Human Computer Systems Laboratory
Department of Industrial Engineering
Clemson University

1/9/2006

WebSAT Quarterly Report (January, 2006)

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 9th, 2006:

- Presented the technical audits module functionality to the FAA. (Dec 8th – 9th, 2005)
- Conducted a debriefing session with FAA on accomplishments of WebSAT and demonstrated its data analysis capabilities (WebSAT project report attached). (Dec 8th – 9th, 2005)
- Conducted a data gathering session with FedEx. (Nov 15th - 18th, 2005 and Dec 19th – 21st, 2005)
- Gathered historical data for the work functions of surveillance, internal and technical audits for developing the risk model. (Nov 15th - 18th, 2005 and Dec 19th – 21st, 2005)
- Generated personas and scenarios for Internal Audit Module.
- Designed the data analysis interface for the Technical Audit prototype.
- Enhanced the user-interface experience of technical audits module with new features.
- Presented the following conference paper: Iyengar, N., Dharwada, P., Kapoor, K., Greenstein, J. S., and Gramopadhye, A. K., WebSAT: "Development of a Knowledge Management System to Reduce Errors in Aviation Maintenance, Proceedings of International Journal of Industrial Ergonomics, Clearwater, Florida, 2005.

2.) Work in Progress from January 9th – April 9th (The dates in parentheses indicate the deliverable date):

- Convert available audit data into discrete elements using optical character readers to facilitate data analysis (January, 2006).
- Design Internal Audit Module (January, 2006).
- Develop the risk model for WebSAT (January, 2006).
- Design Surveillance Module (February, 2006).
- Disseminate User-Interface design methodology identified from WebSAT research (February, 2006).
- Disseminate quantitative and qualitative data analysis techniques identified from WebSAT research (February, 2006).

3) Future delays in meeting milestones:

- None.