

MOSCITO1 – SöCAP-GX

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Final Report

Introduction

In this report, which is tied together with the [MOSCITO](#) projects field of research, we have studied social capital in relation to the synchronicity of communication. This report, with some limitations, will try to answer how communication synchronicity influences collaboration in a working situation of global context and how again this relates to social capital. We, the group who have worked on this report, have tried to find out whether one type of communication is best overall or if different types of communication are equivalent and/or based on geographic and efficiently-based factors. To investigate this we have carried out five depth interviews with people whose work are dependent on a lot of communication both with physically close colleagues as well as people in different countries and time zones. After analyzing each interview objects we have then tried to extract similarities and differences, as well as each interview objects personal preferences. The important part of this report has not just been to gather these data, but also in trying to explain why and how in relation to how communication technology has been, are today, and also will be in the

future. To explain this evolution of technology we have used older articles and theories as a measurement of comparing how technology was 5 - 10 years ago. The depth interview covers how communication is today, and to investigate how communication will look in the future we have used a mix of both theories and data from our interviews as we in each interview asked the interview objects how they would like communication tools to function optimally.

Background

About MOSCITO

MOSCITO is an abbreviation for "Mobilizing Social Capital in Global ICT-based Organizations", and is a collaborative work between Telenor, The University of Oslo, Norwegian University of Science and Technology and StatoilHydro, as well as various partners from universities abroad. The project is partly funded by the Norwegian Research Council. Their purpose is described as such:

"The MOSCITO project will generate new empirical insights and accumulate evidence in the form of practical organizational knowledge as to how organizations operating on an international scene can use specific communication technologies to develop, maintain, combine and exploit social capital. The project will focus on three central types of technological clusters: mobile applications, web-based applications and e-mails & messaging, and investigate how each of these clusters affects the deployment of social capital in organizations."

<http://www.samforsk.no/sitepageview.aspx?sitePageID=1198>

In the starting phase of our study, we had a meeting with Telenor's MOSCITO project researchers. There we got to know some of their basic ideas and the ways in which the researchers in telecommunication explore the concept of social capital in relation to their technology strategy. The policy of Telenor is stressed as "strategic investor in operations abroad with an ambition of harmonizing the technology platform in all operations"; and a consolidated technology strategy, hence, manifests the importance with the need of global coordination in such organizations. For a more tangible approach than only theoretical analysis of utilizing social capital, they have

established a group called CONTEST, which stands for COMmon TEchnology STRategy for Telenor group. "Social capital expressions" derive from CONTEST plenary meetings, which are held four times per year and provide physical meetings for the participants working for Telenor in different locations around the world. Besides the follow-up documents, the physical meetings provide context and directions for work streams that characterize the CONTEST way of work as "an important tool in Telenor's business developing tool box".

Considering the time and resources we have available for this project it is too complex for our MOSCITO group to get as deep in such a wide field of research as Telenor have done, but we do benefit a lot from learning about their approach. Taking Telenor's basic ideas from MOSCITO as our starting point, our research focus remains on how communication and collaboration are facilitated or hindered by different communication technologies within working situations in a global organizational context. We undertake this project by gathering information through a qualitative research method and have thereby selected five qualified case studies.

Social Capital

Social capital has in sociological theory been referred to as: "The advantages of having access to a rich and differentiated network of relations." Further explanation from the Project Proposal on Mosquito's website is read as follows: "The goodwill that is engendered by the fabric of social relations and that can be mobilized to facilitate action". Capital is by most researchers used in the sense that it demands some sort of investment to give a return. Social capital can also be regarded as a quality or resource residing in the relation between actors. It is believed that social interaction has side effects related to increased motivation and a higher level of productivity which is closely linked to social capital. The concept of social capital, or the value that can be derived from social ties created by goodwill, mutual support, shared language, common beliefs, and a sense of mutual obligation, has been applied to a number of fields, from sociology to management. It is only lately, however, that researchers in information technology and knowledge management have begun to explore the idea of social capital in relation to their field. Particularly on a micro level as resources available to actors through participation in social network, and on a

system level as relation based resources which are of importance for a system's qualities and performance. (Wikipedia on social capital, 2008)

Research question

In this report our main question to answer will be: “How does communication synchronicity influence collaboration in a working situation of global context and how does this relate to social capital?”

