OPINION? AGREE - OR NOT

The Ultimate Waiting Experience
by

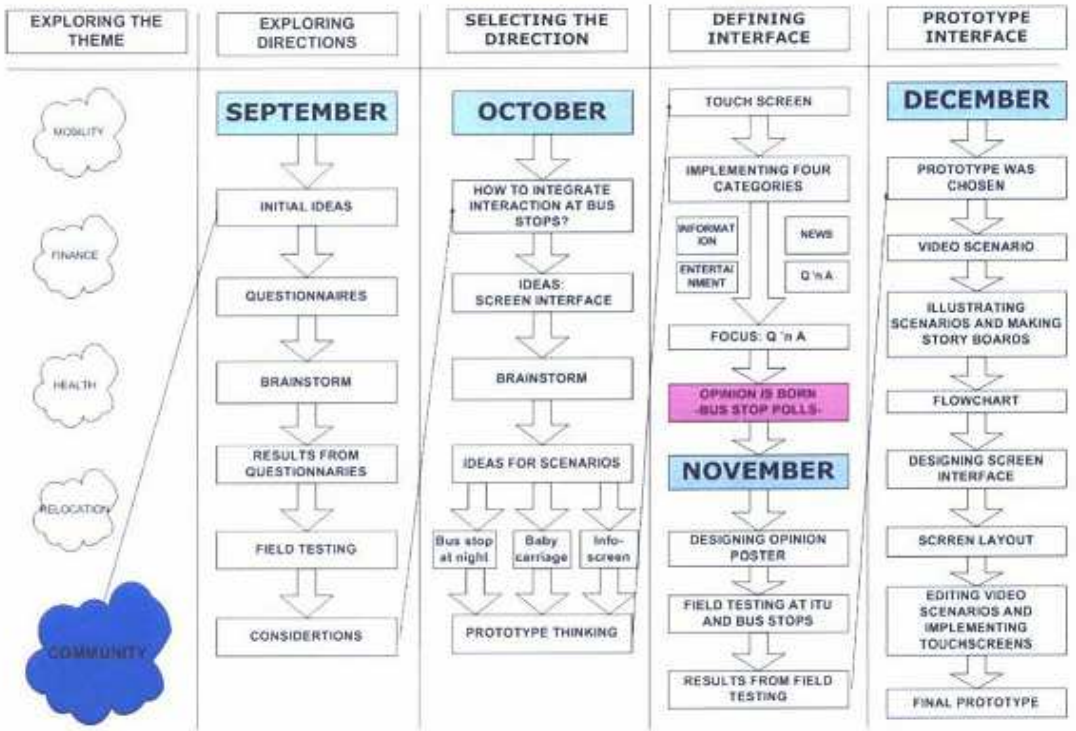
Syed Qasim Ali Jari Naqvi
(130181-2821)
Britt Sunekær
(110674-1952)
Christian Schimmell
(121174-2395)
Kamilla Bjerregaard
(100378-1026)
Troels Jørgensen
(110876-2353)

Interaction Design and Ethnography, DIDE, Fall 2006

ABOUT THIS PROJECT

The intention with this booklet is to document the different ideas, thoughts and stages we as a group have been going through the last four months. To do this right and to make everything as clear as possible, all documentation is presented chronologically.

Monthly project overview



SEPTEMBER:

Initial idea

We started out thinking of different situations where people could interact with each other and of situations where existing interaction could be improved.

The idea we ended up with was the bus stop, a place where people often tend not to interact with each other or a place where there is room for implementing some sort of service design.
To confuse ourselves and our surroundings even more, we came up with the solution ahead of the problem. The idea we presented in class, was to design a bus stop that had certain specific characteristics:

- *Bus stop should be illuminated and the colours should have an emotional impact on people when waiting*
- *The illumination at night, should present a safety factor*
- *Colours should change accordingly to the number of people waiting*
- *Colours should change when the bus is approaching*
- *All sides of the bus stop should consist of screens/monitors (commercials, radio, movie trailers etc.)*

Questionnaires:

We had to change our concept, and think of things that might have an influence on people when waiting at the bus stop. We agreed to focus on the waiting factor, which all group members had experienced as annoying.
To get an idea of whether or not people actually experienced waiting as a problem, we made a questionnaire.
We made face-to-face interviews during daytime at bus stops in Copenhagen and Ringsted, and interviewed bus passengers of all ages.

The following questions were asked:

- *Is your waiting experience negative or positive?*
- *Can the experience be improved and if so, how can it be improved?*
- *How often do you use the bus?*
- *In what situations do you use the bus?*

We ended up interviewing approximately 20 people of all ages around Copenhagen and Ringsted, each interview was between 5 to 15 minutes and were done during the day. We did our best to avoid the focus on time, but the passengers' main experience of waiting was time oriented.

