

Exploring mobile video streaming for socializing with new media tools

Jenny Håkansson

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Department of Design Sciences
Lund University

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Abstract

Mobile video streaming lets anyone send live video from their mobile phone to the Internet, available for millions to view in real-time. This is a very powerful technology that can be expected to grow in the next few years. This thesis has explored mobile video streaming as a core component in new media tools. It has particularly investigated the possibilities of creating and maintaining a relation between producers and consumers of videos.

By evaluating and benchmarking existing mobile video streaming services a white space was identified on the market. With this white space in mind, a conceptualization phase was performed. It resulted in five concepts of possible future ways of using mobile video streaming technology. One of these concepts was taken further and actualized in a prototype, *Malmö Mobilecast*. Malmö Mobilecast was then put in real use for eight days during Malmöfestivalen, a yearly urban festival in Malmö. Six *bloggers* were making live video broadcasts from the festival that could be seen on a screen in a tent at Mölleplatsen, one of the main sites of the festival.

Viewers had the possibility of subscribing to one or more of the bloggers. The result was a different experience for subscribing viewers compared to non-subscribing viewers. While non-subscribing viewers struggled with placing the video in a context, subscribing viewers appreciated the video content better and most of the times understood the context.

Furthermore, the bloggers were exposed to two kinds of broadcasting experiences, one where there was no interaction with the viewers and one where the viewers sent text messages to the bloggers during the broadcast. Again, the result was two different experiences. Once the bloggers had been given a taste of interaction they experienced a feeling of “emptiness” throughout their following broadcasts without interaction.

The development and subsequent use of Malmö Mobilecast constituted a platform for a discussion on how to proceed to reach future successful mobile video streaming applications. Essentially, it was concluded that specifically targeted services with interaction between producers and consumers is an approach that is interesting to explore further.

Sammanfattning

Mobil videoströmning gör det möjligt för vem som helst att direktsända video på Internet med hjälp av sin mobiltelefon. I samma ögonblick som videon filmas kan den ses av miljoner tittare. Det är en väldigt kraftfull teknik som kan förväntas växa stor de kommande åren. Det här examensarbetet har utforskat mobil videoströmning som en kärna i nya digitala medier. I synnerhet har möjligheterna att skapa och bevara en länk mellan producenter och konsumenter av video utforskats.

Genom utvärdering och kartläggning av nuvarande tjänster inom mobil videoströmning identifierades ett tomrum på marknaden. En idéutvecklingsfas genomfördes för att ta fram koncept för tjänster som kan fylla detta tomrum. Denna fas resulterade i fem koncept som alla innehåller idéer på hur mobil videoströmning kan tänkas användas i framtiden. Ett utav dess koncept vidarearbetades och realiserades i en prototyp, *Malmö Mobilecast*. Malmö Mobilecast användes sedan skarpt i åtta dagar under Malmöfestivalen, en årlig stadsfestival i Malmö. Sex bloggare sände live video från festivalen som kunde ses på en storskärm i ett tält på Mölleplatsen, en av festivalens huvudplatser.

Under festivalen var det möjligt för besökare att prenumerera på en eller flera bloggare. Utvärderingar påvisade en annorlunda användarupplevelse för de tittare som prenumererade och de som inte gjorde det. Tittare som inte prenumererade hade svårt att sätta sändningarna i ett sammanhang och upplevde de som tagna ur luften, medan prenumeranter uppskattade dem mer och kunde i de flesta fall placera in de i ett sammanhang.

Bloggarna utsattes dessutom för två olika sätt att sända video. Dels sände de utan interaktion med tittarna och dels så gjorde de sändningar där tittarna i realtiden kunde kommunicera med dem genom att skicka textmeddelanden. Återigen påvisades två olika upplevelser. Efter att bloggarna provat på att interagera med tittarna under en sändning upplevde de en tomhet i de följande sändningarna utan interaktion.

Utvecklingen och den påföljande användningen av Malmö Mobilecast utgjorde en plattform för diskussion kring hur framtida tjänster inom mobil videoströmning kan bli framgångsrika. Den viktigaste slutsatsen blev att hårt nischade tjänster som erbjuder interaktion mellan tittare och filmare är ett intressant angreppssätt som är värt att utforska vidare.

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1 Introduction

Human beings are social creatures. We naturally strive to assemble, exchange thoughts and share experiences. The rapid development of new media technology over the last couple of decades has intensely changed the way we do so. Repeatedly we have been, and will continue to be, provided with new tools that result in new kind of social activities.

Take, for example, Jaiku, the micro blogging service that let users find out what their friends are up to through one-line status messages typed in by themselves. (Jaiku) This is a way of communication between friends that, before the concept of micro blogging, did not exist.

Clay Shirky explains that these new ways of communication arise only because humans already have a desire for them (Shirky, 2008). Earlier, the cost of performing such communications was higher than the value of them. We are already interested in what our friends are up to, we are just not interested enough to pick up the phone and ask each and everyone of them. The cost in terms of time and effort is too high. Now, with Jaiku these costs have been lowered and the value is worth the small effort.

These kinds of tools that lower the cost compared to the gained value keep popping up. Tools that have not been missing before, but once they emerge almost seem indispensable. We are just in the beginning of a period of intense experiments with such tools that new media make possible.

This thesis project has explored the possibilities for using *mobile video streaming* as a core component in the development of such new tools.

1.1 What is mobile video streaming?

Video streaming can be explained as downloading a video from a device (usually a computer) at the same speed as it is being watched on another device. This can be put in contrast to first waiting for the entire video to download and then watch it.

Mobile video streaming is when the source for downloading is a mobile device; in this thesis project always a mobile telephone. The mobile device *streams* out the video, hence the naming 'mobile video streaming'.

1.2 Why mobile video streaming?

This section stimulates why mobile video streaming is an interesting technology to investigate as a core component in upcoming socializing tools.

Mobile video streaming is interesting to look at for several reasons. For a start, it is right in time. Mobile phones have been equipped with video cameras for a few years and streaming services have just started to pop up. The software is

just in place; good enough to perform user studies and create prototypes with but with quality poor enough to prevent high performance software to be on the market already. With increasingly better graphic capabilities in mobile phones and the continuous improvements of the mobile net infrastructures, mobile video streaming is one of the technologies that can be expected to flourish in the next few years. It is not unlikely that within a few years the quality of mobile video streaming will have improved to become a high performance piece of software.

Video itself has properties and advantages that make it an interesting medium to communicate through. Erik Stark talks about *emotional bandwidth* (ReachCards, 2007). He claims that communication technologies can be measured by their emotional bandwidth, which indicates the extent to which they transfer emotional data. During a face-to-face meeting a huge amount of emotional data is transferred between you and the person you meet. A video stream carries more emotional data than a voice conversation, but less than a face-to-face meeting. A voice conversation in turn is more emotionally intense than an email or a SMS. This high emotional bandwidth of video as a media format makes it particularly interesting to investigate further as a piece in future mobile phone applications.

1.3 Objective

The extended objective of the project has been to investigate mobile video streaming as a core component in new media tools for socializing. *In particular, the thesis has investigated the possibilities of creating and maintaining a relation between producers and consumers of videos.*

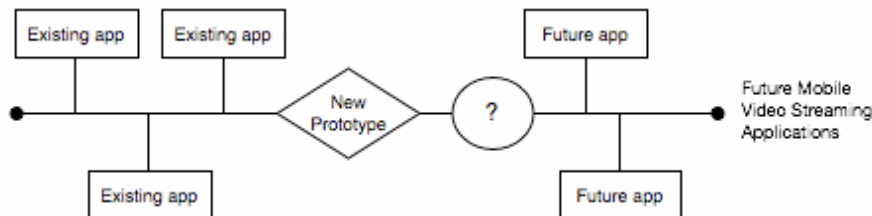


Figure 1. A visualization of the objective of this thesis.

An overview of the objective can be seen in Figure 1. By looking at existing services the aim has been to develop a prototype that takes a few steps further towards future mobile video streaming software. The purpose of the prototype has been to constitute as a platform for discussions and conclusions to what additional steps to take in the direction towards future successful mobile video streaming applications.

It is important to stress that this thesis has not had the naïve ambition to set the framework for the ultimate video streaming application, but to investigate

small steps towards it that can inform future prototypes and investigations in the field.

1.4 Deliverables

This thesis project has three deliverables: this report, which is a thorough documentation of the project, a prototype that goes under the name *Malmö Mobilecast* and a popular scientific summary that extracts the essence of the project.

1.5 Background

In order to investigate the problems formulated above, this thesis project has had the possibility to take advantage of an existing network, see Figure 2, of parties in Malmö interested in the research field of cross-media productions. This section will explain this network and conclude by introducing the specific opportunity that opened up for this thesis project to do a very interesting user test.

1.5.1 Lunds Tekniska Högskola

This project has been performed as a master's thesis within the program of Computer Science at Lunds Tekniska Högskola (Faculty of engineering at Lund university) and has been conducted at the division of Ergonomics and Aerosol Technology.

1.5.2 The Astonishing Tribe (TAT)

The thesis has been carried out at The Astonishing Tribe AB (TAT) in Malmö. The core business of TAT is user interfaces for mobile phones. The project has however been part of TAT Tenk, the innovation process at TAT, where research of the future use of mobile phones is performed.

1.5.3 Malmö Living Lab

TAT is a partner in a project called Malmö Living Lab run by the Art and Communication unit at Malmö Högskola (K3) and Inkonst, a multidisciplinary culture house in Malmö.

Malmö Living Lab aims at exploring new possibilities for products and services within new media, especially such that benefit from collaborative work. The lab gathers the new media industry, students, researchers and artists to collaborate in conducting a series of experimental projects within the area.

The idea of Malmö Living Lab is to involve humanities and the dynamics of actual urban life, rather than to perform research behind closed doors hidden away from reality. Instead of using usability labs or doing other staged user test, the experiments made by Malmö Living Lab are thrown into real life scenarios. In this way, all the interesting and unexpected encounters that come with real usage of an application, gets part of the research results.

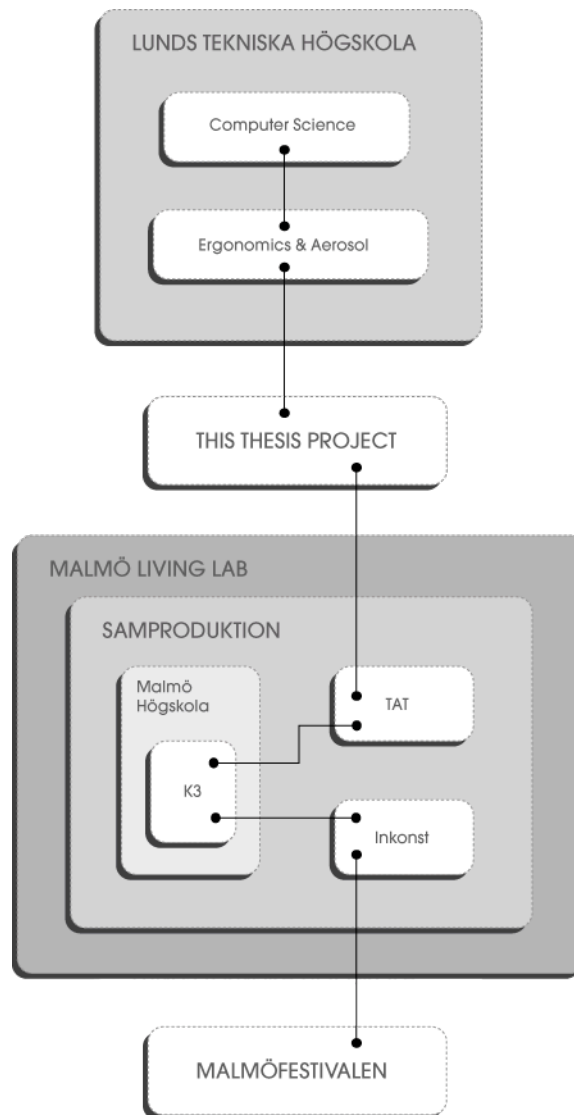


Figure 2. The network of stakeholders that this thesis has cooperated with.

1.5.4 Samproduktion

K3 has been given a grant by KK-stiftelsen (The Knowledge Foundation) to conduct research in the area of collaborative cross-media production and consumption. Samproduktion, as the project is called, will last for two years starting from summer 2008 and engage the network K3 already has in place through Malmö Living Lab.

The objective of Samproduktion is to explore new, collaborative ways of both producing and consuming media. The background to the grant is the rapid changes in the media landscape that new media technology contributes to. The tools and products of new media technology enable collaborative work that has not been possible before. The project intends to combine theoretical and

practical efforts to achieve results. One very specific objective with Samproduktion is to create prototypes for new media production tools for collaborative media productions.

1.5.5 Malmöfestivalen

Malmöfestivalen is a yearly urban festival held in August for eight days in Malmö. The festival targets a very broad audience with all sorts of activities, ranging from music and art to street markets and fun fairs.

This year the organizers of Malmöfestivalen approached Inkonst with the offer to run a tent at one of the main sites of the festival. Inkonst was put with the restrictions that they could not show music acts and they could not serve alcohol. With these limitations Inkonst came up with the idea to involve Malmö Living Lab/Samproduktion to create some sort of video project. The idea was to put a screen as the main component in the tent and show videos filmed around Malmöfestivalen by a number of ambassadors.

Through their collaboration in Malmö Living Lab, TAT was asked to participate. This thesis project had just started and, considering its direction towards mobile video streaming, suited well to take part in the project.

2 Mapping out the existing market

Despite the novelty of video streaming from mobile phones there are a handful of services available on the market today. This section presents the most prominent of them and concludes by discussing some of their issues.

Mobile video streaming applications have two kinds of users: producers of videos and consumers of it. These will be referred to as *broadcasters* and *viewers* throughout this report. Traditionally producers of video have been professionals and consuming has been a passive experience. With the rise of video streaming applications in mobile phones these two roles are being blurred. Consumers of videos can now also be producers. And consumers are usually amateurs and furthermore, they come in millions! When they start to produce as well as consume the available material will change. It will increase in quantity and decrease in quality. This induces both interesting opportunities and tricky problems. Whereas professional producers are limited in their coverage, the masses and distribution of the consumers allow them to collectively cover strikingly large areas. By putting their material on the Internet it is immediately distributed to million of viewers. However, here is the problem: Millions of viewers rarely share a common interest in the material from one single amateur producer.

While exploring the existing services the following keywords has been kept in mind to see how they embrace and tackle the opportunities and problems of “consumers producing” respectively.

- **Live** – *Does the service provide live video streaming?*
- **User-generated** – *Is the streamed video content that the service provide user-generated, i.e. is it filmed by a user?*
- **Wide audience** – *Does the material from the service reach out to a wide audience?*
- **Filtered content** – *Has the service been through some kind of filtering process before it reaches the viewer?*
- **Viewable in mobile** – *Does the service support consumption of videos in mobile phones?*

2.1 YouTube

YouTube is a successful website entirely consisting of user-uploaded video content. It is not a mobile video streaming service, but deserves attention nevertheless because of its popularity and the social culture it has created around sharing videos. Users can upload, view and share videos. They can also discuss and rate the uploaded material.

The presented content is very wide; it includes TV and movie clips, music videos and amateur content such as how-to movies and video blogging. This

variety in content attracts a *wide audience*. Basically there is no content frame or limit to what can be uploaded, with the exception of certain prohibitions like those of pornography, nudity, harassment and the like.

YouTube is divided into three sections: video, channels and community. The video section is the main part of the site. The absence of upload limits necessitates some filtering functions, an intelligent search engine and categorization of content. Furthermore, this part of the site allows users to browse videos by most discussed, most viewed and top favorited. Videos can also be featured by an editorial team, who reviews the videos that have been most rated, discussed and viewed by the users and selects the most compelling and entertaining material. (YouTube)

The channel part of the site offers users to set up a channel of their own. A channel gathers videos that belong to a certain subject uploaded by a specific author.

Just like the channel section, the community part of the site gathers topic specific content. The difference is that content can be uploaded by community members rather than just one author.

A scenario is that a user is given a link to a clip on YouTube by a friend. She follows the link and watches the video. Once finished, she is offered a selection of videos that are related to the one she first saw. She picks one of the offered videos that seem interesting and watches it. Again she is offered a list of videos related to the one she just saw, once it is completed. She continues to watch a few more videos and ends up finding one that she think is really interested. She sends the link to it to another friend. Next time she meets one of her friends they discuss the YouTube video.

YouTube Mobile

In 2007 YouTube launched a mobile version of their service that makes the content of the site *viewable in mobile phones*. The main features are the same, although it lacks the channel and community sections.

One of the most obvious advantages of this mobile version compared to the web version is that videos can be directly uploaded from the same device that recorded it. Another important distinction is the possibility of watching on the go.

2.2 Bambuser

Bambuser (Adler) is a service that allows users to stream *live* video from their mobile phone to a website. Users can download a streaming application to their mobile phones and use it to become broadcasters, streaming live videos that can be watched by millions on the web. Hence, all content is *user-generated*.

