Tools: LEADUM Software DBScribe
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LTER Information Managers have been promoting the importance of documenting environmental data and other research products since the earliest days of the network, but less attention has been paid to the need to fully document the information systems used to archive and deliver these products. At GCE, all custom software code is well documented and we've been using SVN for several years to track changes to software and website code. However, writing good documentation for relational database designs has proven challenging. EML can be used to document database objects and relationships, and SQL scripts (source code) can be generated from many RDBMS systems, but neither of these options produces very readable output for communicating a database design. To date, we've primarily archived graphical images of entity-relationship diagrams and relied on stored SQL scripts in our SVN (and database backups) to archive the complete structure.

Recently, I was asked to design a database for the National Park Service to manage metadata about water quality monitoring programs operating in the Southeast. The database design was one of the deliverables for this project, so I decided to look for a better database documentation solution. While reviewing various options, from shareware programs to major commercial packages, I discovered DBScribe from LEADUM Software (http://www.leadum.com/products.php?prod_type=DBScribe). This software analyzes every detail of the database and generates comprehensive documentation in MS Word, HTML or Microsoft Help format, complete with cross-references, lists of dependencies and navigation links. Any attribute and table annotations are automatically used as descriptions, and additional descriptions can be added using an object browser interface after the analysis phase is complete. Details to include in the report can be customized at several levels, and then saved in XML format to

re-use when regenerating documentation after changes to the database structure. Sensitive details (e.g. logins, database configuration, etc.) can be excluded from the report for security reasons. The MS Word report format includes a table of contents and document links, which are automatically converted to hyperlinks and bookmarks when converted to PDF format by Adobe PDF Writer.

DBScribe proved very useful for our NPS project, generating hundreds of pages of very readable (and attractive) documentation in a few minutes, so we're now using it to document all GCE production databases. Versions are available for all major RDBMS systems, priced from $39-$99 depending on database platform. A fully-functional 30-day trial is also available for evaluation.