

Electrical Circuit puzzle game, 10/25/12

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Problem Definition

- Statement: To Create a puzzle game capable of simulating Electrical Circuits in order to teach in a new and interactive manner.
- Scope: A standalone game using a custom game engine built in the XNA game studio framework.
- Schedule: The first progress report will consist of a basic framework that can simulate a bread board that must be completed to solve the puzzle. The second progress report will feature secondary features such as saving, scoring, ect.
- Resources: XNA Game Studio, Visual Studio C#, Game Design Document, music and artwork.

Solution Specifications

- A custom built framework using XNA Game Studio.
- The framework will be built by organizing the code into component-based entities. This will allow for more modular code and features. As well as reusable code for the editor.
- Build an editor to allow others to build and play their own puzzles. As well as export and import puzzles from others.

Competitive Analysis

- Other games that already simulate logic design such as Minecraft, LittlebigPlanet and others.

Potential Applications

- A teaching tool for students who prefer a more interactive learning environment.
- A tool for Electrical Engineering teachers.
- An exciting way to introduce Electrical Engineering to others.

Future Improvement Ideas

- Build a mod API that will allow others to add their own custom components.
- Include a single player story mode that will lead players through a series of mysteries. Puzzles must be solved to advance and the game will introduce players to electrical engineering concepts one step at a time.

