feel mama

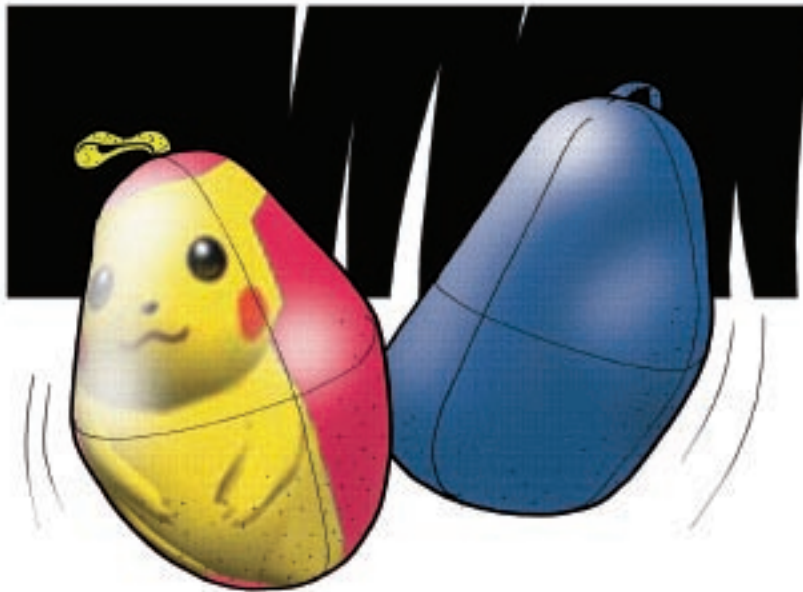## a communication product for children and parents

design: **Robin Hoenderdos**
Springtime Industrial Design
e: info@springtime.nl
t: +31 (0)20 509 18 18
w: www.springtime.nl

user research: **Anke Pierik**
Meru Research
e: info@meru.nl
t: +31 (0)15 268 2564
w: www.meru.nl

Goal:

stimulate communication between children 4-6 and parents / caretakers

Kids in the age group of four to six years go to school for the first time. Suddenly they don't see their parents too much anymore, especially when both parents are working. However, the kids do still need the contact with them. From both the child's as the parent's point of view it is necessary to have the child share it's day with the parent. But often the child has forgotten a lot of what happened during the day, or doesn't want to talk about it.

The aim of our product is to stimulate communication between kids and their parents. This should be done in a respectful way. The parents should want to put effort into communicating with their child. The children should be stimulated to develop their social abilities. All this has to be achieved in an ethical way, and considering the user's specific characteristics.

Design:

long distance playing with the same toy

The design provides child and parent with the feeling that they are nearby eachother. It provides a means for subtle contact in a playful way. Child and parent can simultaniously play together with 'one' object. This will improve their relationship and make them **want to communicate** about their day. The product thus triggers communication.

The productidea is a system of two objects that always share eachothers shape. By changing the shape of one object, you change the other simultaniously, in real-time. Child and parent both have an object, and thus they control not only their own, but also the other's object. This very touchable product fits with the child's development and environment as well as with the parents.

'spine' + changeable 'skin'
The concept consists of a set of two products. Both products consist of a 'skeleton' and a 'skin'. The skin is changeable, so that child and parents can have a different looking product that fits them and in their environment.

now-version **technology**
- Servomotors
- Penlightbatteries
- Radiographic connection, duplex communication
- two modes: private and public
- range: about 300 meters

future version
- gel actuators
- small turbine engine / human powered (use kinetic energy)
- continuous long distance wireless connection

properties
- rich, high resolution deformation
- compact
- low maintenance
- extra possibilities, like the internet initiating communication

applications:

