Codename Heroes:
Pervasive Games for Empowerment

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We

Jon Back

Jon is working on his Ph.D. thesis. His research interest lies in the design of game, play and playful activities. His focus is on how the design affects the engagement, feelings and experiences of the game.

Jon’s interest in the design of activities, comes from a broad background. He has studied and worked with, among other things, computer programming and design. He moved on towards communication with a pedagogical twist and games as his main tools.

Earlier he also studied game design in more practically oriented ways. He has designed both live action role playing games and published board games, both for serious use and for entertainment.

Syed Naseh

Syed is an Interaction Designer/Developer with interest in games. He started at the centre as a master thesis student and explored the possibilities smart phones present for Augmented Sound Reality.

Syed has a background in Mobile App Design/Development. He is interested in making playful interactive games with emphasis on education in developing nations. He wants to explore how interactive media and games can be used for mass scale education.

Annika Waern

Annika is centre director for Mobile Life. Annika is a ‘research by design’ academic with a background in computer science and Human-Computer Interaction, who has dedicated the latest ten years of her life to understanding games, and more specifically, pervasive games. These are games that are played in the physical world, often but not necessarily with the aid of mobile and ubiquitous technology. She is on the board of DIGRA, the Digital Games Research Association, acts as editor for the DIGRA journal ToDIGRA, and frequently participates in programme committees for scientific conferences.

A Short Background

Pervasive Games

Pervasive games take their main pleasure from doing things for real, in the real world...

...they move interaction away from the screen and into the real world...

...they move out of a pre-defined game space & time, and into people's everyday lives.

As these games tie into the everyday life of the users,

can we use it for the betterment of peoples everyday life?

Can we use them to empower the players?

Research Objectives

Codename Heroes:
Design to Empower

As a pervasive game, Codename Heroes affects everyday life situations. In this we wanted to create a *gender-aware* pervasive game to *engage* and ***empower***, mainly young women.

We wanted to make a game based on *mobile technology*, with *physical ties* to the real world, but without game mastering of individual situations.

We wanted to find a sustainable model for getting a pervasive game to ’*run forever*’, as a persistent world, making your game friends available in the game whenever you want them.

This will be the focus
for the presentation!

The Design Process
Codename Heroes as Example

Codename Heroes, Design Process Overview

- Literature review
- Iterative design
- Early pen and paper tests...
- ...moving into a more and more finished prototype
- Focused tests on different parts
- Working into whole
- Never finished, always tweaking, each run is unique with detail changes, even in a 'finished' product

Litterature Review

What Girls Face

Originally the idea began in a target group of young women, as interesting because it's often viewed as a group that do not play games.

As the target group was studied, mainly by literature reviews of ethnographic and feminist studies. Five problematic areas were found:

- Trust issues, especially with boys. Seems related to fear of manipulation and betrayal.
- Appearance and attractivity focused on attracting others, rather than improvement of self.
- Fear of outside world, seeing it as a place where you risk sexual, social and physical abuse.
- Uncertainty of personal identity, tied to peer pressure and expressed through performing the identity of the girl.
- Not daring to try with technology, tied to 'neutral' technology being male technology, making the female technology the odd exception.

We call these areas '*what girls face*'

Pink and Gender-Agnostic

Activities, technologies, and work situations are gender coded. Some activities and technologies are perceived as typically male, others as female.

To create games that attract women, one way is to focus on female-coded design elements.

We call this '*pink design*', from the colour of many of those games.

Another way is to turn a blind eye to gender. This can work, but due to the valuation of male and female in society, it can lead to a design where things that are male-coded in society are equated with 'strong' and 'good' in the game.

