



**Office of Scientific and Technical Information
U.S. Department of Energy**



Tapping the Information Age to Fuel the Science Mission

**Chuck Morgan, Deputy Director/Manager
Office of Scientific and Technical Information
Nov. 9, 1999**



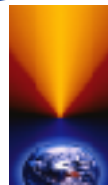
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U.S. Department of Energy Office of Scientific and Technical Information Scientific and Technical Information Program

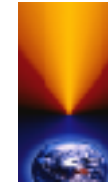
"A Complex-Wide Collaboration to Lead DOE in the Information Age"



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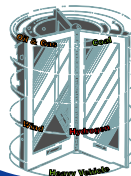
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Digital access to active DOE R&D projects

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Electronic Current Awareness Publications (ECAPS)

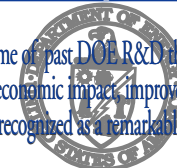


Subject-specific citations from a variety of sources with abstracts and full text, when available

www.osti.gov/ecaps/

DOE R&D Accomplishments Database

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



www.osti.gov/accomplishments/



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“For science to rapidly advance at the frontiers, it must be open. And shared knowledge is the enabler of scientific progress.”



U.S. Secretary of Energy Bill Richardson
Fermi Awards Presentation
Washington, D.C.
April 16, 1999

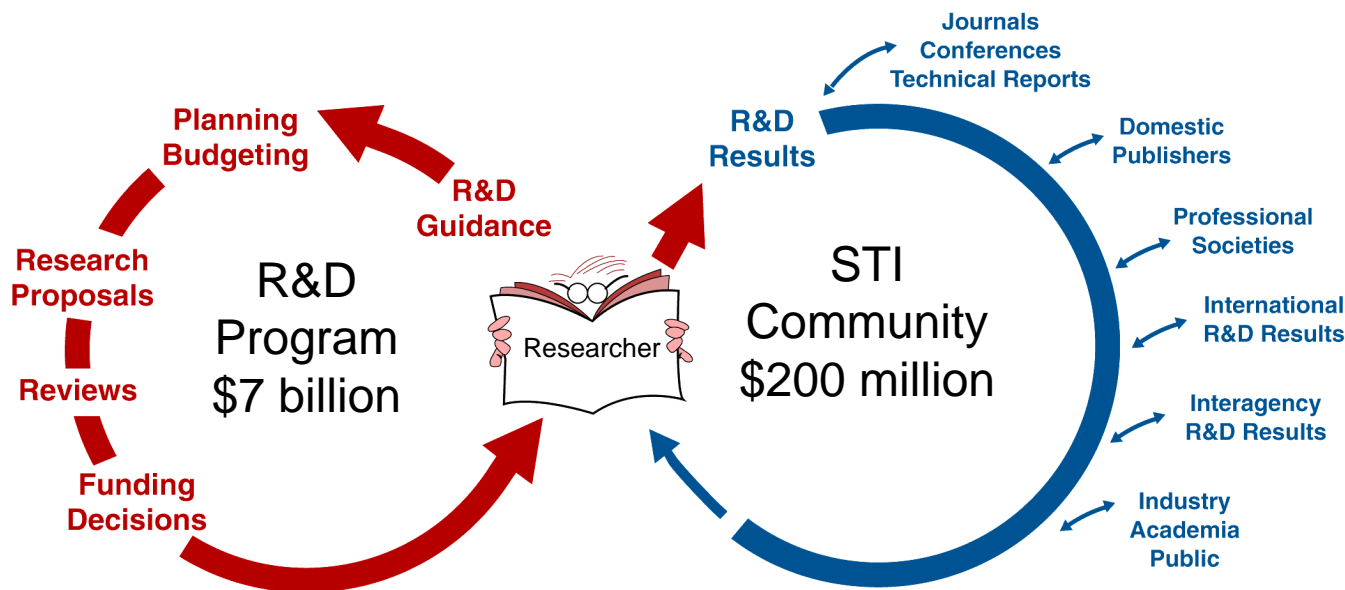


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Our Mission: Supporting the Science Mission

- 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, **STI is reaching more people—at a lower cost per person served**