neoprene-like skin: elastic, soft

gel layer: no 'holes', soft,

hard plastic skeleton
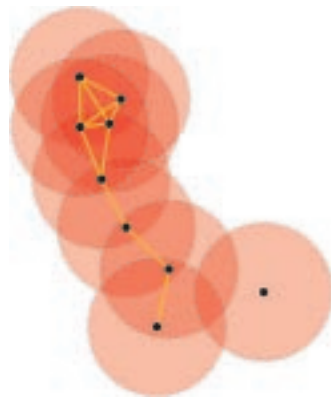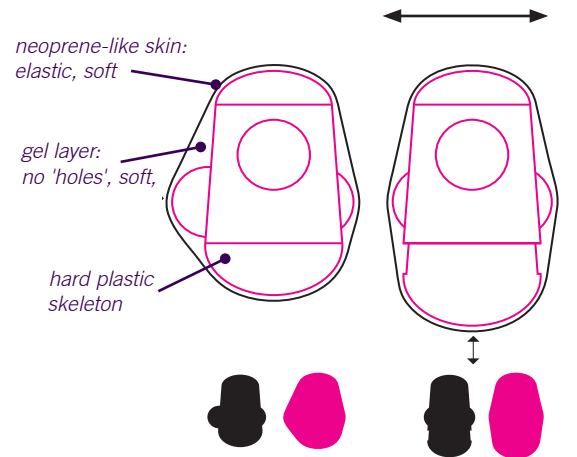
public mode: connect to a chain of people - all of them control the shape!

public mode or private mode
Each product has two modes: a private and an public mode. In private mode the product only links to the other product in the set (child and mother). In public mode the product links to all other products within reach, thus creating a network of objects sharing shape and motion.
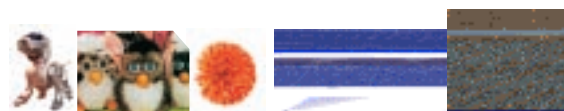
social object
proven very interesting. it elicits mixed emotions like "I hope I never need one", "now i am always with him". It's a very social object, and can also evoke anger or frustration. Whether this happens or not depends on the **mentality of the user.**
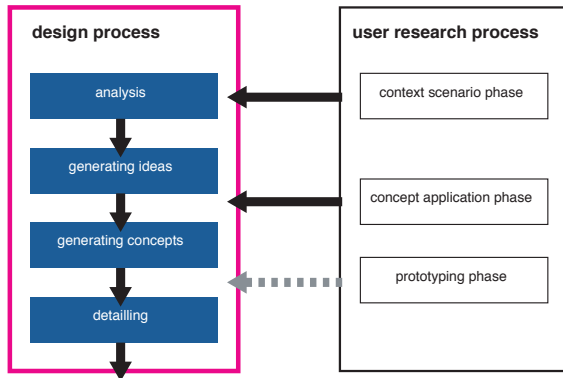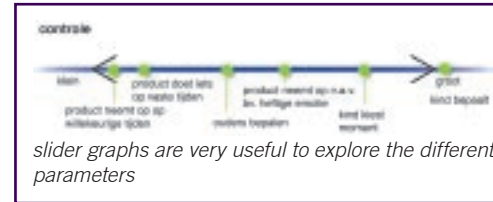

feel mama

2

| design process	user research process
analysis	context scenario phase
generating ideas	concept application phase
generating concepts	prototyping phase
detailling	

Team workshops

Results were presented during workshops with the whole project team, which included people from the Delft University of Technology, Meru Research, Springtime and the IPO (TU Eindhoven). We decided to design for the age group 4 to 6. At the age of four children go to school for the first time, which means parent and child do not spent this time together. A solution should be found to facilitate, capture, share and store so called 'Look Mama Moments' of the child. These refer to the experiences of the child. The future should exclude pictures or visuals but may include sounds, touch, smells, taste etc. Some conclusions of a second workshop were that the product should have a positive influence on the parent-child relation, should be fun to use and have a close personal relation with the child. This while keeping in mind that the product should trigger 'Look Mama Moments'.

based on analisis of the problem, we formulated a design vision to characterize the user-product interaction. based on that we formulated product-characteristics that elicite that interaction.

