



Department of Energy

Technical Information Management Program (TIMP)

**Expanding the Energy Science Universe**





# Technical Information Management Program (TIMP)

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## Program Update and FY2000 Budget Briefing

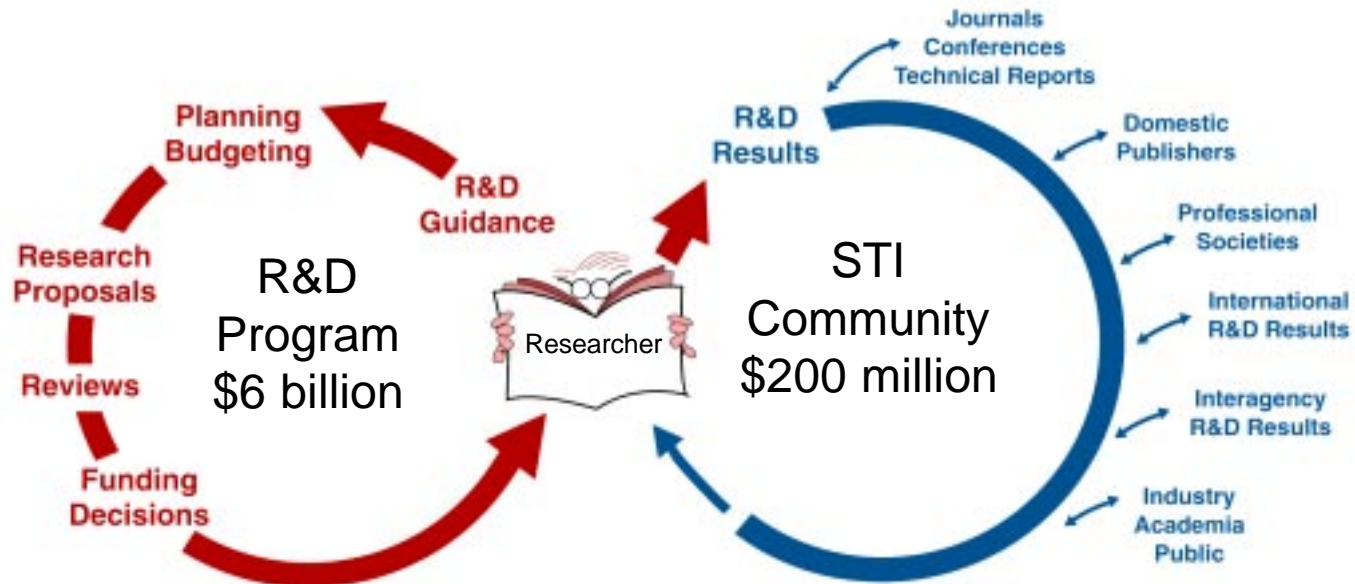


# Technical Information Management Program (TIMP)



## Our Mission: Supporting the Science Mission

- Department of Energy invests \$7 billion annually in R&D
- Principal output from R&D is scientific and technical information
- Scientific and technical information (recorded in journals or reports) serves the science mission and researcher needs
- Using Information Age technology, **TIMP is reaching more people—at a lower cost per person served**