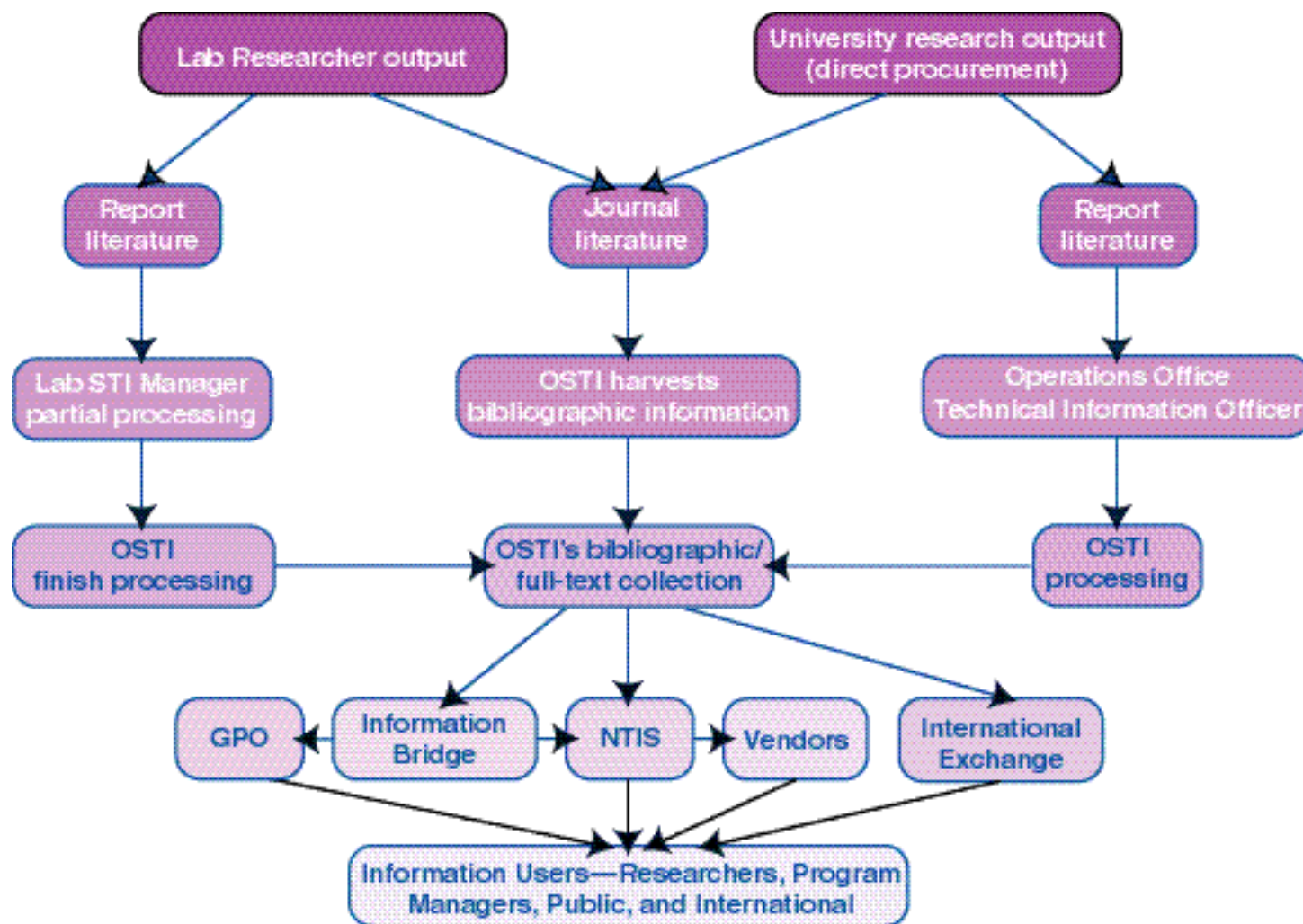




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Information Flow





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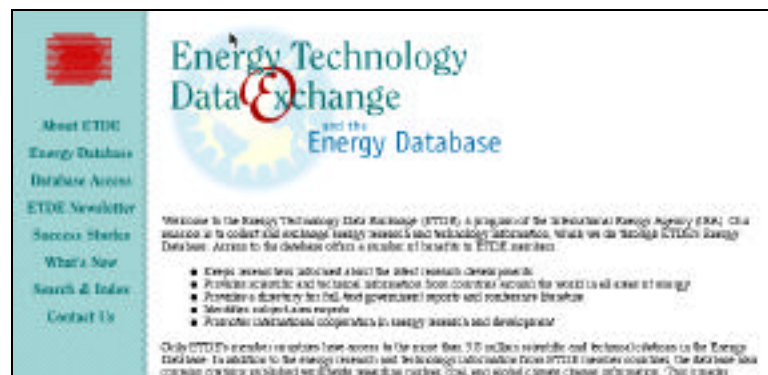


International Science Results

- 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.”