Focus

What works when and what doesn't?

New types of information and communication systems facilitate new ways of communicating and cooperating. But still, there are no systems available at this point that can translate tacit knowledge just as efficiently as when “delivered” face to face. Organizations located in different countries rely heavily on modern communication technologies, especially the internet and its extended use. If employees could improve the communication technologies currently available to them, what would the improvements be? There are various ways of communicating and different situations require different communication methods. In this report we will focus on synchronous and asynchronous communication systems. What are the benefits and what are the obstructions with these systems in regards to communication in different situations? Determined by the situation, we also want to investigate which type of communication system is preferred and what the underlying reasons for a person's choice would be?

People employed in internationally orientated organizations often run into challenges concerned communication. We are curious with regards to how communication is carried out in these types of work situations, and how it affects the efficiency and cooperation between the partners involved. A fact is that in situations like these, communication is often carried out asynchronously due to the different time-zones and working hours. In addition

the employees often descend from different cultures and have different native languages, which is another factor that can create complications with communication between the workers. We ask ourselves, will valuable social capital be lost in cases where inadequate technological applications are utilized to communicate?

With this in mind, we see that a person working in a setting like the one mentioned above is suited as a qualitative research object related to our investigation.

In the next section there will be an elaboration of the terms communication and accessibility which are particularly relevant in regards to the selected area of investigation.

Communication

Communication is the process where a person, group or organization (Sender) transmits an information type (message) to another person, group or organization (Receiver), and where the receiver gets a certain understanding of the message.[Kaufmann 2008]

Achieving productive collaboration depends heavily on methods that provide effective communication. Effective communication models and having access to different customized channels enabling the transfer of it, is a crucial factor for successful collaboration across organizations and country borders. Arguments supporting this may include:

- Geographic barriers exclude «face to face» communication, which is regarded to be the most efficient form of communications in a great number of situations
- Language and cultural barriers result in different interpretations and perceptions of messages
- Different time zones between communication actors reduce significantly the time available for carrying out synchronous communication

We have chosen to focus on asynchronous or synchronous communication methods and will make these concepts fixed points through our qualitative research which will be explained in further details in the section concerned method. Stated below is a definition of asynchronous and synchronous communication.

“Direct communication, where all parties involved in the communication are present at the same time (an event) is a form of synchronous communication. Examples include a telephone conversation, a company board meeting a chat room event and instant messaging. Asynchronous communication does not require that all parties involved in the communication need to be present and available at the same time. Examples of this include e-mail (the receiver does not have to be logged on when the sender sends the e-mail message), discussion boards, which allow conversations to evolve and community to develop over a period of time, and text messaging over cell phones.” (Definition at definethat.com 2008)

Accessibility

In a globalizing context, employees are required to work in different time zones, spending more time traveling and dealing with international customers. This is required in order to strengthen the firm’s competitive advantage and keep up with the expansion into new markets and countries. It would not be possible for workers to respond to customers’ requests, nor for project-orientated teams scattered around the world, to cooperate effectively and efficiently without the assistance of mobile technology.

From the definition by the dictionary, mobility means the quality or state of moving freely. It has many different dimensions: physical movements, control or ability of moving, by means of mobile facilities and un-stationary terminals etc. If we look at how communication is constituted, we might crudely divide the structure into three layers from a technical perspective. The top layer is the service, realized by the mid-layer of the application and the lowest is the physical infrastructure where mobility is implemented. We are in a state and process of creating such an environment where people are given the tools to access all

manner of electronic communications, media, entertainment, commercial services, information resources, personal files and academic content, in both mobile, desktop or laptop settings. Mobility facilitates thus somehow different services, and is closely connected with communication, accessibility, cooperation, networks and information systems and therefore also related to social capital. The development of internet and cellular network reinforces partially the network building which facilitates allocation of information and social capital.