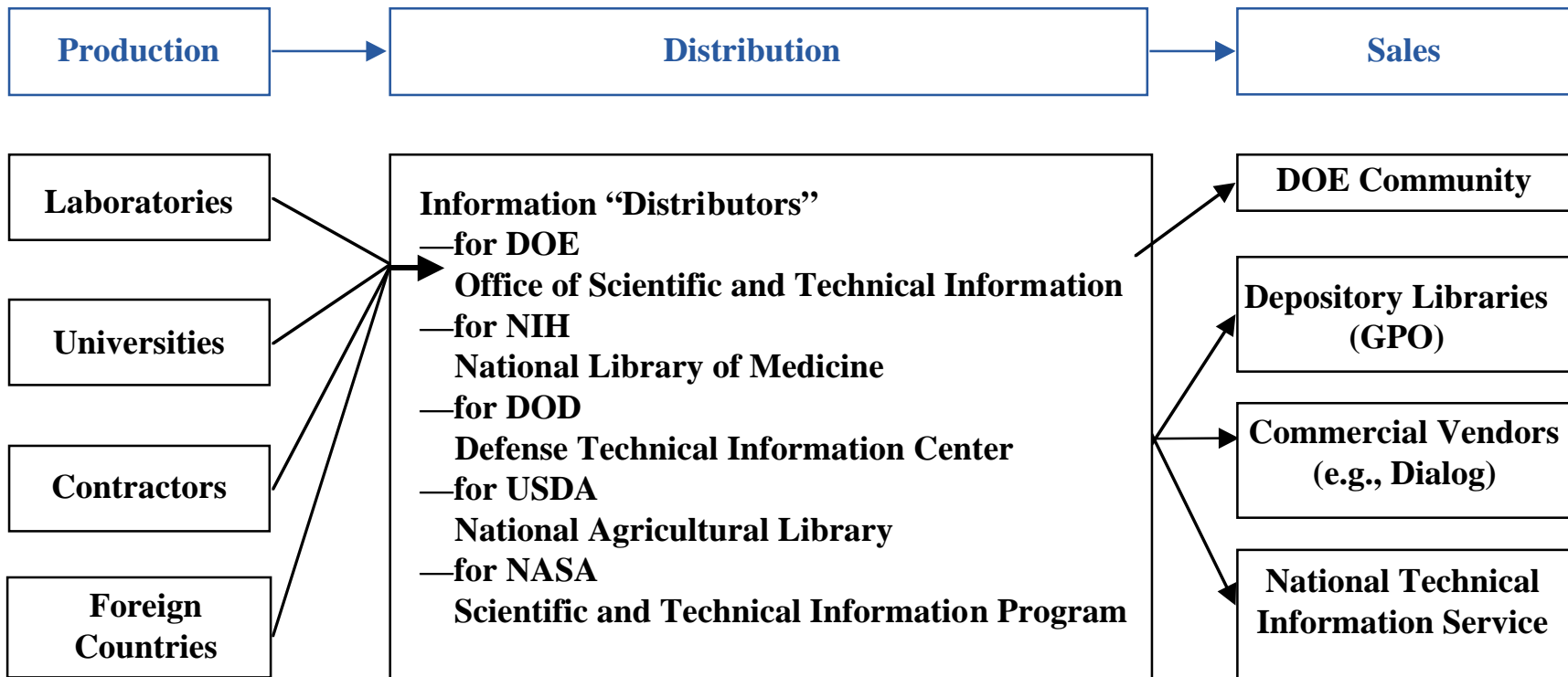


# Technical Information Management Program (TIMP)



## Components of the Information Business

### Analogous to Manufactured Goods

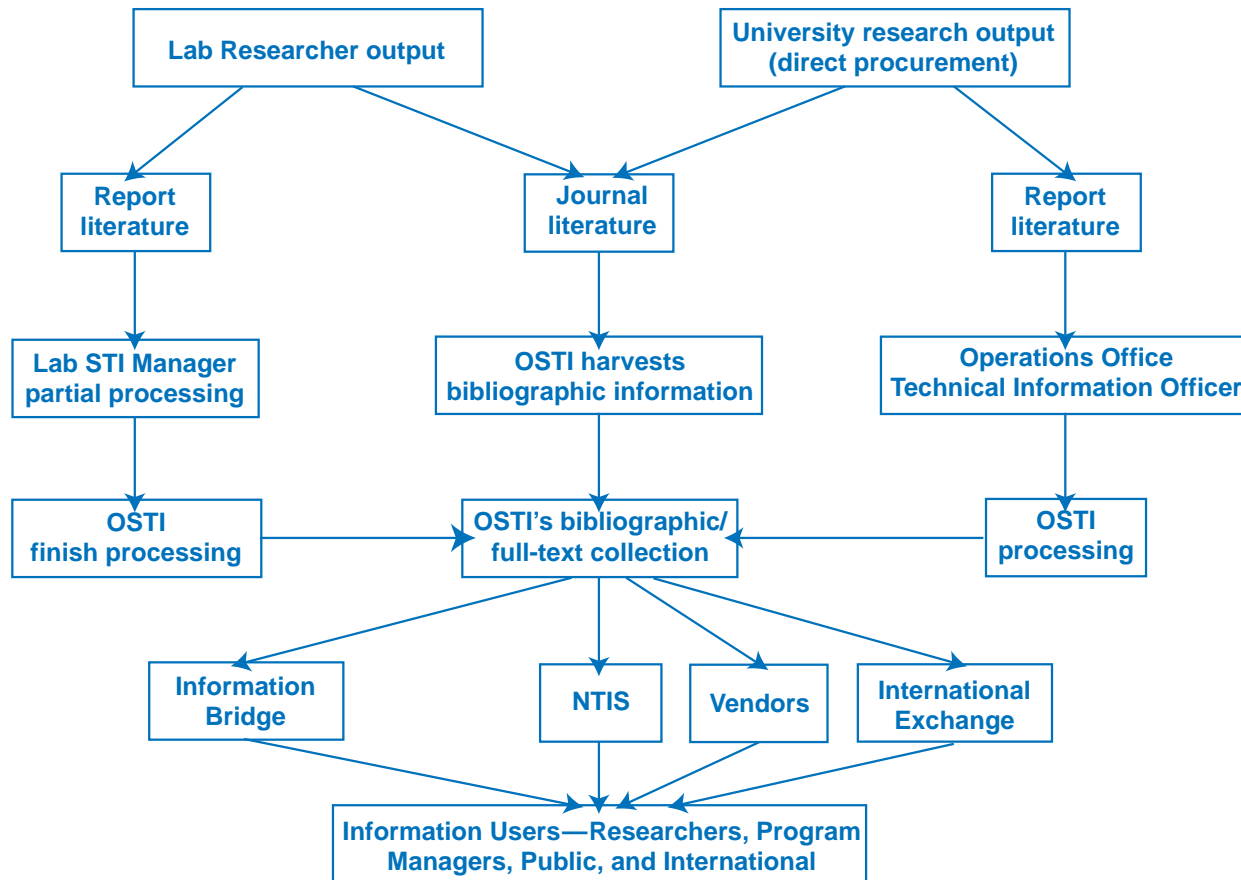




# Technical Information Management Program (TIMP)



## Information Flow





# Technical Information Management Program (TIMP)



## What We Do

### Using Technology to Support the Science Mission

Information Age technology is revolutionizing the way TIMP supports the science mission by bringing science information to the desktop. TIMP . . .

- Leads scientific and technical information program, policies, and business practices costing \$200 million at multiple sites;
- Develops, operates, and maintains DOE's Virtual Library of Energy Science and Technology (EnergyFiles);
- Collects, preserves and disseminates full-text R&D technical reports via the Information Bridge;
- Produces electronic summaries and bibliographic records of science journal articles containing DOE-sponsored R&D;
- Connects multiple sources of electronic information;
- Serves as a locator to decentralized collections at Labs;
- Provides an electronic archive;
- Manages the world's most comprehensive collection of classified and sensitive energy-related information—well-positioned to support the Department's classified technical information management;
- Manages classified information exchange with DOD; and
- Gains access to 80,000 foreign research summaries per year.

Result—Information delivered to the desktop, reaching thousands more people—at a lower cost per person served.





# Technical Information Management Program (TIMP)

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## What We Do (cont'd)

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### Supporting the National Security Mission

Repository for Classified Information

- 100,000 citations
