ID 535 DESIGNING INTERACTION

PROJECT REPORT

izzettin fazıl akın

“the singing frog”

Design Brief

Designing an audio player for home usage of tiny users with a Tangible User Interface.

Interpretations

Tangible User Interface is essential for these children as they hardly know how to write or read

The user group is the primary concern of the project; the user and the buyer of the device is also the same

The children their selves should also find the device attractive

Those children perceive many things very different than our generation

Workshop Discussions

How children see Music?

What are the children's Main Activity in those ages?

How children are socially developed in these ages?

What differences has this generation?

Music is the primary activity when they listen to it, they do not perceive it as an ambient sound

They dance, jump, run with the music

They mostly play with toys in their whole time, they watch cartoons, if they have school, they go there.

Most of the children in that age stay at home, their brothers or neighbors are their playmates but they are also very happy when they play alone.

This new generation is more got used to manage digital devices, they can learn easily how to operate an new digital device. They are not scared to use them

My Design Path

At first; I had four main ideas related to the project. One was about a toy-like player, the other was a story-telling device, another was a player in which the child could create his/her own music, the last idea was about an audio player which the child could bring it to the playgrounds outside his/her own house.

I gave up the other three ideas and developed the first one; toy-like audio player, as children's main activity is playing with toys in those ages. They can play with everything; they explore the world through playing with the objects.

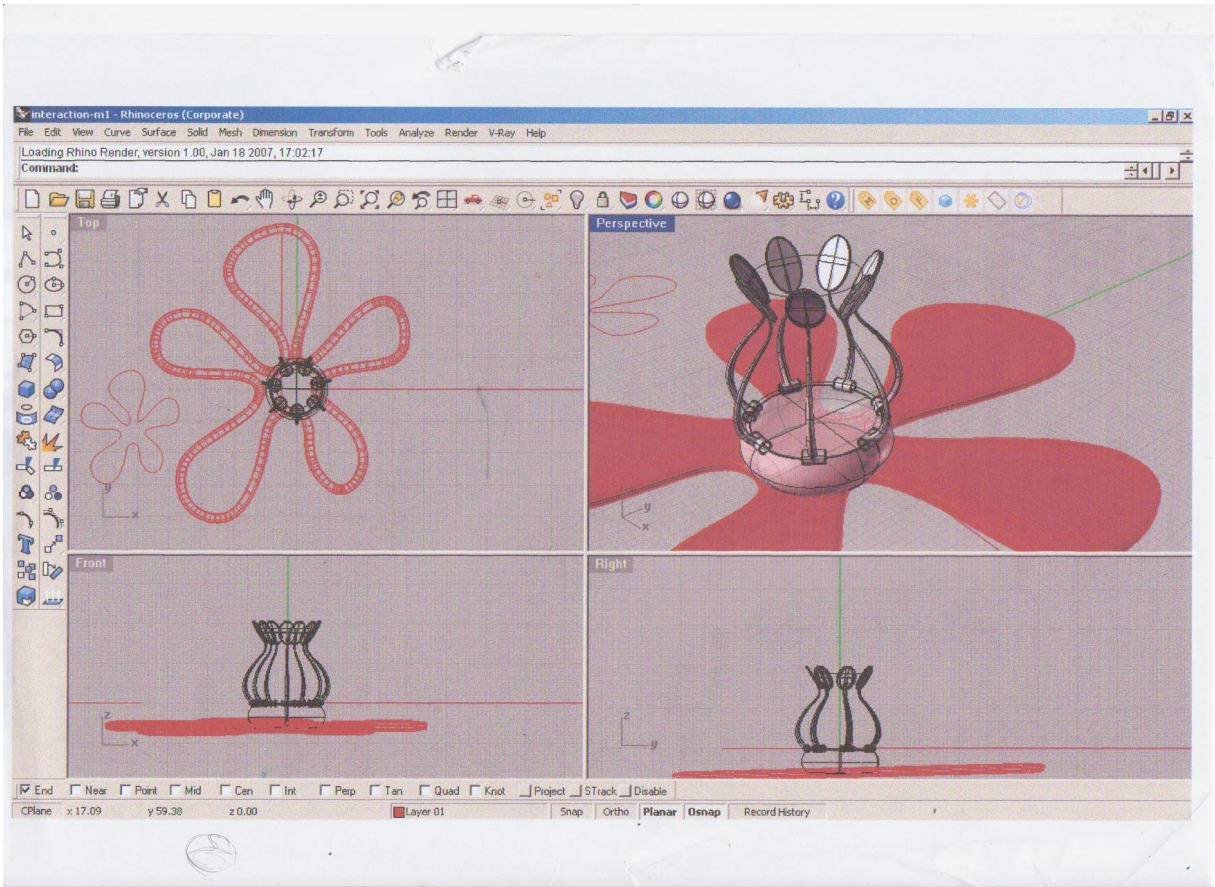
A story telling device did not fit my aim, because the story-listening and telling activity should be an human interaction between the mother/father and the child.

