

E-paper services: Using workshops for exploring services and user value for future users

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Abstract: The potential for electronic media in the newspaper business is interesting. The research about electronic media will bring demands on new thinking in developing new value, income generating services and related business models. An example of electronic media is electronic paper. This paper explores the added value and payment methods for the e-paper. We have conducted future workshops with our target group the reader. On the basis of future workshops this paper shows that interaction, individualization, improved selection and content, environment friendly and saving capabilities are necessities for the e-paper to be successful. We suggest that the e-paper must be more than just an online newspaper for people to buy it.

Keywords: e-paper, electronic media, e-business models, future services, online newspaper.

1. Introduction

There is presently an enormous interest in e-business because of the digitalization of media (Afuah and Tucci 2001; Amit and Zott 2002; Eriksen and Palmer 1999; Mings and White 1997). The content of the media is changing with new communication forms, new services and new actors and this has given rise to new kinds of e-business models (Hedman and Kalling 2003; Krüger and Swatman 2002; Outing 2002; Picard 2000). 'Business model' is a term often used to describe the key components of a given business (Timmers 2000; Hedman and Kalling 2002). This paper follows the definition of an e-business model made by Afuah and Tucci (2001) i.e. focusing on the importance of content and services that's benefiting the customers' needs.

A part of the digitalization is the electronic paper, called e-paper (DigiNews 2003¹; Perkin 2004; Philips 2004²) which contains electronic ink (e-ink). The e-paper device is light weighted and portable and could be received electronically on a thin, plastically, paper-like sheet (Perkin 2004; DigiNews 2003¹). The vision is that the e-paper will be accessible to everyone as the ordinary newspaper (Perkin 2004) and may offer interesting services as a result of the digital technology.

The current situation is that digital newspapers are utilizing multiple marketing approaches. A problem with new technologies is the difficulties of predicting business models that are generating value. While there is a vaguely research that describes generating value from the e-paper there is a lot we can learn from online newspapers. If the price of the service is affordable and perceive to bring value for the customer (Carveth et al. 1998) then the online newspapers may attract and hold an audience (Krüger and Swatman 2002; Krüger et al. 2003).

This paper examines the added value and payment methods for the electronic paper. By using future workshops we explore why and how the customer will pay for the e-paper. We know very little about how the business model will look like in the future for new technologies but we think it will enable creative solutions and bring an added value to the e-paper.

The paper is presented in five sections. We start with an introduction to the paper. The second section gives the reader some theoretical background by related research, the third section describes the used method and the results are presented in section four. A discussion of the findings and concluding comments are in the fifth section.

2. Related research

This section is based on research about electronic media, not specifically the e-paper because it is a future technology with a vaguely or none existing earlier research.

Research about e-business models has grown significantly over the past few years (Afuah and Tucci 2001; Hedman and Kalling 2003; Krüger and Swatman 2002; Outing 2002; Picard 2000). Defining an e-business model is like searching the Internet; you often don't get it all and the landscape changes day by day (Weill and Vitale 2001).

Eriksen and Palmer (1999) state that the ordinary newspaper's business model is quite kneaded: the publisher coordinates articles and advertisements in a unique version that is distributed by regular mail or through a retailer. However, electronic media are different from other sales channels. Online newspapers are utilizing multiple marketing approaches by its combination of ubiquitous and global presence, direct interactivity, integration and individualized handling of information (Hedman and Kalling 2002).

Timmers (2000) states that digital information business forces us to rethink segmentation, pricing, packaging and other elements of the marketing mix. To make this new medium attractive to the customer, the vendors have to be creative and develop new formats and combinations because the online newspapers are operating in an unclear market (Ericsson and Jungkvist 2002).

Cameron et al. (1996) and Mings³ (1997) see the electronic media as an alternative to, not competitors of, the printed paper. On the other hand, Dr Stig Nordqvist (Perkin 2004) claims that electronic media will change everything. He further states that it is a replacement for the ordinary newspaper.

