

Music-In-Control

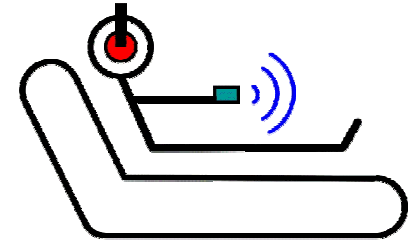
Final Presentation

Members:

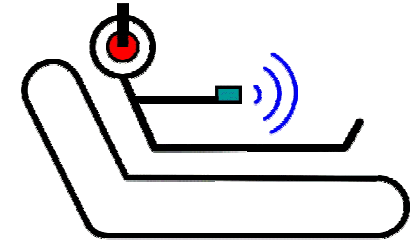
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Jonathan Cameron
Luis Velázquez
Jonathan Luna

Outline

- Background
- System Overview
- Objectives
- System Design
- Results
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- Questions

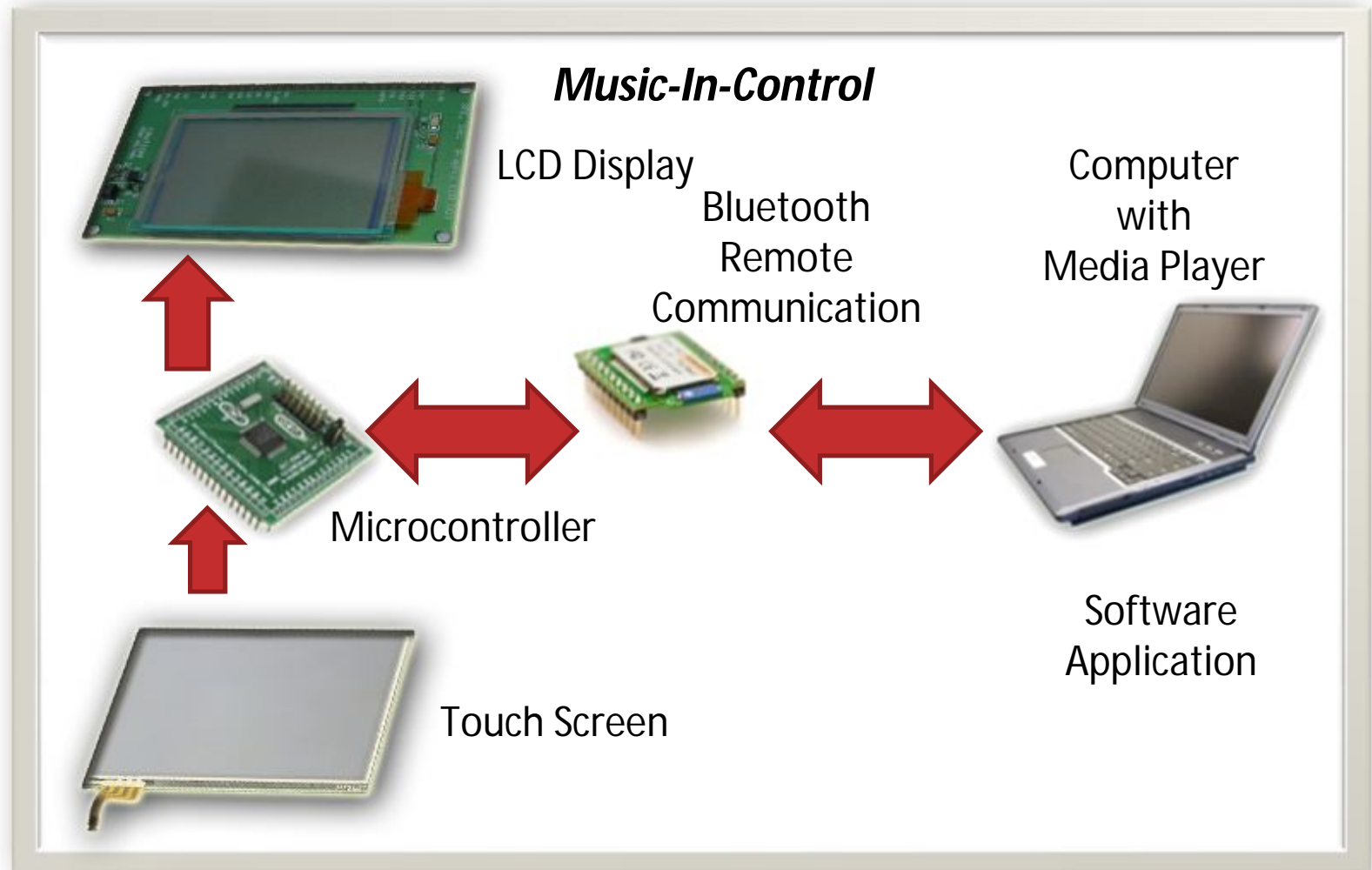
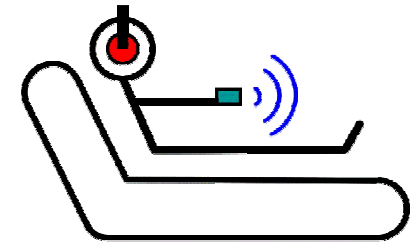