A music player with which the child could create his/her own music seemed to me a bit out of the projects aim, as the primary function would be to create a music rather than listening to it.

I gave up also the playground-audio player idea as the children do not go outside alone so much, and it may not be very useful to listen music at the outside.

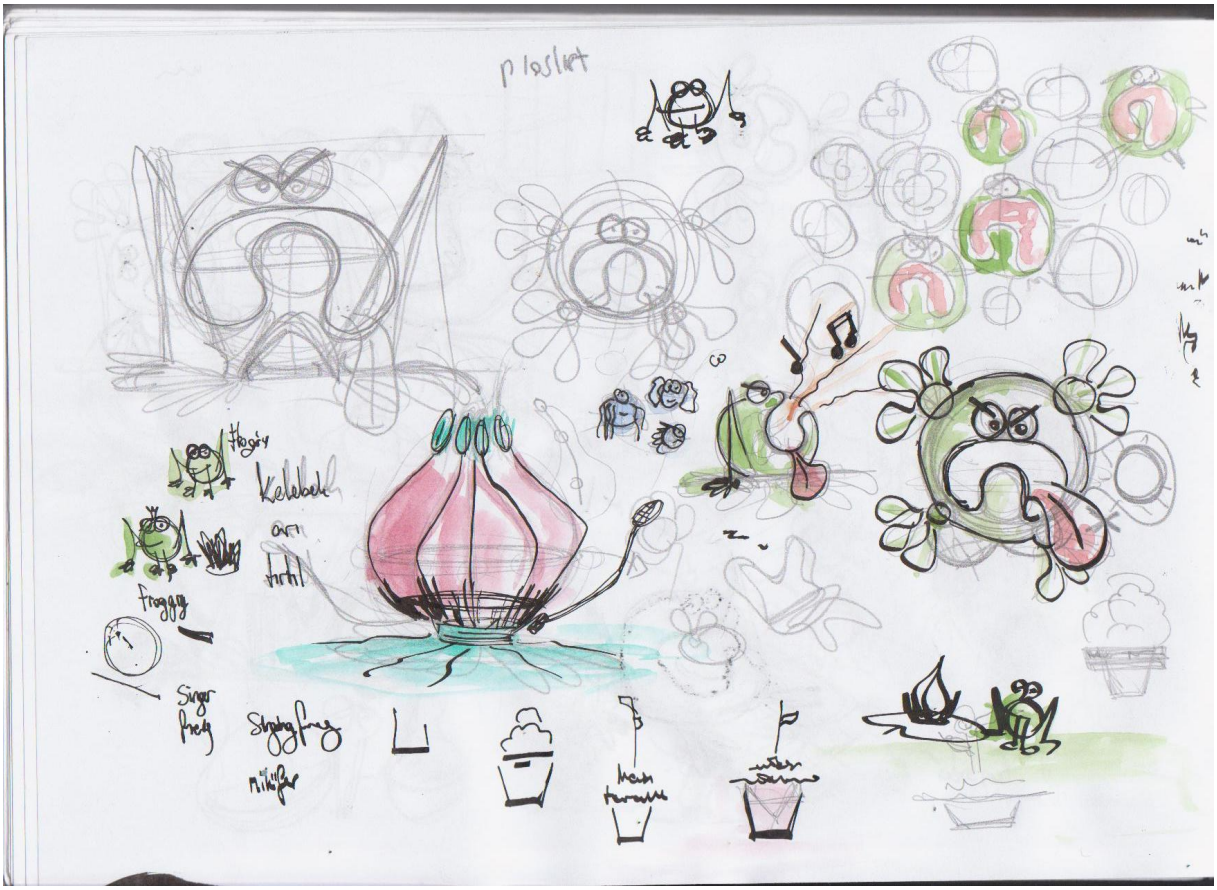
Development of the Design Idea

The idea firstly was about a big flower, in which the volume of the device would be arranged with the opening size of the leaves of the flower. In other words if you would widen the petals of the flower it would give more sound and if you would close the petals the device would turn off.



As I wanted to make a unisex device, the flower idea would not fit the boys. So I thought about a different interpretation of the idea. The flower idea was inspired from water lilies so I thought that a frog would be suitable for the boys, later the frog idea was refined so that it would fit both the girls and the boys.