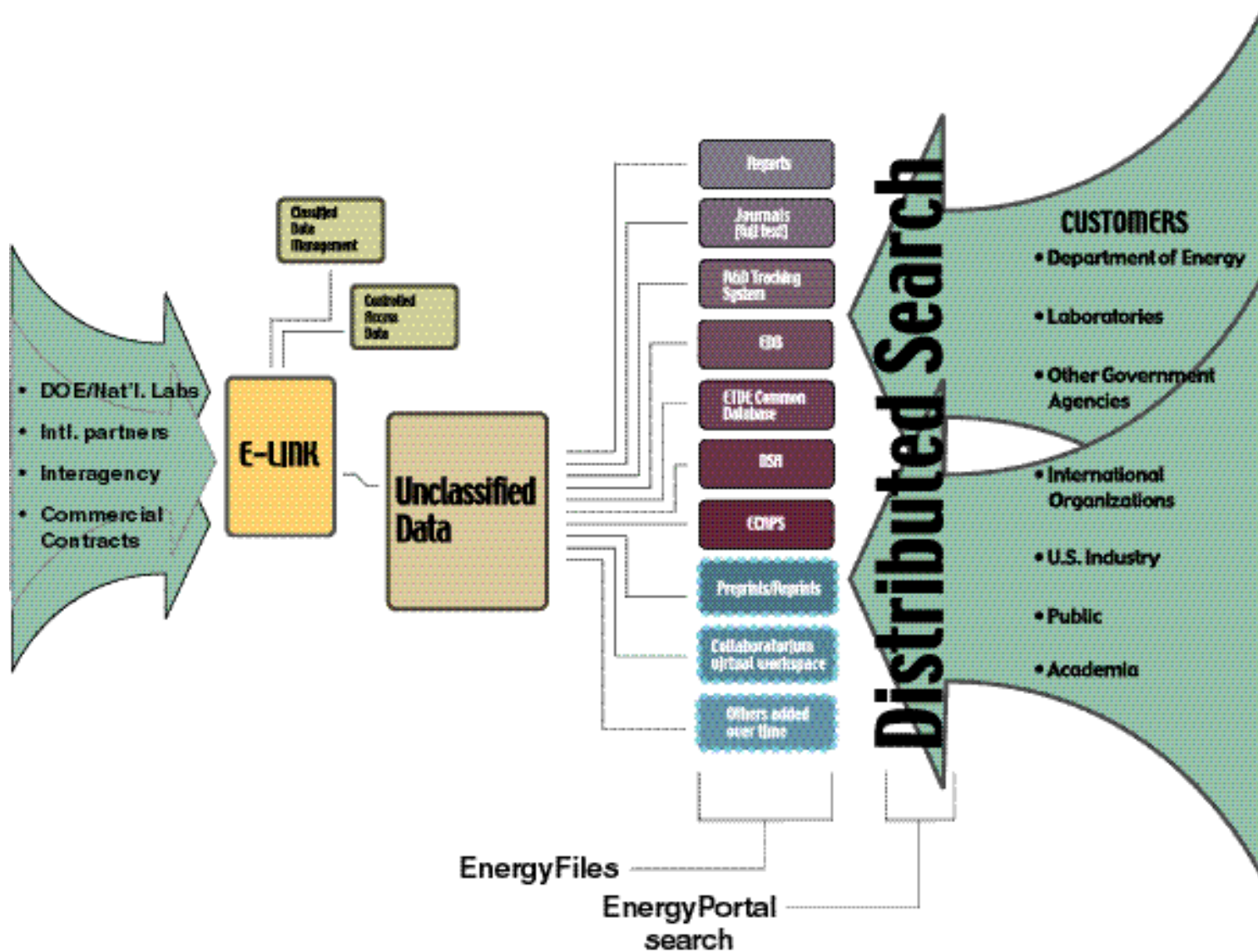
<http://www.iaea.or.at/programmes/inis/inis.htm>



<http://www.etde.org>



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SEARCH



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Where We're Going

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.



