

Design Document

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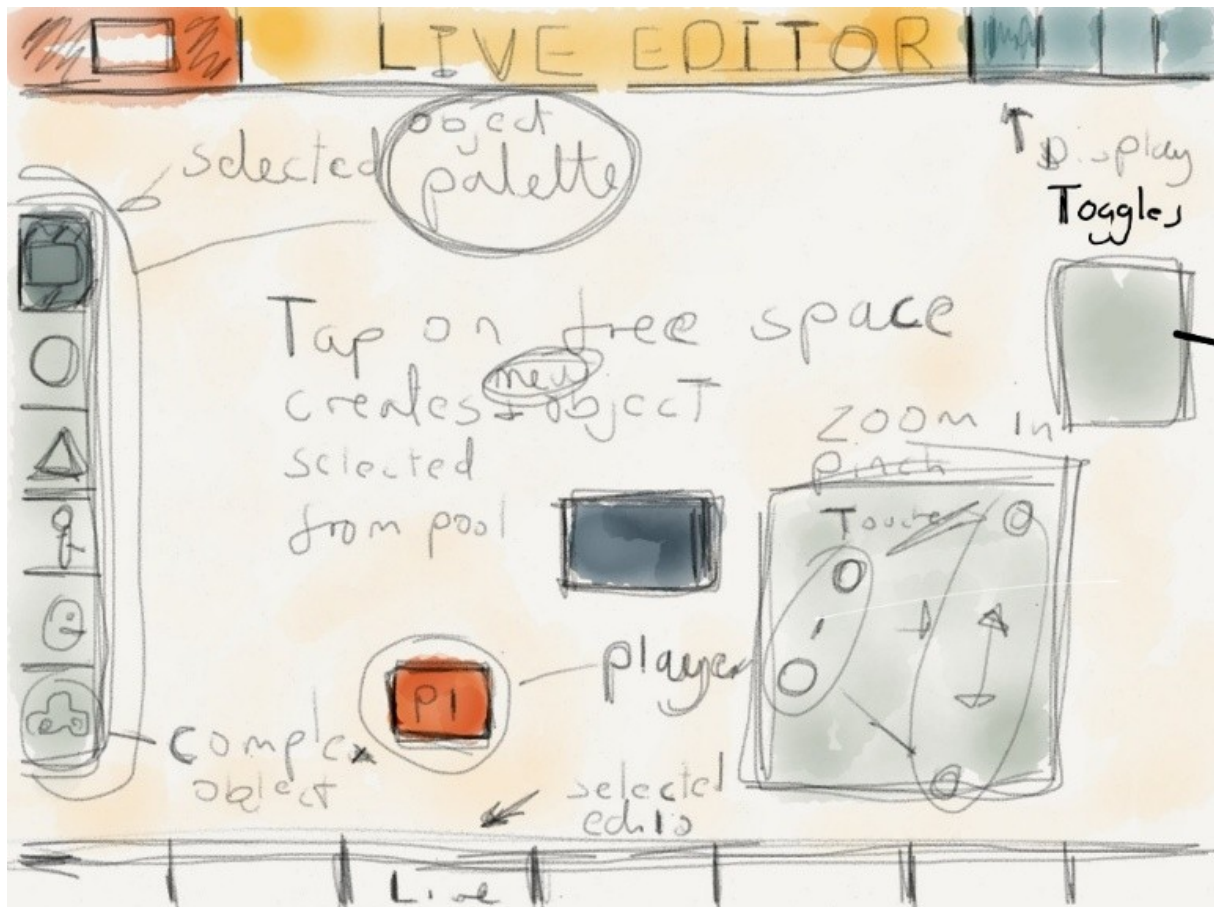
1 About

This is the first elaborated prototype of our game editor for the Real-time Collaborative Game Environment for iPad. The purpose of this prototype is to provide the beginning of a framework for the program structure, and as proof of concept. The prototype will feature a simple drawing and object manipulation environment where 2 designers simultaneously are able to edit a game world.

