DOE OSTI – Connecting Research Components Using PIDs

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CHORUS Forum
Mapping the Research Lifecycle - Connecting the Pieces
**Mission:** The US Department of Energy’s Office of Scientific and Technical Information (OSTI) collects, preserves, and disseminates DOE-funded research and development results.

**DOE Program Offices** ~$12B annual R&D funding National labs and grantees 50K R&D outputs (accepted manuscripts, software, data, etc.) **OSTI**  

**Public** **DOE** **Other agencies**

**Required by law:** Energy Policy Act of 2005, P.L. 109-58, Section 982: “The Secretary, through the Office of Scientific and Technical Information, shall maintain within the Department publicly available collections of scientific and technical information resulting from research, development, demonstration, and commercial applications activities supported by the Department.”

**Core Function:** Provide and use persistent identifier services
**PID Definition (OSTP)** – A digital identifier that is globally unique, persistent, machine resolvable and processable, and has an associated metadata schema.

**PID Definitions support:**
- Easing administration burden
- Disambiguation
- Proper credit
- Reporting
- Enabling broader discovery and making connections
- Understanding impact

**PID at DOE and throughout the Research Lifecycle**
### OSTI PID Services

#### PIDs for Research Outputs
- **Reports, Posters, Presentations**: E-link
- **Data**: Data ID Services
- **Software**: DOE CODE

#### PIDs for Awards
- **Award DOI Service**: Crossref

#### PIDs for People
- **US Government ORCID Consortium**: ORCID
- **OSTI.GOV**: Crossref

#### PIDs for Organizations
- **OSTI Org Authority**: Crossref

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**Note:** The image contains logos and text related to PID services for research outputs, awards, people, and organizations.
Persistent Identifiers (PID)

The Department of Energy's Office of Scientific and Technical Information (DOE OSTI) offers persistent identifier (PID) services to the DOE community and the US Government. A PID is a digital identifier that is globally unique, persistent, machine resolvable, has an associated metadata schema, identifies an entity, and is frequently used to disambiguate between entities.

- **PIDs for Data**
  - OSTI provides DOIs for DOE-funded research data through the free DOE Data ID Service and to partnering US government agencies through the Interagency DOI Service.

- **PIDs for Software**
  - OSTI provides DOIs for DOE-funded software through the DOE software services platform and search tool CODE CODE. DOIs are optionally assigned when submitting software to OSTI and automatically assigned through the formal software announcement process.

- **PIDs for Text Documents**
  - OSTI automatically assigns DOIs to DOE-funded technical reports, workshop reports, conference posters, and presentations submitted to OSTI through the E-Link submission system.

- **PIDs for Awards**
  - OSTI provides the Award DOI Service for DOE organizations to assign DOIs to awards, grants, and contracts.

- **PIDs for People**
  - OSTI leads the US Government ORCID Consortium for US government organizations who would like to use, collect, and integrate ORCID IDs into their research workflows.

- **PIDs for Organizations**
  - OSTI maintains an internal organization authority that maps organization names to organization PIDs such as ROR, DOI, Wikidata, and Ringgold identifiers.

[https://www.osti.gov/pids/](https://www.osti.gov/pids/)
Using PIDs for Reporting and Easing Burden
Using PIDs to Broaden Discovery and Make Connections

https://doi.org/10.46936/10.25585/60008401

SIP-Omics: Development of a semi-automated stable isotope probing pipeline identifies cross-kingdom interactions in the hyphosphere of arbuscular mycorrhizal fungi

http://genomics.jgi.doe.gov/piper/download/SIPO/metadata/SIPO/htsip.html

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https://doi.org/10.1186/s40168-022-01391-z
Using PIDs to Understand Impact

Impact of Persistent Identifiers

The persistent identification of digital entities (e.g., research outputs, people, funders, awards, etc.) can increase discoverability of research, alleviating data validation issues, and reducing researcher burden.

By increasing discoverability of research-related objects, user communities can track their research over time and develop programmatic methods for finding, reproducing, and reusing research. PIDs are an essential component to developing mechanisms for human-machine interoperability, which helps promote improved citation and reference tracking.

PIDs are not just for journal articles and datasets. DOE OSTI collects DOIs for many different research product types (e.g., conference papers, conference proceedings, journal articles, etc.). And OSTI’s DOI Services provide DOI assignment and registration for technical reports, conference posters and presentations, data, and software.

Since 2007, more than 400k DOIs have been registered by OSTI on behalf of the DOE community for texts, data, and software. More than 1.4M of the records in OSTI DOAR can be referenced with a DOI.

To date, more than 250k records in OSTI DOAR have been submitted or curated with related identifiers that identify specific types of relationships with other research products.

https://www.osti.gov/pids/using-pids/impact
Thank you!

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Please reach out to pids@osti.gov with any questions.