The usage of the device was controlled with RFID tags, which the children can code them with their music.

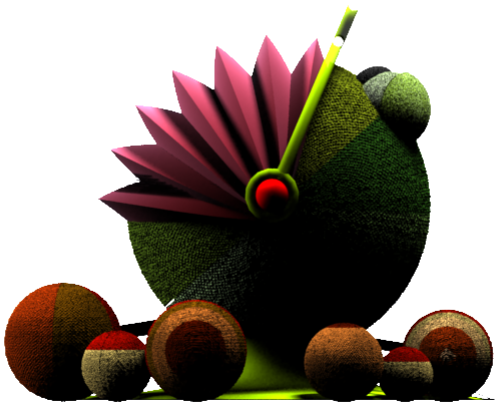


The Product

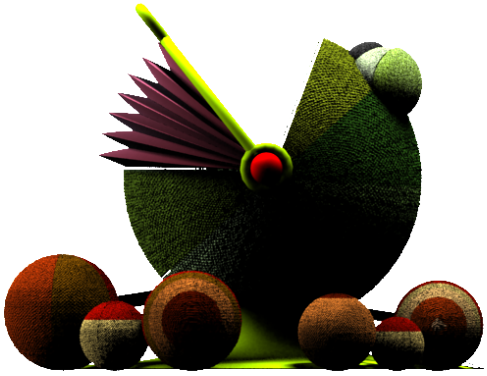
the singing frog

The singing frog is an 50 cm. height audio device, which can read RFID tags and according to its memory it can relate those codes to identified songs and play them.

The device has a Tangible User Interface, the RFID tags are placed inside the some plush-toys; flies. There are 20 flies with 4 different shape and different colors or symbols. The flies are matched by the mother/father with some songs. The songs are sent through Bluetooth® to the main device “frog”. When the flies with RFID tags are placed into the frog , the audio device plays the identified songs. The opening of the frog can be adjusted, to control the volume of the audio player. If the opening is big, it gives more sound, if the opening is small it gives less sound. If the mouth of the frog is closed, the device is shot down.

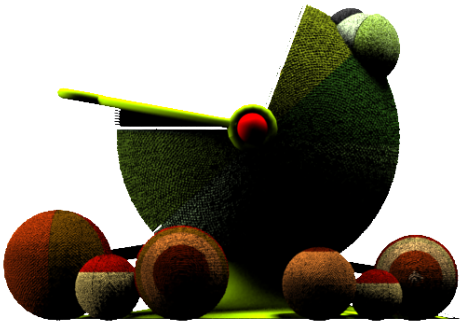


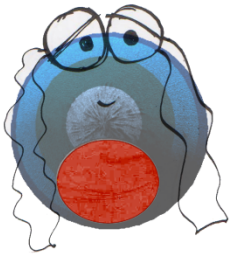
The singing frog is off.