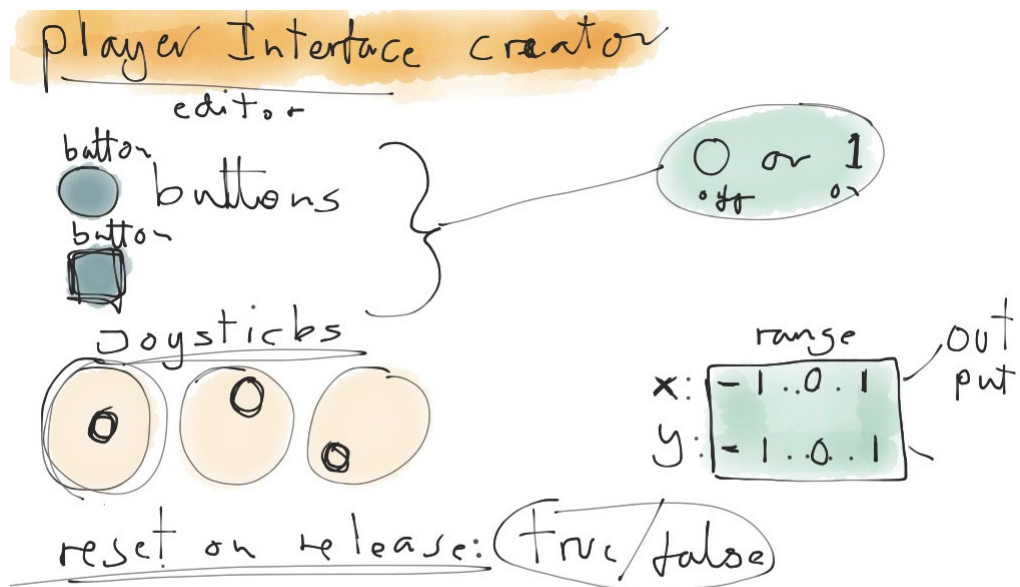
2 Content

2.1 Interface

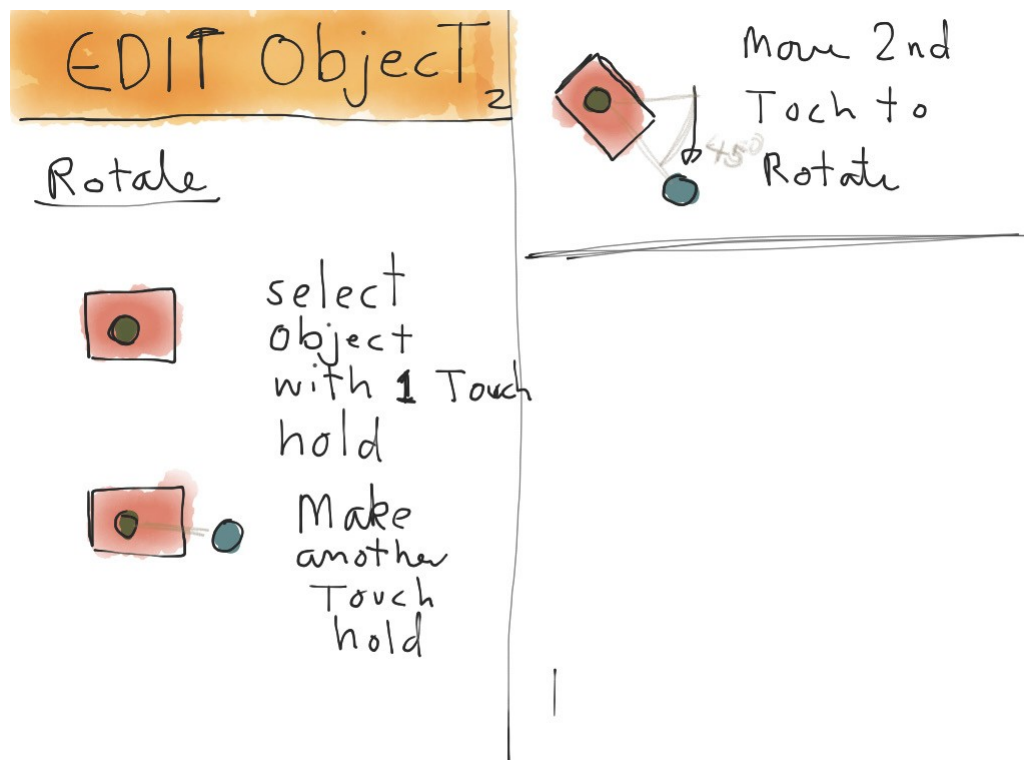
2.1.1 Main interface (Designer)



