

DAWN G. GREGG AND MICHAEL GOUL

A PROPOSAL FOR AN OPEN DSS PROTOCOL

Before Decision Support Systems can be shared via the Web, a common protocol for deploying them must be agreed upon.

THE WEB WAS DESIGNED TO BE A “POOL OF HUMAN KNOWLEDGE, WHICH WOULD ALLOW COLLABORATORS TO SHARE THEIR IDEAS AND ALL ASPECTS OF A COMMON PROJECT” [2]. This goal for the Web makes it an ideal distribution system for the Decision Support Systems (DSS) of the future. A DSS is an object class that includes software applications, mathematical subprograms or model solvers designed to interact with humans to facilitate decision-making. The determination as to whether an application is a DSS is in the hands of the application developer. However, the definition of a DSS is user-based; that is, repeated discretionary use by end users represents the final authority on the value of a DSS. This definition includes expert systems as DSS, should those expert system developers choose to deploy the systems on the Web in a protocol-compliant format.

At present the Internet provides access to hundreds of gigabytes each of software, documents, sounds, images, and many other types of information [6]. It is only a matter of time before vendors begin deploying

DSS on the Web on this type of scale. For DSS to be efficiently discovered on the Web, a protocol that allows DSS information to be found and transmitted must be established. In addition, a mechanism to provide a consistent organized view of DSS information is necessary. A DSS resource discovery system will need to identify a resource, collect information about it from several sources, and convert the representation to a format that can be indexed for efficient searching [6]. The purpose of this article is to propose a protocol suite that will facilitate the discovery of DSS on the Web by allowing Web pages containing DSS to be easily distinguished from other Web pages. In addition, the protocol provides a common format for describing DSS, such that autonomous intelligent search agents can identify DSS that meet specific user-defined requirements.