Computer science professors receive NSF grant for improving digital libraries

Texas A&M University

Computer science and engineering professors Richard Furuta and Frank Shipman were recently awarded a National Science Foundation Division of Undergraduate Education (NSF DUE) grant to develop tools that will allow for easier curation of the National Science Digital Library (NSDL).

Their project, “NSDL Service to Manage Distributed Collections,” will be funded through 2013.

“This project looks at developing new tools that will help curators maintain distributed digital libraries,” Shipman said. “Distributed digital libraries are collections of metadata from resources that are spread out over the web or Internet. The resource itself is controlled by some other entity. Problems arise when the resources are changed by their respective owners. These changes are often done without the knowledge of the curators of the digital library, and results in much time being spent by the people who maintain the digital library to figure out if the resource is still relevant.”

This scenario rarely happens in a traditional library, even with regard to digital media, because contracts between the owners of the outside databases and the libraries ensure for some sort of quality control and reliability. Another goal is to allow the moderators of these collections to work more efficiently.

Furuta said, “We will also make the job easier for the curators of these collections. Often the distributed digital library is maintained by volunteers who have a large area to cover, like data for the entire College of Engineering, and we are particularly interested in trying to find ways to cut down on the amount of work that they have to do, so that they can focus on the things that require their attention.”

This grant is the third currentlyactive award in a series of grants that Furuta and Shipman have received from the NSF in order to develop tools for the NSDL. This research is part of a continuing large scale effort to provide a national resource for science, technology, engineering and math education from preschool through life-long learning.

Furuta’s research interests are digital libraries, hypertext systems and models, computer-human interaction, and digital humanities. Shipman’s research interests include sense making, the design of intelligent user interfaces, hypertext, the use of computers and education, multimedia, new media, and computer-human interaction.

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