

Senior Design History File

Alan Trester Sadie Gladden Zuguang Liu

College of Engineering and Applied Science, University of Cincinnati

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Project Problem Statement

1.1 Preliminary Description

1.2 Detailed Problem Description

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Team Description

2.1 Team Members

2.2 Technical Advisors

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Design Activities

3.1 List of Attributes

describes desired quality measures

3.2 Objective Tree

a hierarchical tree of relevant objectives that the design is to satisfy

3.3 Pairwise Comparison Charts

consider which design criteria are most important such as cost, quality, expected product life, reliability, manufacturability, aesthetics, safety, etc. Compare alternative designs to find best one with respect to all these criteria.

3.4 Design Specifications

3.4.1 Physical Aspects

specify physical characteristics and/or physical constraints

3.4.2 Interfacing Issues

Specify the ports for connecting to external systems and for connecting parts within the system

3.5 Functional Description

Master block diagram [black box level] Functional block diagram [transparent box level]

3.6 Task Assignments

A Mechanical tasks: Block diagrams Design drawings B Electrical/Electronic tasks: Block diagrams Circuit designs

3.7 Ghantt Chart

show evolution

3.8 Detailed Budget

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Design Prototyping and Testing

4.1 Final Design

4.2 Testing Methods

Test Instruments, Methods and Procedures at board level

4.3 Standards

Executive Summary for Appropriate Standards Document(s) Summary of How Standard Influenced the Design

4.4 Cascade Matrix

Signed Off by Tester(s) for Verification and Validation Test Documentation:
Examples: test data, operational screen captures, photos, video, etc.

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Project Management

5.1 Team Charter

5.2 Team Calendar

Team Calendar and/or Gantt Chart [final version]—at least week-by-week—this is your PLAN

5.3 Team Hourly Budget

number of hours each member will expect to work per week

5.4 Work Breakout Structure

with time effort estimations consistent with the person-hour estimates provided in the Team Hourly Budget

5.5 Completion Progress

Marking to Estimate Completion: Update Graph Regularly to show Progress; Annotate to Explain Difference from Original Calendar / Gantt Chart—this is what actually happened

5.6 Team Effectiveness Surveys

5.7 Weekly Team Progress Reports