Capturing TV user behaviour in fictional character descriptions

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SICS Technical Report T2008:11
ISSN 1100-3154
22 October 2008

This work is part of the On-demand IPTV project, conducted by Acreo and SICS with financing from Vinnova and active support from an industrial consortium. The main goal of the project is to study the demands on cost-effective, scalable video-on-demand networks that can deliver video with high-quality with minor quality degradations in the transmission. An important issue in understanding this situation is to explore future user behaviour (and the resulting traffic patterns) when user can choose a mix of broadcast TV and a large number of on-demand channels and services.

This paper reports on the first steps to develop an understanding of IPTV user behaviour by investigating the current situation using archetypical, fictional character descriptions often referred to as personas. This is an intermediate version; the final version will be the result of Task 4.1: User requirements analysis, part of WP 4: User needs and behaviour.

Background: personas

Personas are descriptions of fictional characters representing archetypical users of a computer system or service. Introduced into systems development by Cooper (1999), personas are aimed at helping design teams to understand and take into account user needs throughout the systems design and development process. Using whatever information is available about the user population, designers iteratively create well grounded character descriptions involving enough detail to make the fictional character stand out as a real person whose goals and motivations may be investigated during the design process.

Many variations and understandings of the persona concept are available today. The method has been used successfully not only by Alan Cooper's own consulting company[1] but also e.g. by Microsoft (Grudin and Pruitt 2002; Pruitt and Grudin 2003). Naturally, the method has also been criticised. Chapman and Milham (2006) attack the claim that personas can reflect empirical data. Blomquist and Arvola (2002) question not so much personas per se but the possibility to use the method, based on participant observations of design team members. Although Cooper's book takes a clear stand against technicians as designers[2], personas have also been criticised for actually taking the users "out of the loop" instead bringing them in as active participants in design and development processes.

However well grounded this criticism may be, there are numerous situations where real users are hard to find. For completely new services potential users may be identifiable but their behaviour cannot be studied until the service is available. IPTV on demand is an example of such a situation. Although the technology is available, the choice of TV programs and interactive services is still very limited: user behaviour is not representative of the future. Building a prototype and studying its use may provide interesting insights (Vyas and van der Veer 2006), but does not solve the problem. This has been the main argument for using the persona approach in our work.

Method

The work with creating a number of fictional users, exemplifying different future users has been conducted in several steps. An existing set of persona-style characters developed by the TV and broadband operator *ComHem* was used as a starting point for the exploration. These characters, represented by dolls, are neighbours in an apartment building in a town somewhere in Sweden. Each character is fairly elaborated and features in soap opera style "short film" TV-commercials as well as in other advertising and on-line[3]. The aim with this was to have a starting point that was established from a commercial perspective. However, these characters only served as an inspiration for forthcoming work, which in later steps was based on empirical data.

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[1] www.cooper.com

[2] In reference to the title of the book, technicians are "the inmates" who "are running the asylum".

[3] www.comhem.se and comhem.se/portal/comhem/comhem_reklamen

The work continued inspired by a model developed by Kujala & Kauppinen (2004). This model provides support in identify and group different categories of users. The ComHem characters were described based on different characteristics/variables. These were: age, gender, marital status, geographical location (region, city, country side, small town, market area), education and job type, socio-economic status and role in organisation, social connections (societies and organisations), and finally lifestyle and personality (for example, attitudes towards technology). We also extended the model to include physical and cognitive limitations, and preferences regarding TV-programs.

After the characters had been distributed in a table based on the variables described above, we created different age groups: 15-24, 25-34, 35-44, 45-54, 55-64, 65-74 and 75 years and older. We extended the number of characters to cover all these age categories by at least one male and one female. The added characters were given an age within the current age interval and a geographical location/living that was varied between city and suburb, and between house, apartment or rental apartment. All characters were described as living in a large city with the aim to limit the number of possible combinations. Marital status was also described in the table and was varied dependent on age, phase in life and also upon an intention to get different family conditions represented. All information about the new characters, besides age, gender, martial status and living condition were left blank. All information that could possibly be gained from the ComHem characters was included in the table: only variables that were could not be deducted from the commercials and other data were left blank.

The next part of the work consisted of a brainstorming were the participants generated ideas in small groups. The session consisted of 3 groups with 2-3 participants each. Participants were instructed to provide information about variables where information was missing based on the existing information of the character combined with their own experience and imagination. The results from the Brainstorming and tables from previous work were summarised into sixteen short textual character descriptions of different ages and gender.

