News on demand considered useless
— An explorative assessment of database news publication features

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Summary

We use a video scenario and explorative interviews to elicit
people's views on the technical concept of database publica-
tion and news on demand. The results indicate that the
technical features themselves are of limited value. We iden-
tify three promising directions for further research: facilitate
routinization of news consumption in digital media; address
the distinction between volatile and persistent information;
develop news formats and contents in digital media rather
than access mechanisms. Specific design ideas include adjust-
able news summaries and social navigation environments.

Introduction

A large body of research into digital news media concerns
consumer access mechanisms. It is generally assumed that
news on demand is necessarily good; the following quote is
typical.

> "Imagine waking in the morning, turning on your inter-
> active TV, and being greeted by your intelligent news
> agent. Your agent has spent the night digitizing, seg-
> menting, indexing, extracting, translating and summariz-
> ing the world's news broadcasts. The agent, knowing your
> interests from your previous implicit and explicit interac-
> tions, selects the most relevant sources and topics and
> dynamically generates an interactive newscast personal-
> ized to your preferred format, length, language, and inter-
> ests. Fantasy or reality?" (Maybury, 2000).

We prefer to concentrate on how people perceive news on
demand in an everyday news consumption context. To this
end, we produced a five-minute video scenario illustrating
sequences of everyday news consumption in a technically
plausible near future. The video was used as a tool for
explorative interviews, directed towards answering the fol-
lowing questions:
- How is the technical concept of database news on demand

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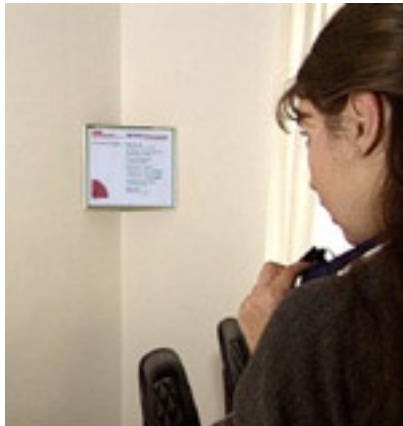
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perceived? Benefits and drawbacks, relative to current news habits?

• What is the perceived value of database news on demand?

The overall aim of the study was to inform further research and concept development in the field of digital news media.

The rest of this paper describes the video scenario, details the interviews and their results, answers the main questions tentatively and finally identifies what appears to be promising research directions.

The scenario

Imagine that digital and analog media continue to converge (à la web+digital TV). Multimedia databases are used to provide news and other content on demand. News production is glocalized to a greater extent.

The video News media, September 15, 2002 illustrates one such scenario. It contains five key scenes from an ordinary evening in the lives of Jocke, 16, and his mother Anna.

i. Jocke is on the bus home from Malmö to Ystad. He spends the trip visiting his preferred news service EdgeWARE on his PDA.

ii. Anna is Jocke's mother. She is single with two children and works full-time. An active community member, she is interested in news: regional and national as well as global. She subscribes to CNM Österlen, a news service with a strong reputation for quality and good local coverage. By using personalized news filters and watching news shows, she manages to stay reasonably updated on the upcoming elections.

iii. Jocke comes into the kitchen and zaps the kitchen-wall screen with his PDA, to pick up where he left off on the bus. Anna throws him out and continues to listen to her news while cooking.

iv. Jocke turns to the living-room screen, using the PDA as a pointing device to publish an item from EdgeWARE on his own news site. In his own sub-culture (cyber/hardcore), he is very active; not only does he consume large amounts of news, but he also produces his own news service in Swedish for a local following. However, he has chosen to ignore traditional sources such as the morning paper and his mother's preferred news magazines.

v. Erik lives right across the street from Anna and her children. He is an avid news consumer—eight hours a day is not unusual. However, his idea of news consists in the major soccer leagues in most European countries. It is not hard for him to find such "news". He doesn't even have to pay for it as long as he puts up with 25% commercials.

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The scenario concentrates on typical news access methods: following a story across time and media; using automatic filters to select personal headlines from large quantities of potential news; distributing radio-style material in the kitchen where the eyes and hands are occupied elsewhere. The news contents and formats used by Jocke, Anna and their neighbor are modelled on current styles.

Explorative assessment method

In the Spring of 1999, we interviewed eight people, ranging from 19 to 69 years of age, using the video scenario and an interview guide for open-ended interview (see appendix).

Each interview started with backgrund information. We then showed the video, explained some unclear parts of it and answered questions. The final part of the interview concerned the themes we illustrated in the video: news on demand and news stories following the consumers across time and media. We also talked briefly about the desirability of the concepts, expressed in willingness to pay for them. Each interview lasted around one hour.

The people we interviewed all consume news on a daily basis, spending from 15 to 90 minutes per day. Newspapers, TV and radio are preferred; one of the respondents use the Internet occasionally for specialized news.