Results:

The results we got from our questionnaires were more or less unambiguous, but there were some differences in the feedback we got, which had to do with social aspects:

- *Make conversation instead of counting minutes (Ringsted)*
- *Copenhagen passengers felt the experience as something to get over with.*
- *Ringsted passengers felt the experience as a social event when having the opportunity to talk to others.*

Pictures on this page is from the field survey

Next stages:

Based on the results from the questionnaires we agreed to focus on the time factor. We realized that commuters tend to feel bored or irritated while waiting for the bus. We therefore decided to create and try out some ideas in order to improve the waiting experience.
We had to try out some field testing!

Field testing:

Our goal was now to try and come up with different ideas to distract people from focusing on the time factor. We had to think of different situations and activities that might help doing so.

We had a brainstorm where the following ideas came up:

Crayons and flip board
Hot coffee
Magnetic drawing board
Touch-screen Sudoku
Theme exhibition
Stand up comedy
Better seats (massage)
Music /Radio
Punch bag
Interactive games

Based on the initial brainstorm, we decided to include the following in our field test:

- Putting up Sudoku boards (A3 format)
- Putting up crayons and blank paper (A3 format)
- Putting up foldable chairs
- Hot coffee

Field test results:

The field-test produced some rather interesting results, which was caught on video camera and pictures. People actually used the things placed at the different bus stops. Sudoku-boards were filled out, and people had written/drawn on the blank papers using either crayons or pencils. So to a certain degree the field-test were a success, despite the poor weather and our limited time of testing, we could tell that people had no problem in interacting while waiting for the bus.

Screen dumps from our field test video

OCTOBER

We started October with more focus on how it might be possible to implement interaction at a bus stop in an entertaining way

Let's go crazy

Having thought of one way of implementing a tangible device, we decided to go absolutely crazy, and had a huge brainstorm, where the rules were very simple: If you laugh at or disagree with an idea made by a group member, it's your turn next!
So based on that and not being limited or restrained by 'rational thinking' we gave it our best shot (The Brainstorm lasted for apx. 1 hour)

What would divert people from thinking about time while waiting for the bus?

Picture showing some of our ideas from the brainstorm

Decisions:

After the brainstorm we decided to make scenarios, in which we tried to implement some of the functions we would like to have integrated into both the bus stop itself and screen:

Ideas for interaction:

Multi-information screens will be placed at bus stops and will have a variety of functions:

Information:

About delays – and ideas for alternate routes
Numbers of people on the bus
Does the bus have room for your baby-carrier?

Entertainment:

Puzzles
News"papers"

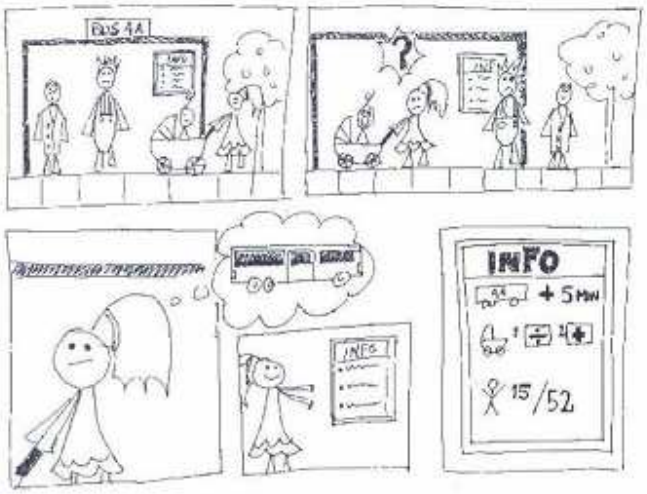
Accessing these screens, both busses and monthly bus-passes must have some sort of build-in chip (chip installed) in order to register: where the bus is, and how many people is on board. The number of passengers on a bus will only be an estimate, as people buying single tickets or using a multiple-ride card will not be registered.

Scenario 1

A bus stop that reacts with lights when you approach it.

Scenario 2

A mother with a baby carriage approaches the bus stop. She wonders whether or not there might be room for the carriage on the bus, and checks the screen.



Scenario 3

The info screen informs that the bus is delayed and one passenger chooses to take taxi instead.

PROTOTYPE DISCUSSION

We reached a point where we were unsure whether we should implement only our primary idea into a prototype, or mix some of our scenarios together and go from there.

We had a meeting with Simona whom were very much into the idea that bus stops should be able to interact with each other, e.g. gaming? At this point we were a bit confused about which direction to take the project, and we started to feel frustrated, since we felt we did the right things but did not get anywhere. So in order to try and clear things out we had a meeting with our tutor Dave.

