WebSAT Quarterly Report (January 12th, 2005)

Title: Development of an Industry Standardized Auditing and Surveillance Tool: Minimizing Maintenance Errors
Investigator: Dr. Anand K. Gramopadhye and Dr. Joel S. Greenstein
Institution: Clemson University
Category: Aviation Maintenance
Project Status Category: Green (G) – Indications are that the project is on track and will be completed as planned.

1.) Significant Milestones achieved as of January 12th, 2005:

- Conducted interview sessions with key members in the Quality Assurance and Audit departments at the FedEx facility in Memphis, TN.
- Used task analysis to identify needs for support of surveillance and inspection performance.
- Created a process measures definition document for the departments of Surveillance, Auditing, and Airworthiness Directives.
- Defining the impact variables, and other variables, to be considered for WebSAT, in association with key members in the Quality Assurance and Audit departments, at the FedEx facility at Memphis, TN.
- Presented a paper at the SAHI conference at St Louis, MO, in March 2004.
- Presented two research papers at the IERC conference in Houston, TX, in May 2004.
- Presented the research in 2 poster competitions in the Department of Industrial Engineering, Clemson University.
- Presented a poster of the research at the Clemson University research forum.
- Presented a poster at the HFES conference in New Orleans, LA, in September 2004. Published an associated research paper in the conference proceedings.
- Conducted a web-based process measures validation survey with FedEx to ascertain the accuracy of the process measures defined by the research team.
- Designed a framework for the WebSAT tool which would include the goals to be met and the functions that would be accomplished by WebSAT.
- Completed the annual report in October 2004.
- Conducted a web-based process measures validation survey with other airlines to ascertain the support for the selected process measures.
- Identified process measures using a need-metrics matrix.
- Identified the modules that will be incorporated in WebSAT.
- Started preliminary work on designing prototypes for each module using a conceptual design methodology.
- Awaiting reviews of abstracts submitted to ISAP (International Symposium on Aviation Psychology), 2005, and IERC (Industrial Engineering Research Conference), 2005.
- Awaiting review of journal paper submitted to IJAAS (International Journal of Applied Aviation Studies), 2005.

2.) Work in Progress from January 12th – April, 2005 (The dates in parentheses indicate the deliverable date):

- Schedule a trip to a participating airline company to validate the selected impact variables.
- Conduct competitive benchmarking to evaluate metrics and establish target specifications. (February 10th, 2005)
- Develop the goals to be met and functions to be included in each module.(February 1st , 2005)
- Develop objectives for each module and sub – objectives for modules. (February 1st, 2005)
- Write a document listing the number of screens in WebSAT and their functions. (February 1st, 2005)
- Begin product map iterations. (February 18th, 2005)
- Begin screen design iterations. (March 1st, 2005)
- Make a trip to FedEx to conduct testing. (March 21st, 2005)
- Test the first set of product map iterations with FedEx. (March 21st, 2005)
- Test the first set of screen design iterations with FedEx. (March 21st, 2005)

3) Future delays in meeting milestones:

- Trip to partnering airlines.