# Design for future use by genre development:
# A case study of local online newspapers

## Introduction: Problem Area

In an uncertain near future, online newspapers most likely will have to face a new technology infrastructure, with new demands on content form, and new competition. In this future scenario, online newspapers need to produce high quality news services utilizing the possibilities offered by the new technology infrastructure. That means that they have to produce the services using new formats, such as hyper-video. However, it is difficult to predict future use of technology. Although it is difficult, predicting future use is of importance since the news organization may have to invent new services and formats for these, invest in and learn new tools, and integrate these in their production system to support novel work routines. The problem that needs to be solved is how to efficiently, effectively and reliably imagine future use of technology to reveal needs for changed news production and consumption tools as well as new production practices and consumption habits.

## Survey: State-of-the-Art

Researchers have tried to solve the problem of imagining future use of technology by means of a number of different foresight techniques and design techniques. Within human-computer interaction, design techniques for future use include **a)** immersion in current use as in the *contextual design approach*, **b)** requirements elicitation and prototyping as in the *usability engineering approach*, **c)** scenario evaluation as in the *scenario-based design approach*, **d)** and participatory creation and evaluation of future scenarios and prototypes as in the *participatory design approach*, **e)** *specific techniques* for envisioning and enacting future scenarios. *Foresight* (as a specific technique) is normally achieved by a group of experts envisioning future needs based on forecasts of the future.

## Thesis Question

The main limitation of the design approaches described above is that their expected outcome is a new way of achieving the same things as before, but in better ways, enhanced by technology. In contrast, new uses of new technologies can mean to achieve something different from what was previously done. Current techniques for creating such outcomes are not well understood. The disadvantage of foresight techniques is that they find needs rather than solutions. Thus, what is missing is a well understood way to find new uses of new technologies for online newspapers, in a way that reveal the gap of necessary changes, in organization, tools, production system, news service format, and audience habits between the current and future use. *In this thesis the question is how well three design techniques used together can meet that need.* The techniques are **a)** online questionnaires, **b)** hierarchical genre analysis, and **c)** cooperative scenario building in future workshops. The resulting scenarios should be useful for online local newspapers, similar to those of this study, when considering the impact of new technologies to their organization. Furthermore, stakeholders of mass communication sites in general could use the insights gained regarding the design techniques, when conducting design for future use.

## Method

The main research method is a case study of an EC research and development project, the electronic newspaper initiative (ELIN). In particular three methods were used; artefact analysis, future workshops, and online questionnaires.

## Results

Firstly, a description of the current online newspaper genre was achieved by using a human-computer interaction design perspective on computer mediated mass communication. It consists of an analysis of the users (audience), their activities, and the online newspapers.

The artefact analysis of the online newspapers resulted primarily in page element descriptions, from the front pages of the online newspapers. Purpose and quality were derived from HCI theory, from the user's view, and from the producer's view.

Secondly, the future genre is also described in terms of use, as scenarios of production or consumption, as a result of the future workshops. Some of these concepts have been evaluated by the producing groups, and some by other subjects, as a result of the future workshops, the stakeholder workshops, and the services survey. The workshops, in addition to the ELIN survey, also revealed attitudes towards the technologies.

Thirdly, the need for the design techniques was evaluated in the usability methods future workshop, which also provided input to the evaluation of the workshop as a technique, in particular the use of cards representing problems. That alteration of the method was a result of the analysis of the other future workshop processes. The genre analysis seminars highlighted problems with conducting a genre analysis.

## Conclusions

The techniques were complementary, describing the services form different views. The artefact analysis described the services in terms of recurrent form used to mediate content. From that, and HCI theory, the purposes of the news sites and the recurrent activities of use was inferred.

The online questionnaires instead described the respondents (who cannot be seen as representative for news sites) reading habits; what contents they read, the purposes of reading, and the time and location of reading. The particular recurrent forms and contents that could make those habits possible were inferred.

In the future workshops, activities of future use were conceived. These concepts were described as activities of use, utilizing services with particular contents. Examples of recurring forms for delivering the services were inferred.

Together, the views show a gap between current and future use, in terms of difficulties and opportunities of new technologies.

In media theory, recurring mediating forms between and within communities are called genres. Thus, the analysis has shown opportunities and pitfalls for genre development. The choice of elements used throughout the description was influenced by mass media theory and HCI. Together, these aspects form an idealized design perspective for computer mediated mass communication.

Furthermore, the analysis of the design process has revealed strengths and weaknesses of in particular the artefact analysis technique, and the future use envisioning technique, and of the combination of the three techniques, including the online questionnaire. It is concluded that the process has been poor in catching problems with scenarios of service use. This problem can be overcome by modifying the design techniques.