We call this '*gender-agnostic design*'

What Girls Like

Being aware of the gender-agnostic approach, we wanted to

- include game activities that were female-coded but still gave them a positive and strong role in the game,
- - avoid overtly 'pink' design elements (create a game for all)

In our literature studies we found suitable design elements:

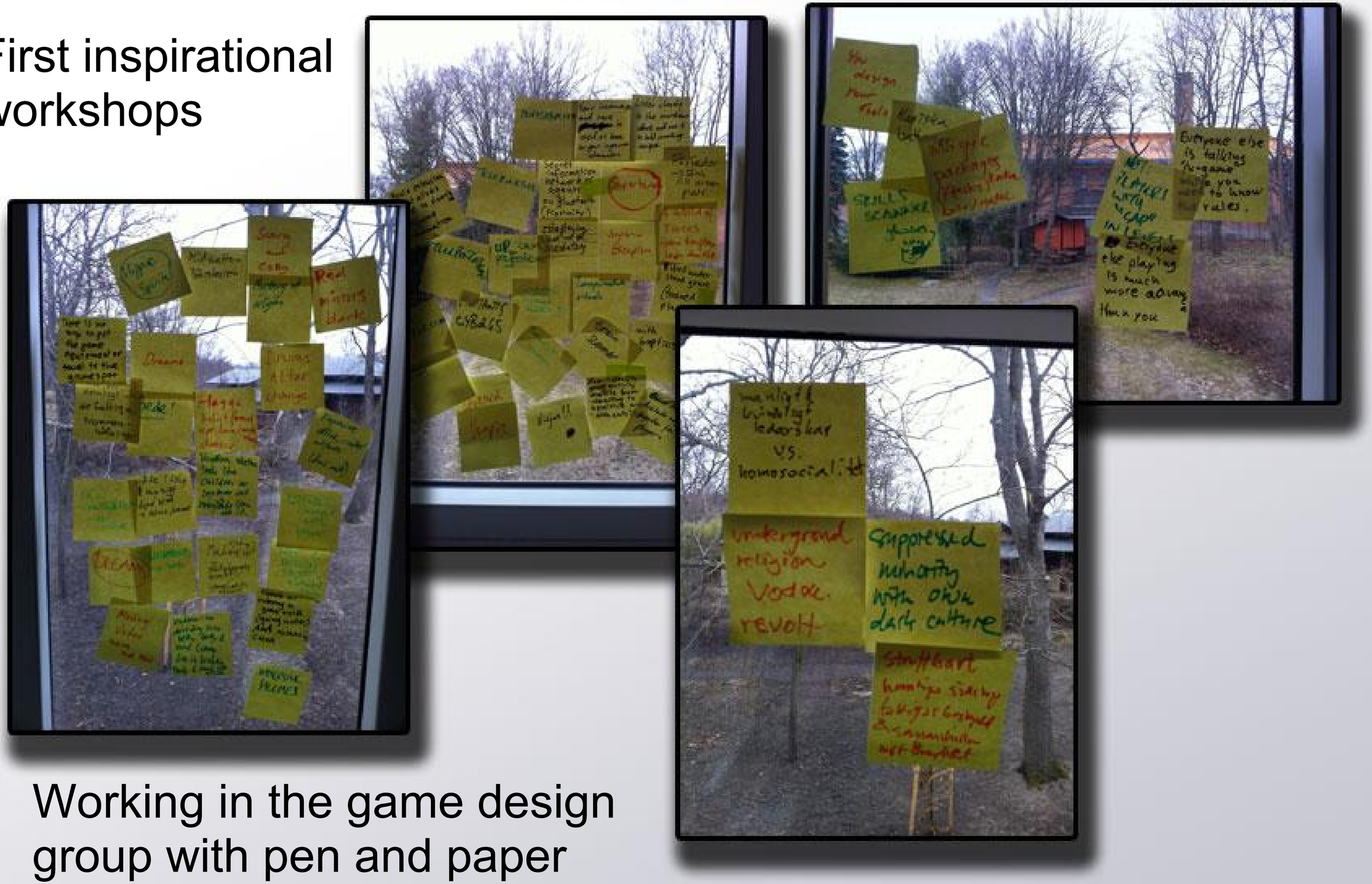
- Player versus Environment to encourage team building
- Secrecy to enable socially acceptable play, and be in control of who you meet with
- Gift giving as an activity of trust building
- Meritocracy and flat structures rather than pyramids that reward can and do rather than contacts and previous power

We call these areas '*what girls like*'

The Idea

Original Idea Generation

First inspirational workshops



Working in the game design group with pen and paper

Iterative Tests

Iterative testing

In as large extent as possible, the players were observed during play. After the game group interviews were conducted. The observations were used to better understand the interviews.

