Mediated Social Serendipity

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May 2007

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“Expect the unpredictable. Predict the unexpectable”

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Introduction

ABSTRACT

This master thesis in industrial design is a research- and innovation-project in the vast area of the interaction design of mediated communication. This thesis describe mobile-phone services and applications that enable users to "stumble into" friends, despite being apart physically. Four concept-categories for social serendipitous mobile-phone experiences were developed.

What was done?

The thesis is based on interviews, workshops and focus-groups as well as surveying existing research in areas such as computer-supported collaborative work, locative technologies, sensor-networks, ubiquitous computing, urbanism and social sciences. Based on the knowledge gained from the research, a set of concrete and simple idea-cards was developed. The idea-cards where then evaluated by different people with diverse backgrounds and expertise. The final product of this project is identifying and describing four different categories of concepts for future mobile phone experiences.

What this is not

The concepts described in this thesis differ from dating-and-matchmaking devices similar to the 'LoveGetty'. Nor is this about developing new versions of Intel Research's Jabberwocky (Paulos and Goodman, 2004). There may be some resemblance with the shared micro content community of Jaiku (Hall 2006), but differs fundamentally by way of use. The concept also differ from instant messaging services by *not* requiring an initiation from the user in order to trigger communication.

Who could be interested in this?

Developers of mobile-phone services, game developers, anthropologists, interaction designers, user experience designers, industrial designers, urbanists, architects, gadgeteers and owners of mobile phones.

Keywords

Experience design, interaction design, social relations, social behavior, sensor-data, mobile-phones, artificial intelligence, ideation, R&D, ubiquitous technologies.

INTERACTION DESIGN

> *"The discipline of defining and creating the behavior of technical, biological, environmental and organizational systems [in relation to the users' cognitive-, social and physical abilities]. Examples of these systems are software, [physical] products, […] environments, services, […], and even organizations themselves. Interaction design defines the behavior (the "interaction") of an artifact or system in response to its users over time".*
>
> *-- (from Wikipedia. May, 2007)*

A brief history of Human Computer Interaction

Interaction design deal with intuitiveness, handling and experience of every kind of object or service that humans use, but this project will focus on the part of interaction design concerned with the interaction with computers and similar devices.

When looking back we can identify several distinct stages of evolution when it comes to interaction with computers. From the first known computational 'machines'; the abacus, 2400 years BC, to the monstrous 'difference engines' of Charles Babbage of the 19th century, the mode of interaction was *mechanical*.

During the 20th century however, the evolution of human computer interaction goes through several stages. After *mechanical* interaction we got *electrical* interaction with electron valves and *symbolic* interaction via punch-cards, but the level of "interactivity" could be discussed as the computers had limited conversational capabilities. The handling also required thorough knowledge of electrical design and manipulation of abstract languages. The first big leap in the level of interactivity came when computers could be manipulated with text. The DOS operating system is an example of a *textual* mode of human computer interaction that enabled the user to have a dialogue with a machine through written text. Looking at these stages of evolution is a great help in understanding where we are now and where we are likely to go next. (Dourish, 2001).

Present and future directions

During these stages in evolution, the use of human skills and abilities as a part of the interaction increase. The graphical user interface utilize our spatial skills, pattern recognition, and muscle memory when we manipulate it with mouse and keyboard. The graphical user interface have been the dominant mode of interaction since the early nineteen-eighties, and it still is. There

are however signs of the next evolutional steps in human computer interaction; tangible and social. We see new modes of interaction being developed in computer-gaming and play (Arnall, 2007), but also in the emerging social use of the Internet and in the use of communication tools as mobile-phones. The evolution points to human computer interactions that not only use intellectual skills, but also social and collaborative abilities together with our physical senses.

SOCIAL SERENDIPITY

The project has it's starting point in the hypothesis that repeated unintentional encounters with familiar people nourish social relations in an unique way. The idea of accidental mediated encounters emerged during another project by the author, where the aim was to develop new processes in professional movie-production using mediated collaboration tools.

Remote Relations

Today it is quite common to have friends, family or colleagues spread around the world. Humans are social creatures that organize themselves in social networks, often eager to build and keep relationships. Sometimes we manage to nourish our relationships well, but most people have experienced that over time emails and phone-calls get less frequent and relationships fade. Nowadays we use email, instant messaging, audio- or video conferencing and phone, yet, when it comes to building relationships - any form of mediated communication can not beat meeting face to face in real life. The missing elements is sometimes referred to as "the social-technological gap" - the divide between what we know we must support socially and what we can support technically.

Accidental Mediation

But what if you could stumble into someone while being apart? Could the "stumbling-into" be mediated, still accidental, but occurring when in different physical space. Could it even be possible to create some kind of accidental interaction between people independent of time?

All communication-tools we use today differs from the accidental meetings since the initiation of the communication is intentional. An accidental meeting can to a certain extent be intended.

DESIGN PROCESS

This report is a result of a four-step design-process, starting with research followed by ideation, concept development and evidencing. This report is structured the same way as the project was conducted. The project was completed during a period of four months, from January to May 2007.

Research

Research was an essential part of this project. The primary research is my own original research consisting of interviews, workshops and discussions. The secondary research is surveying existing research-papers, web-articles, recorded lectures and literature in areas such as computer-mediated communication, ubiquitous computing, computer-supported collaborative work, user interfaces, social anthropology, urbanism, jazz-improvisation, computer-games and experience design.

The primary- and the secondary research was conducted in parallel, but I have chosen to separate the two in the report for structural reasons.

Ideation

A set of ideas was developed based on the research. The ideas was presented as idea-cards, evaluated and rated. The ideas with highest rating gave four categories of concepts for future mobile-, locative and social services for mobile phones. These four directions are the result of this project.

My Goal

Prior to planning this project I had three essential personal goals.. First I wanted to use this opportunity to do something experimental and explorative in order to evolve as a designer. Second, I wanted the project to be original and innovative. Third, I wanted to establish a network of people outside Oslo School of Architecture and Design in order to get connections that could potentially be steppingstones to a career. Preferably in the area of research and development.

I have developed concepts in an area where I have been able to find some related, but no similar previous work. I have evolved as a person as well as a designer by working with questions I knew very little about. I completed this project as an Intern at the Interactive Institute Mobility Studio in Stockholm, and also collaborated with master-students at the Royal Institute of Technology's Architecture & Urban Research Laboratory. This have given me valuable contacts and some good friends.

I have accomplished all three of my initial goals.

Understanding People; Primary Research

The primary research is my own original research consisting of a web survey, workshops and discussions. The primary- and the secondary research was conducted in parallel, but I have chosen to separate the two in the report for structural reasons.

WEB-SURVEY

Early in the process I sent out a web-questionnaire regarding different experiences and behaviors in real-life and in a 'mediated life' via mobile-phones and the Internet.

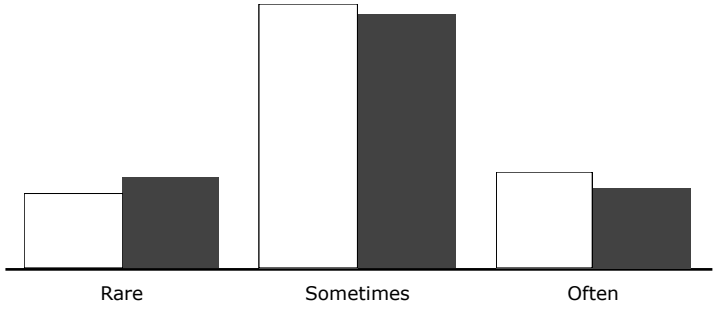
My main goal was to find out more about people's notion about where, when and how often they unexpectedly stumble into someone they know. Second, I wanted to know more about their use of mediated communication-tools and media when keeping in touch with friends and families. Facsimiles of the web-questionnaire and written answers can be found in the appendix.

The questionnaire consisted of 28 questions and was e-mailed to a total of approximately 600 individuals at Oslo School of Architecture and Design, Swedish Institute of Computer Science, The Interactive Institute, Royal Institute of Technology's Architecture & urban Research Lab and selected friends of mine. I'm very happy with the response to my web-survey as I received 190 answers. Many respondents wrote long and qualitatively valuable answers in the text-boxes.

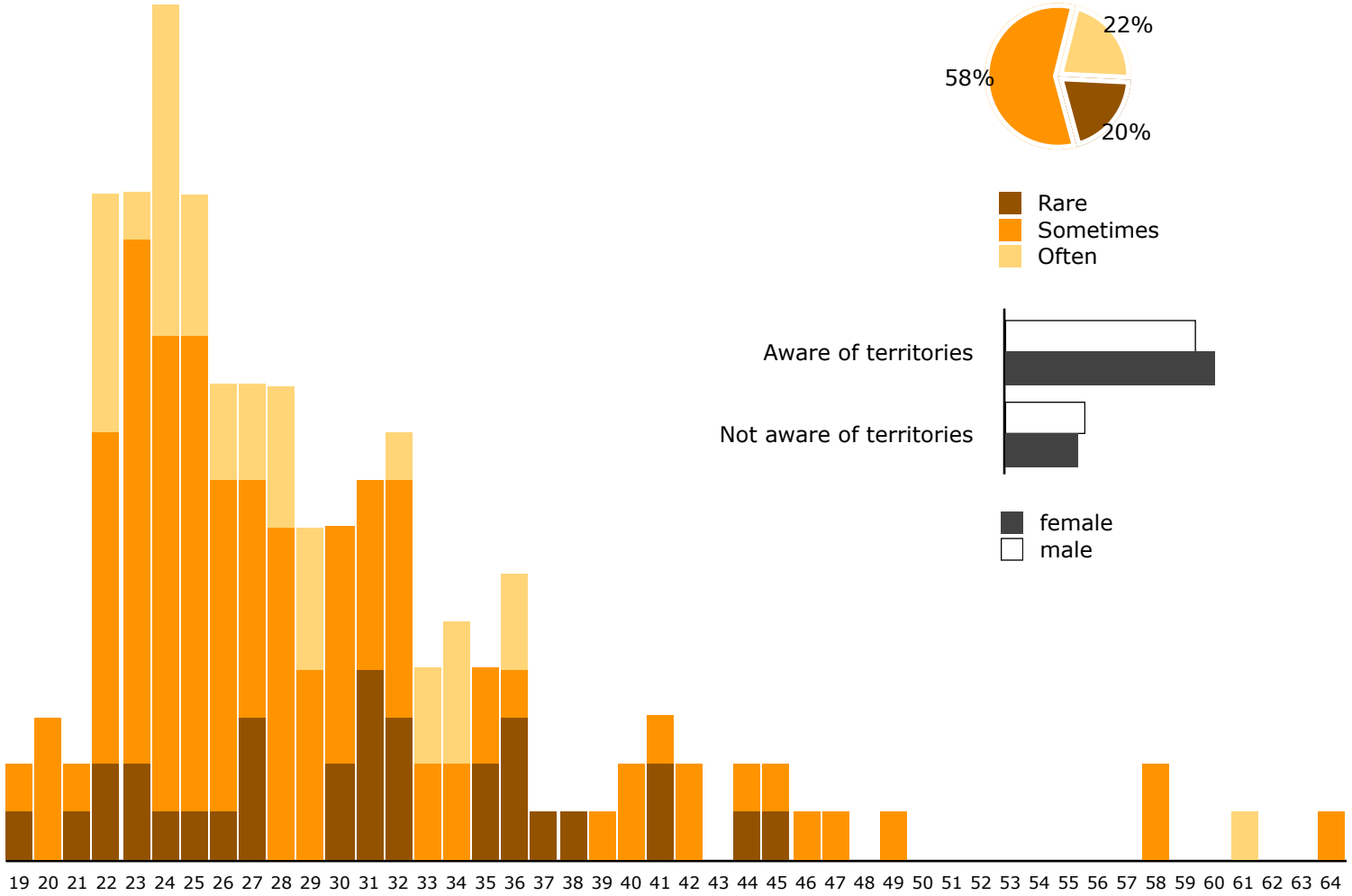
The majority of the respondents were scandinavian citizens between the age of 20 and 40, the full range was 19-64. The distribution between sexes was 50/50. As many as 350 of the respondents were design- and architecture students.

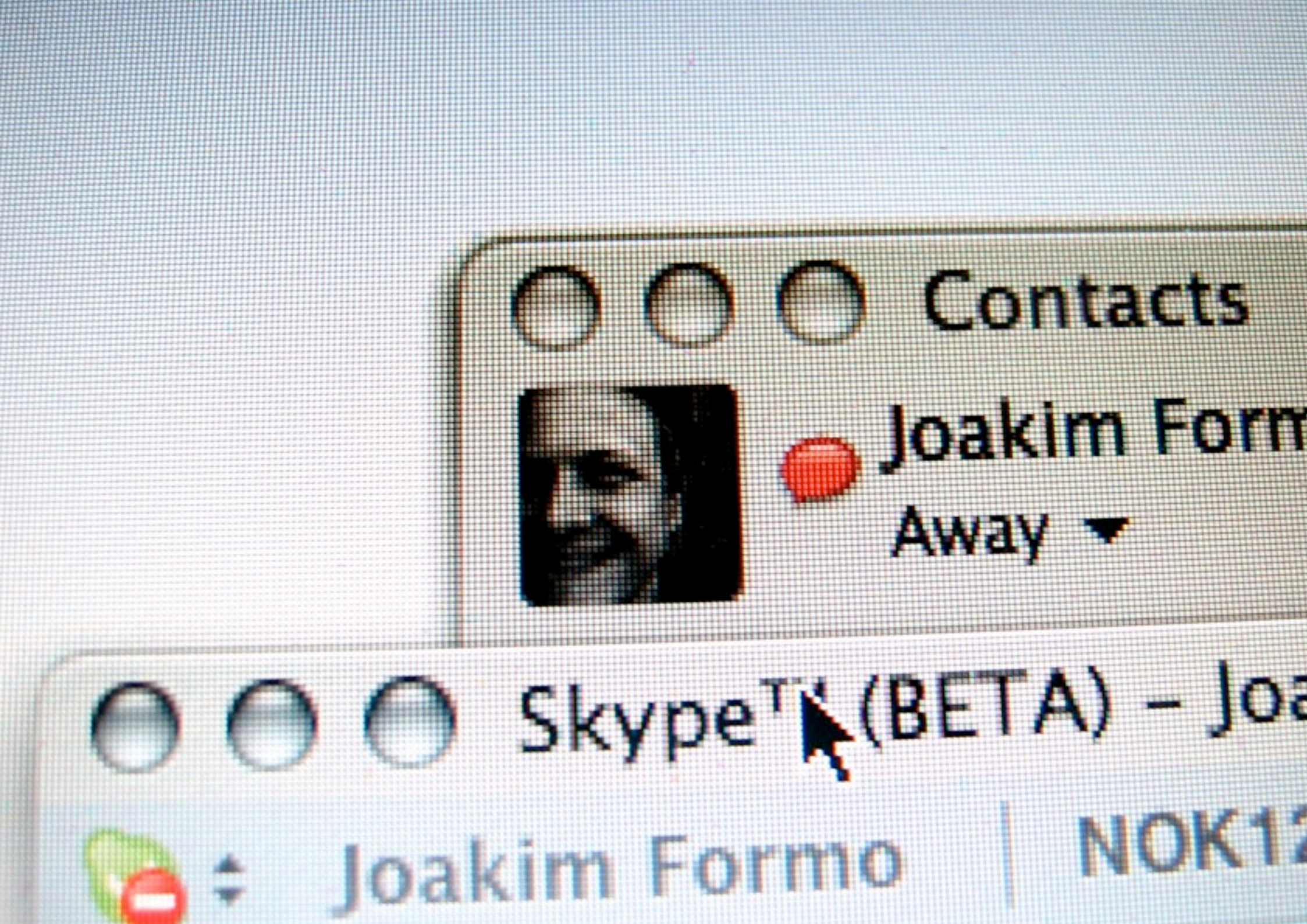
Unexpectedly bumping into

On figure number 1, the distribution of age of the respondents and their subjective estimates of how often they stumble into friends unexpectedly. The staples are divided into "rarely", "sometimes" and "often".



When comparing gender and frequency of accidental meetings, we can see that the results for males or females are very similar. Also the awareness of certain territories where accidental meetings are more likely show no significant difference between female and male respondents. On the charts, female are white, male black.


22%
58%
20%
Rare
Sometimes
Often
Aware of territories
Not aware of territories
female
male
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
Respondents and Age


Contacts
Joakim Form
Away
Skype™ (BETA) - Joa
Joakim Formo
NOK12

Online presence and privacy

About 70% of my respondents are what we could call regular users of instant messaging as they are online a couple of times every week or more frequently. Nearly one out of four respondents say they are constantly online. 19% do not use instant messaging at all.

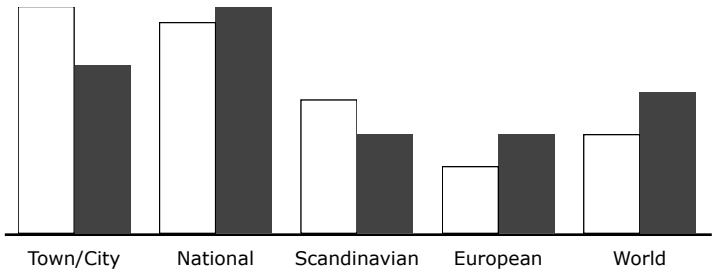
Empirical evidence had given me reason to believe that many users of instant messaging services have the habit of being online, but with their status set to “Away” by default. I wanted to gather some information about this apparent dilemma of wanting both presence, awareness and privacy, and I found that 39% of my respondents have “Away”, “Not Available” or “Do Not Disturb” as their default status-message when online. Many respondents explain the reason for this habit; basically everyone want to see others and if they are available, while at the same time preventing others from contacting themselves.

Another question about personal borders between private and public concerned the use of location tracking services. The rightmost pie-chart on page 31 show that 11% would consider using some sort of location service and share their location to friends while 2% already do. Just above half of the respondents are not willing to enable others to see their physical locations.

Local and social belonging

The question about where people feel they belong - ranging from ‘home town citizens’ to ‘global citizens’ - show no significant difference between male and female. Perhaps a tendency of female respondents considering themselves more local, and males in the other hand a slightly more globally oriented. On the other hand, this could also be showing that men tend to be a bit more ambitious when describing themselves.

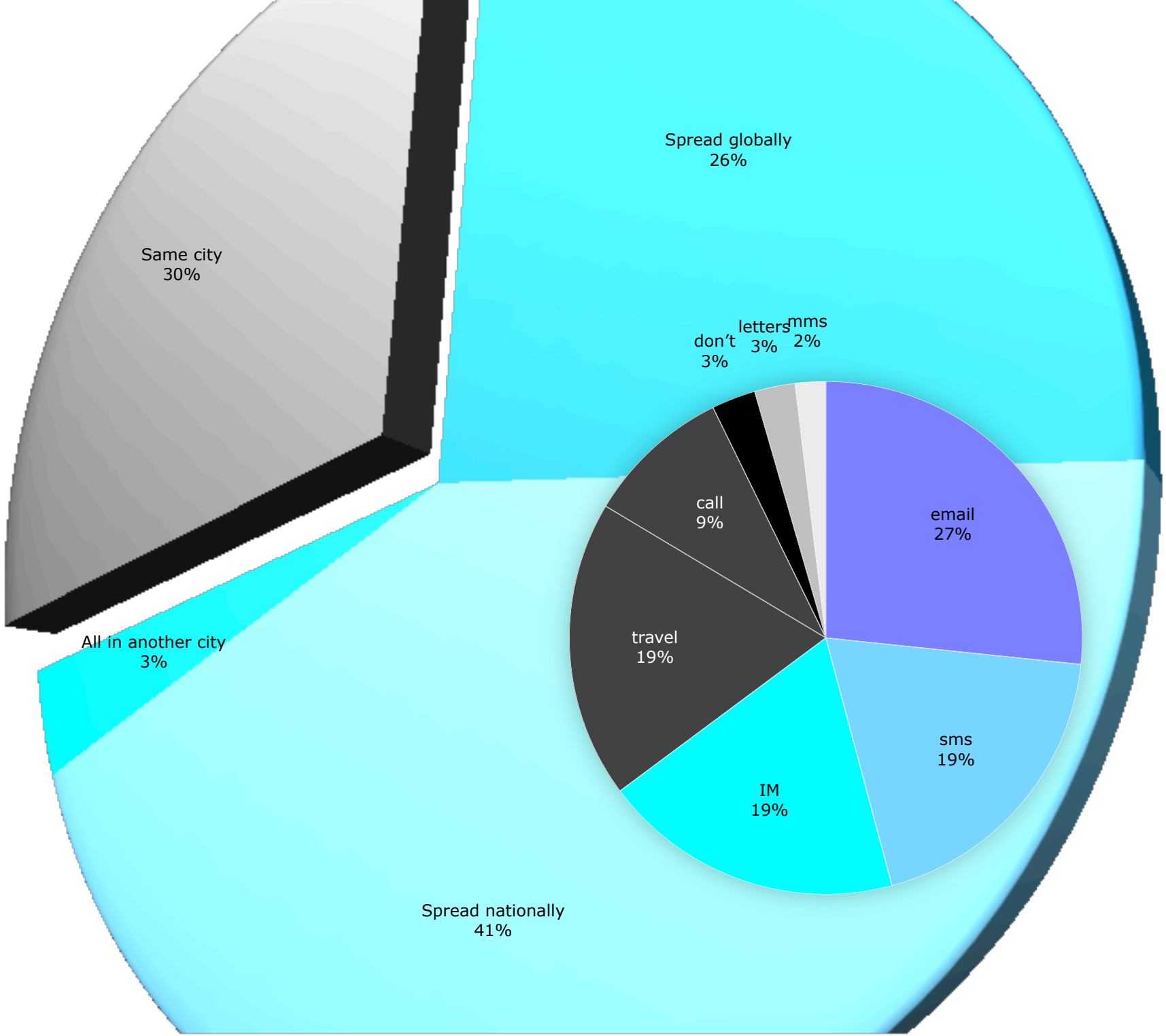
70% answered that the majority of their friends live elsewhere. Only 30% have most of their friends in the same city as they currently live in. I do not believe this is representative for the population s a whole. The respondents are mainly students at university level and researchers.