The service has two directions. Primarily all broadcasts are assembled and shown on Bambuser's own web site. There seem to be an aim that every broadcast should reach out to a *wide audience*.



Figure 3. Bambuser service on Svenska Dagbladet website

Secondly, Bambuser also offers the users to show their stream on other sites. For example, Svenska Dagbladet uses their service to show video clips as a complement to the articles on their website, see Figure 3.

There is a live chat function, that lets viewers send text message from the website where they are watching that appear on the screen of the mobile phone that the broadcaster is using. The text messages appear as a popup (see Figure 4) overlaid on top of the video for a second or two. It is not possible

for the broadcaster to reply to the messages other than by using his or her voice. Neither is there a way that old messages can be revived, if a message is missed when it pops up there is no way to go back and view it.

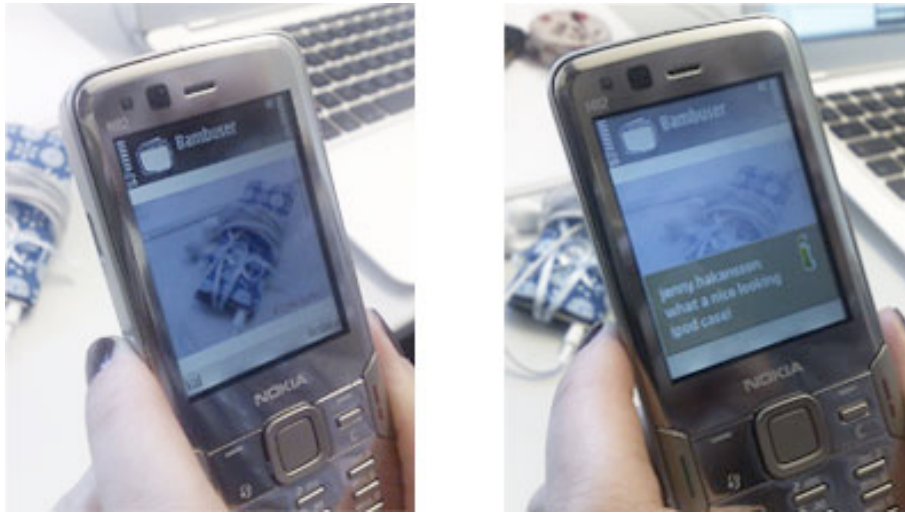


Figure 4. Comments by users pop up in front of the video screen.

Like YouTube, there are no limits to what kind of content that can be streamed. Content on the website are sorted by the time they were recorded. Live recordings or recordings recently shot are highlighted on the start page. There are no filters except for the time; the most recently shot/live video is shown on top of the page no matter of its content.

2.3 Qik

Qik (Qik) is a service similar to Bambuser, it is *live* and *user-generated*, but provides higher quality, which results in a longer delay to their stream. Similarly to Bambuser, each video is being streamed out to a very *wide audience*.

Another difference is the live chat function. Qik lets the broadcaster see the whole chat history as opposed to Bambuser where only the last message is shown. The messages are also showed for a longer time than in the Bambuser service. They are presented transparently on top of the video and hence are not as disturbing to the video as the popup Bambuser is using. Once they have disappeared the user can revive them.

The site provides easy shortcuts to share, embed and get the URL of a clip. Users can create groups allowing only group members to watch videos. Qik also lets users tag videos by their content, and search videos by tags.

2.4 Flixwagon

Flixwagon (Flixwagon) is another service similar to Qik and Bambuser. Again, the content is *live* and *user-generated* and reaches out to a *wide audience*. Live commenting by viewers is also supported. Flixwagon use a third presentation of the live messages. Instead of showing the messages on top of the video like Qik and Bambuser they are shown in a box below. Like Qik, the user can scroll through a history of the messages.

Just like Qik, Flixwagon supports tagging of videos.

2.5 Kyte

Kyte (Kyte) is yet another service in the group of live mobile video streaming applications (Bambuser, Qik, Flixwagon). In addition to *live, user-generated* content it also supports *viewing in mobile phones*. The videos reach out to a *wide audience*.

While recording video the application shows the broadcaster the number of viewers that are watching in real-time. It also has a live chat, similar to the other mobile video streaming services mentioned above, but slightly more sophisticated.

2.6 SwarmCam

SwarmCam is a prototype that has been implemented by Interaktiva Institutet in order to investigate mobile collaborative video mixing. (Engström, Esbjörnsson, & Juhlin, 2008) By using live video streaming software on three mobile phones, together with a video server and a live video mixer (standard Video Jockeying (VJ) equipment) experiments were performed in nightclubs with visitors being the contributors of the VJ's material. The contributions by the visitors were shown on a screen in the nightclub.

A typical scenario of the SwarmCam application is as follows. A visitor spends the evening at a nightclub that presents a VJ. During the evening she brings out her mobile phone and opens the SwarmCam application. She captures the cool grooves of her buddies with it, and in real-time it gets streamed to the VJ. The VJ acts as a *filter of the content*, if he finds it decent enough he combines it with some effects and merges it nicely into the overall VJ performance. As her video recordings are selected and shown the visitor gets a notice on her mobile phone saying her video is "on air".

There is no interaction between the users and the VJ except for the subtle feedback the VJ get by watching the audience react to the videos. The VJ interprets the activities of the audience as feedback on their performance. If the audience dances and take visual interest of the screen the VJs consider themselves successful. However, if the audience just gazes at what they are doing they take it as negative feedback.

With this project, Interaktiva Institutet wanted to investigate how to design new and innovative services that support mobile user content creation. VJ:ing was chosen because it includes real-time editing of visuals, has elements of social interaction and for the fact that the visitors of nightclubs often carry mobile equipment.

2.7 Issues with current services

As previously stated, with consumers taking the roll of producers, mobile video streaming applications introduce the opportunity to cover large areas, which lead to a huge spread in content. They also introduce another opportunity, namely the possibility for the viewer to interact with the broadcaster. With these two opportunities in mind, the material from the existing services has been structured by looking at two axes: *content relevancy* and *engagement with social media*. The extremes of content relevancy are highly filtered content and open-ended content. Engagement with social media ranges from, as has been the case up until now, passive consumption to an interactive, live and dynamic experience. Figure 5 shows how the existing services have been mapped out along these axes.

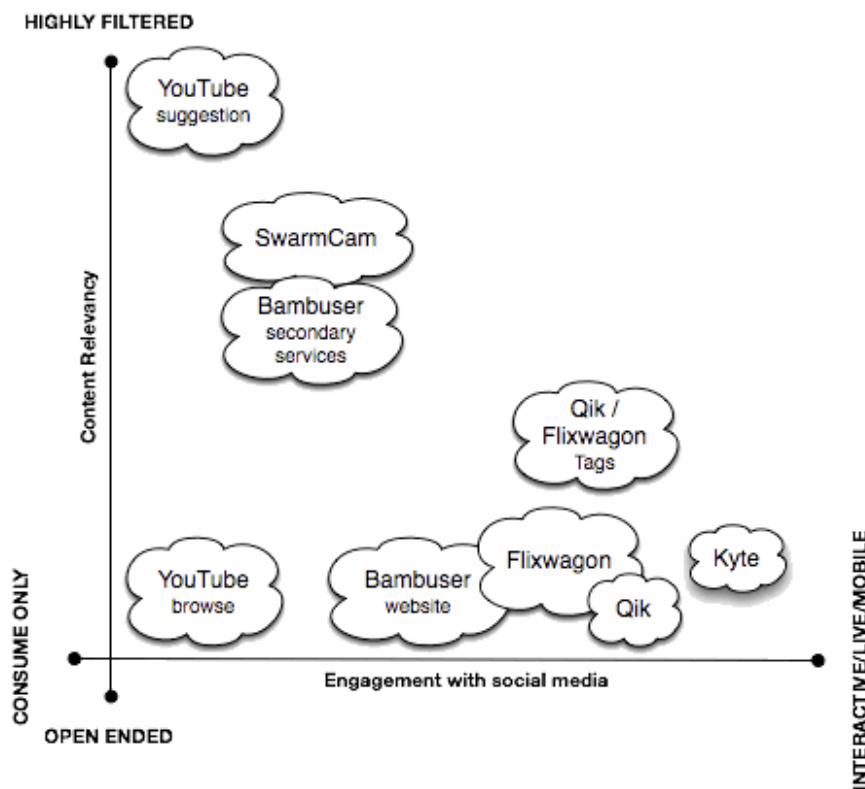


Figure 5. Mapping of existing services against content relevancy and engagement with social media.

YouTube is being placed along the content relevancy axis, since it has no real-time interaction with the author of the video material. A suggestion from a

friend is highly filtered, but if you surf into YouTube just to browse, the content is very open-ended.

The primary direction of Bambuser has no filtering of content, but is live and has interaction possibilities. When Bambuser is being used by a secondary service, like the example with Svenska Dagbladet, the service becomes more narrowly targeted but loses the interaction part (only viewing is possible). What is more, in the case with Svenska Dagbladet, the producers are back to being professionals.

Qik has a slightly more sophisticated live chat function than Bambuser and therefore deserves to sit further towards the interaction end of the engagement with social media axis.

Flixwagon has been placed between Bambuser and Qik on the engagement with social media axis, since it has a few more features (such as revival of messages) to the live chat than Bambuser but less than Qik.

Kyte lets the viewer watch video content in mobile phones, which makes viewing a more dynamic experience. The fact that Kyte also shows the broadcaster the number of viewers currently viewing is in itself a kind of interaction. These two properties move the service further towards the interaction end of the engagement axis compared to the other mobile video streaming services.

The content produced by the SwarmCam prototype is specifically targeted, namely at the people in the nightclub. It is also filtered well since every video that is being selected by the VJ prior to being broadcasted. It essentially lacks interaction between the viewer and broadcaster, although the broadcaster gets feedback from the VJ once the video is used in the performance.

Looking at the chart there is a white space opening up for interactive applications that are specifically targeted. Let us repeat the specific objective with this thesis project:

To investigate the possibilities of creating and maintaining a relation between producers and consumers of videos.

The white space makes a good foundation for experiments with creating such a relation. While the highly filtered content helps in creating a relation with the consumer, interaction is an apparent tool to maintain it.

3 Method

This section presents the practices used while exploring the field of mobile video streaming. The approach has essentially been to develop a prototype, Malmö Mobilecast, and to test it in an extensive user test during Malmöfestivalen in collaboration with K3 and Inkonst. Afterwards the results of the user test has been evaluated and discussed. The idea has been to use the results of the evaluation as an indication to what direction to take towards future mobile video streaming applications. Prior to the start of the development of Malmö Mobilecast a conceptualization phase was carried out to define the vision of the prototype.

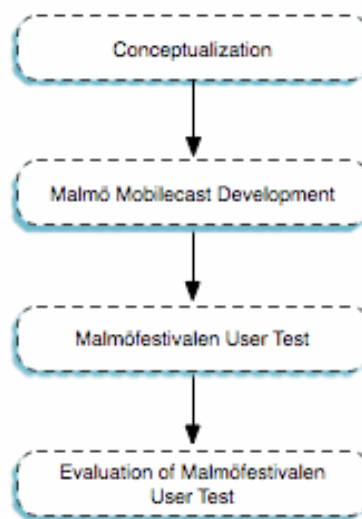


Figure 6. An overview of the method used in this thesis project.

Figure 6 shows the different phases of the procedure in chronological order. The following sections describes each phase one by one. In every phase an agile working method called Scrum has been used. (appendix A)

3.1 Conceptualization

The aim of the conceptualization phase was to take advantage of the opportunity to collaborate with Malmö Living Lab and define a vision that could be implemented and tested during Malmöfestivalen. The conceptualization phase that has been used is a composition of recognized design methods. TAT Tenk has composed them with the aim to achieve a final concept at the end of the process. These methods and their composition can be seen in Figure 7. They will be further explained one by one in the sections below.

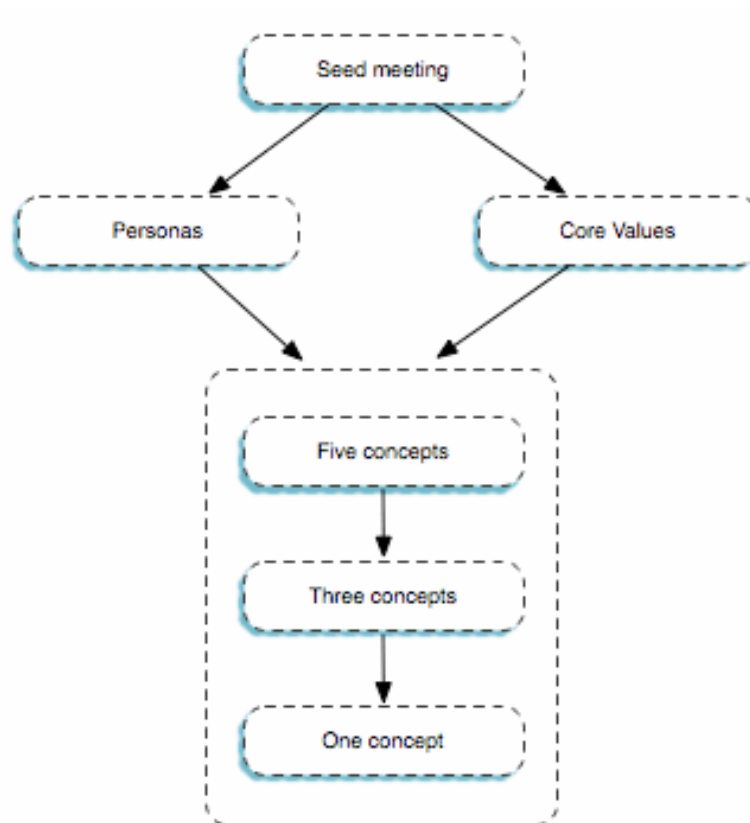


Figure 7. The approach used in the conceptualization phase.

In addition to these methods, a value proposition referred to as NABC (need, approach, benefits per costs and competition) has been present all the way through the thesis project (Carlsson & Wilmot, 2006). (appendix B)

3.1.1 Seed meeting

The goal of the seed meeting is to create common ground with all involved in the project. The meeting is set to untangle any contradictory views and ideas of the service that the members may have. It may seem unnecessary to conduct such a meeting for a one-man project like this thesis. However, TAT Tenk has a setup where their thesis workers spend 80% of the time working on their

own project, and 20% of their time working on other thesis projects. This means that every project will have input from lots of different people. Furthermore, this thesis project has had three mentors from TAT Tenk. During the meeting the following questions are raised:

What?

This is where everyone in the meeting tries to answer the question: What is this service about? An important side effect of this procedure is that it becomes clear also what the service is not about.

Why?

The next question to be reflected upon by the members in the meeting is: Why would anyone want to use this service?

Who?

The final question to discuss is: Who would like to use this service? The purpose of this question is to identify a target group.

The procedure is like a silent brainstorm. Everyone prints their thoughts on post it notes and sticks them in the middle of the table. In this way, no one gets interrupted, and everyone's opinions are represented in the result.

After the seed meeting the developer of the project sits down and make his or her interpretation of the seed meeting. This is done by two other methods, *Personas* and *Core Values*, which will be described in the following sections.

3.1.2 Personas

Using personas is a method with the purpose of identifying the target group in greater detail. A persona is a model of a typical user of a product or service. In difference to an ordinary user profile, personas come with made-up personal details that make the persona more tangible to the development team. As the name 'persona' hints, the model of the user should have a bit of personality, but is not allowed to be an existing person.

The idea of personas originates from Alan Cooper, an interaction designer. He argues that a good interaction design has a meaning only in the context of a person actually using it for some purpose (Blomkvist, 2002). Therefore, in addition to name, age, profession etc., a persona is defined by his or her goals. The goals are categorized in four different types: personal, corporate, practical and false goals. Personal goals are simple and universal such as not make mistakes. Corporate goals are those of businesses transferred to the persona, such as increase the market share. Practical goals bridge the gap between the objectives of the organization and the objectives of the individual. The false goals are not relevant to the user, they are only created to support the developer, for example save memory.

During the conceptualization phase the objective was to come up with three to five different personas.

3.1.3 Core Values

During the phase of creating personas the developer mainly look at the result of the Who-question from the seed meeting. When defining the core values he or she instead evaluates the result from the What- and Why-questions.

The purpose of this phase is to define a few solid core values that belong to the service. The core values should be sustainable enough to last through to the release of the service.

A lot of the times one single core value is inadequate in the sense that a core value is often the extreme of two polar positions. Therefore, the core values are often represented by axes. By putting a cross on an axis with two polar positions, for example light \Leftrightarrow dark, you have not only stated that something is dark, but also *how* dark it is.

Axes can be combined to create a multidimensional space, where each axis describe one dimension. In a multidimensional space that describes haircuts possible axes would be masculine \Leftrightarrow feminine, wild \Leftrightarrow civilized, businesslike \Leftrightarrow bohemian, etc. (Eno, 1996)

This axis thinking has been used when defining core values in the conceptualization phase.

