

Porting activities in GCompris in Qt-Quick

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1. Motivation

GCompris is about teaching the basics in the most easiest way to children between the age of 2 to 10. The gtk+ version of GCompris was very well recieved, and from there it was decided to Qt version, to make GCompris available for all kinds of devices, like tablets. The latest version of GCompris is 0.70 and as of now it has 137 categories on various topics like science, maths, games and much more, fully supporting 15 languages.

My goal for the project is to port two experimental activities from the Gtk+ version of GCompris to the Qt version.

The best way to teach any concept is by demonstration. But it is not always possible to demonstrate everything that needs to be taught, such as the working of submarine and it's different parts. That's were simulation of real world problems come to play. The aim of this project is to simulate real world situations in two activities, "*Pilot a Submarine*" and "*Sea race (Single Player)*"

2. Project Goals

3. Implementation Details

3.1. Pilot a Submarine

The "*Pilot a Submarine*" is to learn how a submarine works, explaining the usage of elements such as engine, rudders and air tanks, in order to navigate a submarine to a required depth.

Since this activity was already present in the Gtk+ version, I will be using the svg and the audio files from the resources used in the Gtk+ submarines activity. This will allow me to dive into the coding part directly. Firstly I will be implementing the submarine and the mechanics of it's elements, namely the engine, rudders and the air tanks. Once that is in place, I will then shift on to create various levels, implementing the submarine to pickup jewels, as it was in the Gtk+ version.

The Gtk+ version had only 4 levels, and I would like to increase the number of levels in the Qt port, increasing the difficulty curve, bringing up elements like caves, rocks, while still keeping it doable for children within the prescribed age limit.

3.2. Sea Race (Single Player)

3.3. Third undecided one

```
/*2d matrix, Tux, door and few pickups. command tux to take all pickups
and move out of the door. Commands - rotate (+-90, +180), move forward
(x blocks)*/
/*Physics*/
/*Complete incomplete activities*/
```

4. Timeline

5. About Me

1. Numbered list item one
2. Numbered list item two

5.1. Subsection One

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Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table 1: Table caption

5.2. Subsection Two

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Figure 1: Figure caption

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$$e = mc^2 \tag{1}$$

6. The Second Section

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