Mediated Communication

The dominant mode of communication for keeping in touch with friends and families are textual and asynchronous. The question was a multi-option question, i.e. respondents could give several answers of what media they use. When illustrating the answers as a pie-chart, 100% in this case could be seen as the total ‘bandwidth’ of keeping in touch with friends.

Looking at the answers we see that email, text messages and instant messaging count for 65% of the total ‘bandwidth’.


Spread globally
26%
Same city
30%
don't
3%
letters
3%
mms
2%
call
9%
email
27%
travel
19%
sms
19%
IM
19%
All in another city
3%
Spread nationally
41%

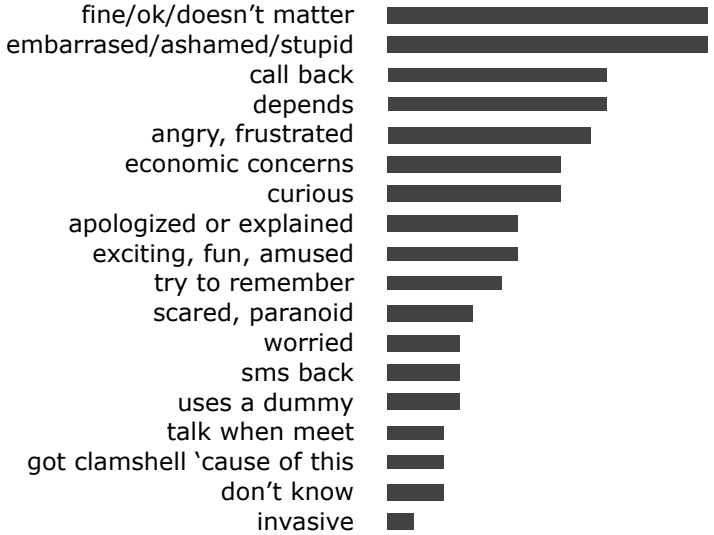
Interestingly, phone-calls are only 9%, considerably less than people say they travel to visit each-other. MMS-messages are hardly used for this purpose.

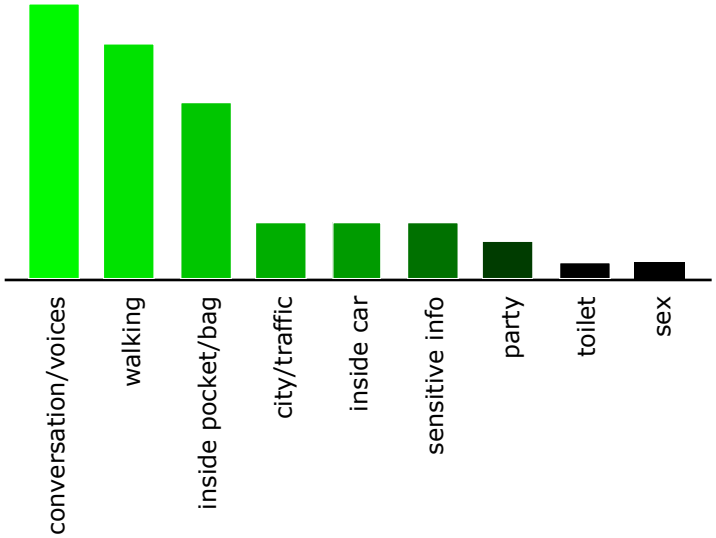
Eavesdropping and pocket-calls

One of the most interesting findings from the web-survey is that as many as 93% have experienced accidental phone-calls to their phone from someone that doesn't know that their phone have dialed and connected. This finding reveal a major general failure of industrial design, throughout all brands. Many respondents say the have placed dummy-numbers in their contact-lists beginning with the letter A and the last letter of the alphabet (Z, Å or Ö depending on language), or some have even switched to clam-shell models solely because of this problem. Evidently the problem is that many people regard key-locks as bad for usability, and they choose not to use it.

When getting a "pocketcall", most people (78%) just terminate the call. Many would also try to get the attention of the caller by shouting.

16% of the respondents think this is fun and would normally listen for interesting information. Many of these have also written rich answers about what happened, what they could hear, in what context and if the knew the caller or not. From the stories people have written I've made an extract some of the most frequent



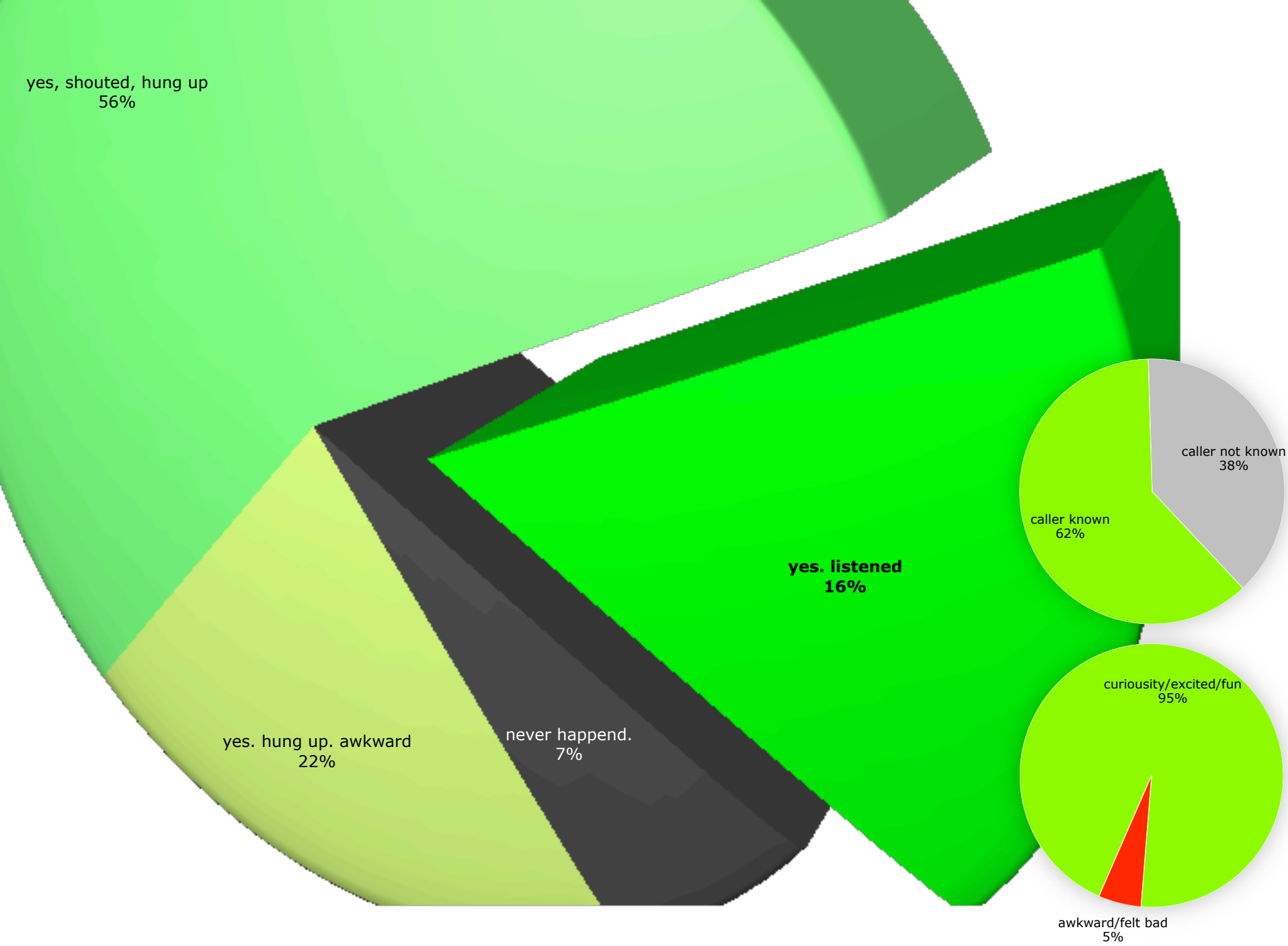


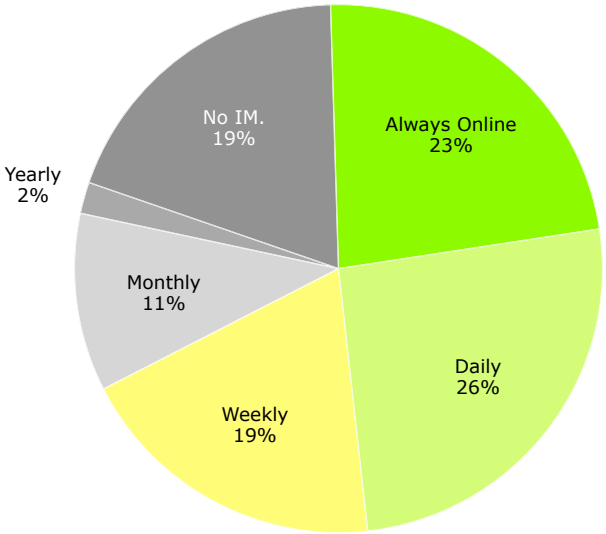
descriptions of what they heard..

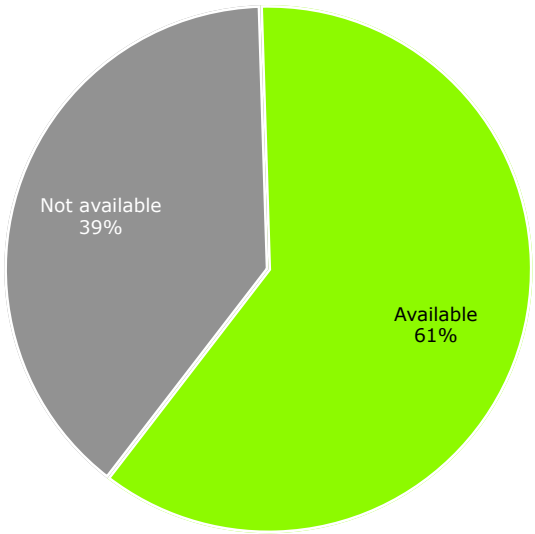
From the descriptions of what the respondents described hearing, I have also tried to interpret approximately how many of the callers that where known to the receiver.

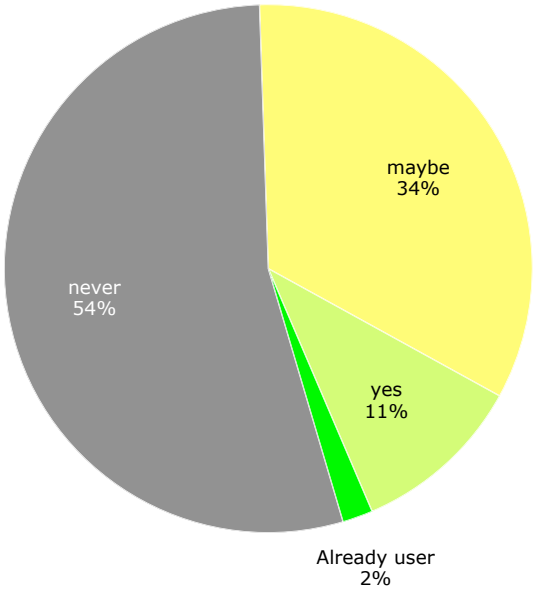
The same way I have also tried to interpret how many thought the experience of remote eavesdropping was positive or negative. In the opposite scenario, when asked about their reaction if experiencing that their own phone had accidentally called someone, the reactions are a bit more mixed. I have counted and roughly categorized the adjectives used in the answers, and one can see that the amount of reactions described as ‘embarrassed’, ‘guilty’ and ‘feeling stupid’ is about as frequent as the ‘fine’, ‘ok’ and ‘doesn’t care’-answers.

The reactions have different bias dependent of context. While 29% of the stories contained definitive negative descriptions, the 17% of the stories that described concern could in some cases also be interpreted as excitement. About half of the expressions of concern was about what the other person might have heard, the other half about the cost of the wasted call. 14% would want to respond back to the person they had accidentally called, and explain or excuse what had happened. 24% of the descriptions was about positive reactions, curiousness, fun, excitement or just explicit statements about not having anything against being listened to for a while.


yes, shouted, hung up
56%
yes. hung up. awkward
22%
never happend.
7%
yes. listened
16%
caller not known
38%
caller known
62%
curiousity/excited/fun
95%
awkward/felt bad
5%


No IM.
19%
Always Online
23%
Yearly
2%
Monthly
11%
Daily
26%
Weekly
19%


Not available
39%
Available
61%


maybe
34%
never
54%
yes
11%
Already user
2%

5% was about taking precautionary actions, either by placing dummy-numbers at the letter “A” in the phonebook, or changing phone to a clamshell-type of phone in order to avoid outgoing pocketcalls.

The essence of why eavesdropping via pocket-calls are considered interesting by some, is that they create feelings of *curiosity, secretiveness and uncertainty*.

In addition to giving some clues about *why* people listened to pocketcalls, the web-interview also gave some information about *what* they think they heard. Many have also described *where* the call sounded like it came from, and *how* they think it happened.

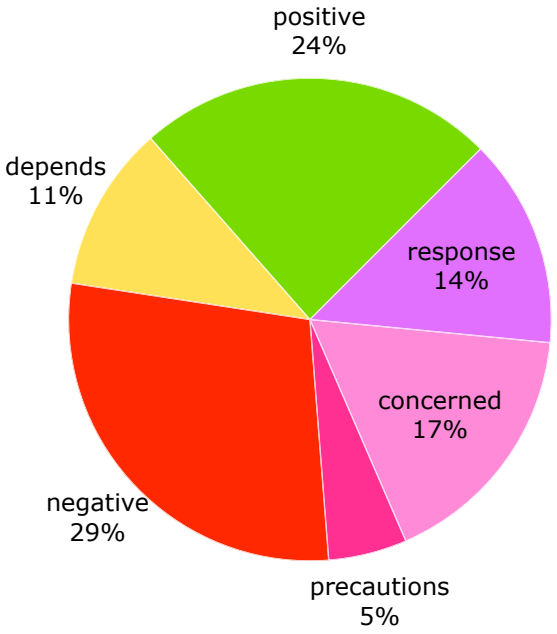
The fact that people are less reluctant to eavesdrop on others than they are to share their own private sphere is hardly a surprising discovery. The interesting part is which different contexts would change this.

Conclusions

Seven out of ten are aware that they have specific territories apart from school or workplace where the odds of accidentally meeting someone they know is greater.

Massive general design failure as 93% have received pocket-calls! Some think eavesdropping by mobile phone is fun, but the majority of pocket-calls tend to be just boring ambient noise.

Many wish to share presence, be aware of others, but at the same time not be available. Two of five respondents use ‘away’ as their default status-message when online with an instant messaging services.




how
he doesn't know how to put on the automatic key- lock
got some great news
forgot to put the keylock on
he seemed to object to using the key-lock
footsteps on hard surface
figure what's going on
went to the toilet, then
walking or some kind of physical activity
Curiosity
I guess the phone call was triggered by movement
I listen out of curiosity
could guess that she was walking
person who had the phone was not the owner
I find it entertaining
interesting to be inside someone's pocket
two males where talking
why
what
kinda exiting, forbidden
Sydney
I am curious about what he is up to
sounds of other people's voices passing by
someone walking
Not very nice of me but fun!
curious what the person was doing
I might use that to crack a joke later
in a different city
Heard two voices
a city, traffic
scratching noises (in pocket)
I was only curious
sat down in his car, switched the radio on and drove off
sounds from the city
walking on the street or driving his car and talking to someone
cars driving by, sirens from a police car
Sounded like I was in someone's pocket
sounded like a bar
where

WORKSHOP

As a part of the research about accidental encounters I held a workshop at the Royal Institute of Technology in Stockholm with four master-students at the Architecture & Urban Research Lab.

Participants and Method

The participants had only normal user-experience with mobile-phone technology and use, but they had however experience of working with issues concerning human behavior in relation to physical spaces. The workshop was based on the brainstorming-technique “Five Levels of Why” in order to quickly get down to a deep level of reasoning about a given subject.

The workshop was facilitated by myself, and I started by introducing some of my thoughts about accidental face-to-face encounters versus “mediated-stumbling-into”. My aim was to get some in-depth thoughts about positive sides of accidental meetings.

The question we discussed at the workshop was simply “Why is stumbling into someone a good ting? The result was some thoughts about different kinds of accidental meetings.

Stumbling-into Online

A certain way some people use instant messaging could perhaps count as stumbling into. For example someone who does not own a computer, and visits web-cafés from time to time would “pop in” on an instant message service for a couple of minutes, just to have a look if anyone are online. If someone is online, they say hi and chat for a short while and then get offline again. The user is not online a lot, but when he or she is online, the communication is focused. This would be more like if someone dropped by a location where many friends are known to hang out. The accidentalness could be discussed, and one of the participants would still have to take *initiative* for the communication to happen.

Triangulation

The term is used in urban planning when designing public spaces. Social interaction when present in online communities, in Massive Multiplayer Online Role Play Games, or situations of close-range identity-broadcasting (“Toothing” or wifi-scanning) could also be seen as a sort of triangulation because the media itself could act as a social object.

Accidental indirect awareness about presence could be both pushed presence and triangulation at the same time. This was the conclusion after discussing technology that can detect stealth airplanes that are invisible on radar by measuring changes in

KÄNNSLA AV GEMENSKAP

FÖR Å FÅ ET FUNKERENDE SAMFUNN

SAMHØRIGHET

DET ER ET SAVN

NÆRHET

BLI SETT

ANERKJENNELSE

SOSIALT = POSITIVT

GOD SAMVITTIGHET

GLÄDJE

SOSIALT KITT

TRYGGHET

"HOME-NESS"

TERRITORIUM (REVIR)

FRED

AVBRØTT/ UPRAKNANDE

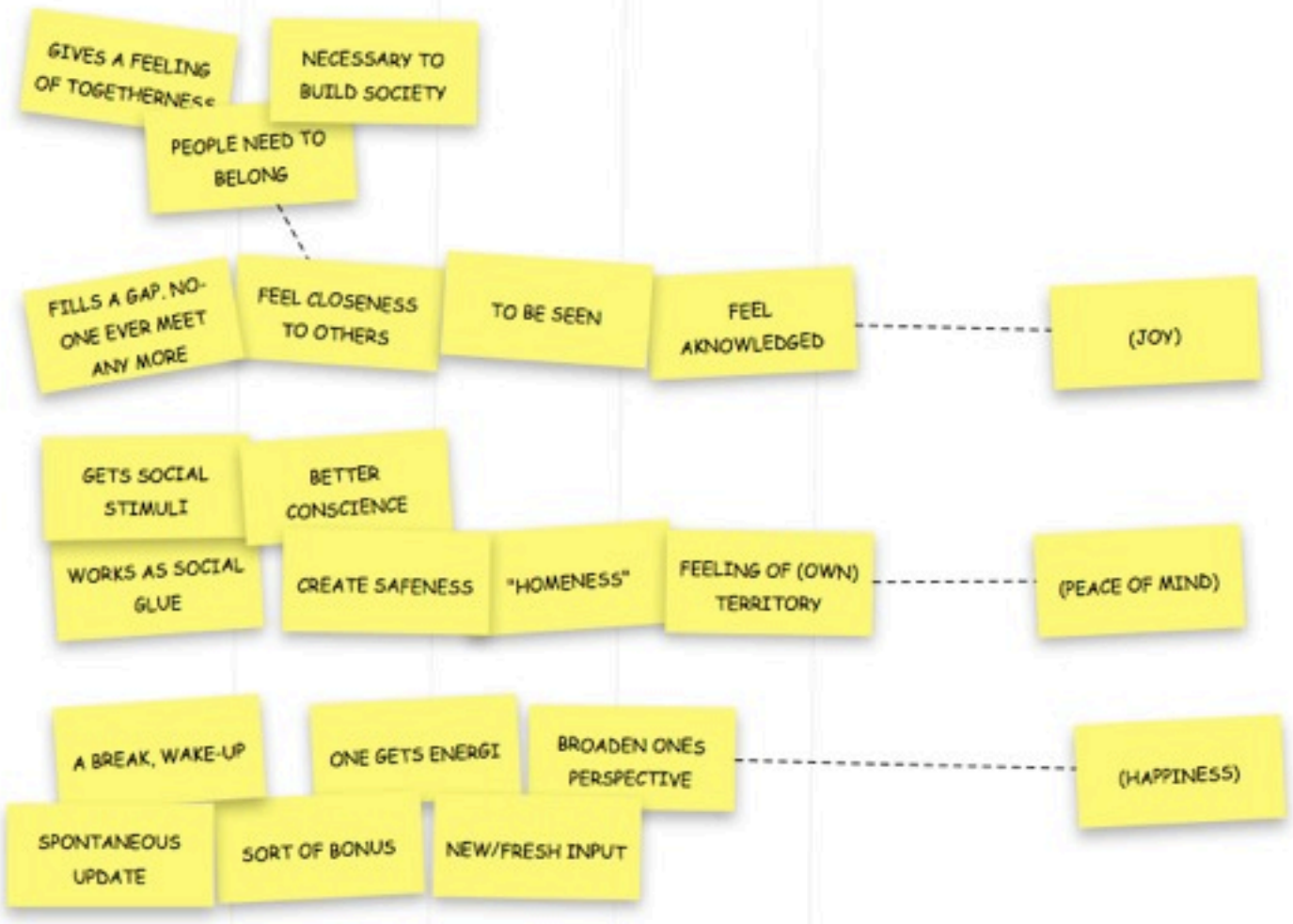
ENERGI

PERSPEKTIV

LYKKE...