Mobile communication systems facilitate accessibility through dominant technologies like PDA's, cell phones, desktops and stationary terminals. Working hours are not what they used to be and people's place of work is not what it once was. These days one's office can be everywhere, at home, at the airport or even in the back seat of a taxi. Mobile tools ensure people the capability of increased flexibility and faster correspondence in order to accommodate the current situation.

Method

Why we have chosen the specific method:

We have chosen to use depth interviews as our main method for collecting and analyzing data. At first we were considering using methods more focused on quantitative data which could be obtained through other methods such as polls and surveys. However, after going through what kind of information we needed related to different work situations, quantitative data would not cover the different specters of communication we were going to research. As one will see later on, our interview objects have different backgrounds, working situations, and some of them differentiated a lot when it came to preferences. We were also interested in not only what kind of communication tools they used but also why they used them over others – this depth analysis would render data from a quantitative source like a poll almost useless.

As Silverman(2005) points out, there are no brownie points for gathering your own data, since the real work lies in the analysis we first tried to find some already gathered data through the library and the internet – however, this turned out to be very hard since a lot of

the already gathered material on this specific area were often too old and even 5 year old data would be pretty much useless since communications tools have evolved a whole lot the recent years. However, old articles can also be interesting as you can see how communication have changed in a small period of time. Based on this unsuccessful hunt for already gathered data we decided to find our own interview objects. It was essential that the interview objects were in a type of work that used a lot of communication daily and that some also had to face the challenge of time and space by working with people in other countries.

How we carried out the method:

Carrying out a depth interview in itself is not hard if you know what you are after. The real work lies in preparation and the analyzing after the interviews are carried out: First we had to prepare a good outline for the interview so we could get as much data as possible. We had to be careful not to have too leading questions – but rather let the interview object explain as loosely around the subject as possible since you often can get new and surprising data when straying from the set questions – at the same time, it is also important that you do not stray too much so the analysis would get overwhelming with too much useless data. We first carried out a test interview to check if the questions we had come up would be satisfying in regards to what kind of data we were after.

To record the interviews we used a tape recorder, since this is the best way to not lose the flow of the interview – if we had to write down everything the interview objects said, this could lead to us losing train of thought and the whole flow of the interviews.

Analysis of the depth interviews:

After we had carried out the interviews and were left with the interviews on sound files, we transcribed them, and then extracted the data that was relevant for us. After extraction, we compared the different interviews to find similarities and differences. We all did this individually, so that we could different views on the different topics.

In the analysis part that follows later on, we will uncover what we found, and also how they relate to our initial questions.

Interviews

Before we present what we found, we will first summarize all the different interviews in short revisions:

Interview A: (IA)

The interviewee is a software engineer from Sri Lanka, currently working for a start-up company called Moota Telecom with offices in Oslo and branch offices in Colombo (Sri Lanka). Since he started working for Moota Telecom one year ago, IA has traveled to the Oslo office twice; otherwise he lives in Sri Lanka, working at the Colombo office. Before he joined this company, he used to work for an Irish company headquartered in Dublin with branches in Paris, San Francisco, Narita (Japan) and Colombo (Sri Lanka).

His preference for communication at work is face-to-face at present as he feels it best when working among a small team; although in his previous work he used more email communication for collaborating with a larger group. Face-to-face communication is valued by him as most efficient way of working for his current team comprised of a smaller group of colleagues; while he would often also communicate with the remote office through chatting or voice/audio conference calls by Skype. The choice of communication channels depends also on the situations or on the message being transmitted. Trivial message may well be transmitted by text chatting tools or by email. Whereas, if issues are unclear or it needs a common understanding, conference calls next to face-to-face communication is the most efficient way.

He also feels that informal communication, such as chatting around common interests or sharing individual private concerns, benefits closer relations among colleagues and better

teamwork. The interviewee mentions that at his previous work, the yearly collective trips they used to have, also helped with team relationship building and provided higher teamwork outputs. He explains that according to his culture codes, one is reluctant to submitting demands and arguing with seniors. Therefore, he feels that it takes time to get acquainted to and learn culture codes of a new work environment and a new project team. For him, "meeting the team mates, at least once or twice" helps build trust and strengthen relationships.

