2004.

A lack of a thorough understanding of the problem space shouldn’t hinder the possibility to propose directions for the future. Taking design challenges is a way of addressing complex systems. Stolterman and Schuler, in their article on *The Societal Design of Societal Cyberspace* (2000), address the importance of approaching cyberspace through a design challenge for rendering it a social space.

“When a system is too complex to fully understand or control, we have to acknowledge the situation as a design challenge. That means we can not wait for the time when we have enough information or knowledge to make only truly rational decisions: That time will never come. We need to realize that we won’t be able to know everything, and that changes are occurring while we are studying the situation... At best, we’d be able to identify decisions after the fact that we could or should have been made.”
(Stolterman & Schuler 2000)

The same approach should be applied to investigating hybrid space, especially in order to be able to propose other alternatives to basically ‘what money can buy’ and leaving the development of urban hybrid space to purely commercial interests.

5.1.2 *Design beyond predetermined categories*

Design can be understood as an approach and not a solution (Nelson & Stolterman 2003). Hybrid space as a design space can address different design specializations, from architecture to software design. Design as solution often leads to predetermined solution based on the framework presented by a specific design field; architects design buildings and software designers design software. Addressing design for hybrid space as an approach avoids limiting the investigation to predefined solutions but rather gives importance to the design process itself, and the way it can inform the design investigation. I have therefore decided to follow a design process that would in

itself help me free myself from perspectives grounded in specific design fields. Most important therefore was to find ways to address urban hybrid space from the perspective of those for whom design is intended: the people in the context of the city.

5.2 *A people-centered approach*

“In design, we are not dealing with a universal truth - we are dealing with the particular; as well as with that which is real.” (Nelson & Stolterman 2003)

Michel de Certeau in *The Practice of Everyday Life* (1984) makes the distinction between the city and urban life. The city is more of a concept, a product of a distant view through what he calls a “*solar Eye, looking down like a god*”. This is especially true for the professional urban understanding of the city. Traditionally, designing for the city has been through a top-down approach. Urban life on the other hand refers to the actual hustle and bustle on the streets, the lived space of the city, the space of everyday practices.

I decided to address the city through the complexity of its urban life and therefore through a people-centered approach. People-centered approaches aim at taking people’s social context into consideration, as part as the design process. This social context is in effect the space of design itself.

It becomes important for the designer then to try to reach people’s own understanding of the design context and free herself from other imposed understandings. Trying to reach people’s understanding of the context of design also reflects a desire to meet what Klaus Krippendorff (1995) has labeled “*second-order understanding:*” “*By taking the meanings of others as a fundamental starting point for design, designers must proceed from their understanding of user’s understanding.*”

People-centered approaches, especially those with a more democratic drive (see Chapter 2), might seem idealistic. They don’t directly respond to the prevailing philosophy of mass marketing and consumerism. I believe however in the validity of such approaches as a drive for design. A people-centered approach as a drive to design can then be understood as what Nelson and Stolterman have named the “*guarantor of design:*” the attempt to find some solid and dependable base for design actions (Nelson & Stolterman 2000). A

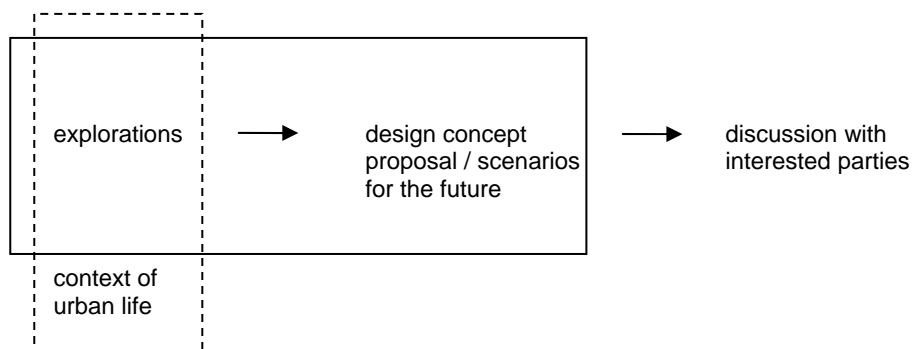
designer bears the responsibility of what possible additions or changes she proposes for the world. Being aware of this responsibility brings forth the importance of the “*guarantor of design.*”

5.3 *Starting points for the design process*

“The choice a designer makes, as to how to acquire knowledge, deeply affects how his or her design work is done.” (Nelson & Stolterman 2003)

I decided to start the design process by reaching out to what I’ll call *instances of urban life*. Instances of urban life are ways or reflections of how people relate to the urban environment, through their daily experience of it. It was therefore important to devise ways that would help me reach these instances of urban life. There is no right way or only way to address the complexity of urban life as it is made up of individual experiences. All these experiences are valid reflections of urban life.

I decided on a series of personal explorations that would put me in dialogue with the level of the street (the shared locus of urban life) and with people. These dialogues with instances of urban life would permit me to gather design considerations inspired by the existing context for design for hybrid space. These design considerations would in turn feed a proposal for a design concept. This concept, presented through scenarios, would illustrate a possible hybrid future for cities grounded in a people-centered approach and could be then used as a discussion tool to introduce the ideas to others.



The different phases of the design process

To make the design process easier to understand I present here a graph that schematizes it. I am not pretending to present the design process as any recipe

to follow but I believe it is important to present it as an experiment in designing for urban hybrid space.

6 Personal explorations: dialogues with the lived city

“Cities also believe they are the work of the mind or of chance, but neither the one nor the other suffices to hold up their walls. You take delight not in a city’s seven or seventy wonders, but in the answers it gives to a question of yours.”

“Or the question it asks you, forcing you to answer, like Thebes through the mouth of the Sphinx.” (Italo Calvino – Invisible Cities)

The following design process is based on a dialogical attempt between the designer and instances of urban life, each interaction asking questions or raising some; bringing a new layer of understanding and new considerations to take into account.

I took inspiration from different approaches and experiments from different fields and that had a people-centered drive to them. Much inspiration came from the field of participatory design, but also from certain urban research approaches that have concentrated on the urban context of people’s everyday lives.

The guiding points for the explorations were the main points I had introduced in Chapter 4 as potentials presented by the new technologies infiltrating urban space:

- The possibility for (tele)presence on the street
- The introduction of a mediation layer between people and the urban environment as well as between people and the political city. The resulting possibilities for mediated interaction can be part of the daily experience of urban space.

The three dialogues therefore reflect these points of interest and each one focuses on one aspect in its relationship to the existing context of urban life:

- The existing voices in urban space (presence on the street) are explored through observations on the streets of Helsinki.

- People's everyday experience of urban space and the related practices is explored through two volunteers' own documentation of daily journeys in the city.
- People's motivation to participate in issues concerning their urban environment is explored through interviews with a group of Active Seniors who are planning to move to a new area of Helsinki.

A fourth dialogue also arose and constituted a low-key/low-tech concept testing in the area of Arabianranta.

The following chapters report the dialogical process I went through; an iterative process that resulted in design considerations that in turn fed the design concept. For each dialogue, I ask questions, give an overview of the inspirations for choosing the exploration approach and then move to the analysis of what unfolded in terms of design considerations.

6.1 First dialogue: on the street – looking for asynchronous presence

In Chapter 3, various examples showed how new technologies could create a possibility for people to have a (tele)presence on the street. From their own devices they could send text or images that would in a way be representative of their own voices, to be displayed in the cityscape. These examples were only either temporary artistic experiments or ongoing research projects. They provide a glimpse into a possible future but what about existing practices related to people's self-expression in urban space?



Promoting asynchronous presence?

I decided to approach urban space through its existing layer of asynchronous presence (visible information in the cityscape – see Chapter 2). I believe it can hint to an understanding of possible future digitally mediated presence in urban space. These forms of asynchronous presence point to the voices that currently have a visible presence in public space and they might be important actors to consider when speculating about the hybrid future. I paid particular attention to information/messages provided by ordinary people and have explored related existing practices. The existing social reality can help in gathering design considerations for the future that are nevertheless grounded in people's ways of operating in real life, in the context of urban space.

6.1.1 Description of the exploration

I was inspired by approaches brought forth by people like William Whyte and Jan Gehl. Both have been practicing urban researchers in the late 1970's, early 1980's; Whyte in the USA and Gehl mostly in Denmark. Although coming from a field that has traditionally approached the city from a top perspective, they have nevertheless both tried to approach it through its public spaces and life in them. They both took the streets as their working ground and gathered observations from there (Whyte 1980, Gehl 1987). They placed human presence and interaction between people as one of the main ingredients of successful public spaces, and therefore cities. The same applies to urban hybrid space: as mentioned previously, without people the relationship between 'computer' and 'environment' is meaningless, just as cities without people are mere ruins (Rajanti 1999).

I have mostly documented my observation by taking photographs. The observations ran over a period of approximately eight months, mostly in Helsinki. I usually had a digital camera along with me all the time, and I kept an eye open for any subject of interest during my routine outings. I have also gone, though not often, on special 'photo taking walks' to areas that stretched somehow beyond the spaces I normally encountered daily. I have gathered these pictures in a database searchable by different topics.¹⁶

¹⁶ The database was developed in collaboration with Petteri Sulonen.

Search parameters | Image list

Title (text, use * and ? for wildcards)

Notes (text, use * and ? for wildcards)

Contributed by
 --none-- | joanna | petteri

Location
 --none-- | ziltasaari | seurasaari | kruununhaka | keskusta | linnunlaulu | hakaniemi | arabianranta | other in helsinki | sweden | usa | other in world

ELEMENTS FOR ANALYSIS:

CONTEXT
 --none-- | inside buildings -shared areas | between buildings | inside public transportation

DIMENSION
 --none-- | physical | digital | hybrid (digital-physical)

PHYSICAL DESCRIPTION
 --none-- | surface | element | structure | spatial configuration | shelter | interface | self-standing | attached | permanent | temporary | fixed | movable | mobile

INTERFACES

Description
 --none-- | permanent | temporary | between spaces | between private and public space | between physical and digital space | for communication | for a service

Interface belongs to
 --none-- | no one | city | group or community | company | an individual | unknown

Nature of the communication
 --none-- | private | public | one to one | one to many | many to one | many to many

MESSAGES

Nature of the message
 --none-- | commercial | artistic/cultural | political | personal | informational | parasite | anything | unknown

Posted by
 --none-- | individual | company | community | neighborhood association/society | cultural enterprise | political party | NGO, fund | city | anyone | unknown

Controlled by
 --none-- | city authority | neighborhood association/society | political entity | commercial enterprise | cultural enterprise | a certain community | individual | no one/anyone | unknown

RELATED PRACTICES
 --none-- | walking | resting | communicating | reading | sharing free newspapers | warchalking | voting

Reset form | Clear form | Get list

Screenshot of the database's search possibility.

Image	Title	Author	Contributor	Location	Context	Dimension	Physical description	Interface description	Interface belongs to	Interface nature of	Message nature of	Message posted by	Message controlled by	Related practices
	Image 1	joanna	petteri	ziltasaari	inside buildings -shared areas	physical	surface	for communication	city	permanent	commercial	individual	city authority	walking
	Image 2	joanna	petteri	ziltasaari	inside buildings -shared areas	physical	surface	for communication	city	permanent	commercial	individual	city authority	walking
	Image 3	joanna	petteri	ziltasaari	inside buildings -shared areas	physical	surface	for communication	city	permanent	commercial	individual	city authority	walking
	Image 4	joanna	petteri	ziltasaari	inside buildings -shared areas	physical	surface	for communication	city	permanent	commercial	individual	city authority	walking
	Image 5	joanna	petteri	ziltasaari	inside buildings -shared areas	physical	surface	for communication	city	permanent	commercial	individual	city authority	walking
	Image 6	joanna	petteri	ziltasaari	inside buildings -shared areas	physical	surface	for communication	city	permanent	commercial	individual	city authority	walking
	Image 7	joanna	petteri	ziltasaari	inside buildings -shared areas	physical	surface	for communication	city	permanent	commercial	individual	city authority	walking
	Image 8	joanna	petteri	ziltasaari	inside buildings -shared areas	physical	surface	for communication	city	permanent	commercial	individual	city authority	walking

Screenshot of the image list.

6.1.2 *Ordinary people and ordinary situations*

The average person belongs to the group less represented in the space of the city and the one with the least possibilities for expression. Advertisements and city regulation rules make up most of the information visible in the streetscape. Artistic works, either commissioned by the city or sponsored by it or by corporations, have a strong presence. ‘Underground’ culture has appropriated city surfaces for its own production and information.

There are specific circumstances when ordinary people are presented with means for visible expression, like the Helsingin Sanomat ad campaign and the “Keskus” installation mentioned in Chapter 3. I wanted to explore *ordinary situations* when people posted messages on the street¹⁷.

Ordinary people’s voices mostly appear in the cityscape through the facades of their own businesses or through community boards. Neighborhood community boards are sometimes placed in neighborhoods by residents’ associations or schools or local cultural institutions. Other types of bulletin boards also used by people are located in public libraries or are provided by shops, within their own premises.



Artisan’s shop, neighborhood restaurant, neighborhood bulletin board.

There are much more community-centered instances of mediated public expression in residential or partly residential neighborhoods than in the business oriented city center. In the city center, electric poles and boxes are

¹⁷ I documented ‘underground’ practices of posting stickers or writing graffiti but didn’t concentrate on them because they reflect the practices of a specific group of people who operate often at the borders of illegality. Their followers often operate at night, in relative secrecy, or during the day, very quickly in order not to be noticed. Some messages have more political agendas and are representative of a ‘protest culture’; others are simply ‘cheap’ ads.

mostly used by those belonging to underground cultures (stickers advertising CDs or various kinds of happenings). On the other hand, in Kruununhaka, a mostly residential neighborhood, the residents association has stuck flyers on electrical poles and electric box to advertise upcoming reunions about issues relating to the neighborhood, and local daycare centers have advertised their annual flea markets in a similar fashion. Residents and local businesses also use the bulletin board at the corner of Liisankatu and Snellmaninkatu. Residents place personal messages for renting or looking for flats, for babysitting services etc. Local businesses place ads. The Sibelius high school also has a bulletin board on Liisankatu where students inform about their activities and upcoming school concerts.



Information in Kruununhaka.

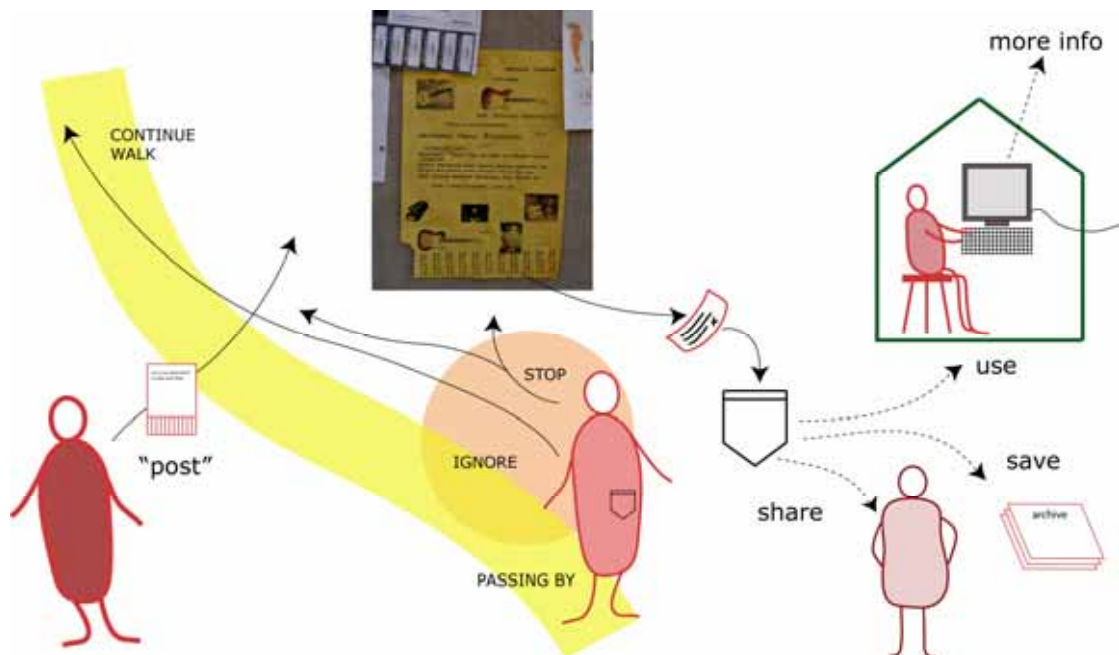
6.1.3 Existing practices and proposed design considerations

Quite often, messages are placed in the street in order to address other passers-by (people of the neighborhood). They are short and usually carry an indication for a way of getting more information (a phone number, an email address or a URL). This practice already indicates an underlying hybrid mediation layer in the city: an indicator visible at a specific physical location refers to information related to it in the digital dimension.