Background

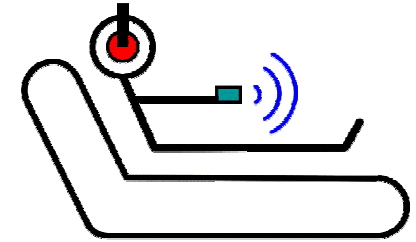


- The use of personal computer as an integrated home entertainment system.
- People are limited in the way they interact with the computer.
- Portability and remote devices are becoming part of our lifestyle.

System Overview

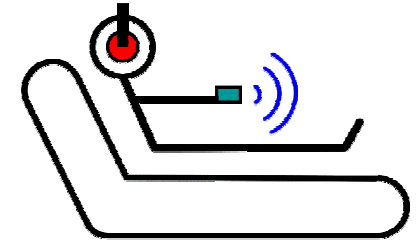


Objectives



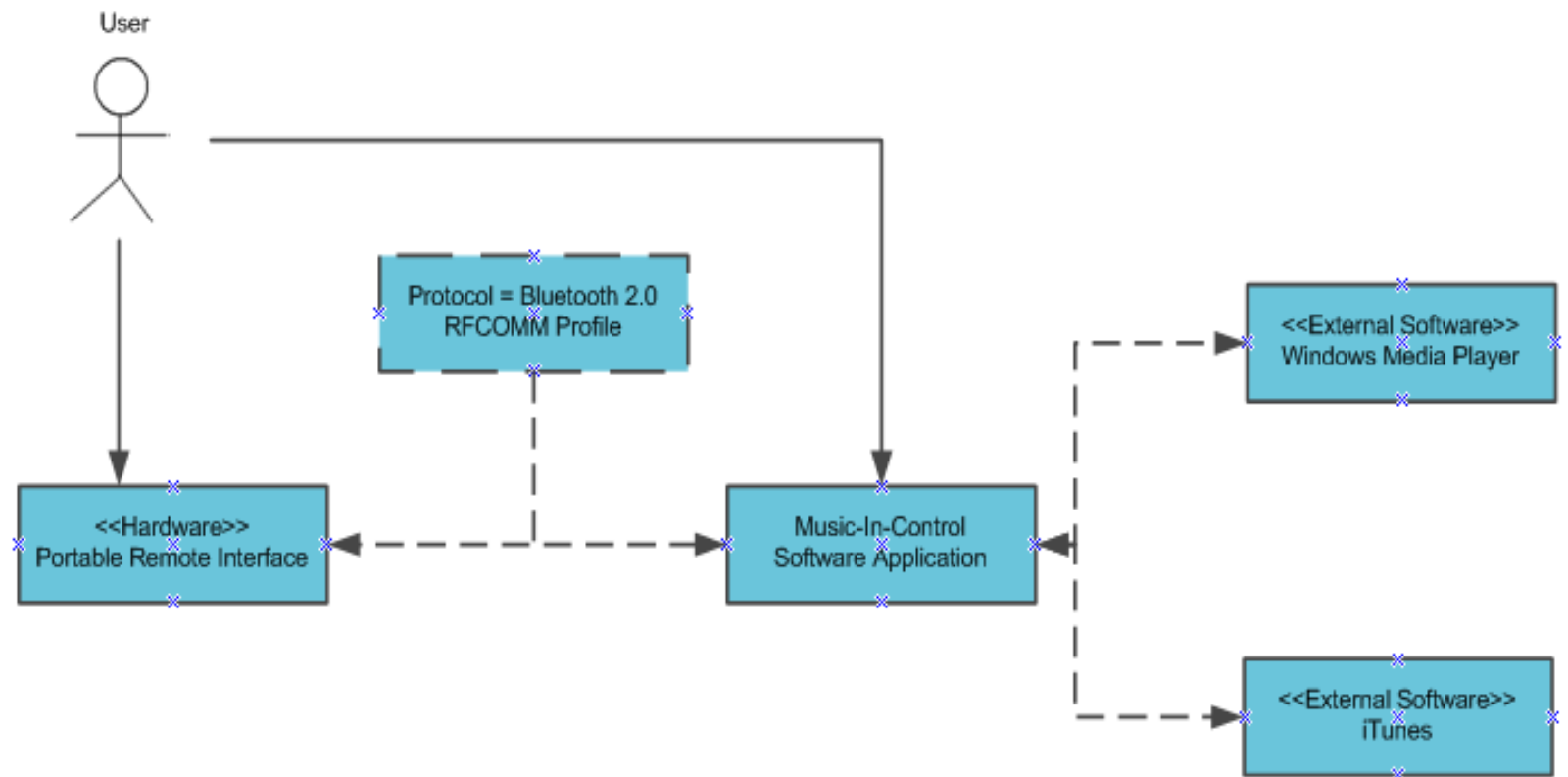
- Develop a system where the personal computer is the main component to create an audio entertainment environment.
- Develop a portable remote interface to use Media Players without having to get near the computer.
- Display the Music Library and Audio Options in a LCD display.