"Within 15 years e-paper will change everything. And this will be to the benefit of newspapers. It will be revolutionary but I don't see the point in discussing if and when it will replace print. We need to prepare for, rather than to predict, the future." (Nordqvist in Perkin 2004)

2.1 E-paper

Media IT at Halmstad University runs research projects around development and usage, mainly in the areas design and business models of digital medium. One project that runs by Media IT is DigiNews. This project is aiming to a complete solution for publishing, infrastructure and consumption of e-papers that runs in cooperation with Tidningsutgivarna (TU), several Swedish newspapers and a plural of companies in Europe (Media IT 2004⁴). We work in company with DigiNews in the area business models, focusing on the added value and payment methods for the e-paper.

After years of development, the e-paper is to change the traditional newspaper (Perkin 2004; Philips 2004²). The main benefit with the e-paper is according Pogorelic (1996) the replaceable information and its capability to deliver information in real time (Picard 2000). The e-paper invites the same personalized reading given to the hardcopy newspaper i.e. every reader can use it differently (Pogorelic 1996). According to Perkin (2004) the e-paper is easy to read and it can be read in natural reflected light (rather than back-lit like existing electronic displays). Once the image of the page is shaped, it stays on place and it does not need to be switched on to read.

The e-paper contains electronic ink (e-ink) and has a resolution of 170 pixels per inch. Batteries are only required when a new page is received and the displays will be light weighted and portable and could be received electronically on a thin, plastically, paper-like sheet (Perkin 2004; Philips 2004²).

From the industry's point of view, the e-paper will eliminate, or at least alleviate, a large amount of the cost associated with newsprint production and distribution (Mings 1997³). The industry also hopes that new services for the online newspapers might recapture young readers, who have fallen away from the habit of reading hard-copy papers (Pogorelic 1996; Cameron et al. 1997).

Mings³ (1997) argues that the online newspaper gives the users the ability to choose the news and view what they want. Ordinary newspapers rely on the intelligence of the reader; readers choose, peruse, sort, queue and quaff the news and advertisements at their own pace and choice. Each reader chooses to follow their own path through a newspaper or magazine, therefore each individual reading is a custom-made round up of news events.

According to newspaper publishers there is no skepticism that e-paper has the capability to be an important development. It combines many of the characters of the paper version with advantages of digital media as the capability to deliver new editions directly and no need of transport over enormous distances (Perkin 2004). Earlier research indicates (Mensing 1998; Meyer 1995; Träff 2002) that until newspapers are able to demonstrate for the consumers an added value, subscription models appear not likely to be a significant source of income. Advertisements are and will be the most important income for newspapers.

2.2 E-business models

Electronic commerce is probably the most extraordinary economic phenomenon of recent years (Krüger and Swatman 2002) and this commerce has given rise to new kinds of e-business models (Hedman and Kalling 2003; Krüger and Swatman 2002; Mings and White 1997; Outing 2002; Picard 2000). Research about e-business models can be organized around two streams. The first stream aims to describe the components of a business model (Afuah and Tucci 2001; Amit and Zott 2001) and the second aims to develop descriptions of specific business models (Hedman and Kalling 2002). In this paper we are concentrating on the first stream; the components of a business model with focus on added value and payment methods for the e-paper. Afuah and Tucci (2001) present a list of components that are relevant for our paper:

- customer value (distinctive offering or low cost)
- scope (which customer and what products/services)
- price (price the value)
- revenue sources

These components are applicable to our research because of our limitation of different parts of the e-business model. Our intention is not to present a

complete business model, but to suggest components that we think are important to our study. Customer value and scope are we referring to in terms of added value. We are using the concept payment methods to describe price and revenue sources that are in relation to our study.

To identify an appropriate e-business model for your own use, you need to link the relevant components to suit your own needs (Krüger et al. 2003). We have a poor knowledge about how the e-business model will look like in the future for new technologies but we think it will enable creative solutions and bring an added value to the e-paper.

2.2.1 Income resources

If the price of the service is affordable and bring value for the consumer (Carveth et al. 1998; Hedman and Kalling 2002), it will attract and hold an audience (Krüger and Swatman 2002; Krüger et al. 2003).