SPONTANT UPPDATERAD

BONUS


GIVES A FEELING OF TOGETHERNESS
NECESSARY TO BUILD SOCIETY
PEOPLE NEED TO BELONG
FILLS A GAP, NO-ONE EVER MEET ANY MORE
FEEL CLOSENESS TO OTHERS
TO BE SEEN
FEEL AKNOWLEDGED
(JOY)
GETS SOCIAL STIMULI
BETTER CONSCIENCE
WORKS AS SOCIAL GLUE
CREATE SAFENESS
"HOMENESS"
FEELING OF (OWN) TERRITORY
(PEACE OF MIND)
A BREAK, WAKE-UP
ONE GETS ENERGI
BROADEN ONES PERSPECTIVE
(HAPPINESS)
SPONTANEOUS UPDATE
SORT OF BONUS
NEW/FRESH INPUT

GSM-signals. Something that reveal it's presence only when creating a change in another object or media. An everyday analog to this concerning people and places could be when you know someone is at home because the car is in the driveway. Interpretation is important to this form of triangulated pushed presence.

When approaching someone in real life, you may recognize familiar persons in 50 meters or so (sometimes more), you'll say hi in approximately 4-5 meters, and depending on how good you know each-other you'll stop at about 1 meters distance, or alternatively don't stop. This gradual "ritual" of approaching each-other does not exist in the digital world, which is literally digital in an on/off way, maybe with some exceptions in VR-worlds like SecondLife, but still it's much harder to gradually recognize a graphical avatar than a human being. This gradual recognition is also important for privacy, to play the game of not seeing someone and by that choose not to meet someone, in a socially legitimate way.

Context

The concept of a meeting-place or territory is definitively important, even if it is merely presented as a list, it could still be considered a "place" because individuals have presence on it.

We also discussed different territories of stumbling into someone, in terms of how the space dictates tacit rules about how close an encounter should be. An example would be when stumbling into someone familiar (not close friend) when boarding an airplane, the chances are that you would at least consider sitting together. When stumbling into someone on a train, the "sitting-together"-pressure is a little less committing, on a bus or subway it's ok to sit separate. Most people I've discussed this with, agree that it is like this, even if logically it could very well have been the opposite - the bus or subway, being the most limited in time and therefore less committing should be most likely to have co-sitting as a result.

Summary

Accidental encounters are an important part of human social relations. They are potential sources of 'energy', they establish 'ownership' of places, and generate feelings of belonging and acknowledgment.

Nowadays, at least in scandinavia, people unconsciously suffer from the absence of caring and attention of fellow human beings. People need to be seen and to be acknowledged. Getting more of this missing part of many peoples lives may lead to happiness and a more joyful life. Spontaneous encounters are social glue, which again could produce profound feelings of serenity, acknowledgment and belonging.

DISCOURSE

During the research I started drafting some concrete ideas on idea-cards. I used these cards as a base for discussion with different people in order to get other points of view. Here are a couple of thoughts.

Breaking Ice

A core function of all the ideas is to act as a kind of ice-breaker, something that initiate a connection of some sort. I discussed some of the idea-cards with a friend of mine, Filipe Balestra. He has a background in architecture, live in Sweden but he is originally from Brazil and grew up in Portugal. He believe that most of the ideas may not work in many cultures where the threshold for communication and involvement with other people is lower. The concepts seem to be valid in cultures where social interaction is more aloof, as in Scandinavia.

Pervasive awareness systems supporting social use

During the secondary research I came across a research-project called ASTRA, short for Awareness-services and Systems towards Theory and ReAlisation. ASTRA is a collaboration between TU/e, NTNU, Telenor, Philips Research and CTI and aims to “define a framework for supporting the conception and the design of Pervasive Awareness systems, specifically those that are intended to support social relationships. I went to Trondheim to meet Otto H Nygård, a researcher at the ASTRA-project. He explained that one of their main goals is to develop a theory to guide the design and evaluation of pervasive awareness systems supporting social use. Second, they aim to develop a service oriented architecture, tools and applications that support communities to create, adapt and appropriate Pervasive Awareness systems (Markopoulos, 2003).

ASTRA is about making a platform for pervasive computing. A system for providing user-customizable services. Even enable combinations of services. One of the focus-areas is usability; how to make it easy for anyone to use, combine, create and publish services. This is not necessarily about mobile phones. Emerging future scenarios where everything gets connected could be with or without a physical representation. Ambient intelligent systems. Privacy is another important area.

Written scenarios and focus-groups are used to evaluate. ASTRA concentrate on the services made possible with pervasive socially intelligent systems. User-defined services, where every user can design services and “deliver” to other users. While my starting-point for this project is more the *experience*, ASTRA in a way starts with the technical possibilities and social implications prior to what I work with.

Understanding People; Secondary Research

The secondary research is based on research-papers, web-articles, recorded lectures and literature in areas such as computer-mediated communication, ubiquitous computing, computer-supported collaborative work, user interfaces, social anthropology, urbanism, jazz-improvisation, computer-games and experience design.

BEHAVIOR

When using mediated communication tools such as computers or phones, it become clear how much of our communication we loose when body-language and facial expressions are not available. Ackerman refers to this as a part of what he call the social-technological gap; the distance between required functionality for supporting social interaction and the actual technological capabilities (Ackerman, 2000).

Triangulation around Social Objects

In the world of social internet sites like flickr, del.icio.us, YouTube etc. the criteria for making a successful service lie in having good social objects for people to gather around. People tend to interact with each other via something. this something could be a common interest, a dog, kids, a mutual friend etc. This social interaction could be called triangulation, because two parts are interacting with each-other via a third, a social object. The object that the triangulation occur around would be the reason for a particular user to make contact with another particular user, and not any random user. The website Flickr is a very good example as photos are the objects that are shared, searched, explored and discovered and social networks and communities develop around the photos. In addition to being just photos, the photos has metadata, links and tags. Amazon have done the same to books. YouTube does it to videos.

At a speech at the Innovate/MSN seminar, December 7th 2006 in Stockholm, Jaiku co-founder Juri Engeström points out his principles for building successful services around social objects. When the social object is defined it is important to define verbs. Ebay have "*buy*" and "*sell*" as their's. Flickr have "*upload*" and *'share'*. When it comes to inviting new users to participate, it's important that the invitations are not in danger of being regarded as spam. One strategy to avoid this would be to turn invitations into gifts; the invitations should be valuable to the receiver. Skype is a good example as an invitation is valuable because it makes it possible for the receiver to talk for free to the giver.

Mobile phones and emerging patterns of use

Traditionally, making phone-calls have been the 'killer-app' of phones, but there are new patterns emerging concerning the mode of the communication. Young people are often using

Young people using communications technology in semi-sync

communications technology in semi-sync, neither quite synchronous nor really asynchronous communication. Text messaging is often used in a semi-sync way and when Jyri Engeström demonstrates Jaiku he describes semi-sync usage patterns (Stone 2006).

User experience designer Leland Rechis at Google divide the mobile users into three categories (Wellman, 2007). First the "Repetitive" user-category are people who are checking for updated information about the same topic over and over again. Users who follow stock-quotes, traffic-information or weather reports fall into this category. Second, the "Bored" users have time to kill and could for example be commuters on public transport and people waiting. Third, the "Urgent"-category users wanting to find something specific fast, like the location of a restaurant or directions to the train station.

My target-users for this project can be found in the two first categories. Either checking updated information via widgets about friends elsewhere, or checking locations for detected activities of some sort. Or also bored and in need for some entertainment, on the bus, waiting for someone at a café etc. I reckon that quite often user-patterns combined of the Repetitive- and the Bored-category would be occurring. It should also be considered that many in the generation now leaving college view phone calls as intrusive and prefer text messaging. They use social websites such as MySpace to keep in touch with a wide set of acquaintances, text messaging is used for both one-to-one and one-to-many communications. The notable though, is that phone-calls are reserved for one's closest friends (Stone 2006).

AWARENESS

When surveying concerns related to issues like presence and privacy, it is relevant to look at the research area of Computer-Supported Collaborative Work (CSCW) as well as instant messaging and computer gaming. When speaking to people in my immediate surroundings, asking about their use of instant messaging systems, it gives a hint that awareness of other people is important. Many admit that they use chat-clients as MSN, AIM, Skype or iChat - not primarily to communicate, but to monitor the online presence of friends and colleagues.

Social Translucency

A big problem with most digital communication systems is that they are generally opaque to social information. This is part of what Ericksson mentions as the social-technological gap, the divide between what we know we must support socially and what we can support technically. Ericsson states that in a face-to-face conversation most of our knowledge about people, most of our

attainment to their interactions, most of our facility for improvising in a changing situation goes unused. In the digital world the default state is socially blindness (Erickson & Kellogg 2000).

In order to communicate non-verbal cues we need social translucency. The term translucent is used rather than transparent because there is a tension between privacy an visibility.

According to Erickson & Kellogg social translucent system should support visibility, awareness, and accountability. They use an analogy with a frosted glass door; it will separate in and out, it will be visible if there are anyone in the room inside, but you can not recognize anyone's identity through it. You would not open the door quickly if you are aware there are people behind it that could be hit by it. Even if you did not care if you slammed the door into someone, you would still not do it because you would be accountable for your action because the people inside will know that you knew it was people behind the door.

A conversation is a fundamentally social process (Goffman 1963) in two ways; the constant mutual awareness of social cues and by peoples need to express their individuality (Kendon 1990). First, speakers are aware of how the listeners are reacting and adjust their communication appropriately: nods and mutual gaze carry one message; facial expressions and interruptions another; body language such as fidgeting still another. Second, conversation is social in that people portray themselves through conversation. People use conversation to advance their personal agendas, project their personal style, take credit and share blame, often with a great deal of subtlety. The social nature of talk is not an undesirable side effect, but rather the heart of it: personal motivations fuel conversation and provide the energy for the considerable intellectual work it takes, whether the conversation in question is banter over morning coffee or about the composition of an academic paper.

So how do we design digital systems in order to support social cues? Erickson and Kellogg see three design approaches to answering this question: the realist, the mimetic, and the abstract. The realistic approach would be video-conferencing. Virtual reality environments where users are represented as avatars is mimetic. The abstract approach involves portraying social information in ways that are not closely tied to their physical analogs. Generating abstract mediated presence would allow participants to "see" one another, and to make inferences about the each others activities.

Pushed Presence

There are many ways to compensate for some of the social blindness (Erickson & Kellogg 2000) in mediated communication. When using instant messaging systems, people communicate

dynamic status by adding status-messages to their name. When speaking in a mobile phone, some of the most frequent introductions to a conversations are “where are you”, “what are you doing?” and “who are you with”.

Pushed presence is a term used for this kind of meta-information generated by users or the system and receive in instant messaging applications about status and activity (Smith & Grubb, 2004). In today’s instant messaging-applications information about state and activities is automatically generated and ‘pushed’ to each-other. In the earliest instant messaging applications, presence-status was as good as non existing. One could only see whether participants were online or offline. Then we got system-generated information about whether people were online, away or idle, and for how long or what music they are listening to. In addition you often find a list of user-set status-messages such as out to lunch, in a meeting, different moods, whereabouts or one could write customized status-messages. Now most users of instant messaging are use to real-time feedback, such as indication about when a user is typing.

The introduction of location- and proximity-awareness enables even richer presence data, and has potentially profound implications for the design of mobile data services.

Inevitably the next step in this evolution is real time system-generated feedback about who you are with, information about where people are about what it is like to be there. An even information about what users are going to do next, where they are going to be and when. Services such as Jaiku and Dopplr already show us a glimpse of how services like this can look like. Even services for user-generated pushed presence appear, such as the website Twitter, where people continuously post short messages about what they are doing, thinking or feeling just now.

Continuous Partial Attention and Information Overload

Keeping attention of several different things simultaneously can be a very functional behavior. However, in large doses, it contributes to a stressful lifestyle. The body starts to operate in a mode similar to when managing a crisis, and this compromise the ability to reflect, to make decisions, and to think creatively (Stone, 2006).

Linda Stone, a former researcher at Apple and Microsoft, argue that “in an ‘always-on world’, continuous partial attention used as our dominant attention mode contributes to a feeling of overwhelm, over-stimulation and to a sense of being unfulfilled. We are so accessible, we're inaccessible. The latest, greatest powerful technologies have contributed to our feeling increasingly powerless” (Stone, 2006).

Although avoiding continuous partial attention is not my main focus in this project, I think it is an important area for future work. Among others, Matt Webb in collaboration with Nokia do experimental work with interfaces that ease the stress of continuous partial attention.

The Paradox of Choice

Continuous partial attention in large doses could be a bad thing. Likewise, the constant demand for *decisions* in our daily lives could also makes us feel tired and generally stressed. In our consumer-society most of us are exposed to a nearly infinite numbers of options every day. Being confronted with all these options require choices to be made all the time, and a massive number of continuous decisions actually raise our blood-pressure (Boyer, 2004).

This is why I regard a the fact that no active initiative, choice or decision have to be made when an unexpected encounter occur - is a distinct positive quality of stumbling into a friend. If we think of tiredness and high blood-pressure as a price to pay for making decisions; the accidental meeting is virtually free. The stumbling-into just happen without effort, it is an experiences of something gratis, a perceived bonus. It may even have a positive physical effect as well as mentally.

The paradox lies in the following; *choice*, *result* and *access* are three things most people would value very high. In our democratic and commercialized society, most of us feel we have control and freedom when they get to choose (Rich, 2006) and we would generally be very reluctant to give up any of this power. But at then same time the responsibility of making the right choices may paralyze us and make us feel bad.

The psychology behind the paradox of the positive in having both many and no choices is described in a speech at Google TechTalks given by professor of psychology Barry Schwartz at Stanford University. He believe that more choices is good *and* bad at the same time. More choices tend to enable people to perform better, and bad because at the same time more choices will make the same people *feel* worse than if they had less choices, *even if they performed better*. It doesn't matter if the choice that was made was actually an excellent choice. The fact that something else *may also* be an excellent choice, make us feel bad. In addition to this, the agony people experience during the selection-process doesn't stop when the choice is made. There is a 'leakage'; the negative feelings we feel during the selection-process leaks over in the user-experience of the product or service long after we have chosen it. More choices raise expectations, with unlimited choices, the expectation is perfection and it is extremely unlikely that you will ever reach that level of satisfaction.

Research on consumer-patterns in grocery stores have shown that when presented with many options within the same product-category; less people will actually select anything at all, and the ones that do select something will not feel as good as they hoped with their choice. With only a few options, the number of people selecting something increase, and in addition they will tend to experience more satisfaction with their choices (Schwartz, 2006).

Enjoyable Uncertainty, Outsourced Selection

New generations are likely to develop new cognitive strategies for dealing with the overload of choice as they grow up with it (Boyer, 2004). The paradox of choice together with the concerns of continuous partial attention makes an interesting area for future design-work. For example by designing systems that act as trusted agents. With a trusted agent that makes the choice for you, you will feel better, *with any choice*. The selection-process is effectively outsourced, and you have prevented the leakage of agony from the process of choosing (Schwartz, 2006).

TV-channels and other media are examples of products that have long practices of making choices on the behalf of the consumer. They are trusted agents, but then again there are several tv-channels, news papers and magazines to choose from to begin with. Another example of a products that relieve the owner from the burden of choosing is music-players that shuffle:

“I enjoy uncertainty. One of the [iPod] shuffle’s apparent disadvantages, the small storage space, turns into an advantage for me, because I need to carefully choose what I load onto it: only a hundred of my favorite tracks get to live on it at one time”. (Leeuwen, 2007).

The iPod Shuffle may seem like a cheaper, simpler and less advanced version of it’s iPod-cousins, and of course it is, technically speaking. But it is also in a subtle way the most advanced user experience. Not only does it act as an advocate that choose for you, and you can enjoy the music completely without the danger of damaging the experience with negative “leakage” from the selection-process. In line with Schwartz, more options would without a doubt enabled better control and precision, but with less options, the user is happier. If the Shuffle chose something that wasn’t perfect, the user is not to blame. The opposite is the case with the other versions of the iPod, where the user is responsible and in control - following the arguments of Schwartz, the user would be less happy because of the underlying responsibility of making the perfect selection. Because of the Shuffle’s lack of a display, it also prevents continuous partial attention, which together with it’s low weight and tiny size contribute to enhance the user-experience even more.

Google could be said to have some of the same have some of the same meta-functionality in their “I’m Feeling Lucky”-button, which differ from the “Search”-button by going straight to a page that matches your criteria, without bothering you with choosing a page from the list of matching web-pages.

LOCATION

Territories and finite provinces of meaning

An accidental meeting can to a certain extent be intended. People are aware of specific places where the odds for stumbling into someone familiar is higher. The intention may be to stumble into someone, but who, when, exactly where or if it is going to happen at all, is still by chance. This reveals that accidental meetings are often about territories and what kind of territories could be created in the virtual world for increasing the odds for an accidental meeting? What criteria could be used for defining shared virtual places?

This could be related to the phenomenon of increasing closeness to barely familiar people (familiar strangers) in remote locations. People you don't even nod at when meeting at school, because thats where they always are, you may nod recognizing at when you meet just outside the city. If you stumble into each-other on the other side of the globe, you would perhaps act as you were close friends.

ACCIDENTAL INTERACTIONS

In order to find out if it is even possible to design for accidental interactions, I surveyed a couple of areas where a certain degree of unpredictability is present.

Stumbling Into

Compared to both mediated communication and planned meetings, one of the subjectively most valued social interaction takes place when stumbling into someone familiar by accident. The accidental meeting often creates a burst of associations related to the encountered person. Thoughts, ideas and mutual memories can instantly be transformed in to a valuable conversation or discussion. In addition to the intellectual stimulus, it could potentially increase mental well-being by giving a feeling of belonging, participation, and a feeling of happiness by being given something that was not expected, as a kind of bonus.

Shared physical spaces to promote unplanned social interactions can be desired even in a professional context in order to achieve increased productivity, creativity and loyalty. Having a shared location will increase the odds of spontaneous social conversations and architects are hired to design workplaces with shared public spaces where people can *bump into each other* (Jones et al 2004). Within the research-area of computer-supported collaborative

work, much efforts have been made to design systems that initiate impromptu face-to-face meetings (Eagle and Pentland 2004, Wang and Sørensen 2005, Lawrence et al 2006), and also computer-mediated physical spaces to enable spontaneous social interactions despite being in different physical locations (Harrison and Dourish 1996, Mark 1999, Jeffrey and McGrath 2000, Karahailos and Donath 2004, Wichary et al 2005).

Improvisation

There is a certain degree of uncertainty present in all forms of dialogue because the participants do not know the perceived meaning of the dialogue before it is completed. In other words, you can only know the meaning of your message after you have receive it's response (Molander 1996, Alterhaug et al. 2005).

I believe that the unpreparedness and unpredictability inherent in all accidental meetings is essential to why serendipitous conversations are sometimes the most exciting and rewarding. During unexpected meetings we have to improvise more than if we had been prepared, and as most designers know; getting people out of their comfort-zones will stimulate creativity and increase the odds of getting new ideas. This is a well known technique used in different ideation-processes.

We also find many of the same patterns utilized as a structured and creative process in jazz-improvisation. Improvisation (from Latin *improvisus;* 'unforeseen') is *not* synonymous to "making something up out of thin air". As I understand Alterhaug, he argue that improvisation should be understood as spontaneous creativity, based on previous experience, practice and knowledge (Alterhaug 2004). Understanding improvisation is important as it is intrinsic to accidental meetings. The design of serendipitous social encounters should take into consideration how technology, functions and interface can promote some degree of improvisation.

Understanding Technology

LOCATIVE TECHNOLOGIES

> *"The true promise of presence is that it will enable users to pay less attention to the system and give user experience designers more opportunities to design the interfaces out of the process. Presence will also enable designers to tailor the user experience more than ever before. It's exciting to imagine a generation of services in which the user experience moves from a computer screen to phone speaker and back, based on the user's location, situation, and step in a process, and it's exciting to imagine being able to design for such immediacy and relevance."*
>
> *-- Boxes and Arrows (Smith & Grubb, 2004)*

In some of the first experimental location- and proximity-aware systems for social interaction used short-range radio transmitters (Dahlberg et al. 1999) and infra red light emitters (Want 1992) to decide the location of mobile devices. A mix of technologies will make up the location and tracking infrastructure of the future.

Cellular Triangulation

A mobile phone is connected to the closest cellular antenna or tower. In a city, a mobile phone is likely to be within range of several cells, and the current location could be calculated using triangulation. The technique can locate a device indoors or outdoors within approximately 120 meters. The precision decreases in rural areas, where a device is often within range of just a single cell. However, in a setting like this, a cell can be modified to detect the angle of transmission-reception in order to locate a device within 1-2 kilometers.

Bluetooth

Bluetooth is a short range radio signal for wireless personal area networks. The range is about 10 meters if the signal is not obstructed. Bluetooth can be used to detect location indirectly via a connection to other devices with a known location.

Wifi

More and more mobile phones now come outfitted with wifi, the technology used in home wireless networks. The wifi could be used to locate people indoors or outdoors within 1-20 meters. This technology is among other uses tested for use in local tourist guides (Petersen, 2006).

Global Positioning System

The Global Positioning System (GPS) is currently the only fully functional global navigation satellite system. It uses at least 24 satellites that transmit precise radio signals. The signals from the satellites enables a GPS receiver to determine its own location, speed and direction. A few mobile phones now ship with built-in GPS and this functionality is expected to become more widespread as chips decrease in size and use less and less power. GPS can locate a device outdoors to within 3-15 meters, but have difficulties indoors.

Ultrawideband

A few researchers and small companies as well as the US military are looking at ultrawideband as a promising location detection technology. It is accurate to within centimeters and requires very little power, but the technology is not very far along in development .

