



## Information Technology Laboratory

# DoE Groundwater Remediation Content Services

### Background

The Department of Energy (DoE) is responsible for remediation projects in a variety of geographically dispersed locations. Managers must be able to review the location and movement of subsurface (unsaturated and saturated media) contaminant plumes, well logs, subsurface stratigraphy, and contaminant concentrations and to assess the effectiveness of different activities associated with site remediation. Site personnel require the ability to productively manage and analyze highly disparate field data sets. A variety of stakeholders, ranging from the public to site personnel, require access to site information. In response to DoE's need to make the flow of information more timely and effective than it currently is, ITL has developed the DoE Groundwater Remediation Content Server (CS) to leverage the Internet to establish a single point of access for all environmental data; access information and prepare its use by any models used for analyses; easily disseminate model run results, unstructured reports and analyses, and structured data found in relational databases; and provide access to other information sources outside the DoE.

### Objectives

The objectives of the DoE Groundwater Remediation Content Services are to organize, publish, access, and manipulate information (e.g. model results, geographic information system (GIS) files, reports, etc.) over the Internet; improve "freshness" of the information acquired from DoE sites; minimize effort required to maintain Web sites with routinely changing content; and promote a consistent look and feel.

### Benefits

Although difficult to quantify, return on investment can be realized in several ways:

- The ability to share information over the Internet, or an Intranet, facilitates productivity. Information posted to an Internet can be instantly accessed by multiple people, ensuring that everyone views the same version (especially important in model runs where many "what if" analyses can be run on a particular scenario).
- Having both structured data (relational databases) and unstructured data (model run results) available over the Internet to information consumers adds value to their understanding of the underlying information the model represents.
- A drag and drop Internet publishing capability provides the DoE with a simple way for people to disseminate the information they produce. In effect, anyone with an interest in sharing model run results, reports, or database information can become an Internet publisher, without having to learn programming language or Internet publishing software.
- A dynamic Web-based content-relevant portal gives DoE a single point for information access and retrieval pertinent to environmental restoration projects.

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