Giving away content is as old as the Web, but offers have to be paid for; therefore content must be exclusive and generate added value (Outing 2002). Few online newspapers are today profitable, but they still got a positive attitude towards digital media (Ihlström et al. 2002; Outing 2002). They are starting to find new ways to offer both an online and a paper version. They are aware of the larger audiences they get with the availability for the ones abroad and younger people which they may be profit from in the long run (Mings 1997³; Cameron 1997).

In the beginning of 2002 Dagens Industri (Träff 2002) limited their selection for the non-subscriber and enabled the whole newspaper to the subscribers the evening before. A three week free period led to 3 800 new subscribers, which exceeded all of the previous years' recruit campaigns on the Internet. Later that same year, Dagens Industri was offering single copies in pdf-version and where you could pay through your mobile telephone bill (Träff 2002). The more information about the users the more attractive it becomes for the advertisers. According to Träff (2002) you are selling the readers not the amount of happenings or the amount of pages.

Online newspapers are operating in an unclear market and they are usually cautious in their design and quite limited in the number of non-traditional marketing activities used. For the most part, online newspapers have simply ported the existing print model to the Web (Eriksen and Palmer 1999).

General news across various sources is not enough. Eriksen and Palmer (1999) argue that it requires a more specialized information content or specialized delivery of the information for people to pay for the access to the information. The online format got some major technical advantages over the paper version. The direction of the market is driven by the ability to implement new technical advances such as personalized content and improved information retrieval.

Ihlström et al. (2002) state that profitable services in the future are: advertisement, payable services and various subscription fees, personalized

news services, deepened news services, parallel publishing in print and web, radio and SMS services.

3. Method

We have conducted future workshops to get ideas from people that are interesting in the future (Jungk and Müllert 1987; Kensing and Madsen 1991). The participants represented end-users. To get a successful result from the workshops, we believe it is important that the participants are free minded and able to think outside the limits.

All of the participants represented end-users with different age and different motives for their participation and expectations of the future services. The end-users were invited through an entry on the online edition of Hallandsposten. We were looking for both male and female participants that should represent end-users of the paper. Eight persons participated in our workshops, five male and three female. Six of them through the entry on Hallandsposten and two of them are familiar students and were asked if they wanted to participate.

3.1 Future workshops

The future is something that involves us all; it is a challenge and a necessary. It takes involvement with people that has great imagination and creativity to create new societies, non-violent methods to change social, political and economic condition, to find new professions, new goals and values and generate a creative society (Jungk and Müllert 1987).

We have conducted two future workshops to envision the added value, payment methods and services for the e-paper. In its basic form, a future workshop has three main phases; critique, fantasy and implementation (Jungk and Müllert 1987; Kensing and Madsen 1991). However in this method only the critique and fantasy phase remain, the implementation phase is left aside since it involves present time (Jungk and Müllert 1987). The e-paper is a future service that involves the future, and to involve the present can prevent the participants' minds.

Jungk and Müllert (1987) recommend a time limit of three days, one day for each phase with a couple of days in between. We chose to run the workshop during two days with one week break because of several reasons: first it was hard to get participants with a short notice of one week and second as the paper has a time limit we thought it would be for the best to keep it for two days.

Future workshops can be used for (Jungk and Müllert 1987):

- Problem solving in organizations like factories, schools, associations, youth centers and volunteer organizations.
- Developing plans for individuals, families and neighborhoods.
- Giving life to seminars and meetings.

According to Jungk and Müllert (1987) the ultimate group size is 15-25 persons. We think with a smaller group every one of the participants can be more active in the discussion. We chose to have a group of 5-10 people because during a future workshop spontaneity and independent thinking are important. Two participants could not participate at the first occasion, the same for the second. Therefore at each occasion there were a group of six participants.

A workshop can take as little as two and a half-hour up to half a day. It differs from other methods where the workshop has a focus on current practice rather than future practice (Bødker et al. 1993). Both of the workshops lasted three hours with torrent discussions.