- Remotely accessible

Classified Databases

- Arms control and disarmament
- Nuclear explosion containment
- DOD classified database

Support to the Department's Classified Technical Information Management

- Archiving
- Knowledge capture
- Retrieving
- Sharing



# Technical Information Management Program (TIMP)



## How We Differ from NTIS

- FY 1999 House Appropriations language incorrectly cites “redundancy” between DOE and NTIS databases
- TIMP and NTIS Directors jointly refuted “redundancy” claim outlining complementary, not duplicative, functions
- TIMP fulfills DOE’s obligation (as all federal agencies are required under the American Technology Pre-Eminence Act) to provide information to NTIS
- TIMP collects, annotates, and disseminates ~135,000 technical reports or research summaries from more than 7,000 separate research entities
- NTIS is not funded to undertake these activities; it combines DOE’s information with 80,000 items from other federal agencies and makes the collection available to U.S. industry, academia, and the public
- TIMP performs other functions not provided by NTIS—foreign information exchange agreements, classified/sensitive information exchange and repository, and DOE technical information policy and standards facilitation and coordination





# Technical Information Management Program (TIMP)

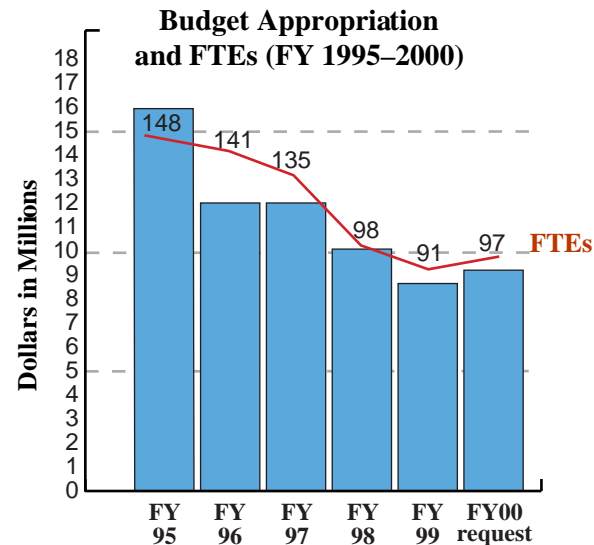


## Resource History

- Program funding and staffing down 46 percent since 1995
- Reductions have required both federal and contractor layoffs
- Some of OSTI's mission has been preserved by labor-saving technology
- FTE losses, without funds to support new hires, have caused significant skills imbalance
- Skills imbalance has been exacerbated by rapid changes in information technology
- FY 2000 request represents a cost of less than 0.2 percent of DOE's total R&D budget

