Pacific Northwest NATIONAL LABORATORY

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National Visualization and Analytics Center™

IN-SPIRE™

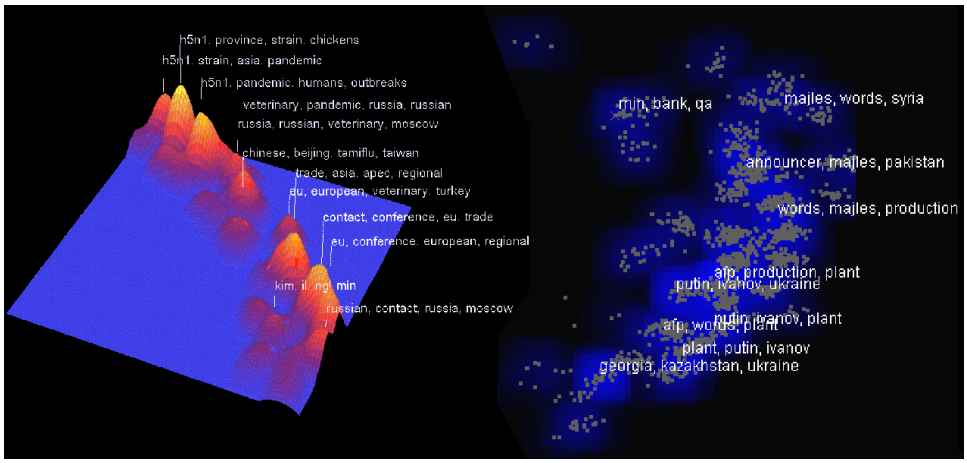
Extracting insight from large volumes of text

Benefits: IN-SPIRE is text analysis and visualization software that can quickly reveal important information in large collections of unformatted text documents and accelerate subsequent investigation and discovery. Because IN-SPIRE does not rely on semantic information for its visualizations, the software can analyze a wide range of unstructured text collections, incuding foreign languages, without requiring users to have special training or use advanced key wording.

ABOUT IN-SPIRE

IN-SPIRE is text analysis software that works with a person's natural ability to discover and learn from visually conveyed information. IN-SPIRE can quickly reveal important information from large collections of unstructured text documents such as technical reports, web data, newswire feeds and message traffic—and accelerate subsequent investigation and discovery. Using advanced statistical algorithms, IN-SPIRE automatically identifies key thematic terms within a document collection and then visually organizes the documents based on term usage. This technique highlights common themes and reveals hidden relationships within the text.

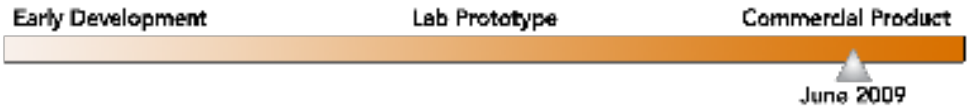
IN-SPIRE's two main visualizations display representations of the documents in which those with similar or related topics appear closer together. The ThemeView™ visualization uses a 3-dimensional terrain map display to provide a high-level overview of the data. The Galaxy visualization uses the metaphor of stars in the night sky, with each star representing individual documents.