The interview data were analyzed inductively (Patton, 1990) with the double aim of answering the general questions and understanding people's rationales for their views and feelings. An important part of the analysis was to distinguish more persistent or profound values from positions shaped mainly by personal ideas on news technology. Current theory on media use (Andersson, 1998) was an important tool in making that distinction.

Results

The respondents contrast the rather naive expression of news on demand in the video with their current modes of news consumption. They point to the value of professional editors and journalists selecting and presenting the contents of papers and news shows, the pleasure of sitting back and being told about the ways of the world. They also put news consumption into larger contexts of many everyday activities and responsibilities, competing for time and attention.

A closer analysis of the data indicates three distinct benefits of traditional broadcast news (including newspapers as well as TV and radio news shows).

• **News consumption is a routine**, individually designed to stay updated on important events and the ways of the world. External prompting, i.e., the fixed broadcast time of TV news and the arrival in the mailbox of the morning paper, is an important component of maintaining the routine.

> – I am not sure I would watch any news if
> they weren't broadcast.
> (Male, single, regularly watches evening news on TV.)

• Most of the respondents point to **the value of editorial news products** in presenting news and events that they could not anticipate, but appreciate to find out about. The data shows two related rationales, one concerning societal responsibility ("the danger of missing out on things you don't know that you need to know") and one on the value of serendipitous discovery.

• News are valuable as a **platform for discussion and social exchanges**, in everyday life and in the workplace.

These benefits lead several of the respondents to emphasize the importance of editorial selection, production and juxta-position in digital media. Spontaneous suggestions include news show formats and mandatory front pages also in more flexible search services.

Moreover, news on demand is generally seen as a complement to existing news media. Respondents stress the importance of overview combined with a rich archive of background material. The possibility to obtain several perspectives on the same events is seen as interesting.

Using digital media to consume news in a more coherent way throughout the day is generally seen as a benefit. Better radio news during car travel—more relevant, no rep-etitions—is mentioned several times, as well as public trans-portation. Two respondents, however, are concerned with increasing information stress and the aggravating effects of mobile news on demand.

Most respondents distinguish between broadcast informa-tion and preserved information. The idea of print on demand is put forward separately by two respondents as a means for keeping interesting information for future reference.

> – If I had a printer for preserving things, I could use
> this news service instead of [our current morning paper].
> (Male, married, two small children.)

The respondents do not feel that the benefits of news on demand in themselves are worth paying for. They compare the news services in the video with current newspapers and find that they would be worth roughly the same subscription rates.

Conclusions

It appears that the scenario-prompted interview method "worked", in the sense that all respondents were able to relate the ideas expressed in the video to their own lives.

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The findings motivate three preliminary conclusions for the design of appropriate news services in digital media.

1. People routinize news consumption. News services in digital media need to accommodate the development of routines. One idea might be overview-oriented news shows with strong support for individual exploration of story backgrounds and contexts, primed by features in the general overview. For instance, when the overview item concerns a pending UN intervention in Ethiopia, an interested reader might wish to refresh her memory as to why the Ethiopian conflict started in the first place.

news shows for overview

Another product idea is the news summary with adjustable length, that the consumer can customize to fit the daily travel to and from work. Distribution channels can vary, but the interview data indicate that audio presentations has great potential in a mobile context. The technical foundations for duration-based summarization are illustrated by, e.g., Merialdo et al. (1999).

adjustable summary

The importance of quality brands will be even higher in relation to routinization in an information-packed news landscape. Editorial selection that the consumers trust enough to make it their regular choice is a competitive strength (cf. Pew Research, 1998, on credibility).

brand quality

2. The distinction between broadcast and preserved information should not be interpreted naively as the need for ubiquitous printing technology. Rather, it motivates further study towards the integration of information in everyday life.

Recent developments in personal information artifacts and tangible information (e.g., Pentland, 2000) may be applied to address the tradition-induced distinction between virtual and physical information. From an everyday use point of view, the most important goal seems to be the integration of virtual information in the distributed routine activities throughout the household. O'Brien et al. (1999) in particular point out the problematic effects of concentrating too much functionality in one device.

distributing virtual information

3. Finally, and most importantly, it must be noted that **features of news on demand**—goal-driven information retrieval, personalized selection, independence of broadcast times, etc.—**do not appear very valuable in themselves.** It is more interesting to look at complementary and new formats and types of content that digital news media afford or enforce.

The interactivity and pointcast possibilities of digital media sets the scene for social news navigation, where your selection of news is mediated primarily by the actions and preferences of a small group of trusted peers. Unlike most filtering systems today, you decide which group to belong to and with whom. Our work in this field (Karlsson, 2000)

social news navigation

seems to show that trust and identification are facilitated in a social navigation environment, as well as your propensity to get involved, voice your opinions, form ad-hoc interest groups and take action.