Phone numbers, email addresses, and URLs at the Kruununhaka board.

The current impossibility for most people to directly link to the digital dimension from the physical location itself has led those who post messages to come up with ways of facilitating the process of reaching the further information. One common solution is to propose tags that can be torn and taken along and that contain the information or link to the information.



Tear and take along

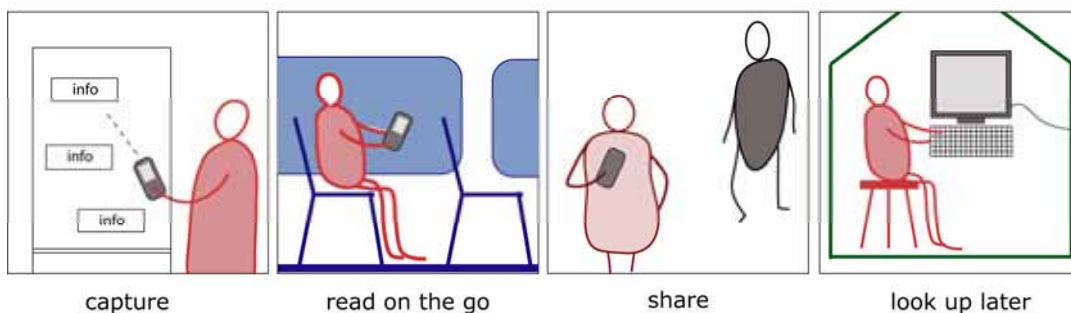
The process of interacting with such 'augmented' information is currently lengthy. What if the process was made easier and it were possible for example to capture a URL via one's personal device and directly reach the information in the digital dimension? This could be achieved for example if the links were present on digital boards in public locations and people could capture them

via their own personal digital devices through proximity connection. Would such a possibility be viable, from the point of view of social practices?

One example of how people use more extended information they receive in urban space is the practice of reading free newspapers distributed in the city (like Metro and 100 in Helsinki). Many people read these newspapers while they are on the bus and have forced time to spend. This could indicate a pattern that could be followed with digital information if it were available in urban space.



Existing practices.

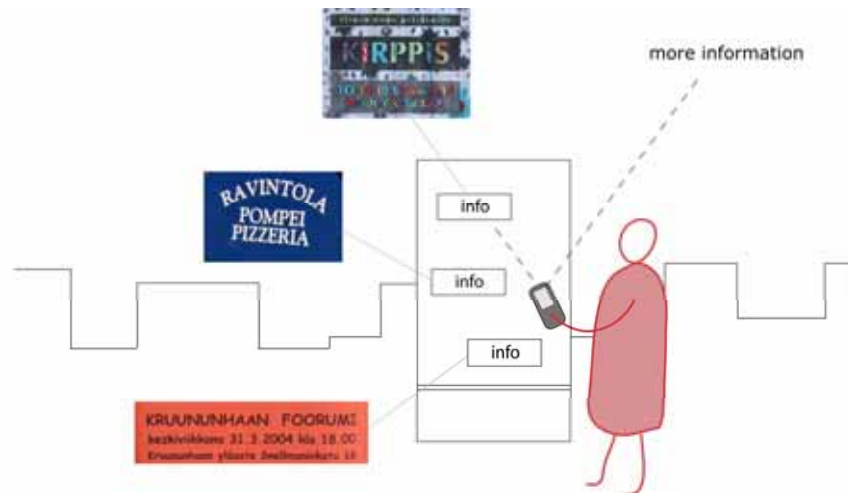


Proposed design consideration: capture – save – share.

One design consideration for urban hybrid space is therefore to consider ways of interacting with augmented information in urban space that are inspired by existing practices. People could be given presence in urban space through

interactive neighborhood boards where they could post their own messages and interact on the spot with others. The interactive boards would extend physical location into the digital dimension. The fact that they would belong to the neighborhood itself would permit to control the information present in these neighborhoods' hybrid spaces. The possibility to augment information in physical space to the digital dimension would not only be reserved to advertisements and businesses.¹⁸

Local actors like local businesses, schools, neighborhood communities etc. could share a common extension of the physical neighborhood into the digital dimension, such as a neighborhood network, instead of resorting to scattered endeavors on the Internet. This neighborhood network would also exist in urban space through the above mentioned interactive neighborhood boards.

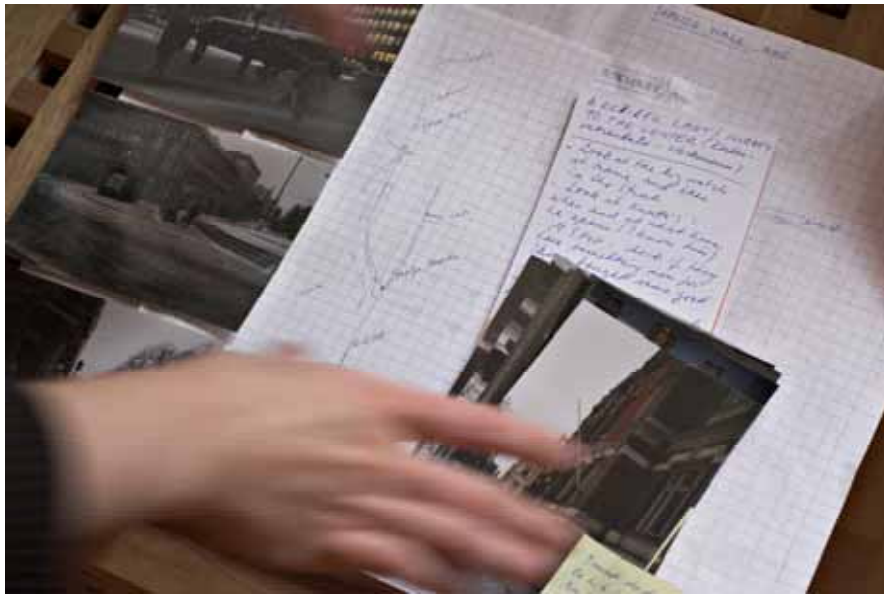


A neighborhood network visible in urban space.

¹⁸ JCDecaux has started experimenting with 'extending' ads into the digital domain by running a test campaign during 2004. Ads appeared in Helsinki that showed an image and a message saying "city messages at this address: aux.fi".

6.2 *Second dialogue: the experienced city – exploring people’s everyday experience of urban space*

I refer again to de Certeau’s distinction between the city as a concept and urban life (see Chapter 5). Through my own professional background in architecture and urban design, I have become used to dealing with the city as a concept, through plans and bird’s eye perspectives. It was important therefore to free myself from these professionally imposed methodologies and explore the city through its layer of urban life.



Aune’s documentation.

Again, I am not looking for any scientific absolute truth but rather for individual stories that make up, like many thousand others, the life of cities. I have therefore decided to engage people in this investigation in order to reach out for what Krippendorff has called “*second order understanding*” (Krippendorff 1995); in this case one understanding (or more) of the city through the mundane experience of its space.

Taina Rajanti (1999) mentions in her book *Kaupunki on ihmisen koti* (The city is the people’s home) the complexity of the city and the impossibility to define it. The city is made of different voices and different stories. In that sense, any story is valid as a way of approaching this complexity.

This second dialogue engages people in reporting their daily routine in the city. It is a way for the designer to be able to reach the instances of everyday life that make up life in the city. It is a way of involving people in the design process itself. This second exploration permitted reflection on the observations and proposals made in the previous chapter, now examined in the light of others' experiences.

6.2.1 *Inspiration*

I found inspiration from different sources in order to devise a way that would help reveal at least some parts of people's urban everyday practices and how these practices shape their understanding of the city.

The Royal College of Art's Computer Related design department's research for the "*Presence Project*" was an investigation on ways technology could be used to increase the presence of older people in their communities. The designers/researchers involved in the project experimented with ways of involving people (in that case senior citizens) in the design process itself. They sent people a set of "*probes*" (Gaver 2001); packages containing disposable cameras, maps, postcards, so that they could document their own lives. The experiments done through this project have since then become a reference in the participatory design discourse.

I was also inspired by Kevin Lynch's urban studies investigations on the concept he named "*imageability*". Lynch and his team asked people to draw mental maps of their cities. These maps were then used to investigate how people perceive or "read" cities in different ways: each one of us has his own image of the city (Lynch 1960).

6.2.2 *Description of the exploration: volunteers' self documentation*

Two people agreed to proceed with the exploration. One volunteer was a retired lady, Aune, 62 years old, married, and has been living around 6 months per year in Helsinki since 2003, on Korkeavuorenkatu. The second volunteer was a working man (IT field), Petteri, 32 years old, married, amateur photographer, and has lived in Helsinki since his 20s (currently living on Liisankatu).

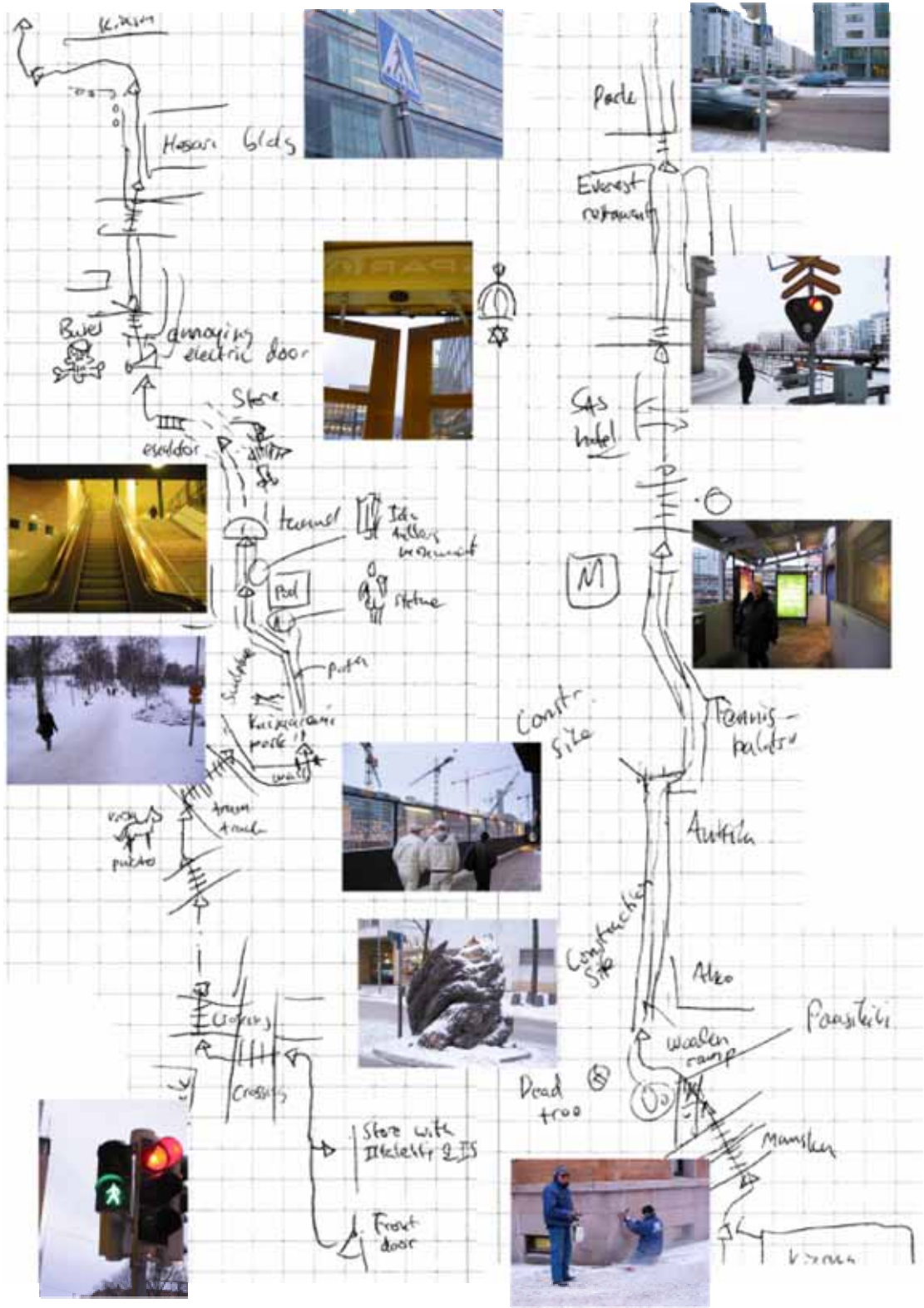
The volunteers were asked to document one or two typical journeys in public space, from the moment just before leaving a certain point A (house or office)

to the moment just after reaching their destination (point B), by taking notes and photographs.

Each volunteer was then invited to discuss the pictures taken. Before starting the discussion about the pictures, the volunteers were asked to draw a mental map of their journeys.

The map's main purpose in this experiment was to be a support tool for the volunteers, as they explained their journey. Asking them to draw these maps at the beginning of the interview helped them also to remember their journeys. The combination of maps, images and notes helped reconstitute a journey's real scenario.

Aune chose to document two journeys she regularly takes: her "daily one hour walk at the seaside" (Korkeavuorenkatu – Kaivopuisto shore) and her regular "journey to the center" (Korkeavuorenkatu – Stockmann). Petteri chose to document his daily morning commute from home to office (Liisankatu to Ruoholahti).



Petteri's map and pictures.

6.2.3 *'My' city – a personal interaction*

Being on the go and waiting

Being on the go refers to this reality of experiencing urban space as an in between two places. It is especially true for working people who are tied to their race to and from work. Petteri develops strategies to avoid known long red lights; *“at this really annoying double crossing here, I have to run though the first lights or the others will go red”*. Even Aune, with more time on her hands, doesn't like to stop and wait on her to the city center, nor during her fitness walk. She has to run in order to 'catch' the green light and not be stuck at the intersection with 'long' red lights.

Inhabiting the city

Even though one often experiences urban space 'on the go', there is a clear sense of familiarity that develops towards the space encountered daily. This reflects what Rajanti mentions in her book that everyday experience of urban space starts from the home and adds familiarity to the original unknown (Rajanti 1999).

The volunteers documented their routine experience of urban space that has through time become part of their extended *“inhabited place.”* The inhabited city extends from the center point of the home to the places and paths encountered daily: to work and back, through a daily routine walk, walking the dog...

Both Aune and Petteri expressed a special relationship to the area they live in. Aune took a picture of the street she lives in and labeled it *“approaching home.”* She also prefers to draw cash from 'her' ATM and not from another. Petteri also mentioned shopping at 'our' K-Kauppa.

Familiarity, curiosity and interest also develop towards elements, places or people we encounter along our daily paths.

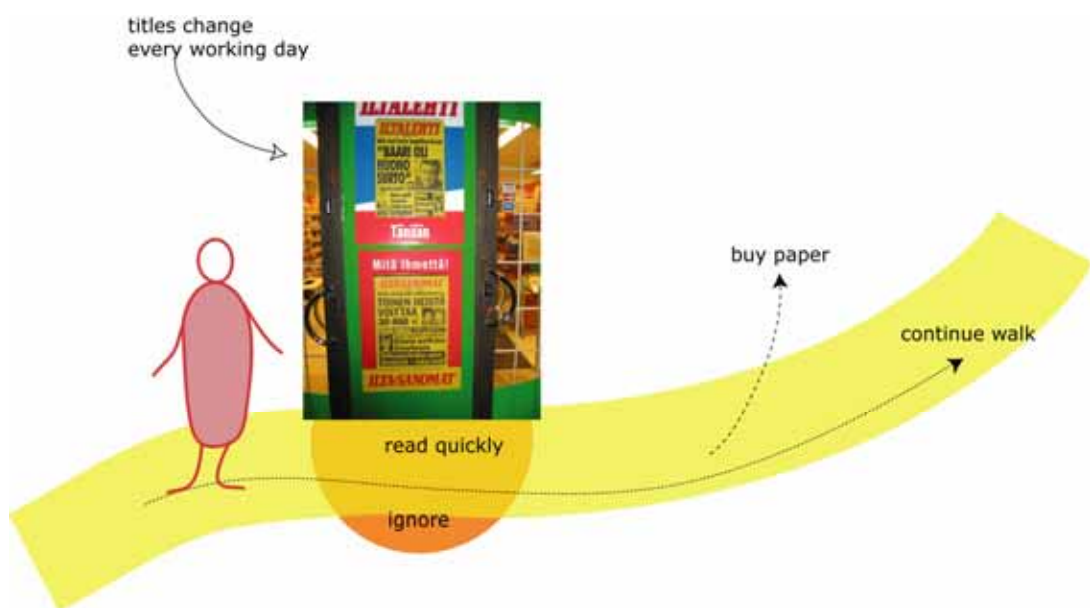
Aune says that she is always intrigued by a certain spot on her walk back from the seaside. She believes the place is a maintenance store and it strangely has a *“paperboard picture in the window.”* Petteri also developed an interest towards a certain barbershop. This shop appeared quite strange to him, *“it has very strange opening hours: it seems to be only open on appointments.”*

Neither Petteri nor Aune have ever tried to actively know more about these 'mysterious' places, but they have become integrated to their routine.

