



Project Scope

1.1.1 Project Description

Design a thermal-control device (air-conditioning unit) that allows the optimization of the users' input to arrive at the most desirable thermal temperature for the various users. More to be determined after meeting with sponsor. Due to extraneous circumstances, sponsor is unable to meet within the given timeframe (illness).

1.1.2 Key Goals

- Optimize environmental conditions (temperature) within a given space utilizing various user inputs within the given area
- Design an air conditioning system which takes in various inputs, synthesizes the data, and performs an output that maximizes user satisfaction
- Satisfy key customer needs whilst providing a cost-effective solution to the project description
- Market final design for various real-world applications and uses

1.1.3 Primary Markets

- Hospitals - satisfy individual patients to provide relaxing environment
- Schools - satisfy individual classrooms to increase comfortability and thus learning capability
- Businesses - satisfy employees to increase productivity



1.1.4 Secondary Markets

- Residential housing - provide custom satisfaction to a household (weighted inputs for parents, elderly, etc.)

1.1.5 Assumptions

- All controlled points are assumed to work
- Existing wires is expected to be operational
- No modifications will need to be made to existing air handler equipment or duct work.

1.1.6 Stakeholders

- Dr. Mike Devine
 - Provides a clear understanding of the product and assists with any ideas
- Dr. Jerris Hooker
 - Assist with ECE advisement
- Dr. Shayne McConomy
 - Assist with ME advisement
- Dr. Neda Yaghoobian
 - Provides technical advisement for the product
- Bryce Zarini
 - Provides assignment guidance