

ESD.342 Spring 2006

Project Information

Project Goals:

- Analyze and attempt to improve upon an existing large scale system (or organization)
- Understand the domain of the system (and its history, if relevant)
- Use Course Material on the system
 - Pay attention to data availability and quality, and note any observational limits
 - Test methods and tools for usefulness
 - Identify opportunities for quantitative analysis and necessary qualitative aspects
 - Identify hierarchy of various types if applicable
 - Apply network analysis and other quantitative tools
 - Identify architectural types and compare to canonical forms
 - Understand system ilities and constraints
 - Make comparison to other systems

Project Deliverables:

- **Meetings with assigned project faculty:** should occur at least once in each phase, that is, a week or two before each presentation
- **March 23:** Each project team gives a 7 minute presentation on their **project status**
- **April 25:** Each project team gives a 7 minute presentation on **the quantitative aspects of their project** (network analysis and other tool application)
- **May 9 and May 11:** Each project team to give 15 (2 person teams) or 20 minute **final presentations** on their project.
- **Presentation Constraints:**
 - **Each project member** is required to give a minimum of **two (partial) presentations** during the term.
 - The short presentation times and multiple presenters will require **careful planning/rehearsal.**
- **May 16:** Final Written report due at noon for all projects.

Final Presentation Objectives:

- Help class learn about use of course material in actual system by interesting and informative examples.
- Creative application and testing of several conceptual aspects of course material.
- The work should involve observational as well as modeling or theory approaches and try to connect this analysis to change or design issues for the system

Final Report Content:

- System description
 - Stimulus, main actors, stakeholders
 - Sources of needs and requirements
 - System Extent (Boundary and quantities)
 - Mission statements, explicit if it exists or “reasonably presumed” for purposes of project
- System historical background and evolution
 - History of each version fielded, if applicable
 - Important changes in system architectural structure, defined by methods we have been discussing
 - Its size, scale, network metrics or other descriptors over time as possible
- Assessment of system effectiveness over time including current critical issues
 - Related to mission statement
 - Related to system characteristics like flexibility, complexity, robustness, cost, performance etc.
 - Related to metrics derived from network analysis or others
- Potential architectural Improvements
- Reflections and comparisons (what worked and didn’t with respect to methods and tools learned this term)
 - Analogies to other systems or kinds of systems
 - What did you learn by doing this project
 - What aspects of system architecture analysis and description did you find strong or weak, more or less useful, etc.
- Written Material *must* be less than 20 pages of text (1.5 spaced) but can include various additional graphs and tables.