

Digitizing makes government reports more available to public

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TRAIL, a national collaborative digitization and preservation project that was launched at the UA, is making available to the public millions of pages of federal documents that have previously been classified or unavailable. Historically, the reports served to inform research institutions and industry leaders about important developments in government-funded research. (Photo courtesy of TRAIL, National Bureau of Standards Electronic Automatic Computer)

(PhysOrg.com) -- The University of Arizona Libraries is part of a growing, nationwide collaboration working to document, digitize and make publicly available technical reports commissioned by the federal government before about 1975.

Behind secured doors on the fifth floor of the UA's Main Library, a team of University of Arizona graduate students and librarians has been processing and cataloging millions of pages of government technical



reports.

The team is at the core of the Technical Report Archive and Image Library, or TRAIL, a nationwide network of institutions launched years ago by UA librarians to preserve and digitize science and engineering reports commissioned by several federal agencies before about 1975.

It was during the early part of the last decade that librarians such as Maliaca Oxnam became increasingly troubled that such reports were difficult for researchers to find and access.

The technical reports represent "the collective knowledge we have about the history of science and engineering-related research," said Oxnam, an associate librarian with the UA Libraries. "It was becoming more and more challenging for people to get access to this work."

Since its origins, TRAIL has gathered more institutional partners, awards and nationwide recognition for an effort that has resulted in more than 23,300 reports – nearly 2 million pages – made accessible to the public, often for the first time.

Never before has the public had such access to these reports – ranging between a few dozen pages to as many as 900 pages long – many of which were formerly classified or passed only between the hands of government officials and scientists.

"For some of these reports, this is the first time researchers have been able to search for and access the report without extensive mediation and assistance from librarians or from the government agencies who issued the reports," said Oxnam, who led the original vision that resulted in TRAIL.

"Stats from just the pilot site showed extensive usage from all around the



world – and we've received reference questions for hard-to-find items – and comments of appreciation – from all over the U.S. and as far away as Italy and Greece," she added.

For some of the early report series, no coding or tracking system existed. This resulted in pockets of reports distributed throughout libraries across the country.

"To add to the challenge, for some series little information was available about how many and which reports were distributed to the public over time making it challenging to ensure that TRAIL acquired and digitized all reports so that the series were complete," Oxnam said.

"We knew there was a demand for this information, but we didn't know the real extent of desire for this work. TRAIL's success been a little overwhelming," Oxnam said.

Overwhelming and rewarding.

Under Oxnam's leadership, TRAIL began with a small group of librarians and eventually become part of the Greater Western Library Alliance, a regional consortium of libraries.

TRAIL has since become part of the Global Resource Network at the Center for Research Libraries, or CRL. With CRL now holding organizational oversight of TRAIL comes a new phase in the grassroots movement to gather, document, catalog and digitize technical reports.

Marda Johnson, the digital projects coordinator for the UA Libraries, has spent the last several years heading up the cataloging and digitization for TRAIL, all of which UA manages.

"All of the cataloging is done here at the UA, mostly with student help,"



Johnson said. "It's descriptive information – anything that anyone can plug into a search."

Among the agency reports being cataloged and digitized are those from the U.S. Atomic Energy Commission, U.S. National Bureau of Standards, the Energy Research and Development Administration and the U.S. Bureau of Mines.

Johnson has most often worked with UA graduate students to catalog the reports and send the information to OCLC, a global nonprofit library and research organization, enabling libraries around the country to add information to their library catalogs.

For digitization and to ensure long-term storage of the digital files, the UA works with the University of Michigan Libraries, Google, the University of North Texas and the HathiTrust Digital Repository.

In addition to the digital versions, TRAIL ensures a physical copy of each report is retained in an archive held at Oklahoma State University.

The UA also sends any necessary material to the University of North Texas for storage and the University of Michigan and Google to work on the digitization processes. Also, the UA maintains microform, print and online versions of technical reports, which are searchable via the UA Libraries catalog.

For its mission and efforts, TRAIL received the American Library Association's 2010 "Documents to the People" award, which goes to an individual, institution or library that "has most effectively encouraged the use of government documents or information in support of library service," according to the ALA.

"There is just a wealth of government scientific research out there, but



huge chunks of it never made the transition to online library catalogs," said Jez Gaddoura, a UA library specialist who began working on the project through a graduate assistantship in 2008.

"So you have to be friends with a very good reference librarian to find it all," he added.

To name a few examples, reports detailed and documented research and processes related to nuclear physics, investigations of coals and their potential practical application in the early 20th century and the discovery of the "element 94," which was later named plutonium.

Reports explain experiments conducted at the Manhattan District and Los Alamos National Lab.

Some detailed ways to address water shortages, how to appropriately and safely transport radioactive materials and develop synthetic fuels.

Other documents detail war propaganda, describe the distribution of national resources, explain the construction of water desalination plants, reveal fire safety investigations into consumer fabrics and report improvements to the energy efficiency of buildings and homes.

Along with CRL's oversight, TRAIL has more institutional backing to expand its offerings.

Some of the most recent institutions to get involved include Arizona State, Baylor, Harvard, Iowa State, Princeton and Rice universities. Also the University of California, San Diego; University of Notre Dame; University of Utah and the University of Washington are newly involved.

And in the future, TRAIL will continue to expand its digitization with



intentions to expand its offerings of reports including items requiring special handling for digitization, such as those containing local and regional maps in the U.S., Oxnam said.

"It has gotten to the point now that institutions are voluntary stepping forward to participate," she said.

"This project is an excellent demonstration of the changing nature of collaborations," Oxnam added. "People contribute what they can when they can."

Chiefly, the importance in TRAIL's work is in preserving foundational scientific research while placing it in the hands of contemporary scientists and curious-minded individuals.

Some of the research, which may have been before its time, is now seeing a resurgence of interest, particularly given more integrated and highly technical science and the borderless communication ease the Internet can bring.

"If you are trying to find a solution to a particular problem, there is a chance that someone has written a technical report on it," said Gaddoura, who earned his UA master's degree from the School of Information and Library Sciences and certification from the digital information management program in August.

Take the moon base for example.

The Wall Street Journal in mid-December published an <u>opinion piece</u> written by author and former NASA engineer Homer Hickam suggesting that now is the time to seriously consider introducing a lunar base.

Incidentally, a report issued in 1960 that provided a conceptual design



for the construction of a power plant on the base that would then power the station.

"That was actually before the first person was in space and long before the first moon landing," Gaddoura.

"So there is access to information about experiments performed under conditions that cannot or may not be replicated now because of rules and regulations," he added. "That data might still be relevant today."

Provided by University of Arizona

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