**FY 2000 President's Budget**  
(In Thousands)

	FY 1998 Actual	FY 1999 Actual	FY 2000 Request
Appropriation	\$10,100	\$8,600	\$9,100
Less: General Reduction	(100)	—	—
<b>Total</b>	<b>\$10,000</b>	<b>\$8,600</b>	<b>\$9,100</b>





# Technical Information Management Program (TIMP)



**FY2000**

## Functional Breakdown of TIMP Resources

1. Collecting, Preserving and Disseminating STI Reports	\$1.6 million/19 FTEs
2. Journal Abstracting and Indexing, E-Journals	\$1.7 million/17 FTEs
3. Re-engineering and New Systems Development	\$1.6 million/16 FTEs
4. Computer Operations/Infrastructure	\$1.5 million/15 FTEs
5. Classified Information Program/Operations	\$0.7 million/7 FTEs
6. International Information Exchanges	\$0.6 million/6 FTEs
7. STIP Planning and Coordination	\$0.5 million/ 7 FTEs
8. Facility Management and Administration	\$0.9 million/ 10 FTEs
<b>Total</b>	<b>\$9.1 million/ 97 FTEs</b>



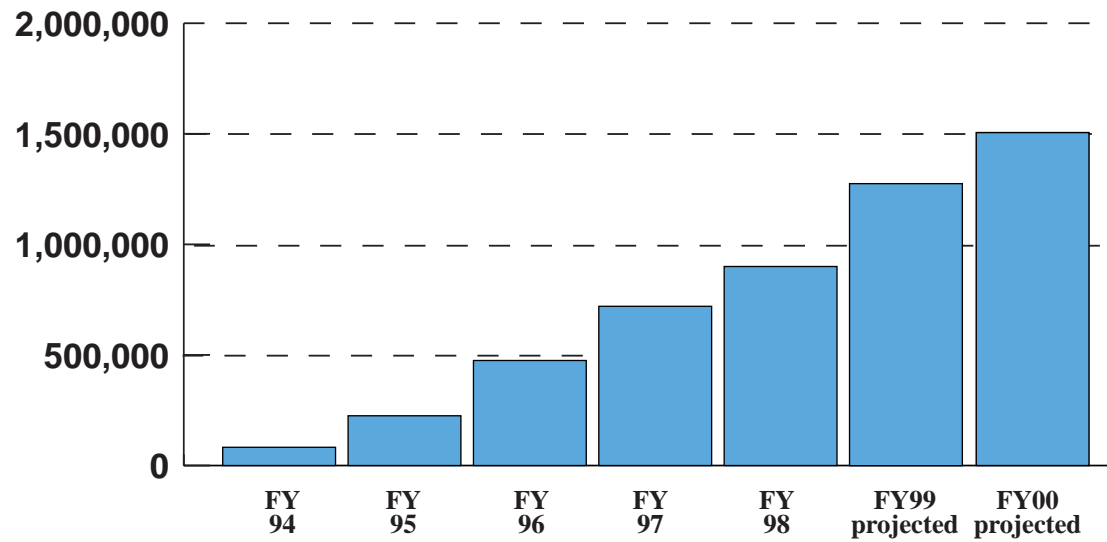
# Technical Information Management Program (TIMP)



## Accomplishments . . .

**OSTI has radically transitioned its services to meet these challenges**

Internet Accesses to OSTI Products





# Technical Information Management Program (TIMP)



## STIP—A DOE Complex-Wide Collaboration

(<http://www.doe.gov/stip>)

The Scientific and Technical Information Program (STIP) Partnership is a complex-wide collaboration working together to lead DOE in the Information Age. Partners include all the DOE national laboratories, other major contractor facilities, and Headquarters programs and field offices. STIP provides the infrastructure within the Department to coordinate the information activities of the Department and facilitate information access.

The screenshot shows the STIP website interface. On the left is a vertical navigation menu with orange and yellow background, listing links such as 'STIP Program Overview', 'Policy & Best Practices', 'Goal Workgroups', 'STIP Meetings', 'STICG', 'STI Program Contacts', 'STI Training', 'Electronic STI Exchange Page', 'OSTI Home Page', 'DOE Home Page', 'InForum Home Page', and 'Contacts'. The main content area has a blue header with the U.S. Department of Energy logo and the title 'Scientific and Technical Information Program'. Below the header is a paragraph describing the program's purpose and coordination structure, followed by a row of five circular icons.