Sixteen characters are much too many to handle efficiently; the next step was to reduce the number of character descriptions while striving to maintain variations in age and gender. Characters that were very similar to each other or close e.g. according to age were merged into one character with traits from both the former ones; some character descriptions were dropped. When this part of the work was finished, six character descriptions remained for further development.

The remaining character descriptions were now extended with information about their use of TV, Internet and other media, based on large surveys and well established Swedish publications within the area:

- on-line statistics from the Nordic Institute for Media and Communication research (Nordicom 2006);
- two reports on broadband and internet use in Sweden from WII, the World Internet Institute Sweden (Findahl 2007; Findahl and Elvelid 2007);

- two reports from the Swedish Radio and TV Authority (Schierbeck 2007; Fredriksson 2006);
- a report on telephone and internet use from the Swedish Post and Telecom Agency (Jönsson et al. 2007).

The on-line statistics and the WII report on Swedes and the internet (Findahl 2007) proved particularly useful and are referenced in more detail in the persona descriptions below. The remaining reports provided background and a broader understanding of the area. Three papers dealing with user studies and IPTV were also included in the background reading (Brown and Barkhuus 2006, Simeoni et al 2007; Vyas and van der Veer 2006).

Finally, two interviews were conducted, one with a young man and one with a man in the thirties. The aim with these interviews was to get a deeper understanding of some of the characters, regarding their attitude to media and TV usage in particular, but also to (home) technology usage in general. These interviews have inspired the character descriptions of *Jonathan* and *Stefan*.

Results: character descriptions

The result of the process described in the previous section is six character descriptions of archetypical TV consumers, men and women, belonging to different age groups and at different stages in life.

Jonathan, 17

Jonathan is 17 years old and lives with his parents in an apartment in the middle of Stockholm. He is a college student and on his spare time he practices football, plays online games (mainly WoW) and, of course, dates girls (Brainstorming). He usually watches TV in his room where he can have both his computer and his TV on at the same time (Interview). Jonathan spends approximately 2-3 hours playing computer games and watching TV per day (Nordicom 2006).

When watching TV, Jonathan is mostly interested in sports, mainly football. Further, he watches a couple of TV-series that his friends also follow on a regular basis (Brainstorming). During the commercial breaks, Jonathan and his friends often use MSN to communicate, and they also share YouTube links (Interview). If Jonathan watches a film it is most often a DVD, which happens one or two times a week (Nordicom 2006). Occasionally he and his friends might also see a good film that is broadcast on TV. One thing that Jonathan longs for is a device with PVR-possibilities (Interview). The main reason for this is that he misses his favourite series on Tuesdays when he is away practising football.

Emma, 25

Emma is a woman of 25 renting a small two-room apartment in Växjö, a town in south-east Sweden. Emma is a clothing store clerk and listens to music a lot. A couple of years ago she started to share music with others through the Internet, and she thinks this has broadened her taste for different kinds of music. She is also convinced that the sharing

has contributed to her and her friends buying more music than they previously did (Brainstorming, Findahl 2007). Emma is also very interested in clothes, nightlife and keeping fit. She exercises a lot at a gym nearby where she lives.

Friends are very important to Emma, and she uses both her mobile and the Internet for chatting with them and keeping in contact in other ways (Brainstorming, Findahl 2007). Emma is quite a big Internet user. Besides using chat services and downloading music she also has a blog that she updates on a daily basis (Findahl 2007). Emma and her friends go to the movies sometimes, but most of the time - once a week or so - they rent a movie that they watch at Emma's place (Nordicom 2006). An evening at home for Emma often ends with watching some TV. Approximately she spends a couple of hours a day in front of the TV set (in average 1,5 hour per day according to Nordicom 2006).

Stefan, 33

Stefan is a 33 year old father of two that spends a lot of time at work. His high income is balanced by high costs: he lives in a one-family house in Uppsala (close to Stockholm) and is very interested in high tech gadgets (interview). The little time he has left outside of work is spent on his children's activities, mostly on training his 11 year old daughter's football team (Brainstorming). Stefan watches TV for about an hour and a half a day but that greatly varies over the days of the week. When working late he tends to use text TV to check on the latest news and sports results. During weekends, he and his wife regularly watch a movie once the children have gone to bed. Stefan also spends about an hour a day or more browsing the Internet. (Nordicom 2006).