Objectives



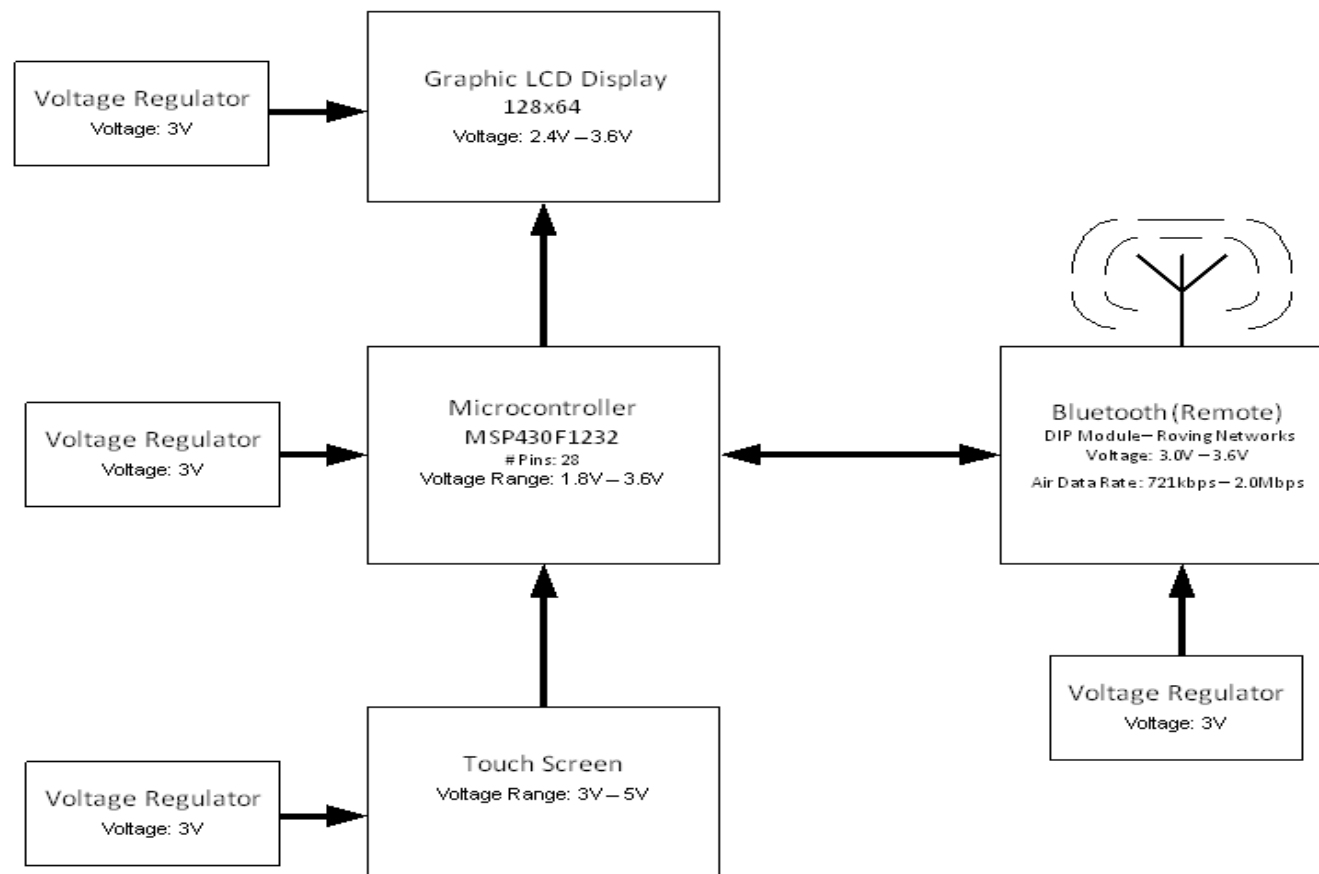
- Develop a software application that works as an interface between the portable remote interface and the Media Players.
- Use a Touch Screen configuration to handle user input.
- Establish the communication using Bluetooth technology.