During the workshops the participants first articulated problems and concerns about the e-paper, then the problems were turned into a vision of a desirable future and scenarios of e-paper use were created.

3.1.1 The first workshop

A workshop should be kept as simple and informal as possible. Jungk and Müllert (1987) suggest to begin with a preparatory phase or introduction phase. It is important that all participants in the workshop have the same focus and are introduced to each other (Jungk and Müllert 1987; Kensing and Madsen 1991).

The first occasion started with a presentation of our selves and the project DigiNews. We showed a movie containing a description of the e-paper and kept an introduction about what a future workshop is. A discussion followed very efficiently with a critical perspective and all of the six participants were actively involved.

This included investigating negative factors that in our case the e-paper can bring. The negative factors were listed and kept for the next workshop. It's important that the participants are involved and to get an acceptable level on the discussion (Jungk and Müllert 1987). If there's any disagreement the facilitator should in a nice way interrupt and let the discussion go on. Some times it was hard to keep the discussion on the right trace, and as a facilitator you should keep the discussion go on and let it solve it self, as it always did. We recorded the workshops both with a video camera and a mp3-player, "the eye is a complement to the ear" (Jungk and Müllert 1987).

The main concerns that the participants expressed were:

- Too fragile, how easily can it get damage?
- An economical aspect, if the e-paper is going to be too expensive no one wants to buy it.
- The radiation
- The lack of interaction
- How can a purchased newspaper be saved?
- How suitable will it be for the disabled?

Several of the participants showed a positive attitude towards the e-paper right away while others were a bit more uncertain about the technology.

3.1.2 The second workshop

The goal with the second workshop is to continue with the negative factors and redo the criticism to a positive sense. It is important to keep your mind open and see no limit to the technology. In the fantasy phase reality does not matter (Jungk and Müllert 1987). This was hard to accomplish when the participants easily stick in one's memory the technology.

During the second workshop the topic was about scenarios of future services and different suggestions about desirable payment methods. This workshop involves active participation from our part as facilitators. Facilitators need to get the participants to try to go around the problem and it is important to get them not to think of any obstacles. According to Jungk and Müllert (1987) it is important that none of the participants criticize someone else's ideas if new sidetracks and solutions of the problems are presented. A facilitator should dismiss outbursts like "Ridiculous, it would never work" and have the ability to keep the ball rolling (Jungk and Müllert 1987).

Since the age difference between the participants was immense there were a lot of disagreements. Older participants had a harder time not to think of any obstacles, while younger participants showed an inflamed attitude by dismissing others' suggestions and thoughts.

3.1.3 Information process

After the workshops we went through all the collected information e.g. notes, tapes. The information was grouped in different themes that belonged to similar areas. On the basis of the respond from the participants, the added value were illustrated in terms of Interaction, Individualization, Improved selection and content, Environment friendly and Saving capabilities. Payment methods are divided in Subscription, Single copies and Abroad. After the workshops, we increased the scenarios discussed and they were put together to get a wider context of the courses of event.

4. Result

In this section we are presenting the results from the two workshops in three categories: added value, payment methods and scenarios. Each category is divided in to sub divisions. In the scenario category the added value and payment methods are linked.

4.1 Added Value

4.1.1 Interaction

The analysis of the performed workshops shows that there is a market for the e-paper, but not as the technology is developed today. To fulfill the customers' needs, the e-paper must offer more functions than just the reading function. The added value for the e-paper only exists if it can be used as a combination of a computer and online newspaper, i.e. the interaction and communication play an important role for the e-paper's success.

We already have a lot of technical devices surrounding us in our everyday life and we don't want one more. Our participants claim there is no reason using the device if the interaction is missing. An alternative to make the e-paper interactive is to connect it with a computer and a printer. One can either use the e-paper only as an online newspaper (the reading function), or you can connect it with a computer when you need to interact. The e-paper device could be placed in a frame that is connected with the computer and printer. In this way it is possible to make the e-paper interactive without making it to a PDA or computer.