Radio Frequency Identification (RFID)

The first commercial mobile phones with built in RFID read and write capabilities was recently launched by Nokia. RFID may be used to detect a location much the same way as Bluetooth, but require the user to swipe a location-specific RFID-tag in order to “check in” at a location.

SENSOR TECHNOLOGIES

In addition to detecting a location, there are many ways of recording ambient data that can be used to generate rich information about one's immediate surroundings.

Microphone

Surveillance technology exist that can recognize different types of sound, or interpret of a person is speaking aggressive or friendly Audio can be used in sound-recognition applications in order to recognize specific person's voices, certain words, certain kinds of ambient sound etc. many phones already have simple voice-recognition built in, and as the processing-power in mobile phones increase they could have more powerful audio-recognition systems. This could for example be used to create a log of rich metadata about the immediate surroundings, recognize it's owners voice, the voice of friends etc.

Camera

The camera is in essence a light-sensor. In addition to detect if it light or dark, many camera-phones have auto-focus and could be used to calculate the relative distance to objects. If combined with pattern-recognition software the camera could also recognize people's faces and certain objects.

Gyroscope

Gyroscopes detect how much and how fast something is rotating around three axes. Gyros are widely used in image-stabilizing systems in digital cameras. Another area of use is motion control by tilting a device. Gyroscopes are often used together with an accelerometer to even include linear movement in motion control (Goehl and Sachs).

Accelerometer

Accelerometers measure movement along the three axes. Accelerometers are used in release-mechanisms in airbags in cars, and combined with a gyroscope in the handheld controller for the Nintendo Wii game-console.

Hygrometer

Sensors for measuring the amount of humidity in the air.

Thermometer

Sensors for measuring temperature.

Altimeter

Measure the altitude above sea level.

Inspiration/Related Work

The survey of existing research revealed a great number of projects, prototypes and experiments as well as commercial products aiming for different kinds and levels of mediation between people in different locations.

MATCHMAKING

Finding and connecting to new and interesting people seem to be one of the most dominant areas of social locative presence technology. Projects have explored different aspects of proximity-awareness. Several systems aim to match people not previously known to each-other by transmitting certain criteria or status. This is done with several purposes in mind, but romance seem to be a common goal.

Lovegetty

A small pink or blue oval device with three settings. The colors indicate male or female versions. The settings are selected according to what activity she or he is interested in: "talk", "karaoke" or "get2". Once the holder selects a mode, the device searches for Lovegetty-users of the opposite sex in a five meter radius. If it locates a match, a “get”-light flashes and is beeps, so the pair can find each other and meet face-to-face. If another user with a different mode is detected, the "find" light flashes and a different sound goes off. The Lovegetty was launched in 1998 and was the first commercial device of this type and have inspired more recent bluetooth-enabled matchmaking services for mobile phones.

Mobiluck

Mobiluck is basically a mobile-phone version of Lovegetty. It works by bluetooth which gives a range of 10 meters.. It also detect the signal strength of each device so their relative distance from you can be shown. You create a profile on your phone, and if

others nearby use the same software the phones will compare interests or requirements. It beeps when you have a match.

NokiaSensor

Much the same and clearly inspired by Lovegetty, with the difference that this is an application runs on mobile phones. You can create your own personal locally broadcasted “bluetooth-web-pages” on your phone. It’s a bit like a local mini-version of Myspace, with a guest-book, contact-list, pictures and sounds. You can search for other Sensor users nearby, exchange messages, and share files.

PRESENCE AND AWARENESS

Jaiku

A mobile phone application which share your availability, location, and calendar, publicly or with a limited group of people. You can write short notes about your present whereabouts, mood or actions, and in addition the phone will also automatically update your availability based on your ring profile, your location based on cellular network towers, and what you are doing now and next based on calendar events. Jaiku can also share who you're with based on nearby Bluetooth devices. The interface is based on the contact-list, with added status-icons and comments.

Jabberwocky

Bluetooth-software to detect and recognize repeated encounters with people you don’t know. The people you wait at the train-station every morning and others who share time and place with you during the day.


モヤイ
アイテムハント
#1 Matto 681 pt
#2 chamou 327 p
#3 Arch 192 pt
#4 3013 78 pt
#5 taka 54 pt

GAMING AND PLAY

Mogi

Japanese mobile phone and PC-game where players are organized into teams. They acquire ‘currency’ by collecting virtual ‘items’ hidden in locations in the actual city of Tokyo. The game is played both on mobile phones and on personal computers and the game is played in teams. Players using mobile phones are able to see a limited “radar” view of their immediate surroundings with nearby players, and nearby items which they can collect. They can move around in the city, and they can also trade items with other players. Players using PCs see a full-city map and they can direct their mobile-team, but they’re bound to one location and can not collect anything.

Geocaching

From Wikipedia: “Geocaching is an outdoor treasure-hunting game in which the participants use a Global Positioning System receiver or other navigational techniques to hide and seek containers (called "geocaches" or "caches") anywhere in the world. A typical cache is a small waterproof container containing a logbook and "treasure," usually toys or trinkets of little monetary value. Today, well over 350,000 geocaches are currently placed in 222 countries around the world, which are registered on various websites devoted to the sport”.

PLACE-MARKING AND INFORMATION

Psiloc’s Where I Am

Software which uses cell location to trigger events on a mobile phone. You identify locations and to assign actions to location’s names. These could include playing a sound file when you enter a certain place, automatically sending an SMS when you leave work in the afternoon, turning the silent-mode on when you are in the library. In urban areas it can be accurate to 20 meters, in the rural areas the accuracy can fall to 1 kilometer.

Yellow Arrow

Yellow Arrow is a global public art project created and run by Counts Media in New York. People can obtain yellow arrow-

shaped stickers and place them any where they like, pointing at something of interest. When someone see a sticker, one can send the unique code printed on it as a text message to a particular phone number. Moments later a text message will be received with a message left by the sticker's original owner.

Active Codes

Hewlett-Packard's Active Posters, Neven Vision or Siemens Siecodes. These are all marks on real objects in the environment (like barcodes) which can be decoded through the mobile phone camera. The code can then carry information like a website URL, a phone number or just some text that can trigger the phone into action. They have been used in treasure hunt games in Canada and in an architecture event in Amsterdam they have been used to barcode children's clothing in a day-care experiment.

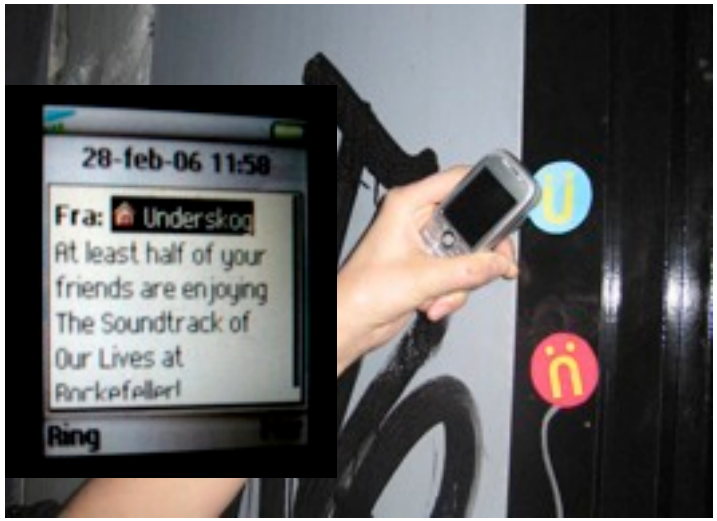
RFID

The Hunaja System

The Hunaja system that allow users to check in- and out at Aula in Helsinki by using a dedicated RFID-reader at the door. Users elsewhere could request a list of currently present friends via SMS (Engeström & Muutanen, 2001).

Underskog Touchpoints

Jørn Knutsen and Anette Andersen's study of touchable RFID-based services for the social network Underskog.no (Knutsen & Andersen, 2006) is based on roughly the same idea as the Hunaja system.



MEDIATED STUMBLING INTO

Mediated communication-tools differs from face-to-face meetings by the fact that the initiation of the communication always is intentional. What if we could stumble into someone while being apart? Could the "stumbling-into" be mediated, still accidental, but occurring when not at the same physical location?

Pocket-calls

One example of an unintended mediated "encounter" is when a mobile phone accidentally call someone in the contact-list by being pushed against something while in a pocket or a purse. An especially vivid 'pocket-call' to my wife from a friend of ours in Sydney made me curious about how often this phenomenon happen, and what other people have experienced. Prior to the web-survey I had a hunch that pocket-calls are quite common, but was surprised that as many as 93% of my respondents had experienced this phenomenon.

Capturing Moments (Blinks and Buttons)

Sascha Pohflepp's experimental networked, lens-less camera explore a loosely related experience. The camera captures only a moment in time and search the Internet for other photos that have been taken in the very same moment. When a coincident picture is found, it is downloaded and presented on the camera. The camera basically takes other people's photos. Because of the connection in time, the photos are never dismissed as random (Pohflepp, 2007).

AUDIO NARRATIVES

Our imaginations are more than capable of providing imagery interpreted from sounds. Interpretation of location, surroundings, person identities, events or time on the day could be recognized by

audio only. The display of mobile phones may be limited in size, but the imagery created by for example an audio narrative has no such limits.

The Missing Voice

Canadian artist Janet Cardiff's work The Missing Voice (Case study B) from 1999 is an audio-walk in London's East-End. It has the alter the experience of an environment by giving a narrative soundtrack to a specific place. Cardiff's audio-walks are psychologically absorbing experiences that have the potential to create series of serendipities - for an audience of one at a time (Cardiff, 2000).

Backseat Playground

The game intended for children traveling by car is a context dependent mobile game. It uses GPS-location combined with GIS-data to generate a narrative game experience and users can interact by using a directional 'microphone'. With this users can point at objects in the physical environment or investigate the virtual soundscape surrounding the car (Gustafsson et al, 2004. Brunnberg and Juhlin, 2005)

Research Summary

The summary of the research give some guidelines for the design. What context seem to be most relevant? Who with, when, why and how? Could people be encouraged to compromise their privacy and loose control to a set of criteria that could expose them to something or someone 'accidentally'?

> *"For the last two decades, give or take, ease of use has been the mantra of every technology columnist, every product manager in every high tech. company. It's good. But it's no longer good enough. The new mantra, the new differentiator, the new opportunity for all of us is: improves quality of life. Does this product, service, feature, message— enhance and improve our quality of life? Does it help us protect, filter, create a meaningful connection? Discern? Use our attention as well and as wisely as we possibly can?" (Linda Stone 2006)*

CONTEXT

Where and When

I think territories are important ingredients in this project and one specific territory for 'accidental encounters' may be a transit-situation. Research in computer-games show that one of the main reasons people, and especially women (McGonigal, 2006), are *not* playing computer games is because they feel it's a waste of time. If my concept could be 'played' only when doing something else that people perceive as an even more waste of time, like commuting or waiting, people may be more willing to use time on it. It will seem more valuable in comparison to their primary occupation.

Alternatively the concepts should enhance the experience of something else, or may contribute with some kind of sixth sense.

Who

Anyone who use mobile phones with remote friends and families. According to the user categories used by Google (see page 43), the target users in this project are in the Bored or the Repetitive user (Wellman, 2007), but also for users outside of Google's mobile user categories. Could things like *"intentional unintentional"* or *"expect the unpredictable"* be slogans for a new kind of designed experiences suitable for a new user group?

CONTENT

Most of the time, the things we chose to share is not something we pick or generate by random. At Flickr, people tend to share the most interesting pictures, special occasions, events, or a weird/stupid/fun thing that happened.

Social Objects

The concepts should be built around something to share. The shared objects could be visual, readable or audible and ideally they should work as initiators of interaction and imagination.

Awareness

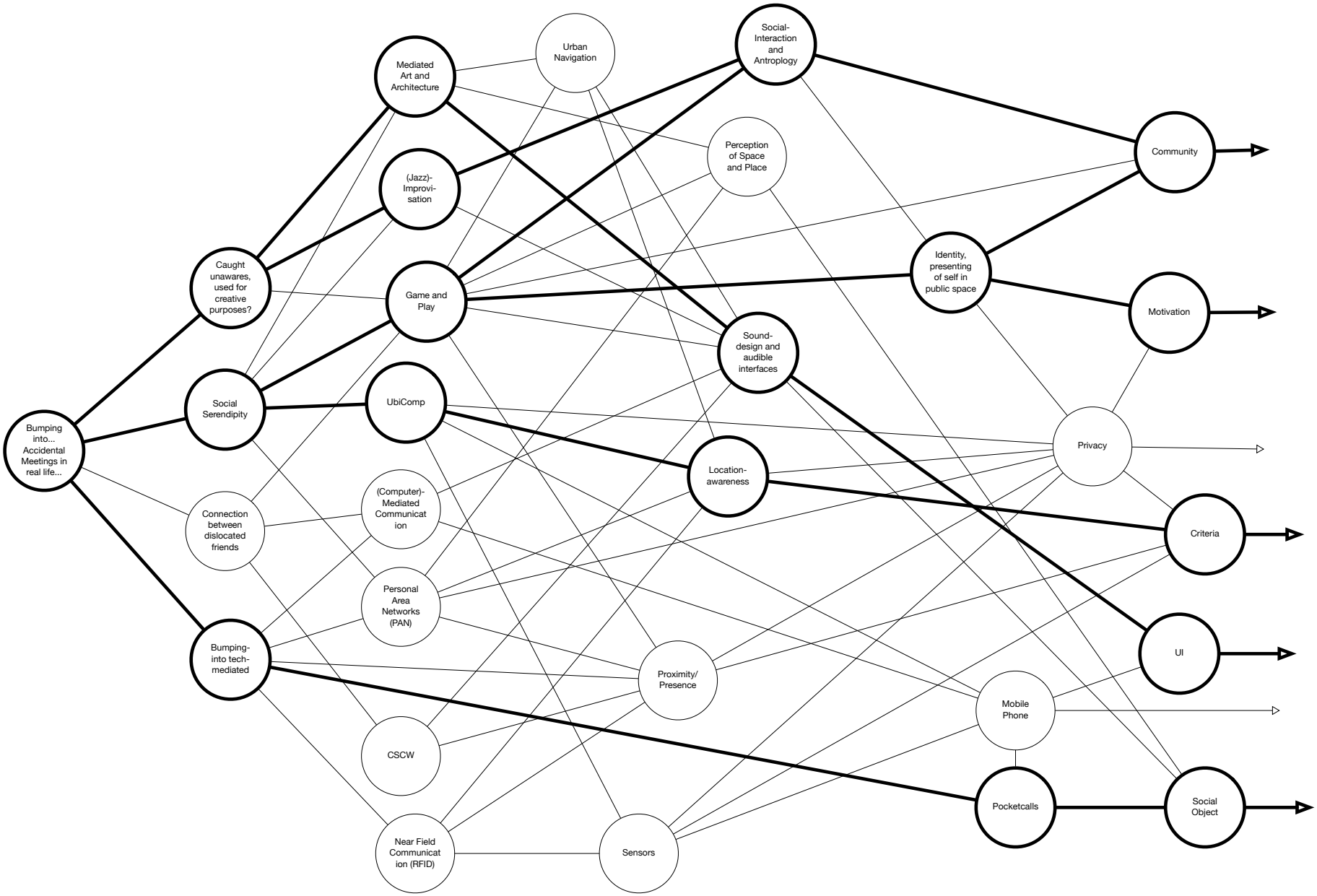
Different kinds of awareness could be an effect of the social objects. The awareness could be users state, actions, location, environment, proximity, movement or relation to something and this information could be represented in any way; mimetic, abstract or realistic.

Serendipity

Preferably something should be done to increase the odds of accidental encounters. Information gathered from online presence for example on social web-sites, or data from sensors and logs in the user's phone may be used as criteria for creating matches. The events triggered could have elements of mystery or riddle.

Things to avoid

It is a good thing if it does not contribute to increased continuous partial attention by demanding too much attention.


Bumping into... Accidental Meetings in real life...
Caught unawares, used for creative purposes?
Social Serendipity
Connection between dislocated friends
Bumping-into tech-mediated
Mediated Art and Architecture
(Jazz)-Improvi-sation
Game and Play
UbiComp
(Computer)-Mediated Communicat ion
Personal Area Networks (PAN)
CSCW
Near Field Communicat ion (RFID)
Urban Navigation
Perception of Space and Place
Sound-design and audible interfaces
Location-awareness
Proximity/ Presence
Sensors
Social-Interaction and Antroplogy
Identity, presenting of self in public space
Privacy
Mobile Phone
Pocketcalls
Community
Motivation
Criteria
UI
Social Object

Concept development

IDEATION

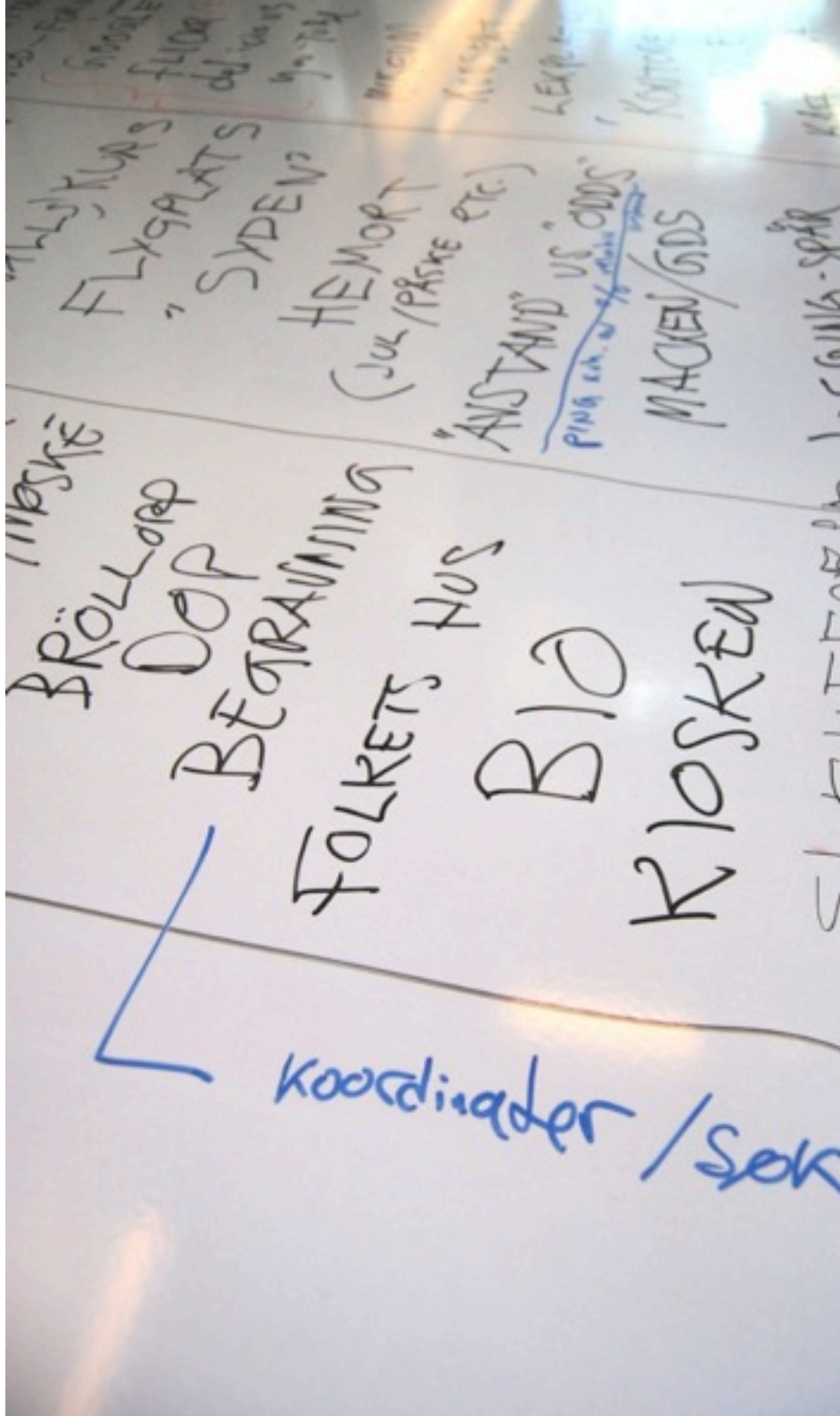
The concept development consisted of generating ideas and then selecting. Some vague ideas emerged in the back of my head during the research and others was formulated in discussions. The concept development structured the idea-generation.