System Architecture

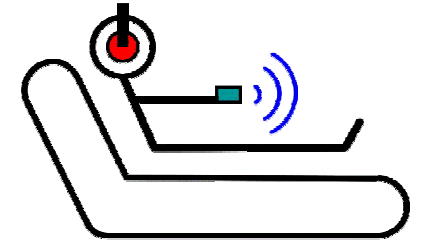


Hardware Design

Hardware Design



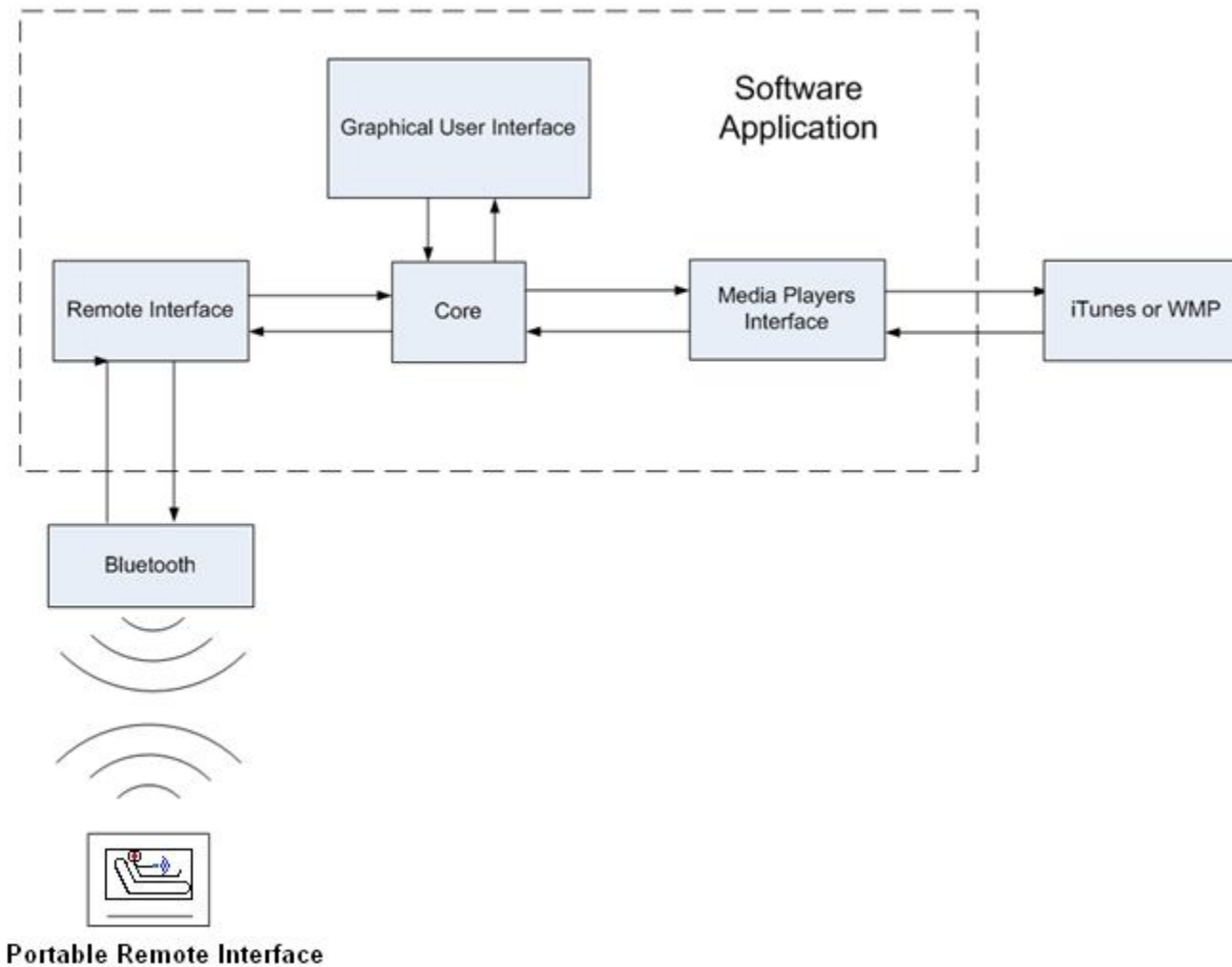
Implementation Approach



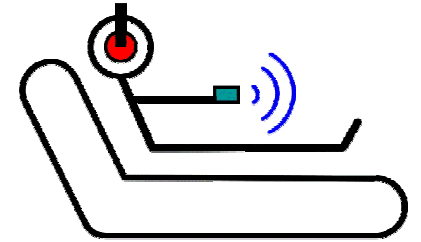
- LCD Programming
- Touch Screen Programming
- Bluetooth Communication
- Develop Firmware
- Testing
- Prototype Mounting

Software Design

Software Design

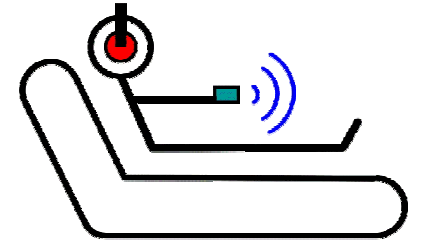


Implementation Approach



- Interface with Windows Media Player
- Bluetooth Communication
- Data Management Algorithm
- Volume Management
- Interface with iTunes