# Technical Information Management Program (TIMP)



## EnergyFiles: Virtual Library of Energy Science and Technology

(<http://www.doe.gov/EnergyFiles>)

- Comprised of over 400 digital scientific and technical information collections in 14 energy-related subject categories
- Includes scientific and technical databases, electronic journals and publications, full-text documents, preprints, and conference proceedings
- Includes a language translator to translate scientific and technical information from 10 different languages to English and from English to Spanish or French
- A proof-of-concept distributed search using one search query across 5 databases developed at OSTI, a DOE Environmental Management database, as well as across DTIC, EPA, and NASA databases, will be available in April 1999
- Awarded 1999 Hammer Award

**EnergyFiles**  
Virtual Library of Energy Science and Technology

[EnergyFiles Home](#)  
[What's New](#)  
[R&D Highlights](#)  
[Subject Pathways](#)  
[Virtual Workspace](#)  
[Resource List](#)  
[Contacts/Comments](#)

• [OSTI Home](#) • [DOE Home](#)

### Subject Pathways

These pages contain information collections that reside at remote Web sites in a variety of formats, organized into subject-specific categories called Subject Pathways. Here the concept of one-stop access to and use of widely distributed information provides the foundation for an electronic national library of energy-related science and technology. Each Subject Pathway is preceded by a brief explanation of the type of information found under that specific category.

**Resources by Subject**

- [Biology and Medicine](#)
- [Chemistry](#)
- [Energy Storage, Conversion and Utilization](#)
- [Engineering](#)
- [Environmental Sciences, Safety and Health](#)
- [Fission and Nuclear Technologies](#)
- [Fossil Fuels](#)
- [Geosciences](#)
- [Materials Science](#)
- [Mathematics, Computer and Information Science](#)
- [Physics](#)
- [Plasma Physics and Fusion](#)
- [Power Transmission, Distribution and Plants](#)
- [Renewable Energy](#)
- [Multidisciplinary Databases and Resources](#)

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[OSTI Home](#) | [DOE Home](#)  
Last update: 03/01/99

product of the  
Office of Scientific  
and Technical  
Information

**EnergyFiles**  
Virtual Library of Energy Science and Technology

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[What's New](#)  
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### Distributed Search

This page provides a proof-of-concept for the next phase of the EnergyFiles Virtual Library of Energy Science and Technology development, distributed searching or searching across multiple collections using one search query. The intent of EnergyFiles is to provide energy-related scientific and technical information in an easily accessible format, a widely distributed search capability is key. Several DOE and other governmental databases have been integrated into this proof-of-concept search with additional databases available in the future. Watch this page!

**Hint: Limiting the number of collections searched will return faster results. For search tips and a brief description of the databases please click on the Help button below.**

**Check the collections to search:**

<input type="checkbox"/> DOE Information Bridge	<input type="checkbox"/> DTIC Technical Reports Database
<input type="checkbox"/> DOE OpenNet Database	<input type="checkbox"/> EM Science Research Projects
<input type="checkbox"/> DOE Reports Bibliographic Database	<input type="checkbox"/> EPA Technical Reports
<input type="checkbox"/> DOE R&D Accomplishments Database	<input type="checkbox"/> NASA CASI Technical Reports
<input type="checkbox"/> DOE R&D Project Summaries Database	

Select number of records to retrieve from each collection:

Enter search terms:

[Home](#) | [What's New](#) | [R&D Highlights](#) | [Subject Pathways](#)  
[Virtual Workspace](#) | [Resource List](#) | [Contacts/Comments](#)  
[OSTI Home](#) | [DOE Home](#)  
Last update: 03/01/99



# Technical Information Management Program (TIMP)



## Information Bridge

(<http://www.doe.gov/bridge>)

- 30,000 technical reports (2.5 million full-text pages) accessible and searchable
- Researchers downloading 4,000 reports weekly
- Winner of numerous honors and awards, including a Hammer Award

**Contents**

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a product of the  
Office of Scientific  
and Technical  
Information

**DOE Information Bridge**  
Department of Energy • Government Printing Office

*Bringing DOE Information to your desktop. . .*

The Department of Energy (DOE) welcomes you to the *DOE Information Bridge*. You now have over 2 million full-text pages at your fingertips!

DOE Information Bridge, a component of EnergyFiles, provides free, convenient, and quick access to full-text DOE research and development reports in physics, chemistry, materials, biology, environmental sciences, energy technologies, engineering, computer and information science, renewable energy, and other topics.