3.1.4 Concept development

Once the personas and core values have been completed, the concept development can start. The aim of the concept development is to lead to the eventual goal with the conceptualization phase: one final concept, ready to implement and test.

The approach is to initially come up with five loose concepts, as diverse as possible. As a next step these concepts will be presented to different people who will give their feedback. All individuals are given green, pink and yellow post it notes to put their feedback on. Positive feedback goes on green notes and negative feedback goes on pink notes. New ideas or neutral comments are put on yellow post it notes.

The developer will review the feedback and select features from the five concepts as a ground for coming up with three new concepts. Each concept should consist of a name, a sketch, an explanation and a tagline.

The three new concepts will be presented again and one out of the three will be selected as the final concept. This will now be refined and worked over more carefully. The whole process can be seen in Figure 8.

3.2 Malmö Mobilecast Development

The purpose with this phase was to develop a fully working prototype: Malmö Mobilecast, which implements the concept defined by the conceptualization

phase. As far as possible, the prototype was built upon and composed by existing code pieces and technology.

Malmö Mobilecast was developed using an open source solution called Movino (also used by Bambuser and SwarmCam) as a foundation. (Storsjö) Movino is essentially an application that lets the user record video from a mobile phone and stream it to a server in real-time.

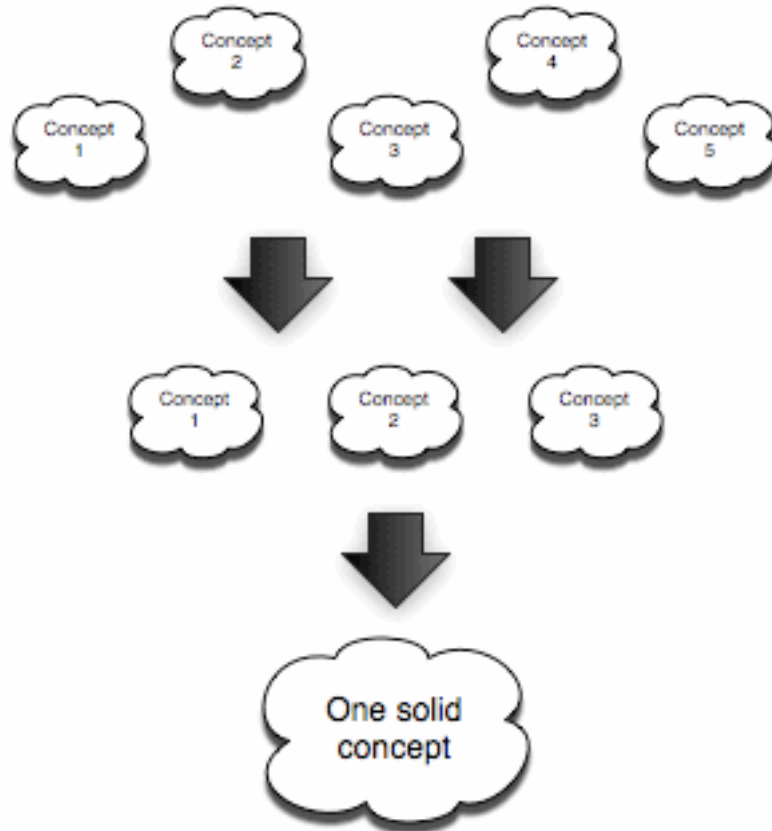


Figure 8. The concept development from five loose concepts to one solid concept.

Movino has been developed for the Symbian S60 platform, which means that the decision to use it also implicitly decided the platform and the programming language (C++). The server runs on a Linux platform.

In addition to Movino, a SMS gateway was used. This service was bought from a company called SMS Teknik. (SMS Teknik) PHP was used for handling incoming SMS messages and C++ was used for sending SMS messages through the gateway.

Other technologies used in Malmö Mobilecast are a MySQL database and a web site developed in PHP. A YouTube channel was set up offering viewers access to the archive of previously recorded material.

Malmö Mobilecast was tested using Nokia N82, Nokia N95, Mozilla Firefox, Internet Explorer and Safari.

3.3 Malmöfestivalen User Test

This section describes the various techniques used during the user test to gain information of how Malmö Mobilecast was experienced and used by both viewers and broadcasters.

3.3.1 The broadcasters

The following seven ambassadors were casted by Inkonst and took part as broadcasters in the user test. They are more or less famous Malmö personalities that all reach out to different audiences.

- *Anders Carlsson* – artistic director of the theatre company Institutet
- *Rakel Chukri* – cultural writer at Sydsvenskan
- *Gudrun Hauksdottir* – musician and club arranger
- *Saga Gärde* – actress and filmmaker
- *Behrang Miri* – rap artist and leader of the organization *The Voices and Faces of the Street*
- *Collabo Queens* – a design/DJ/artist duo consisting of Johanna Ritscher and Erika Sandström.

3.3.2 Setting up the broadcasters

Prior to the user test during Malmöfestivalen each one of the broadcasters were given individual instructions of Malmö Mobilecast. An underlying purpose with going through the technology individually was to find out more about the broadcasters background and experience in video recording, Malmöfestivalen and general use of mobile phones.

To make the background questioning as natural as possible those questions was interweaved in the instructing of the prototype. The desire was to make the broadcasters feel comfortable and answer as spontaneously and honest as possible.

The individual interviews were recorded with a DV camera for documentation.

The interview questions can be seen in Appendix C.

3.3.3 Meta filming

In order to observe the behavior of the broadcasters while using Malmö Mobilecast some of their broadcasts were filmed by a second camera. During the broadcast or immediately afterwards the broadcasters were asked questions about decisions they took and their experience.

3.3.4 An editor

Even though the prototype was developed in such a way that the technology was stable enough to handle all video streams and notifications automatically there was an editor present in the Inkonst tent during the user test.

The editor had essentially three roles: help coordinate the broadcasters, watch all broadcast and choose clips to be looped between the live broadcasts and give the broadcasts titles and upload them to the online YouTube channel.

The editor role was shared by two persons taking turns to monitor the live broadcasts. An editor phone was set up and its phone number was installed in the broadcasters' devices so that they could easily get in contact with the person currently responsible.

3.3.5 Staged interaction with broadcasters

During this rather long user test, smaller user tests were set up. The objective with these tests was mainly to observe the reaction of the broadcaster once they received feedback from viewers. The method for this was therefore to stage some of the feedback to the bloggers. A group of random people from the tent was asked to send messages during a longer (20 min) broadcast.

3.3.6 Video archive

One interesting thing regarding the user test was what kind of material the broadcasters would produce. Therefore all of the material was stored so that it could be retrieved and watched after the live broadcast.

3.4 Evaluation of the Malmöfestivalen User Test

The following section describes what different methods were used to evaluate the results from the user test.

In addition to the methods described below some of the archived video material were watched and analyzed. There were also continuous discussions and observations made throughout the user test.

3.4.1 Review with viewers

After the user test a meeting with five persons who had participated as viewers was held where the experience of using the system was discussed. The meeting was guided with a set of questions. (appendix D)

The viewers were all employees at TAT, with an interest in new media, and aged between 23-28.

In addition to this group meeting, two individual interviews were made, where the same questions were asked.

The strategy of having both individual interviews and a group meeting was chosen because on one hand, you would like a discussion to take off with ideas of improvements, but on the other hand you do not want the users to be too affected by each others answers. During all occasions written notes of the answers were taken. No notes were taken of who gave the answers, except where it was relevant to the question, in which case the relevancy was noted. For example it might be interesting to know whether the person who answered was a subscriber or not.

3.4.2 Interviews with broadcasters

Two individual interviews were held with two of the broadcasters where they got asked about their newly gained experience of mobile live broadcasting. The interviews were held towards the end of the user test. They were recorded and then transcribed afterwards. (appendix E)

3.4.3 Film viewing meeting

As a wrap up to the festival a group meeting was held where material recorded during the user test was watched and discussed. Two of the broadcasters were present, one with his girlfriend, both of the editors as well as students and staff from Malmö Högskola.

Prior to the meeting the broadcasters (also the ones who were not present) had chosen a few videos each that they were particularly pleased with or for some other reason found interesting.

The procedure of the meeting was that the videos chosen by the broadcasters was shown. After the viewing of a video, it was commented, first by the broadcaster who shot it, and then also by the other persons present. During the commenting questions was asked to encourage the discussion. Also some of the not present broadcasters' videos were shown and commented.

Parts of the meeting were video taped and notes were taken during the discussions.

4 Results

This section presents the results found in this thesis project. First, the result of the conceptualization phase is described. All concepts are presented, starting with the first five, continuing with the next three and then the final concept. Next Malmö Mobilecast is presented. The different features of the prototype are described, but technical details have been left out. Finally the findings from the Malmöfestivalen user test are presented.

4.1 Results of the Conceptualization phase

4.1.1 Personas

The personas that was developed and used can be seen in Appendix F.

4.1.2 Core values

The following core values were defined:

- **Narrow** – all broadcasts made with Malmö Mobilecast shall have a common ground, i.e. the content shall be narrow rather than wide
- **Awareness** – the broadcasters shall be aware of their group of viewers
- **Feedback** – Malmö Mobilecast shall allow feedback to the broadcasters from the viewers during a recording
- **Live** – as far as it is possible, all broadcasts shall be live

4.1.3 The five concepts

During the first stage of the conceptualization phase the following five initial concepts were developed. Since these concepts exist only to evolve into new concepts they are described rather loosely and kept pretty open. Details like for example the choice of medium for a particular feature have been left out.

Broadcaster subscription

The core idea with this concept is that there exist broadcasters that are making live broadcasts from around the festival. Festival visitors can choose to subscribe to one or more of them. While broadcasting the broadcasters get feedback in their mobile phone on how many people are watching their video stream at the moment.

By subscribing the viewers get a notification in their mobile phone when a live broadcast starts. If the live event is missed, the video will be archived and there will be a notification saying that there is one new unseen video.

The concept reminds of text blogging, where one particular person is followed by a group of people. Like with conventional text blogging, the previously recorded material is archived and available for viewer to watch afterwards.

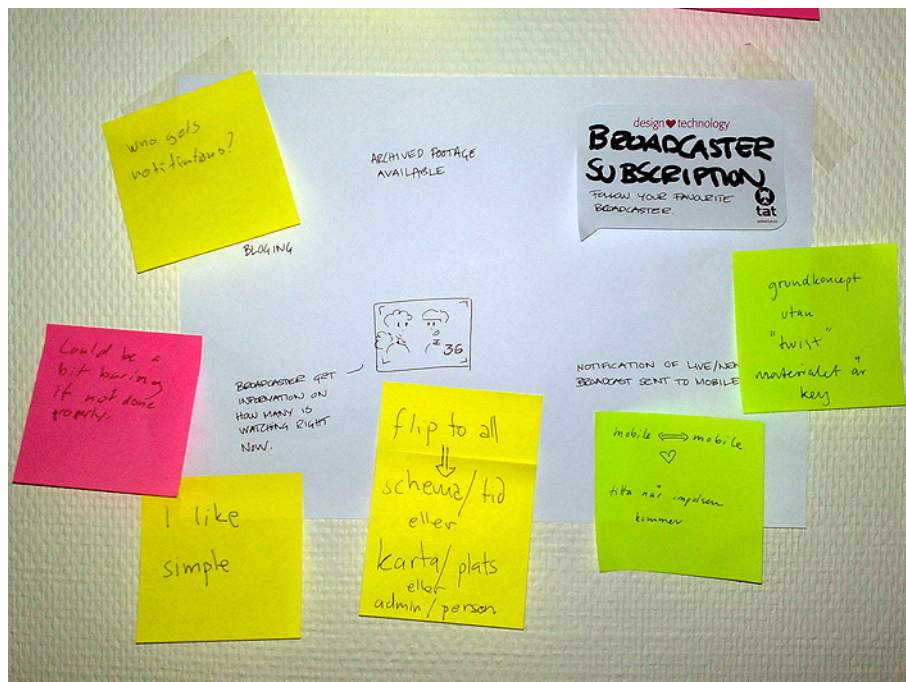


Figure 9 The broadcaster subscription concept with feedback.

The positive feedback that this concept received was that it is a solid ground that more complicated concepts can grow from. It is a simple concept with no particular twist to it. Other comments included that it would be interesting to subscribe not only to a certain broadcaster but also to events, places or even time intervals.

Collective creation

In this concept the streamed video is created by a group of people, rather than just one person. One person might add the moving images, while another person contributes with sound and a third user adds graphics. The group can continuously switch roles and even collaborate in shooting a certain event from different angles, similar to real-time editing of video.

The viewers can rate the videos as feedback to the group of producers. The rating might even extend into a competition where different groups of broadcasters are competing.

A specific, complex rating system is connected to this concept, but it might be applied to any of the other concepts that involve rating. The rating system works as follows. Instead of having a simple rating system with bars or figures the broadcasted video would be cluttered with more or less noise depending on the opinions of the viewer. This would force the broadcasters to listen to the feedback from his or her viewers. All videos would start in a middle mode, having some noise in them, to encourage the broadcasters to do well.

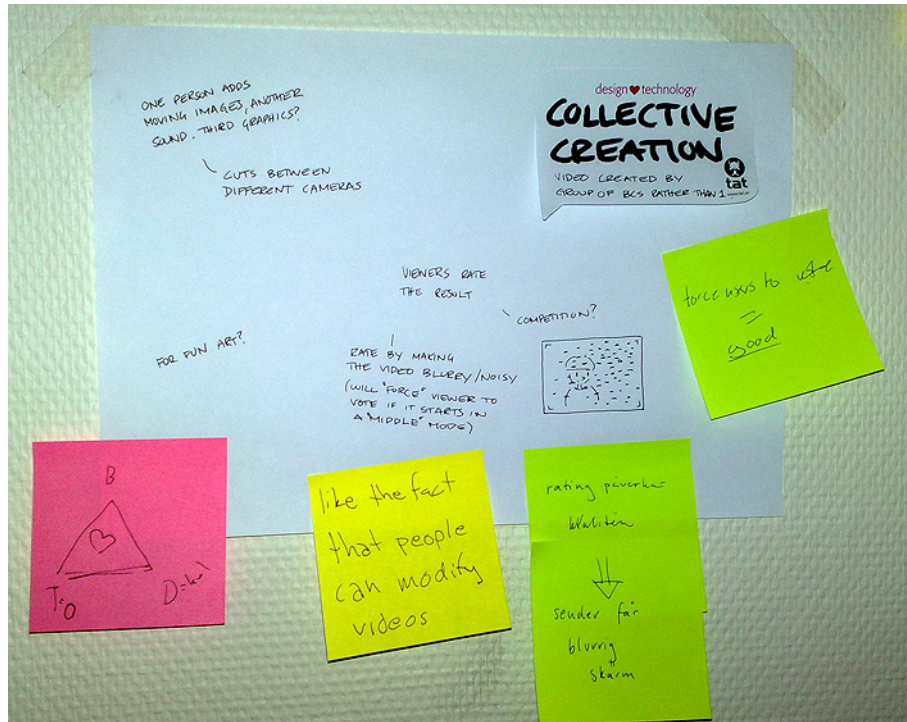


Figure 10. The collective creation concept with feedback.

This concept received negative feedback concerning its technical complexity. At the same time, out of the five concepts, it is the one that engaged most people. There were some complaints about the somewhat complicated rating system, saying that the noise would not give a negatively rated video a chance to improve, since no one would be able to see it. Only adding the noise to the broadcasters screen could solve this.

Robot

The idea with this concept is that the viewers strictly control the content produced. The broadcaster merely acts as a terminal to the world of the festival. The viewers control the content by sending arrows to the broadcaster, indicating what direction they would like him or her to film. The broadcaster then films in the direction that most viewers wish for. This almost allows the viewers to “go to” the festival from home.

To get the broadcasters started the concept involves a wish list for live content, resided on for example the website of Malmöfestivalen. Again, each broadcaster has a very specific content area, so that the opinion of directions does not vary too much. The viewers essentially come from the same target group. Subscriptions on events make up a priority list for the broadcaster.

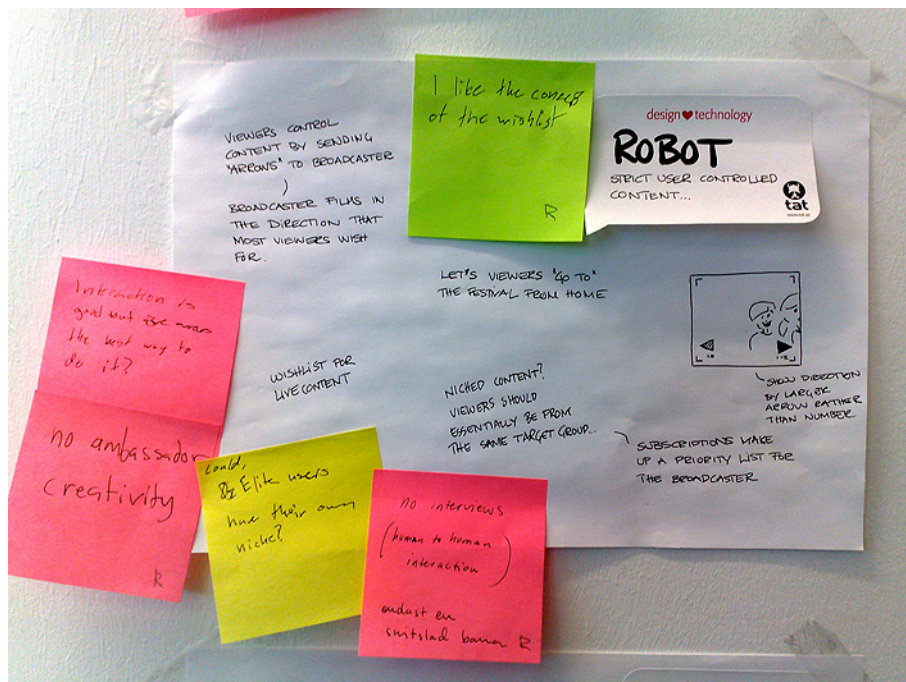


Figure 11. The robot concept with feedback.

