

Research Design

Minor Intelligent Environments

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v2.0 - February 26th, 2013

Introduction

Ijsco is a group of three students from the Hogeschool of Amsterdam who are enrolled in the minor Intelligent Environments. For this minor we got assigned to a project by Ijsfontein, which is a company specialized in interactive media. The project is built around the problem that tourists tend to stick to the popular center of the city, visit only the highly recommended sites and thereby overflow the city center with their presence.

Our goal within this project will be to get tourists to leave the overcrowded city center.

The logical way to achieve our goal is by persuading tourists to visit other attractive areas outside the city center. We are going to find a way to take the attention of the tourists and place the idea to visit one of these areas in their heads. Ijsfontein has given us the assignment to do exactly this with the Cultural Park Westergasfabriek, which will be the exemplary attractive area. So now that we have a goal and a vague idea of how to reach this goal, it's time to take a look at our target group. Since there are many different kinds of tourists overcrowding the city center we have decided to segment our target group. We will only be looking at foreign tourists between the age of 18 and 35.

We have chosen this specific group of tourists because foreign tourists are easier to address and this age category will have an open mind if it comes to trying new things where technology is involved.

To achieve our goal we will have to know more about our target group, what is technically possible and what makes the areas outside the city center attractive. To help ourselves get this information we have composed some research questions. On the basis of these questions we have found some very interesting and related literature. Read on to learn more about the research we've done so far, our target group, possibilities in technology and even the beginning of a concept.

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Research questions

Main question

Since our goal is to let tourists leave the overcrowded city center, we have to ask ourselves how to accomplish that. We have to find a way to get tourists to do what we want them to do. Thus our main question for our research is:

How can we persuade tourists to adapt their planned activities?

Sub questions

Persuasive technology

- What is persuasive technology and how can we use it?

Target group

- Where are they from and how many are there?
- When is the peak of tourists?
- Are tourists willing to change their plans?

Westergas area

- What are the recurring events held at the area?

Hypothesis

Based on the research we have done so far we have developed a hypothesis/concept. With this concept we hope to achieve our goal and by doing more research in the form of prototype tests, desk research and field research we hope to prove the hypothesis.

General hypothesis

By using a trigger combined with a trail we can persuade and guide tourists to an attractive area outside the city center.

Trigger:

The tourists will need to have a 'trigger' in the center of the city. This trigger will function as the call to action; it will plant the idea in the tourists' mind to visit the designated area.

Trail:

Once the idea has been placed we will have to make sure it stays there. Therefore the entire route to the designated area will give the tourist feedback. This trail of feedback will not only tell the user it's on the right way but also build interest for the area.

Hypothesis for the Westergasfabriek

By using a trigger presented as an interactive video portal combined with a trail of wifi access points, we can persuade and guide tourists to an attractive area outside the city center.

Trigger:

We think one of the best ways to trigger the tourists is by showing them the actual area we want them to visit. By placing a rotatable screen in the center of the city that communicates with a rotatable camera in the Westergas area we will give the tourists the opportunity to do this.

Trail:

As for the trail we are still looking for possible solutions that will keep the users interested. One of the most persistent ideas we have at this moment is to place wifi access points throughout the route and make the tourists interact with these points. This is mostly a technical basis on which we hope to build our ideas.

Background research

Persuasive technology

What is persuasive technology and how can we use it?

Eight steps

According to BJ Fogg from Stanford University there are eight steps to follow in the early stages of a persuasive technology design [1]. We strive to follow these steps when designing our persuasive solution. It's not a guarantee for success, but it will increase the probability of success. Too many projects fail because the aim is too high. The behavioral change is too ambitious. To make sure that the goal for our persuasive design is realistic, we're going to keep the following eight steps in mind:

1. Choose a simple behavior to target
2. Choose a receptive audience
3. Find what is preventing the target behavior
4. Choose an appropriate technology channel
5. Find relevant examples of persuasive technology
6. Imitate successful examples
7. Test & iterate quickly
8. Expand on success

Content in persuasive design

Colleen Jones gives us three reasons why persuasive designs aren't always enough to influence behavior [2]. These three are:

1. Persuasive design doesn't address what we think
2. Persuasive design leaves out content
3. Persuasive design gets (mis)applied as optimization

Although persuasive design isn't persuasive if it doesn't influence behavior, her three points are not to be ignored. The first point is about finding out what drives people to act the way they do, instead of observing the shallow actions. The second one is about the role of content in a design. It can be of greater influence than we might think. The third one warns us that focussing too much on persuasive design techniques might scare people away. The persuasion part must not be too obvious.