Meeting with Dave:

After having a nice and informative conversation with Dave, we found out that we had to be more specific concerning the aspect of implementing 'interaction' between bus stops. Therefore we had to be more consistent in our design/prototype-thinking. We came up with some initial ideas:

Ideas for a prototype:

When you buy or renew your monthly bus-pass, you can choose to hand in a profile that would give you access to certain services, e.g. You may receive either on your mobile or at touch screens 'on location', some of the following services:

- *Practical information regarding the flow of traffic (busses, metro, trains). I.e. press starting point and end point and you would receive information on delays, and alternate routes.*
- *Gaming; playing with fellow commuters using screen at the bus stop.*
- *Ask questions; 'who knows what' – encyclopaedia made by the commuters.*
- *Free newspapers in an electronic version.*
- *Commercials to finance the screens.*

Results:

Based upon the ideas above, we all decided that the way to go was to create a prototype touch screen, in which the following 4 different services should be implemented:

- *General information about HUR, timetables, delays etc.*
- *News – different newspapers available electronically*
- *Entertainment – i.e. Sudoku*
- *Bulletin board – "Q 'n A"*

The fourth service 'Bulletin board – Q n A' will be our main focus:

Having another meeting with Dave made us realize that we had to further narrow it down. We decided to concentrate on one of the 'menus' in the touch screen, and we chose the Q n A' bulletin board. To add some details we thought of the following:

- *Bus stop polls!*
- *Need an answer to a question? Ask your fellow commuters*
- *Use the bus stop touch screen to display the questions, which have to be a yes or a no question.*
- *You should be able to send your message as text message from your mobile, just as you should be able to receive your answer on your mobile.*
- *You have to be registered to participate – you need a username and a password – username could be the number from your commuters pass.*

We named the prototype OPNION!

NOVEMBER

Meeting with Dave (again)

He was pleased with our new idea and the fact that it enables a person to interact with the surroundings. He asked about the prototype/scenario and he thought that making a video of our prototype would be useful.
He also said that we needed to test it at a bus stop, and that we should be able to answer all questions about how, what and why.
He wants us to make more of a real prototype than a video prototype.

What needs to be done?

Why, how and when:

- *More field testing to solve why, how and when.*
- *Make specific polls on paper that commuters can answer, make the interface on paper as a mock-up.*
- *How are the users, what do they use the proposed stuff for?*
- *We have to try it out and see what we have learned from the process so far.*
- *We should also know what the interface should contain/include. Why, and what could be improved.*

Meeting with Heather and Dave

Heather and Dave agreed that we had to do more specific field research. We decided to do the following:

- *Make posters with questions for people to answer, and blank sheets for people to post their own questions.*
- *Make layout look professional.*
- *We should try to synchronize the boards by staying in touch on our individual mobile phones, so that answers and questions would appear on every touch screen, as they would if we had an actual touch screen.*
- *We should observe – interact and interview, i.e. we have to blend in to get an idea of what will happen, and then later let people in on the fact that we are a part of the research team.*
- *We have to get more into the details of the touch screen.*

Field testing of the 'Opinion':

The 'OPINION'-poster consists of 6 pieces of A3 sheets, (840 mm. x 595 mm.) which we decided was the right size, as readability and user friendliness are the two most important factors.
These were put up at different bus stops across Copenhagen, one in Ringsted and some inside the ITU-building both in the hallways and in the elevators.

Pictures of our OPINION posters in use at ITU.

Every poster had two pre-written questions:

- *Are you attending Christmas party this year?*
- *Should Christiania be closed?*

Fieldtesting at bus stops

A posted soaked from the rain

Results:

- ***Ringsted**: The posters caught people's attention, but no one posted any serious questions or any answers for that matter.*
  Some had written naughty things on the posters, which might have prevented people from using them.
- ***Copenhagen**: We had placed four posters. However three were removed by the authorities of HUR, so we do not know their content. On the last poster we observed that 3 questions had been asked*
- ***ITU**: We placed four posters at ITU in. One in each elevator and these were used "seriously" by those using the elevator:*

1 *Four posters were placed in the elevators for about 6 days, and the two posters near Scroll Bar had the touch of those visiting the Friday Bar social gathering. Answers were misplaced, drawings were made, silly remarks were written etc. The other two posters also had the touch of the Friday Bar social gathering, though not to the same degree. People had asked for more posters to be put up and so we did.*
2 *Extra posters were placed in the elevator (Monday – Friday) and these were the most successful, since they were used more seriously.*

After the fieldtest:

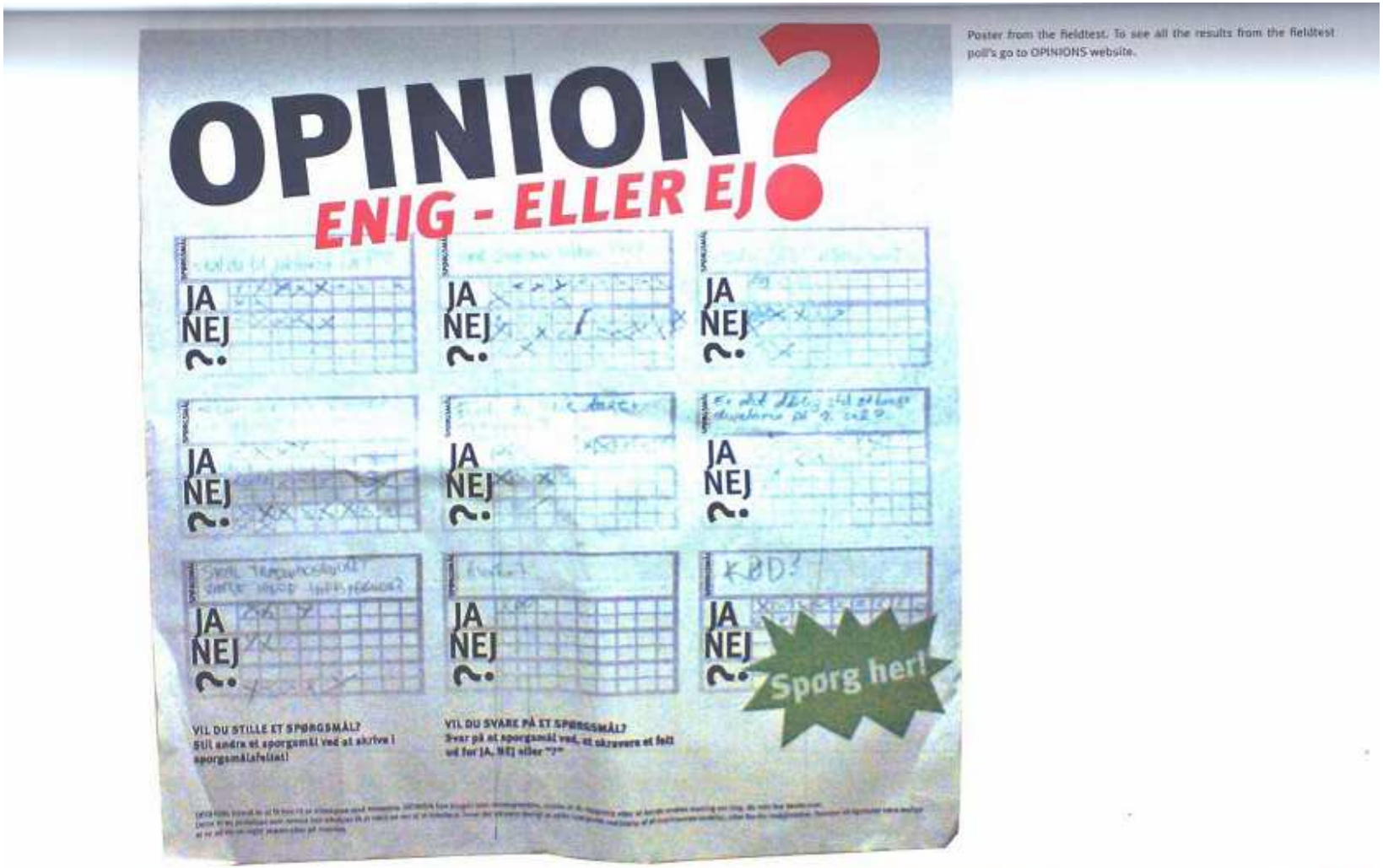
We let the posters hang for approximately 24 hours at each bus stop with the intention of collecting them the next day. To our big disappointment they were all removed except one which was soaking wet but that gave us an impression on what the results would have been if we had got them all. The posters at ITU were intact and proved very useful indeed. Certain factors had interfered with our field testing:

Factors:

- *Permission is indeed needed before placing posters.*
- *The weather is a very important factor. If the weather is harsh, the post ers might fall down. (We only used glue)*
- *If the posters are placed near a social gathering with alcohol con- sumption, people might be less serious and misuse the OPINION, (read; SCROLL-bar on Friday nights).*
- *ITU is only used by teachers or student and is therefore a tight commu- nity, while bus stops are open to the general public.*
- *Using an elevator make people experience the notion of "waiting time", which was the primary research area of the field tests.*

Prototype:

Video scenario was chosen
After the meeting with dave and our recent fieldtest, we have decided to make a video prototype.



Poster from the fieldtest. To see all the results from the fieldtest poll's go to OPINIONS website.

DECEMBER:

Storyboard for the scenarios

In order to illustrate and show our 'OPINION' prototype in action, we decided to create three different real life scenarios. We would make scenarios, that each shows different menus being used:

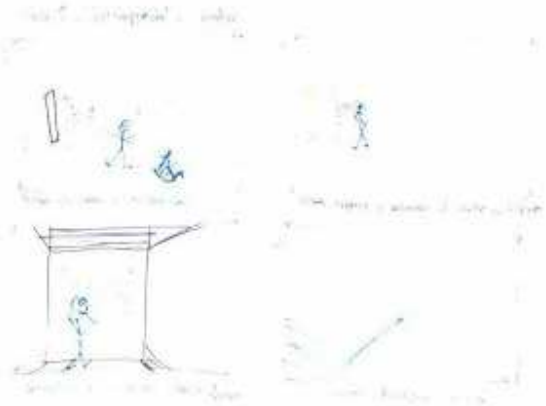
- *At a bus stop*
- *In an elevator*
- *At home, browsing on the pc*

The storyboard was illustrated by hand and a separate storyboard was collected for each scene to make filming more easily.

SCENARIO 1

Destination: Bus stop

Activity: Random person approaches and arrives at a bus stop, and while watching the OPINION-screen, becomes interested and starts to interact.