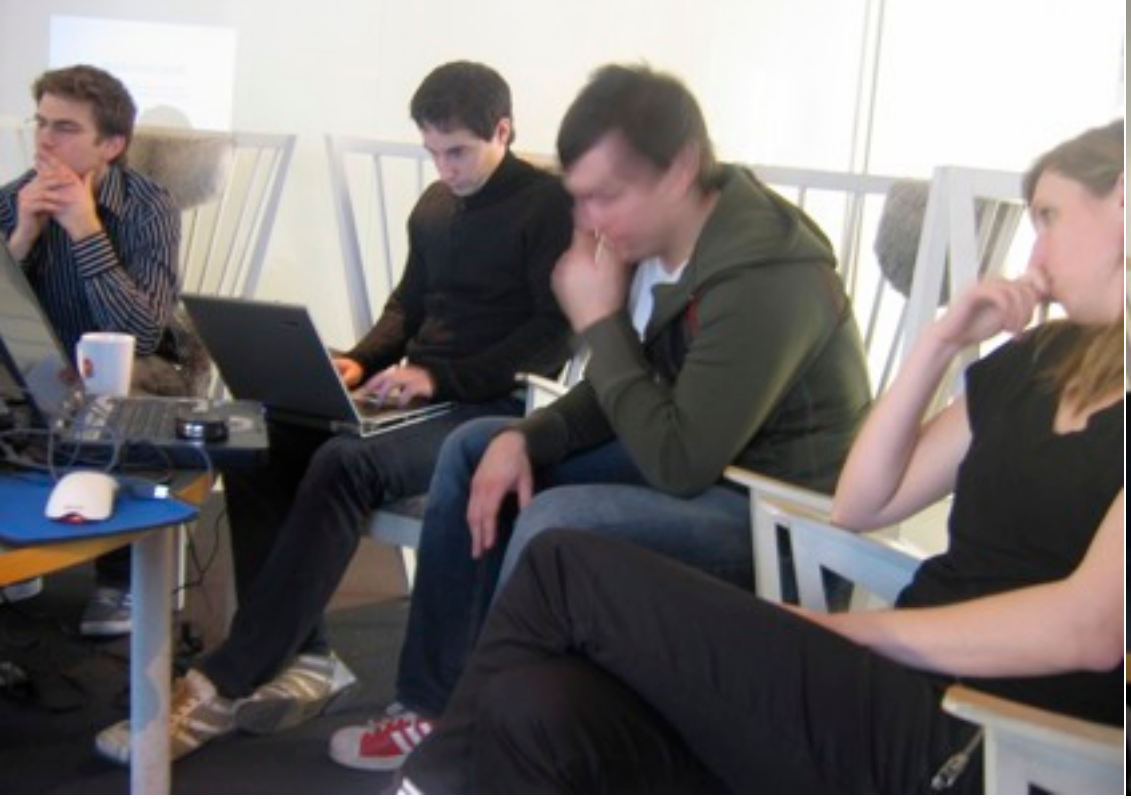
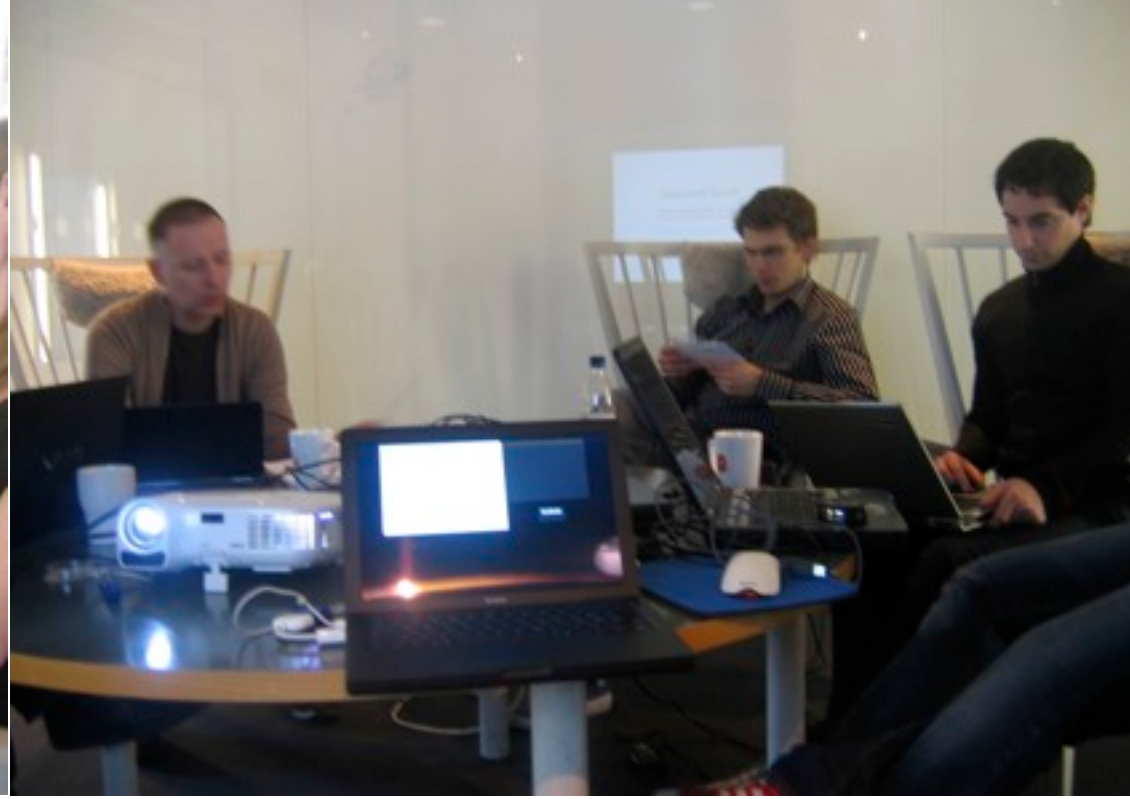
Workshop "Stakeholders"

A workshop/discussion with Oskar Juhlin, Liselott Brunnberg, Anton Gustafsson and Arvid Engström at the Interactive Intitute Mobility Studio. The aim was to come up with a list of entities that can be both stakeholder and location at the same time. How can these be used as a base for reciprocal "transactions" with friends?

Then we discussed categories and characteristics an how people "use" the different entities on the list; as carrier of identity, objects of genuine interest or objects of comparison.

The list will be used as a base to generate more ideas, which are then compiled and added to the portfolio of idea-cards.



Idea-cards

During the research I started to write down and draw simple sketches of concrete ideas. These ideas was later structured on idea-cards. Each card contain a descriptive name, a sketch of the idea, a number and pros and concerns.

During the research and stakeholder-workshop 23 idea-cards was created. The cards were used as a base for discussions and ultimately to select four ideas for further development.

SELECTION

> *"Telephone industry never got what Hollywood did; emotion is everything". (Cochrane, 2006).*

Workshop with idea cards: participants

The plan was to gather a group of 5-6 people with expertise in different relevant areas and get them to rate and discuss the idea-cards during a half-day workshop. Unfortunately, due to me being a little late in planning the workshop, people of course had other commitments and only two participants were available.

The participants in the workshop was Jarmo Laaksolahti and Johan Klövstedt.

Jarmo Laaksolahti is a researcher in the Interaction lab at the Swedish Institute of Computer Science (SICS). His main focus is on affective interaction and entertainment applications. In particular he is working on techniques for increasing the affective expressivity/interactivity of games through cinematography.

Johan Klövstedt is a programmer and master student at the Interactive Institute Mobility Studio, working with a context dependent narrative-based mobile game.

Because I only got two persons and myself at the workshop I decided to make an attempt to continue the workshop online. I posted all the idea-cards on my blog and invited ten persons from Swedish Institute of Computer Science, Interactive Institute, Oslo School of Architecture and Design and the University of Stockholm to participate with comments and votes.

Only two people responded. From this a lesson was learned; apparently if people do not share time or place, they tend to postpone the task forever. Because of this, the validity of the selection-process may have suffered some.

The two participants in the online-workshop was Etienne Thessman and Christina Öhman. Etienne Thessman is a master student of media technology at the Royal Institute of Technology,

working with user generated content in context-dependent mobile games at the Interactive Institute Mobility Studio. Christina Öhman is an architect, former webdesign-entrepreneur and currently studio director at the Interactive Institute Power Studio.

Workshop with idea-cards: voting and discussion

Each participants was asked to place three votes in each of the five criteria. The three potentially *most exciting experiences* were given dark pink votes. Yellow votes are given to the top three from a venture capitalistic point of view; *most 'commercializeable'*. The three most *innovative* ideas got green votes. Orange votes to the three ideas most likely to *evolve* into something better/more/bigger etc in future versions. The light pink votes was given to three ideas which gave a *non-specific 'hunch'* of just being good ideas. In addition a single favorite was given a smiley-sticker.

Many of the ideas was commented and discussed. It was agreed that number 11, the *'Stumble-into-meter'* together with number 18 the *'Drunk-o-meter'* and number 17, the *'Shoppinglist'* could be a

bundle of widgets for connecting with friends through different kinds of social activities or location.

Number 14, the *'Usual Suspects'* did not get any votes but was credited for being an interesting concept because the user don't control it directly, but it's actions is generated by your own behavioral patterns. It could potentially be a very different experience- and tool for keeping in touch with friends and family, contacting people for you when you should have done it yourself. It describe a way of stumbling into, one of the core goals in this project. Number #10, the *'finite provinces of meaning'* is related to the *'usual suspects'*. They are both semi-artificial-intelligent services that can act on their own, based on patterns of use. *'Finite provinces of meaning'* was mentioned as a potential service that could collect data and match the pattern of use to the most suitable service-provider and subscription deal.

Number 13 *'Second Second Life'* was also mentioned as one of the most intriguing. It was described as a meta-meta-kind-of experience, and could perhaps be part of a game.

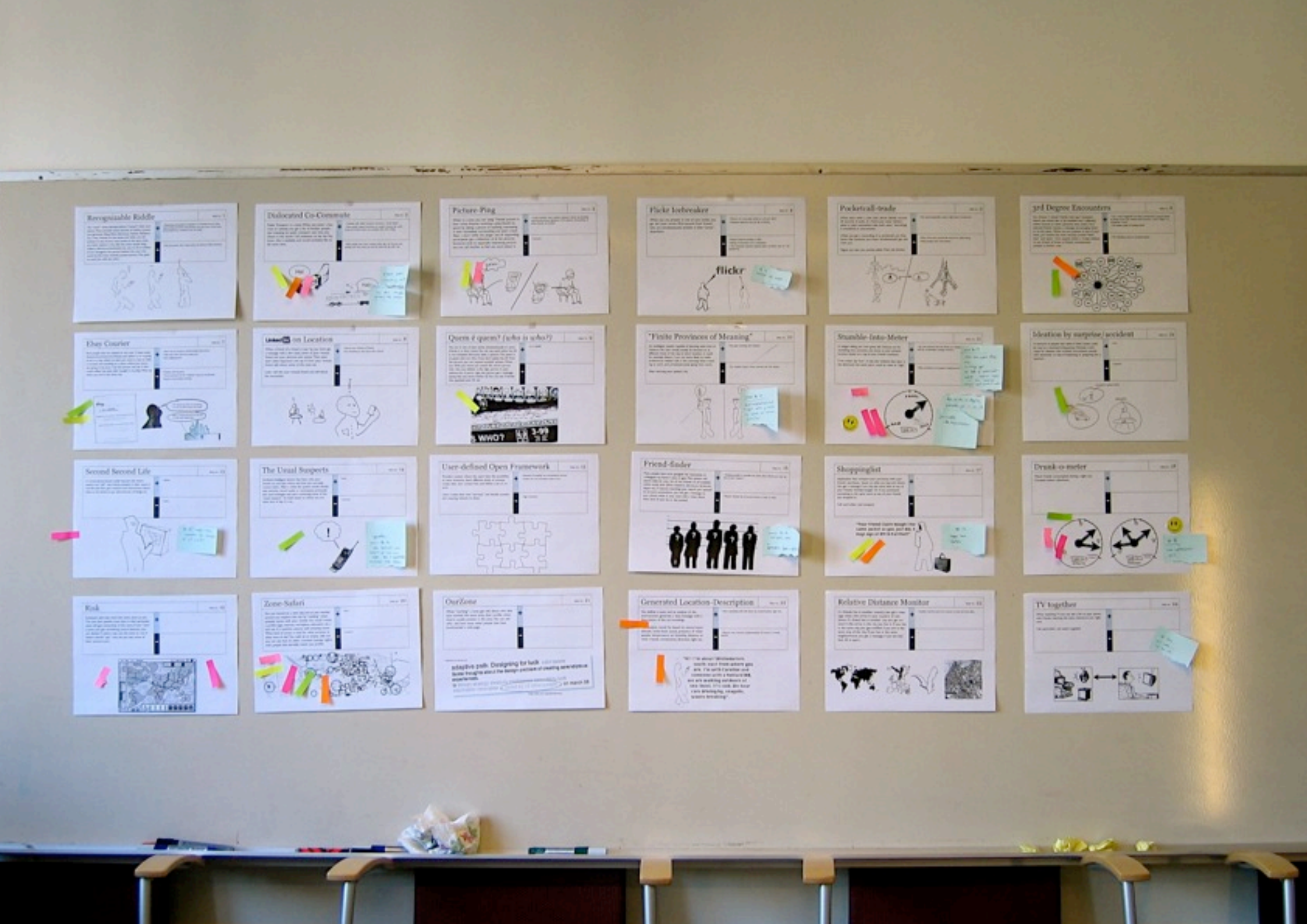
Another idea that did not get any votes was number 16, the *'Friend-finder'*. It was however commented as a fun idea, but not among the best. It is closely related to number 6, 8 and 9, *'third degree encounters', 'linked-in on location' and 'who is who'*. They could perhaps be merged into one concept? It was stated that people in general are curious of other people, and this is a good starting-point for a service.

Idea #20, the *'Zone-Safari'*, was the only idea that won votes from all categories, but it does not really connect friends.

Everyone think it is excellent to link some of the ideas to public transport and commuting. Mobile social applications linked to public transport is a relatively unexplored area, and number 2, *'dislocated co-commute'* got five votes for evolvement, commercialization and gut-feeling. It can contain many of the other ideas and it is a sensible time and place as a 'territory'. 'Dislocated co-commute' is also my own favorite because of this.

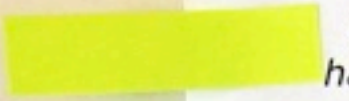
I gave my 'excitement-votes' to 8, 9 and 14; *'inked-in by location', 'who is who'* and *'the usual suspects'*. I like the fact that the user can not entirely control nor predict the outcome. I would have put my money on 8 and 17, *'linked-in by location'* and *'shoppinglist'*, because I think here are benefits in these services that people would be willing to pay for.

Number 15, the *'user defined open framework'* is perhaps the hardest to see in use, because it is not defined. This is something that could be interesting as a platform, as a mobile peer-to-peer parallel framework to something like the internet. The vastness of potential in this concept is also the reason for not getting many votes.


Recognizable Riddle
Dislocated Co-Commute
Picture-Ping
Flickr Icebreaker
flickr
Pocketcall-trade
3rd Degree Encounters
Ebay Courier
on Location
Quem é quem? (who is who?)
WHO?
"Finite Provinces of Meaning"
Stumble-Into-Meter
Ideation by surprise/accident
Second Second Life
The Usual Suspects
User-defined Open Framework
Friend-finder
Shoppinglist
Drunk-o-meter
Risk
Zone-Safari
OurZone
Generated Location-Description
Relative Distance Monitor
TV together

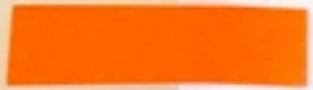
You give 3 votes in each category.

- *The three potentially most exciting experiences*



- *The venture-capitalistic point of view; three ideas that have most commercial potential?*

- *The three most innovative ideas.*



- *The ideas most likely to evolve into something better/ more advanced/bigger etc in future versions.*

- *Top three ideas witch give you a gut-feeling of just be-ing good ideas.*

Pick one favorite, regardless of criteria.
The smiley goes with this one

WINNERS

Four idea-cards with the most votes was picked out. Because many idea-cards got the same number of votes, although in different categories, the ideas that was selected was the ones that got many votes and at the same time represented distinct genres. In addition, the idea-cards in the same categories at the four winners were also selected. This resulted in four groups, or genres of concepts.

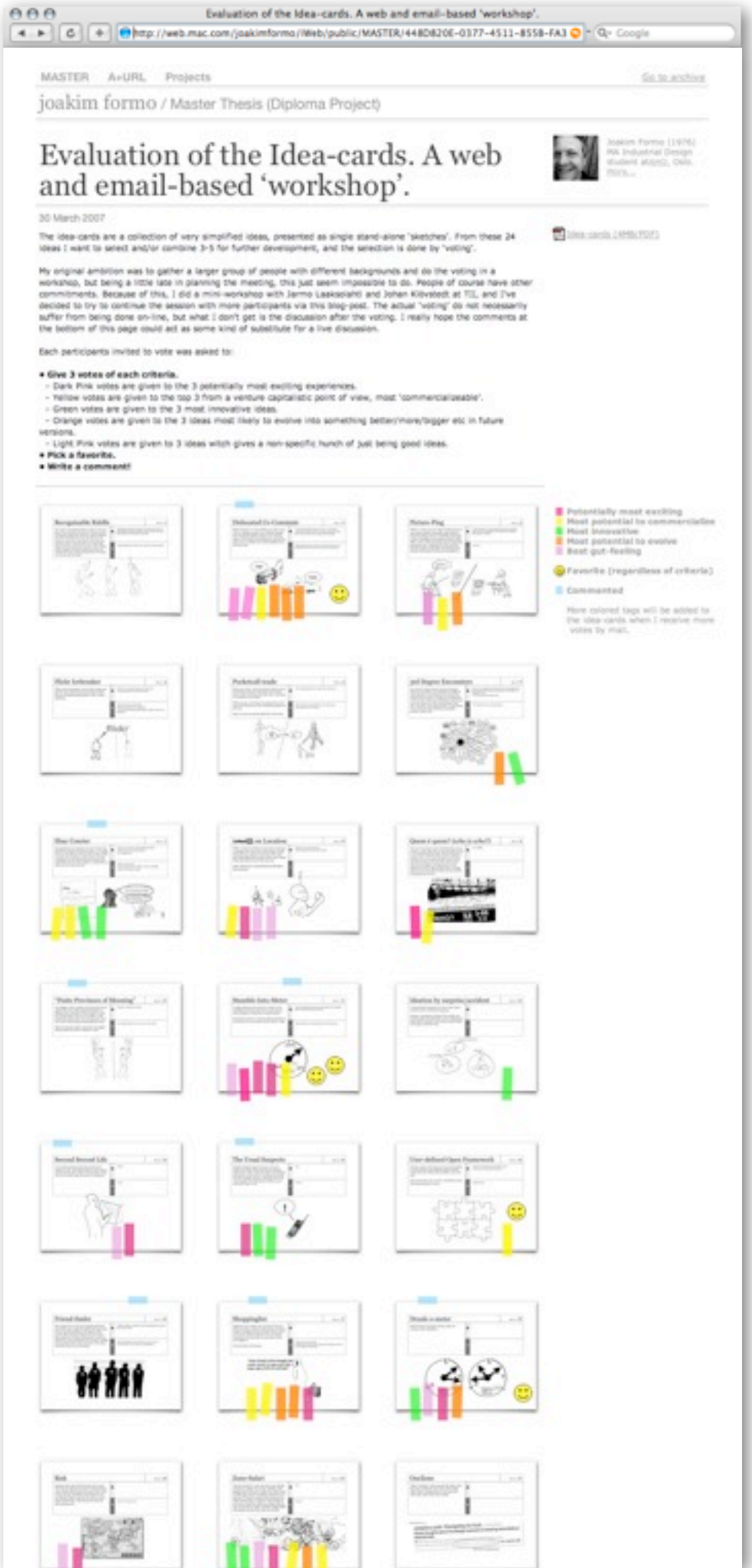
The Awareness Widgets

These ideas are limited to very specific activities that can generate data which is transmitted to a group of users. One such activity is shopping for clothes. Another version would be based on buying drinks at bars. If or when payment directly by mobile-phones become common, rich information about purchased items could be bundled with a digital receipt. Another possibility is if or when radio frequency identification tags are used as labels attached to goods in stores. Assuming that most mobile phones will be shipping with built in RFID-readers in a few years, swiping your mobile phone over such a tag could give rich information about the item. This information could be used as social objects for sharing, comparing, listing, informing, locating and tagging. Combined with pictures and links to consumer information services this have the potential to become a service for many different kinds of users.

If we borrow some terminology from the world of computer games, the service could be used in both *'one-player'* mode as some kind of assistant, or in a *'multi-player'* mode and turn into a mediated social gathering. To continue with the analogy, the *gameplay* could be either asynchronous, synchronous or semi-synchronous.

Obvious categories are different types of goods such as clothes, music, books, magazines, electronics etc.

The Apple iPod+Nike experience could be a source of inspiration as it is a good example of a system for comparing the results of a specific activity. The experience comply with all four of the pleasures with products described by Patrick Jordan (Jordan, 2000), have a *social object* - running - and a *verb*; compete (Engeström 2006).


Evaluation of the Idea-cards. A web and email-based 'workshop'.
http://web.mac.com/joakimformo/iWeb/public/MASTER/448D820E-0377-4511-855B-FA3
Google
MASTER
A+URL
Projects
Go to archive
joakim formo / Master Thesis (Diploma Project)
Evaluation of the Idea-cards. A web and email-based 'workshop'.
Joakim Formo (1976) MA Industrial Design student @IDEO, Oslo. Work...
30 March 2007
The idea-cards are a collection of very simplified ideas, presented as single stand-alone 'sketches'. From these 24 ideas I want to select and/or combine 3-5 for further development, and the selection is done by 'voting'.
Idea cards (4MB/PDF)
My original ambition was to gather a larger group of people with different backgrounds and do the voting in a workshop, but being a little late in planning the meeting, this just seem impossible to do. People of course have other commitments. Because of this, I did a mini-workshop with Jarmo Laaksolahti and Johan Kildredet at TCI, and I've decided to try to continue the session with more participants via this blog-post. The actual "voting" do not necessarily suffer from being done on-line, but what I don't get is the discussion after the voting. I really hope the comments at the bottom of this page could act as some kind of substitute for a live discussion.
Each participants invited to vote was asked to:
• Give 3 votes of each criteria.
- Dark Pink votes are given to the 3 potentially most exciting experiences.
- Yellow votes are given to the top 3 from a venture capitalistic point of view, most 'commercializeable'.
- Green votes are given to the 3 most innovative ideas.
- Orange votes are given to the 3 ideas most likely to evolve into something better/more/bigger etc in future versions.
- Light Pink votes are given to 3 ideas witch gives a non-specific hunch of just being good ideas.
• Pick a favorite.
• Write a comment!
Potentially most exciting
Most potential to commercialize
Most innovative
Most potential to evolve
Best gut-feeling
Favorite (regardless of criteria)
Commented
More colored tags will be added to the idea cards when I receive more votes by mail.