DOE is pleased to offer the American Public this new web tool through GPO Access, a service of the Government Printing Office (GPO). Public access to this system is the result of a longstanding



# Technical Information Management Program (TIMP)

## DOE Information Bridge Recognition



	  <p>Yo Students, Teachers, Researchers and Librarians.: Check out Energy's Electronic Bridge to the 21st Century. If you are a student, teacher, researcher, or librarian, you'll love a new Department of Energy Web site, the DOE Information Bridge</p>	 <p>Scout Report Selection</p>
 <p>Pick of the Day Pick of the Week</p>	<p><b>AWARDS</b></p>  <p>DOE Information Management Technical Excellence Award</p> <hr/> <p>Vice President Gore's National Performance Review Hammer Award</p>	 <p><b>Commendation from the Depository Library Council</b> <i>Spring 1998</i></p> <p><i>DEPARTMENT OF ENERGY INFORMATION BRIDGE</i></p> <p>Council commends the GPO and the Department of Energy for providing no-fee public access to the Office of Scientific and Technical Information's "Information Bridge" through GPO Access. This partnership between a major technical agency and GPO provides a convenient and cost-effective successor to the DOE depository microfiche collection.</p>



# Technical Information Management Program (TIMP)

## DOE Information Bridge Recognition (cont'd)



- Commendation of the GPO Depository Library Council to GPO and DOE for providing a no-fee public access
- *Yahoo!* Pick of the Day and Pick of the Week, April 30, 1998 (in Science: Energy)
- *The Scout Report* (Univ. Wisconsin) selected resource for Science and Engineering
- *Global SchoolNet*, Global SchoolNet Foundation, listed as educational opportunity
- *DOE This Month*, May 1998, page 11, “Building a Bridge to the 21st Century”
- Citation in the Government Executive publication *The Federal Technology Source: 1998-99*
- *D-Lib Magazine* (The Magazine of Digital Library Research), May 1998, Clips & Pointers
- *ER-News*, May–June 1998, Vol. 8, No. 4, “OSTI’s Infobridge-Rich New Cyberian Resource . . .”
- DOE Information Quality Award–1998
- Hammer Award–1999





# Technical Information Management Program (TIMP)



## PubSCIENCE

(<http://swa117.soph-ware.com-idea/demo/idea.html>)

- Concept for electronic journal citations with hypertext linkages to on-line full-text science journals
- A physical sciences service similar to the National Library of Medicine's PubMed in life sciences
- Will strengthen the foundation of the Virtual Library of Energy Science and Technology
- Modernizes an OSTI core mission

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**PubSCIENCE**

Providing the Department of Energy access to a growing collection of  
Scientific and Technical Publishers and Journals

[| First-time User |](#) [| Registered User |](#)

 [Maintained by the U.S. Department of Energy](#)  
[Office of Scientific and Technical Information](#)



# Technical Information Management Program (TIMP)

## R&D Accomplishments

(<http://www.doe.gov/accomplishments>)



Research and Development
R&D Accomplishments
of the U.S. Department of Energy

Home

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Title List

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Disclaimer

Office of Scientific and Technical Information

Sponsored and maintained by the Department's Office of Scientific and Technical Information (OSTI), this database provides a central forum for information about the outcome of **past** DOE R&D that has had significant economic impact improved people's lives, or been widely recognized as a remarkable advance in science. For information about **current** research highlights and research program progress see [EnergyFiles R&D Highlights](#).

### Physics research advances medicine

Computed Axial Tomography (CAT scanners) and Magnetic Resonance Imaging devices (MRI scanners) have revolutionized diagnosis of disorders of soft tissues, especially disorders of the head and brain. Rare is the shock-trauma unit or major neurological clinic that does not have one of these machines on-site or at its immediate disposal. The sophisticated mathematical techniques used to reconstruct the images of organs and tissues that doctors see with these amazing diagnostic instruments—as well as in positron emission tomographs discussed below—originated in particle detection methods developed by high-energy physicists.

Alan Cormack, a high-energy physicist at Tufts University, shared the 1979 Nobel prize in physiology and medicine for his key work in developing these methods for CAT scanners which are widely regarded as the most significant advance in medical radiography since the 1895 discovery of x-rays. His physics research was directed towards replacing bubble chambers and similar particle detectors with digital electronic instruments.

Sigma SP, a new GE MRI system

Full Report  
7907 K

This fully searchable full-text Web application of DOE R&D Accomplishments is currently populated with only a few representative accomplishments to demonstrate the concept and capabilities of the database. Continued development and growth will occur as additional accomplishments are submitted by the DOE Scientific and Technical Information Program (STIP) community. Comments may be provided to [valerie.allen@comail.osti.gov](mailto:valerie.allen@comail.osti.gov)

[Instructions](#) for Submitting Accomplishments to this Database



# Technical Information Management Program (TIMP)



## Current Awareness Electronic Publications

(<http://www.doe.gov/html/osti/products/publics.html>)

Provides electronic access to current energy-related, subject specific collections of bibliographic citations with abstracts compiled from a variety of available resources. Links to full text of bibliographic records will soon be available via EnergyFiles Web site.