Synchronous communication for him personally is not always better; there are times he gets disrupted from ongoing tasks, and it gets worse especially when he is already deeply focused on working on many concurrent tasks. Asynchronous communication like emails become thus preferred in such occasions; what's more, emails have better documentation properties as is the case of most written communication compared to oral communication, and as communication proof, messages are easily archived and thus preserved for future use. Otherwise, when information needs to be transferred to several colleagues, emails are also preferable. Nevertheless, as he points out that emails may sometimes easily be unanswered and neglected by the recipients.

The interviewee finds it mostly efficient to communicate in his mother tongue, and even have problems sometimes with face-to-face communication because of the language barrier. Time-zone differences cause problems when somebody wants to start a working day while the others are about to finish. He therefore suggests that this issue might be overcome if both parties are willing to compromise on working hours.

Interview B: (IB)

Interviewee B is a software engineer and is Sri Lankan Tamil. His current place of work is Moota Telecom and he is based at Colombo branch office in Sri Lanka.

He thinks that before starting projects, it is important to get to meet project team members physically and maybe also have informal social events. He points out that getting to know project team members helps in achieving better collaboration. Most often, he shares information and discusses issues during informal settings and finds this way of communicating efficient. The employee points out that although he could use audio conference calls and chatting sessions, he would always ask for written emails as this might be used as documentation. In situations where he prefers synchronous over asynchronous communication he says face-to-face meetings or conference calls while demonstrating a product for a customer or when discussing solution architecture with system designers or architects. He summarizes that synchronous communication is preferred in situations where instant feedback or interaction is needed. However, sometimes email is more appropriate for customers to use because of the time zone differences. Typically, customers would send requests by email during their work day and expect answers early in the morning the following day. Regarding Instant Messaging systems, his preference is Google Talk as it is easy to use and allows for saving communication sessions. He suggests as improvements, better integrated tool for IM management could be a page syndicating all IM systems and saving all chatting sessions.

When it comes to synchronous vs. asynchronous communication, he definitely prefers synchronous communication since often when devising a solution he needs to make sure that he and the customer together have reached the same understanding. Also, using remote desktop or Net Meetings are useful when a prototype solution is ready in that this eases communication. A combination of synchronous and asynchronous communication is his preference. He thinks that among the benefits from synchronous communication are instant feedback from a live person and not a screen. This is important and will increase a person's motivation.

Interview C: (IC)

Interviewee C is a software engineer of Norwegian nationality, she is currently working as head of development at the Norwegian company sol.no. Her workplace is located in Oslo, but she does some traveling to meet with colleges in the Nordic countries.

Her main task is to follow-up employees and IT-projects. A typical workday consists of meetings, communication through email, and various chat bases systems such as Skype and msn. In addition she spends much time doing follow-up work at their project management system [basecamp](#), and sharing documents using [confluence](#), a wiki based document sharing tool. At work she uses a wide variety of communication channels, both synchronous and asynchronous. There are face-to-face meetings, cell phone calls, emails, msn, gtalk, skype, linked-in and sometimes also videoconferences and facebook. As for synchronous communication, she prefers different types in different situations. When there is a need to get to know people and be more familiar with them, face-to-face communication is fundamental, and there are no good substitutes. But in many situations it is easier to write an email. In carrying out her day-to-day tasks, skype or msn is preferred. This is due to the fact that the communication is logged, and therefore can be followed-up and viewed in retrospect. She tries to avoid using mobile phones, since the dialogue is not documented. Another reason for not using cell phone is the fear of radiation and what that might lead to. She's not found of group meetings; where one sits down in the same room. These meetings often feel unnecessary and time consuming.

The most efficient communication methods for her day to day tasks are in her opinion definitely asynchronous communication. Personally she uses chat based services all the time and finds it easier to reach people that way. This due to the fact that one can post a problem to several people at once, and usually some of them comes up with a solution. The interviewee also uses software like twitter <http://twitter.com/> and delicious <http://del.icio.us/> to share articles documents with the different project groups and collaborators. This is something she finds very useful and makes it easy to find relevant information. IT technology and social software is used extensively during her working day. She is very happy with the communication and information systems she utilizes, and feels it makes the working day a lot more efficient.

