

# ENG 470 - SYSTEMS ENGINEERING PROJECT #2

## CONCEPTUAL SYSTEM DESIGN OF THE “REDBOX” AND TOP-LEVEL SYSTEM ARCHITECTURE SIMULATION WITH MATLAB

In this project, the students will develop a “Conceptual System Design” for the “Redbox”.

1. Start by researching the requirements for the Redbox, and this product and business model in general.
2. Write a report, which will be due by the date announced in class, containing the following deliverables:
  - a. (2) Statements of the Problem Definition and Need Identification.
  - b. (1) Documentation of the System Feasibility Analysis.
  - c. (1) Documentation of the System Operational Requirements.
  - d. (1) Documentation of the development of the Maintenance and Support Concept for the system.
  - e. (2) Documentation of the Technical Performance Measures of the system using a Modified House of Quality.
  - f. (2) Documentation of the Functional Analysis and Allocation for the system.
  - g. (2) Documentation of the usage of Matlab Stateflow to draw a Functional Block Diagram for the system, and simulate the top level architectural behavior of the system. **Submit all Matlab work!**
3. GRADING RUBRIC: The total grade will be 11 points normalized to 100% for your report. Each of the deliverables outlined in points a through g in (7) are worth the number of point indicated within parentheses.
4. REPORT FORMAT: Free form, but it must be:
  - a. One report per student
  - b. Have a cover sheet with identification: Title, Class, Your Names, etc.

- c. COMPLETELY word-processed
- d. Double spaced
- e. 12 pt Times New Roman font
- f. Fully justified (optional)