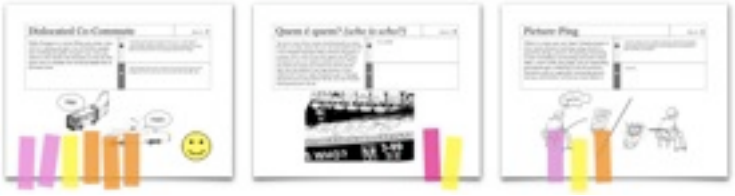
I see some ethical problems, as well as economical and moral issues with a co-shopping service. Depending on the design it could potentially increase an already considerable pressure on kids by making consumption into a de facto competition.

As mentioned, a category of purchases could be drinks limited to a specific establishment or duration of time. The Drunk-o-meter widget could share info about how many drinks each user in a group have purchased, and this information other users could interpret how drunk each user might be, or who is not buying rounds.

The '*stumble-into-meter*' does not link remote friends, but was appreciated by the panel as an interesting idea and it received two smilies. This widget would fall into the "repetitive now" user behavior, or it could also have some kind of attention signal (vibrating, light or sound) when entering a location with above average odds of stumbling into someone.

Kill some time

This group of ideas are definitively for the "bored-now"-user and the main goal here is to kill some time. Typically to be entertained while doing something considered as a waist of time. Commuting or waiting are the main context.



Rather than a location-based or other criteria-based trigger mechanism, this genre of applications should be initiated by the user.

Because the winning idea the 'dislocated co-commute' has more characteristics of context than of content, I see this as a potential platform for other services. Single or multi-player games based on locations or identity of the players could be one kind of applications. 'Who is who' and 'picture ping' are consequently part of this group.

Make new friends.

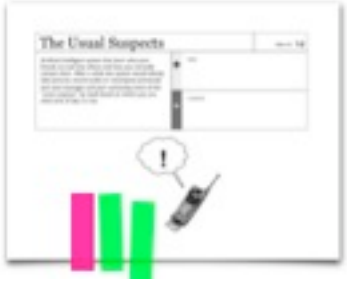
This genre is inspired by services like Jambo, or Jabberwocky. A much more advanced and versatile version of LoveGetty or MobiLuck. As Jambo, this class of services link to several online profiles on web-sites such as Facebook, Linked-in, Myspace, a blog, Flickr, Dopplr, Twitter, Jaiku, Youtube and others. Anywhere you have an online presence.

In the “Linked-in by Location”-idea a location aware application running on your phone tell you when someone related one step away from you is present in the same physical area. The one-step relation is a friend of a friend of you. The service should be reciprocative; both users get a picture and some information about each other at the same time. The both know what the other person look like, who your mutual friend is and both will also know that the other person has also got your picture. If they meet, they will both have a good reason to tell their mutual friend about the encounter, and in this way it is even an incentive to keep in touch.

Artificial Accidentalness

A category of application which are running in the background and only visible when something is happening or has happened. This services could for example generate “accidental” text-messages, pictures or sounds that are sent to others in your contact-list. The contacts could be chosen based on your own user-patterns, who you usually call when, and where.

This category of concepts may not fall into any of the google-mobile-user-categories. This is not something you do, this is a kind of experience that just happen. It could have characteristics of a game, but one you do not control, the game plays you. Great inspiration here could be David Finchers “The Game” with Michael Douglas.



The experiences could be related to pocket-calls, but should have a higher degree of interestingness. I regard this as by far the most intriguing, but perhaps vague category of concepts.

Evidencing

COCOMMUTAINMENT

This is a mobile game where the players are anonymous to each other, but they are all friends. The goal is to reveal the identity of the others from a picture they sent.

This could be played when you commute, or while waiting for a tram, or any other occasion where you just want to kill some time. This is how the game works: Check if anyone of your friends are online. Invite someone to play. Each player take and submit a picture of something that could reveal their identity. It could for example be a detail on your clothing. In addition to the pictures, sensor-data such as temperature, location, altitude and the names of any near by bluetooth-devices are recorded. This data is submitted along with the picture. All players receive the pictures of all the other players. When you think you know someone's identity, you pick the matching name in the contact list of your phone and match it to the corresponding picture. If you are wrong the picture is locked. The owner of the picture is immediately notified if you were right or wrong. If you win; call someone that lost and have a laugh together. If no-one is correct; play again.

- Pros: Fun. Good context for short games. Non-intrusive.
- Cons: Privacy (location awareness). Cost of transmitting data.

The train just left the platform. It is 15 minutes to the next train. Her phone knows she should have been on that train, and that she is not. As one of her friends is in a similar situation elsewhere, it suggests a game while waiting.


Sony Ericsson
cingular
9:41 AM

She takes a photo of her shoe. Sensor-data is automatically captured with the image. She submits her clue.

She receives a picture from her friend, and she immediately recognizes the content of his bag. He on the other hand does not recognize her shoe. They play a couple of times, but he lose every time.

When he lose for the fourth time she call him as her train arrives.

RELATED STRANGERS

An application for your mobile phone that tell you if you are near by a friend of a friend. If you get within a short range of someone you don't know but with whom you share a friend, both of you get notified with name and picture of the other.

The application is linked to networked social web-sites such as Linked-In, Facebook or Myspace.

The service is location-aware by GPS or cell-info and you get notified when you are within 100 meters of someone that you have a mutual friend with.

You and related stranger both receive each other's picture, each others names and the name of your mutual friend.

After a while you may stumble into each other, and perhaps even have a chat. If your phone has bluetooth you may activate the "Stumble-into-support"-feature, which will give a signal if you get within 10 meters of each other.

• Pros: Combining face-to-face encounters, meeting new people and relation to a friend.

• Cons: Privacy (location awareness). Intrusiveness.

During one of the breaks at the conference, someone get a Linked-In notification; “A friend of a friend is located within 10 meters”

...they both got noticed, and they realize they are sitting next to each other at the coffee-corner!

They chat about their mutual friend for the rest of the break. They decide to hook up later. Both of them send a text message to tell their friend about the coincident that he was unwittingly part of.

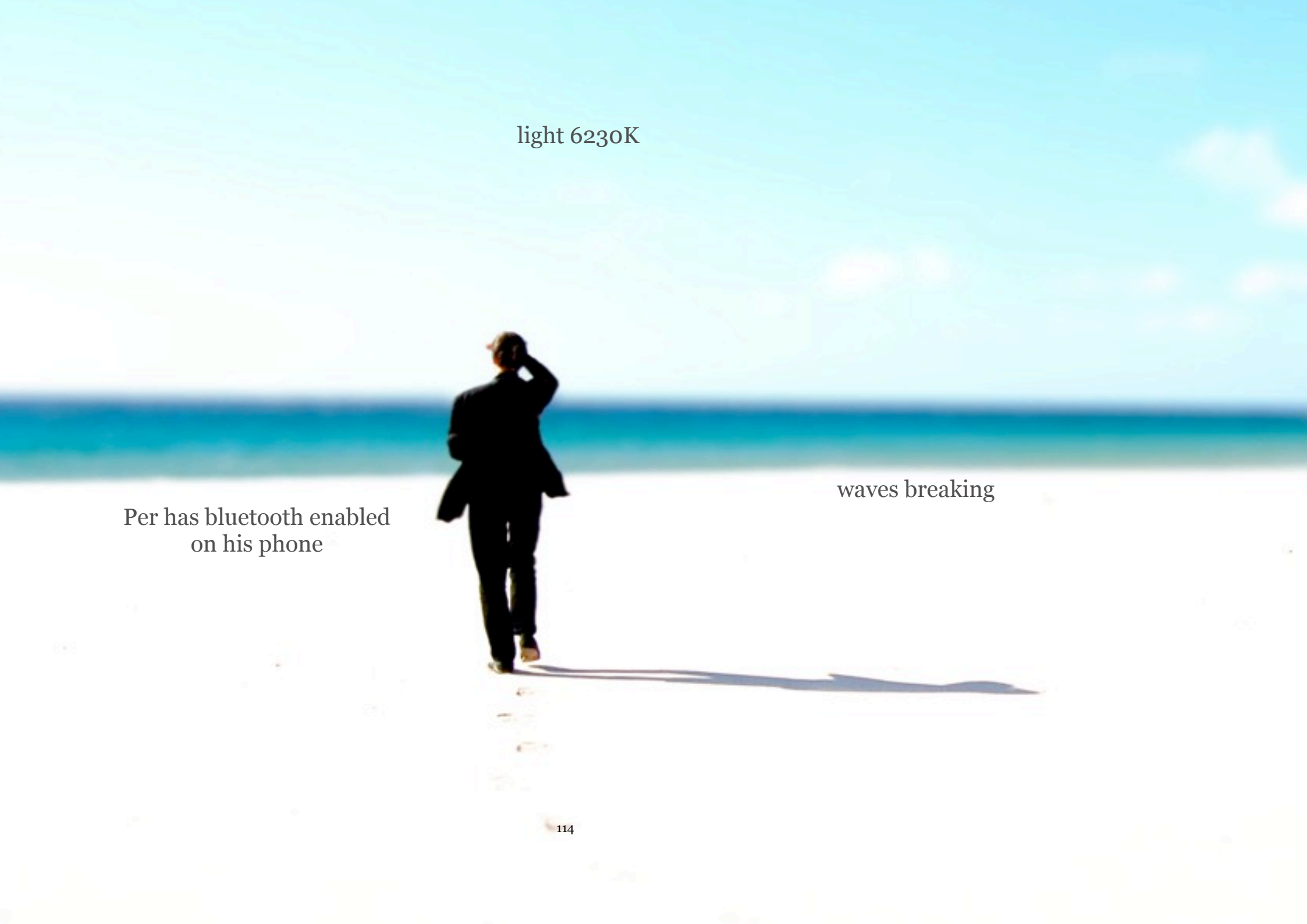
ARTIFICIALLY ACCIDENTAL

When people travel, many of us have a tendency to think of friends they should have contacted more. They may even intend to send a postcard, but empirical evidence show that often it stops with the thought.

Much the same way as new intelligent technology in cars help the driver with navigating or handling the car, this concept-category aim to help people with nourishing and managing their social attentions.

“Nudge” is a system that is silently logging incoming and outgoing communication on your mobile phone. The system recognize patterns of your everyday life and is capable of detecting if your relation with a friend is in danger of fading. If so, the system will generate messages to this friend. Location, sensor-data such as temperature, light, altitude and also audio-recognition software is used to generate from your surroundings and sent to the first person on the automated “bad consciousness”-list.

- Pros: Nourish friendships. Surprise. Excitement.
- Cons: Auto-messages may put some people off or be considered spam.


light 6230K
Per has bluetooth enabled
on his phone
waves breaking

seagull screams

humidity 73%

temperature: 25°C

Åsa walks slowly on the beach. She should have called her friend ages ago. Her phone is in her bag.

Felicia laughs and shouts

0.5 m above sea level

30°00’42.26”N 5°36’37.13”W = Tarifa, Spain

Åsa’s phone has registered that she is far from home. It has gathered information about the surroundings, and is about to generate a text message to a good friend of hers who she has not called in several months.

Sony Ericsson
YES
NO
labello
LIP CARE

As she walks down to the water to dip her toes in the ocean, her phone automatically sends a message to her friend.

“Hi! Right now I’m about 3142 kilometers south-west from where you are. Felicia, Per and I are walking along the beach in Tarifa, Spain. It’s 25°C and the sun shines. We hear seagulls and waves breaking.
Speak to you soon!
/Åsa”

Conclusion

SUMMARY AND REFLECTION

This project have been an exploratory study in a vast field of emerging technologies for mobile devices. I have presented potential areas of use that these ubiquitous systems will make possible in a near future. The specific field of interest for this project have been to explore if accidentalness in mediated communication could be a sustainable and essential ingredient in mobile social systems. I am convinced that so is the case, and that mediated social serendipity is an important field to explore further.

Designing experiences

This project can be seen as an argument for a shifting role of designers. From designing objects, to services, it becomes clear that designing *experiences* will be increasingly important. Especially when designing for ubiquitous technologies such as mobile phones, it will be important to think beyond practical and rational, and explore the emotional and sensational benefits of services that is not entirely predictable and that can surprise it's users.

Social Intelligent Assistants

Much the same way as new technology help drivers to navigate traffic and handle their vehicles, the mobile services described in this report help people maintain and renew their social relations. This is an entirely new class of services for mobile phones.

Privacy

The issues related to privacy was deliberately not discussed to any greater extent in this project as the aim was to focus on the possibilities rather than concerns. This report raises many unanswered questions about integrity. The author do not see this as a shortcoming for this project, but as an important and necessary field of discussion in future work.

FUTURE WORK

This project has been trying to find new areas for innovation in a relatively young field of design. I propose that this report should be used as a foundation for further investigations in the design of serendipitous experiences.

Development

The services outlined during this project can be a starting point for developing real services. Social web-services such as Linked-In, Facebook, Yahoo's Flickr could be potential prospects for developing some of these concepts. Some of the most progressive mobile phone manufacturers and service providers should consider using resources for research and development in this area.

The work of this project may also be an opportunity for venture capital and entrepreneurship.

Appendix

THE WEB SURVEY

Page 1 of 3: Real Life

Question 1-9

What describes you best?

- ○ Female
- ○ Male

How old are you?

Your email. This is optional, but required if you are located in Oslo and want to have the opportunity to win a bottle of wine... (The wine-lottery is for those at AHO only, I'm afraid).

Which of these alternatives fit for you?

- ☐ I work
- ☐ I study
- ☐ I'm together with someone
- ☐ I'm single
- ☐ I'm a parent

Where do you feel you belong the most?

- ○ I'm a citizen of my home-town/city
- ○ I'm a national citizen
- ○ I'm a Scandinavian citizen
- ○ I'm an European, African or Asian citizen
- ○ I'm a world-citizen

Do most of the people you know live in the same city as you live in?

- ○ No. They all live in another city.
- ○ No, they are spread in several places around the globe
- ○ No, they are spread in several places but most of them in the same country
- ○ Yes. most of the people I know live in the same city as I am living in.

How do you keep in touch with your far-away-friends?

- ☐ I don't
- ☐ I call most of them regularly
- ☐ Write emails
- ☐ Write letters
- ☐ We chat (Instant Messaging)
- ☐ With SMS
- ☐ Send MMS
- ☐ I travel to meet them

How often would you say you unexpectedly "bump into" familiar people? (Note: "Bumping into" colleagues/classmates at work/school would hardly be characterized unexpected).

- ○ It's very rare
- ○ Sometimes
- ○ Often

Do you have certain areas, cities or places where you know it is more likely that you would "bump into" someone you know?

- ○ No
- ○ Yes

If yes, where would that be?

Submit

Page 2 of 3: Mobile Life

Question 10-18

What kind of SMS would you say you send most often?

- ○ I never send SMS
- ○ Info or questions about where you or others are
- ○ Info or questions about what to do
- ○ Info or questions about mood
- ○ Love-messages
- ○ None of the above

Do you take pictures with the camera on your mobile phone?

- ○ I don't have a mobile phone
- ○ My phone doesn't have a camera
- ○ My phone have a camera, but I don't use it to take pictures
- ○ Yes, but not very often
- ○ Yes, I take pictures with my phone all the time

If you take pictures with your phone, what do you do with the pictures? (You can select more than one).

- ☐ I send the picture as a MMS to people I know.
- ☐ I add sound and/or text to the pictures and send a MMS to people I know
- ☐ I just keep them on my phone
- ☐ I post them directly to a webpage (moblog).
- ☐ I transfer them to my computer
- ☐ I print them directly from my phone.

Have you ever got a call from someone who's phone have called you by accident, and the owner of the phone don't know about it? If yes, what was your reaction?

- ○ No. Never happend to me. Is it even possible? !
- ○ Yes. I hung up. It felt awkward.
- ○ Yes, and I shouted to get his/her attention. Then hung up.
- ○ Yes, I didn't say anything and listened for a long time...

If you chose to listen, what made you do that? Could you figure out who the caller was, where she or he was, what the person did or who the person was with? Did the caller find out in the end? Could you please describe what happened?

If your phone accidentally called someone and you didn't know until after. Afterward you could see who, when and for how long the phones where connected. How would you react when you discovered it?

Would you concider using a mobile phone service that could automatically and constantly track your friend, and at the same time broadcast your own location, information about who you are with and what you are doing?

- ○ Never
- ○ Maybe
- ○ Yes
- ○ I'm already using a service like that

In the most unlikely event of you selecting the last alternative in the previous question: What service are you using? Why are you using it, how and for what?

Submit

Page 3 of 3: Internet Life

Question 19-28

How often are you connected to the Internet?

- ○ A couple of times a month
- ○ A couple of times a week
- ○ A couple of times every day
- ○ Constantly! At home, school, work and at cafés/bars)

If you use any Instant Messaging applications, how often do you start/open the program? (An Internet Messaging application is software for sending "live" text-messages over internet, such as AIM, MSN, Skype, iChat, Jabber, IRC, ICQ etc.)

- ○ I don't use IM.
- ○ A couple of times a year
- ○ A couple of times a month
- ○ A couple of times a week
- ○ A couple of times a day
- ○ It is constantly up and running.

When you have your IM-application running, do you normally have your status set to Available/Online or Away/Do Not Disturb?

- ○ Available/Online
- ○ Away/Do Not Disturb
- ○ What?! Can I change the status?!

If you do set your status to Away/Do Not Disturb as default - why do you open the application in the first place?

(please, tell me why...)

If you do set your status to Away/Do Not Disturb as default - why do you open the application in the first place?

(please, tell me why...)

If you have added a picture to your IM-profile, what kind of picture is that?

- ○ I have not added a picture
- ○ A photo of myself
- ○ A photo of someone else
- ○ A photo of an animal
- ○ A photo of an object
- ○ A logo
- ○ A drawing or cartoon
- ○ A place
- ○ Other
- ○ I change it all the time

If you would set a customized status or add a message to your IM-name, what kind of status/message is that likely to be? (You can select more than one).

- ☐ Current location
- ☐ My mood
- ☐ What I'm doing
- ☐ The weather outside
- ☐ The music I play right now
- ☐ Who I am with
- ☐ I don't add status or messages.
- ☐ Other

If you customize your status, WHY would you do do that?

(I'm just curious...)

How many percent of the people in your IM-contact-list do you meet frequently, say at least once a week, in real life?

0%

When someone start a text-chat with you, does it ever happen that you "filter", i.e. decide NOT to answer because you can see who writes?

- ○ Never
- ○ It has happend, but it is rare.
- ○ Yes, I do that a lot

How many of all your friends/colleagues use IM?

- ○ Most of them does NOT use Instant Messaging.
- ○ About 50/50
- ○ Most of them use Instant Messaging

Submit

ANSWERS FROM THE WEB-SURVEY

Privacy vs Availability

Answers on the question *If you do set your status to Away/Do Not Disturb as default - why do you open the application in the first place?*

• *"I don't want to be talked to all the time, but if it's something important I want to be able to get the message".*

• *"Not be disturb by people i don't want to speak to, at that time".*

• *"Want to talk to some people, don't want all of the people in my list to contact me or I am there just because I am sending some files to a classmate".*

• *"to see who's on... you don't wanna talk to everyone.. And sometimes you're busy and people can contact you if its important"*

• *"Because I want to chat with some relatives or close friends".*

• *"then i can talk to people i want to talk to, without being disturbed by other people".*

• *"Because there is something wrong with it. Either I have to be online all the time or away all the time. It doesn't automatically change the way I want it to".*

• *"I wonder who is connected and most people know I'm there anyway (even if it says away or busy). They also know I'm probably working. Its weird, in a way it makes you feel that you are being sociable even if you are alone".*

• *"to know who is on-line, and if I suddenly feel like chatting with someone that is on-line..."*

• *"Because I'm doing other things on the net at the same time so for that reason it feels more honest to have it on "Away". And I can still talk to the ones I really want/need to talk to".*

• *"To see if there's anyone interesting to talk to, if not, I set the Away/Busy status".*

• *"if there's people i want to speak to"*

• *"incase i want to talk to someone. When i was available all the time, I got often disturbed when i worked".*

• *"I use it to contact specific people and don't want to start a chat with some one by random. I usually only use skype as I prefer to talk directly to people".*

• *"good friends will I'm if they have exciting news even if it says 'away'"*

• *"to talk to other persons, and at the same time I wouldn't get interrupted by folks just saying "hello, what's up?" I usually call*

the status "school", so people don't take contact. Kinda self-centered i guess :-)"

• *"For å se om noen jeg vil chatte med er på."*

• *"Sometimes I'm just working while there are people online that -probably- would like to talk to me, but they won't if they think I'm away. Pretty smart. My default setting is an auto feature that puts me away when I'm away for real (15 minutes or somthing)".*

• *"To see if there is someone who I (!) would like to talk to, and to avoid useless and endless chitchat-sessions in which I have no interest".*

• *"to see who is on and choose to whom i want to talk to or not, so that no one can disturb me if i dont want to talk to them."*

• *"to see if theres anyone in particular i want/need to talk to, and/or give messages".*

• *"for å se hvem som er der"*

• *"To see who's online. If there is anyone I see rarely and that i really'd like to chat with..."*

Why Customize?

If you customize your status, WHY would you do do that?