Implementation Approach



- Equalizer Presets
- Testing
- Software Application Deployment



Results

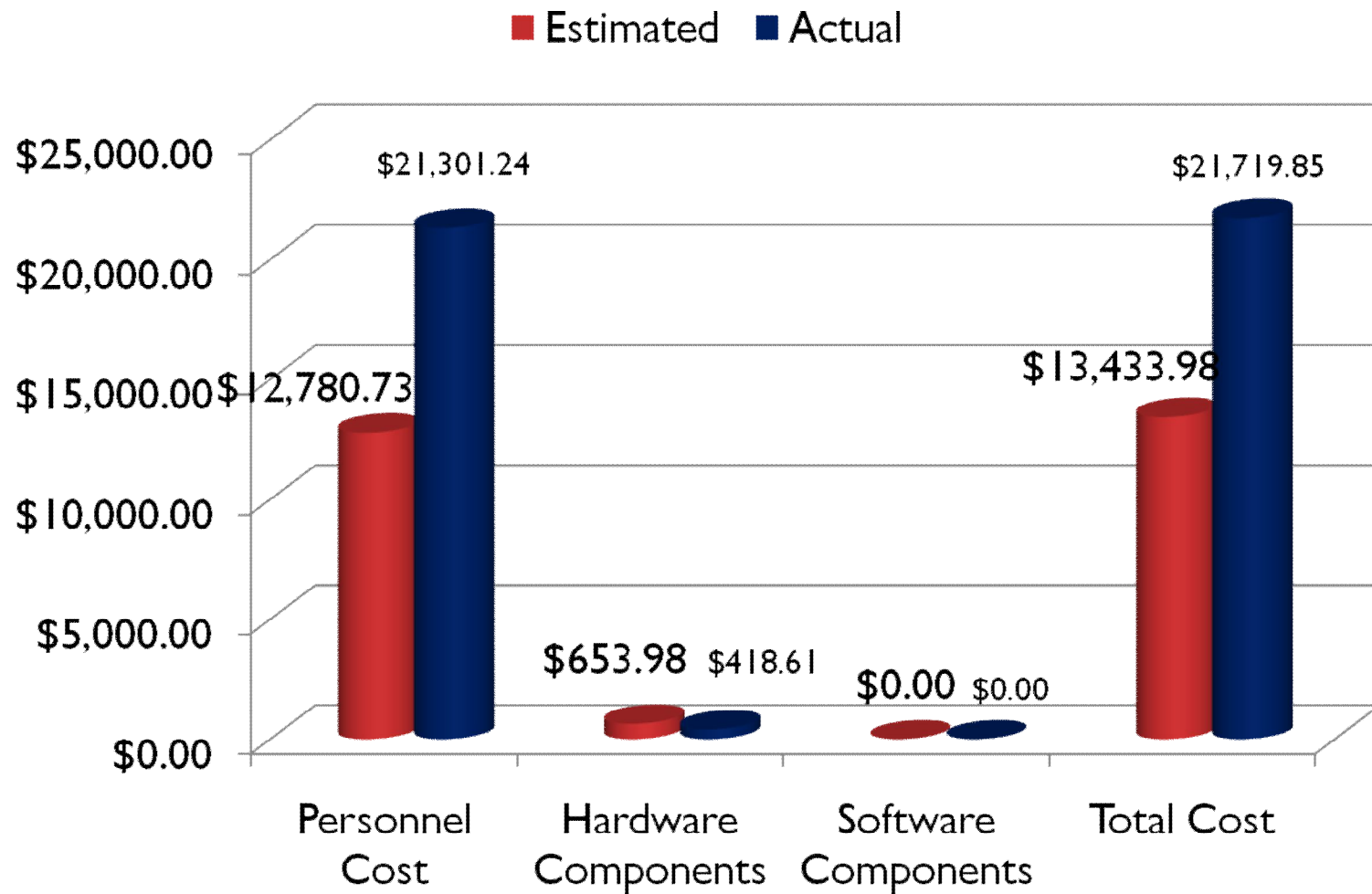
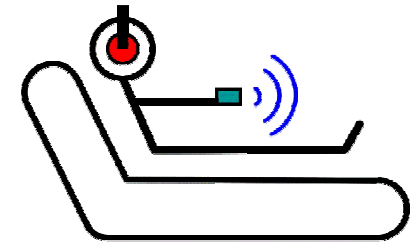
- Music-In-Control working prototype finished in May 5, 2009.
- Interface with iTunes and Windows Media Player Control and Music Library.
- Data structure to handle Music Library information.



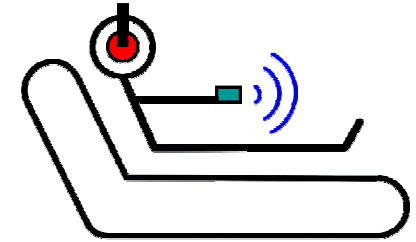
Results

- Use of Touch Screen as user input.
- Management of Volume and Equalizer Presets remotely.
