Comprehensive Design Review Team Castle Quest March 6, 2017

Electrical and Computer Engineering

Advisor: Professor Zink

Team Castle Quest



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UMassAmherst Project Overview

- Electronic entertainment is no longer group-centric
- Virtually multiplayer, physically singleplayer
- Market and psychological demand for group centric games, especially board games
- Castle Quest is a electronic 4-player fantasy board game centered around an electronic Castle

Previous Block Diagram



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Updated Block Diagram



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Original CDR Deliverables

- Fully Implemented Java Project Sarah
 - Able to "play game" through command line
- PCB Prototype soldered Dev
- Functioning LED matrix Eric
- Printed Castle David
- Finished UI -

- David - Dev
- Game Board Mock Up -

Sarah's CDR Deliverables

- Built Castle
- Designed Board Graphic



David's CDR Deliverables

- Programmed UI in Java Swift
- Programmed Gameplay in Eclipse
- Collaborated with Eric to integrate game UI with player/LED movement
- Established USB and Local saving/loading capabilities
- Updated Player Manual





Devrim's CDR Deliverables

- Assembled LED interface on gameboard.
- Debugged wiring.
- Designed and printed PCBs.
- Tested PCBs for functionality.





Eric's CDR Deliverables

- Set up I2C communication between RasPi and Arduino
- Constructed physical game board
- Debugged LED wiring
- Wrote LED controller code for Arduino
- Collaborated with David to integrate game UI with player/LED movement



Demo

Outline of demo:

- a) Constructed castle
- b) Using pcb/battery
- c) Playing the game
- d) Saving/Loading

UMassAmherst FPR Deliverables

- Final Game and Board Assembly
- Testing
 - Software
 - Hardware
 - Integration
- Aesthetics
 - Tower and Board
 - Player Guide

Gantt Chart

	Dec 31th	Jan 15th	Jan 31st	Feb 15th	Feb 28th	CDR	Mar 31st	Apr 15th	FPR	Demo Day
Order Parts	х	x	~							
Print/Construct Tower		x	x	х	х	~				
Print PCB		x	x	~						
Implement UI	x	x	x	~						
Construct Board	x	x	x	х	~					
Implement Gameplay	x	x	x	~	x					
Implement LED Code	х	x	x	~	x					
Prototype Full PCB		x	x	х	x					
Integrate Code Systems				~	x	x				
Integrate Components					x	x	x			
Game Aesthetics						x	x	x	x	
Final Testing							x	x	х	x

QUESTIONS?

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