**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 systemilities 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.