- Wireless communication between software application and hardware prototype using Bluetooth technology.

Cost Results

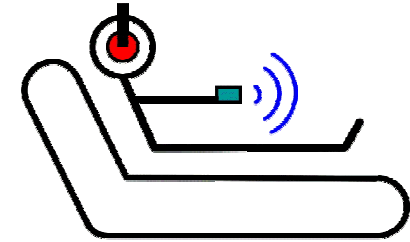


Conclusion



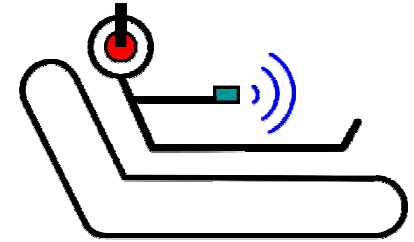
- Every minute counts and every day of work is as important as the next one.
- The assignment of tasks in pairs decreased learning curve and implementation time.
- Respect, trust and cooperation are key elements to a successful project.

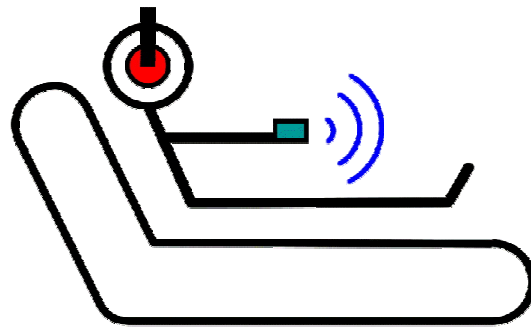
References



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Prototype





Questions?