Both Petteri and Aune expressed interest in changes in the urban environment. Petteri has followed the Kamppi construction site that he sees everyday. Aune has been wondering when certain street work or façade renovation will be finished.

When asked about their reaction to information present in public space, both Aune and Petteri paid attention to messages related to their familiar spots. Petteri filters out most ads, "*it is just written noise*" but Aune did mention noticing when ads change at the bus stop she uses regularly. Personal messages written by someone familiar and 'posted' onto the street, for example Aune's hairdresser's practice of writing a post-it note on the door of his shop to indicate when he'll be back from a break, also triggered interest. Aune reads these messages because she says that "*I know Knutte.*"

Both Aune and Petteri integrated reading the titles of tabloids (known as 'lööpit' in Finnish) to their daily routine even though they mentioned that they effectively very rarely buy them. Both however only read these tabloids at specific locations and times. Petteri only read them at the window of 'his' K-Kauppa, just after leaving home in the morning. Aune only read them during her daily fitness walk when she happens to pass in front of the R-Kioski of Kapteeninkatu.



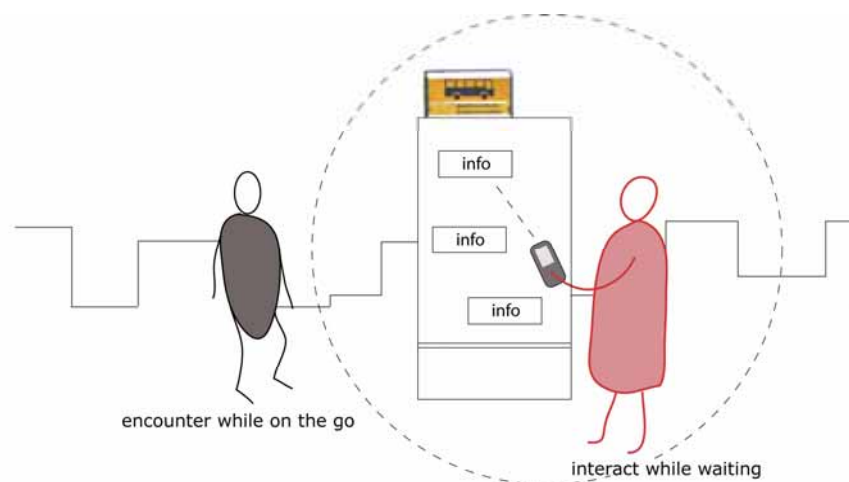
Interacting with 'lööpit.'

This personal level of interaction with the city that happens on a daily basis is important to consider when designing for digitally mediated interaction with and in urban space. The interaction cannot be forced but affordances can be thought of in order for it to be facilitated.

Places of waiting for example can be thought of as spots with potential for interaction. The Urban Diary project mentioned in Chapter 3 was quite successful as the screens were placed at the metro station waiting platforms, where people had time to interact with them while waiting for the metro. On the other hand even while on the go, people do encounter different things and can pay attention to them. Reading the 'lööpit' for example, with their short and quickly read titles, has been integrated into Aune and Petteri's practices.

I propose therefore to consider possibilities for digitally mediated interaction in urban space that would respond to these two criteria:

- the possibility to be encountered while 'on the go'
- the possibility for interaction while waiting

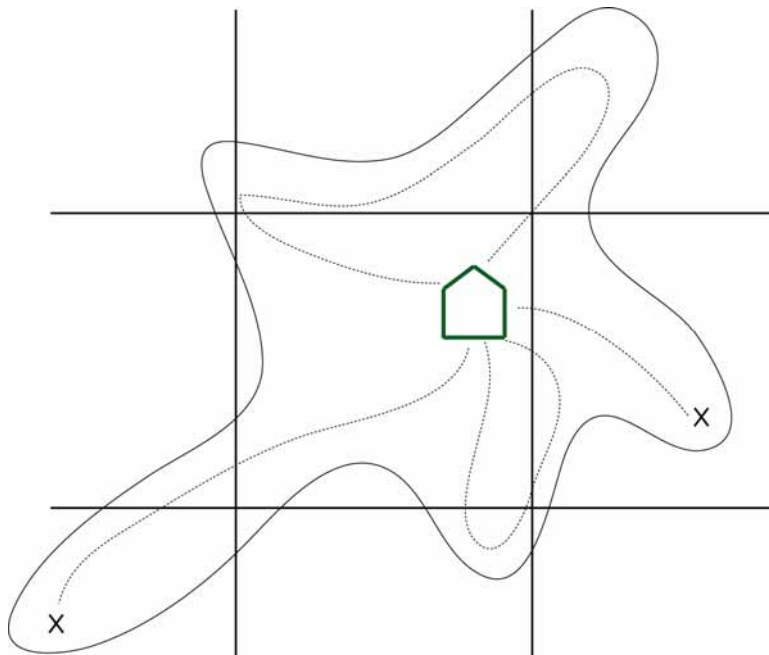


Encounter or interact.¹⁹

On a wider level of design considerations, it is important to keep in mind the importance of the personal level of interaction with the city. It does not necessarily clash with the established 'division' of the city, for example into

¹⁹ I present here public display boards as possible representatives of a possible hybrid network system in public space. It is just one possibility and the easiest one to use to illustrate the concept I am working on. It is important however to remember that digital information can be present in the environment in other ways, as I have noted in Chapter 3.

known neighborhoods. The individual layers of the people's 'own' city simply overlap with the administrative areas. Keeping the existing divisions in areas and neighborhoods makes it easier for any hybrid system to integrate existing physical and digital systems. However, it becomes important to leave interactions with such systems customizable according to people's own experience of the city.



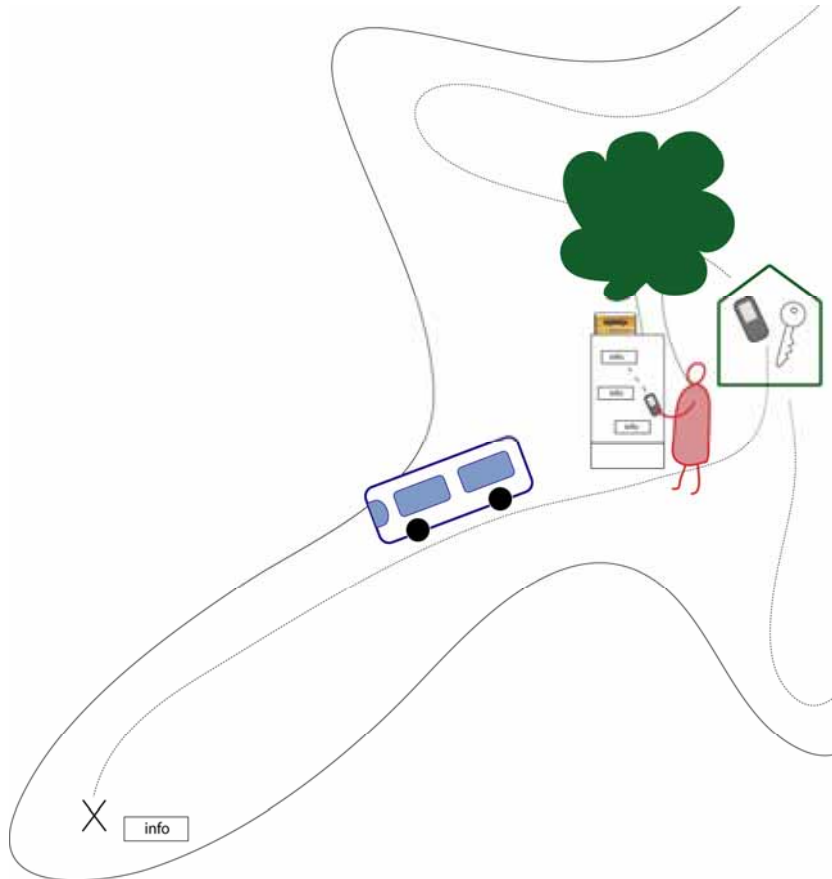
Overlapping 'my' city and the grid.

Let's take the case of Petteri who lives in Kruununuhaka and walks to work to Ruoholahti. Petteri might be interested in interacting with what would be the Kruununuhaka hybrid neighborhood network, but also with the one of Kamppi, on his way to work. He should be able to choose whether he would like to have rights to capture and send information that would appear on one neighborhood's public display or whether he only wants to glance at the information present on these displays, without interacting with them.

The spanning space of practice: private-public

It is also important to remember that the experience of urban space starts before stepping out into the street. We do not encounter the city bare. We dress and take along various personal objects as preparation to encountering urban space. Petteri makes sure he has his keys, wallet and mobile phone before leaving home. Personal portable digital devices, especially the mobile phone, have become part of our everyday baggage. I believe that it therefore

make sense to investigate using these devices as tools of interaction with the city. They can become the keys to neighborhood networks we want to interact with, providing the public system with means for identifying us and providing us accordingly with possibilities to customize our interaction with the city according to our own daily experience of urban space.



'My' device interacts with the neighborhood at 'my' bus stop.

6.3 Third dialogue: Active city-zens - exploring public participation

National and municipal strategies in Finland are striving to address the 'active citizen.' People are expected to be active and participate in the different democratic processes that are opening up to them via new technologies. The influence of the national information society strategy (Castells & Himanen 2002) on different aspects of citizenry has raised the Internet as the preferred tool offered for public participation. Participation therefore requires access to information technologies as well as knowledge in how to use them. This is indeed an area into which Finland is currently putting a lot of effort (Vehviläinen 2001).



Active citizens.

It is important however to step back and consider what might be other conditions that encourage action. Lelia Green, in her book *Communication, technology and society*, examines the concept of public interest and the role of equitable information access for fostering it. She reminds us though that “*to talk simply in terms of equity of access ignores the fact that effective interaction in the information society requires high levels of motivation and sustained effort. Such keenness to interact with the technology of information cannot be assumed. Continuing motivation is perhaps the key determinant of successful participation – more important than access per se.*” (Green 2001, 104)

I have proposed in Chapter 4 to consider the potential hybrid mediation layer in cities to include mediation possibilities between people and city authorities. My hypothesis was that if the possibility for action was present in urban space itself, it would motivate people more. I decided therefore to explore participation and the way it relates to people’s everyday practices.

6.3.1 Description of the exploration

When asked, the previous volunteers, Aune and Petteri both said they did not consider themselves as ‘active citizens’. They both could express annoyance towards certain issues but never attempted to do anything about it. They both said that these were things that took time and effort (for example having to

search for information and ways of voicing one's opinion on the Internet) and that if the problems were not acute, they really didn't bother.

Through my work with ARKI, I had the opportunity to come in contact with members of the Active Seniors' association²⁰. It was therefore a good opportunity to ask people who openly consider themselves as active what it is that makes people take action or encourage action and what are the strategies involved, if any. In addition, the fact that they had just received the permit to build their building in the new area of Arabianranta provided a good opportunity to investigate their own relationship, as active people, with an urban neighborhood.

I decided to interview some members of the association. This approach is very much inspired by qualitative research methods, and I have actually used this interview to present a longer paper about participation for the "Researching Communication Technologies in Society" course I took at the Department of Communication of Helsinki University in spring 2004. In this thesis, I concentrate on presenting the findings related to design considerations.

I have used open ended interviews as a way of accessing stories through which people describe their world (Silverman 2000). Again this was not an attempt to reach the 'truth' but rather "*generate plausible accounts of the world.*" (Silverman 2000)

Four members of the Active Seniors' association were interviewed. Two interviews were conducted with groups of two (two ladies and a couple).

6.3.2 *Triggers for motivation*

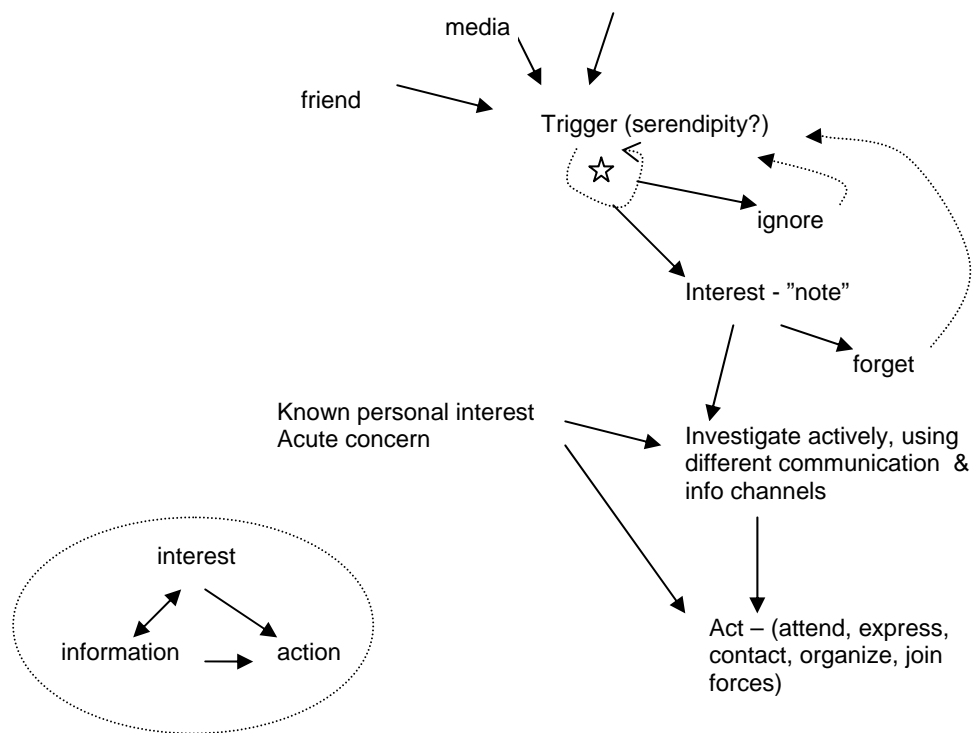
It is interesting to note that all interviewees had first heard about the Active Seniors association by chance. One interviewee heard about the Active Seniors association from a friend, one heard about it on the radio, while driving her

²⁰ The Active Seniors' association is an independent and non-political association, trying to come up with an alternative model for senior people's living and housing. This model is based on community and participatory life but respects also each person's need for privacy and independent life. The Active Seniors hope to be able to live by themselves for as long as possible, helping each other to achieve that. Their building, Loppukiri, is going to be erected in Arabianranta, and the construction work will start in autumn 2004. The Active Seniors association is one community of practice currently engaged in co-design explorations with the ARKI group.

car and Emmi read about it in the newspaper²¹. They were not looking for the information and they might not have considered the issue altogether before this first encounter with it.

The case of Eila was particularly interesting as she decided to contact the association after hearing about it twice on the radio, while driving.

The interviewees seem therefore to have encountered information that triggered an interested in them, purely by chance. It reached them as they were going about their everyday life, without them actively looking for it. The role of mass media and its ubiquitous presence is important in relaying information to people and acts as a trigger for more action.

