Human Computer Systems Laboratory
Department of Industrial Engineering
Clemson University

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# WebSAT Quarterly Report (October 8th, 2004)

**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 October 8th, 2004:

- 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 to support surveillance and inspection performance.
- Created a process measures definition document for the departments of Surveillance, Auditing, and Airworthiness Directives.
- Defining the impact 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 and other variables.
- Presented a paper at the SAHI conference at St Louis, MO, in March 2004 (See attached pdf file).
- Presented two research papers have been accepted for presentation at Houston, TX, at the IERC conference, in May 2004. (See attached pdf files).
- Presented the research in 2 poster competitions in the department of Industrial Engineering, Clemson University.
- Presented a poster at the research at the Clemson University research forum.
- Presented a poster at the HFES conference at New Orleans, LA, in September 2004. Published a research paper by virtue of this poster being accepted for presentation.
- 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 of the WebSAT tool which would include the goals and the functions that would be accomplished by WebSAT.
- Completed the annual report in October 2004.

## 2.) Work in Progress from October 8th – November, 2004 (The dates in parenthesis indicate the deliverable date):

- Conduct a web based process measures validation survey with other airlines to ascertain the accuracy of the selected process measures.
- Identify process measures using the need-metrics matrix. (October 20th , 2004)
- Identify the modules that will be incorporated in WebSAT. (October 20th , 2004)
- Develop the goals and functions to be included in each module.(October 20th , 2004)

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- Develop objectives for each module and sub – objectives for modules. (October 20th, 2004)
- Schedule a trip to a participating airline company to validate the selected impact variables.
- Started preliminary work on designing the iteration prototype for each module using the conceptual design methodology.  (October 31st, 2004)
- Writing papers for ISAP 2005, IJAAS 2005, and IERC 2005.


**3) Future delays in meeting milestones:**

- Delays -- None anticipated.
- Survey for partnering airlines.