By focusing on specific parts in different iterations we had just enough observations to handle the next iteration without being swamped with information.

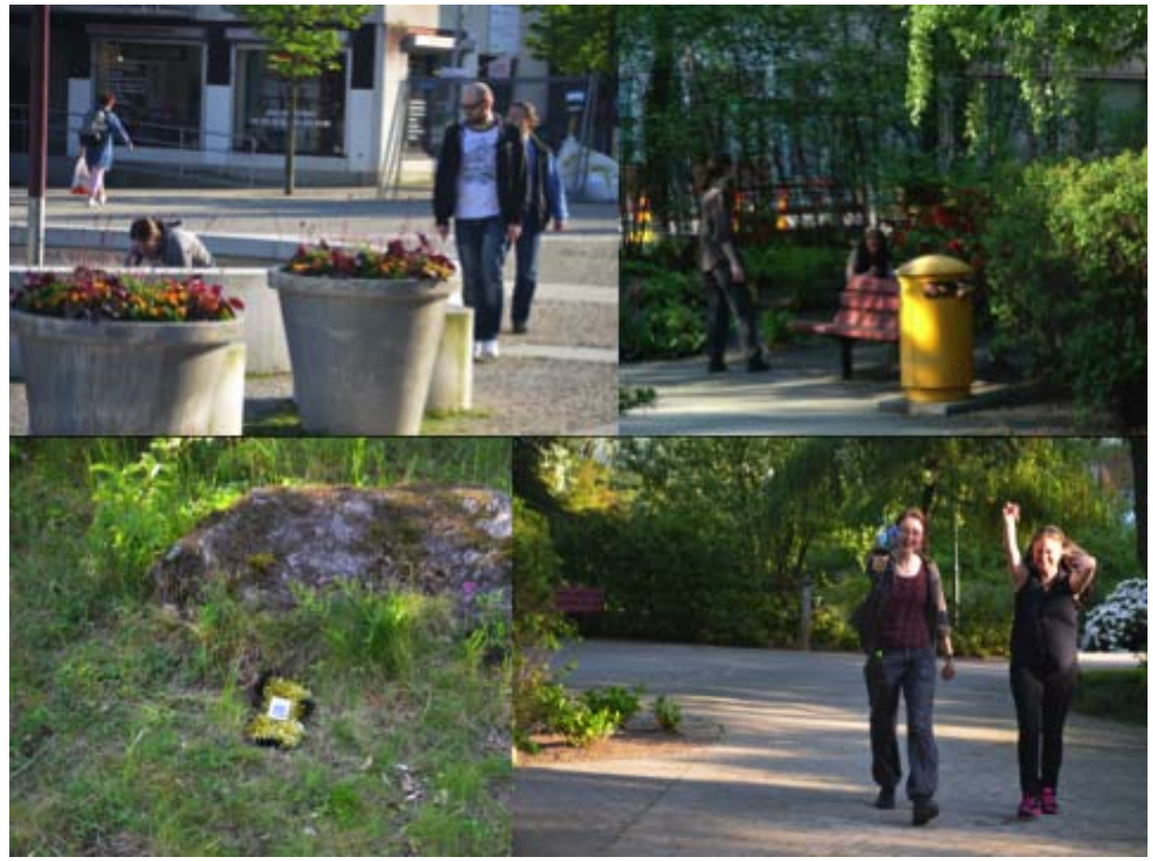
Informants were selected mainly from two groups. Depending on the goal of that test:

1) Users from the target audience, used to see how it actually worked.