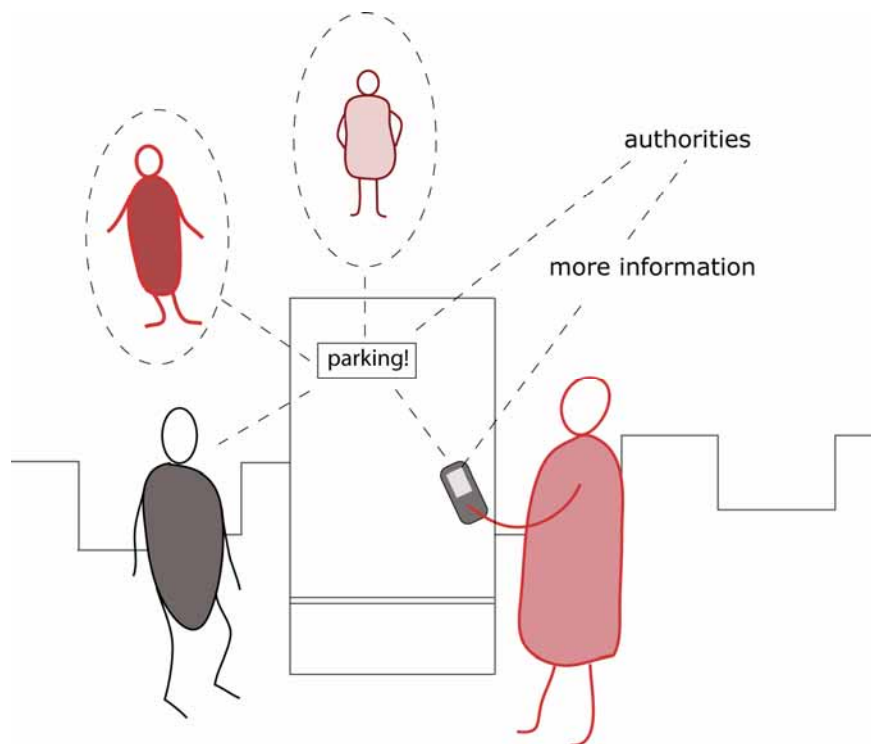


In the proposal for a hybrid mediation layer in cities (see Chapter 4), I have considered the possibility presented by new technologies to introduce a mediation possibility between people and authorities in the space of the city itself. This mediation possibility could be realized by presenting authorities

²¹ The importance given, since the beginning, to using the media as a channel for ‘advertising’ the Active Seniors project comes from the fact that most of the founding members used to work for national broadcasting agency (YLE). These people already had contacts in the media world. As Väinö clearly stated during the interview, the Active Seniors use media “to recruit more members and also to reach city and governmental authorities: they want to promote their idea of housing and living for senior citizens”.

with the possibility to post triggers about certain urban issues, in the space of the city itself. The city planning department for example currently publishes information about new projects that are to be started in the main newspapers, in local newspapers and on their Internet pages. What if triggers about such information were to appear in the space of the concerned neighborhoods themselves and interaction with them could link people to more information and to the concerned authorities? This might trigger motivation from a larger number of people; as an ad for outdoor advertising said in Helsinki: *“ulkona on enemmän ihmisiä”* (outside there are more people)²².

Triggers could also be a way for people to post their own concerns regarding the neighborhood and use it as a way to gather the attention of others as well as the attention of authorities.



The illustration shows the example of a posted trigger about a subject Väinö had mentioned during the interview: in his opinion there aren't enough parking places in Arabianranta. During the interview, Väinö said he was thinking of forming a sort of popular movement, with the other inhabitants

²² A campaign for street advertising in Helsinki in January 2005 has actually resumed the 'benefits' of this kind of advertising: *“ulkona on enemmän ihmisiä”* (outside there are more people), *“ulkona tavoitat asiakkaan H hetkellä”* (outside you reach customers at the right time), *“ulkona mainoskatko kestää 24 h/vrk”* (outside the ad break last 24 hours a day).

concerned with the same problem. They'd then *"go to the city [authorities] for pressuring."*

6.6.3 Diversity in (re)action

Being active means being *"engaged in activity, contributing, participating – causing or initiating action or change"* (The American Heritage Dictionary). Even if the Active Seniors belong to a group and present themselves to other through the adjective 'active,' each one is also an individual, like all other people, with different levels of activity with respect to different issues.

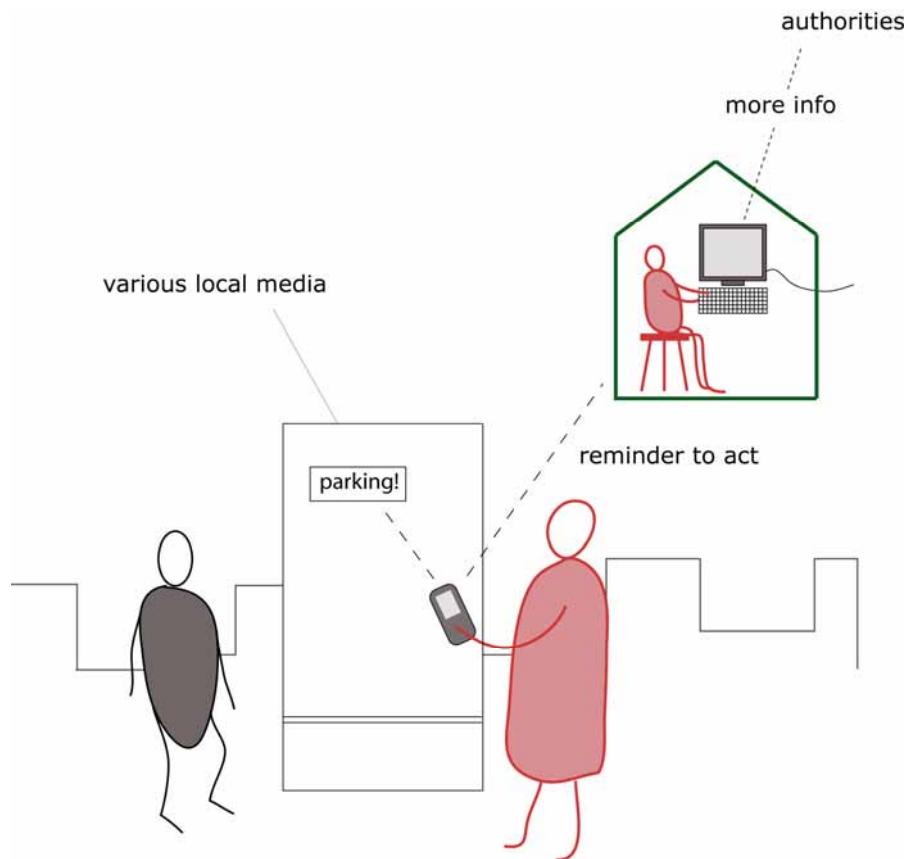
The willingness for taking action depends also a lot on one's way of life. Struggling between work and taking care of one's family often doesn't leave much time to think about other things. For example, Väinö and Emmi said that it is only now, after their retirement, that they feel they can get involved in issues that are more of general interest and that they can interact with the local authorities or even governmental authorities. Before retirement, their reaction to annoyances in the neighborhood for example would have been: *"let the wiser take care of the problem."* This is indeed the reaction of most of us. However, if the possibility for action could be easily and unobtrusively linked to everyday practices, then it might motivate more people.

Eila mentioned that she prefers to act spontaneously, for example by quickly voicing her opinion about problems in the neighborhood. She also said that if she doesn't react quite immediately, then she doesn't do it later and she ends up having a bad feeling about not having done it. Sirkka, on the other hand, said she likes to think about things before saying them. She often writes emails and saves them then looks at them again the second day, before (editing them) and sending them.

Both Eila and Sirkka said though that there is this issue of forgetting to react to things if it is not done spontaneously. Both try to 'write it down' but one sends it automatically whereas the other saves it and looks at it again later, then decides to send it or not.

When designing for participation it is important to design for flexible possibilities of interactions that can be adapted by each person. *Participation cannot be forced but can be facilitated.* In fact, this is very much what this design concept exploration is about. Certain realities of our environment

might temporarily draw our attention. We might even consider acting upon them on the spot, but often fail to do so because we're in a hurry, we're busy, and later, we simply forget. Many people's opinions remain unvoiced, especially on issues concerning one's urban environment, because there is no possibility to store the initial reaction before it is forgotten. Storing a reminder for ourselves, to make us act upon such issues is not easily compatible with our daily urban practices: we should be able to do it, as we are 'on the go,' and later be able to retrieve it, when we are in a position to formulate a proposal for action.



This illustration shows different possible ways of interacting with triggers: spontaneously in-situ or at home for example, after a time for reflection.

Other media are also shown to be linked to the hybrid neighborhood system, local radio, TV, and newspapers. They are also important to consider as being part of any local hybrid platform, especially as the future of digitalization is moving towards convergence²³.

²³ In the case of the virtual community network Nettimaunula (see Chapter 3), local newspapers were involved in the project and they have their web presence on the community website itself.

7 In situ concept testing: triggers in Arabianranta

The three previous explorations - dialogues with the lived city - brought forth different design considerations regarding a possible hybrid system that would reinforce people's presence on the street as well as provide triggers for taking part in shaping one's environment. Such a system could both exist in the digital domain, through a neighborhood network, and in the physical locations in neighborhoods, for example as interactive public board at places of waiting. People could interact with the system spontaneously on location through their own personal digital devices, or at their own chosen time and place, through the Internet.

Some important questions regarding the validity of such a concept remained to be investigated:

Would people be actually interested in information regarding the neighborhood if it were presented in the physical space of the neighborhood itself? Would the different possibilities presented to interact with this information; either spontaneously on location or at their own timing through the Internet, really encourage them to participate?

I decided to make a small in-situ experiment, using low-tech/low-key means because I had no budget, in order to test the concept and get a feel of the real situation 'on the ground.' I also wanted to experiment with ways of engaging in the design process itself, the 'potential users' of the proposed system, namely people going about their everyday activities in urban space.

Helyä
humanoidi :
vastaus
on ulkona.
Mutta miksi
bussit menevät
ohi?



*“Dear humanoid: the answer is outside. But why did the buses pass?”
Message left by an anonymous on 16.05.2004, on the notebook at the bus
stop opposite the University of Art and Design and the Pop & Jazz
Conservatory.*

7.1 Inspiration

I was inspired by Participatory Design and ARKI's co-design approaches of engaging ordinary people in the design process (Botero et al.). As my own research and design space was urban space, I decided to take the participatory design process 'to the streets,' where the context and the situations involved would be real.

Some participatory design experiments have also been conducted in urban space and have staged an activity in public space as part of their design process: Mazé and Jacobs for their design research exploration, Underdogs and Superheroes, aimed at *“investigating new means for people to express themselves in public spaces”* (Mazé, Jacobs 2003), Iacucci and Kuutti for their Situated Enactments of Scenarios research aimed at designing future digital portable devices (Iacucci, Kuutti 2002), and the Royal College of Art CRD team for the Presence project aimed at finding ways to use technology *“to increase the presence of older people in their local communities”* (Gaver 2001).

Underdog and Superheroes as well the Situated Enactments of Scenarios project have used the real urban context as the stage for their participatory design experiments: participatory games for the former, enactment of

scenarios for the latter. Both these projects however mainly targeted chosen participants as well as the designers. By staging the activities in urban space, they aimed at broadening the context of investigation: the designers and the participants involved were able to deal with situations that were not planned in advanced but rather happened to be there, in the context of everyday life in the city. The Presence project on the other hand placed prototypes of their design ideas in urban space. They wanted to observe the reactions of passers by to their “slogan benches”²⁴ and in that way test their concept.

I have been inspired by these projects and experiments and the ways they have created a possibility for people, participants or passers-by, to engage in a certain activity in public space as a way of informing designers of design considerations.

I was also inspired for my own in-situ exploration by the observations I had done in Helsinki and the different mediated means of public communication observed, especially those used by average people. The Helsingin Sanomat ad campaign (see Chapter 3) was one example of presenting people with a way of expressing their opinions in public space. I envisioned the in-situ experiment to be an adaptation of it: I was going to place stickers with short information about a certain neighborhood (*triggers*) at this neighborhood’s bus stops (*places of waiting*). An attached notebook and pen would give people the possibility to comment these triggers. More information would be accessible from a website.

7.2 *Description of the exploration*

I decided to use information about the area of Arabianranta that I had gathered from the interviews with the Active Seniors to prepare the triggers. The Active Seniors had been eager to discuss what Arabianranta, the new area where they were going to move to, meant to them, and they brought up many issues regarding this neighborhood. I created short titles out of the Active Seniors’ information and wrote them of small pieces of paper.

²⁴ “Slogan benches” were prototype benches made out of laminated MDF over steel frames, with a display window inbuilt in them. The display showed messages that had been collected and edited by the old people of Biljmer/The Netherlands involved in the project.



Issues concerning Arabianranta.

I placed the prepared stickers and notebooks at two bus stops and at the public library in Arabianranta²⁵. I collected the comments written on the notebook every evening, for as long as the notebook was still there (for around one week at one bus stop and for two weeks at the other). I also interviewed at that time some people waiting at the bus stops.

²⁵ I had decided to put triggers in the library in order to test if I would get more responses in a controlled space rather than on the street. Even though I had asked permission from the Aralis library personnel to place my tags there, and they had been very positive about it, the tags were removed each time, so I didn't get any results there.



Map showing the location of the stickers and notebooks in Arabianranta.

Because of some technical problems, the website I had created with a discussion board as an extension of the notebooks was up and running only as the last notebook had already been taken away. I decided to make the best of this situation and used another means of mediated public communication to ‘advertise’ the website’s URL: I placed flyers that offered the possibility to tear small pieces of it (tags) where the URL was written: www.julkiset-tilat.tk²⁶. These flyers were placed on different surfaces in Arabianranta usually used to post flyers (from community bulletin boards to electric boxes and poles).



One flyer placed at the seashore.

²⁶ The web site’s original URL was: <http://mlab.uiah.fi/publicspaces/index-insitu.html>. I didn’t want to use this URL for the flyers because it was too long and hard to memorize. It also indicated that the website was from the University of Art and Design. I wanted to keep the purpose of the website somehow mysterious, and therefore didn’t want to be too explicit in the text appearing on the flyers. For this reason, I chose a free URL offered by dot.tk and opted for an easy address.

Oletko huomannut tarrat jotka ilmestyivät viime viikolla muutamille bussipysäkeille Arabianrannassa ja Araliksessa?

JOODUTAANKO
HÄVITTÄMÄÄN KAIKKI
TYRNIMARJA PENSAAT?

Jos haluat tietää mistä tässä on kysymys tai jos vain yksinkertaisesti haluat lähettää kommenttisi, jonka toiset Arabianrannan asukkaat mahdollisesti lukevat :

www.julkiset-tilat.tk



www.julkiset-tilat.tk
Asiaa Arabianrannasta,
tai ehkä jostakin muusta...

www.julkiset-tilat.tk
Asiaa Arabianrannasta,
tai ehkä jostakin muusta...

www.julkiset-tilat.tk
Asiaa Arabianrannasta,
tai ehkä jostakin muusta...

www.julkiset-tilat.tk
Asiaa Arabianrannasta,
tai ehkä jostakin muusta...

www.julkiset-tilat.tk
Asiaa Arabianrannasta,
tai ehkä jostakin muusta...

www.julkiset-tilat.tk
Asiaa Arabianrannasta,
tai ehkä jostakin muusta...

Flyer used for the experiment.

[Etusivu] [Arabian bussipysäkki] [TAIKIN bussipysäkki] [Aralis]
[Kommentit]



Nämä sivut ovat osa käynnissä olevaa tutkimusprosessia. Se ei ole lopullinen dokumentti, vaan työväline.



Kaikki mukaan?

Tässä on kysymys pienestä opiskelijaprojektista, mitä teen loppuyöni yhteydessä TAIKissa, Media Laboratoriossa.

Suunnittelijat yrittävät yhä enemmän ja enemmän saada käyttäjiä mukaan suunnitteluprosessiin. Koska olen yleisistä kaupunkibloista kiinnostunut suunnittelija, ajattelin että olisi mielenkiintoista tehdä tutkimuksia kadulla ja saada ihmiset mukaan siellä...

Tutkimusalueena on kolme paikkaa Arabianrannassa: Bussipysäkki Arabian kauppakeskusta vastapäätä, TAIKia ja Pop and Jazz'ia vastapäätä oleva bussipysäkki ja Aralis-kirjasto. Näihin paikkoihin sijoitettiin tarroja missä oli viestejä ja aina lisättiin vielä uusi joka yö. Neljäntenä yönä sinne sijoitettiin muistivihko ja kynä.

Näytteillä oleviin tarroihin oli saatu inspiraatiot Arabianrannan tulevien asukkaiden kanssa käytyjen haastattelujen yhteydessä esintulleiden keskustelujen teemoista.

Jos olet huomannut nämä tarrat tai jos vain yksinkertaisesti haluat ilmaista mielipiteesi, niin **lähetä kommenttisi** näille verkkosivuille.

Nämä sivut todennäköisesti muuttuvat projektin edetessä. Pitäkää myös silmät auki Arabianrannassa muiden vuorovaikutusmahdollisuuksien varalta!

Main page of the website.

Asiaa Arabianrannasta, tai ehkä jostakin muusta...

Jos olet huomannut Arabianrantaan ilmestyneet tarrat, tai jos vain haluat sanoa jotain, jonka arabianrantalaiset (tai ketkä tahansa) voivat lukea, täytä tämä lomake!

Kirjoita mitä tulee mieleen.

Kaikki kommentit ovat nimettömiä sille haluat mainita lähettämässäsi kommentissa kuka olet.

Olisi tosi kiva saada kommenttisi!

Nimennekki:

Missa olet tätä hetkellä:

Mistä saat tämän webbisivon:

Mitä haluat kertoa:

Aluksi voitit vaikka kertoa, missä näit tarrat ja mitä mieltä olit lehtiästä...

Feedback form.

The website offered the possibility to anonymously send comments that were automatically posted there.

7.3 Outcomes

The experiment provided useful feedback for the design concept and new material to take the concept further. Some findings have reinforced the

legitimacy of the design concept and others have opened it up to further considerations.