One of the participants expressed as following:

"Why stop with a device only for reading? It feels like a waste of research if the development stops with the newspaper idea. Why not use it as a computer? Maybe batteries in the future will come in liquid form so you can just as easily like today use this plastic thin device."

4.1.2 Individualization

New technology, as the e-paper, must be improved for the customer and those who handle it. The e-paper should be much better than the regular newspaper if it will be successful. One way to improve will be to make the e-paper individualized. The e-paper can come in different models and sizes and for different target groups. By making the e-paper personal you can make it suit your own interests. One participant articulated: *"I would like the device to be personal after my own desires, so I always can see which e-paper is my own and not mix it up with someone else's."*

It can also be adjustable for people with visual impairment, which makes it more adaptable than a regular newspaper. Text and layout can individually be adjusted to the readers' need e.g. a blind could get Braille. Another possibility is to adjust the e-paper when children are using the technology. Sometimes there is news and other information a child should not see or perhaps the parents rather explain them selves.

4.1.3 Improved selection and content

The primary effect of the e-paper is the increasing speed and flexibility of information. According to our participants the benefits with the e-paper are improved content and range. There will be possibilities to update and distribute

information easier because of the digitalization. By using digital information, news can be downloaded over night, 24-hours a day, which makes the e-paper more up-to-date than today's newspaper.

E-paper will offer more concentrated information; you can choose to get the sports pages or more international news. This can be a question about culture and general knowledge when you choose not to read some parts, but on the other side you will get more information about something else. E-paper makes it easier to get a subscription from another country that comes in an updated version. Today when you subscribe to a paper from a different country or local newspaper it can take several days before you get it. With the e-paper you will get the latest issue in time.

Is there any risk that there will be a less selection of newspaper cause of non economical valid aspects? There is nothing that points at advertisers vanishing; this is something you also can do through the e-paper. Instead there is a chance that there will be an enhanced selection of newspapers when a few of the expenses will disappear like a middleman and distribution expenses.

There are a lot of channels that provide you with news, both domestic and international. E-paper could provide you with updated collections of books and maps that needs to take the world development into consideration. All sorts of information that you can find in print, the e-paper should be able to provide for the reader. Another important value is that there is no risk that we will run out of copies.

If you don't have a subscription at the local newspaper today you may miss a lot of important information, like public information. The e-paper could provide important information and happenings in your own community. It could also offer tourist information through hot spots when you enter a new community.

To quote one participant:

"I think we will get a better selection and content. One example is the free magazines today like Metro. When they don't have expenses e.g. distributions costs, they can endeavor the content. And you are also offering the readers 24h updated information."

4.1.4 Environment friendly

The e-paper can be used more than one time, comparing to the paper version. With the paper version you read it and then throw it away but with an e-paper you can read it over and over again.

According to the newspaper publishers, paper will be short in supply in the future. E-paper will not exclude the paper industry's existence because we do not believe in the vision of a "paper-free society". However, it would be a success if the technology can be reused, but it demands an improvement of the technology. Today the e-paper is made of glass and plastic, which is not an environmentally friendly material.

With all the commercials you get in your mailbox today, it is an enormous waste of paper. By using an e-paper you have the opportunity to choose what kind of commercials you want, which will hopefully decrease the use of paper in this occasion. The participants expressed numerous of reasons why this is a good thing for the environment, one participant said:

"It is time that we start to care for the environment. In the future paper will be in short supply. I don't think the e-paper will exclude the paper industry's existence; however to choose the e-paper you will do something for the environment."

4.1.5 Saving capabilities

During the workshops the participants were concern about storage, to quote one: *"When you buy the paper version you can save the purchased item and use it in other occasions. How can the e-paper give me as a reader the service to be able to save articles and copies of a magazine or newspaper?"*

This can work as following:

- You connect the e-paper to a computer and get your copies through a database serviced by the offering company.
- You save it locally on your hard drive and you can retrieve the wanted issues when you are connected to the computer. Disadvantages like how it works when your hard drive is not available needs to be taken into consideration for this suggestion.