2) Older players with knowledge and interest in game design (mainly larp) and feminist ideas, to give an 'if I were the designer'-view.

Short Iterations, Early Tests

Early pen and paper prototypes, using what is available, re-purposed previous systems, play in real environment. Focusing on different important aspects of the game design, one in each workshop.



Ex1: Moving, Letters and Map

Players in environment

Physical letters

People at drop points

Locating people on mobile phone map

Old system to manually, but digitally (with GPS) note positions

Messy solution, but works enough to use with external people.
The 'sketch' style made people aware this is an early prototype.
AIt gave a lot of input on what to do, what works and what doesn't.

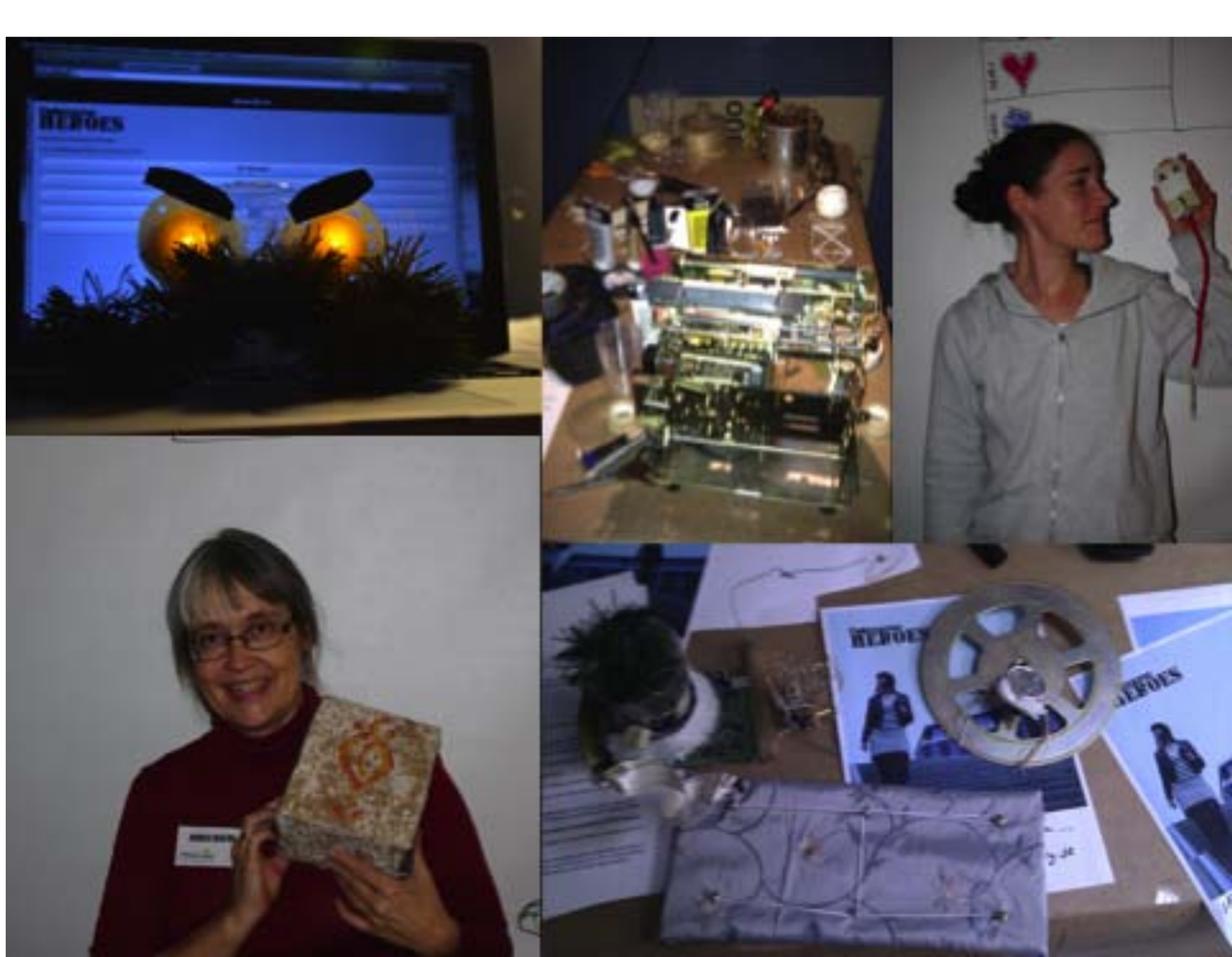
Ex2: Building Objects, Giving meaning

At Prolog 2012 gaming convention we 'borrowed' players that were there and gave them lots of 'stuff' to build with.
(Glue, paint, salvaged computer parts, cloth, other things lying around)

Users built and placed the objects in the environment.

Objects were enhanced with virtual content, using re-purposed system.

This gave an understanding of how players interact with objects. Testing without clear tie to the other parts of the game had drawbacks.

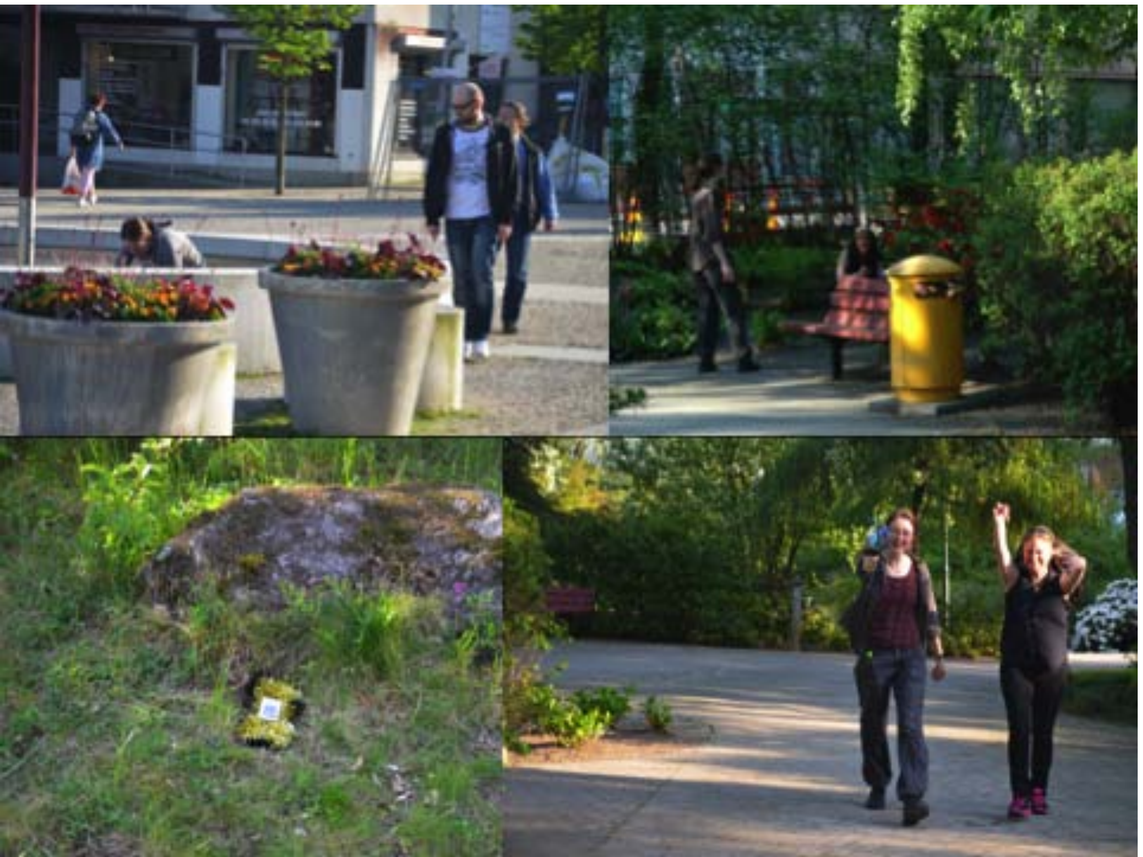


Ex3: Full System Test

Game in real implementation

Almost no graphics work done

Players in real environment, objects and application working (more or less) as supposed.