This concept received some negative feedback concerning the lack of creativity of the broadcasters. There were doubts on how fun it would be for the producer. However, the idea with a wish list was popular.

Schedule

This concept is concentrated around a schedule that is available on the web. The schedule consists of small video clips for each event during the festival. If there is an event in the schedule that one of the bloggers plan to broadcast from, they can add a pre-recorded trailer to the schedule. By tapping in to a current event the user will get to see a live broadcast from the event. By adding the trailers to the schedule the broadcasters book times when they plan to film.

The screen in the Inkonst tent shows all current live broadcast from different broadcasters, or trailers if there are not enough live broadcasts at the moment. Comments by the users are submitted by sending emoticons like smileys and thumbs up/down to the broadcaster during the live broadcast.

The phone application that the broadcasters use to record senses the environment with Bluetooth to find out how crowded the place is. This information is presented in the schedule and in the tent along with the broadcast.

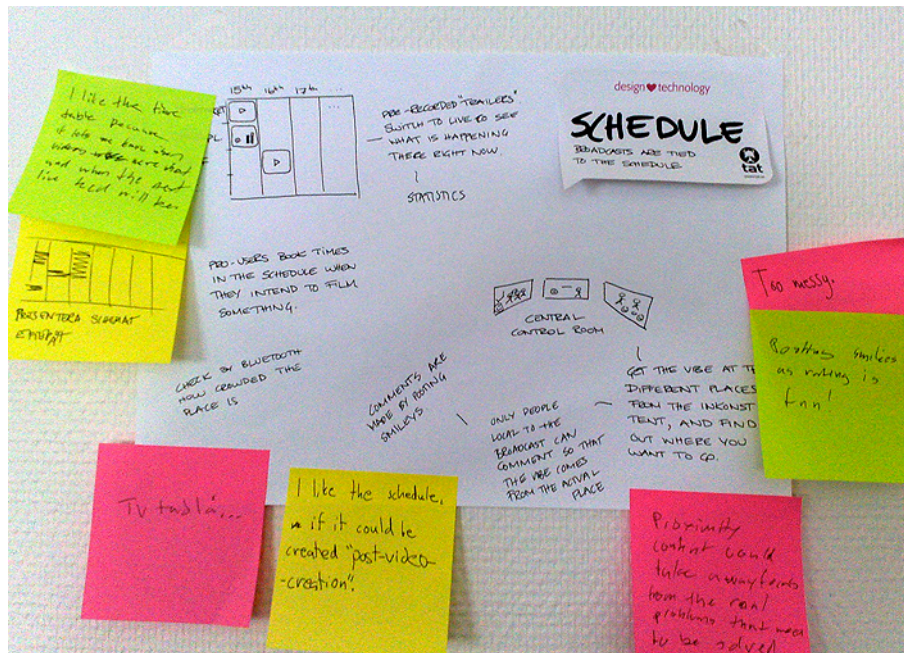


Figure 12. The schedule concept with feedback.

Some thought this concept, depending on how you present the schedule, could become too messy. Others liked the idea with a timetable, because it lets the viewer know when a video was shot and when the next live broadcast will be. The interaction with smileys received positive feedback.

Control room

This concept was initially part of the schedule concept, but during the presentation of the concepts it became clear that it could be extracted to a concept of its own. The extracted concept is therefore presented in more detail in the section below.

4.1.4 The three concepts

By evaluating the feedback given on the five concepts presented in the previous section, the following three concepts were extracted.

Control room – find out the vibe. Where do you want to go?

The five broadcasters should be assigned to cover different areas of the festival. Users may comment on these five areas, it could be a place or an event, with a rating system. They do not necessarily have to watch the video the broadcaster is shooting, but have to be in his or her proximity in order to make a comment. The feedback will be summarized and shown in connection to the video broadcasted. This will allow people in the tent and other people watching to get a vibe of the place and/or event without being there. Other statistics could be gathered as well, for example how crowded the place is.

The tent will work as a control room, monitoring the festival. It will be like a central hub to which you can go to in order to find out where you want to go.

Collective creation – assist your favorite broadcaster

The five broadcasters should have really distinct content areas. People can sign up to a certain broadcaster, either as a subscriber/viewer to the content submitted by him or her, or as a participator. Participators can add content in form of music, graphics and/or video footage. There will be a limited amount of participators allowed, say five, for a limited time, say two hours.

Viewers can feedback the material through a rating system. Statistics could be shown on the web page.

Complete coverage – participate in covering the festival

This concept does not distinguish broadcasters and viewers in the same sense as the previous two concepts. Broadcasters and viewers are therefore referred to as users of the system. Users do not actively film things all the time, if they do not feel the urge. If participating in the project they install the application on their phone. By doing so, they will be marked in a map over the festival and other users can request them to film from where they are. Viewers can send feedback to the broadcaster as arrows, indicating in which direction they would like him or her to film. They can also feedback the quality of the content by a rating system, and the overall rating will be shown together with the broadcaster's location on the map.

People in the tent can be presented with the map, and choose one of the users of the system (who might not yet be broadcasting), who they would like to start a broadcast.

The vision with this concept is that if a lot of people participate, they can have complete coverage of the festival.

4.1.5 The final concept

As described in the method section the procedure of the concept development is to pick one of the three concepts described above and refine it to become the final concept. However, a short time limit made it unrealistic to take one of the three concepts forward for implementation. Instead, one of first five concepts was chosen, *Broadcaster subscription*. This concept was picked because it is to some extent the common denominator to all the other concepts. The technology that needs to be developed to actualize this concept is also the foundation for the other four concepts. This concluding section describes this final concept and the next section presents Malmö Mobilecast that aims at implementing it.

The basic idea of the final concept is that five *bloggers* (broadcasters) with distinct target audiences make live video blogs from around Malmöfestivalen. There is three different ways of accessing the video blogs that they record: a big screen in a tent at Mölleplatsen, a web site and mobile phones. The

presentation of the videos is adapted to the media it is represented in, as will be described below. Anyone watching a live broadcast can send feedback to the

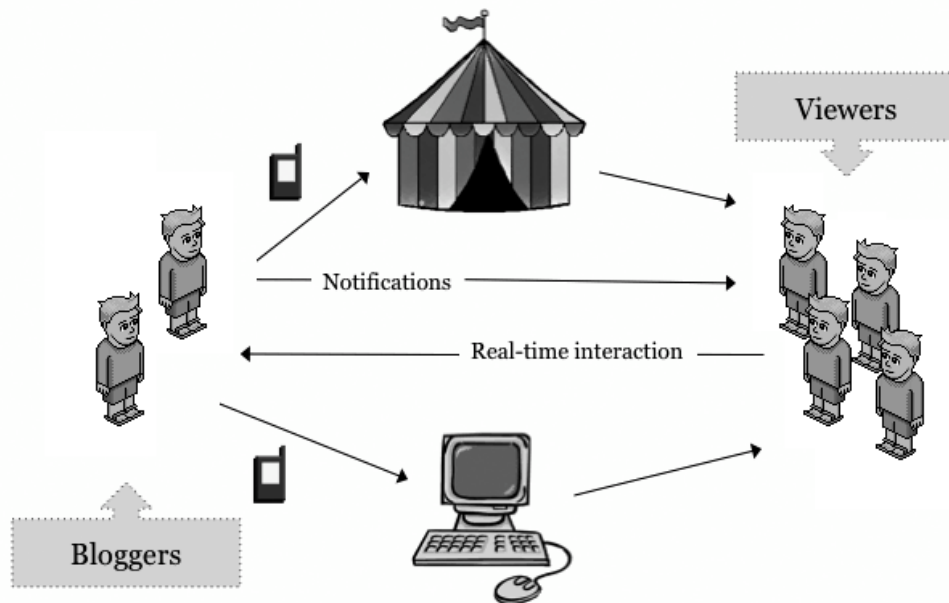


Figure 13. The network of pieces constituting Malmö Mobilecast

blogger in real-time. Furthermore, it is possible for viewers to subscribe to one or more broadcasters to get notifications of live broadcasts in advance.

Website

The website supports watching of live broadcasts as well as watching of archived material. It also shows a schedule of the planned broadcasts. Each one of the bloggers are presented on the website with a profile in text and a promo video. This helps the users to decide whether they would like to subscribe to a blogger.

Users can, via the website, wish for events that they would like the bloggers to attend and broadcast from.

Screen in the Inkonst tent

The screen in the tent will show all live broadcasts. If there is no current live broadcast previously recorded material will be shown. It will be material recorded during the last couple of hours or so and not older, in order to gain a simultaneous experience.

Mobile phones

Viewers can watch live broadcasts in their mobile phone. The mobile phone is the media used to subscribe to one or all of the bloggers. The decision to place the sign up part of the subscription in the mobile phones was taken to allow users to sign up impulsively while watching a broadcast in the tent. The

notifications are sent by the bloggers to the subscribers' mobile phones automatically at the start of a live broadcast. The notifications contain short information promoting the broadcast and information on how and where to watch it.

The mobile phones are used to send feedback to the bloggers during a live broadcast. The feedback is sent by SMS to the blogger, which appears directly on the screen of the mobile phone the blogger is using to record. The messages also appear on the screen in the Inkonst tent and on the website.

4.2 Malmö Mobilecast

Malmö Mobilecast tries to actualize the final concept presented in the previous section. Unfortunately the time limit became an obstacle in realizing some parts of the concept, as will be explained below. The final prototype is a network of several pieces, see Figure 13. The following sections will talk through the different parts of the prototype.

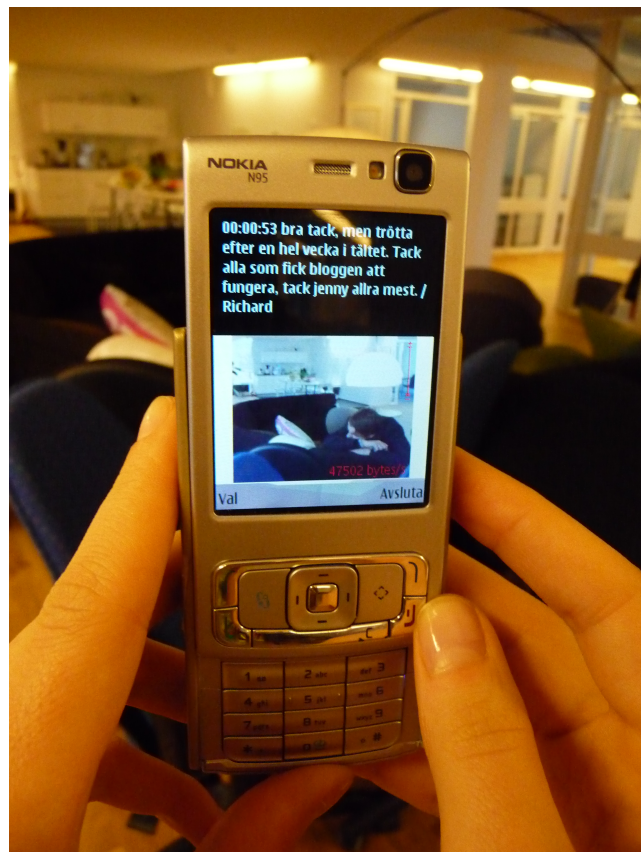


Figure 14. The mobile phone application, part of Malmö Mobilecast.

4.2.1 Mobile production of live video streams

The core of the prototype is the client application designed for Symbian S60 mobile devices that enables the user to stream video in real time to a server. In

addition to streaming video the application can receive messages in real-time from viewers in a similar way to the existing software described in section 2. The prototype can only hold the most recent message. It is presented with white text on a black background box just above the video, see Figure 14.

4.2.2 Mobile consumption

This is the most unfortunate part that had to be left out from the prototype. Having spent two weeks of hard work on this, the decision was taken to leave it out in favor for the interaction text messages.

4.2.3 Screen in the Inkost tent

All live broadcasts were shown on a screen in the Inkost tent. Immediately upon connecting, the bloggers' stream was live on the screen. Between all live broadcasts a selection of seven previously recordings was looped. The seven videos were selected by the editor and were always the most recent clips. For example, in the event of a live broadcast the loop was interrupted and the live broadcast shown. When the live broadcast finished the screen would return to show the loop again, now with the just recorded video as part of the loop. Below the frame showing the videos there was a text displaying whether the clip showing was a previous broadcast or if it was live. If it was live the text would show the name of the broadcaster making the broadcast.



Figure 15. The Inkost tent showing the stream on a screen.

The screen in the tent also presented information about how to subscribe to one or more of the bloggers by mobile phone. Furthermore, it displayed the three most recent text messages sent by viewers to the bloggers during live broadcasts.

4.2.4 Website

The website shows the same as the screen in the tent, in fact the screen shows the website.

The website links to a channel on YouTube where all the archived clips chosen and named by the editor are shown. This channel page also contained some other information including promo videos of the bloggers, information and background of the bloggers.

The website also showed the promo videos of the bloggers before the start of the festival. Unfortunately there was no time to implement a wishing function.

4.2.5 SMS notifications

The initial idea with the SMS notifications from the bloggers to their subscribers was to have them sent out automatically upon the start of a live broadcast. However, once it became clear that the mobile consumption part of the prototype had to be left out the live notifications became somewhat irrelevant. To watch a promoted broadcast the user would have either physically move over to the Inkonst tent or surf into the web site. Since the broadcast would last for only a few minutes it wasn't realistic to think the notifications would prove useful.

Instead, the SMS notifications were sent out manually by the bloggers themselves using ordinary SMS technology ten or fifteen minutes before the start of a broadcast. Using the SMS gateway the SMS notifications is distributed to all the blogger's subscribers. In order to make it more convenient for the bloggers to send out notifications a template was created on their devices that contained information about where to view the upcoming video, see Figure 16.

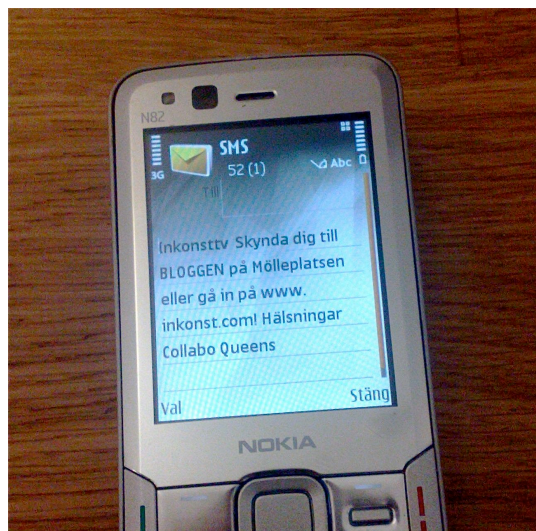


Figure 16. Template used for send outs of notifications.

The original notifications that were sent out automatically upon connection were kept internally between the bloggers to help them synchronize their broadcasts.



Figure 17. Notifications of live broadcasts were sent to the other bloggers.

4.2.6 Interaction messages

While watching a live broadcast the viewer could use SMS to send text messages to the broadcaster. Both the web site and the screen in the tent contained instructions on how to send messages to the blogger. To send a text message the viewer typed 'InkonstTV' as a prefix followed by a message.

The viewer did not need to specify the recipient of the message, all text messages sent was always received by the blogger currently broadcasting live. If a text message got sent when no one was currently on air, the message was yet displayed on the screen in the tent and on the website. Next time one of the blogger connected to go live he or she saw the most recent message sent by a viewer.

4.3 Findings from the Malmöfestivalen User Test

The user test highlighted quite a few issues with the prototype. Some of the features of the prototype were more or less expected to prove troublesome whereas some finding came as a surprise and would not have been identified

without the user test. The findings encountered have been divided into five sections presented below.

4.3.1 Subscription and notifications

This section will describe the user experience of subscribers to the service. The experience turned out to be quite individual but there was a few recurring things that will be resumed below. Before this there will be a resume of how the bloggers used the notification system.

Bloggers' experience

During the instructing of the application all bloggers were told to send out notifications ten to fifteen minutes in advance of a live broadcast. They were told to use the template provided and fill in an approximately 60 character text messages promoting their next live video. As the user test took off they all started to use the possibility to notify subscribers pretty differently.