7.3.1 Some results that reinforced the concept

People are interested in issues regarding their neighborhood

The results of the in-situ experiment, especially the notebook experiment, did not seem at first to be very helpful: people did not respond overwhelmingly to the triggers provided, as if issues regarding the neighborhood did not interest them.

The interviews with people at the bus stops revealed however that many were interested in these issues; especially people who lived there or worked there. Many people said they had noticed the triggers and they thought they hinted at interesting issues. The trigger hinting at the destruction of buckthorn bushes in the area and the one concerning the future quality of the urban environment of Arabianranta triggered most interest, both in the notebooks and during the interviews.

More direct access to more information in-situ would trigger more interest and possibilities for action

Some people ended up discussing the above mentioned issues in more or less detail with me. When asked why they didn't write comments some said they would have liked to know more about the context related to these triggers; what they were all about. When asked about it, they said they would check out a website explaining the triggers if it had been possible, right there, at the same moment.

There is a need for straightforward mediation possibilities between people and city authorities

The comments contributed to the webpage indicated a genuine interest in the issues that were brought up by the triggers and a desire to 'do something about it'. One person for example asked for advice on how she could take up with the debated issue and 'do something about it.' Another also indirectly addressed architects and influential personalities in the neighborhood.

Even though websites currently exist that provide forums for inhabitants and possibilities to come in contact with authorities, not everyone is aware of their existence. They only manifest themselves in the digital dimension and not in the urban spaces themselves.

Nimimerkki	Anjuska
Missä olet tällä hetkellä:	Toukolassa
Mistä sai osoitteen:	kutosen ratikan päättäriltä
Aika:	27.05.2004 13.48

Aluksi voisit vaikka kertoa, missä näit tarrat ja mitä mieltä olit lehtiöstä... En mä mitään tarroja nähny, näin päättärin ilmoitustaululla lapun jos oli tää osoite ja oli sinä yks tommonen lappukommentti siitä miten eri maailmat hämeentie jakaa. Ja asia on mulle ajankohtainen koska olemme muuttamassa Arabianrantaan täältä Toukolan puolelta jähka ko. talo valmistuu. Ja vähän hirvittää. Ympäristön suhteen mm. se, että suunnitellaan ja sorkitaan liikaa, puututaan joka neliometriin, että oisko niillä päättäjillä tajua jättää ranta rauhaan vai vedetäänkö asfalttivyylät, hinkataanko rantaviiva, ja mikä se sillaksi jatkuva baana joka lähtee niistä bombooseista portaista on? Että ei menis ihan bisnekseks koko homma. (Antaisin Yrjä Sotamaan viitoittamalle tielle paljon anteeks jos rantaan tulis avantouintipaikka, ei mitään megakeskusta vaan pikemmin reikä jäähän -meininki. Mitenkähän toiveen sais perile, ja minne?)

A comment sent by 'Anjuska,' complaining that there's too much construction going on in Arabianranta, and saying that she'd like to make her voice heard.

7.3.2 Further design considerations

Interaction possibilities in public space should happen at one's own discretion

Using stickers and notebooks for the experiment wasn't a successful choice to interact with the average person. Stickers in the city are usually 'read' by those who belong to this specific culture, in that case the 'underground' culture. Also, writing on a 'public' notebook is a rather unusual means of communication and doesn't relate to existing public communication patterns for most people. The outside also remains, like urbanist Richard Sennett states, "*a realm of exposure*" (Sennett 1990). In certain public situations, one feels vulnerable under the possibly threatening gaze of 'anyone'.

Using one's own digital device however might render it easier for people to interact with a public system as interaction is done privately, at one's own discretion, even if it happens at the same location where the public information is displayed. The combination of public interfaces turned

outwards and private interfaces turned inwards makes it possible to keep a certain equilibrium between what is public and what remains private.

Build a trusted framework – a reliable infrastructure

The interviews with people revealed that it was important for them to know who they were addressing; some of them also mentioned that they might have considered writing something on the notebooks if they had known what it was all about. One person had suspected that the stickers were some propaganda by neighborhood associations; another person thought it was an ad campaign of some sort.

Comparing the amount of messages written on one Helsingin Sanomat ad poster to the amount gathered during the same amount of time (one week) on the notebooks, the difference is rather big. The Helsingin Sanomat ads seem to have gathered much more attention. Indeed, the ad posters were big and were much more easily noticed than the little stickers and notebooks. There is however an important point to consider: the ads were easily recognizable as being those of Helsingin Sanomat, the biggest newspaper in Finland, and a trusted source of information. Helsingin Sanomat is about an institution. The posters also referred to the know Mielipide (Opinions) page of the newspaper, where people can send their own contributions, and the poster ad was understood to be an opportunity to write one's opinions on this Mielipide page on the street. The same goes with the Keskus installation. It was part of the Helsinki festival week and had even been mentioned in newspapers.

One observation also related to that issue is that all the tags of the flyers placed on bulletin boards had been taken away, but only a few had been taken away from flyers posted on electric boxes. Moreover, the four people who sent contributions to the website had all come across flyers posted on a bulletin board²⁷. The practice of posting flyers on bulletin boards is much more common and most people are familiar with such a practice. The boards are usually provided by the city itself or by local residents associations.

It is therefore important to have a certain legitimacy in public space if the aim is to address the range of different people that make these spaces. A proposal

²⁷ The comment form on the website had a field to be filled to answer this question: "From where did you get the address for this site?"

for a platform for interaction and communication in public space should involve trusted partners such as the city. Indeed one of the important questions that the new developments in “urban UbiComp”²⁸ have brought up is: “*what is the right balance between user-provided and environment-provided capability?*” (Paulos, Anderson, Townsend 2004). I believe that the city could present a public framework for hybrid space that would become an open hybrid structural backbone for urban communities.

The city can ensure that such a system is public, open to all those who share common urban spaces: for the city and its people. Urban communities could then themselves control the information present in their hybrid dimension and not leave it to be dictated by the market economy.

Design for awareness, not only participation

Many people were interested about the urban issues presented through the triggers. However, most weren’t interested in participating actively, neither by writing a comment on the notebook nor on the website.

In the second phase of the experiment, the website meter eventually showed that during the period between 21.05.2004 and 27.05.2004 there had been 12 visits to the web pages but only 2 comments appeared. Later, the average amount of new visits to the site was around 7 a day but only 2 new comments appeared.

It is therefore important to design for raising awareness and providing information regarding urban issues as well as for facilitating participation.

This somehow brings forth again the issue of activeness and participation. An important question when designing interactive systems is indeed who are we designing them for? Chris Heathcote brought up this topic during his talk on “Exhibitionists and Voyeurs” at ISEA 2004²⁹. According to him, most of us are “*leechers*”; we’d rather look from a certain distance at information that is presented to us. We indeed are interested, we might take note of it, but we do not contribute to it. Most online communities work this way, with just a small group of people creating the content whereas the bulk of those who

²⁸ see Chapter 3

²⁹ International Symposium on Electronic Arts

nevertheless make up these communities do not. Heathcote also reminds us that *“locative media has also so far concentrated on mass active participation ... and correspondingly the services have been designed for creators rather than consumers.”* (Heathcote 2004)

Knowing about one’s neighborhood raises one’s sense of belonging to it even though one chooses not to be actively involved. Increasing neighborhoods’ sense of community is therefore not only linked to active participation but also to passive interest. Design effort should in making information about the neighborhoods more easily accessible, in ways that people can encounter them casually, without having to necessarily actively look for it.

Design for adaptability: an open and flexible system

The in-situ experiment per se concentrated on the possibility of offering a way for people to respond to information about their neighborhood, in the physical space of the neighborhood itself. Some people did indeed use the means presented for interaction (notebook and web pages) to do exactly that. Many others however ended up using these means of interaction, in that case the notebook, for other kinds of expression altogether, mostly personal expression.



Spontaneous personal expression also dresses a portrait of the surroundings.

De Certeau (1984) has referred to the sphere of everyday life as one of people's tactical adaptability with respect to the strategic representations they are presented with. Design propositions often are thought of as overall strategies or finished products – a package to be presented to its users. People however will adapt them to their own lives and therefore continue the design process itself through their own interventions. Therefore, it is important to remember to design for adaptability because people will always adapt existing realities to their own uses and needs (Moran 2002).

Any system present in public space will be confronted to a multitude of possible uses; design effort should then be put into offering desired opportunities for the most desired interlocutors rather than putting effort into limiting adaptation to other uses.

Of course, open systems can be more vulnerable to different kinds of misuses by people, but at the same time, their openness can let them be self-regulatory. There were insults and bad words written on the notebooks placed at the bus stops, but there were also reproachful comments addressed to them and some had even been scratched over: an open system will for example allow for self-moderation rather than impose restrictive use.

Erik Stolterman has written a paper about the importance of what he called “unintended use” in the design of large public systems: *“A community is always changing. People have all the time new needs and wants. The technology for supporting such a community must build on the idea of “unintended use”. Unintended use is not a threat to the supporting system; instead unintended use has to be understood as the creative driving force... Unintended use is necessary in a community support system – not a problem.”* (Stolterman 2002)

My own design considerations started by exploring a possible hybrid layer of mediation between people and authorities. This however can only be part of a bigger framework for interaction in public space that would be open to different uses by different people.



Adaptation in the urban context can be seen in this example of an official information board for the city Helsinki. Its bare surface is being use to post flyers.



A trusted and open system.

8 Mediaattori – Urban Mediator: a hybrid infrastructure for neighborhoods

The experiments documented in the previous chapters have contributed in giving pointers to different design considerations that would be relevant for integrating potentials presented by new technologies in urban spaces to objectives that include people as participants for developing better neighborhoods.

The emerging design concept is that of a *hybrid infrastructure for neighborhoods*. The chosen name, *Mediaattori* in Finnish, or *Urban mediator* in English, indicates the role of this new infrastructure as an intermediary agent that would bring people together in the hybrid space of neighborhoods. The hybrid infrastructure acts as a supporting framework for mediated interactions between different parties sharing an interest in a neighborhood; from people who experience the neighborhood daily up to authorities and decision makers.

This proposal is way of illustrating a possible approach to an *urban hybrid future*. It is not intended to be viewed as a fixed solution, to be taken or left, but rather as a tool for discussion with potential parties that would be interested in taking the direction proposed by this project. City authorities, urban professionals, digital designers, research and development groups in new technologies, can all be potential stakeholders for such an approach to bringing together the physical and digital spaces of cities.

Dagny Stuedahl points out in his paper entitled “*Design as performance*” that, “*since design of new technology first of all is about constructions that are executed by more than one person, a design conceptualization that captures the border crossing and multidisciplinary communication involved in the design work is needed*” (Stuedahl 2001). Urban mediator is such a design conceptualization; it aims at providing a starting point for discussing potential endeavors combining new technologies and cities.

8.1 *Introducing Urban Mediator*

The Urban Mediator concept presents one possible approach for envisioning a digitally mediated urban environment. This approach puts emphasis on giving people the possibility to themselves shape their city, and adapting this possibility for action to people's everyday practices.

8.1.1 *A hybrid infrastructure*

Infrastructure:

1. *an underlying base or supporting structure*
2. *the basic facilities, equipment, services, and installations needed for the growth and functioning of a country, community, or organization*

(The American Heritage Dictionary)

A hybrid infrastructure exists simultaneously in physical public spaces of the city and in the virtual, global environment of the Internet. It is a support base for different interaction possibilities in hybrid space (physical-digital) between people and their neighborhood as well as between them and authorities and decision makers.

The proposal for a hybrid infrastructure for neighborhoods reflects a holistic approach to designing for the hybrid space. It is not limited to designing hybrid interactions possibilities only, but also the supporting base for them to happen.

8.1.2 *A hybrid platform for public expression and interaction*

A network of information servers (*neighborhood servers*) lies at the heart of the hybrid infrastructure. Interaction with these servers can happen at specific locations in urban space, *interactive spots*, through proximity connection with interactive public boards (*neighborhood boards*) or localized access to WiFi. Connection to the servers can also happen through the Internet. These concepts are presented in detail in Paragraph 8.4.

8.1.3 Objectives

The main objectives of the Urban Mediator are:

- To stimulate people's presence on the street and give the average person a mode of public expression in urban space.
- To bring a sense of community to neighborhoods by bringing together people sharing a common environment
- To enhance civic life and give people the possibility to participate in issues concerning their everyday environment in way that is integrative to their own everyday practices.

8.2 Existing information infrastructure basis in cities

Different physical and digital infrastructures support various expressions of interests towards the city. Some of these infrastructures are provided by the city itself, others are privately owned.

8.2.1 Physical infrastructure

In Chapter 3, I had mentioned the current *"managers of public space"* (Foucault 1980) who regulate the possibilities for mediated presence in the city as they are the ones providing the physical infrastructure it can rest on. Different kinds of physical infrastructure are used as support for different kinds of information. They belong to different providers; mainly the city, neighborhood associations, commercial companies.



The physical infrastructure for street advertising is presented in Helsinki by an advertising company, JCDecaux. Their slogan is “JCDecaux – showcasing the world” and they have taken over the streetscape of many European cities, providing them with various advertising boards and other rotating columns. It is interesting to note that information presented by the city of Helsinki, about the city itself, such as happenings, is presented on boards provided by the advertising company JCDecaux. In order to present information about itself, Helsinki has to use a commercial service.

As mentioned in Chapter 6.1, there exists in neighborhoods a scattered network of different local actors. Each of these actors has a presence in the physical urban space of neighborhoods, reflected through different interface possibilities for displaying information. Individuals have also added an information layer to different kinds of physical infrastructures: stickers and flyers appear on the gutters of buildings, on electric poles and even on information boards provided by the city.

Temporary structures also sometimes appear in urban space, for example during local elections when different parties post lists of their candidates.



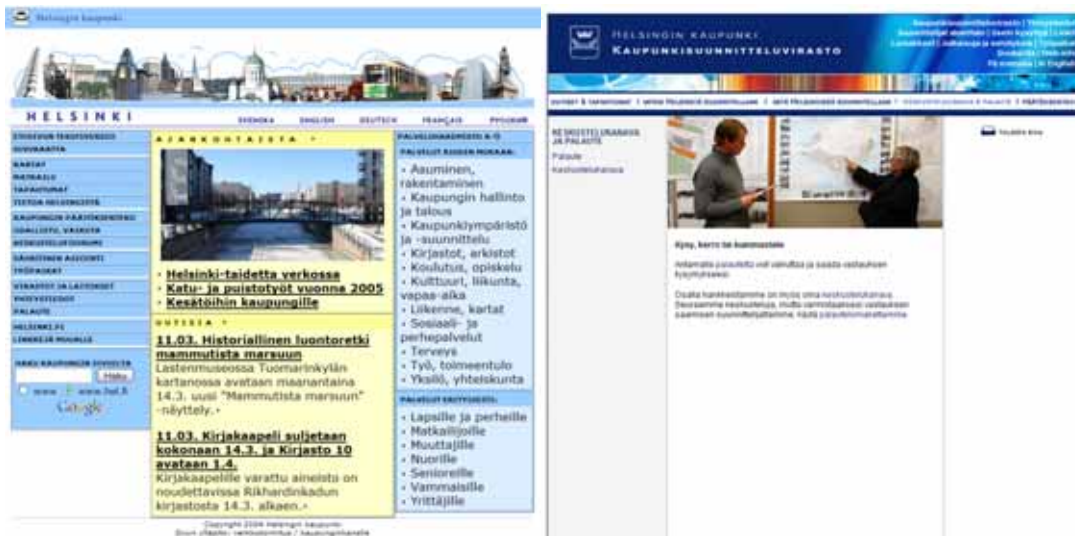
Boards during local elections in Helsinki.

8.2.2 Digital technology infrastructure

The information and telecommunications infrastructural layer in cities has lately turned towards digital technologies. The Internet infrastructure and the wireless infrastructure are its most recent constituents. The Internet infrastructure is made up of Internet service providers, telephone companies,

cable TV companies and public ICT infrastructure. The wireless infrastructure includes the cellular and the WiFi networks.

These infrastructures fall mostly under the private sector, with the exception of some fundamental structures. Commercial companies offer different kinds of services rendered possible by these infrastructures. The city has so far used the services provided by these existing infrastructures as a basis on which to build its own public services. Websites have been created as channels of communication and interaction for citizens (see Chapter 3).



Screenshots of the City of Helsinki web site and the City of Helsinki Planning Department web site.



Neighborhoods also have a presence on the Internet and use their websites as forums for the inhabitants.

In public spaces themselves, the city has provided Internet kiosks in public libraries and some post offices. The Arabianranta neighborhood is experimenting with providing free WLAN access in its public library.

Even though these services are provided by the city itself or by neighborhoods, they nevertheless remain portals into the amorphous, global world of the Internet, or services provided on the Internet. They do not reflect the local structure of urban neighborhood themselves and are not an integrative part of these neighborhoods.