4.2 Payment methods

4.2.1 Subscription

A way to attract younger audience is to offer the e-paper at a lower cost compared to the paper version. You can subscribe from a variety of newspapers and a possibility is to offer at a higher price saving possibilities.

You might have a one time fee for enrolling to the subscription and a subscription fee each month. Another suggestion is to have a subscription that is committed to a device similar the mobile phones' offers; you get the e-paper for free if you sign up for a subscription for x number of months.

Based on the digital TV packages you may well have a base package that contains x number of newspapers or magazines, and if you want choices of extras you pay a higher amount each month. This kind of packages can market their offers to e.g. women, men, students and families.

"For people to buy the e-paper it needs to be less expensive than a regular news paper. Different offers to women, men, students would be desirable and to adopt a working payment method as the mobile phone subscriptions could be a good idea."

4.2.2 Single copies

According to our participants there is a need for single copies. You can obtain placards of different newspapers and choose after the most interesting placard. Maybe the amount for each bought single copy is withdrawn from a cash card. A search mechanism could enable abstracts for the reader with the intension to offer the whole article for purchase.

"You also should be able to buy single copies and maybe articles. There could be a search mechanism that allows you to read an abstract and purchase the complete article if you so wishes."

4.2.3 Abroad

The participants articulated that the potential of using the e-paper abroad could bring an excellent advantage. When you are situated in another country it can work as the telecommunications network when you are transferred to another network and pay for the discrepancy.

"One of the advantages with the e-paper can be when you are on vacation in another country. I always want to read the newspaper at the beach and this could be a great possibility with the e-paper; to get the latest news."

4.3 Scenarios

The following scenarios are based on the results from the workshops and the theoretical research.

4.3.1 The vacation scenario

Lisa is going on vacation for three weeks with her family that consists of five people. Everyone wants to bring a lot of magazines and her parents want to read the daily local newspaper and news from the country they are situated in. The e-paper can be an excellent choice for Lisa and her family, given that they are not forced to bring an extra bag only for the magazines and are able to read their morning paper.

Lisa overhears someone on the beach talking about a Swedish travel company that is warning tourists to visit the country you are present in. She takes up her e-paper and reads the latest news and sees that this does not concern the part she is spending her vacation. While she is using the e-paper she can just as well take the chance to finish the crossword she started during the journey over here. When the crossword is finished she is able to send it in by connecting her e-paper to a computer.

Lisa's family pays monthly subscription fee and an additional discrepancy from the country they are present in. They can either pay for global news as single copies or they maybe already subscribe from a global newspaper. Since they are a large family, they might want a family subscription which offers a variety of magazines and newspaper that is shaped in favor of their family's interests.

4.3.2 The morning scenario

Before investing in the e-paper:

David starts the day by skimming through the news while drinking his coffee, since his wife Karin also wants to read the newspaper before going to work. Karin is not very interested in sports and David brings the sport's section with him on the train. Karin continues reading the newspaper thoroughly. Since David has a train ride about one hour to work and he always forgets to bring a book. He gets a little bit restless and sometimes falls asleep and misses his stop.

After investing in the e-paper:

David starts his day a little bit later; he drinks his coffee and goes to the train station. He reads the whole newspaper thoroughly on the e-paper on his way to work. On the mean time his wife Karin are reading her e-paper after her selection of interests. She gets more international news that she felt she missed before at a less expanse than subscribing from a paper version that comes in few days' late issue.

On the train after finishing his paper, David sits next to Björn that is reading another local newspaper. David asks if Björn wants to switch newspaper, and by a technology e.g. blue tooth they transfer the newspapers between each other.

While David is on the train the e-paper reports a public information notice that says there has been an accident on David's subway line. He calls the office and tells them that he will be in a little late to the weekly Wednesday meeting. When he comes to the station he chooses a different subway line that will take him close to the office, and he walks the remaining part of the way.

4.3.3 The student scenario

Martin is a 20 year old student who has recently moved far from home to study. Because of his new arrival and his economical situation as a student he does not have a subscription of the local newspaper.

