Interface between RTOS target and an Industrial System: Developing USB Digital I/O Module

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Definitions, acronyms, and abbreviations

|  |  |
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| GRP | Graduate Research Project |
| PLC | Programmable Logic Controller |
| RTS | Real-Time Systems |
| RTOS | Real-Time Operating System |
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# ****Introduction****

# Objective

# Background

## Literary Exploration

## Existing Solutions

### EasyVeep, PSIM, Bradley Simulators, Sealevel USB Digital I/O device, etc

### Why Existing Solutions Won’t Work

### What was learned from Existing Solutions

## Existing Components Used

# Methodology

## Using EasyVeep

### Reversing EasyVeep Protocol

### Implementing Imitation EasyPort

### Problems with EasyVeep

## Creating MyEasyVeep

### Reuse of SWF Files

### Decompiling and Reversing SWF Files

### Interacting with SWFs programmatically

### Creating a Serial Protocol

## Creating MyEasyPort

### Platform Selection Iterations

### Circuit Design and Considerations

## Real Time Target Platform

### Using the AIM32-104 Digital I/O Card

### Implementing a VxWorks Interface

## Testing and Verification

# Budget and Scheduling

## Budget

### Projected Budget and Actual Budget

#### Bill of Materials

#### Items Purchase

## Schedule

### Projected Schedule and Actual Schedule

# References

# Appendices