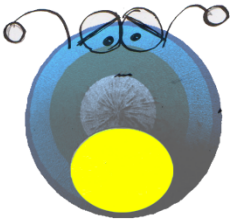
The singing frog is on, and plays the song which are coded to the flies inside it.

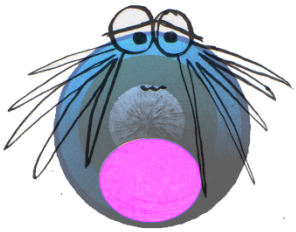
The singing frog plays the songs with the higest volume.





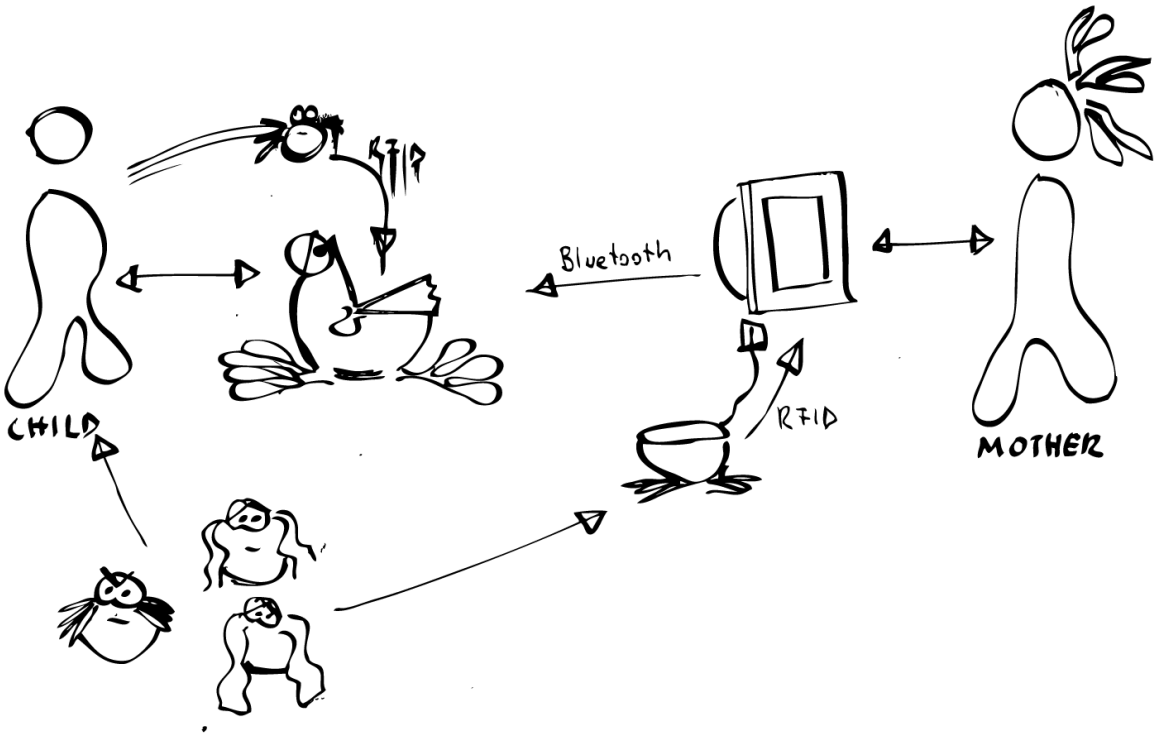
The flies are ball-like plushy toys, with a diameter of 10cm, they have 4 different types and 5 different colors, so altogether they are 20 pieces. The flies have RFID tags inside them. They are connected to a computer via the coder device. With the help of the coder, they are assigned particular songs. These songs are later uploaded to the main device “frog” via Bluetooth.





The inter

actions of the Project



- Child -frog: user-product
- Child -flies: user-product
- Frog-computer: product-product
- Flies-computer: product-product
- Computer-mother: user-product

Functions

Functions	**Operations**
On/Off button	Open/ close the mouth of the frog
Volume up/ down	Adjusting the width of the frogs mouth
Playlist	Every fly is assigned to a certain song,so the child can control the playlist with putting/taking out the flies from the frogs inside.