



# **Heuristic Evaluation**

## **Staff Deployment Simulation Software**

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## **1. Document Overview**

This document describes a test plan for conducting a heuristic evaluation during the development of SATS Staff Deployment Simulation Software.

### **The goals and objectives of usability testing:**

- Record and document general feedback and first impressions
- Identify any potential concerns to address regarding application usability, presentation, and navigation.

Test Date : 12 November 2012 to 15 November 2012

Test Venue : To testers' convenience

## 2. Methodology

### 2.1 User Testing Environment

Computer platform	:	Intel Pentium Processor
Screen resolution	:	1028 x 768
Operating System	:	Windows XP
Set-up required	:	Computer date format (English (Australia)) of d/MM/yyyy

### 2.2 Participants

The participants are facilitated to run through the application from pages to pages. There is no scenarios given.

1. Jaslin, IS background
2. Jeffrey, IS bakground
3. Shannen, non-IS background
4. Kwok Meang, non-IS background
5. Jayen, non-IS background
6. Dina, non-IS background
7. Daniel, IS background
8. Vee, non-IS background

## 3. Procedure

### *Instructions*

1. Each user will be accompanied by 1 facilitator.
2. Users are encouraged to verbalize their movements, purpose, and problems.
3. Facilitators will record obstacles and questions made by users during testing.
4. To start the test, click on the file named "START.bat" found in folder named "SATS\_Bumblebee\_Beta\_v14".
5. All sample files needed for testing are found in: SATS\_Bumblebee\_Beta\_v14/data
6. Database used to store imported data is also found in ROOT folder.
7. Facilitators will guide the user from page to page and prompt them with questions about the heuristic of every pages.
8. After completing all tasks, users will be filling in overall evaluation form.
9. Date time format of the computer has to be in: English (Australia) (d/MM/yyyy)

## **Tasks**

Below are tasks given to facilitators. Facilitators have to guide user to complete these task from page to page.

**1. Import File(s)** (by starting a simulation process)

This task is for user to import data from excel files such as Flight Schedule Departure, Flight Schedule Arrival, Staff Records, etc. into the application. The application will then use these data for simulation purpose in the later step.

**2. Edit Airline Requirements**

Airlines have several different requirements on number of CSA and CSO needed.

This task is to record the individual requirements into the database. The input data will be used for simulation purpose in the later step.

**3. Edit Cost Parameters**

This task is to record various costs in hiring staff into the application.

**4. Edit Simulation Parameters**

This task is to record the mean and standard deviation of different uncertainties that will affect the initial schedule prepared by the application.

**5. Start Simulation (and view result in pie chart)**

Run simulation to start assigning staff to different job assignments.

Please record the OT Hours, Recall Hours, Airline Requirement Coverage, Staff Utilization Rate.

**6. View Staff Schedule (in Gantt Chart)**

This allows user to view and compare between a staff's roster and actual assigned working time.

**7. View Past Results**

This task is to view the result generated in PDF format. Development of this function is still in progress.

## **Team Roles**

### **Overall in-charge (Glorya Marie)**

- Provide training overview prior to heuristic evaluation

### **Facilitators (Glorya Marie, Yosin Anggusti, Nguyen Nhat Minh, Choo Jek Bao)**

- Facilitator will observe and enter user behavior and user comments.
- Responds to participant's requests for assistance

## 4. Reporting Results

A set of questions are given to the facilitators to fill in as users navigate around the systems. All observations made by the facilitators are to be further discussed by team.

### Homepage

Questions	Observations
Is the homepage intuitive? Does the user know what this page is for?	All users know what this page is about.
Does the user know what the two buttons are for?	7 out of 8 users know what the two buttons are for.  One user thought view past result is a setting buttons. Suggested rename it as <b>View Past Simulation Result</b> .
What is the first button that user click?	6 out of 8 users click <b>View Past Result</b> first.

### Import Data

Is the Import Data page intuitive? Does the user know what this page is for?	All users know what this page is about.
Does the user know what to click to import files?	All users know what to click to import files
What is the sequence of the button clicked?	Vertically down
Could user indentify the next button?	All users could identify the next button

### Manage Airline Requirement

How does the user come to this page?	6 out of 8 users know that clicking the pencil icon will bring them to this page.
Is the Manage Airline Requirement page intuitive? Does the user know what this	All users do not really know what this page is about until explained by the facilitators.

page is for?	
Does the user know what to change the airline requirements?	7 out of 8 users know how to change the airline requirements.  One user finds the input field and the table confusing. User raised a question the 2 save buttons.
What is the sequence of the button clicked?	Field and then tables.
Does user know how to move on after they finished changing the airline requirements?	5 out of 8 users do not know how to proceed as there is no next button. Eventually, they have no choice and close the window (the right way to proceed from manage airline requirements)

### **Manage Cost Parameter**

Is the manage cost parameter page intuitive? Does the user know what this page is for?	All users know what this page is about
What is the sequence of the user input and button clicked?	Vertically down
Could user indentify the next button?	All users could identify the next button.

### **Manage Simulation Parameter**

Is the manage Simulation Parameter page intuitive? Does the user know what this page is for?	All users know what this page is about
What is the sequence of the user input and button clicked?	Vertically down

Could user identify the next button?	All users could identify the next button.
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**Run Simulation**

Does user know that he/she is supposed to wait while the simulation is running?	All users know they should wait. Two users suggested to add "loading bar"/
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**Simulation Result**

Is the Simulation Result page intuitive? Does the user know what this page is for?	All users know what this page is about
Does the user know what is the difference between Get detailed report, View staff schedule, Get cost sensitive schedule, View location list?	7 out of 8 users could not tell what are the different buttons are for.
What is the sequence of button clicked?	Different across all users.

**View Schedule**

Is the View Schedule page intuitive? Does the user know what this page is for?	All users know what this page is for.
What is the sequence of button clicked?	Staff no and then week list and then view

**View Past Result**

Is the Simulation Result page intuitive? Does the user know what this page is for?	All users know what this page is for
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What is the sequence of button clicked?	Filter function, click result and generate pdf.
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### 5. Subjective Evaluations

Subjective evaluations regarding ease of use and satisfaction will be collected via questionnaires. Participant will be asked to respond “Agree”, “Neutral”, and “Disagree” against the questions below. Agree = 10 pts, Neutral = 5 pts, & Disagree = 0 pt.

An average of all the answers given by testers will be computed and compared with previous user testing.

Navigation Impression	Heuristic Evaluation
It is easy to find my way around the system	8.75
It is easy to remember where to find things	6.25
The system is well-suited to first-time users	8.75
Look and Feel	Heuristic Evaluation
The interface design is simple and clear	8.75
The size and layout of the application is optimal	5
The font style and size are easy to read	10
Functions	Heuristic Evaluation
Each page/step has a clear purpose	10
Overall Impression	Heuristic Evaluation
The user will be satisfied with the system	8.75

### List 3 good things and 3 bad things about this system

GOOD	BAD
Easy to navigate	For manage airline requirements, those that cant be edit should set to disable edit
Good font size	Unaware that the table in manage airline requirements are editable
Simple to understand	
Step navigation that show which step we at.	
Neat and tidy, with hover to view instructions	
Table able to edit numbers	
Icons to replace words	

## 6. Reporting Conclusion

- ✓ Users have no problem in navigating around the system in general.
- ✓ There is a need for more instructions from pages to pages.