TTR/CE/11

Transfer of Inter-Office Collaboration System to Key West, FL

FY 2003 Proposal to the NOAA HPCC Program

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Transfer of Inter-Office Collaboration System to Key West, FL
Proposal for FY 2002 HPCC Funding

Prepared by: U. Herb Grote

Executive Summary:

FSL has received funding from HPCC in FY00 and FY01 to assist with the development of an Inter-Office Collaborative Forecast System. The system was developed with the cooperation of NWS staff at the Atlanta River Forecast Office. However, the software can require significant manual labor to install and configure for a particular user. This proposal is directed towards simplifying the installation and site configuration to allow more users within NOAA and elsewhere to utilize the system. The NOAA/NWS office in Key West, FL has agreed to test the installation procedures and also evaluate the system performance.

FSL will provide the necessary computer resources to create the installation tools and generalizing certain aspects of the system. The Key West Office will purchase their own system hardware and perform any required network upgrade (such as DSL) and use the installation tools and documentation to install the application.

Problem Statement:

A number of organizations have expressed interest in the collaboration system and would like to be able to install and maintain the system themselves. Currently, the installation is a manual process that requires the installation of Java on some machines, defining the system environment, installing the application, and setting up any shortcuts. It may also require some customization of the system for a particular location. This customization could affect the menus, localization information (e.g. maps), and list of servers. In some cases, users would also like to be able to set up their own collaboration server. This may require the installation of additional COTS and definition of additional environmental variables.

The collaboration system has been tested on several different platforms with different operating system: Win98, WinNT, Win2000, WinXP, Red Hat Linux, and Macintosh with Yellow Dog Linux. Each system requires slightly different procedures for installing the software based on operating system peculiarities.

Proposed Solution:

FSL will provide basic installation scripts, system management tools, and documentation to simplify the installation and maintenance of the collaboration software. This will require the development of some scripts and/or purchase of COTS (such as InstallShield). Also, some changes

will need to be made to the software to place certain variables into tables (text files) or environmental variable.

It is anticipated that the installation tool for Linux systems will be a shell script since shell scripts provides access to an extensive set of scripting utilities. Some of the utilities will be used to modify text in a file, extract information from directories, and interpret environmental variables. The solution for Windows operating systems will most likely be a commercial product, such as InstallShield, since these systems are easier to configure. Windows machines are not able to run a collaboration server.

Users will also be provided with a simple installation and maintenance guide in html format. The guide will explain the installation steps and provide guidance on how to modify certain variables using the system management tools.

The focus of this work will be on providing the necessary tools and documentation needed by the Key West Office to allow them to install the software at their site and the Monroe County emergency manager's office. The objective is to allow the Key West office to coordinate severe weather conditions with the Emergency Manager in Monroe County.

Analysis:

In order to effectively transfer the "Collaboration System" technology to other NOAA groups requires that some work be performed to make the software easier to install and configure. Istallation tools, such as InstallShield have made t easy for the average person to install a large variety of commercial software. Native scripting languages for DOS are extremely limited for writing complex scripts. However, Linux provides extensive and powerful scripting support and is considered a better choice for that environment.

Documentation is essential in order to be able to install and maintain systems. A user guide has been prepared that allows users to learn how to operate the system. However, an installation and maintenance guide needs work in order to reduce reliance on software developers.

The Key West office will be an important component in refining the installation procedure and assessing its utility.

Performance Measure:

In most cases, the collaboration server should install without help from FSL. Exceptions may arise where the AWIPS software is not installed or improperly installed on the server.

At the end of the project the Key West collaboration system will be fully functional and available for routine use by forecasters.

Milestones:

Month 3 - Client installation software for Windows PCs
Month 6 - Client and server installation software for Linux machines.
Month 9 - Basic documentation
Month 12 - CD containing Windows and Linux installation software.

Deliverables:

The final product from this project is a CD that contains the collaboration software, installation software, and basic documentation.

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