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R&D Accomplishments

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

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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 [EnergyPlus 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. For in 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 tomographic diagnosis 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 role in developing these methods for CAT scanners which are widely regarded as the most significant advances 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.

Siemens SP, a new GE MRI system

Full Report
7907 K

The fully searchable full-text Web application of DOE R&D Accomplishments is currently populated with only a few representative accomplishments to demonstrate the coverage 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 stark.stip@ornl.gov

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



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OSTI SCIENCE

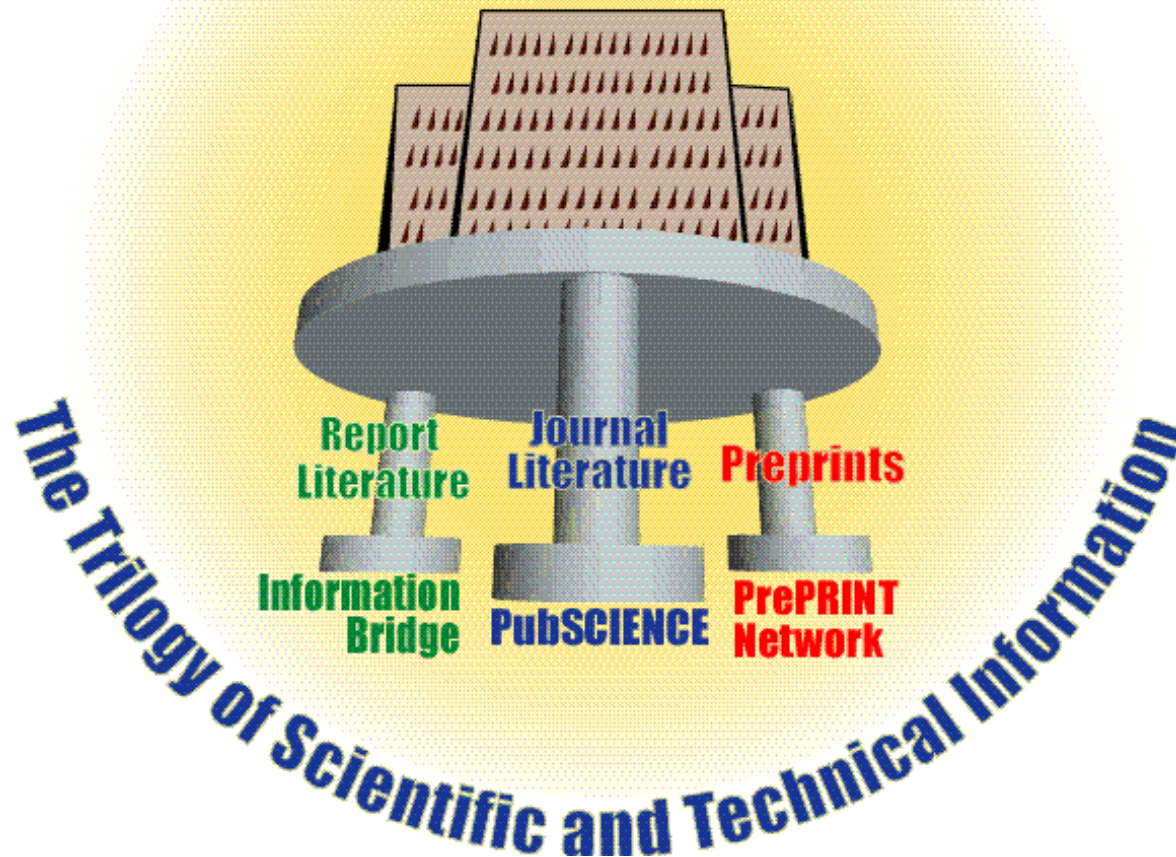
- Revolutionary approach to access peer reviewed scientific journal articles in physical sciences and other disciplines of concern to DOE
- Agreements being implemented with journal publishers (currently 20)
- Distributed searching across multiple journal sources
- Searchable citations will link to full-text source
- Publicly available through GPO in October



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The Scientific Edifice





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