Digitalization has also opened up the way for people to become active producers of content in the form of different kinds of media. This also finds its way in people's relationship to the cities they inhabit. Blogs have become a popular means for people to express themselves and reach out for others. Some blogs related to urban neighborhoods in Helsinki have also recently spontaneously emerged, for example Kallio-blogi. These blogs reflect people's interest in their neighborhoods just as the new trend of wearing T-shirts with the name and postal code of urban neighborhoods.



Kallio is a neighborhood in Helsinki.

However, these manifestations of interest regarding one's urban environment have remained at the level of dispersed initiatives. They exist as independent sites on the Internet. All these expressions of interest towards neighborhoods, whether currently existing in physical space or on the Internet, should be brought together and linked to one main supporting structure so that they reflect the structure of the neighborhoods themselves. They could therefore form the *hybrid core of neighborhoods*.

8.3 A supporting framework for neighborhoods

Urban mediator is a *public infrastructure that acts as a supporting framework for mediated interactions between different parties sharing an interest in a neighborhood*; from people who experience the space daily up to authorities and decision makers.

8.3.1 A structural backbone

A hybrid infrastructure for neighborhoods acts as backbone that brings together all those who share an interest for the neighborhood; inhabitants, people who work there, different local actors such as local businesses and schools, communities, city authorities, and so on. It organically links different actors that would otherwise still go about dispersed initiatives.

A hybrid infrastructure for neighborhoods presents them a solid structural backbone where they could all tap into and have the possibility to themselves produce the content that will exist in the digital dimension. Its hybrid nature also gives them a presence in the urban environment itself.



8.3.2 A trusted infrastructure

The proposal for a hybrid infrastructure attempts addresses the possibility of involving the city, the traditional provider of public infrastructures and the guarantor of public spaces as accessible spaces for all its citizens, to play a role in providing a new infrastructural layer for the cities. The public hybrid infrastructure would ensure that the future hybrid layer of cities will not only be a mere playground for businesses or technology developers to experiment with, but rather a structural part of cities that renders them interactive to citizens needs and use.

The hybrid infrastructure presents average citizens with a mode of public expression and interaction that links them to all those sharing an interest with their daily urban environment: other citizens, neighborhood communities, local businesses, educational and cultural bodies, authorities, decision makers etc. This includes the possibility to influence and be part of the democratic process of shaping one's neighborhood and making it a better place to live in.

This possibility for public expression and interaction is also reflected in the neighborhood's streetscape, stimulating people's presence there: people's voices become part of the urban landscape: in the city, for the city.

This hybrid infrastructure also brings a sense of community to neighborhoods: people share their interest for their everyday environments and have the possibility to express it in a way that is integrative to their own experience of these spaces and to their everyday practices. Participating in constructing a common space is not forced but rather can happen in ways that do not disturb one's everyday routines; it can become part of the routine itself and be open to all.

The hybrid infrastructure finally ensures that the rising urban hybrid space is common to all and won't be colonized by purely commercial interests. The cities of the future, with their combined digital and physical dimensions, will still be able to show local identity through their different neighborhoods and be a reflection of the people that inhabit these neighborhoods.

8.3.3 An open and flexible system: an adaptive design

Urban Mediator is a framework that the city provides; an infrastructure for its inhabitants, but it is nevertheless open and flexible to adaptation by people.

The in-situ experiment reported in Chapter 7 as well as observations on the street have shown how people tend to adapt existing systems to their own purposes. This might be considered as unintended use by some, but I believe, like Erik Stolterman, that unintended use of technological systems “*has to be understood as a creative driving force*” (Stolterman 2002).

With large open systems, one option is to choose to render them as closed. This however does not follow the democratic aspirations of this particular system, urban mediator, to empower citizens. The other approach would be to design the system in such a way that it is open and adaptive to what users make of it.

The hybrid infrastructure should therefore include possibilities to accommodate people’s adaptive capacities. In that sense it is also reflective of more bottom-up approach for public systems.

8.4 *Key constituents of the Urban Mediator*

Each neighborhood has its own urban mediator but people can choose to have the possibility to ‘register’ to different ones (for example where they live, where they work or even just neighborhoods they encounter, for one reason or another, on a daily basis).

As previously mentioned in Chapter 6.2, we all have our own image of the cities we experience and our own understanding of them. We everyday weave our own trajectories that eventually will bring some places, some elements, some people into the realm of what we consider familiar.

Different ways of understanding the city can overlap, for example the municipal division of the city into neighborhoods and individuals own experience of the city. A hybrid system can give the freedom to the individual to fashion his/her own city and to choose his/her interaction with it while at the same time the existing administrative and political division of urban space can still exist.

8.4.1 *Neighborhood servers as local service providers*

Neighborhood servers are the backbone of the digital infrastructural layer of urban neighborhoods. Neighborhood servers give neighborhoods more freedom in producing, publishing and managing their own digital media.

The neighborhood server would host both public and private services. As a public service, the server could support storing and managing information shared by people of the neighborhood. Such information could concern the life of the neighborhood (personal messages, community news, events, and propositions for community action). The server would also support applications for interaction between residents and city authorities.

Currently existing services like neighborhood websites can be integrated to the hybrid infrastructure: they are transferred to their corresponding neighborhood servers.

8.4.2 *Interactive spots*

The *interactive spots* are locations in neighborhoods that offer WiFi access to the *neighborhood server* and in some cases the Internet. Interactive spots are indicated by *Urban Mediator signs*. Interactive spots that have *neighborhood boards* also provide possibilities for proximity interaction via people's own devices. Links to information can be captured via Bluetooth connection between personal devices and the board.

Neighborhood boards are public displays in the form of interactive boards, placed in specific locations of the neighborhood:



Public lounges

A new kind of public space can develop around a new kind of urban element: neighborhood boards. They can be placed in neighborhood public squares, “*to stand roughly in the middle*” like Christopher Alexander proposes in general for urban elements of public squares (Alexander 1982)

Places of waiting

Neighborhood boards can also be placed at places of waiting like bus stops.



8.4.3 *Access control and user privileges*

Each neighborhood's Urban Mediator offers possibilities for registering to it and provides users with different levels of access to the neighborhood server. The system provides the following user roles:

- People who live, study or work in the neighborhood can apply for resident status by contacting the administrator. Resident status enables them to be registered users with special privileges in the system. Residents have broad access to the neighborhood server and can produce content on this server that can then be displayed in the public space of the neighborhoods or on the Internet (for example their own web pages can be hosted on the neighborhood server).
- People who regularly want to interact with neighborhood boards or with a neighborhood web site can self-enroll and gain the status of regular visitor. Self-enrolment can happen at interactive spots. The system identifies the user through the user's own GSM number. This identifier creates an electronic ID for the user, her 'mobile identity'. Regular visitors can capture and post content on neighborhood boards as well as interact with the neighborhood web site. They don't have further access to the neighborhood server.
- People who happen to pass by a neighborhood want and want to capture information presented there can do so. They are recognized as guests by the system. They cannot post comments nor access the neighborhood server.

All users can keep their anonymity when posting information. They can choose usernames. Their digital identifiers are only available to the system and its administrators.

8.4.4 *Moderation*

One major issue in public systems, especially those with public displays, is how to prevent the system to be monopolized by certain groups who use it in offending ways. There are different possibilities to keep public systems under relative control. Urban Mediator is inspired by the way Bulletin Board Systems (BBS) on the Internet deal with the issue:

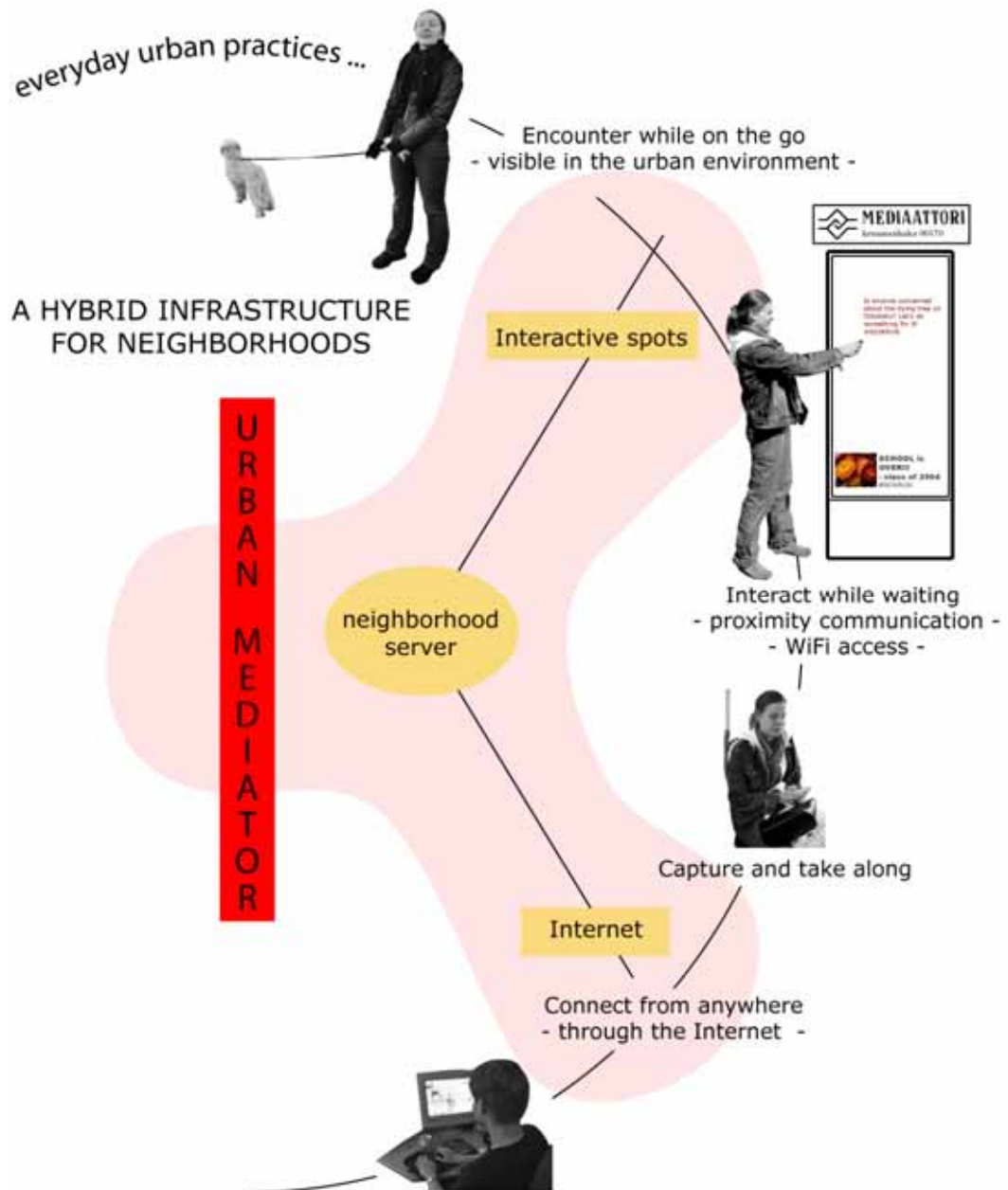
Administrators have the right to moderate the system and remove information deemed offensive from it. Residents can apply to become moderators and have the rights to remove information. Residents also have the privilege of voting: they can give negative points for information they want to be removed from the boards. For example information receiving more than five negative points will automatically be removed.

Administrators and resident-moderators can de-register misbehaving users from the system. Users whose posts have received a large number of negative points will also be de-registered.

8.4.5 Interaction possibilities

Possibilities for interaction are integrated to urban practices:

- Encounter while on the go (information is visible in the urban environment)
- Interact while waiting, through proximity communication or WiFi access: capture – post – share
- Connect from anywhere through the Internet: browse and interact



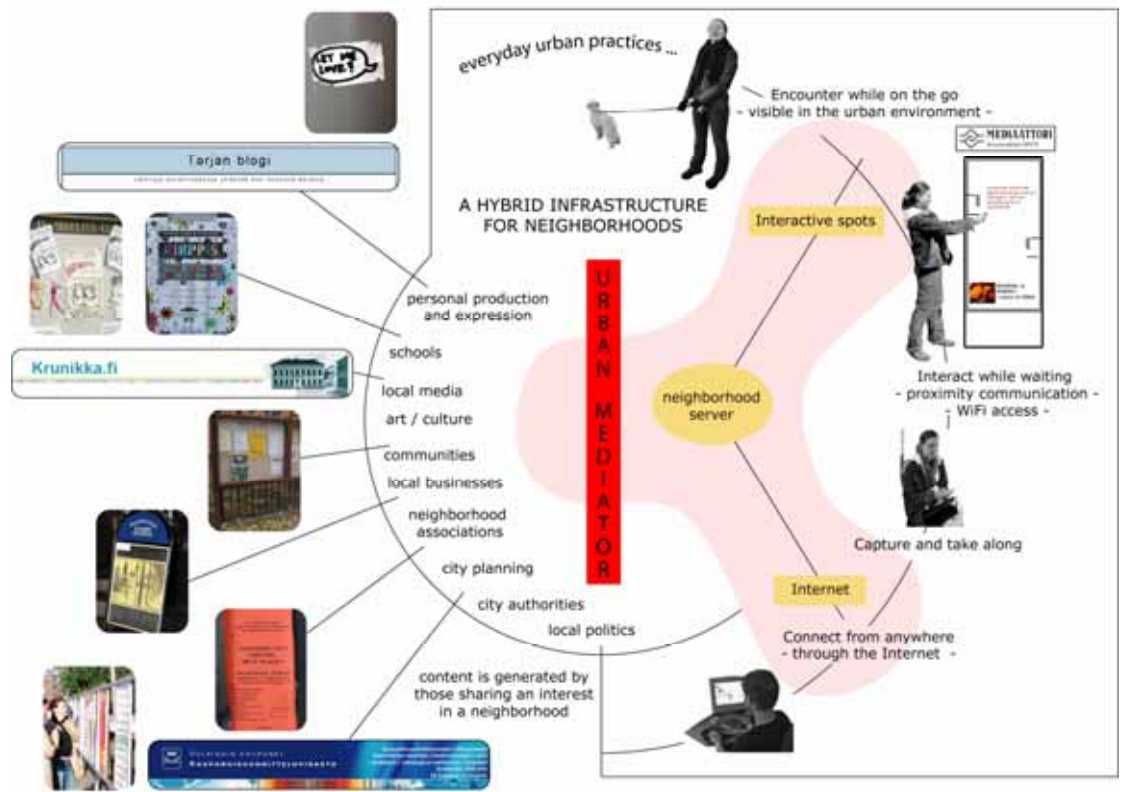
Interaction is integrated to everyday practices.

8.5 Mediator

A common structural backbone for urban communities becomes in itself the mediator that brings people together. Its hybrid nature permits interaction to happen in different ways, both through the digital and the physical dimension.

The possibility of creating a relationship between people, the digital dimension, and the physical urban dimension in the lived space of everyday practices constitutes therefore a mediatory layer in neighborhoods and in

cities. This mediatory layer becomes a constituent of urban hybrid space and a guarantor of the public nature of this space.



9 Exploring the concept through scenarios

Scenarios bring the concept of Urban Mediator to life by placing it in accounts of everyday situations; they are grounded in existing practices and needs. Scenarios are working tools that can be used in presenting and discussing the design concept with different potential stakeholders.

9.1 *The role of scenarios*

“Scenario development comes from the observation that, given the impossibility of knowing precisely how the future will play out, a good decision or strategy to adopt is one that plays well across several possible futures or scenarios.” (Verwijnen 1999, 28)

The design concept proposal for a hybrid infrastructure is one that deals with a vision for the future of cities; hybrid cities that would exist through combinations of the physical and the digital dimension. No one however can precisely say what the future will eventually look like. Many elements can come into play in different ways and it is not always easy to predict what direction societies and cities will take. This doesn't mean that we shouldn't propose visions and proposals for action that hint at a certain possible direction.

I decided to explore the concept of hybrid infrastructures for neighborhoods through building scenarios that illustrate possible directions to take in order to bring the concept further. The scenarios are therefore a starting point for further development and provide a first tool to be used to support any discussion on the ideas the design concept brings.

Urban mediator is an illustration of a possible approach to an urban hybrid future. The scenarios are important working tools for discussion with those who might become involved in design, policy or even strategy developments regarding the future of cities. These tools are useful as they raise many relevant issues, even if the concept of the Urban Mediator per se is not taken into further development.

9.2 *Building the scenarios*

These scenarios are mostly inspired by the investigations undertaken during the phase of dialogue with the city and people experiencing the city (see Chapter 6). The scenarios are therefore grounded in people's everyday practices and needs. They present some ideas that might have community value and that might speak to different people with different experiences of urban life (people of different age and socio-cultural groups). The scenarios also bring up issues to be considered as design investigations, in the different fields that might be involved in such a project, for example urban design and digital design. These considerations are brought up through accounts of pieces of everyday lives of urban dwellers.