• *"slogan.... whatever on your mind"*

• *"so people can get a better picture of who i am and what i do. more personal stupid :)"*

• *"To make people happy with funny messages that they can see without having to start a conversation..."*

• *"because i think it might be funny for my friends to know what im doing when we not meet, also i soon will have a collection of what i state that i do at work, as my application saves all my statuses. which is fun for me. and i have a comment about these questions, i dont use msn-like chats, i use qruiser.se which is a more of a community. so i have answered according to how that community works which is a bit different than msn for example, you cant really chat, but you can send messages and you can see which friends are online and what they do, if they write that. almost all my friends are there, i dont use msn because "no one" is there"*

• *"fun"*

• *"in some IM services (eg Audium) it's to much hassle to change status for each account etc. Easier if using only MSN etc"*

• *“I would add some funny quote. Just because I like to read them.”*

• *“just something... news perhaps. now i got "jeg slo meg sjæl i bondesjakk" which i did! kinda neat!”*

• *“just because it is possible I guess....”*

• *“To my friends online to know what I'm doing (most of the time studying)”*

• *“A funny qoute is what I usaly use, like: "Somethimes, when your a man, you use stretchy-pants in your room. Its for fun.." - Nacho - Nacho Libre”*

• *“to inform my friends”*

• *“Alltså jag gör det inte, för att det kräver för mycket energi, men stämningen och vad jag gör just nu är det jag tycker hade varit intressant att berätta om.”*

• *“So, as I said, people wouldn't disturb, and also seem important and hard working:-)”*

• *“I think it `s nice to know what others are doing without t o have to ask and start a conversation...”*

• *“I often don't but I would think that it's a "conversation starter", just like carrying around something really neat, like going "ohh, what's that". “*

• *“A custom message about what I'm doing is a sign to other people wether I would like to be contacted or if I'm busy”*

• *“to show others if they should bother me with smalltalk or say something important.”*

• *“to inform friends/contacts of what i’m doing and where i am, to prevent unnecessary calls and/or messages/dialogues.”*

• *“I would have a word of wisdom to tell people a bit about myself and my attitude.”*

• *“Because when working, If people add something non workrelated fun info, it makes the day a little bit brighter. “*

• *“Just so that my friends can see what I,m up to”*

• *“That add-a-message-to-your -name thing I just use for jokes and silly stuff. I even change my name regularly. hihi”*

• *“I take pride in always having a quota without meaning. Maybe because I am a difficult person. "wat over het gaan naar de staaf?"“*

Accidental Incoming Pocket-Calls

Answers from the web survey. The question was If you chose to listen [to the accidental incoming call], what made you do that? Could you figure out who the caller was, where she or he was, what the person did or who

the person was with? Did the caller find out in the end? Could you please describe what happened?

• *“Listened, shouted, listened, shouted. Heard two voices and understood that the person who had the phone was not the owner, but her husband on vacation with their daughter. Guess they found out since I sent an sms telling them how to lock their phone, since it happened twice in a short time. Other times I've only heard the sound of someone walking”.*

• *“My dad rings me constantly without knowing and I always stay on the line for a few minutes because I am curious about what he is up to. Mostly I hear him walking on the street or driving his car and talking to someone at the same time. The reason why this always tend to happened is because he doesn't know how to put on the automatic key- lock”.*

• *“Usually I just hear walking or some kind of physical activity. I call out once and hang up”.*

• *“I figured out who the caller was since he’s in my phonebook, heard who he was with and got some great news and he never find out… Not very nice of me but fun!”*

• *“Curiosity :) Sounded like I was in someone’s pocket. Do not think the caller ever noticed… I did not hear from him/her. I did not check who the number belonged to”.*

• *“It has happened a lot of times. Most of the times it´s my mother or my sister who´s got their mobiles in their huge handbags and forgot to put the keylock on. That´s what I figured out after listening for a few minutes. I called them up afterwards and told them about the call… they never figured it out at the time of the call”.*

• *“I was just curious what the person was doing. Sometimes when this occurs, there's somekind of conversation, and sometimes when there’s a conversation you can make out the words. That's kinda exiting, forbidden info :-)”*

• *“Usually from the person sitting on the phone or tumbling in their bag. Hard to pick out distinctive conversation or subject-revealing talk beyond single phrases”.*

• *“The mobile that "called" me was usually in a bag or pocket so I could not hear what the person was saying but could guess that she was walking”.*

• *“This has happened a couple of times. Always with someone i know. I listen, sometimes shout to get their attention (which is never successful) if I am not short of time I find it entertaining. They do normal boring stuff (unfortunately) one man went to the toilet, then sat down in his car, switched the radio on and drove off. I always mention this the next time I see them, thanking them for taking me to the "pocket theatre". They seem worried when i*

bring it up, probably wondering if they did something embarrassing…"

• "My father often does that when his driving the car with handsfree. I just hang up".

• "This happened to me several times by a friend living in a different city. I was at the bottom of his list of contacts, and he seemed to object to using the key-lock. I usually hung up as soon as I understood that there was no-one at the end of the line, but once I recall that a conversation could be clearly overheard, and I listened for a short while to hear if he was talking to anyone I knew".

• "Nick an Marks walk in Sidney. Otherwise I normally listen for a while and shout and when I dont' get any attention I hang up". The call this person refers to was recorded on her voicemail, and I myself heard parts of it. This is what she could hear; two people talking and ambient sounds of other people's voices passing by, footsteps on hard surface, outdoor noise from a city, traffic hum, cars driving by, sirens from a police car etc. From the fragments of the conversation she could tell that two males where talking. One spoke english with a swedish accent, but she could not hear who it was until the other person addressed him by using his name. The other male had an australian accent, and it sounded much like a mutual friend of Åsa and the caller. He live in Sidney. It could very well be him! They were talking about tall buildings, the australian guiding the swedish through the city. After a few minutes they ended up in what sounded like a bar. At the bar there was some sort of venue, or show. A male with high pitched voice and a bit feminine way of speaking was announcing something through PA speakers. Applause and excited whistling and shouts from the crowd. The voicemail ended. Probably because of a maximum limit to the message length. During the whole recording she could hear scratching noises, as if the phone was moving against something. The quality of the sound was quite good, so the phone could not have been placed in a bag, or in the pocket. She guessed the phone must have been in the pocket of a jacket, as it sounded like the phone was close to the voices that spoke. After listening to the message, she felt like she had been there with them for a few minutes. She got a clear picture of her friends walking through Sidney, ending up at a drag-show (?), perhaps at the bar where Marc works? This was much better than a postcard! The clear image in her imagination was followed by an urge to travel to meet the friends we have scattered around the globe.

• "If i know the caller, I would listen and figure what's going on. Its quite interesting to be inside someone's pocket while walking, at a party you're not invited to etc. If I didn't know the caller I would probably hang up faster. The caller never finds out…"

• *“I listen out of curiosity, they usually don't find out and if I do pick up anything of substance I might use that to crack a joke later”.*

• *“Jeg prøvde å høre hvem det kunne være. Tilslutt hørte jeg noen sa noe slik at jeg kunne tenke meg frem til hvem det kunne være. Jeg ringte hjem til den som ringte meg, men han var ikke der, men hans samboer visste hvor han var slik at jeg fikk ringt til noen der og tilslutt fikk han lagt på etter sikkert 40 minutters ‘samtale’ til meg”.*

• *“I was only curious as to if you actually could hear what was going on. I already knew who had called (it has been my husband) because that showed on-screen when the phone rang. That made it feel less intrusive, because if it had been a complete stranger I would have been reluctant to listen. I've never heard anything somebody talking but I have been able to understand that he was walking - I guess the phone call was triggered because of the movement”.*

• *“If I heard a voice talking, I would assume that voice was speaking to me. When I would understand it didn't, then i would say good bye out of habit and hang up. Most of the times that person was walking surrounded by sounds from the city. The caller found out in the end”.*

• *“First of all waiting for his attention, thought he did it on purpose. Then trying to figure out why he dosen't answer, ie listen for clues about what he's doing. A curious feeling, but after a while I felt stupid and sneaky and hung up”.*

Accidental Outgoing Pocket-Calls

Answers from the web survey. The question was If your phone accidentally called someone and you didn't know until after. Afterward you could see who, when and for how long the phones where connected. How would you react when you discovered it?

• *“Jeg har gjort det flere ganger og blir alltid flau for å ha forstyrret uten mening. Blir og flau og nysgjerrig på hva jeg har sagt og gjort når jeg ringte uten å være klar over det. Har ringt uforvarende en gang og lagt ut personlige oppfattninger til en venninne om personen som jeg ringte opp. Veldig flaut siden den andre fikk med seg hele samtalen. Liker ikke at folk vet ting om meg som jeg ikke har kontroll på”.*

• *“I would call them back, and apologize for the inconvenience”.*

• *“Call the person again and explain the accident”.*

• *“Depends on who I called and what I was doing at the time. If its a close friend I would tell them later and laugh about it. If it*

was some one I know on a formal basis (Boss etc) I would be embarrassed and probably either apologize or pretend it never happened".

• "Oh, my god! What did I say about her… ;-)"

• "Smile. Would check to whom it was. Check the time and figure out what I maybe were up to at that time.

• "Depending on which person it was (girlfriend, ex, mum etc) and in which situation the call was in (bragging to my friends, sweettalking to my girlfriend etc). Most likely i would get embarrassed. If the phonecall was over a long period of time i would get annoyed and irritated, no matter who the receiver was…"

• "It's happened a lot of times with a guy named Anders. My phone always calls Anders. Now he's renamed B-Anders, so he won't get the calls anymore. I now have the person A on my list with # as the number to dial".

• "I wouldn't care to much if it was someone I knew well, or if the connection was very brief. If the connection had lasted for a long time, I would be annoyed, and demand an explanation if the person on the receiving end was someone I knew well. If I didn't know the person, I would also be annoyed, but not daring to ask why he/she hadn't hung up immediately, hoping nothing sensitive was overheard and blaming myself for not using the key-lock".

• "Of coarse with some embarrassment. Depending who was called up, I would called her and check. But I figure it has probably happened to me, but I've never noticed it happening".

• "I would say to myself: 'Hundre kroner i tellerskritt rett i dass… Bra jobba mongo!'"

• "I would have wondered if I had said or done anything embarrassing or something that would hurt the one calling. I would have fantasized about a conspiracy, or someone from my past trying to reach me, someone I haven´t talked to for a long time! Or I would have hoped for someone calling to tell me that I had won a lot of money maybe".

• "Embarrassed on some occasions. It has at least once called a very formal business contact. He rang me back and told me it had happened, which gave us both a laugh".

• "If they where connected for a long time i would get pissed off, 'cause then the person more likely have been listening to me".

• "Depend on who it is. If I knew the person well, no problem but I would tease the person slightly for talking so long with me. If not I would not do anything. My phone actually called the first name in my phone book once, by TOTAL mistake (a bad fling in

another country), then I had a missed call from him, on another number, and called to his answering machine and then suddenly realized what happened when I tracked my calls. Didn't leave a message. Then I changed the order in my phonebook by respelling his name".

• *"Depends on who I called... if it's someone I rarely speak to, maybe someone I really don't know why I have the phone-number to, it's a bit embarrassing. But most times this have happened to me, it's someone I've called earlier the same day, and it's no problem. And the phone has usually been located in my bag, and they haven't been able to hear anything but noise. I just got a new phone with "flaps" so I know this luckily won't happen again :)"*

IDEA-CARDS

Recognizable Riddle

Idea no.: 1

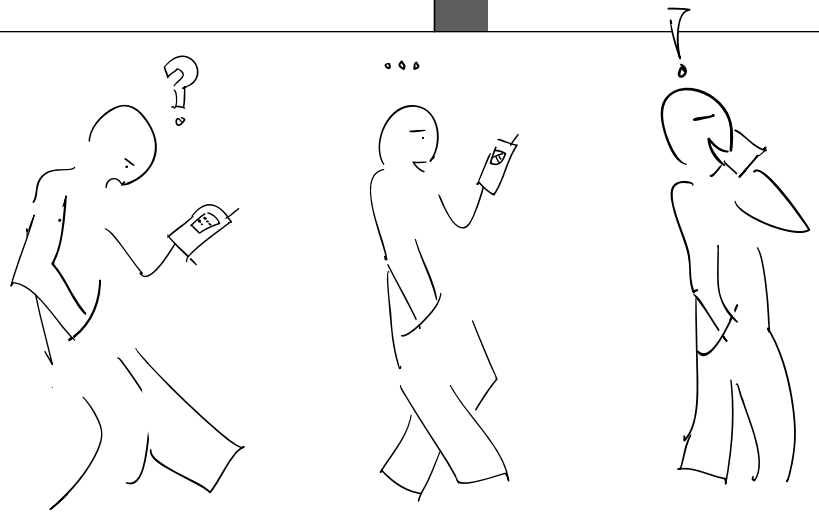
You "mark" some physical places ("zones") with your phone. Then, provide some sources of online content you generate (blog, flickr, del.icio.us, twitter, MySpace, etc.). Your friends do the same, and when you are present in any of your own zones at the same time, you both receive a clue, like the most recent blog-subject, del-icio.us-bookmark etc, but no ID. If neither of you recognize the person behind, the next clue could be the most recently posted picture. This goes on until one calls the other.

+

- *Replicating the gradual recognition of a familiar person when approaching each-other face-to-face may give some of the same bonus-experience created by the real thing.*

-

- *Only for people with a quite active and diverse online presence.*



Dislocated Co-Commute

Idea no.: 2

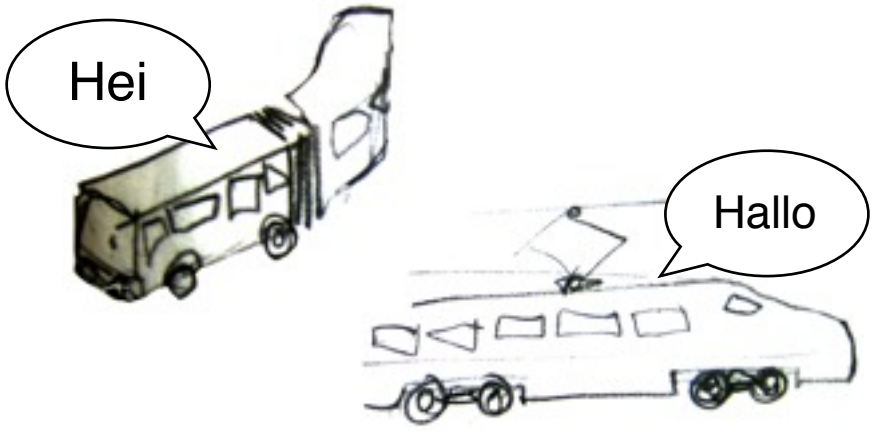
Public Transport is a zone. When you enter a bus, train or subway, you get a list of familiar people - also traveling by public transport just now, anywhere in the world. Call someone on the list. You know s/he is available and would probably like to kill some time.

+

- *Traveling with public transport becomes a "social object".*
- *Most people regard travel-time as wasted anyway, this could make use of time when not occupied with other things.*

-

- *Most people have same routines every day. Can become less exciting over time when you see the same list day after day.*



Picture-Ping

Idea no.: 3

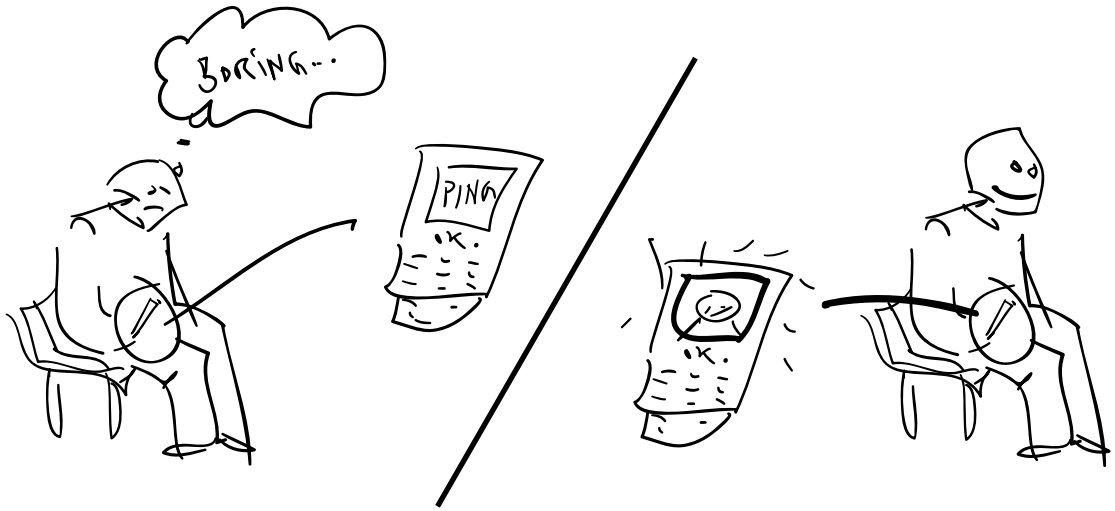
When in a zone, you can "ping" friends present in their zones. Anyone receiving a ping should respond by taking a picture of anything interesting in their immediate surrounding and send it back. After a short while, the pinger and all responding participants get a slideshow of all the pictures. Someone took an especially interesting picture, and you call him/her to find out more about it.

+

- *Could maintain close relations between friends by providing close-to-synchronous glimpses of the physical surroundings in which friends are located.*

-

- *concerns*



Flickr Icebreaker

Idea no.: 4

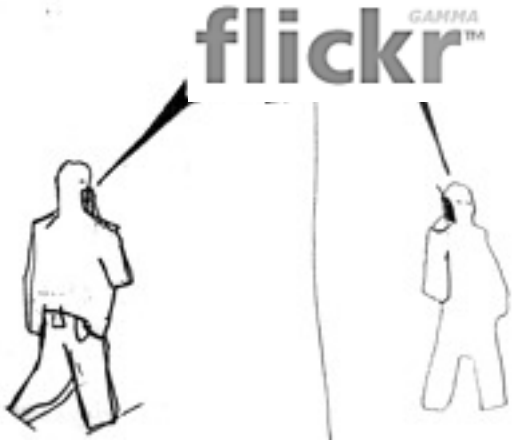
When you are present in one of your zones, you get the most recent flickr-picture from friends who are simultaneously present in *their* "zones", elsewhere.

+

- *Pictures can encourage people to call each other*
- *Reciprocal glimpses into the life of friends.*

-

- *Require frequent posting to flickr*
- *Boring if encounters are to infrequent*
- *The connection between physical place and flickr may be a bit far-fetched.*



Pocketcall-trade

Idea no.: 5

When users enter a *zone*, their phone silently records 30 seconds of audio. If a friend-user enter his/hers place or path somewhere else, both users' recordings is transfered to one-another.

When you get a (recording of a) pocketcall, you then know that someone you know simultaneously get one from you.

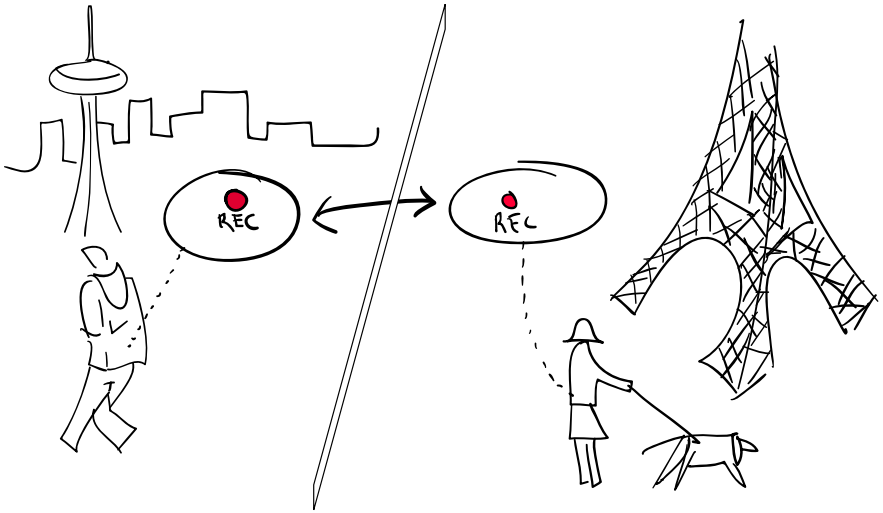
Figure out who you pocket-called. Then call him/her.

+

- *This could potentially create a high level of excitement*

-

- *Most of the time, pocketcalls tend to be really boring.*
- *Many people have reservations...*



3rd Degree Encounters

Idea no.: 6

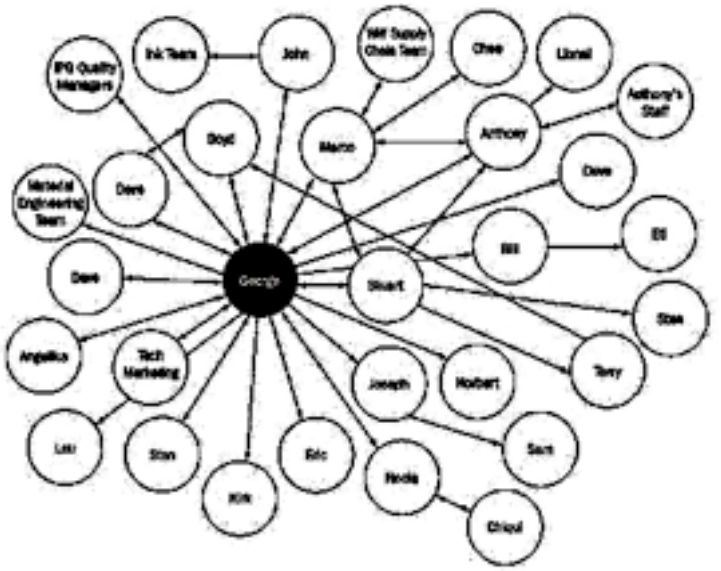
You choose 3 closest friends, then tag 3 locations where you would like to be available and 3 different online sources to share (pictures, text, audio). Your selected friends receive a message encouraging them to do the same. When you are present in one of your *zones* you receive the most recently posted "feed-item" and name - from anyone within a 3-step relation of you (friend of friend of friend), simultaneous present in his/her *zone*.

