

## eWFO White Paper

### **System Objectives:**

Provide a web based tool for line users to facilitate creation, administration and processing of WFO proposals.

Assist WFO managers to better manage the proposal tracking and approval process by providing real time information related to all aspects of a proposals life cycle.

### **eWFO Users:**

#### ***Line Users:***

Sandia National Labs proposal creators and managers.  
Project Managers, Program Managers, Corrections Contacts, etc.

#### ***Admin Users:***

eWFO managers. Debra Payne and Scoti Hagerman.

### **eWFO Development and Support:**

Desert Sky Software designed and developed the eWFO application.

### **Application Availability:**

Since initial deployment, unscheduled down time has been less than 1%.

### **System Architecture:**

#### ***Three Tiered Architecture:***

eWFO employs a three tiered architecture (Browser, Application Server, Database Server). This architecture allows the application, if necessary, to be scaled to handle a very high transaction load from thousands of users.

#### ***Web Browsers Compatibility:***

The current application is 100% web based for all

line and administrator user interfaces. It is compatible with both Netscape and Internet Explorer browsers.

***Application Server:***

Utilizes WebObjects as the application server. WebObjects is a high transaction, robust, scalable application server.

***Database Server:***

The eWFO application uses Oracle 8 as the back-end database.

***OS Deployment Environment:***

The application is deployed on Sun Solaris platform. It currently deployed on two Sun Ultra 10 servers. One servers as the application server and the the other as a database server. In addition, for an added level of redundancy, each machine is configured to work as both application and database server in case of a machine failure.

***Programming Language:***

The application is written completely in Java.

***Platform Independent:***

Because the eWFO application is 100% web based it can be accessed form PC, Unix, and Macintosh computers.

***Security:***

The system uses Kerberos for login and proposal approval authentication.

**Modules:**

***Proposal Management:***

Provides an easy to use interface to allow users to quickly create and administrate proposals. Guides the user through the steps required to successfully create and submit proposals.

***Workflow/Digital Authorization:***

Completely automates the process of routing proposals to users from whom authorization is required. Provides a collaboration environment to greatly enhance the time required to process a proposal to

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final approval. Provides detailed metrics on all phases of the approval process. Allows administrative users to track each proposal through the workflow process to locate and remove bottlenecks.

### ***Standard Reporting:***

The application dynamically generates proposal reports in Acrobat .pdf format.

### ***Ad-Hoc Reporting:***

System includes a module to perform web based ad-hoc searches. In addition, the system can be queried by and SQL query tool.

### ***EMail Messaging:***

The application auto generates and delivers emails to related users upon the occurrence of specific amendment related events (approval, creation, workflow rejection, etc).

### ***Library Proposal:***

System maintains a document reference library of important documents that can be downloaded on demand by line users. The documents are administered by admin users.

### ***Charting:***

System provides a charting module to assist in analyzing proposal values.