The person browses through the different menus and ends up asking a new question:

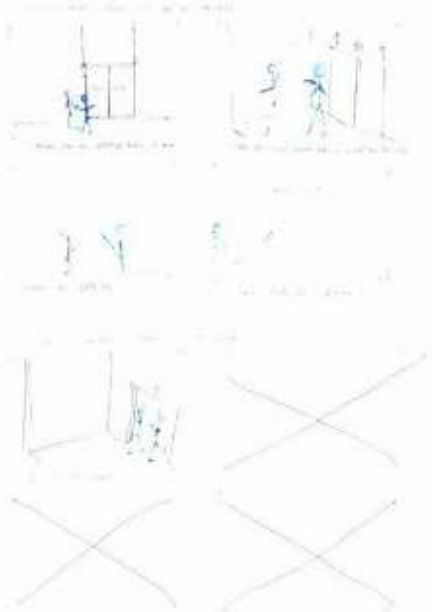
1. *Browses through 'CATEGORY'*
2. *Presses 'HOWTO'*
3. *Returns to 'CATEGORY'*
4. *Browses through the different questions in the specific category.*
5. *Ends up asking ('ASK') a new question.*
6. *Bus arrives and when it drives away, the question just asked is present on the OPNION-screensaver.*

SCENARIO 2

Destination: An elevator at ITU or similar place.

Activity: A group of persons with user experience of OPINION stands outside an elevator and talks about OPINION. The elevator arrives, and while still talking, a funny random question pops up on the OPINION-screensaver, and the group agrees to answer:

1. *Presses the OPINION-screensaver to answer the enlightened question.*
2. *The group is talking about what the exact answer should be while laughing and fooling around.*
3. *Elevator arrives at the destination; the group leaves the elevator laughing about the question they just answered.*

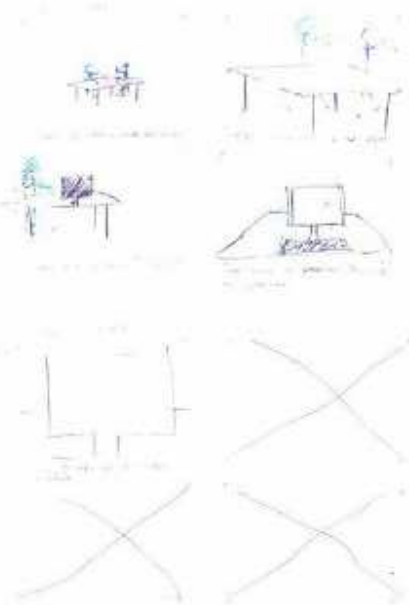


SCENARIO 3

Destination: At a café, in front of the computer.

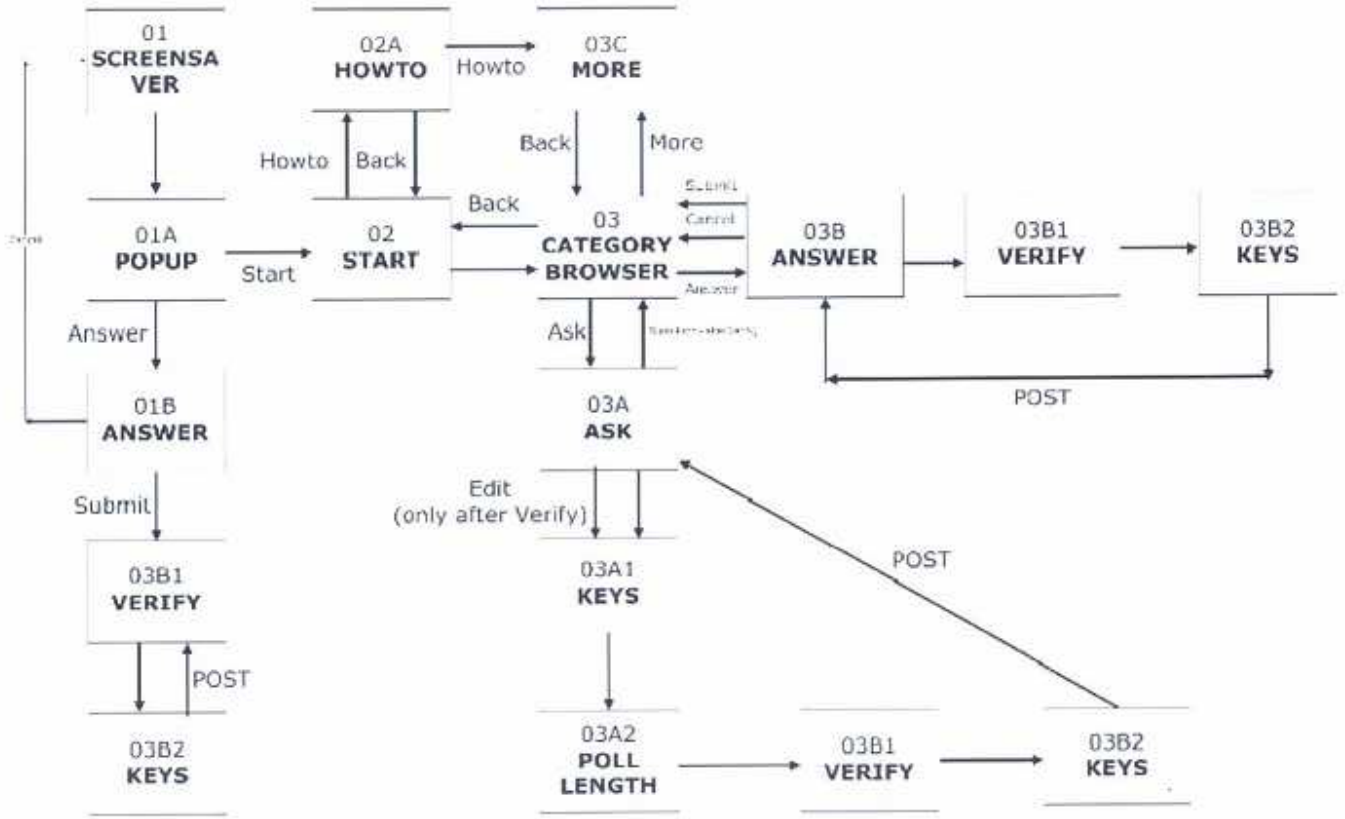
Activity: The group of people that were present in 'SCENARIO 2' sitting at a café several hours later, after answering a question on OPNION. They decide:

1. *"Hey, by the way, why not go check out how the poll from earlier on is going?....giggle"*
2. *"Oh yeah, I completely forgot about that giggle it..."*
3. *The 2 friends sits in front the PC where they enter the OPINION-website, browsing in search for the question they answered.*
4. *They laugh when they see the initial result given on the poll.*
5. *After checking the results, they are eager to know the exact geographical location concerning the question.*



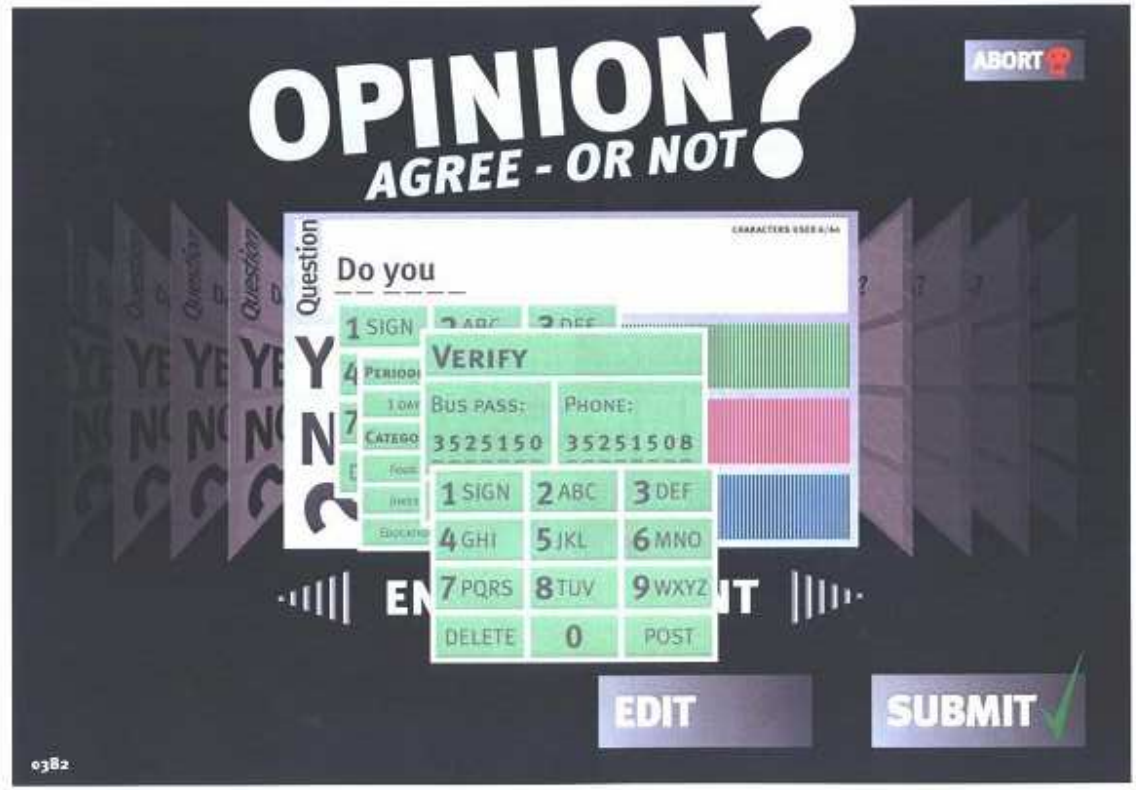
FLOWCHART

To be able to get an overview of how the screens are connected we created a flowchart which illustrates the internal structure of screens and their different buttons. The flowchart also proves important in finding errors and the overall understanding:



SCREEN LAYOUT

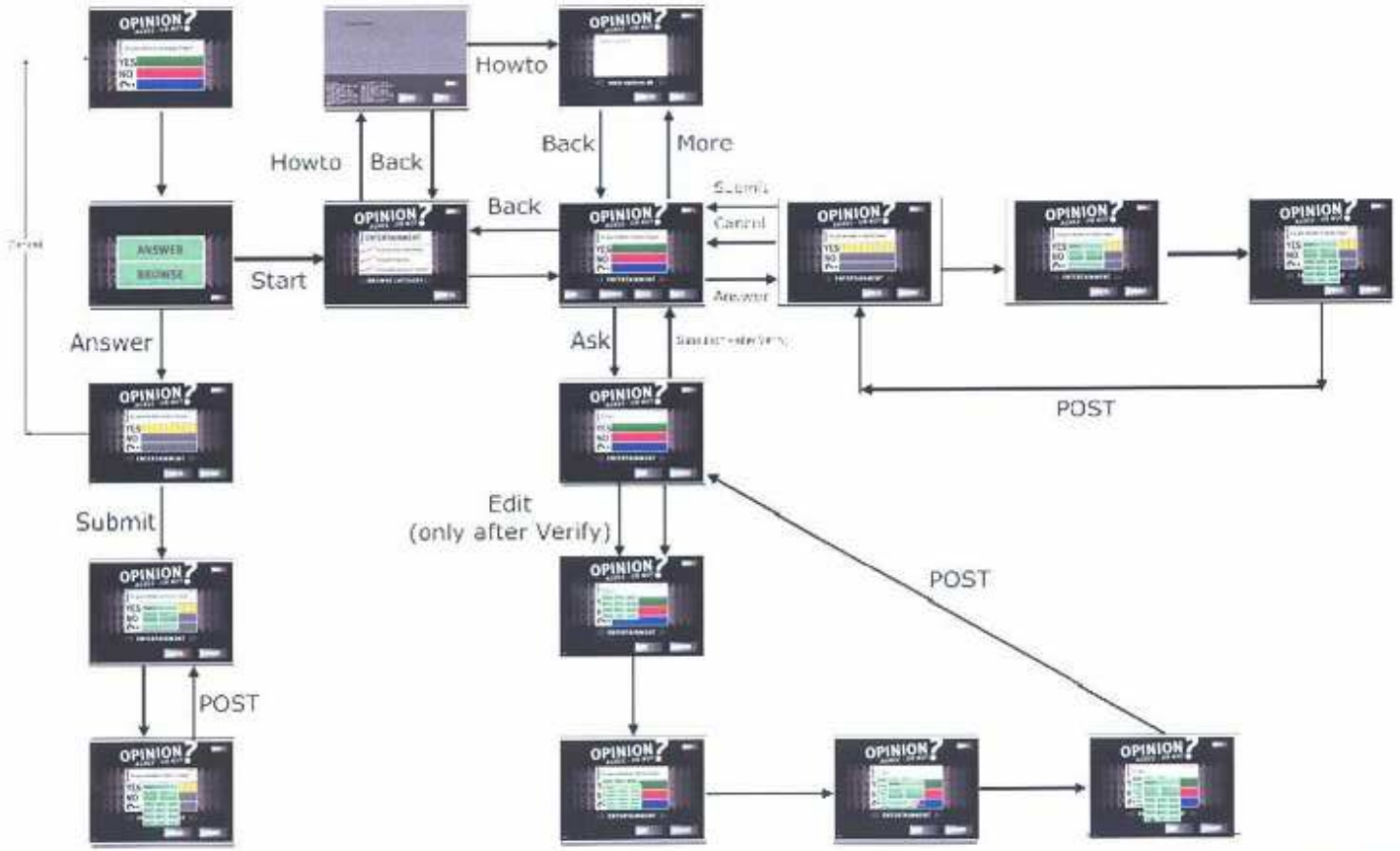
Layout of each screen was decided, and was created and drawn in Illustrator.
We all came up with design ideas, and agreed on a horisontal layout, where the screen is divided into three sections, title, main screen, and browser- and menu buttons.
Size, format, colour, fonts and written content was also chosen and the final screens ended up with the following layout:



Screenshots of the touchscreen

SCREEN LAYOUT FLOWCHART

After designing the flowchart we made the screen layout and placed them in the flowchart this helped to get a overview of all the screens.



A SHORT DESCRIPTION OF THE OPINION TOUCH SCREEN

The first thing you see when you are in front of the touch screen, is a screensaver where different questions pop up.
Here you have two choices;

1: either you choose to answer one of the questions you see directly or,
2: you enter a new question in one of the nine categories.