After the first day Gudrun Hauksdottir felt that sending the notifications were too awkward and simply stopped sending them. Rakel Chukri, being a writer, liked the idea of putting text to her videos and promoted them with well-formed, sometimes enigmatic messages and sent them 30-60 minutes before the live broadcast. Examples of her messages include “Nu blir det parakrobatik” (“Acrobatics in pairs next”), “Ett spelande guldträd” (“A playing tree of gold”), “Varför uppträder han i svart lädermask, Christian?” (“Why is he performing in a black masque of leather, Christian?”) and “Nu ska vi prata FRA” (“Let’s talk FRA”).

Collabo Queens sometimes sent out a series of notifications promoting their next live video, building up a tension. For example one evening they started by sending out “Mat akut nu!” (“Food, now!”) followed two minutes later by “Undervisning i festivaltaktik” (“Teaching festival tactics”) and then finally five more minutes later “Framme!” (“We’re there!”). Shortly thereafter their broadcast started.

Anders Carlsson tended to use the notification opportunity as a way of reaching out to his subscribers at any other times than while visiting the festival ready to do broadcasts. His messages would typically promote broadcasts hours ahead of time. For example “Anders kommer regrediera i Oogli Bogli tältet kl 4” (“Anders will regress in the Oogli Bogli tent at 4 o clock”) and “Kl 21 kör Anders pecha kucha på lördagsplan lilla estrad! Och sänder live!”. (“At 21 o clock Anders will do pecha kucha at lördagsplan lilla estrad! And broadcast live!”) Sometimes, towards the end of the festival, he completely left out the template.

Most of the time Behrang Miri ignored the possibility to send out notifications to his subscribers, and when he did he never put any custom text in them, he just sent out the prewritten template. When doing so, he started his broadcast immediately after the text went out.

All in all, the bloggers were unaware of who their subscribers were, how many they were or when they had chosen to start subscribe to their broadcasts. At one time, Behrang Miri said “I don’t have any subscribers” when in fact he did.

Viewers’ experience

Maybe the most prominent thing that a lot of the subscribers felt was that there is a broken link in the changing of media from mobile phone (where the notification was received) to the web or screen in the tent (where the video was watched). The fact that the viewer has to be active in the change creates a threshold in starting to view the live video streams. Depending on the current occupation of the subscriber, once the notification was received it was more or less successful. If the viewer was stationed by a computer he or she would immediately surf into the website only to be confronted with “Earlier broadcast”. This made him or her loose both interest and trust in the service.

All viewers were unanimous that old text message quickly became irrelevant. One subscriber said she came out after a cinema visit to discover twelve new text messages in her inbox. She deleted them all without reading them. Other subscribers stated that they would only act upon text messages if they discovered them immediately once they were received.

While some users did not mind having notification sent to their SMS inbox (saying they were pretty subtle and easy to delete) others felt intruded by them, meaning SMS is a personal channel. Upon receiving a SMS they would expect it to be from a friend and felt disappointed once they saw it was not.

One user stated that she would like to be able to turn the notifications on and off, meaning that for a period of time she would be open to receive notifications, while for another period she might be unable to watch any videos and hence would not like to receive notifications either. In the period of time when she would like to receive notification she would even like to be able to have different degrees of notifications. For example if she is bored for two hours she would definitely like to watch any live broadcast, she would like to be notified loud, and sometimes she would prefer more subtle notifications, but still being notified.

When it comes to subscribing, the viewers found it difficult to know who they should subscribe to. The promo videos that were shown prior to the start of the festival were helpful as guidance but more information was asked for. One user said that since he did not know who to subscribe to he started by subscribing to all of them, and found his favorites after a few days. In taking the decision to subscribe, there was some additional doubt in what you are signing up to. Basically all of the users did not know what kind of content they could expect when they signed up.

One user who was subscribing to broadcasts from Behrang Miri said he was disappointed to see that Behrang handed out the camera to some kid that made a broadcast instead of Behrang. The user found that Behrang’s acting was

“disrespectful to him as a subscriber”. He did however say that if he knew that the video was shot by a kid chosen by Behrang he would have been more likely to approve of the broadcaster swap.

4.3.2 Context of videos

One of the somewhat unexpected findings that came out of the user test was the lack of context to the broadcasts. This section will describe a few experiences of viewers that all seem to derive from this lack of context.

A typical scenario is that a viewer surf into the website or walk into the Inkonst tent and find a video with no author and no complimentary information. If it was a live broadcast the bloggers name was shown, but still no information telling what the broadcast is about. The viewer had difficulties in identifying the context or plot of the broadcast and therefore shortly lost interest.

Here, a difference was spotted between ordinary viewers and viewers who subscribed to the bloggers. The subscribers, who had beforehand received a small notification conveying what the broadcast would be about, on most occasions tended to find the video more interesting than a viewer who just stumbled upon the broadcast.

One of the viewers who followed Malmöfestivalen through the website remembered one of her favorite moments of the experience. Once when she surfed into the website she found a new message from a viewer displayed on the site saying “No more pocket broadcast, Anders!”. Later, she was notified of a broadcast from Anders and decided to view it. The broadcast features Anders and his friends sitting in a circle taking turns to disclaim what they said during the pocket broadcast (prior to this Anders had accidentally broadcasted live 10 min from his pocket). The scenario excited the user, saying it felt like she was following a story. She was intrigued by the first SMS and pondered upon it, and was pleased to have it explained by the following video.

Some of the viewers requested a timetable for the broadcasts, saying it would be easier to decide what to watch.

4.3.3 Interaction during live broadcasts

This section will resume how the interaction between the bloggers and the viewers were perceived from both sides. The experiences will be presented separately.

Bloggers experience of live interaction

The overall experience of live interaction from the bloggers perspective was very good. Collabo Queens said that their best broadcast was the one that was staged (although they didn't know that), where they continuously received messages from the viewers. This was the first broadcast during which they established a communication with the viewers.

The broadcast starts out with Collabo Queens walking a street in Malmö discussing what's hot and what's not. They get a message from a user asking where they are going, to which they reply that they are on their way to NRJ in the park.

The interaction continues to develop into an interview-like conversation, where the viewers asked questions about Collabo Queens as persons, rather than commenting about the current broadcast. Later it emerged into the audience challenging them what to do next, handing out missions.

At one point they got a text message while still answering a question sent in from a viewer. They read it but continued to answer the first question. When they were free to answer the new question they looked at the phone again, but now a third question had appeared, deleting the previous one. They started to discuss how to get hold of the old message again, but concluded it is not possible. They remembered the question and continued their broadcast.

Their experience in blogging changed after this broadcast, once having tasted the fun of getting feedback, they did not appreciate "just broadcasting" as much as they had done before the staged broadcast. They contacted the editor asking "Where are our text messages? Why don't we get them anymore?" They also asked their audience during their next broadcast if they had any mission for them to complete.

Gudrun Hauksdottir was disappointed that the text messages she received were anonymous, she would like to see who the sender was. She was also confused by some messages, saying that she received "strange" messages.

All bloggers tended to read the message out loud once they saw it, without being instructed to do so.

Observations of the bloggers show that they easily miss the messages sent to them during a live broadcast. A lot of the broadcasts are made by the bloggers directing the camera towards themselves. By doing so they turn the screen of the mobile phone against them and do not get the chance to see any incoming messages.

Viewers experience of live interaction

In contradiction to the perception of interaction from the blogger side, the overall experience in texting the bloggers during broadcasts was considered lame.

For a start, most messages that got sent were from viewers in the tent, targeted at other viewers in the tent. Very few messages were actually directed to the blogger doing the live broadcast.

During the staged broadcasts, where viewers were asked to interact with the broadcaster, a few issues with the SMS interface were identified. The users found it awkward to type in the prefix "InkonstTV", since it is not part of the

T9 dictionary. Even when composing the actual messages the users struggled with the interface of typing on mobile phones.

The result was that it took too long to compose a message. A lot of the times the broadcast would end before the viewer had pressed send. Even if the user was successful in sending the message while the broadcast was still on, the broadcast might have taken a different turn and the message would be irrelevant.

During the review discussion after the festival the viewers stated that they easily got bored with sending text messages if they did not get any indication from the blogger that he or she had seen it.

Upon being asked what they would like to comment to the blogger one user stated “nothing”. As long as the video does not contain a discussion or some sort of debate the viewer did not feel the urge to send a message to the blogger.

4.3.4 Offline feedback

The user test showed that the impact of feedback to the bloggers on other occasions than during the live broadcast was underestimated by the concept. During the interviews and the film viewing meeting it became very clear that all kind of feedback nourished the proceeding of the blogging. A few examples that came up will be explained below.

All bloggers had an ongoing conversation with the editor throughout the blogging hours. As previously explained, the purpose with this communication was to support the synchronization of the broadcasts. However this contact turned out to be valuable in another way. Upon phoning the editor the bloggers were updated with feedback on how their broadcasts were perceived in the Inkonst tent. This feedback made their blogging worthwhile.

Anders Carlsson said that it felt very rewarding every time he came into the tent to meet with the editor to hear his or her opinion of his recent broadcasts. Sometimes he would think about whether they liked something he had done.

Collabo Queens found it relaxing and inspiring to hear from the project group that they were pleased with the broadcast, even if they had done something that they themselves did not think of as ambitious. They felt that this inspired their creativity in making new broadcasts.

Collabo Queens kept checking the Inkonst YouTube channel to see how many views their videos had and became excited as the number of views increased. They also had a circle of friends whom they knew were following their blogging.

A few bloggers said they were stimulated to do more broadcasts when they saw that the other bloggers were doing live streams. For example one night Anders

Carlsson was doing a lot of broadcasts, which inspired Collabo Queens do more broadcasts than originally planned the following night.

4.3.5 Live vs. archived material

This section presents findings related to the fact that the broadcasts went out live.

During the instructions of Malmö Mobilecast prior to the user test almost all bloggers were surprised and thrilled by how easy it was to start a live broadcast.

Anders Carlsson says that being able to broadcast live from a mobile phone is like “walking around with a loaded gun in your pocket”. He means that no one can stop him in time or censor his material; he can in a very direct way reach out to his audience.

Behrang Miri did a broadcast featuring a few kids. After a while he claims to the kids that what he is filming is going out live at the very moment. The kids refuse to believe him and he has to take them to a computer (still broadcasting live) to prove that his current recording is being shown live on the web. The kids are amazed when they see he is telling the truth.

One user got caught by a clip by Gudrun Hauksdottir, he found the content pretty uninformative, but continued to watch because he recognized the environment of the video as a place nearby and liked the idea of it being live. After watching for a while he noticed the text below saying “Earlier recording” and immediately lost interest in the video. He said he felt like “Why am I watching this?”.

Another viewer said that it was interesting to follow a person through the festival, like a story, and that live therefore was not important. He primarily watched the content on the Inkonst channel on YouTube. He did however say that if he surfed into the ordinary web site he expected the content to be live and was disappointed if it was not.

Two viewers said that it was more important that the content was live if it was watched in the tent, than if it is watched at home on the web.

5 Discussion

This section discusses the features of mobile video streaming that this thesis has explored. First, Malmö Mobilecast is compared to the existing mobile video streaming services. Second, the findings from the user test are discussed. Finally, a few additional findings from the user test are presented.

5.1 Malmö Mobilecast vs. existing services

This section compares Malmö Mobilecast to the existing mobile video streaming services that were presented in section 2.

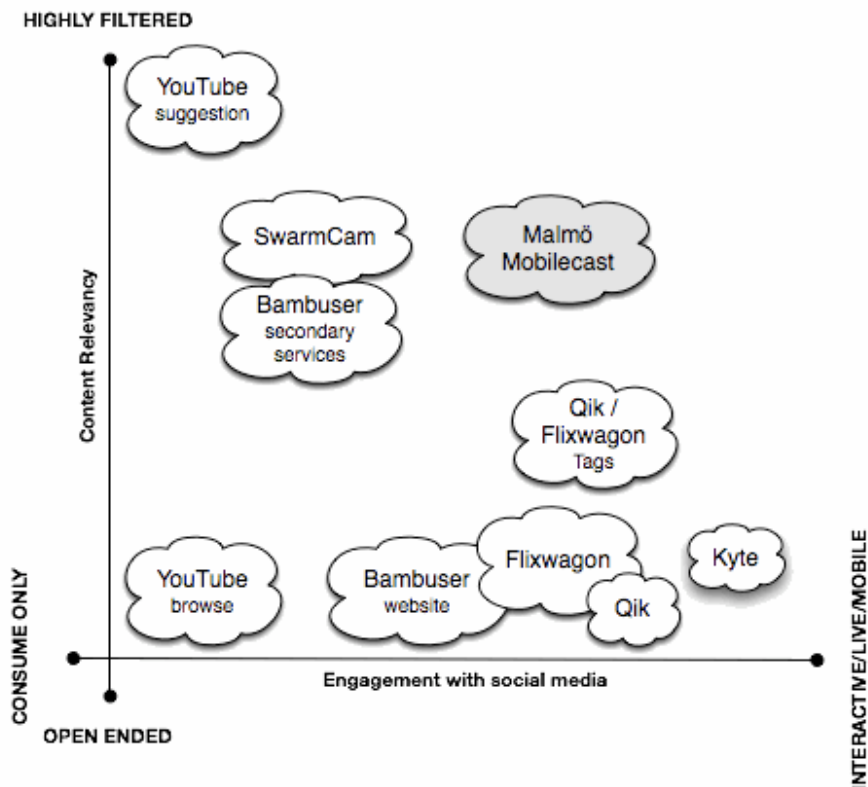


Figure 18. Malmö Mobilecast positioned in the chart defined in section 2.

The objective with the thesis was to investigate the possibilities of creating and maintaining a relation between producers and consumers of videos. The intention was to do so by exploring the white space in the chart.

Malmö Mobilecast created a niche in content and targeted a specific audience, namely Malmöfestivalen visitors and Malmö citizens. Furthermore, its lifespan was limited to eight days. Bambuser, Qik, Flixwagon and Kyte provide the technology but do not make an effort in offering interesting appliances. The material on their websites does not capture the viewers, and one of the hypothesis with this thesis was that this is due to the wide content they offer.

Figure 18 shows Malmö Mobilecast placed in the white space that was identified in section 2.

All the content was filmed from different locations in Malmö. Seeing the target group was Malmö citizens and festival visitors they could relate to the content. One user said that he was captured by a video clip since he recognized the surroundings as a place nearby himself. To some extent this achieved the objective of creating a relation between the producer and the consumer of the videos. One should also remember that Malmöfestivalen is an urban festival that engages almost all the citizens of Malmö to different extents. The viewer might have visited or plan to visit places or events shot by the bloggers. They might even decide to try out something *after* having seen the video. The viewers said that the video content opened up their eyes to what the festival has to offer. One viewer said “I have always had the impression that Malmöfestivalen is free music and oriental food, I did not know there was so much more to it”.

Furthermore, the bloggers were more or less famous Malmö personalities. Each of them has groups of people who know who they are and what they are interested in. For example, Rakel Chukri, who is a cultural writer at the local newspaper *Sydsvenskan*, might have a group of readers that can identify with her and therefore can relate to her video blogs. Also, the bloggers each had their own circle of friends that they knew continuously watched their broadcasts, gave them feedback and in some cases also appeared in the videos.

There was also one subscriber who, minutes after having received a notification from Anders Carlsson, by accident walked by him when he was doing his broadcast. She said this generated a pleasant feeling of presence.

Despite this niche in content with all its benefits, one of the issues that the user test identified was similar to the problem seen in existing services. A significant amount of the video content did not capture the viewers. The subsequent sections will discuss this further and also discuss what can be done in order to diminish the problem.

Future mobile video streaming applications could benefit from being even more specific in their content. Rather than trying to reach out to the world just because it is possible, one should take advantage of the fact that consumers can now also be producers. Mobile video streaming enables millions of media outlets. If they all cover narrow, very specific content areas, one single of them might not reach out to more than ten viewers, but together they can reach out to millions. This can be compared to *The Long Tail* (Anderson, *The Long Tail*, 2004). The theory is that the mainstream products and services that are on the market today are controlled by professional constitute only a small portion of all that is available. All the other services may not be as popular but since they are so many they together form a long tail.

Actually, a service that targets a thousand viewers with interest in the content is likely to reach out to more people than a service that targets millions of viewers with random interests.