### Title List:

- Advanced Coal Technologies (FET)
- Advanced Oil and Gas Recovery Technologies (OGT)
- BioFuels Energy Systems (BMF)
- BioPower Energy Research (BMP)
- Concentrating Solar Power (CSP)
- Environmental Management Technical Reports Database (EMTRD)
- Geothermal Energy (GET)
- Hydrogen Energy Research (HYD)
- Nuclear Reactor Safety (NRS)
- Nuclear Reactors Built, Being Built, or Planned (DOE/OSTI-8200)
- Photovoltaic Energy: Electricity from the Sunlight (PHV)
- Radioactive Waste Management (RWM)
- Superconductivity for Electric Energy Systems (SUP)
- Wind Energy (WE)



# Technical Information Management Program (TIMP)



## DOE R&D Project Summaries

(<http://www.doe.gov/rnd/dbhome.html>)

- A publicly available Internet system that describes over 14,000 DOE R&D projects since 1995 and provides accountability for R&D expenditures
- Awarded 1999 Hammer Award

**Menu**

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**Department of Energy**  
**Research Development**

### DOE R&D Project Summaries

Access to over 14,000 R&D projects currently ongoing within the DOE can be found within this application. Projects pertaining to Departmental activities in Energy Research, Fossil Energy, Environmental Management, and Energy Efficiency and Renewable Energy, are just some of the R&D disciplines found in the database. This application was developed by the [Office of Scientific & Technical Information](#) as a means for the DOE to educate and inform the general public of its R&D activities.

**Easy Search**

Text Search:    
for the word or phrase:   
Number of Projects to View:



# Technical Information Management Program (TIMP)

## International Science Results



- OSTI acquires 80,000 summaries of foreign research results per year from the Energy Technology Data Exchange (ETDE) and the International Nuclear Information System (INIS)
- OSTI is working to bring full-text capability to these sources of information
- OSTI is the U.S. Representative/Liaison for ETDE and INIS, serving on the ETDE Executive Committee and as the U.S. INIS Liaison Officer
- Energy Secretary Richardson has repeatedly acknowledged the importance of international cooperation and the global nature of the energy situation: “The international aspect of our work at the Department of Energy is a high priority for me.”



<http://www.iaea.or.at/programmes/inis/inis.htm>



<http://www.etde.org>



# Technical Information Management Program (TIMP)

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## Where We're Going

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### Legacy Information in InfoBridge

OSTI is collaborating with DOE National Laboratories and research facilities to populate the DOE Information Bridge Web site with their legacy information. Through these and new collaborations, it is hoped that this web site will ultimately offer a comprehensive collection of legacy reports back to the Manhattan Project. Laboratories currently providing digital legacy for inclusion in the system include the Fermi National Accelerator Laboratory (Fermilab), Los Alamos National Laboratory and Amarillo National Resource Center for Plutonium. Additionally, individual legacy information is being added upon request by the DOE community.



# Technical Information Management Program (TIMP)

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## Where We're Going (cont'd)

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### PubSCIENCE Expansion

OSTI will bring electronic scientific journals to the researcher's desktop by offering access to a growing collection of journal literature. Most researchers and academicians rely heavily on journal publications to keep abreast of advancements within their discipline and to integrate relevant results into their own work. OSTI will increase the usefulness of these scientific resources by making available, through one integrated user interface, online journal citations and full-text information. Building upon OSTI's traditional mission, PubSCIENCE is being designed and expanded with an eye toward its evolution into a notable product of worldwide recognition, which will benefit researchers, academicians, and the American public as well.



# Technical Information Management Program (TIMP)



## Where We're Going (cont'd)

### National Library Foundations

Through the EnergyFiles Virtual Library of Energy Science and Technology we have established a digital library of over 400 worldwide energy science and technology collections, databases, electronic journals, preprints, conference proceedings, and related resources such as standards and regulatory information. Collaborative agreements and new technologies will support the continued growth of the Virtual Library of Energy Science and Technology. This will make the information more accessible and more useful than that housed at a physical library since the information collections may be accessed from any location with Internet access. In a major advancement this year, search engine technology is being integrated into the virtual library; this will allow users to search up to nine information collections residing at remote locations using one search query and one user interface. Integrated results from these diverse resources will be returned, greatly enhancing the overall use and efficiency of the library, and will lead to establishing the foundation for a National Library of Energy Science and Technology.