Gave a good understanding of how it all tied together. The 'sketch' style on client and objects still gave impression of unfinished, and encouraged discussion.

Still does not show how it would work long time.

Final Tests, Full Scale

Larger test I:

Ung 08, Youth Festival.

Intensive tests...
...and reputation builder.

Testing game mechanics and balancing in short burst of 45 minute sessions all through the festival. Many games were played and gave a good overview of how it works. Although it was still short test and couldn't answer how it would work over a longer period.


N°1
LE MOUSTACHE

Larger test II:

One week, 'always on', adventure

Based on Stockholm history

- The witch hunt 1676
- Focused on the children who accused people of being witches

Ended with a ’tourist visit’ to the floating market (UnderStockholm larp)

The test gave an understanding of how the game would work playing long time, and how a special events would work, compared to 'everyday play'.


SERIEGALLERIET


FLAP

The Game, Some Key Points

Phone Interface

A mobile app served as an interface between the virtual and the real world. The app turned the phone into a message and power centre where you can look for messages around you, check your energy levels and examine magical artifacts you find.

All you want to do in the game you do through your phone. But what actually happens does so outside of it.

Physical Artifacts

To use your powers you need artifacts. These are created by players and enhanced by the use of QR-codes. They are used through the phone and in this way they get powers without being technologically enhanced themselves, meaning anyone can build them.

Quests

The game is a persistent world. It does not start or end. Instead there are quests with endings. By completing these quests the player gains powers, energy and knowledge. The quests become physical by using the player created artifacts as well as virtual messages.

Clear Ludic Markers

It is a game, it's played as a game. It's in everyday world, but does not hide as everyday world (unlike some other pervasive game designs)

Rabbit marker used on all objects important and in game.

Secrent agent in dark clothes, black sunglasses, and in game tag on the arm

Final Thoughts

Lesson Learned in Codename Heroes

Unknown areas were usually experienced not as dangerous, but still a bit scary. Playing in groups helped to empower in those situations.

Pink design was as dangerous as we thought, both girls and boys didn't like it.

Gift giving and creative aspect of the game (e.g. building artifacts) was perceived positive especially by the girls.

The message passing and spy theme worked well with girls.

The game attracted the target audience (girls), and did not seem to put boys off.

It is easy to resort to solutions that use the facilitators time (e.g. game master characters in the game). This is important to move away from to make the game scale.

Design Components

We build games (with a meaning) in the real world...

...rather than a gamifying a layer on top of the ordinary.

The game is voluntary, fun and 'a game'. It's about feelings and experiences in the game. The player need to appropriate that in her own way, we do not teach.

We have done this in a everyday, real world, context. Mixing everyday with game. In the example mainly using mobile phone as technology, as this gives us a lot of other information on the player (in this case mainly gps-coordiantes is used).

Design Organisation

We do design as research, using a small team, and always focused on research goals rather than effective design.

- Project leader
- Game designer with focus on rules, activity and balance
- 'Look and feel designer', layout, graphics and more
- Programmers

There are not always clear roles. Sometimes they are mixed up, sometimes combined. In this case look, feel and game design combined into one lead designer. Programming, server architecture and similar was spread on three persons. Project leader took more of a checkup and keep on track role, rather than everyday control.

Open questions

We want to develop design principles that can help create and guide engagement and empowerment.

In our design we have seen empowerment, but to what extent is harder to know. And how does it stay with the users in a longer perspective? This is valid questions also for other serious gamified topics.