Interview D: (ID)

Interviewee D is an international secretary in the union organization YS in Norway, he's place of work is at the office in Oslo, but he travels a lot in Europe and especially the Nordic countries and Brussels. His work day consists of reading, interpreting, answering, modifying and forwarding emails with questions from different branches, or with information from umbrella organizations in Europe. The most common communication channel he uses is email, and face-to-face communication at board meetings and seminars. At the office they use face-to-face communication, but most of the work related items are handled by email. The interviewee does not use any chat based medium, social networks nor video conferencing tools. Both cell phone and land line are used frequently. Cooperation at international level is mostly handled by phone, except for the fixed meetings and seminars during the year. The meetings are beneficial because everybody gets together and meets face to face. This is clearly what builds the strongest relations. It's easier to communicate with people you have met, than from knowing somebody only by title and email address.

Concerned synchronous communication he prefers, face-to-face communication, at least at initial contact. If one already has met and talked to a person, it's easier to communicate at later occasions. When face-to-face meetings are not made possible, the phone is used, but mainly if there are urgent matters or if the topic or question is problematic to formulate in an email. When asked if synchronous communication is more efficient than asynchronous, the answer is divided. When answers are needed fast, or the questions are difficult to formulate in text, synchronous communication is the best choice, but when dealing with forwarding of information and documentation, asynchronous (emails) is preferred because it is more efficient. In addition email is preferred when possible, since it gives the ability to review the work done, and plan the work ahead, and there are often more than one that need the same information, but then only parts of the information. It's easier then to send e-mails and refer to the parts necessary. It's also easier with asynchronous communication when communicating with distant colleagues that have different native language and where English is not spoken well. When asked if there is anything he wished existed communication

wise, there is one gadget that would be beneficial, a technical gadget that could spontaneously translate from one language to another.

Interview E: (IE)

Interviewee E is a Norwegian open source-software programmer that works on an open-source project called HISP (Health information system program). He is currently working out of Forskningsparken where his office is based, but works not only with people in Norway but also with other programmers in India, Vietnam, Tanzania and Ethiopia.

Due to the challenge this presents in time and space, he has to rely on a lot of asynchronous communication. Synchronous communication is not as optimal as asynchronous when it comes to collaboration on a code; Asynchronous communication, such as mail and instant messaging, is better because it logs everything, so you can go back at every time and look at it. Explaining and discussing code, is not optimal on synchronous communications tools such as telephone or even face-to-face.

He says that communicating with colleagues in other countries work seamlessly because of the communications tools they use; their primary way of communicating is through a mailing list – where also all the mails get stored in a huge archive, which everyone can access if needed. They use IssueTracker as a tool to keep tracks of different issues; someone can post an issue (i.e. bug, fix, tasks that need to be done) that needs to be looked at and other people on the project can track this issue.

The interviewee uses instant messaging a lot, so he is never stuck with a problem. He also works a whole lot after hours, and then he also instant messages the colleagues he knows the best on MSN. He and his colleagues in different countries meet approximately two times a year for workshops. Workshops are great, because they got a lot of work done, but they also get to know each other better, which makes working with them easier. The main

problem with working with people from other countries isn't that the communication tools come to a short, but that some people don't use them enough.

When asked how he thinks future communication technology will look like, interviewee E, first criticizes some media experts theory that stationary and mobile devices will merge into a single entity. He blows off this vision with saying that a handheld device can never substitute for the need of big displays. On a side note what he says here turns out to be true; recently the manufacturer of displays, NEC, commissioned the University of Utah to perform a study whether big monitors increases efficiency. This study actually concludes with that going from a 17" monitor to a 24" would increase efficiency by an amazing 50%. However, going any bigger than 24", would again decrease efficiency. Taking this study into account we can probably imagine how much efficiency is increased when working on a small display such as those on handheld devices.

Interviewee E actually uses 2 huge monitors when working, because it is the most efficient. Instead of wanting to see some hi-tech handheld device in the future, interviewee would rather want to see software that successfully imitate a more physical cooperation virtually.