Issues more related to digital design considerations are very much inspired by the work done in collaboration with the ARKI group. They reflect therefore ARKI's perspective on the future digitalization: one that takes into consideration ecosystemic issues, meaning "*how products and services should take into account the other applications the users use*" (<http://arki.uiah.fi>).

The scenarios therefore hint at this specific approach to technological development: making people's lives easier by providing technologies that are easy to use, that adapt to people's lives and different needs and that integrate a more ecosystemic understanding of the digital dimension: devices should be able to seamlessly connect to one another, augmenting our own capabilities rather than creating new obstacles. The concept of the Urban Mediator also, in itself, reflects this point of view: a public infrastructure should not be forced on people but rather developed through their own needs and practices. It should also be developed in such a way that it integrates possibilities of interactions with a wide variety of digital devices.

The scenarios also try to give an idea of the range of possible uses for what would constitute *a structural feature of the city itself*; an open system adaptive to a multitude of possible connections between citizens, designers, local institutions, authorities, among others.

These scenarios have been inspired by existing needs for public expression and communication in urban spaces and about them, as well as by existing practices of people in urban space. They highlight the importance of

considering people's everyday activities and routines when proposing ways for them to interact with their environment and participate in making it a better place to experience.

9.3 *Seven scenarios around Urban Mediator*

The scenarios investigate different everyday situations and different design considerations.

9.3.1 *Scenario 1: "How about checking out this new restaurant tonight?"*

This scenario is inspired by Petteri's daily commute to work (see Chapter 6.2). It integrates some aspects of one's everyday routine that can be helpful in feeding design considerations, mostly the possibility to capture and share information encountered in the urban environment.

The main design considerations explored through this scenario are:

- Integrating the more personal layer of digital media use to the interaction possibilities with the hybrid infrastructure.
- Designing seamless connectivity between personal devices and public systems
- Working on public-private boundaries as related to personal and public information using the neighborhood servers



Pete is in his 30's. He lives in Kruununhaka. He works in an IT company in Ruoholahti. He's married to Nanna and has a dog.

It's 9:00 am; Pete is preparing himself to go to work. He puts on his jacket and makes sure that he has his keys, wallet and mobile personal device in his bag. He glances at his personal device's screen and reads that bus 18 will be at the closest bus stop in 6 minutes.

At the bus stop, Pete looks at the digital board of the Kruununhaka Mediaattori. It is indicated that bus 18 will arrive here in 2 minutes. Pete then glances and the other information on the board: there is the question of the day ("Who is the Maria of Mariankatu?"), some messages posted by teenagers and information about a new restaurant.

Pete decides to capture the information about the new restaurant into his personal device. Today is Friday and he and Nanna might go and check it out tonight. Pete takes out his personal device from his bag, points it at the board and chooses to save the link to the "new restaurant in Krunikka" story.

The bus comes and Pete hops on it. The trip to work takes some 15 minutes so he decides to listen to the music his friends in Montana have sent him. He attaches headphones to his personal device and plays the music. He also sees

on his screen that he has a link to the restaurant story. He decides to read it. The menu seems interesting and the prices are decent. He decides to send this link to his wife and adds the message: “what about going there tonight?”

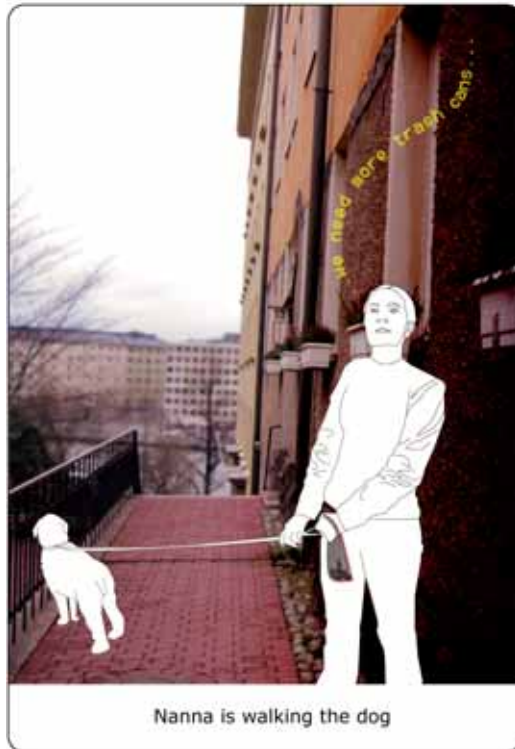
9.3.2 Scenario 2: “We need more trashcans!”

The scenario is inspired by the author’s own daily practice of taking the dog for a walk in the morning. It is linked to the previous scenario and both investigate the relationship between the personal layer of information and the interaction with a public system: it explores ways for families or friends to communicate and share information present in the urban environment.

In addition, this scenario specifically investigates flexible and straightforward possibilities to be active regarding one’s urban environment: either spontaneously, on the spot, or after a time for thought and expression. It also explores the issue of remembering to act (see Chapter 6.3) as a help for being active.

The main design considerations explored through this scenario are the following, in addition to the same ones presented in Scenario 1:

- Integrate possibilities for personal reminders about issues presented in neighborhood boards
- Need for flexibility and compatibility with different platforms



Nanna is in her 30's. She lives in Kruununhaka. She's married to Pete and has a dog. She's a student and goes three times a day to the University of Art and Design in Arabianranta.

It's morning and Nanna is walking the dog around the block. She has three different routes she usually takes when she doesn't want to walk more than 30 minutes. Today she decided to go by Siltavuorenranta.

As usual, she always notices that there are no trash cans there. It always annoys her because it means that she has to carry the 'poop bags' for almost the whole length of her walk! This time Nanna is really annoyed because it's slippery and she has to hold on to the dog's leash in a strong grip but she's struggling with the bags. When she finally reaches the trashcan in Oikokatu she notices the new Krunikka Mediaattori board that has been added to the square. She decides to send a reminder to herself, from her personal device to her computer, to write something about the lack of trash cans.

At home, she opens her computer and notices the reminder. She goes to the Kruununhaka Mediaattori pages and writes a small message. She decided that she also wants this message to appear on three of the public displays in Kruununhaka: the one at the Liisankatu bus stop, the one in the Oikokatu square and the one in Tervasaari. For that, she has to choose a short title for

her message. She decides on: “We need more trash cans!”, and sends her message.

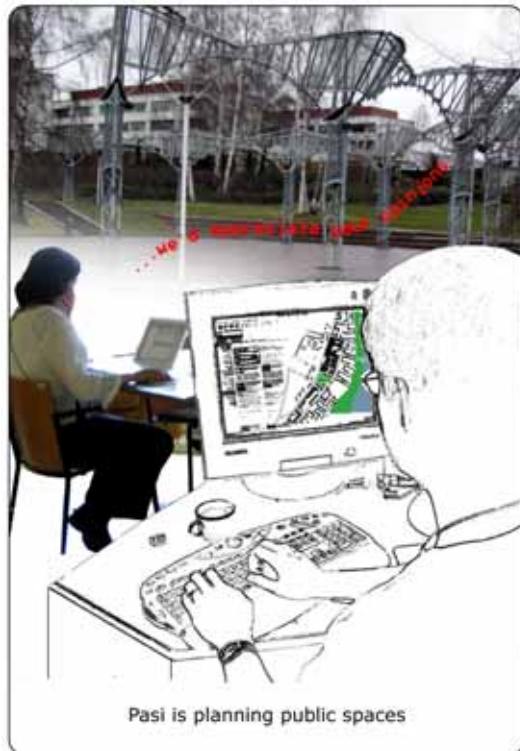
Before switching off her computer, she notices that she just got a message from Pete. He asks her whether she wants to go and check out the new restaurant in Kruununhaka. Nanna clicks then on the link Pete sent and decides that indeed it would be good idea to go eat there.

9.3.3 Scenario 3: “We’d appreciate your opinions”

This scenario is inspired by information gathered from the Active Seniors, regarding the area of Arabianranta. It addresses the City Planning Department’s new Land Use and Building Act 2000 and its implication on the planning process; mainly involving inhabitants in local urban planning and design issues. It also hints at possible ways for urban professionals to use such a system as Urban Mediator and how they could link these possibilities to their work practices.

The main design considerations explored through this scenario are:

- Providing possibilities for other existing networks, for example the City Planning Department’s network, to plug into the neighborhoods’ Urban Mediator systems.
- Access management considerations: who can interact with urban mediator and how? What can be possible ways of identification?



Pasi is a young urban designer working with the Helsinki City Planning Department (Kaupunkisuunnitteluvirasto in Finnish, abbreviated as KSV) on the area of Arabianranta. He started working at KSV in 2004 as is quite familiar with the Land Use and Building Act 2000 which demands a wider level of public participation throughout the planning process.

Pasi is currently working on the public open spaces of Arabianranta and would like to investigate some more the case of the Industrial Art and Design park opposite the University of Art and Design (the one with the strange metal structure).

KSV has lately received complaints from the residents of the old Arabia side (on the “other” side of Hämeentie) saying that they have been ignored in the new developments. Pasi believes that this particular park, because of its “boundary” position, might be developed in such a way as to be a link between the old Arabia side and the new Arabianranta development: a common public space.

He would therefore like to address the residents of Arabianranta and especially those on the old site if they would be interested in sharing opinions or comments about this specific case. He finds on KSV’s intranet a page which explains how to post material on the different neighborhood boards in

Helsinki. There is one template to use if the material to be sent is to appear to come officially from KSV.

Pasi decides to use the template as this project is definitely part of his KSV job. He fills the template with the needed information (name of contact person at KSV, number ID of the project, duration of the project etc...). He also fills the part where he explains what he needs. Would inhabitants from the old part be interested in joining the design project for the garden? Or send comments or proposals? They should be sent by 05.05.05

Finally, Pasi also attaches a link to the KSV's Arabianranta public spaces project webpage, as well as a link to his own personal weblog about urban design.

Pasi then chooses where he wants this information to appear: on which neighborhood boards, on which web pages and for what period of time.

After four days, Pasi gets three interesting comments and two stupid messages that were just insults by drunken young people. He decides to contact the people who sent the interesting comments. It was indicated that if the callers didn't mind being contacted by the designer, then they should enable their personal ID to appear either to the whole public or only to the author of the message which in this case was Pasi.

9.3.4 Scenario 4: *"I wonder what question is on the Mediaattori today?"*

This scenario is inspired by Aune's daily routine in urban space (see Chapter 6), by the interviews with the Active Seniors, by articles in the Krunikka neighborhood paper, as well as by observations made of people's behaviors on the street. The scenario also builds on William Whyte's concept of triangulation: *"the process by which some external stimulus provides a linkage between people and prompts strangers to talk to each other as if they were not."* (Whyte 1980)

The scenario addresses the fact that not everybody might have the technological means to be connected to a digital system, at least not all the time, even in a digital future. It explores the possible effects of information present in a visible form in urban space. The scenario also addresses the importance for collaboration with existing local media (for example local papers), in order to develop the hybrid system.

The main design considerations explored through this scenario are:

- Versatility is needed in interaction possibilities: it is important to think 'outside the box' in order to reach different people
- Develop interactive displays (neighborhood boards at interactive spots) as important urban elements that revitalize public spaces.



Aino and Sulo have lived in the Kruununhaka area of Helsinki altogether for almost 50 years. They have witnessed the growth of Helsinki and its transformation into a European capital. They always believed in the need for people and cities to move forward, but they nevertheless like to repeat that “Helsinki’s old Jugend style buildings are the best!” They feel very fortunate that they had the possibility to move to the Kristakoti home for senior people 4 years ago. Kristakoti is one of the several private senior and sheltered accommodations in Helsinki.

Aino and Sulo have their little routine. Their relatively good health permits them to walk slowly for about 45 minutes everyday, weather permitting of course. In winter they only make it up to their K-Kauppa store and then back.

In decent weather, they get dressed and leave their house at 10:00 sharp. They cross the Oikokatu courtyard and then go through Oikokatu itself to

Snellmaninkatu. They then turn left onto Liisankatu and walk towards K-Kauppa.

Lately, they have noticed a new kind of structure on Oikokatu. It was some kind of board with text and pictures on it. At first they didn't really give it a closer look; it was some kind of new ad board they thought. But one day they heard their young neighbor, the one who just had a kid, pointing at the board at telling a bunch of teen-agers to "write their opinion there if they're not happy that they can't smoke anymore in their building's backyard".

On their way back from their walk that day, Aino and Sulo saw their young neighbor and her baby at K-Kauppa. Aino decided to ask her what was the deal with the teen-agers and this ad board. The young mother then explained to them that there are now these kinds of "neighborhood" boards in different neighborhoods in Helsinki, and that they showed comments sent by inhabitants, by city authorities, by schools etc... Basically anybody could post something, even pictures, through their personal devices, or through the internet.

But, as they started looking at the board on their everyday walk, they found themselves reading the comments there. The comments were written in large letters and were clear to read. They reminded them of the titles of the 'lööpiti' they usually stop to read, but here the issues discussed were related to the neighborhood. It was also nice that this particular board was well positioned in the courtyard: one could read from it even while sitting on the corner bench.

Aino and Sulo even joined a discussion that had started between the lady with the black dog and an unknown gentleman. They were discussing the comment sent to the board by someone appalled by the desolate state of Liisanpuisto garden. It seems that the city authorities are continuously deferring the refurbishment of the park because of lack of resources. Sulo remembered that he had read an article about that in the Kuununka residents' association magazine, Krunikka, that they receive at Kristakoti. It seems Krunikka is also collaborating with the 'board-thing.'

Sulo was even troubled for two days because he read on the board a question posted by Krunikka and couldn't remember the answer. ("What did the empire style building at the corner of Kirkkokatu and Snellmaninkatu use to

be?") He finally decided to call them in order to sleep in peace. The person he had called gave him the answer (The House of Estates - Säätytalo) and also informed him that the young students of Kruununhaka will soon start a project of gathering stories about Kruununhaka, from senior citizens, so that they add them to the neighborhood database. The students will call senior citizens and will ask them if they're interested. The gathered material will then be used during the Helsinki week festivities, when different neighborhoods will participate in the "Helsinki goes interactive" project. "I'm interested" said Sulo. "I know lots of stories. My historical knowledge of the region is way better than some of the stupid things I have read on the board lately."

9.3.5 Scenario 5: "Hey, that's our concert!"

This scenario is inspired by existing mediated forms of communication in urban space, as has been described in Chapter 6.1. The scenario shows the importance for local events to have a presence in the space of the neighborhood itself: it reinforces the local identity of the neighborhood. The scenario also explores people's personal use of the possibility to post messages in public space.

- The main design considerations explored through this scenario are:
- Identification possibilities related to access rights for a digital system
- Possibility to choose how to appear on a digital system (for example as anonymous, or under a username)
- Integrating the more personal layer of digital media use to the interaction possibilities with the hybrid infrastructure.
- Designing seamless connectivity between personal devices and public systems



Jere is a 16 years old student at Sibelius high school in Kruununhaka. He's waiting at the bus stop on Liisankatu. It's 21:00 and there is no one around. He stayed too late at school because he had to practice his part for the upcoming school concert. This year the concert will be based on John Coltrane's A Love Supreme. Cool and Jazzy for once!

Jere notices that the show is already advertised on the Mediaattori board. The good thing is that since Kruununhaka has joined the neighborhood server pilot project, the Sibelius high school students have noticed that there are more people attending their concerts.

Jere then looks at other title on the boards. In the part reserved for personal messages he reads "Riitta loves Markku". Stupid he thinks. Who in their right mind put love messages on these boards? It must be kids or something... The next message is "Happy birthday Sanne" with a picture of some chubby girl... pathetic he thinks!

He decides to send a message himself though, just to pass time. He takes his personal mobile device and writes "Now that there is a forum for people to express themselves, why are there so many stupid messages?" He then points his device towards the board. Jere is identified through his mobile ID as a *Regular Visitor*. He receives a message on his mobile device asking him if he

wants to post his message. He can choose when he wants the message to appear. He decides for “in 8 hours”... just for fun.

