DSS Architecture Outline

I. Objective

The major goal is to build a multi-state distributed DSS based on current state-of-the-art technologies. The data and function distribution scheme along with hardware and network configuration among distributed servers shall be clearly defined. The interoperability standards between distributed servers shall also be agreed upon by developers and site maintainers at every site. Thus, the primary audience for the work proposed is DSS application developers. The result of this effort will be a document describing the agreed upon standards and protocols to be used by the group and a demonstration of these through a prototype DSS.

II. Software Development

The developers at different sites will be free to choose their own tools and web map engines as long as they support the specified multi-server interoperability standards.

a. Requirement Analysis and Standard Setting

The requirement analysis of the whole system needs to be conducted up front. The detailed data and function distribution scheme along with hardware and network configuration among distributed servers will be documented. The interoperability standards will also be defined at this stage.

b. User Oriented Design

The design of the system should be centered around the end users. The user friendliness should be recognized as a key factor for the success of the system. The user interface ideas such as an agent should be integrated into system design at an early stage. Therefore, it will be essential that the group developing the standards work closely with the group working closely with potential users of our DSS applications.

c. Framework Data and Sharing

Core digital base maps will be identified and described to avoid confusion and to promote data sharing and inter-operation of the multi-state systems and to enhance compatibility.

d. Implementation Plan

A plan for software development, upgrade and maintenance will also be prepared to facilitate the long-term viability of this effort. In addition, a working prototype that demonstrates how these DSS applications can be developed will be created.

III. Decision Support System Standards

The DSS standards will address the following major issues:

a. User Interface
b. Data Standard

c. Web-based Database and GIS Engine : Basic functionalities
d. Operational Models or Target Model
e. OGC WMS

IV. Compatibility Testing Information Site

A demonstration site will be created to facilitate testing of components and shared data. In addition, the site will contain:

a. Standard Data Set and Description
b. Trouble Shooting Reports