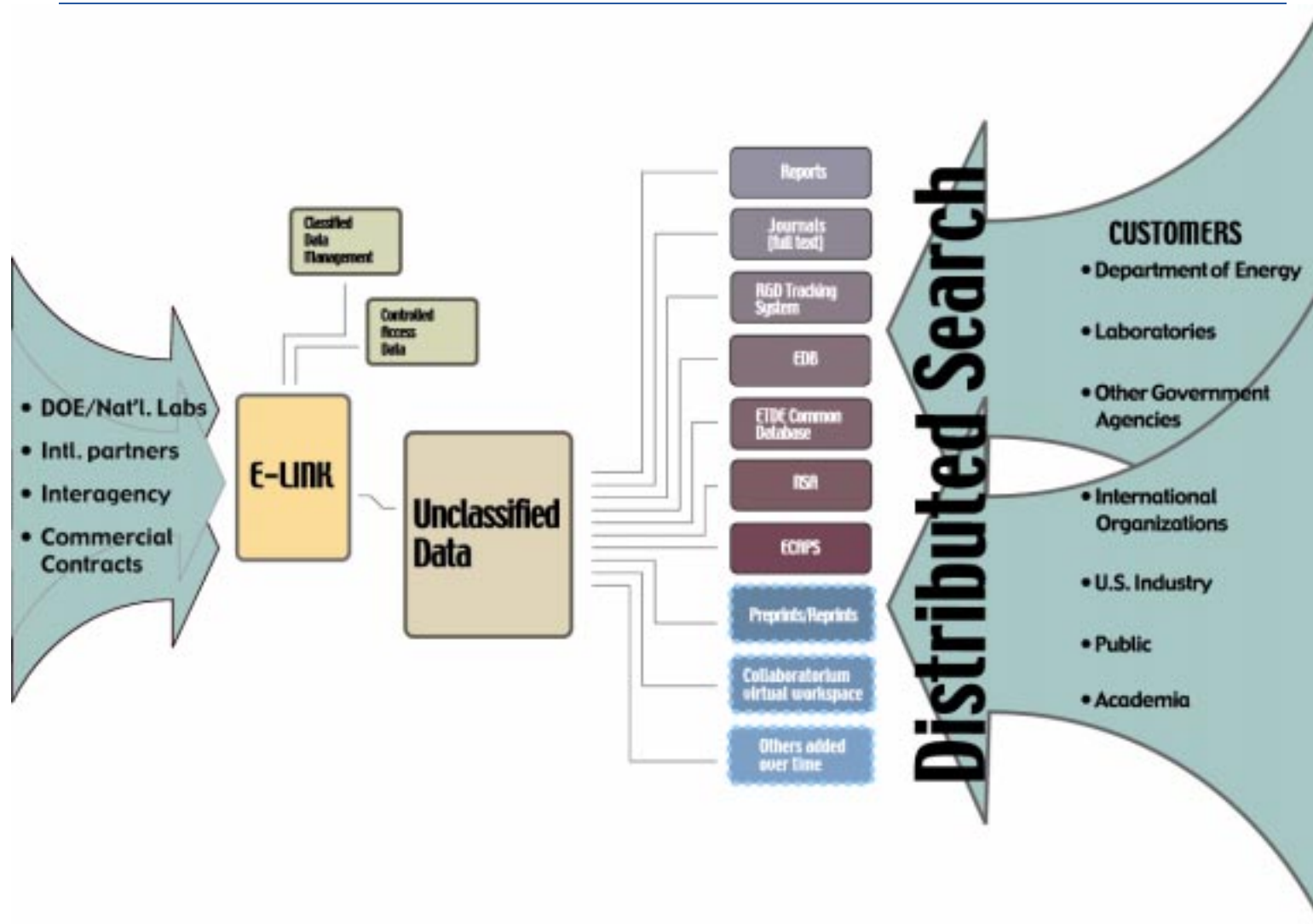




# Technical Information Management Program (TIMP)



## National Library Model





# Technical Information Management Program (TIMP)



## Benefits to U.S. Taxpayers

- Electronic, searchable access to knowledge and technology emanating from DOE's annual \$7 billion R&D investment and its 50-year repository of technical information
- Accountability for research expenditures through systems that track R&D projects and eliminate redundancy of R&D activities
- Service to more customers at less cost and improved researcher productivity via negotiated electronic journal access for the DOE complex
- U.S. access to foreign research results and the avoidance of costs that would be needed to replicate those R&D efforts
- Improved cost efficiency in DOE's \$200 million expenditure on the Department's scientific and technical information program through coordination and implementation of standards, procedures, and best business practices