Abstract

The CenSSIS Citation Index System is designed to serve as a central repository for data and the citations to scholarly publications and research-related materials, generated by CenSSIS researchers and their affiliates. The database will be accessible via the web. Both the submission of data and the querying of the database will be web-based. Levels of access control are introduced. The System is composed of a front-end and a back-end. This poster will give an update on the status of the development of the system.

Accomplishments

This year our accomplishments include:

- Automation tool developed on data submission.
- Populating the system with CenSSIS data using automation tool.
- System upgrade.

Challenges and Significance

One problem when managing CenSSIS data is the diversity of the research being done, which makes it very difficult to find CenSSIS data in a particular web repository. The CitationIndexing system serves as a web-based repository that is available to all CenSSIS researchers. It creates a unified interface for all of the research conducted in the subsurface sensing fields. Each research group will have a central repository in which all can submit and check citations/data generated by themselves or by colleagues within the Center. This will help improve collaboration of different research groups, as well as to facilitate individuals to efficiently obtain material generated within CenSSIS.

Technical Approach

As Figure 1 shows, each component of the Citation Index System consists of three modules:

- Document Submission Module
- Document Update Module
- Query Process Examples

The front-end of the CenSSIS Citation Index System will contain only CenSSIS-related research and publications. It contains an index to peer-reviewed papers, theses, books, preprints, abstracts, datasets, posters, software, code, algorithms and technical reports. The front-end of the system will also allow for web searches to be performed in two ways: either in a manner very similar to Google Scholar or allow for the viewing of the actual data for viewing/downloading.

The back-end modules are implemented using JAVA also. All three front-end modules were implemented using JAVA servlets. A JAVA servlet is a JAVA program that is capable of generating an HTML document to be displayed in a web browser. This can be sent by the web server to the user’s browser, and can then process this data. Querying the database is available to the general public, but document submission is a protected process so as to ensure that only CenSSIS-related documents are included. As with the submission process, a servlet generates a query to gather data. Finally, the security module allows only authorized users to submit documents.

The digital libraries used by the meta-search engine can be modified to add or remove them accordingly to CenSSIS. The system provides a web search engine that may help in finding more information about the desired document and its availability in other digital libraries. The User Account Manager module is integrated with the database Update module and can be reached through the Manage Users mode. It provides information about the registered users of the CenSSIS Citation Index System, as well as user account administration.

State of the Art

The CenSSIS Citation Index System is designed to serve as a central repository for data and the citations to scholarly publications and research-related materials, generated by CenSSIS researchers and their affiliates. The database will be accessible via the web. Both the submission of data and the querying of the database will be web-based. Levels of access control are introduced. The System is composed of a front-end and a back-end. This poster will give an update on the status of the development of the system.

Web Search Features

The system provides a web search engine that may help in finding more information about the desired document and its availability in other digital libraries if the document is not available in the current system. Otherwise, the document itself is returned and can be viewed/downloaded. The search engine will be a meta-search engine that will look in other digital libraries and present the results to the user. Candidate digital libraries of this meta search engine include:

- DEBF Bibliography: http://www.informal.ru-ir.de/lavb/db/index.html
- CiteSeer: http://citeseer.nj.nus.edu/
- Google Scholar: http://scholar.google.com

The digital libraries used by the meta-search engine can be modified to add or remove them accordingly to CenSSIS research interests.

References


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