Answer a question directly from the screensaver:

1. *Touch the question you whish to answer and a new screen with following options will appear on the screen.*
2. *Now you have two choices; you touch answer the question from the screensaver or you can browse through the categories and choose a new one.*
3. *You push answer and on the next screen you just push in you answer by touch yes, no or ? and push submit.*
4. *A Verify pop up screen will appear were you have to enter your cell number or bus pass number to post you answer. To enter your number a new pop up screen looking like a cell phone number pad will appear and after entering your number push POST.*
5. *Before your answer is registered you have to push submit. If you regret your answer you can push the cancel button.*
6. *Now you answer is entered and the screensaver will appear again.*

Post a new question:

1. *Repeat step 1 and 2 and push browse.*
2. *The main screen appears. Push the ask button.*
3. *Now you can enter your question by using the pop up window like in step 4 above.*
4. *A new pop up window appears where you have to choose periods, category.*
5. *Do as in step 4 and 5. If you whish to change your question or edit it, push the cancel button and it will not register your question.*

Answer a question from the main screen:

7. *Touch the question you whish to answer and a new screen with following options will appear on the screen.*
8. *Now you have two choices; you touch answer the question from the screensaver or you can browse through the categories and choose a new one.*
9. *You push answer and on the next screen you just push in you answer by touching*
10. *yes, no or ? and push submit.*
11. *A Verify pop up screen will appear were you have to enter your cell number or bus pass number to post you answer. To enter your number a new pop up screen looking like a cell phone number pad appear and after entering your number push POST.*
12. *Before your answer is registered you have to push submit. If you regret your answer you can push the cancel button.*

If you use your cell phone number to verify your posting, you will receive a text message that confirm your posting.

On the main screen you also have the option to push the more button, which will give information about the website, were you can check your posting and other statistic result. You can also push the how to button, which will guide you through the use of the touch screen.

VIDEO SCENARIOS

Each scene is then shot using the story boards and scenario sketches. We shot at three different locations, at a bus stop, in an ITU- elevator and at SCROLL- bar. In order to implement the 'OPINION' –screens, we used a green card board, on which the animated screens are placed, making the scenes look realistic.

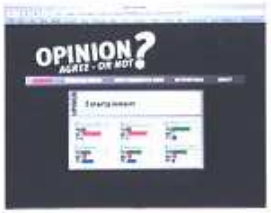
FINAL CONCLUSION

What have we learned?

We started this project backwards, since we came up with the solution before knowing the user's needs.
We have thus learned that a product idea can be changed during the design process. This became abundantly clear after we had done several field-tests. We changed our focus from design to the users needs, after our first field-test results. This resulted in an ongoing development of our project through out the project period, using more field-tests with and without a temporary prototype.
During the field tests, we also learned that user's needs are different depending on factors like gender, age, type and location. Another important factor is that a product idea, can be changed by the environment and where it is being implemented.
An important skill that we have gained during the project process, is scenario making. With an informative scenario we can try out new ideas, provide an insight to our product and also foresee future problems.
The project has also taught us to utilize our skills more efficiently. We all have different backgrounds, and this fact has been useful. Our different skills made us create parts of the project that needed our specific skills and thus we spread the project work among us.

In the future

If this prototype should be implemented in real life we would first of all get in touch with a touch-screen manufacturer and software-developer to make a functional OPINION. The next step would be to contact suitable investors such as local government offices and major advertisement companies and convince them to invest in our product.
The third step would be to launch OPINION in all public places where people might have to wait for something or someone, such as bus stops, airports, train stations, shopping malls etc. This could thus be used as a time killer and maybe enhance a waiting experience.



www.itu.dk/people/brisun/opinion/

Individual personal reflection by Syed Qasim Ali Jari Naqvi

I have learned many things during the project process and will briefly describe my experiences below:

Cooperation:
I have learned that one needs to cooperate with other group members, if a successful project is to be delivered. One needs to listen to other opinions and ideas, and not just think that ones own ideas are the solution to everything. "More brains work better than a single brain", as one saying goes.

Expertise:
All group members have different backgrounds, and it was thus natural for us to use our expertise on the project area that suited our skills.
I will give two examples:

- Troels' background is graphic design, and it was thus natural for him to create the layout of the OPINION.
- I have a background in communication, and it was thus natural for me to write the text on the OPINION so that it was user friendly.

Creating video scenarios:
I have learned how to create short and useful video scenarios.

User oriented design, not designer oriented design:
In the beginning of the project, I wanted to design something for the users without even thinking about their needs etc. This was of course not a very good idea, and during the process I learned that it is the users who are to be pleased, and that it is very important to seek their feedback and opinions etc.
The brainstorming and field tests were thus very helpful and gave me an insight on how a product is made from the beginning to the end. During the project process many changes occurred, which was due to the feedback or actions performed by the users. The users acted differently from what we had expected, and thus we had to change or modify the product.

From the first idea to the final product:
As has been mentioned above, the users' needs were different from what we had expected. This resulted in a total change in the product design and surprisingly also the product itself. Our first idea was to create a bus stop with many lights, games and other objects that would ease the waiting experience for each bus passenger. The final product was not near any of these ideas. Instead we ended up making a product named OPINION, which could be placed wherever people were "forced" to wait. E.g. an elevator, bus stop or other similar surroundings. Instead of physical objects on a bus stop, OPINION became a screen with different categories and the possibility to ask questions or answer questions. What made OPINION more different than our first bus stop idea was the fact that bus passengers could view answers and questions at home via their internet connection.

What would I have done if I had to repeat the process:
I would stop worrying about the final design of the product from the beginning, and take it one step at a time. As my experience has taught me, an idea or design can be changed in no time during a process. I will thus in the future expect major changes to occur in an idea or product design during the process, and thus stop worrying about implementing the initial product idea.