Anna, 46

Anna is 46 and has two children, 13 and 15 years old. They all live in a rented apartment just outside the centre of Stockholm. Besides spending much time with her children, Anna is engaged in several communities such as a parent's association working on school issues. Emma has a lot of friends, both old and new. She also thinks it is important to exercise and keep fit, and she often take long walks (Brainstorming).

Anna watches the TV approximately 1,5 hours per day (Nordicom 2006). Since she lives a very busy life most the time she spends in front of the TV is watching late night series after the children has gone to bed. The rest of her TV watching takes place when spending time with her children, which means that she watches the programs that they are interested in (Brainstorming). Anna also uses text TV now and then – normally she does not have the time to read newspapers and this is one way for her to keep up with what is happening in the world. Watching movies is not something that she does more than a few times a month (Nordicom 2006).

Anna has a computer at home, connected to the Internet, but most of the time it is used by the children (Findahl 2007). Regarding Anna's usage, it is limited to just above half an hour a day. This time is spent on reading e-mail and on participating in a community (Nordicom 2006) that discusses every day physical exercising. Sometimes she also plays simple computer games on different Web sites providing online games (Brainstorming).

Peter, 58

Peter is 58 years old and lives in a house a bit outside Göteborg. His children are grown up and have left home, so nowadays Peter and his wife live alone in their big house. Peter is a physician at the local health care centre and he likes his work and his colleagues. On evenings and weekends he does a lot of reading and his social life, besides the family, is limited to dinners together with other couples (Brainstorming).

Peter watches TV approximately one and a half hour a day (Nordicom 2006). He is very interested in sports, and it is mainly sport he watches at TV (Brainstorming). Peter also uses text-TV a couple a times a week to keep him selves updated with the latest sport results (Nordicom 2006). Peter likes most of the programs at Discovery Channel, and he also tries to watch the news at least once a day. The only TV series that he watches on a regular basis is "Lost" (Brainstorming). Peter is not very enthusiastic about watching films, however he watches a couple of films per month (Nordicom 2006).

Peter is not using different IT-solutions a lot, but he spend a bit less than one hour with the Internet every day (Nordicom 2006). He spends the time in front of the computer by reading e-mail and watching the latest news and events on the stock market. Peter would like to be in the frontline regarding knowledge about new technology, however his children are far in front of him (Brainstorming). One thing, regarding technology usage, which Peter is very proud of, is his own way of finding out how to use and combine different devices and services. For example, how he uses the computer and his mobile phone together.

Ellen, 69

Ellen is a 69 years old retiree living by herself (Findahl 2007) in a rented apartment in central Malmö. The thing likes most of all is spending time with her friends. Ellen is also interested in reading, and participates in a group that reads and discusses different books together (Brainstorming). Another favourite occupation is to read magazines (Findahl 2007).

Ellen watches TV a little more than two hours per day (Nordicom 2006), mainly news, discussions and culture programs – and children's programs together with her grandchildren (Brainstorming). Ellen also uses text-TV mostly every day (Nordicom 2006), mainly for the weathercast and for keeping up with the latest news. Ellen rarely takes the time to go to the movies or see films at home - when this happens, it is together with a friend that has access to a DVD player. Ellen herself does not own a DVD player or video recorder. (Findahl 2007).

Ellen does have a computer but she doesn't use it much. Her usage is limited to about 10 minutes a day on the average, when she reads her e-mail (Nordicom 2006). Sometimes she also uses the Internet for finding information about travelling, culture and about different products. However, it would never cross her mind to buy anything through the Internet: she does not trust the methods for payment (Findahl 2007).

Both the absence of a DVD-player in Ellen's home and her limited computer usage could be explained by the fact that Ellen believes that all this new technology is difficult to

handle. While this keeps her back, she is actually more adept than she thinks (Brainstorming).

Next steps

The next step in this work will be to refine and detail our six personas based on interviews with real TV consumers in a test bed available to the project, in Hudiksvall. In addition, more and more TV-related services are currently made available to consumers both as ordinary internet services (e.g. SVT Play and the recent Play Prima; TV4 Anytime) and by network operators (e.g. Telia Digital-TV), creating new opportunities for studies of actual IPTV user behaviour.

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