CONF-960437--1

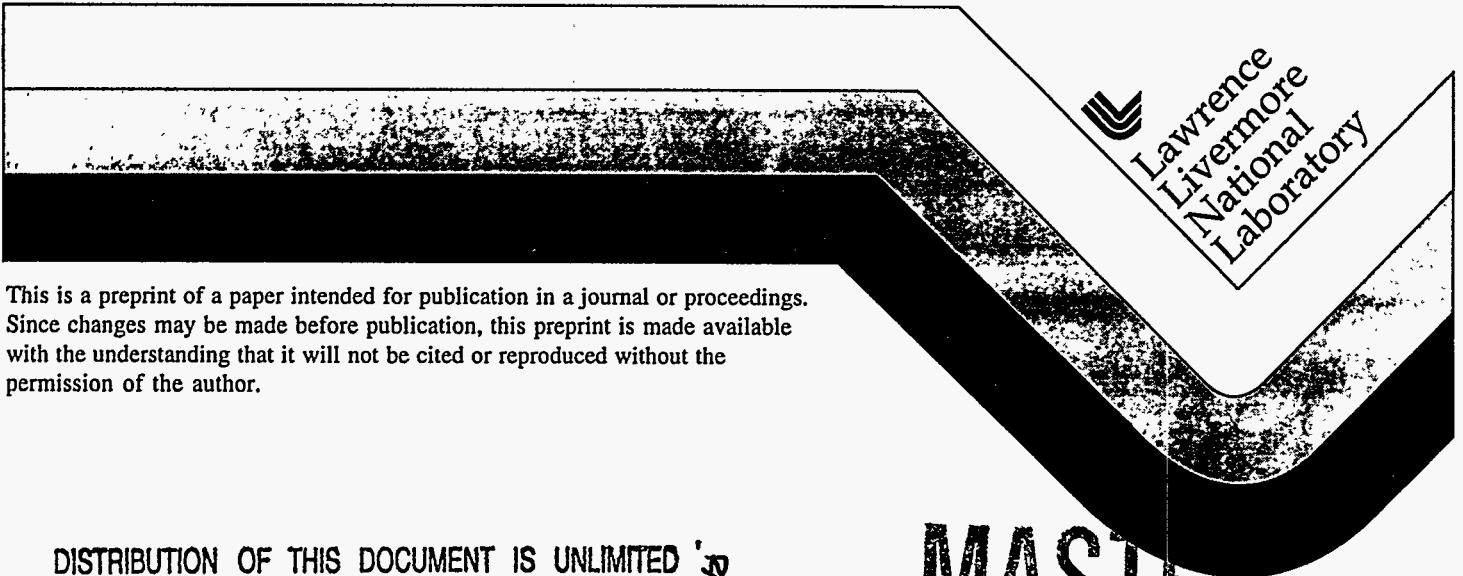# Rapid Data Access: Key to Integrated Use of Environmental Characterization and Monitoring Information

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and multiple use of data are cost-effective information management strategies. Reduced data from one discipline are electronically available for retrieval and use by others. Validated and qualified chemistry data are available for geologists, hydrologists, and engineers. Hydrostratigraphic unit identification is available for chemists, engineers, and modelers. The retrieval and integrated use of correlated data are enhanced by the use of a location-based information model. This successful system enables project personnel to have timely and cost-effective access to current and historical data.

The dedicated customer service information management team assists project staff in obtaining data in formats appropriate to the intended use of the data. Standard format tabular reports are produced for documents and appendices. Custom reports are created to meet unique customer specifications. Ad hoc questions are answered rapidly either verbally or with a listing included in an e-mail message. Direct and timely access by project staff for common data requests is achieved by integrating the WWW's platform independent hypertext technology with X-window applications and traditional access methods of relational database management systems.

The WWW is implemented using a client-server model. Resources (text, images, sounds) are downloaded from a machine on the Internet (a server) to your local machine (a client) and viewed with a web browser such as Netscape or Mosaic. Each resource has its own unique address on the WWW called a Universal Resource Locator (URL). This URL is composed of a unique machine name and location on the machine where the resource can be found. Served resources can themselves contain references to other URLs. These hyperlinks are mouse-sensitive regions of text that, when selected, cause a request to be sent over the Internet to the server machine addressed in the URL asking that the resource be downloaded. The recent explosive growth of the WWW gives some indication of its power and utility in making a wide variety of information easily available to a large audience.

The X-window system is a mature client-server windowing system developed at MIT. It specifies a high level communications protocol between two programs: a server that performs drawing on your screen and handles input from your mouse and keyboard; and a client that performs the computational work and produces the graphical output. The power of the X-window system is that the two programs can reside on the same machine or on different machines. When an X-client application program is run on one system and displayed on another it is referred to as a remote X-client. Although the X-window system was initially developed for UNIX workstations, currently many vendors provide X-servers for the Mac and PC desktop community. Today much of the scientific X-application software previously available only to the UNIX workstation community can be made available to these other platforms.