2.1.2 Main interface (Player)

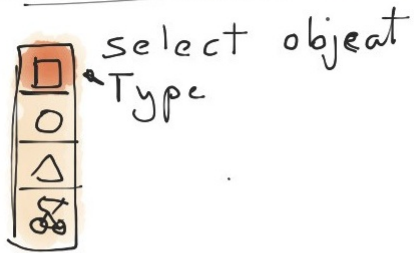


2.1.3 Edit object function

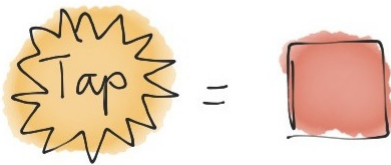


2.1.4 Create object

create new object



Tap on free space
to create new object



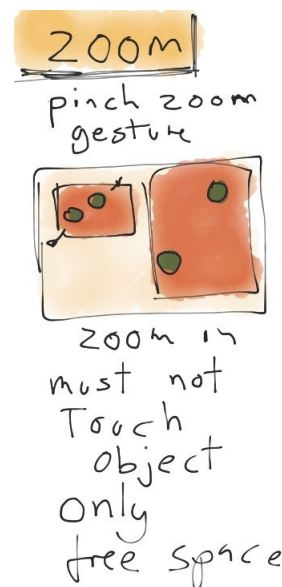
3 Interaction

3.1 Gestures

3.1.1 Tap

- Selects an object - Interacts with button

3.1.2 Pinch/spread



- Zooms the canvas

3.1.3 Two-finger scroll

- Pans the canvas

3.2 Designer tools

3.2.1 Pencil

- Draws objects on top layer

3.2.2 Brush

- Colorize objects on their background layer

4 Objects

4.1 Buttons

4.1.1 Cancel/Delete

- Cancels the modifications and exits the objects current mode (move/scale) - Deletes/Destroys object

4.1.2 Confirm

- Confirms and updates the object and synchronizes with other clients Scale - Puts object in scaling mode Move - Puts object in moving mode