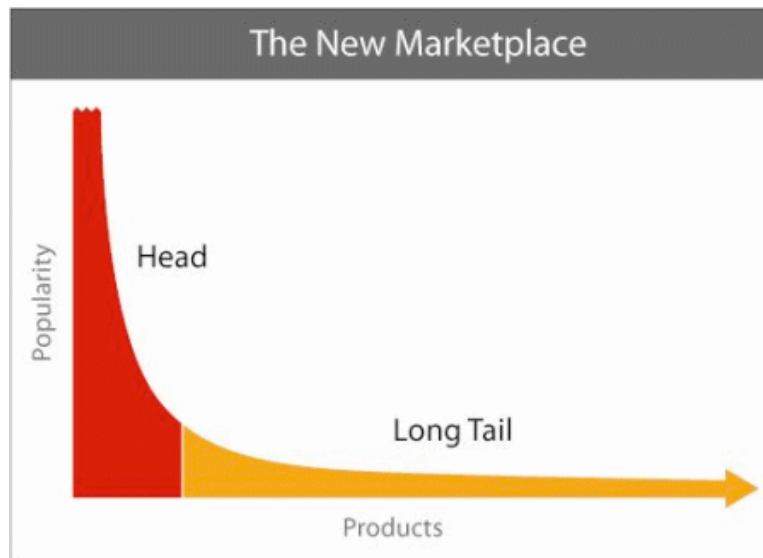


Figure 19. The Long Tail (Anderson, The Long Tail)

There is definitely room for a range of appliances of live mobile video streaming that concern a specific topic. Qik has some suggestions like medical consultation, live customer support and recording for legal and insurance purposes (Information, Qik).

5.2 User test findings

In this section some of the findings presented in the result section are discussed further.

5.2.1 Subscriptions

The idea of having subscriptions was to create an initial relationship between the bloggers and his or her viewers. This section discusses how the subscribing was seen from both the blogger's and the viewer's side, and how it could be improved.

Viewer's side

One hypothesis in the concept of subscribing was that it would work as a filtering function. The viewers themselves choose whose broadcasts they would like view, i.e. filters the content. However, the user test showed two problems here. Firstly, the viewers were not clear about who to subscribe to or why. Secondly, even after signing up to a blogger, the viewers where unsure of what they were actually subscribing to. These two problems will be discussed below.

Why should I subscribe?

Let us start with the contingency of subscribing. The promo videos that were shown on the web site prior to the start of the festival worked as an introduction to the bloggers themselves, but did not give away particularly much information about the actual broadcasts they would make. Even though the bloggers promoted in words what they intended to blog about, the viewers did not get an idea of how their videos would be like. What would they look like? How often would they broadcast? For how long? What does it mean to subscribe?

The lack of answers to some of these questions is due to the fact that the user test was an experiment and no one really knew on beforehand what the video material would end up like (in fact, this itself was an important outcome of the experiment) or how many broadcasts there would be.

Other things, typically what it means to subscribe, could have been communicated better on the website and in the Inkonst tent. The website could give away more detailed information about the bloggers and what they intended to blog about in text, as was the original idea with the concept. However, this would hardly inform the viewers any better than the promo videos did. In addition to having information (text or promo videos) talking about the video blogs, a few example video broadcasts from each blogger could be shown. Not only would this reveal the look and feel to the videos, it would also hint about the length of them. Furthermore, it would give the bloggers a chance to build up a tension and interest in their upcoming blog sessions. Collabo Queens recorded a video the day before the opening of the festival that never went out. It features the two of them sitting at home drinking beer, listening to music, with the schedule for the festival in front of them. They are highlighting interesting events and discussing what they should try out. This is an example of a video that might work as an example broadcast from Collabo Queens.

What am I subscribing to?

Let us say the problem with raising interest in starting a subscription has been solved. There is still the problem with doubtfulness to what you are subscribing to once you have signed up. Broadcasts from one blogger can vary very much content wise. The possible content area may have been narrowed considerable, but it still appears too wide. One user might have signed up to Behrang Miri because he is interested in his organization *The Voices and Faces of the Street (VFOS)*. Quite a few of the broadcasts from Behrang came from a tent promoting VFOS but more than half of his broadcasts were other things. If someone signs up to Behrang and expects to get broadcasts from VFOS the subscriber is bound to be disappointed more than half of the times. Likewise, someone who signed up to Gudrun Hauksdottir because of her interest and involvement in music would most definitely not want to see her broadcast of dogs doing waste sorting (Inkonst, 2008). The evaluation of the user test illustrated a feeling amongst the subscribers of “What am I subscribing to?”.

They received notifications of family activities and music acts from the same broadcaster.

Extending the subscription system with tags could make penance for this, making it possible for the viewers to specify their subscription further. For example, rather than subscribing to just 'Behrang', users may subscribe to broadcasts from Behrang *and* VFOS or Behrang *and* hip hop. The subscription system will then be build upon a tree structure, see Figure 20.

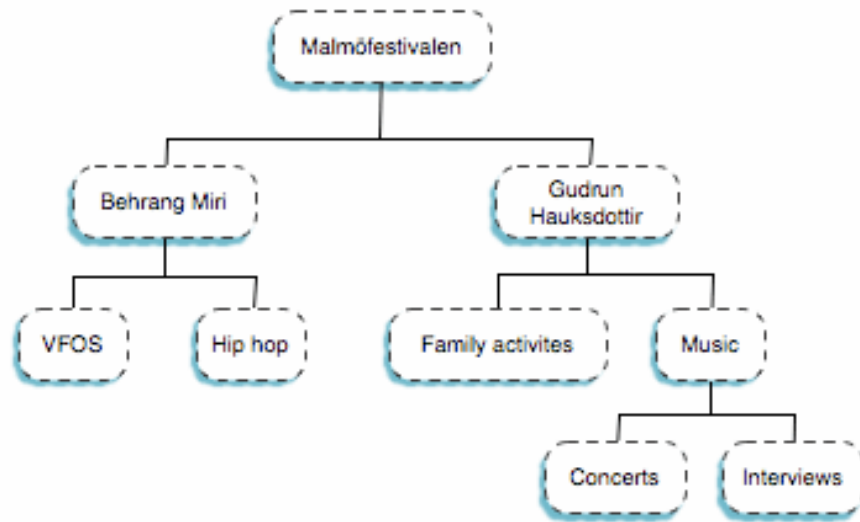


Figure 20. Subscription system in a tree structure.

In this way, the degree of specification of the subscription will be dynamic. Someone who is a close friend to Behrang is probably interested in everything he is broadcasting and can subscribe to the root of “the Behrang tree”. Someone who does not know Behrang can specify his or her subscription individually according to interest area. The tree structure can easily be adjusted to become more or less detailed. Furthermore, it allows someone indirectly to subscribe to an interest area, rather than a certain blogger. If you are interested in everything that is music related from Malmöfestivalen you might tune your subscription as Figure 21 shows.

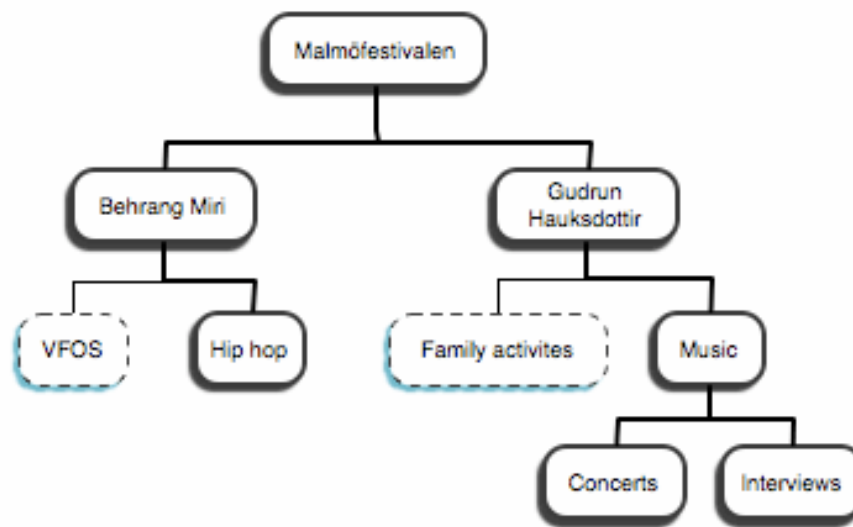


Figure 21. Subscription of everything concerning music.

The subscriptions become very individual and the sought after personal feel is achieved. One specific subscription might not be of interest to a great number of people, but the mobile phone as broadcasting tool opens up for a vast numbers of broadcasters to create an immense amount of subscribing paths.

Blogger's side

In addition to the filtering effect, one of the ideas of having subscriptions was to create an initial relationship between the bloggers and their viewers. Unfortunately, in the development of the user test, almost all of the energy was put on the viewers' experience of the subscription.

It became clear during the user test that the bloggers had no idea (how could they!) about how many subscribers they had let alone who they were. A database stored all information about who and how many was subscribing to each blogger. This information could easily be used to inform the bloggers about their subscription group. Revealing the identity of the viewers is a kind of offline feedback, which, during the user test, proved to be important. Rather than filming for an imaginary audience, which is the case with Bambuser and other existing software, subscription makes information about your viewers available.

An interesting side effect to revealing the identity of the subscription groups as they become more narrowed (as they do in the tree structure described above), is the possibility for the members to find each other and socialize.

5.2.2 Notifications

This section talks about some of the problems encountered with the notifications that were sent from bloggers to subscribers during the user test.

Possible further improvements that eliminate or diminish those problems are also discussed.

Broken link in the change of media

The idea with notifications in the subscribers' mobile phones arose since mobile consumption was a part of the concept. Once the mobile consumption was eliminated from the concept due to shortage of time, the mobile notifications were kept without reconsideration. The user test proved the decision to keep them mobile should have been reviewed. As discussed in the results, a lot of the users experienced a broken link in the change of media. This is typically something that interrupts the fluency in the communication between the broadcaster and his or her viewers.

The most obvious solution to this is to either move the notifications to the media used for watching or move the watching to the mobile phones, as was the initial thought. Looking back, since mobile consumption did not become part of the prototype, the notifications should have been moved to the web and to the Inkstent.

During the interviews with the subscribers, almost everyone who sat by their computer when they received a notification watched the promoted broadcast. On the other hand, if they were busy doing something else and did not have their computer accessible they almost always ignored the notifications.

Obsolete notifications

The difference in action from the subscriber depending on current occupation informs that some of the notifications become obsolete. A notification of a live broadcast ten minutes before its start is completely useless if the subscriber does not have the possibility to view it.

By using the same media for notifications and viewing the chances of sending notifications in an inappropriate time are decreased.

Notifications also become obsolete if the subscriber discovers them after the broadcast already went out. A perfect example is that of the subscriber that discovered twelve notifications after a cinema visit. All twelve broadcasts were over and she could do nothing but delete the notifications.

To avoid annoying the viewer with obsolete notifications they could be deleted from the user's inbox once the broadcast is over. In this way the notifications get more subtle and rather than cluttering the inbox of the viewer they live for in short, relevant time interval.

SMS wrong channel to notify through

The user test showed that using SMS as a channel for the notifications had some issues. As mentioned earlier, some of the viewers felt they were intruded by the SMS messages. Upon receiving a SMS they expected it to be from a friend and became excited. Therefore, when they saw that it was from one of the bloggers they were disappointed. This was a failure. Rather than achieving

a positive reaction from the notifications, as was desired, the reaction became negative.

To solve this problem, the notifications could be moved to an external application dedicated to the viewers. Thereby the viewer would know immediately upon receiving the notification that it is about an upcoming live video broadcast. There will not be a short moment of excitement that turns the discovery of the message into a disappointment.

One user said she wanted degrees of notifications. This is partly solved only by the fact that an external application is used, seeing it is easy to switch off.

Time interval between notification and broadcast

The irregularity in the time interval between the notification and the broadcast was sometimes a problem. The viewer receives a notification but cannot be sure of when to expect the broadcast. Sometimes the notifications themselves contained information about when to expect the broadcast, for example “Jag slutar jobbet nu. Sänder från Sydis tak om 10 minuter.” (“I’m going home from work now. Will broadcast from the roof of Sydis in 10 minutes”) sent out by Rakel Chukri. However, most of the times something came in between and broadcasts did not start when they were anticipated to.

There are different ways to, at least partly, solve this. Provided the same media is used for notifications and watching, it might be enough to fall back on the idea to automatically send out notifications upon the start of a broadcast.

The notifications could also extend to a mixture of the manually sent out notifications and those that are automatically sent out. It might be possible for the user to act upon the first, manual notification. If the contained message raises the interest of the viewer she could tell the application that she would like an automatic sent out reminder upon the start of the broadcast. She could also choose to say that she would not like any more notifications about the broadcast. This is possible provided the notifications have been moved to an external application.

Notifications are awkward but desired

As told in the results section, the ambition to send out the notifications varied from the bloggers. To summarize, there seem to be an urge from the bloggers to notify their subscribers (it is however unclear how much the instructions to send out notifications affected them) but they seem to find the send outs awkward.

Some of the awkwardness could be diminished if the send outs of the notifications are made from within the same application that is used for video streaming rather than by using SMS.

Automatic send outs is obviously the easiest alternative from the blogger side. There is however a drawback in not being able to send out the notification in advance. Furthermore, assuming you keep the custom message part of the

notification there is still the awkwardness and slowness of typing a message on a telephone interface. To ease this, alternative ways to enter the message could be considered, like for example by using voice.

Another alternative is to skip the custom message. The fact that the video streaming tool (a mobile phone) actually is a device with functionalities other than streaming video should be taken advantage of. The telephone can for example collect GPS data to determine the location of the broadcast.

However, as the next section will discuss and as mentioned in the results section, the custom message raised an interest and better understanding of the upcoming broadcast.

5.2.3 Context of videos

Despite the delimitation to Malmöfestivalen-specific content the videos were perceived by viewers as fragmented and out of context. During the analysis of existing mobile video streaming services, e.g Bambuser, the spread in content was considered the main reason to the lack of engagement in the viewers. However, it seems that even when the content is specific and predefined it is difficult to engage viewers in the material.

Narrowing the content might help in raising an interest for viewing the videos, but does not seem to be enough. This section discusses some additional approaches that might be interesting to experiment with in order to avoid the fragmentation of the video material.

Give each video a title

The evaluation of the user test showed that subscribers appreciated the videos more than non-subscribers because of the notification they received beforehand. The notifications most of the times contained one or two sentences describing the content of the upcoming video. Displaying a sentence in affiliation to the video seems to help the viewer to put the video in the correct context. The sentence could act as a title to the video.

The title could very well be the sentence supplied by the bloggers in the notifications. There are two setbacks. For a start, as already explained, some of the bloggers found it troublesome and time consuming to send out the notifications and hence omitted to do so. Secondly, there was a great spontaneity from the bloggers when it comes to deciding what videos to make. It was not unusual that a blogger sent out a notification promoting a planned broadcast and then filmed something else that they just stumbled upon. They did not seem obliged to complete their promise in the notification they sent out to their subscribers.

In order to diminish these two drawbacks one could either make it less complicated for the blogger to supply the notification or let someone else set the title. It could also be a collaboration between the blogger and the viewers, for example the viewers can suggest titles during the first minute or so of the

broadcast. The blogger can then pick the most suitable one from the list of suggestions.

Dynamic timetable

In the interview with the viewers after the user test, a lot of them requested a timetable of all broadcasts. The viewers thought they would have watched more broadcasts if they could plan the viewing better. They also believed that a timetable would make it possible for them to choose videos that they have an interest in, and disregard some broadcasts that they do not find interesting.

A strict timetable, as the ones we are used to, would not be possible. One part of the concept was not to restrain the bloggers by framing their broadcast to predefined times and content areas. In contradiction to traditional recording equipment the mobile phone is always present. The spontaneity that this allows is one of the most interesting aspects with mobile video streaming and should be taken advantage of. As previously mentioned the user test showed that the broadcasts turned out to be even more spontaneous than expected. Even the short planning (between notifying subscribers and the actual broadcast) was altered because the blogger might stumble upon something more interesting.

Despite the difficulty in maintaining a strict timetable, the idea with a timetable does not need to be discarded. It would be interesting to elaborate with some kind of dynamic timetable. For example bloggers can make bookings of events that they are attending, indicating that there might be a broadcast from the event. Some of the bloggers sent out notifications a few hours beforehand. These could be booked in the timetable and updated if the blogger changes his or her mind. The timetable could also act as a place for the viewers to make wishes for broadcasts from certain events.

Allow threading of broadcasts

As previously mentioned, each blogger turned out to have a wide spread of content for their videos. But a lot of the times the bloggers had recurring subjects. For example, there is one occasion when Gudrun Hauksdottir is filming Moto Boy before he is going on stage for his concert. Later she is interviewing his choir in their dressing room, also before the concert. Eventually she broadcasts the beginning of his live show. In the prototype there was no information to the viewers that these three clips belonged to each other. It would be interesting to introduce some kind of threading function, that lets the blogger tag a new broadcast to a previous one. By doing so, viewers could easily be notified of continuous broadcasts on the subject if they find the first one interesting. The following broadcasts would already have a context before they start.

Some of the bloggers also expressed a caution against disconnecting and reconnecting once they had connected. For example, a blogger might connect to film some kind of happening that gets delayed. Rather than disconnecting the blogger continue to broadcast a meaningless video and the viewers get

bored. If threading was allowed in this scenario, the blogger could disconnect and later once the event start, connect again and tag the second broadcast to the first one in order to let the viewers know that it is a continuation.

5.2.4 Interaction during live broadcasts

Unfortunately the possibility to send messages to the bloggers in real-time was poorly communicated to the viewers. Since the text messages also were shown on the website and on the screen in the Inkonst tent most messages that was sent was targeted at friends in the tent or similar. This resulted in complaints from one of the bloggers that she received strange messages.