He sees an ad at the University about the e-paper that offers the e-paper free of charge with a reasonably low monthly subscription fee. He thinks this is a smart offer and will enable him to read more about happenings and local news. Since the e-paper offers extra services e.g. communication with the online network and the computer at home, he thinks this can be worth the money.

Today is gym day and he brings his e-paper with him. He wants to read the news and listen, from the wireless headphones that are connected to the e-paper, a new record he just downloaded while spinning on the exercise bike. Since he is new in town he has signed up for a membership at the school's online community because he wants to find new friends. On his way home the e-paper announce new incoming messages from friends that answered on his ad at the community.

5. Discussion and Conclusion

The results focus on content and services with belonging payment methods that bring an added value to the e-paper. Earlier research has shown that content and services are important values for a product's success (Carveth et al. 1998; Eriksen and Palmer 1999; Outing 2002). We are constantly being fed with news and information from different channels e.g. TV, radio, Internet. Although the readings function is the heart of the e-paper, our results suggest that multiple services are a necessity for the e-paper to be successful. These multiple services should include a mix of individualization, a more concentrated and personal content, ease of transport and public information. These are services that can generate profit and are to be preferred. New services that bring an added value make the technology more wanted.

As we point out in the scenario section interaction is an important function for the e-paper. The scenario section points out the importance with the capability of interaction which indicates that there is no use of buying the e-paper without it. The results also suggest that a vital benefit is the delivery of the information. To give the readers 24h updated information anywhere the reader is situated is not something the paper version can compete with.

The findings on earlier research suggest that newspapers need to make a value obvious for the consumer to get the subscription model successful (Mensing 1998; Meyer 1995; Träff 2002). Our study indicates that subscription could be the payment method used. Knowledge about the readers is valuable and can make this huge income for newspapers even more profitable (Träff 2002).

There are differences in opinions concerning the e-paper's operation on the market. Some predicts a replacement of the traditional newspaper (Perkin 2004) whereas others claim it is only a complement (Cameron et al. 1996; Mings 1997³). We believe that it is hard to change many years of habit and that the e-paper will be a complementary device.

The e-paper belongs to the conception of digital information business (Timmers 2000) which built their business models on the newspapers' existing models. These models may offer a unique value to consumers (Hedman and Kalling 2002). If the collection of an offer is important to the reader and the price is reasonable the customer probably will feel that the e-paper can bring something extra and will buy it (Carveth et al. 1998).

The mobile phones are an example how products can be adopted in a way we don't expect. It's important to keep the services simple and useful. Subscriptions are now in habit and understood as a comfortable routine. We believe there is a lot to take in concern when developing and marketing the e-paper. The customers need to see an added value of a purchase product, furthermore the e-paper needs to be durable if you are going to bring it everywhere and use it in almost every occasion.

References

Afuah, A. Tucci, C. *Internet Business Models and Strategies*. McGraw Hill, Boston, 2001.

Amit, R. and Zott, C. Value drivers of e-commerce business models, In: M.A. Hitt, R. Amit, C. Lucier & R.D. Nixon (eds.), *Creating Value: Winners in the New Business Environment*. Oxford, UK: Blackwell Publishers, 2002, pp.15-47.

Bødker, S. Grønback, K. and Kyng, M. Cooperative Design: Techniques and Experiences from the Scandinavian Scene, In D. Schuler & A. Namioka (Eds.), *Participatory design: Principles and practices*, Hillsdale, NJ: Lawrence Erlbaum Associates, 1993, pp. 157-176.

Carveth, R., Owers, J. and Alexander, A. The economics of online media, In A. Alexander, J. Owers and R. Carveth (Eds.). *Media economic - Theory and Practice*, 2nd ed, 1998, pp. 247-273.

Cameron, G. T. Hollander, B. A. Nowak, G. J. and Shamp S. A. Assessing the potential for a full-featured electronic newspaper for the young adult market, In *Media Management Review*, Charles Warner, Ed. 1997, pp. 15-28.

Cameron, G. T. Curtin, P. A. Hollander, B. A. Nowak, G. J. and Shamp, S. A. Electronic Newspapers: Toward a Research Agenda, *Journal of Mediated Communication*, 11, 1996, pp. 4-53.