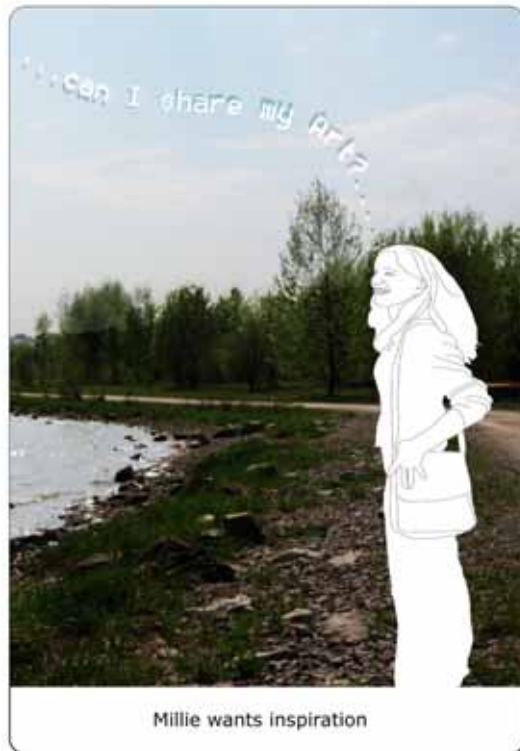
Jere’s bus is late. The board shows that it’ll arrive in 3 minutes. Jere decides to send a link to the John Coltrane show ad to his friend. It’s been a while they haven’t seen each other, but they always shared a passion for Jazz.

9.3.6 Scenario 6: “Can I share my art with the neighborhood?”

This scenario is inspired by comments on the notebooks left at the bus stop near the Pop and Jazz conservatory during the concept testing in-situ experiment (see Chapter 7). It was also inspired by a personal acquaintance and her own work. The scenario explores Urban Mediator as a versatile platform for public display that artists could use for their own artistic work and media production. The scenario also explores the need to consider possibilities for interaction with different kinds of digital media elements, like sound files or moving image clips.

The main design considerations explored through this scenario are:

- The importance of ownership of media production and the necessity to allow people (the producers of media) to choose how they want to share their production.
- Provide integration possibilities with open source and creative commons license systems (<http://creativecommons.org/license/>).
- Identification and access management issues: who should have access to Urban Mediators and what could be different access rights?
- Present possibilities of ‘moderating’ public displays of information in order to avoid offensive material but at the same time keep the system open.



Millie is a sound artist from Australia. She's staying in Helsinki for one year as she got an artist residency from NIFCA (Nordic Institute for Contemporary Art). She's living in the area of Arabianranta, just next to UIAH, in a small apartment she shares with another artist-in-residence from Norway.

While waiting for the bus she has to take daily this month to go to Sibelius academy's Center for Music & Technology, she noticed some kind of interactive board at the bus shelter. It was all in Finnish, so at first she didn't pay too much attention to it, but thought it funny to sometime see people pointing their personal mobile devices at it. She wasn't sure though if they were posting stuff or what. She did find the info about the incoming buses useful. She later learned that these 'board' areas are also hot spots from where anyone can access neighborhood servers as well as the web for free. One could also connect somehow to the info displayed on the board. How she wished she could understand Finnish!

Later during the year, she started working on a sound piece that she wanted to be a sort of interpretation of her daily commute. She recorded different sounds from the city and started to work with them. She nevertheless thought that she wasn't really progressing in an inspired way, but didn't really know what to do about it.

One day, while waiting for the bus, it suddenly hit her. She'd like to upload some samples of her music piece onto this 'bus stop board' and then collect any reactions by people that she would then integrate somehow in her work. Now, the problem was how to upload the stuff on the board and yes, big question, could people listen to it?

One day, while waiting for the bus, it suddenly hit her. She'd like to upload some samples of her music piece onto this 'bus stop board' and then collect any reactions by people that she would then integrate somehow in her work. Now, the problem was how to upload the stuff on the board and yes, big question, could people listen to it?

Millie checked on her mobile that she had access to the Arabianranta Mediaattori WiFi network. She then connected, registered her device onto it, and checked her privileges on the server. As a registered user, she could capture and post information to it.

She then chose which file to upload. She was then asked if she wanted to "protect" her material through Creative Commons license. She opted for yes and was presented with the Creative Commons page to choose an appropriate license. She decided not to allow for commercial uses of her work but to allow for her work to be modified. Her media piece was now ready to be linked to the neighborhood board. She just had to decide when she wants the link to appear there. She opted for three different times during the course of the next day.

On her way to Sibis the next day, Millie noticed that her piece did "appear" on the neighborhood board. Everything worked fine. During the day though, she received a message saying that her piece had played only twice but not the third time as she had scheduled it because it had received five requests for being removed. She wondered why people would want her piece removed but suspected it might have been the work of a bunch of youngsters from the neighborhood doing practical jokes. If 5 different registered users with resident privileges send a request for deleting media elements or pieces of information, they are then removed from the display.

Two days later she gets a nice message though. Someone with a nickname "groovy" tells her: Nice piece! I'm a music student at Sibis. I have some ideas for collaboration. Contact me if you're interested. Best, Teppo Mäkelä.

9.3.7 Scenario 7: “Did you share your Helsinki story?”

This scenario is inspired by Maari Fabritius’ *Katumuisti* project. In this project stories of people living in Helsinki were gathered and there was a possibility to hear them by dialing a phone number or going to the Internet pages (www.katumuisti.net). The project was funded by the city of Helsinki’s cultural foundation (Helsingin Kulttuurikaupunkisäätiö). The scenario is also inspired by the *Keskus* installation presented by artist Ilkka Törmä during the 2004 Helsinki week. (see Chapter 3)

This scenario explores the possibility of using the hybrid infrastructure for cultural happenings and celebrations. It presents a way of involving inhabitants to be partners in such projects. It also presents examples of involving city institutions and commercial enterprises.

Most design considerations presented in this scenario have already been brought up in the previous ones.



The city of Helsinki and its cultural foundation have come up with a small project for the 2006 Helsinki yearly festivities week (Juhlaviikot). This year the theme is “Helsinki goes interactive” and it makes use of the new

interactive infrastructure being tested in several neighborhoods. The project is also sponsored by major information and telecommunication companies.

Schools in different neighborhoods have been involved in the project since the beginning of the year. Students have gathered from interested senior residents stories related to their neighborhoods. These stories have then been added to each neighborhood's database and are presented during the whole Juhlaviikot on the different neighborhood boards. People can save the stories to their own personal devices and also send them to others. Some stories appear as text whereas others are voice recordings.

Residents of the participating neighborhoods can also send their own stories, as text or voice recordings, directly to their neighborhood servers. These stories will be accessible to anyone visiting the neighborhood server, through direct access at the hot spot locations, or through the Internet. Anyone can then vote for the best stories to be displayed or broadcast on the neighborhood boards. A story that gets 5 votes is automatically linked to the boards.

10 Stakeholders: what's in it for whom?

The concept for Urban Mediator can benefit different stakeholders, mainly the city and neighborhoods, local actors, urban professionals, technology developers, and urban dwellers.

The city

A hybrid infrastructure gives cities the possibility to become interactive. It provides cities with ways to implement their own goals for achieving better urban environments and address the different existing strategies calling for involving people in urban issues (see Chapter 3).

The hybrid infrastructure, with its presence on the street, enhances the sense of community in neighborhoods and encourages the sense of belonging.

These ingredients in themselves encourage people's interest in their own urban environments and the use of the possibilities of democratic participation in different local and urban issues can therefore be revitalized. Civic life is consequently enhanced.

The public nature of the infrastructure allows cities to become involved in developing hybrid services for citizens, with more freedom and less dependency on commercial service providers.

Local actors (local businesses, local cultural, educational and artistic bodies, local media)

The hybrid infrastructure offers a common platform for different local actors to come together. It gives them a presence in hybrid space and a possibility of reaching and joining forces with the other stakeholders, without dependency on external services.

Urban professionals

Urban professionals, at least in Helsinki, have to respond to the new Building Act 2000 that stipulates that inhabitants should be engaged in planning processes. The hybrid infrastructure presents urban professionals with a public platform into which they can plug in and develop their own tools for participatory design.

Technology developers

Technology developers benefit from a hybrid infrastructure in cities as it boosts possibilities for development and use of new digital applications, services and products that can be built with location-based technologies. A hybrid infrastructure provides a framework for “*Urban UbiComp*” to develop.

Urban dwellers

People become partners in shaping their cities. They have a possibility of expression on issues concerning their neighborhoods as well as a possibility for presence in urban space itself. The hybrid infrastructure provides them with an environment for expression, communication, production and civic participation – a public service presented by the city to its citizens. Possibilities for action also open up to various people, not only active ‘netizens,’ as they can be integrated to people’s own everyday practices in the city.

11 Conclusions

“What does it matter? Why should we care about this new kind of architectural and urban design issues? It matters because the emerging civic structures and spatial arrangements of the digital era will profoundly affect our access to economic opportunities and public services, the character and content of public discourse, the forms of cultural activity, the enactment of power, and the experiences that give shape and texture to our daily routines. Massive and unstoppable changes are under way, but we are not passive subjects powerless to shape our fates. If we understand what is happening, and if we conceive and explore alternative futures, we can find opportunities to intervene, sometimes to resist, to organize, to legislate, to plan, and to design”. (William Mitchell 1995, 5)

11.1 *Prospects for the future: A strategic perspective for a Mediatory City*

The concept of the Urban Mediator illustrates a possible future for cities: one that is based on the democratic and civic goals of engaging people in shaping their environment. The interweaving of new technologies and urban space opens up new possibilities of interaction between people and their cities, both on the physical level as well as on the political one. It is time for cities to address this new area of possibilities and engage in developing new strategic frameworks for new collaborative hybrid developments, for the good of urban environments and urban life.

Urban Mediator also illustrates the possibility for developing frameworks for new digital technologies that are based on civic goals and the public good. This possibility can open the way for strategic visions for both cities and technological development. Such visions could bring the focus that is currently lacking in the scattered explorations of design and intervention in urban hybrid space.

11.1.1 *Beyond mere consumption of new technologies*

Cities as political entities have different relationships to new technologies and the possibilities it might bring. In Finland, Helsinki is indeed actively working towards the goals it set for itself in its strategy for information technologies

(Helsinki City Office 2002). These include for example developing channels for interaction and discussion about city issues. Even though Helsinki's strategy proposes a multi-channel mode (monikanavamalli) that would give the citizens different possibilities to access and use the services offered by the city (by visiting the city offices - by using Internet services – by using phone services), it seems reluctant to risk itself at considering new technological possibilities that have yet to prove themselves (Interview with Leila Oravisto - 17.01.2005). There is a fear of possible unwanted expenses that might be associated with innovation.

I believe that one major problem is that many cities, like Helsinki, are still considering new technologies as possible ready-made packages that can be purchased and implemented. One example is the Helsinki travel card that was adopted by the city of Helsinki in 2002: the smartcard technology was adopted through this new product and was imposed on unenthusiastic citizens³⁰.

It is important to keep real local needs in mind when developing technologies for the city. In that sense, I believe that cities *should become involved in the process of developing technologies or services based on technologies*, and not be seduced by products or partnerships that might ignore the local needs. In their article on integrating telecommunications into urban planning published in the Cybercities reader, Stephen Graham and Simon Marvin (2004) mention that *“developing more nuanced and sophisticated concepts of the potential roles of telecommunications in urban strategy will require policy-makers to look more critically at the role of technology in contemporary urban strategies”*. New technologies should neither be seen as miracle solutions for urban problems nor should they be ignored in urban development: it is important to know what potential they might have for developing better cities, and it is important to know that this potential can be developed.

11.1.2 *Developing new alliances*

Partnerships between technology developers and the state exist. This is the case in Finland, through its national information society strategy. The goals of these partnerships are to enhance the democratic potential of the welfare

³⁰ Many people wrote complaints to Helsingin Sanomat readers' pages.

state. These partnerships have happened, among others, in the areas of healthcare, justice, defense, education and even local government. The emphasis has been on developing secure and reliable services for both citizens and employees of the public sector.

Technology development companies are currently investing in developing digital technologies that address urban space. They have not yet approached cities as potential partners for developing these technologies. The concept for Urban Mediator shows that cities could play a role in developing the frameworks needed for these new technologies to involve and serve citizens. Developing partnerships between technological development and cities might lead the way to better urban environments and address their growing combinations of the digital and physical dimension.

11.1.3 Towards a collaborative endeavor

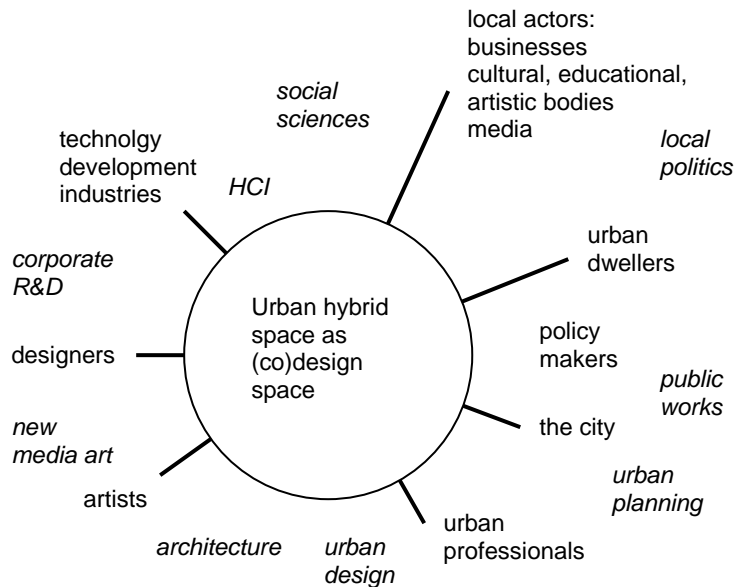
Urban Mediator has also brought forth the different possible stakeholders that could be involved in local hybrid endeavors, other than the city and technology developers: urban professionals, local businesses, local cultural, educational and artistic bodies, local media and urban dwellers. It is important to consider hybrid space as a space for design that could be developed through collaborations between these stakeholders.

It isn't enough to bring all the stakeholders together around a same table. Each has its own perspectives, its own agendas and its own jargon. There is need to design the collaboration itself, and with it the common language that will assure communication between the parties (Botero et al. 2003). Designing the collaboration is one of the roles of the designers involved in it.

Such a collaborative project could be lead by multidisciplinary research groups, coming from both academic and corporate worlds. The goal of such research projects would be to come up with pilot projects in urban areas that would explore hybrid opportunities.

Such projects wouldn't need to start from scratch, but would rather bring together different existing projects currently engaged in promoting public participation in urban areas as well as more personal expressions of interest towards the city. Collaborative work could start with workshops involving the

different stakeholders. The work could even extend into the urban space itself, involving people on the streets.



Such projects could in themselves become the mediators that bring together different stakeholders and offer a platform for investigating and developing a city of the future that would be representative of the democratic aspect of information society and that would have the capability to develop through its interaction with its own citizens.

11.2 Reflections

I want to end this thesis with some personal reflections on the process I have gone through and the ideas I have proposed.

It has not been easy to work at the boundaries of disciplines, in a design and investigation space that is not yet clearly established. The ARKI research group provided me with a framework that encouraged me to take an approach based on understanding people's everyday practices and working with and for them. I believe this was a very relevant focus point for my work. It enabled me to concentrate on the new locus of new technologies in urban space rather than on the technologies themselves. It also gave me the opportunity to

address urban space from the perspective of people and the street rather than the more traditional top-down perspective of urban design and planning.

This approach also presented difficulties. I wasn't working with a predetermined solution in mind, related to a specific design field. Not having a concrete example of what I wanted to come up with made it difficult to engage with others during the initial phases of the design process. I believe I have conducted interviews with city officials and members of the city planning too early, when I hadn't yet developed the Urban Mediator concept. This hindered the possibility for more interactive discussions with them.

The concept of the Urban Mediator did help me at the later stages of the thesis to present my ideas to others. I used it as a tool for discussion during interviews and it made me realize the importance of carefully choosing the visual material I was presenting and making my position clear: I wasn't selling interactive boards nor was I aiming for an artistic experiment.

I believe that this thesis and the process I went through gave me the confidence and the vision I was lacking to propose an actual project that stands a chance to be financed. I now have research and design material that I can use to approach both city officials and technological companies and propose concrete ideas for collaborative investigations. I hope I can now move in this direction and further investigate the area at the boundaries of digital and physical urban space.

Glossary

GSM network: Global System for Mobile Communications – a mobile telephony technical standard. The world's first GSM network was launched in 1991 by Finland's Radiolinja.

WLAN: Wireless Local Area Networks - different IEEE (Institute of Electrical and Electronics Engineers) specifications include 802.11a, b, g and h.

WiFi: Wireless Fidelity - a generic name for the various implementations of 802.11 wireless networking standards.

Bluetooth: Bluetooth technology enables short-range wireless connections between devices. It lets these devices talk to each other when they come in range (usually within 10 meters).

RFID: Radio Frequency Identity – inexpensive microchips with short range radio broadcast capabilities

GPS: Global Positioning System - started as the USA's military satellite system for determining location but is also available to civilians.

GIS: Geographic Information System

Note: these definitions have been gathered from various sources: (Rheingold 2002), Urban Tapestries website, Wikipedia

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