It is very important to make our product relate to people. People should have a good feeling when using our product. We should give it a personality so people can easily relate to it. To make this happen we have to create a playful, fun and interactive user experience [3].

Target group

Where are they from and how many are there?

The City of Amsterdam Economic Development Department mapped the flow of tourists in the city. It tells us where they're from, how long they are here for and more useful information. These facts are very reliable and will help us redefine our target group so that our final product will have maximum appeal. There is one flaw in this document, which is that it only shows us the tourists that stay in hotels.

The distribution of the countries of origin is as follows:

1. 21% - the Netherlands
2. 15% - United Kingdom
3. 10% - USA
4. 7% - Germany
5. 6% - France
6. 6% - Spain
7. 5% - Italy
8. 31% - Rest of the World

Since we will be focussing on foreign tourists only we can easily say we have a very large group we can address.

A quick calculation tells us that 79% of the annual tourists fall within our target group. With 5.3 million tourist arrivals in Amsterdam [4].) That makes our target group as big as 4.2 million people.


It is very probable that this group will shrink further to just the English speaking tourists, which still leaves a very large target group. As we can see the UK and the USA make up to 25% of all the tourists in Amsterdam, which means our target group will be as big as 1.3 million people.

When is the peak of tourists?

Bureau Onderzoek en Statistiek shows a simple graph in which we see the amount of occupied hotel rooms in the city. There are three peaks: the first comes in April, then we see the biggest peak in July and August and the last peak is in October [5].

Are tourists willing to change their plans?

The Global Nomad [6] is a book that is the product of the research program on backpacking developed by the Backpacker Research Group (BRG) of the Association for Tourism and Leisure



Education (ATLAS). The questions that this book sets out to examine are why do so many people become 'global nomads', what do they gain from their travel, and what impact do they have on the places they visit? It will help us get a better image of what moves the tourists in a city like Amsterdam and what sort of activities are they willing to undertake.



Westergas area

What are the recurring events held at the area?

There are various kinds of events and other minor happenings at the westergas area, some of them daily some of them weekly or even yearly. We researched all the local facilities and made a list of recurring events or other interesting places that are in the area.

Restaurants & bars

Bakkerswinkel

Espressofabriek

Mediacafe

North Sea Jazz Club

Pacific Parc

Proef

Rainaraï

Toko MC

Westergasterras

Clubs

DutchView Studio

Het Ketelhuis

MC Theater

North Sea Jazz Club

Pacific Parc

Podium Mozaïek locatie KunstENhuis

WesterUnie

Daily events

De wereld draait door

Paul & Witteman

Monthly and yearly events

Since the amount of event held in the area we decided not to include a list of these events, simply because of the sheer amount of these events and the impossibility of doing this. What we found out however, is that the website of the westergas area has a excellent agenda. We could use the information displayed in this agenda to trigger people to come to the area and so reaching our goal.

Research plans

Paper/photo prototyping

We will test our trigger by using photo's. We'll show tourists some photo's of what they will see through our video portal and offer them some choices. Based on their choices we will show them more photo's. That way we can simulate the interaction process with the interactive video portal trigger. We will build our prototype based on the results of these tests and iterate the testing process while we expand our prototype.

User research

To find out what our users are like we want to take short interviews. We will try to have a natural conversation, because we believe that we can get the best and most honest answers when the atmosphere is comfortable. However we will try to focus on these subjects:

Plans

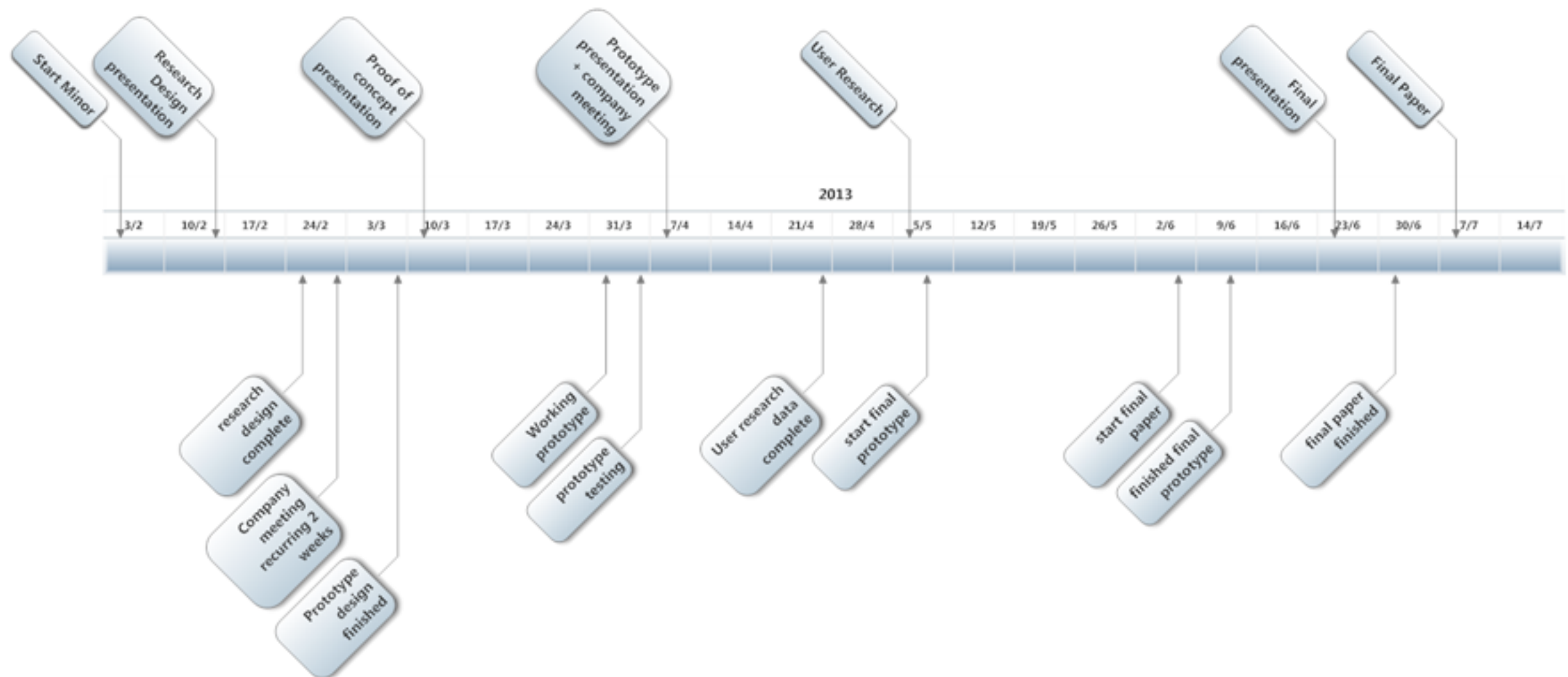
- Do you have a planning for your holiday in Amsterdam?
- What are your plans?
- How busy are your days here?
- Do you plan to hang out?
- Do you free roam around the city?

Tools

- Do you have a map of the city?
- Do you use a smart phone? What for?
- Do you use a rental bike?
- Do you have public transportation cards and do you use them?
- Are you looking for/ attracted by wifi hotspots?

Planning

This is our preliminary planning based on the milestones set up by the minor.



References

1. Fogg, BJ. 'Creating Persuasive Technologies: An Eight-Step Design Process.' *Proceedings of the 4th International Conference on Persuasive Technology*, jrg. 09, art.nr. 44 (2009)
2. Jones, Colleen. 'Three Reasons Why Persuasive Design Isn't Enough to Influence Change.' Versie September 1st, 2010. UXMatters.com September 6th, 2010.
<http://www.uxmatters.com/mt/archives/2010/09/three-reasons-why-persuasive-design-isnt-enough-to-influence-change.php>
3. Anderson, Steven P. 'Seductive Interaction Design: Are You Attractive?' Versie July 1st, 2011. Peachpit.com July 13th, 2011.
<http://www.peachpit.com/articles/article.aspx?p=1729265>
4. Bureau Onderzoek en Statistiek, Gemeente Amsterdam. 'FACT SHEET Tourism 2010: a new record for Amsterdam'. November 2011.
http://www.os.amsterdam.nl/pdf/2011_factsheets_7.pdf
5. Bureau Onderzoek en Statistiek, Gemeente Amsterdam. 'Metropoolregio Amsterdam in cijfers 2012' Page 156. December 2012.
<http://www.os.amsterdam.nl/media/Metropoolregio%202012/#/156/zoomed>
6. Richards, G, and J. Wilson. The Global Nomad: Backpacker Travel in Theory and Practice. Cromwell Press. 2004.