Another interesting example of new formats comes from the horrible club fire in Gothenburg, Sweden, in the fall of -98, where many young people died. The Swedish Rescue Service Agency is ultimately responsible for security in public places, and they were barraged with questions concerning the accident. Instead of communicating with the public through journalists and editorial boards, they chose to arrange a public hearing at the largest Swedish news web: Aftonbladet. Several representatives were available online at the hearing to be interviewed live, present their analysis and action plans, and answer questions from the public. Background material was prepared and linked to supplement the live information. The role of the journalists at Aftonbladet in this hearing was different—facilitators rather than reporters—but by no means inferior.

Discussion

The present study may be questioned on several grounds. First, the empirical material is undeniably scarce. Secondly, it is not clear that the separation of access mechanisms from news contents in the video scenario is defensible. Thirdly, and related to the second point, it is not clear how well the respondents can judge what their behavior would be if the news-on-demand services presented in the video were in fact available. Finally, the study sidesteps an important benefit of news-on-demand in addressing potential weaknesses of editorial news products.

The relatively small amount of empirical data is motivated by the explorative nature of the study. Recall that the overall aim was to inform further research and concept development in the field of digital news media. A specific reason for limiting the data collection was the clear result emerging from the data: general conclusions from qualitative media studies concerning the importance of routinization and editorial roles (as elaborated in Andersson, 1998) were strongly corroborated. In that sense, the empirical study served as confirmation of more general theories in the field. At the same time, we elicited a more detailed understanding of news-on-demand in practical use, which is not addressed specifically in the cultural-studies strand of media theory.

An important methodological question is whether the use of a video scenario makes empirical studies of imaginary products better in a scientific sense. We have no baseline groups for comparison, and hence cannot tell decisively. However, our impression from the interviews is that more support for the respondents' entering into imaginary situations yields better

what-if data. Using scenarios, mock-ups and prototypes is common practice in interaction design for the same reason. Since our research questions focused on use qualities in the larger social context of everyday use, we found the use of video more appropriate than detailed user interface studies. The absence of a discussion of use qualities of news-on-demand in the literature may also be understood as an indication of the need for extraordinary methods.

However, the video scenario used in the study raises a related question. As can be seen above, it illustrates the use of news-on-demand access mechanisms that are presumably new to the respondents. But the news contents and formats presented are completely conventional. The intention was to keep the focus on news-on-demand as an access mechanism, but at the same time we are not representing the technology to its full potential. This is a shortcoming that we share with the majority of the literature on news-on-demand, but the result may be that our findings are overly negative concerning the use value of news-on-demand. However, the research directions identified above are based on the whole of the data and should thus be reasonably well-grounded in spite of the unwarranted separation between form and content.

Finally, news-on-demand can be an important improvement upon limited, trivial or biased editorial news products in traditional media. This aspect has been completely neglected in the present study. The reason is clearly cultural: public service news products in Sweden are generally regarded as highly credible and of very high editorial quality. Hence, our respondents have probably had no notion of limitations in their everyday news products to which news-on-demand could be a remedy. The conclusion is that our results must be regarded as culturally localized.

Future work

We have presented an explorative study of news on demand. In spite of possible methodological shortcomings, it has produced results that inspire a range of reasonably well-grounded directions for our further research:

- Design for routinization of news consumption.
- Design new boundaries between volatile and persistent information.
- Focus on new formats afforded or enforced by the specific properties of digital media.

We concentrate our current efforts on the development of social filtering mechanisms in mobile contexts, and on the development and operation of an extremely localized news service intended to facilitate local community involvement and action. Moreover, it is our hope that the results may be of interest to other researchers and developers of digital news media.

Acknowledgements

Project and author contact

More information on the research project, including interactive sequences from the video scenario, is available on the web at <www.kk.mah.se/n2003>.

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Anders Möller is with Zoo Multimedia AB in Malmö.

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Appendix: Interview guide

Background information
• Age? Sex? Occupation? Family (single, spouse, children)?

News habits today
• How much time do you spend per day consuming news?
• Which media (papers, TV, radio, Internet, etc.)?
• Which kinds of news?
• When, how and with whom do you consume news?
• Why do you consume news?

<Introduce the technical concepts by showing the video
"News media, September 15, 2002". Explain the unclear parts,
answer questions.>

Central themes
• The movie illustrates the concept of news on demand. Can
you see any benefits of that possibility? Any drawbacks?
• The movie further illustrates the concept that news follow
the consumer, across time and across media. Benefits? Draw-
backs?

General reactions
• Would you like access to this kind of news services? Would
you be prepared to pay for them? If so, would you prefer a
set subscription rate or payment for hours of actual use? What
would be a reasonable price?
• How do you feel about the scenario we have tried to
illustrate?
• Any other reactions and comments?