Ericsson, M. and Jungkvist, K. Så ska aftonbladet.se bli lönsamt – affärsmodellerna som ska skapa nya intäkter till Sveriges största mediasajt, *Från lekstuga till affär – Dagstidningen och digitala medier, Tidningsutgivarna*, 2002, pp. 10-14.

Eriksen, L.B. and Palmer, J.W. Digital newspapers explore marketing on the Internet, *Communications of the ACM*, September 1999/Vol.42, No.9, pp. 33-40.

Hedman, J. and Kalling, T. The business model concept: theoretical underpinnings and empirical illustrations, *European Journal of Information Systems* (2003) 12, 2003, pp. 49-59.

Hedman, J. and Kalling, T. *IT and business models – concepts and theories*, Liber: Malmö, 2002.

Ihlström, C. Lundberg, J. Vimarlund, V. Rehnström, C. Online newspapers in search for profitable services, In *Proceedings of eBusiness and eWork 2002*, Prague, pp 1455-1462, 2002.

Jungk, R. and Müllert, N. *Future Workshops: How to Create Desirable Futures*, London: Institute for Social Inventions, 1987.

Kensing, F. and Madsen, K.h. Generating Vision: Future Workshops and Metaphorical Design, *In J. Greenbaum, & M. Kyng (eds.). Design at Work: Cooperative Design of Computer Systems*, Lawrence Earlbaum Associates, New Jersey, USA, 1991, pp. 155-168.

Krüger, C. and Swatman, P. M. C. Regional online newspaper: paths to glory, or the road to ruin? *In the proceedings of the 12th annual BIT Conference* in Manchester, 2002.

Krüger, C. Swatman, P. and van der Beek, K. Business model formation within the online newsmarket: The core+ complement business model framework, *In proceedings of the 16th Bled Electronic Commerce Conference eTransformation*, Bled, Slovenia, 2003.

Mensing, D. The Economics on Online Newspapers, *Presented at the 81th annual meeting of the Association for Education in Journalism and Mass Communication*, Baltimore, MD, 1998.

Meyer, E. *Tomorrow's News Today*. Milwaukee, Wisconsin: Newslink Associates, 1995.

Mings, S and White, P. B. *Making money from the Web? Business models for online news*. Bundoora: La Trobe University Online Media Program, 1997.

Outing, S. To charge or not to charge? searching for the holy grail of revenue models for news sites. *Poynter.org*. 2002.

Perkin, J. Stop the presses! Roll out the e-papers, *Financial Times*, 2004.

Picard, R. Changing business models of online content services – Their implications for multimedia and other content producers, *JMM*, Vol. 2, Nr. 11, pp. 60-68, 2000.

Pogorelic, V. *Repositioning print news in an online environment*. BA Thesis, Murdoch University, 1996.

<http://www.mcc.murdoch.edu.au/ReadingRoom/VID/vanessap/home.html> 2004-04-15

Timmers, P. *Electronic commerce – Strategies and models for business-to-business trading*, John Wiley & Sons Ltd, 2000.

Träff, Gustaf. Det går att ta betalt, *Från lekstuga till affär – Dagstidningen och digitala medier*, *Tidningsutgivarna*, 2002, pp. 49-54.

Weill, P. and Vitale, M. *Place to Space: Migrating to eBusiness models*. Harvard Business School, 2001

Additional references

¹ DigiNews, 2003: Project Description DigiNews, ITEA 03015, Version 1.0, pp. 5-18

² Philips, 2004:

<http://www.research.philips.com/InformationCenter/Global/FArticleDetail.asp?lArticleId=2882&lNodId=929&channel=929&channelId=N929A2882> >2004-03-31

³ Mings, S. The Virtual Paper as a Solution to the Print Paper's Problems, *CMC Magazine*, July 1997. <http://www.december.com/cmc/mag/1997/jul/mingvirt.html> > 2004-05-18

⁴ Media IT, 2004: <http://www.hh.se/media-it/> > 2004-03-19