

## **WebSAT Quarterly Report (March 15<sup>th</sup>, 2005)**

**Title:** Development of an Industry Standardized Auditing and Surveillance Tool:  
Minimizing Maintenance Errors

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**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 March 15<sup>th</sup>, 2005:**

- Conducted interview sessions with key members in the Quality Assurance and Audit departments at the FedEx facility in Memphis, TN.
- The research team made a presentation of the on-going research at the FedEx headquarters in Memphis, TN.
- Used task analysis to identify needs for support of surveillance and inspection performance.
- Made a doctoral colloquium presentation on WebSAT in the Department of Industrial Engineering, Clemson University.
- 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 quarterly report in March 2005.
- Conducted a web-based process measures validation survey with other airlines to ascertain the support for the selected process measures.
- Developed the goals to be met and functions to be included in each module.
- Developed objectives for each module and sub – objectives for modules.
- Developed user needs based on customer statements for the four work functions WebSAT is involved with.
- Developed metrics for the product.
- Developed a need-metrics matrix.
- Began product map iterations.
- Developed paper based prototypes for each module using a conceptual design methodology.
- Began screen design iterations.
- Developing a working prototype for the technical audits module prototype.
- Developed the data base schemata for the technical audits module prototype.
- Awaiting review of paper submitted to the Proceedings of Industrial Engineering Research Conference, 2005 and review of journal paper submitted to IJAAS (International Journal of Applied Aviation Studies), 2005.

### **2.) Work in Progress from March 15<sup>th</sup> – June, 2005 (The dates in parentheses indicate the deliverable date):**



12/1/2005

- Make a trip to participating airline company (Northwest Airlines, Minneapolis) to validate the selected process measures. (March 28<sup>th</sup>, 2005)
- Make a trip to Oklahoma City to present a paper on "*Strategy for Evaluation of Aircraft Maintenance Operations Using Process Measures*" in the International Symposium on Aviation Psychology, 2005. (April 20<sup>th</sup>, 2005)
- Make a trip to FedEx to conduct testing. (May 1<sup>st</sup>, 2005)
- Test the first set of product map iterations with FedEx. (May 1<sup>st</sup>, 2005)
- Test the first set of screen design iterations with FedEx. (May 1<sup>st</sup>, 2005)

### 3) Future delays in meeting milestones:

- Conduct competitive benchmarking to evaluate metrics and establish target specifications.