Nevertheless, explicitly asking viewers to send messages to the bloggers gave information about how the bloggers perceived them and also showed some trends in what type of messages was sent.

Three types of messages could be distinguished: missions to the bloggers, questions that helped clarifying the video material and questions to the blogger that were independent of the video material. For example when Collabo Queens is doing a broadcast they are asked to rap and when Gudrun Hauksdottir is visiting a private cinema she is asked to explain why she is allowed to talk out loud during the movie. Collabo Queens also got a question about why they picked their name. Even though this trend could be seen in the sent messages it is important to stress that they were sent in by people who were asked to communicate with the bloggers and by people participating in the project. This should be contemplated in the evaluation of this trend. Different circumstances may have resulted in different kinds of messages.

Mobile text interaction too slow for video

Interaction using text is employed in pretty much all of the existing services. This works fine since the consumption of videos is made from a computer screen and the text messages can be entered quickly on the keyboard. Since mobile consumption was part of the concept, one goal with the user test was to find out how text interaction from a mobile phone works. Once the decision was taken to remove mobile consumption from the prototype, the decision to keep the text interaction through mobile phone was taken. Mobile consumption is bound to be the next big thing within the area of mobile video streaming. From that perspective, evaluating text interaction from a mobile phone is interesting.

As the result of the user test showed the time it took for the viewers to compose a text message was unproportionately long compared to the length of the broadcasts. Essentially two things caused this: the prefix and the nature of typing text through a mobile phone interface.

By moving the text input to an external viewer application and send messages through TCP/IP rather than by SMS, the problem with the prefix can be eliminated. Even so, the problem with slowness in typing the message still is a problem. Predictive text messaging, such as T9 helps of course, but video is

such a fast medium compared to text. Viewers experienced plenty of times that once they had composed a message, ready to send, the video had changed direction and their comment had already become irrelevant.

Alternative ways of interacting

Typing the interaction messages may have been awkward, but the feedback from the viewers was very appreciated by the bloggers. The question arises: what other ways are there to interact that can create fluency in the interaction?

Looking back at the result of the concept development the following ideas can be extracted:

- Emoticons
- Arrows
- Audience figures
- Rating

The benefit of emoticons is that you can have a predefined set of them that the viewer can choose from; dramatically reducing the time it takes to send feedback. The drawback is that the scale of feedback get much more coarse and impersonal. There is a risk that the emoticons becomes repetitive with the consequence that the broadcaster becomes immune to them. To prevent this the submitted emoticons can be summarized and presented in for example a pie chart. The emoticons submission effectively becomes a rating system.

During the staged interaction session Collabo Queens got hooked on the idea of accepting missions from the viewers. It would be interesting to see what feedback in the form of arrows could contribute to this concept. Perhaps the definition of a mission is worth the time it takes to type text, while further instructions can be submitted using the arrows.

During the conceptualization phase a hypothesis was that showing audience figures to the broadcaster would raise the awareness of the viewers and serve as positive feedback. However, talking to the broadcasters after and during the user test gave the impression that they thought they had more viewers than they actually had. Perhaps, in the case of blogging for an event like Malmöfestivalen, audience figures might serve as negative feedback rather than positive.

The importance of feedback

One of the core values of the concept developed was *feedback*. The hypothesis that feedback is important was confirmed by the user test. In addition to the live feedback, it was interesting to see how useful the offline feedback was.

With this in mind, the concept could benefit from the addition of offline feedback.

Bloggers do not notice the messages

While broadcasting all the bloggers tended to hold the camera towards them, making the screen with the messages being turned away from them, see Figure 22. Obviously this resulted in the problem that they did not notice the messages. Even while having the screen turned towards them some messages were not noticed because the bloggers were too concentrated on the making of the video. If there had been more time, experiments would have been made with different ways of presenting the messages. Sound, color and vibration are some interesting parameters to elaborate with. Sound has the drawback that it will be recorded by the microphone and broadcasted as part of the video. Color on the other hand will not make a difference if the blogger does not look at the screen to start with. Vibration is probably the most effective to start make experiments with, it is unclear if the video would appear shaky or if the vibration of the mobile phone is subtle enough to not get notice. If so, one might want to elaborate with other kinds of feedback, like for example temperature.



Figure 22. While broadcasting the bloggers turned the screen with the messages away from themselves.

5.3 Other findings

The user test performed during Malmöfestivalen was extensive and there were a lot of interesting, sometimes unexpected, findings that lie outside the scope of this thesis project. This section briefly presents three of them.

5.3.1 Mobile phone as recording device

One of the most interesting things to see during the user test was how personal the video material becomes as a result of the recording device being a mobile phone.

Since no one expects a mobile phone to broadcast live video to a wide audience the bloggers managed to get closer to their video subjects than any mass media would be able to. For example, when Gudrun Hauksdottir does an interview with Moto Boy he is very relaxed throughout the filming. He has no problem with her recording him doing some acrobatics and when she sets up the mobile phone he puts his face only centimeters from the camera.

The nature of the mobile phone as recording device (poor microphone, poor zooming capabilities etc) makes it necessary for the blogger to physically come up close to the persons they are filming. Rakel Chukri is doing a broadcast of a man reading poets where she is literally holding the phone 15 centimeters from his face throughout the entire reading.

Even the bloggers themselves, despite their awareness, said that they revealed more about themselves as persons than they had planned to. Anders Carlsson and Collabo Queens both pointed out the possibilities and responsibilities that come with the powerful instrument that live streaming and mobile phones constitute. Anders Carlsson said that he felt his responsibility and chose not to cross the borders even though it was possible to do so. Collabo Queens said they felt as if they almost crossed the border one night when they interviewed two elderly women being drunk.

5.3.2 A new perspective on Malmöfestivalen

Both the viewers and the bloggers said that thanks to this project they discovered a new side to Malmöfestivalen. Even though the videos were perceived as fragmented they gave a comprehensive impression of what the festival has to offer. One viewer said that he would not try out new events himself, but once he had seen the bloggers try them out he felt that he might try them himself next year.

The wide content in offerings from Malmöfestivalen was a surprise for both bloggers and viewers. This is something that should be interesting for the organizers of Malmöfestivalen.

One of the bloggers' girlfriend said that the web site acted as a window to the entire festival. In her own words: "For me, this year's festival *was* that website". There was even one occasion when she decided to go to bed, got a notification

from her boyfriend, logged on to the web site to see his broadcast, and ended up going down to the festival rather than going to bed.

5.3.3 Event blogging is a group effort

The collaboration and synchronization between the bloggers during Malmöfestivalen turned out to be a project in itself. As previously explained, automatic notifications were sent out between the bloggers once one of them connected and thereby was on air. These notifications were originally meant for the subscribers and it was more or less a coincidence that they were used internally between the bloggers. However, they turned out to be the most important tool in synchronizing the live broadcasts. The bloggers even requested a notification from the other bloggers upon disconnecting, which was implemented half way through the festival.

It was also interesting to see how the bloggers tried to find their role in the group. They were very aware of what kind of videos the other bloggers were doing, and tried to do something different. This was not something they were told to do but certainly helped in covering the whole festival.

6 Conclusions

The objective of this thesis project was to investigate mobile video streaming as a component in new media tools, and particularly to investigate the possibilities of creating and maintaining a relation between producers and consumers of videos. One of the main hypotheses was that it is more interesting both to produce and consume videos if such a relation exists.

In an attempt to create a relation, subscription was a part of the concept and live, text based feedback was used to enhance the experience of both viewing and filming.

The user test resulted in the following findings:

- The notifications were appreciated by the subscribers and made the upcoming videos more interesting to watch. However, SMS seem to be the wrong channel to use, since it is regarded as personal.
- The lifespan of notifications are limited. A notification that was seen by the subscriber after the broadcast of the video that it promoted was regarded as irrelevant and annoying. Notification could be deleted upon the start of the live broadcast.
- The hypothesis that it is more fun to produce videos if there is real-time feedback from the viewers was verified. Collabo Queens said that their best broadcast was the one where they received a lot of feedback. After having experienced this they had a feeling of “emptiness” while they were broadcasting without feedback.
- Typing text messages on a mobile phone takes too long. Video is a very fast medium compared to text. A typical scenario from the user test was that once the viewer was finished with composing a text message (even just a small one) the broadcast would either be over or have taken a complete different turn.
- While the bloggers found it very interesting to receive real-time feedback the viewers did not see the point in sending it.
- Despite the chilly interest from the viewers to send real-time text messages to the bloggers three types of messages could be distinguished amongst the ones that were sent:
 - *Handing out missions.* The viewers would challenge the blogger to do things. For example: “Go in to the tent and ask for the boss!”
 - *Clarifying video content.* The viewers would ask questions about the content of the video that appeared unclear. For example: “What does the audience say when you are speaking out loud during in the cinema?” This was asked to Gudrun Hauksdottir when she was visiting a private cinema and speaking out loud to her viewers during the film.

- *Interview-like questions.* Questions to the blogger that did not have any relevance to the video. For example “Why are you called Collabo Queens?”

These trends in messages were found amongst messages that were sent in by people who were asked to communicate with the bloggers or by people participating in the project.

This thesis project has just touched the surface of what can be done with live mobile video streaming. The learnings gained can be used as a foundation for further studies on the subject.

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Appendix A - Scrum

Iterative development is an approach to building software where the project is cut down into iterations. Each iteration consist of a self-contained mini-project that is a part of the bigger project. Scrum is an iterative method that applies to not only development; it can also be applied to for example project management, even in a non-software development context.

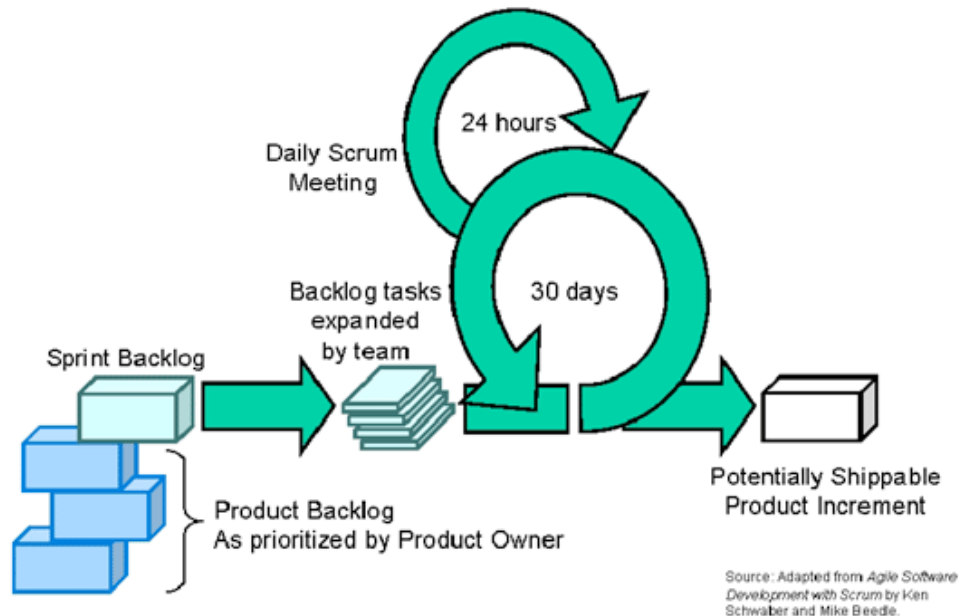


Figure 1. The core practices of the Scrum life cycle that have been used by this thesis project.

The sections below describe the different features of Scrum that has been used.

1. Product backlog

The product backlog is the list of all things that build up the project. The items on the list should only be roughly sketched headings. Once an item is picked from the list it will be refined and made into a sprint backlog.

2. Sprint backlog

The sprint backlog is created out of one of the items in the product backlog. The item is looked at more carefully and broken down into tasks.

3. Tasks

This is the list of tasks that make up the sprint backlog. Each task is time estimated, and if a task is estimated to more than 16 hours it is too large and should be divided into more tasks.

4. Sprint

The sprint is the period when all the items in the task list created from the sprint backlog are implemented. Each sprint should last for two to four weeks.

5. Daily scrum

Each day in the sprint start with a short stand up meeting, referred to as the daily scrum. During the meeting three questions are raised:

- What did you do yesterday?
- What are you going to do today?
- Is there anything preventing you from doing your daily activities?

The purpose of the daily scrum is to keep focused and keep track of what have been done.

6. Sprint review

When a sprint has been finalized a sprint review will take place. This is a meeting where the sprint is evaluated. The time estimation will be compared to the actual time. Tasks that are not ready will be put back in the product backlog.

Appendix B - NABC value proposition

The purpose of putting together a value proposition is to try to prevent failure in creating successful innovations. A NABC value proposition answers the four questions:

What is the market need?

A new innovation will certainly not be successful if you can't identify a need for it on the market.

What is your approach to addressing this need?

How will the need be satisfied? What methods will be used?

What are the benefits per costs of your approach?

What are the benefits of this product/service? What are the costs? For example, what would prevent someone from using the product/service?

How do those benefits per costs compare with the competition?

What is on the market today? In what way is this product/service different?

Appendix C – Questions asked while setting up the broadcasters

1. What do you think the festival experience will be like, have you been to it before?
2. [While instructing how to notify subscribers]
 - a. Have you used a mobile phone for more than just calling?
 - b. Have you used predictive text messaging before?
3. Have you used a mobile phone to take photos/shoot videos with? If so, what did you do with the material?
4. [Instructing how to use the application]
5. Do you think this will be easy or difficult technically for you to do?
6. Have you done any sort of blogging before?
7. Do you think this will be fun?
8. Do you think people who receive your video blogs will be interested in them?

Appendix D – Questions asked while debriefing the viewers

1. Did you use the subscription service?
2. What did you think about the amount of notifications that you received? Was the content relevant? Did you watch the broadcasts that were promoted? If so, were?
3. What would have made you watched the broadcasts? If it was more available or if the content was more interesting? Would you like to have it broadcasted to your mobile phone?
4. Would you like to have any additional information in the notifications? For example promotion of future broadcasts.
5. Which broadcast did you watch and what did you think of them?
6. Did the video blogging add anything to the festival? If so, what?
7. How important is it that the broadcasts are live?
8. Did you watch them alone or with somebody else? Which did you prefer?
9. Did you send feedback to the bloggers? If so, what?

Appendix E – transcripts from interviews with bloggers

Transcripts and interviews are made by Per Anders Hillgren, Malmö Högskola

	Collabo Queens intervju 1 P-A – Per Anders Hillgren, Malmö Högskola, intervjuare Johanna – Johanna Ritscher, ena halvan av Collabo Queens, bloggare Erika – Erika Sandström, andra halvan av Collabo Queens, bloggare Helena – Helena Engberg, projektledare på Inkonst
00.00	Har ni glidit in och ur roller (P-A) nja, nu med dansgrejen var det mer att glida in och ur en roll. Vi märkte hur de ville framställa sitt kompani att de ville ha det mer seriöst, så då fick vi skärpa till oss, så då kanske man gled in i en roll. det var kanske dåligt att man gjorde det men det blir ju så per automatik. Vi hade kanske egentligen velat göra det lite roligare. Jag tror inte att vi glider in och ut ur roller, det är nästan ingen av bloggarna som gör det i heller. Det är det som är styrkan.(Johanna) Vi är så här. I går så var vi lite aggressiva i tonen hela dan och jag ville seriöst typ slå någon (Erika)
01.00	Det syns igenom, döljer man det så är det inte intressant att titta på det vi gör. Att låtsas vara någonting vi inte är (Erika) hela kulturen har blivit dokusåpa man ska se allting på riktigt, man går inte på sånt som är för regisserat
01.44	Konsten är att inte gå in och ur roller, utan att försöka våga vara sig själv. Som Rakel och jag pratade om, vad man har för uppdragsgivare, när man kör sin egen business. Att man visar en sida när man bloggar nu som inte är den här finpolerade superprofessionella sidan utan att man verkligen bjuder på sig själv och det är det som är utmaningen att våga vara alla de personligheterna i sitt liv. Nu när vi bloggar så passar det sig att vara lite slapp och tycka till på riktigt om festivalen och gillar man inte festivalen så kan man säga det eller så filmar man smurffötter eller så undervisar man våldsteknik på skämt (Johanna). Eller dissas ?? som Anders gjorde (Helena)
02.50	Att man vågar vara opretentiös också och hela tiden tänka att vi gör det för att det är roligt, lite pilotprojekt vi testar om det funkar det är ingen som får något betalt, kör. Då får det bära eller brista. Det är bara att köra och försöka vara sig själv. Det är när man inte är det och försöker vara lite seriös som jag försökte vara, det är då man ångrar sig.
03.30	Är det några klipp som ni ångrar? (P-A) Ja det var ett klipp i fredagsnatt när vi filmade lite besökare, att det blev lite respektlöst, vi hittade ett par äldre damer som var på lyset och vi tyckte att de var lite

	roliga, då dokumenterade vi det. Så fick vi reda på dagen efter att det skulle läggas upp på YouTube och då var det kanske inte lika kul längre. Att behandla det här lilla redskapet, att behålla respekten för andra, att inte exponera folk, att inte som dokusåporna ta det värsta av människor när de är fulla, egentligen har de jobb och barn och vill bara vara lediga och inte vara övervakade och gillar inte FRA så kommer två brudar med den här lilla mobilen och dokumenterar när de är svin (Johanna).
04.30	Tror ni att det spelar stor roll att det är en mobil ni filmar med? (P-A) Ja, det tror jag, det funkar verkligen, den där (pekar på Dvkamera) känns fett mycket jobbigare än den där (pekar på mobil) man ser den där röda pricken (Erika).
05.10	Det är också en grej att lägga på förtroende, vi snackade om att man kanske skulle ha avtal, Inkonst kommer stå bakom det här, men sen det ska inte vara ett jobb, man ska inte få betalt utan vara som de personerna ni är och göra vad ni vill göra och se vad det blir (Helena)
05.40	Har ni funderat på relationen till Inkonst att ni är en slags representanter? (P-A) Vi har gjort saker med Inkonst innan och det känns som kompisar emellan (Erika) det finns ju tillit från alla håll och kanter och det märks (Johanna) sen tidigare (P-A) ja och i projektet också, just alltså att det inte har varit något avtal (Johanna) då hade det inte varit lika kul och inte samma frihet, det var som vi sa, fett bra gäng, alla kände så lugna och det tar ju fram det bästa hos alla också att man har en sån tyst överenskommelse också, att man kör sin grej, folk pratar om hash, vi filmar från våran klubb, jag ska köpa skor och det var sådär stort så då filmade vi det. Det hade vi inte kunnat om vi haft avtal om att vi ska vara representanter för någonting som är större än oss själva. Vi jobbar inte för Inkonst i vanliga fall så det skulle vara svårt att försöka spegla ur deras vinkel (Johanna). Det är inte det som grejen heller (Helena)
07.00	En fråga är: vad leder det här till? vad händer med de här filmerna? Varför ska de finnas? Där kan jag känna att det finns en lucka egentligen. Jag ser det mer som ett tekniskt test/pilotprojekt. Det är inte så att Malmöfestivalen i sig har ett egenvärde. Vi som personer har blivit valda för det finns personer som tycker att vi är lite roliga. Men just så här, att det här materialet vad händer med det? Varför gör vi det här egentligen? Vad är syftet? (Johanna) det är det direkta, alltså livegrejen att det sänds. (Helena)