ThemeView Galaxy

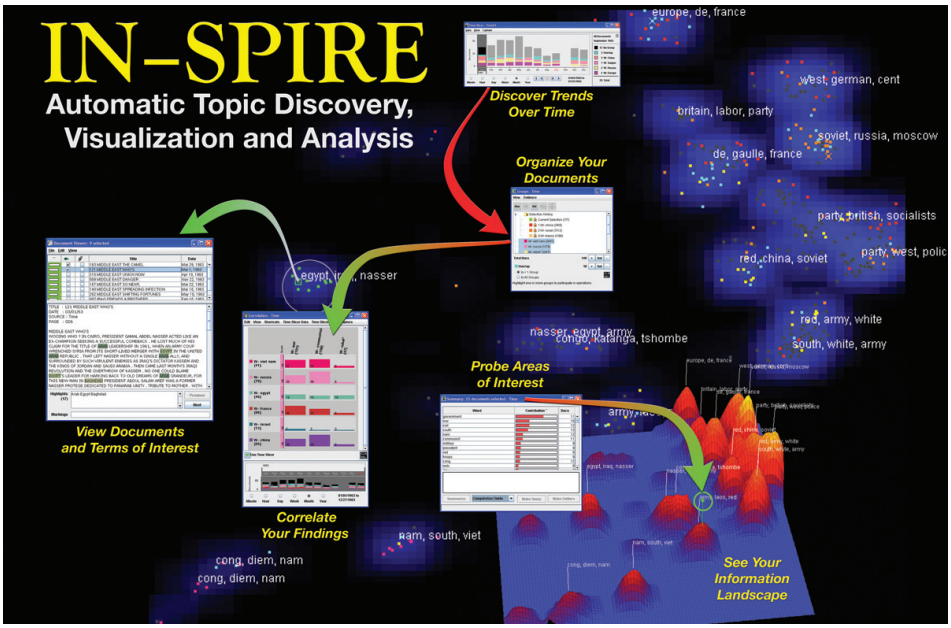
IN-SPIRE TOOLS

While IN-SPIRE's main visualizations provide an enticing overview of your information space, they are also the gateway and starting point to further discovery and analysis. IN-SPIRE also includes a rich suite of analytical tools that work with the visualizations to help you interrogate and organize your data. These tools include capabilities for keyword and context query, temporal analysis, document grouping, correlation, measurement of emotion and more.



U.S. DEPARTMENT OF ENERGY

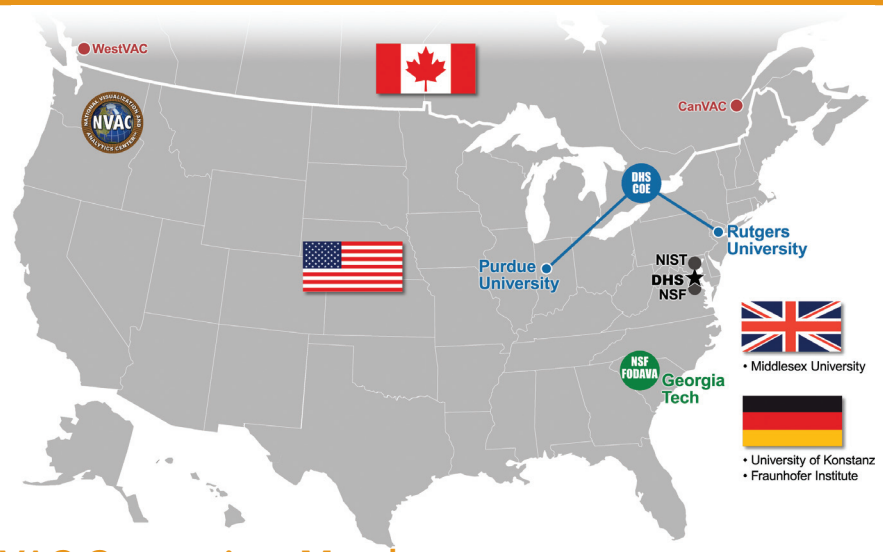
IN-SPIRE is designed to organize and process your documents automatically—without any advanced keywording or training data sets. However, if there are sets of terms that are of special interest, you can specify these high-value terms in advance and see the visualizations with added emphasis on those words. IN-SPIRE is compatible with foreign languages and provides an interface to machine translation products. It is also capable of incrementally analyzing streams of information from real-time data streams such as Really Simple Syndication (RSS) news feeds. IN-SPIRE allows users to spend more time exploring the information they find most relevant and less time sifting through irrelevant documents.



INTERESTED?

IN-SPIRE can be deployed as a web browser applet, making it ideal for enterprise-wide access. It can also be installed as a desktop application on commodity level hardware. The desktop versions include the capability for local file analysis and open source retrieval of information from the internet using keyword searches or selected websites. See http://in-spire.pnl.gov for more information about IN-SPIRE.

Visualization and Analytics Centers



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ABOUT PNNL

The Pacific Northwest National Laboratory, located in southeastern Washington State, is a U.S. Department of Energy Office of Science laboratory that solves complex problems in energy, national security and the environment, and advances scientific frontiers in the chemical, biological, materials, environmental and computational sciences. The Laboratory employs more than 4,200 staff members, has a $918 million annual budget, and has been managed by Ohio-based Battelle since 1965.

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