+

- *Get a more mingle-like and direct introduction to people linked to friends of you. The relation-chain become a social "object" to triangulate around*
- *The system grows by inviting (viral).*

-

- *The invitations may be considered spam.*



Ebay Courier

Idea no.: 7

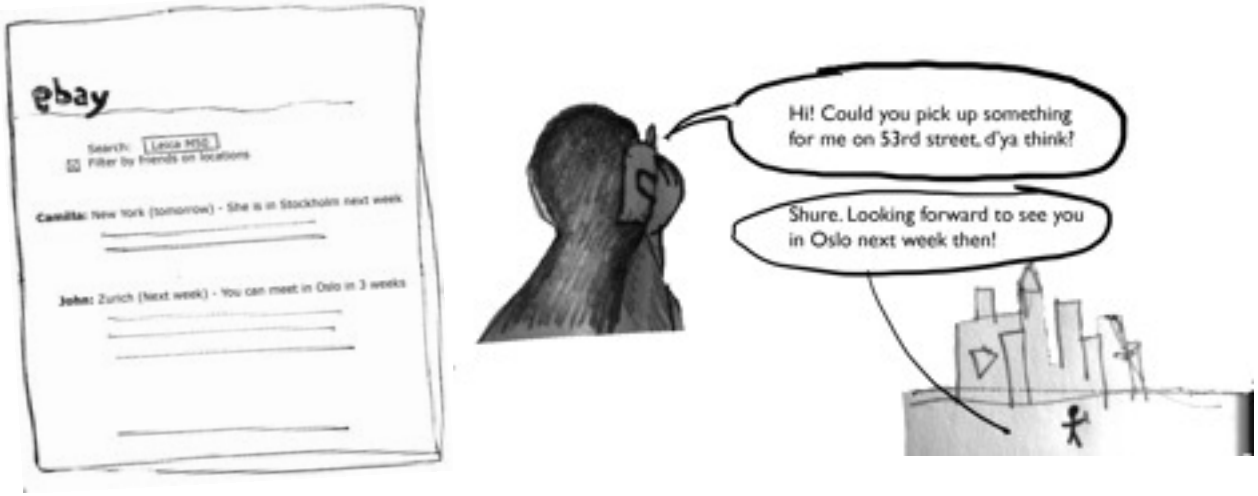
Find people that are related to you max 3 steps away, (friend-of-a-friend-of-a-friend) and either is or is going to be in a city where an item you want to buy on ebay is located, and traveling to a place where you are/or are going to be soon. Call the person and ask if s/he could collect the item after bought it via ebay. Meet up when you are in the same city.

+

- *Meet new & somehow related people face-to-face*
- *Help each other (bond by owing one)*
- *Save shipping-costs*

-

- *Problem with big items*
- *Time-investment for the "collector" may be considerable.*
- *Require many people traveling*



LinkedIn on Location

Idea no.: 8

When a friend of a friend is near by, you both get a message with a few *clues*, name of your mutual friend and your pictures and names. Then, spot each other. Approach and say hi from your mutual friend, talk about some of the *clues* etc.

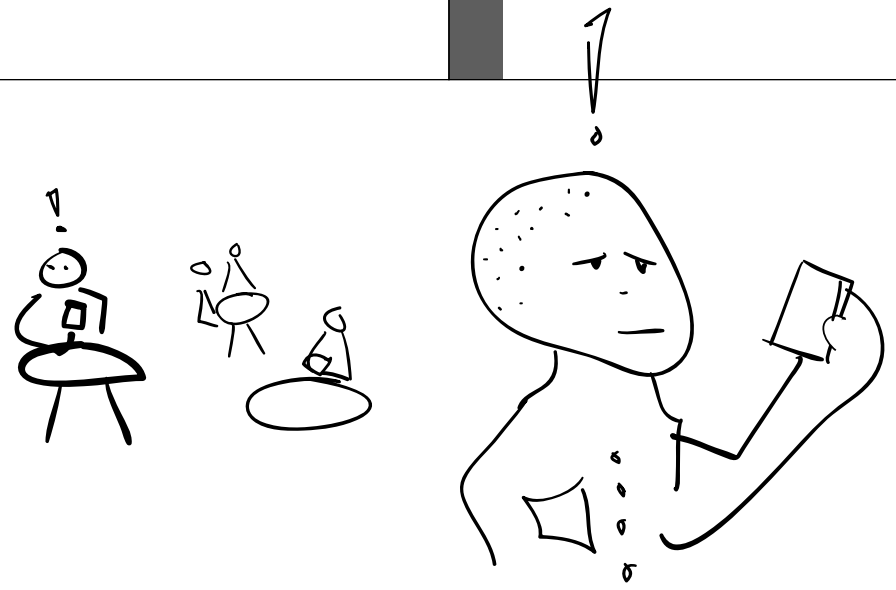
Later: call the your mutual friend and tell about the encounter.

+

- *Expand your network of friends*
- *Get something to talk about with a friend*

-

-



Quem é quem? *(who is who?)*

Idea no.: 9

You are in one of your zones simultaneously as some friends is in their zones. You can see each-other, but ID is not revealed. Everyone takes a picture. The point is to guess who is who. If you don't guess the ID from the picture, you can request another picture. When you think you know, you match the secret person with who you believe is the right person in your address-list. If you're right the person get a message saying that you know his/her ID. You can see if he/she have guessed your ID yet.

+

- *It's a GAME!*

-

-

“Finite Provinces of Meaning”

Idea no.: 10

An intelligent system capable of learning what kind of relations the user would usually be focused on at different times of the day, at which location. It could for example detect if you are more likely to make professional related calls in the morning when traveling to work, and private/personal going from work.

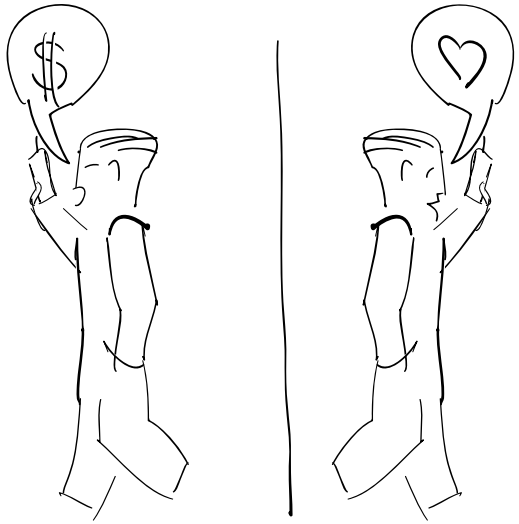
After learning your pattern, your phone will suggest calling contacts you haven’t called for a while.

+

- *May give meaning and variation*

-

- *Too complex. Easy to loose overview over the system.*



Stumble-Into-Meter

Idea no.: 11

A widget telling you how great the chances are for stumbling into someone you know at your present location, based on a log of your friends locations.

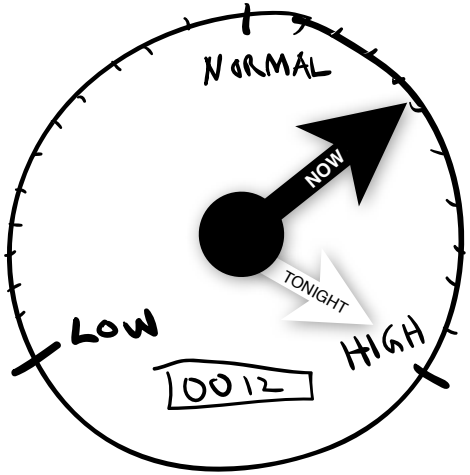
If the meter say "low", it may also indicate that later in the afternoon the same place could be rated as "high".

+

- *You may discover that the places you thought had the highest odds for accidentally meeting someone.*

-

- *May contribute to increased Continuous Partial Attention*



Ideation by surprise/accident

Idea no.: 12

A network/pool of people that when in their zones could be used as a brainstorming-group.

Develop a technique for ideation that includes non-present people with absolutely no way of expecting or preparing for a question, which may be a good thing in some types of brainstorming

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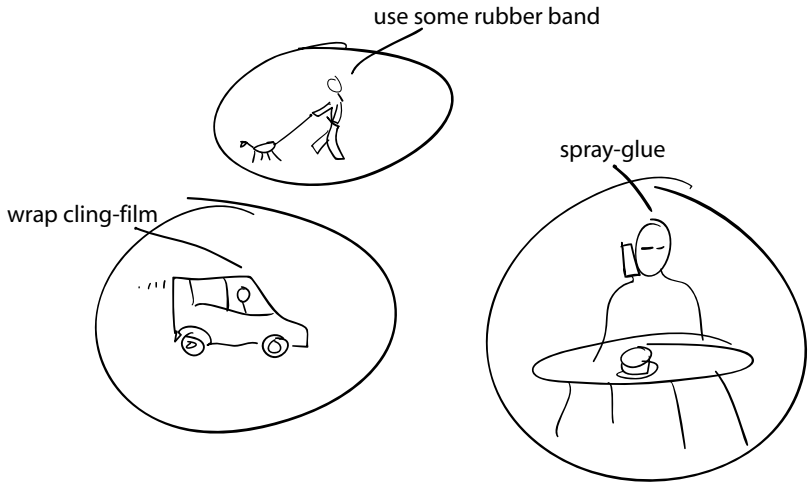


Second Second Life

Idea no.: 13

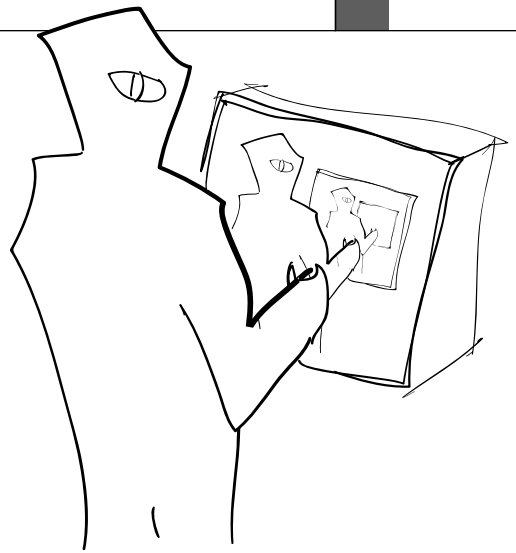
A virtual phone-booth inside Second Life where avatars can "call" real friends, present in their *zones* in real life and then give missions and instructions about what to do, where to go, take pictures of things etc.

+

- *Weird!*

-

- *weird...*



The Usual Suspects

Idea no.: 14

Artificial Intelligent system that learn who your friends are and also where and how you normally contact them. After a while the system would silently take pictures, record audio or recompose previously sent text-messages and start contacting some of the "usual suspects", by itself, based on where you are, what time of day it is etc.

+

- *pros*

-

- *concerns*

User-defined Open Framework

Idea no.: 15

Provide a system where the users have the possibility to mark locations, share different kinds of content, create their own contact-lists and define a set of criteria.

Users create their own "services" and decide content and meaning relevant to them.

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- *Potential of creating very personalized services*
- *Create new and innovative areas of use*

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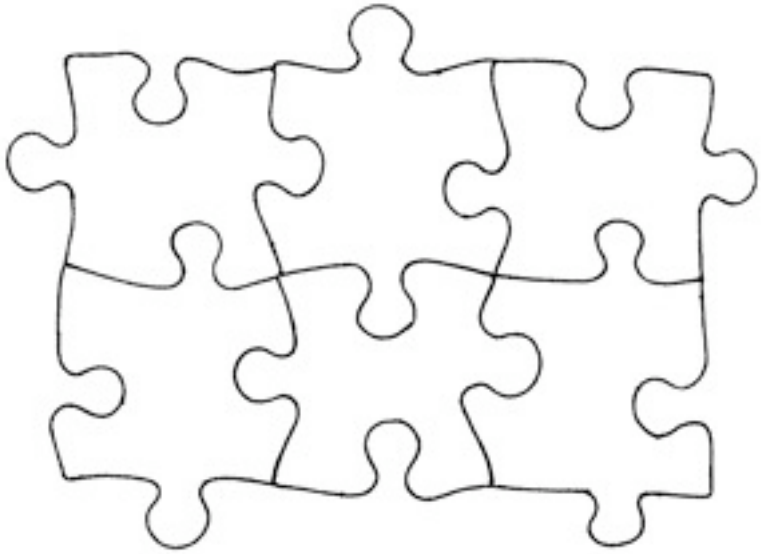
- *High threshold...*



Friend-finder

Idea no.: 16

Many people have at least once googled old friends they haven't seen in ages. This system will search daily for your list of lost friends on all relevant online sources (flickr, friendster, linked-in, del.icio.us, facebook, skype etc). If anyone matching your search just opened an account somewhere, you will get a message to your phone while in your *zone* with a clues about what kind of item he or she posted.

+

- *Making possible to stumble into clues about friends you may not have in your "system".*

-

- *Require detailed list of search-criteria in order to work.*
- *The relation to the zone may be a bit far-fetched*

Shoppinglist

Idea no.: 17

Application that compare your purchases with your friends' purchases, based on what you buy, and where. You get a message if you buy the same item as any of your friends recently bought. Or if you purchased something at the same store as any of your friends just shopped at.

Call each-other and compare.

+

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• *Narrow teenage user-group?*

• *Potentially very boring to get a thousand messages about someone just bought milk and bread...*

"Your friend Claire bought the same jacket as you just did, 4 days ago at HM in Katthult"

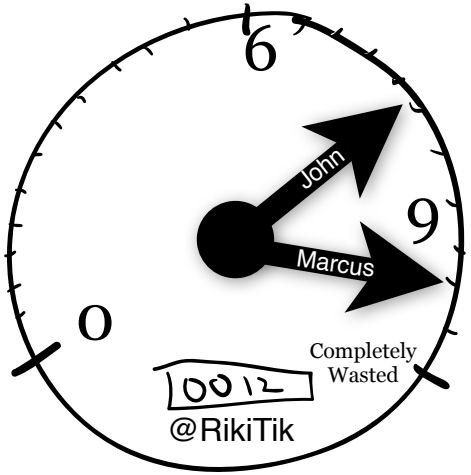
Drunk-o-meter

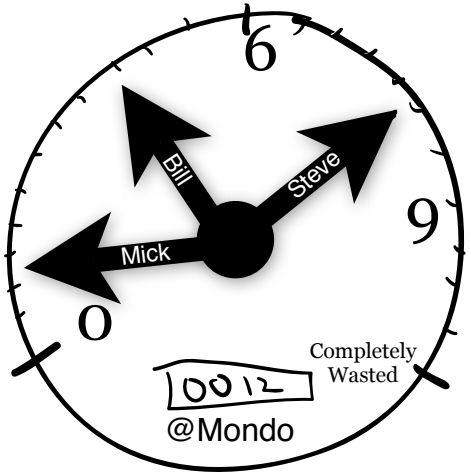
Idea no.: 18

Watch friends consumption during a night out.
Compare others, elsewhere.

+

-





Risk

Idea no.: 19

Someone else may mark the same zone as you. The one that spends most time in that particular zone will get ownership of the zone. If you "own" a zone, you get something (more features, you can decide if others may use the zone or not, if others should "pay" rent, let you see some of their pictures etc).

+

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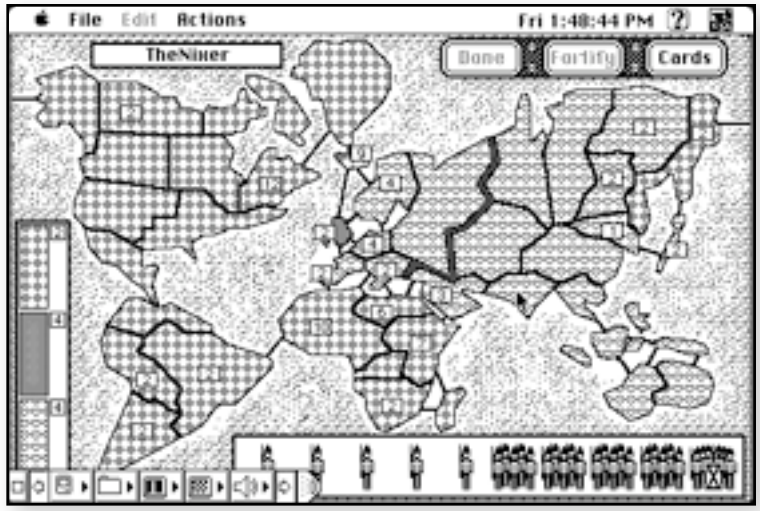
-

• *Does not connect friends*



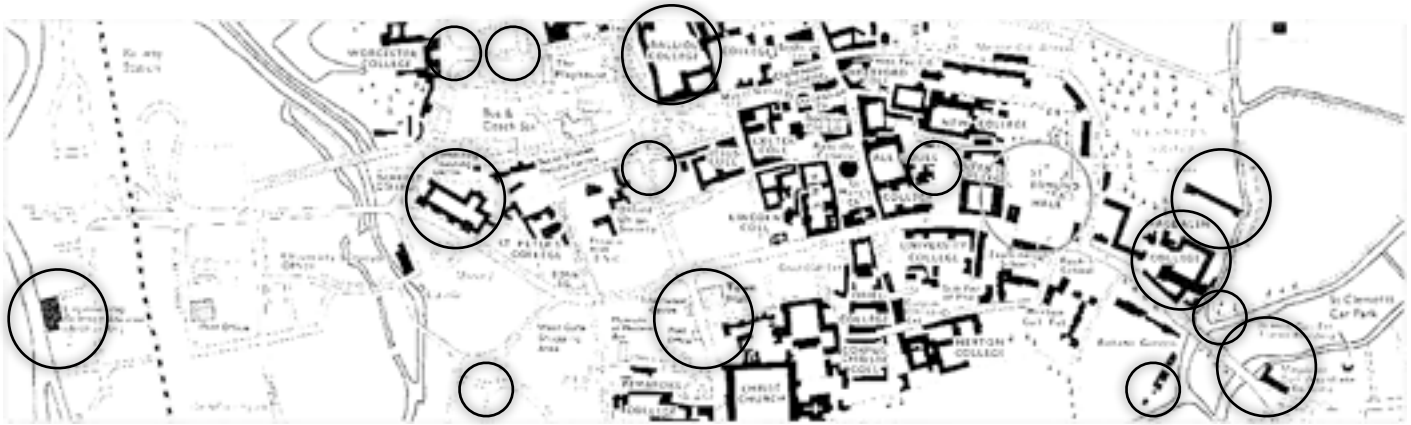
Zone-Safari

Idea no.: 20

You just moved to a new city, and as you wander around you explore the city by "reading" other peoples zones with your mobile. You could create a profile (age, interest, workplace, education etc.) and see if it matches anyone with existing zones. What kind of zones is used for what purpose at what time of day? You walk by an empty café, but you can see that it's often crowded tuesday nights with people that partially match you profile.

\+ • *pros*

\- • *concerns*



OurZone

Idea no.: 21

When "marking" a zone, you get info about who else have marked the same zone, their profile, when they're usually present in the zone and what other zones they have marked.

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Inspired by del.icio.us:

(http://del.icio.us/joakimformo)

Generated Location-Description

Idea no.: 22

You define a zone, and an analysis of the environment generate a text-message with a description of the surroundings.

The analysis would be based on sensor-input; altitude, noise-level, sound, presence of other people, temperature, air humidity, distance to other friends, movements, direction, light etc.

+

- *More interesting with info about the actual location, right now.*
- *As an automatically transcribed pocketcall*

-

- *Require more common implementation of sensors in mobile phones.*

"HI! I'm about 50 kilometers south-east from where you are. I'm with Caroline and someone with a Nokia 6300, we are walking outdoors at sea-level. It's cold. We hear cars driving by, seagulls, waves breaking".

Relative Distance Monitor

Idea no.: 23

If a friends live in another country, you get a message when s/he arrive in your country of residence. If a friend live in another city, you get noticed if s/he arrive in the city you live in. If you live in the same city, you get notified if you are in the same area of the city. If you live in the same neighborhood, you get a message if you are less than 50 m apart.

+

- *location may be used as an excuse to meet up more often*

-

-

TV together

Idea no.: 24

When watching TV, you can see a list on your phone with friends watching the same channel as you, right now.

Call each-other and watch together.

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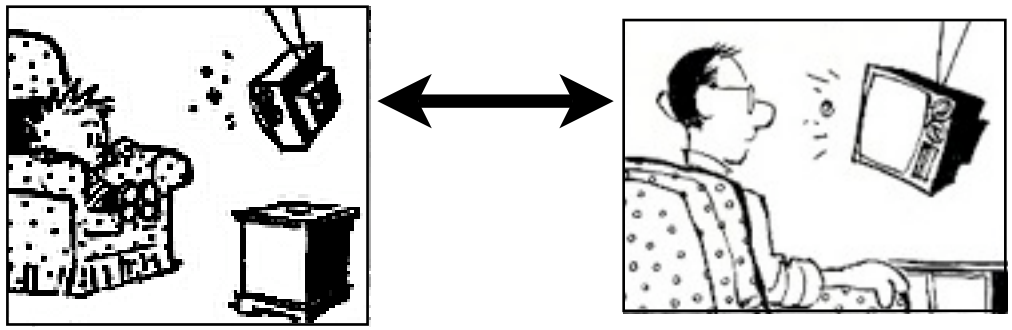

WEBLOG

An important tool in the process have been a weblog. Notes and process was continuously blogged in order to get feedback from others and as a way of keeping track of my own progress.

The blog can be reviewed at the following URL:

http://www.joakimformo.com

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The following people have helped me with this project. I thank You! Jonathan Romm, prof. Simon Clatworthy, Oskar Juhlin, Liselott Brunnberg, Anton Gustafsson, Arvid Engström, Etienne Thessman, Johan Klövstedt, Filipe Balestra, Mosse Sjaastad, Anette Andersen, Jørn Knutsen, Ana Betancour, Christina Öhman, Turid Buner Formo and Åsa Formo.