slider graphs are very useful to explore the different parameters
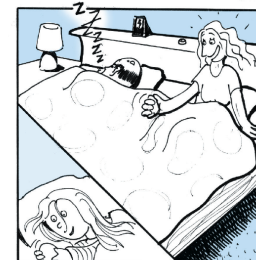

early scratch models provided insights into the use of and interaction with the product


exploratory scenario's helped to find interesting directions and product ideas
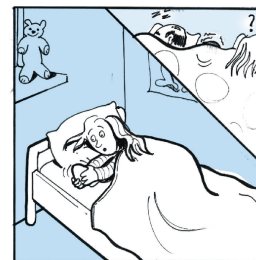
Sammy is al vroeg wakker.
"Zouden papa en mama al wakker zijn?", vraagt ze zich af.
Sammy pakt haar knuffel.
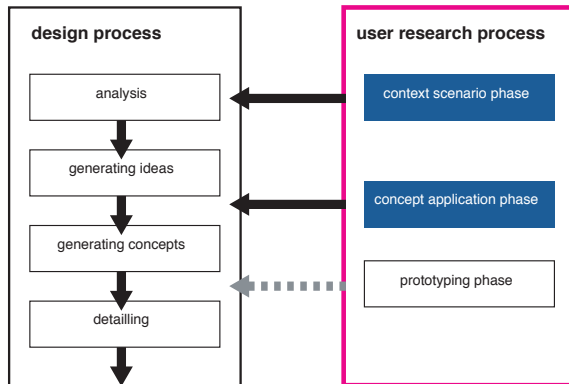Ze buigt haar knuffel zachtjes heen en weer.
Ze wacht eventjes...

Naast mama beweegt iets.
Mama begint te lachen.
Ze pakt het bewegende speeltje.
Mama buigt dit speeltje een paar keer heen en weer...
De knuffel van Sammy begint opeens te bewegen.
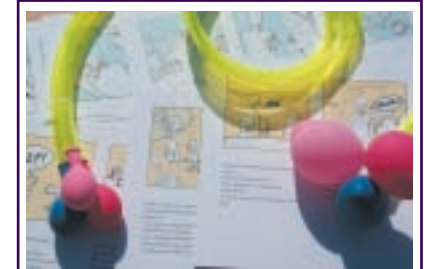Sammy weet nu dat mama ook wakker is.
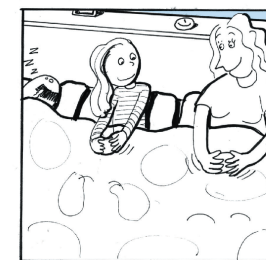
Sammy holt naar de slaapkamer van papa en mama.
Ze springt op bed met haar knuffel in de hand.
Sammy en mama praten zachtjes met elkaar.
Sammy beweegt haar knuffel.
Die van mama beweegt mee.
Dit doen ze heel stilletjes want papa slaapt nog...

we developed storyboards to anticipate the use of the product

design process	user research process
analysis	context scenario phase
generating ideas	concept application phase
generating concepts	prototyping phase
detailling	

part of a diary, pictures and text

a simple, but effective prototype and scenario's were used to get user-feedback on the concept

user research

Context Scenario Phase

We collected user information to learn about the users and their context. During 4 days 17 families, involving 27 children in the age group 2 to 8, produced six diaries, six sets of pictures and five sets of pictures with an additional diary. The assignment was to record daily life situations concerning communication between the child and parents or other persons. The collected material was discussed afterwards with the parents. Based on the data the age group was divided in three groups, children aged 2 to 3, 4 to 6 and 7 to 8. All age group seemed to have their own characteristics, e.g. children within the age group 2 to 3 seemed to play alone while at the age group 7 to 8 playing with friends is important.

Concept Application Phase

Two concept ideas, called the 'Feel Mama' and another one, were developed. During a one-hour user session at the family's home, 5 parents and children were asked to give feedback on the 'Feel Mama' concept idea. The used methodology during this session was showing different scenarios of use, interview techniques and low-tech prototyping. Different insights were obtained from the collected material. Some are mentioned in the following. One insight is that using the 'Feel Mama' toy can be seen as a direct way of communication. By adding a meaning to a certain shape a message could be sent to each other or even a 'conversation' could take place. Using the toy could also trigger to talk about the child's experiences afterwards. All parents agree that the toy could be very helpful in some situations. Although the children seemed to like the toy, parents would think twice before buying it. This depends on the purpose for which parent and child use the toy.

feel mama