Analysis and Discussion

We find that one recurring understanding that all interviewees share is:

Face-to-face is the richest form of communication and is therefore the most appropriate when getting to know new people.

While asynchronous communication is the best form for communication when the goal is to pass information such as documents, and brief messages, especially to multiple recipients.

Synchronous communication using IT technology such as skype and messenger is the best form for communication when goal is discuss matters with colleagues. Both since it documents the conversations and it's easy and time efficient to use.

Ottesen points out in a recent report on virtual colleagues: Meeting physically with project team members and getting to know each other facilitates communication and this in turn results in better collaboration [Ottesen, 2008].

Analyzing the five cases lead us to observe that choosing synchronous vs. asynchronous forms of communication depends on many factors:

- * Situation based, we often choose asynchronous communication when privacy is a concern [O'hara, 2006].

- * Nature of the communication: simple communication like in information transmission versus complex communication like in planning, discussing and negotiating

- * Archiving and documentation properties of the communication channel: like when IB and IC prefer email usage

- * Language barriers: it was mentioned that when using a foreign language, it is sometimes easier to use written communication.

- * Accessibility and geographic barriers: collaborating across time zones often restrict the synchronicity options.

- * Time available: under urgent situations interaction is a necessity, like when IC mentions the case of production server problems.

- * Motivation needs: feedback is more appropriately given synchronously than asynchronously (IB)

- * Organization culture: IB points out that email may be perceived as a more formal communication form than chatting with an instant messaging tool.

- * Cultural: IA finds it more appealing to use synchronous communication because it may be perceived unnatural to send an email to a nearby colleague while IC finds it more

effective to use asynchronous communication, as she find meetings as being a waste of time. Is this difference culturally conditioned?

None of the interviewees sees a need for video conference calls. Although this is probably due to poor quality video as there are usually no dedicated lines available for communication.

We do also believe that video communication raises a number of social and practical issues. O'hara points out that "There are both social and practical barriers to use of video telephony. Social barriers relate to people's concerns about privacy and a reduced ability to control presentation of the self with video" [O'hara, 2006].

Going through all the interviews, we can draw the following conclusions: it is not about "either asynchronous or synchronous communication" it is more about "both asynchronous and synchronous communication".

Regarding Social Capital usage, many interviewees mention using forums and Instant Messaging tools to ask professional contacts when seeking solutions to problems they can't find answers to from near physical colleagues. IB mentions being sometimes awakened during the middle of night in order to help friends or professional contacts. This conducts us to believe that getting help from professional contacts is very dependent on the solidity of the relation and thus on earlier earned goodwill. This verifies Ottesen's article where mentions that, personal relations between virtual colleagues is a condition for successful collaboration, therefore are physical meetings needed to build trust with each other.

"If you have not met with people you work with, it is difficult to find out how they react. You also need to meet people often in order to build up trust. In our business, trust among colleagues is absolutely a must." [Ottesen, 2008]

All interviewees seem to agree that synchronous communication is best suited when it comes to building and tightening relationships, but yet at the same time many prefer asynchronous communication in terms of the efficiency gains this form of communication

gives. As a result many strive after finding a balance between the two communication forms, although we feel that this can only be achieved if understanding fully the aspects and mechanisms surrounding the two forms of communication.

One other major playing factor in remote collaboration is the adaptation and appropriation of the technology used by virtual colleagues [Harrison, 1996]. As Belotti points out: long term experiments with media suggest some of these concerns may disappear as video mediated relationships develop with time and in appropriate cultural contexts [Bellotti, 1996].

As part of this project the article "Walking Away from the Desktop Computer " Belotti V. and Bly S (1996) was the first we read, and it concerns a great deal with different types of communication. As a group we were curious weather the technology to support collaboration over distances, both locally and remote, have evolved significantly since the days of the study (1996).

The article shows that collaboration benefitted greatly at the local sites by employees leaving their desk to talk and cooperate with others, while the collaboration between the offices located in different cities where nearly not present.

This was due to, the study shows, that the employees liked to (and needed to) have face-to-face communication and discuss problems while the object where at hand. In this way they could keep updated on what was going on and participate when they where needed, or wanted to do so. Doing so the employees build a strong awareness of other projects and their status, and often contributed in project where they did not participate from the beginning.

