



Science.gov – An integrated approach to providing access to federally-funded research results

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The Challenge

- 1) Federally-funded research results are distributed and exist mostly below the surface web in many deep and complex databases.
- 2) Without a solution, the public must a) know that all of these agency databases exist and where to find them and b) have the time to search them individually – two implausible suppositions.

Science.gov (as a Strategy) to meet the Challenge

- 1) Through the use of **Federated Search** technology, Science.gov, through its interagency collaboration (the Science.gov Alliance), identifies information sources across federal agencies (creating an authoritative, comprehensive set), and crafts connectors for each source. The connector then queries the identified source for relevant information based on the search query provided by the user. This gets beyond the surface web.
- 2) Federated Search is smart in that it returns results for a given term or query in real-time, searching in parallel, multiple, distributed sources which it then aggregates, relevance ranks and de-duplicates results for the user. The user can effectively search across all identified agency sources at a single place and find what is most relevant to their search.
- 3) Only top-level results (versus all results) are returned by the **federated search** which maximize the relevance of the results, eliminating the need to sift through pages of possibly irrelevant content.

*Science.gov Alliance
Member Agencies*



Science.gov and strategies to address Public Access

To support public access, several updates have been made to the site:

1. Federated search connectors were developed

- These connectors query each of the federal agency public access collections, focusing on peer-reviewed journal articles/accepted manuscripts, providing results to show the agency that funded the result.

2. An inventory of APIs was created

- To improve the machine discovery of publications across federal agency repositories, and support application interoperability, an inventory of federal agency Application Programming Interfaces (APIs) has been developed and will be published on Science.gov.

3. A listing of agency public access plans and requirements, as well as the submission systems to be used by authors was created

- Both of these links can be found here: <https://www.science.gov/publicAccess.html> and <https://www.science.gov/submit.html>

What's next? Steps to further improve interoperability across sources

To support interoperability, and to help promote greater scientific progress thorough discovery, Science.gov is planning to provide an API that will enable access to the information collections that it federates. This will be provided securely to those interested in using the API.

The Science.gov Alliance is considering a new User Interface which will enhance the user's experience and also improve the relevance ranking which will increase the findability of the research.

Both items are being considered, and in test, but we encourage you to visit Science.gov for updates, or contact me for details.

For More Information

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Science.gov is the U.S. contribution to WorldWideScience.org, which provides access to science information from more than 70 nations.