
INTERACTIVE GAME FOR CHILD

P09003

Christopher Yang

Alana Malina

Nicholas Babin

David Carmichael

Claude Jerome

Robert Modzelewski

Jesse Muszynski

Neil Pinto

Ketan Surender

Pei hong Tan

Project Manager

EE Lead Engineer

Mechanical Engineer

Information Technology

Information Technology

Industrial Design

Electrical Engineer

Electrical Engineer

Electrical Engineer

Industrial Design

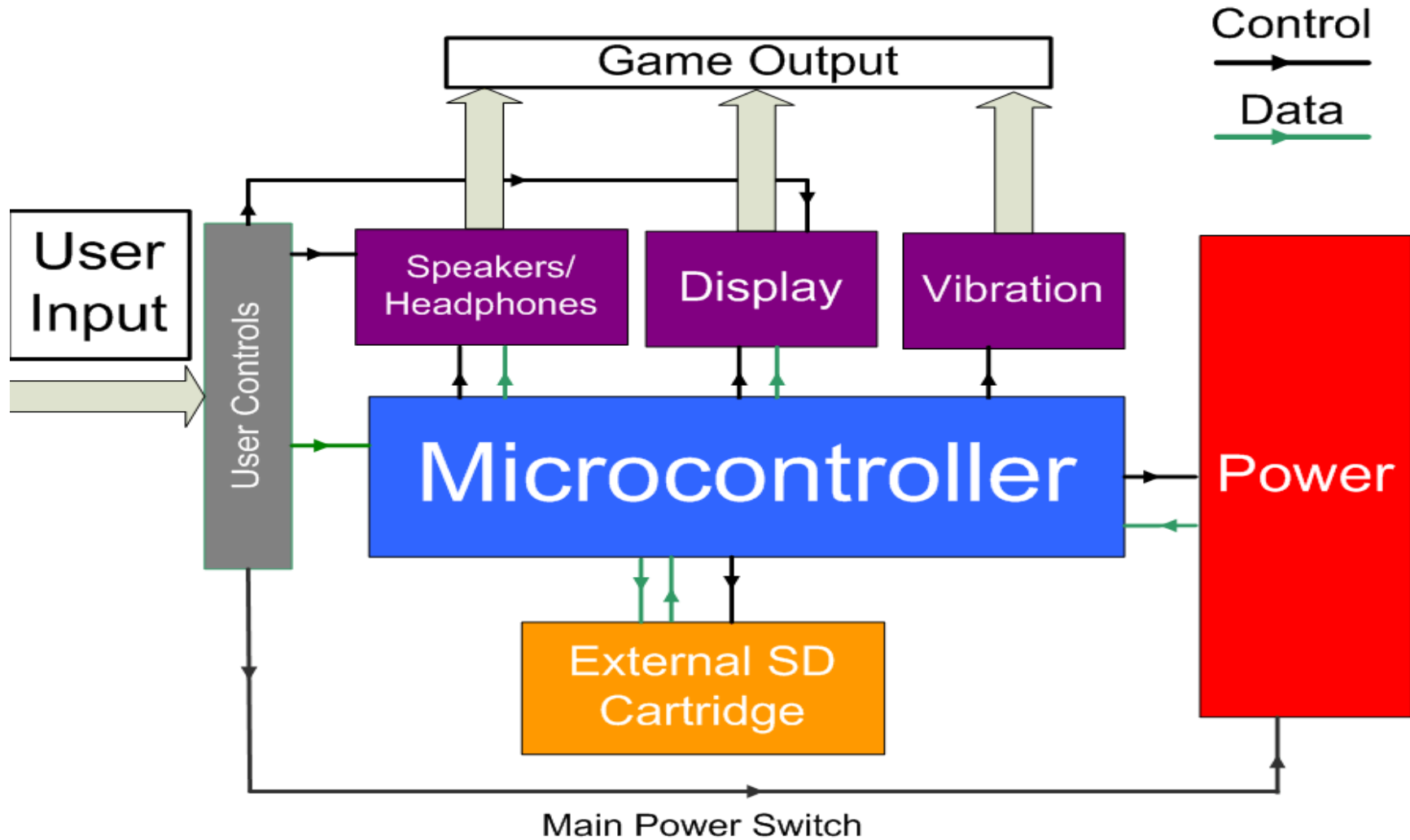
PROJECT DESCRIPTION



Key Level Customer Needs/Engineering Specification

- Custom Product
 - Dimensions < 9.8in X 5.9in X 3in
 - Weight < 2 lbs.
 - Battery Life ~ Approx 3 – 4 hrs.
 - Audio
 - Stereo Speakers
 - Headphone Jack
 - Game Mechanics
 - Tactile Feedback
 - Game Cartridges
 - Game Graphics
 - High Contrast
 - Graphic Size > 1 Sq. In.
-

SYSTEM ARCHITECTURE



SOFTWARE DESIGN

- Audio Emphasis
 - Tactile Feedback
 - Games
 - Simon
 - Avoidance
 - Maze Game
-

TECHNICAL RISK ASSESSMENT

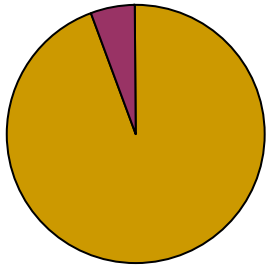
- Mechanical/Electrical Interface
 - Mitigation: Maintaining relative dimensions, 3D Modeling of Components
 - Processor Does Not Meet Software Needs
 - Mitigation: Scale Back Graphic Intensity
 - PCB Design & Debug
 - Mitigation: Utilize Resources Available & Early Design SDII
 - Drop Test
 - Mitigation: Overdesign
-

CURRENT STATE OF DESIGN

- Meets All Customer Needs & Engineering Specifications Except Graphic Size
 - Mitigation: Frequent Prototype Session & Adjust As Needed
 - Schedule: Two Weeks Behind
 - SD Card & Interface
 - Simulation & CAD Drawing
 - Mitigation: Simulation, CAD Drawing, SD Card & Interface Over Break
 - Moderate Confidence In Drop Specifications
-

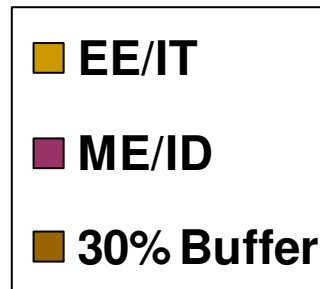
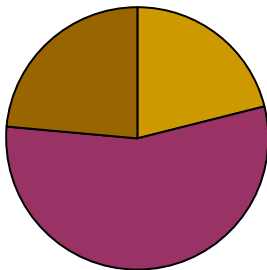
EXPENDITURES & PROJECTED COSTS

Expenditure



- EE/IT: \$906.85
- ME/ID: \$52.23
- **Total Spent: \$959.08**

Projected Expenditure



- EE/IT: \$450
- ME/ID: \$1170
- 30% Buffer: \$500
- **Projected: \$2120**



SD II SCHEDULE MILESTONES

- Dec. 16 – Prototype Meeting (Week 3)
 - 1st Rapid Prototype
 - Demos Of All Games
 - Button Placement
 - Finalize Internal Components
 - Jan 23 (Week 6)
 - Finalize Hardware Assembly (Button, Processor, LCD Screen)
 - Prototype (Full Function) – Jan. 30 (Week 7)
 - Complete Documentation – Feb. 9 (Week 9)
 - Formal Paper and Poster – Feb. 13 (Week 9)
 - Final Project Review – Feb. 20 (Week 10)
-