On the other hand the cooperation between the cities where at a much poorer level. This was of course due to the fact that they didn't have the possibility to walk to each other's

offices, but had to pick up the phone and take a call, or send an email. And as one of the employees stated “There’s a lot of inertia in just picking up the phone.”

Our findings related to this are that for four and especially for one of the interviewed, the development manager at sol.no, technology has come a long way, not only in functionality but also in acceptance among users. They use social networks, project management systems and chat software extensively, so that the need for having a “walk about” to gain collaboration and awareness of different projects, has become of less importance. Groups in social networks and chat software replace the need for random face-to-face communication in many aspects, and helps communicating over distances. But, our findings here relates to the IT industry, where most topics in communication will be about IT, and not, as for the study in the article, about designers. Designers probably has other needs when communicating than It personnel, such as be able to physically see the objects they are designing.

During our research we came over an article by Spiegelman and Detsky, “Instant Mobile Communication, Efficiency, and Quality of Life” [Spiegelman, 2008] which focuses on the downsides regarding how instant communication changes our way of life, and raises the question whether this should be an issue for health departments. We found this article interesting, since we all recognized the problems debated there.

The article describes for instance that the possibility of using the cell phone in every situation, can neglect or offend people that are present, and thus lead to antisocial behavior. They also speak about decreased efficiency, due to increased frequent interruption by phone calls or messages that one feels obligated to answer. Furthermore the article distinguish between “high control-motivated knowledge workers” and “low control-motivated knowledge workers”, where the first usually is leaders that tend to interrupt workers, and expect rapid response, while the other category, normal employees, tends to use email or

other asynchronous messaging when directing questions, and are not expecting answers at once.

To our surprise, none of the interviewees seemed to focus, or have noticeable experience with, the issues raised.

The article also raises the challenges with infringement of the Work-Life Boundary, and the negative aspects of this, due to always being available.

Something also discussed by [Ottesen, 2008].

Our interviewees seem to be neither, and has a balanced view on how and when to “interrupt” co-workers with synchronous communication. Even the IT development managers, which could be expected to be, or is, a “high control-motivated knowledge workers” seems to understand the importance of letting people control their time, and is not demanding to get responses immediately.

The article also raises the challenges with infringement of the Work-Life Boundary, and the negative aspects of this, due to always being available.

An interesting article in Dagens Næringsliv [Ottesen 2008], speaks of this problem, and shows that for some employee groups the normal separation between working hours and private time is diminishing.

Our interviewees do not seem to be very influenced by this, even though it happens that they receive work related phone calls or messages after normal hours. And they seem to be very clear about differentiating work life and private life. But as some of them stated. “It is better to be available, than risking to fall out of the loop, and miss important calls”.

Even if we all have experienced situations described in the article, there are no indicators among the interviews that back this up as a serious problem. Our reflection on this matter could be that people actually adapt to technology over time, and the misuse of technology has more to do with the person than the technology itself.

Concluding remarks

Through our interviews we have found out that face-to-face meetings are the most optimal form of communication when people are trying to get to know each other. However, when people already know each other in a working situation they prefer asynchronous communication when the goal is to pass information such as documents, and brief messages, especially to multiple recipients.

Instant messaging through software such MSN and Gtalk are the most preferred communication tools, when the persons know each other well. This is actually preferred over synchronous communication such as phone calls.

We can also conclude with that just during the 5 last years, the preferences in communication have changed and evolved; when phoning other people was the best and most efficient way in the 90's and the start of 2000 to get a message across. We can however conclude today, that calling another person, and even talking to them face-to-face has become an inefficient way of communicating since the digital asynchronous communications tools today are lightweight, fast and among other things, let you store all information so you can at any time go back and retrieve it.

From this study we can draw the following conclusions: communication in collaboration is not about "either asynchronous or synchronous communication" it is more about "both asynchronous and synchronous communication" depending on the situation and its requirements. Furthermore, we feel that synchronous communication is best suited to build good will in social capital building as this form of communication more closely relate to motivation as one of our interviewees points out.

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