	<p>Collabo Queens intervju 2 P-A – Per Anders Hillgren, Malmö Högskola, intervjuare Johanna – Johanna Ritscher, ena halvan av Collabo Queens, bloggare Erika – Erika Sandström, andra halvan av Collabo Queens, bloggare Helena – Helena Engberg, projektledare på Inkonst</p>
00.00	Jag är van att allt är lite strukturerat, att man vet vad man får, det är så man hittar sin målgrupp, de människor som är intresserade av mat de kommer att gå in och kolla på matklippet (Johanna) efter 8 dagar kan man se om det blivit en form det kan ju uppstå (Helena)
00.20	Hur känner ni nu, det är 3 dagar kvar, skulle ni kunna tänka er att blogga på livstid? (P-A) (skratt) ja alltså vi pratade om att (Johanna) Vi vill ha en sån här telefon och en redaktör, jag bloggar i text och bild redan och jag tycker att det är asfett så här, då slipper jag, det går mycket snabbare, alltså bilder och text, här är alltihop, ja jag skulle lätt kunna göra det (Erika)
01.00	Jag har inte bloggat innan, jag är ju musikbloggare, jag läser inte andras bloggar, jag kollar in din blogg (Erikas) det är typ den enda blogg jag kollar in som inte har med musik att göra. Jag hade väldigt svårt att se mig själv som bloggare för en vecka sedan...men så bara hände det, men det är ju roligt för att vi kör tillsammans och att alla kör sin grej, det är så att alla är positiva och det lilla man gör värderas högt, typ ”oh vad bra att ni filmat” och inte så att ni borde gjort mer eller seriösare. Så vi har gått igång på det, vi pratade igår om att när vi åker till Berlin, tänk om vi skulle filma då, och typ rapportera tillbaka till nån, för vi har ju några som vi vet kollar bloggen hela tiden, när man snackar telefon så (Johanna) ”så du, såg du, det var roligt, jag hör ingenting, det hackar bara” (Erika) så igår, ”jag har köpt nya skor”, ”ja jag hörde det om potatistår” det blir ju så lite internt med vissa personer. Det är lite roligt, för varje filmning blir att man utvecklas, man kommer på att nu ska vi göra ett sånt här inslag, nu ska vi göra ett sånt här inslag. Det uppmuntrar ens kreativitet väldigt mycket (Johanna) ni har utvecklat något under vägen (P-A) vi hade intentionen att intervjua lite mer artister, vi har ju haft den möjligheten, sen bara fuck it vi gör nåt helt annat, det är inte våran grej Gudrun får göra det (Erika)
02.55	Det handlar inte bara om musiken det handlar om att det är trist, öltälten och toaletten, blir förbannad, ja mycket ilska. (Erika) vilket är det argaste klippet (P-A) det är matkön, mitt blodsocker är under marknivå och jag är så jävla förbannad, johanna och jag står bak i kön, det går folk framför oss, har står två vi inte vet vi bara mejjar ned dem
03.37	Har ni planerat mycket av det ni ska filma? (P-A) nej, vi freestylar, så

	<p>gör vi rätt ofta med andra saker också (johanna) det är lite våra grej (Erika) har vi planerat nånting? (johanna) om vi planerat så har det gått åt helvete och så har vi skitit i det, då känns det skittråkigt (erika) jag tror att det varit lite så för alla, att de frångått schemat, att det blivit mer spontant med tiden (Andrea) ni har varit bra på att skicka ut sms ändå (P-A) vi har varit dåliga på det och då fick vi lite kritik, nu står jag där och antingen skickar jag eller så skickar jag efteråt bara för att det ska ut. Det tar ett tag innan man lär sig telefonen, man tycker att det tar lite lång tid och bökitigt för att man inte är van, så när man har lärt sig så går det fort. (Johanna)</p>
04.39	<p>De som hört av sig nu, är det folk ni känner väl? Ja, bara, vi har inte fått respons från folk vi inte känner. Har din pappa kollat, har han? (Johanna till Erika) det är ju bara hon johanna hela tiden, skratt, men ibland är det bara jag så det jämnar ut sig, och mamma hackar det bara för, för dålig uppkoppling (Erika)</p>
05.24	<p>Har ni kollat någonting på de andra bloggarna? (P-A) ja (Erika) ja, vi gillar Anders mest. Vi träffade honom fredag natt första dan när vi var på väg hem, då var han på väg hit, det var så där ett på natten, och han: ”oh vad mycket ni har sänt” och vi sände ju bara skitgrejer, han fick ju sms hela tiden att vi sände, så han blev lite taggad, så dan efter så var det så att han sände skitmycket. Vi fick också sms av Rakel att nu sänder ni jättemycket. Så det är bra att vi får sms när de andra sänder av den anledningen också för utom att man vet...(Johanna) alltså fan 24 meddelanden nu får vi fan sätta fart</p>
06.16	<p>Har ni upplevt Malmöfestivalen på ett annat sätt i och med detta? (P-A) Gud, ja, jag hade inte varit här annars, jag skulle inte ha tid att vara här, jag skulle ha gått på några spelningar (Johanna) jag skulle aldrig, på stortorget, jag skulle aldrig satt min fot där (Erika) vi gick på kräftskivan, jag tvingade ut erika på kräftskivan, då var du verkligen sur på riktigt, vi måste göra det här för det är en tradition med malmöfestivalen. Och den snubben vi intervjuar var bara så ”jau de e brau med kräftskiva för dåu feår man dricka sprit på allmän plats” vad händer tre timmar senare när vi lagt över videomaterialet, då möter vi hans kompisar. Det är anledningen att man inte orkar gå på stadsfestival (Johanna) då filmade ni inte honom den gången (P-A) han förtjänade inte ens att vara med, han ska inte få airtime av oss (Erika) kameran gör att man kan ta sig an saker man inte gjort annars (P-A) ja så klart (Johanna) det är också ovant, men man får komma över sin egen skräck, jag var inne på att sätta ett skavsårsplåster över högtalaren för våra röster låter så jävliga (Erika) de är hemska (Johanna)</p>
08.25	<p>Har ni gått och kollat på klippen efteråt, hur det har blivit? (P-A) jag har inte varit lika bra, men jag har kollat några grejjer (Johanna) man vill ha någon slags hur blev det? (P-A) ja, men känner lite grann att jag</p>

	<p>har så mycket annat att göra, och känner att det är bättre att inte veta, orkar inte bry mig om hur jag lät och såg ut och hur dåliga frågor jag ställde. Det har varit anledningen till att jag inte kollat så mycket (Johanna) Även om ni har mycket att göra så om ni fått telefonerna så hade ni kunnat tänka er att fortsätta? (P-A) ja, för då behöver vi inte åka till ett ställe för att dokumentera, då skulle vi dokumentera vår vardag, det gör det mycket, mycket enklare. (Erika)</p>
	<p>Gudrun Hauksdottir intervju P-A – Per Anders Hillgren, Malmö Högskola, intervjuare Gudrun – Gudrun Hauksdottir, bloggare</p>
00.00	<p>På väg från dansbanan där hon bloggade från allsång (som hon tyckte var tråkigt) fick hon syn på några stora genomskinliga bollar nere vid vattnet som snurrade ute på vattnet. Det såg jättekul ut, blåser upp och slänger in lite ungar som får hoppa runt, otroligt vackert.</p>
01.00	<p>På väg mot lördagsplan fick hon på långt håll syn på något som såg ut som uppblåsbara ballonger, det visade sig vara plaströr från en rörorgel som de byggde. De ska bygga hela veckan och ge sig av med orgeln. Det bloggade jag om. Det var jättespännande.</p>
02.10	<p>Sen var jag i malmö högskolas tält och jag såg i programmet att ”Gurkverkstad” det är inte vanliga gurkor, malmö högskola kan hitta på vad som helst. Det var musikgurkor, det var en liten orkester som spelade för mig och så intervjuade jag dem, det var jättetrevligt. (Gudrun) det var inte heller planerat (P-A) nej, sen var jag lite på Ane Brun, jag skulle egentligen ha pratat med henne men det blev lite sent och jag ville inte störa henne innan konserten. Jag skulle ha pratat med henne nu efter men jag har inte fått nåt svar av henne</p>
03.40	<p>Tror du att du upplevt festivalen annorlunda i och med att du filmat? (P-A) verkligen verkligen, jag har bara sett saker som jag aldrig skulle ha sett annars, jag är ingen malmöfestivalbesökare, inte för att jag tycker att det är för dåligt, men det är för mycket folk, och de artister jag vill se på festivalen brukar jag kunna se på andra ställen. Jag har verkligen bara sett en massa annorlunda saker och det är väldigt kul för då märker man hur stängd man är för saker. Tanken att jag vet att jag vill leta efter saker som folk inte förväntar sig av mig. Det är så typiskt att folk skulle tro att det skulle handla om musik, därför har jag i stort sett valt bort det. (Gudrun)</p>
04.50	<p>Vad har du fått för respons från folk på det du gjort? (P-A) det största responsen har jag fått från de människor jag filmat och sen har jag fått lite sms, men inte så mycket mer respons än så. Sms som kommit in</p>

	har inte varit meningsfulla bl.a. för att inga är adresserade, man vet inte vem de är ifrån och det är konstiga frågor och konstateranden som man undrar om det ska till mig eller till vem är det? Jag har kommenterat nån av dem. (Gudrun) är det nån du känner som hört av sig? (P-A) inte vad jag vet
06.21	Det är 3 dagar kvar, har du fortfarande energi i projektet? (P-A) Jag försöker inte tänka så, det får gå på lite vilja och lust. Jag håller på med andra saker som är viktiga som jag koncentrerar mig på, när jag jobbat färdigt så går jag till festivalen och ser vad som händer.(Gudrun)
06.40	Känns det lätt att gå in och ur rollen att vara privat, jobba, börja filma? (P-A) ja, ja inga problem alls (Gudrun) skulle du kunna tänka dig att blogga på livstid (P-A) ja det känns inte särskilt besvärligt, hellre videoblogga än att skrivblogga, det har jag provat och det blev alldeles för ambitiöst och det sket sig.
07.15	Upplever du att det är en skillnad att det är en mobiltelefon du filmar med när du möter människor (P-A) jätte, jätte, jättestor skillnad, bara som med den här kameran (pekar) jag är så van så jag skiter i det, men folk blir inte alls rädda när man kommer med mobiltelefon inte ens när man kommer så nära (10 cm) och det handlar säkert om att mobilen är ganska nära hela tiden. Ska man videoblogga ska det vara på det sättet

Appendix F – Personas

Möllan-Maja

Maja is a 23 year old girl who lives near Södervärn in Malmö. She studies random courses of her interest at the local university.

She very much enjoys going to different concerts in town, mostly held at KB or Inkonst. She is a fan of indie-music. At Malmöfestivalen she prefers to watch the concerts at Mölleplatsen and she dislikes the events taking place at Stortorget.

Since she is a student she does not have a lot of money, but the ones she has she spends on events together with her friends.



Thomas the Teenager

Thomas is an 18 years old boy living with his parents in Malmö. Right now he has a lot of spare time since he is on summer vacation. A few weeks before Malmöfestivalen he will work in a local store though to earn some extra money. When his summer vacation is over he will begin his last year of his high school education.

Thomas likes to hang out with his friends during Malmöfestivalen, enjoying the kebab, the langos and some of the really cool rides. He and his friends will mostly wander the festival in search for stuff to do. They will most likely stumble across a concert or two at Stortorget, but if a band he likes would play there, he could just as likely miss it since he does not read the schedule.



Retired Rita

Rita is an old woman, 78 years of age. She is feeling time slowly catching up with her but she still has some spirit left. She enjoys taking a walk at Malmöfestivalen, always fun when something happens. She visits the town once during the festival week and she does it at daytime. Does not buy or eat anything.



Family Four

The family consists of the parents, 36 and 38 and their two young boys of 6 and 8 years of age. They live in a house in the suburb and are typical middle class people. They have decided to visit Malmöfestivalen in order to "have a nice time". The mother is very driven to find something to do that everyone can enjoy, if that means eating ice cream or watching an event. They go through the program (and has one with them) in order to find out what to do.



A typical quote: "There is supposed to be a show for the whole family in 40 minutes. Says here that it is especially suiting for kids below 12. Doesn't that sound good?"

They come into town early afternoon and when they finally have found a satisfying parking place they go for a walk, have something to eat and buy ice cream or candy for the boys. They leave the town early evening and will hopefully have had a good time.

Young Josefin

Josefin has just turned 15. She is in the middle of the process of separating from her childhood and finding an identity of her own. She hangs around in crowds, most of her friends come from school. Falling in love and boys is a newfound interest or hers. She likes to discuss this interest with her best friend, whom by the way differs from time to time.



She is very perceptive to new trends. Most of her clothes are bought at H&M and she wears bold, sometimes colorful make-up. She likes to experiment with her appearance and dyes her hair differently every now and then.

Josefin uses her mobile phone and instant messaging to communicate with her friends, mainly because the communication is out of her parents' control. She types text messages quickly with one hand and knows all convenient abbreviations and smileys. The mobile phone is very central to her social life. Malmöfestivalen is a special part of the year for Josefin and her friends. Since they are too young to go to the pubs and nightclubs in town, Malmöfestivalen is like a party-haven for them. They can go out every night for one week, drink and party together with lots of other people. A possibility that otherwise is taken for granted by people over the age of 18.

Krille

30-year old Krille is in his first employment after his university degree. His salary is overwhelming to him and he spends a lot of money on eating out. He has deviated from home parties and drinks his beer in restaurants and bars.

Krille still doesn't have any children and spends all his money and time on himself. He is focused on his career, but still has an extended social life. He is concerned with his looks and makes sure to wear the right brands.

He uses the calendar in his mobile phone to book appointments, job meetings as well as drinking beer with friends. His phone book is neatly organized, contacts are identified by their first and last name.



Krille hopes to have a good time with his friends at Malmöfestivalen. They will probably spend an evening or two at Lilla Torg, and also watch some of the events. But as long as he can have a beer or six with his friends, he is happy.

Sanna

Sanna is 26 years old nurse that shares a flat with her boyfriend. They don't have any children yet but enjoy living life as a couple. She enjoys a quiet evening in, watching a movie and eating snacks together with her boyfriends, which has a resulted in a few gained kilos.

Her social life mainly consists of inviting other couples to their home for dinner. Once every six months she has a "girls night out" in order to lower her bad conscience for all the times she has turned down offers from friends in order to cuddle up with her boyfriend.

At Malmöfestivalen Sanna and her boyfriend will go out and have a nice time together with other friends that also are in relationships. They will probably have something to drink but not to any exaggeration. That is if she doesn't choose to have one of the "girls night out" at the festival.