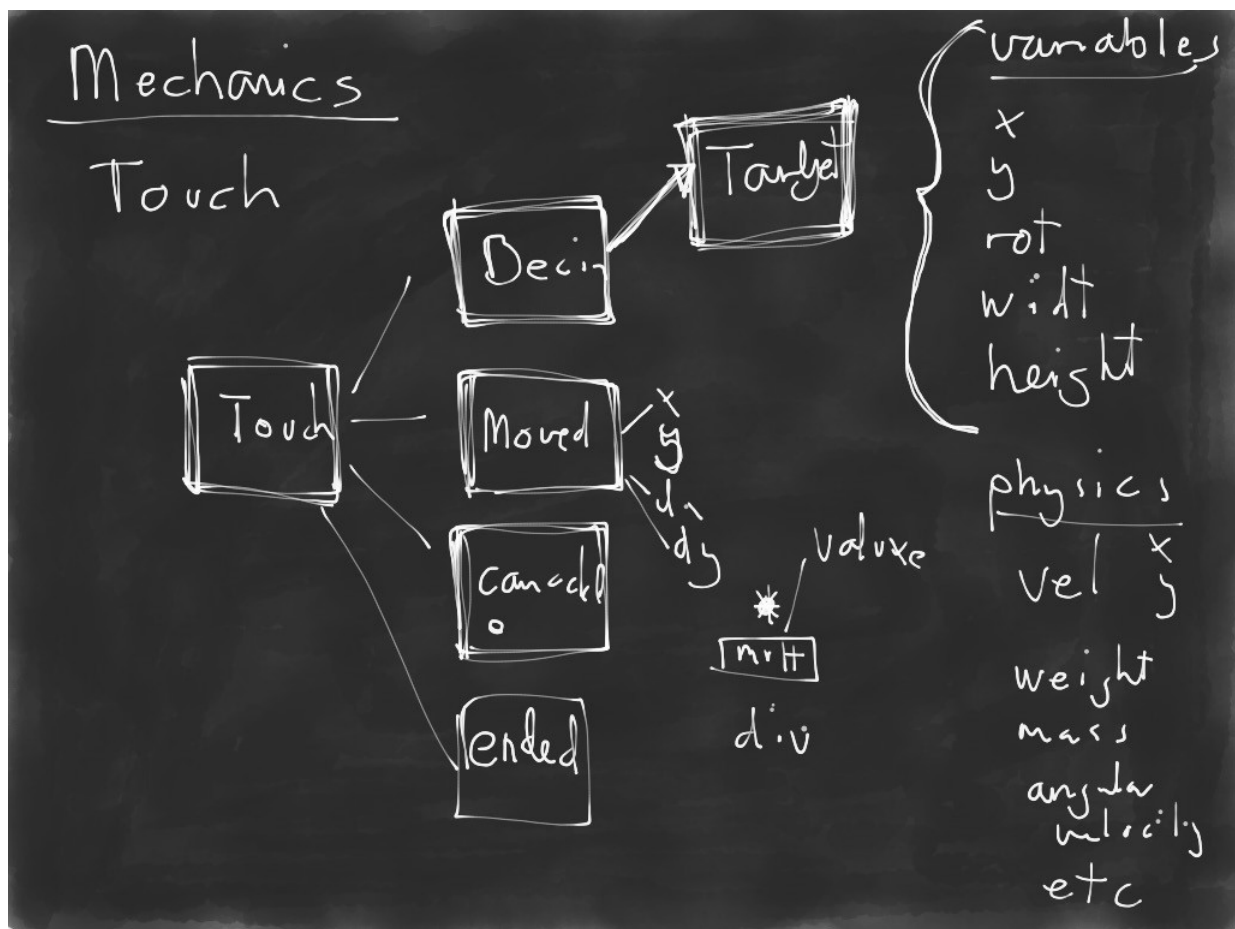
4.1.3 Edit

- Puts object in edit mode

4.2 App feedback

- Displays object boundaries while drawing - Objects created by tapping confirm button placed in the corner of the object (This created a .png file that synchs with the other connected clients. Technical Document

5 Technical details



5.1 Objects

5.1.1 The objects:

The objects are all created with a unique id, so that they are identifiable for the network protocol. They are born with simple physics as isSensor objects, and is moved using touch joints with setTarget method. They are static. On resize they have to be reimplemented in the box 2dEngine with new dimensions (i think) Objects are inserted automatically into the gameLayer and all manipulation of an object has to be relative to the game layer, so that we can zoom in and out on the screen.

5.1.2 Layers

The layers are: - Game Layer This is the lowest displayGroup, it holds all created objects aswell as the background, It will be resized using pinch zoom gesture. - Objects The layer where all new objects are inserted into - Color Layer The color layer is where the color tool inserts its lines - Outline Layer is where the pencil tool inserts its lines - UI layer The UI layer is not resizable, and shows the UI interface. The Background should be completely transparent to support for the generation of transparent pngs.

5.1.3 Modes

The modes are selected on the UI left on the screen there are three tools/modes - Draw mode: When selecting drawmode, the drawing tools pops up at the bottom of the screen. There is two buttons one, that deletes the current drawing, and one that ends the drawing session, and ads a new object to the scene, and selects edit mode. - Edit Mode In edit mode, the designers can manipulate objects, and pinch zoom freely - Delete Delete is more of a tool than a specific editor