



Proudly Operated
by **Battelle** Since 1965

Battelle Number(s):

17126

Available for licensing in all fields

Available Technologies

Scalable Reasoning System

SUMMARY

The Scalable Reasoning System (SRS) is an analytic framework for developing web-based applications. Using a growing library of both visual and analytic components, custom applications can be created for any domain, from any data source. SRS incorporates the simplicity and accessibility of web-based solutions with the power of an extensible and adaptable backend analytics platform. Applications built using SRS have been developed to run on modern web browsers, handheld devices, and as standalone desktop applications. SRS applications have been deployed to:

- * Analyze unstructured text
- * Explore hierarchical taxonomies
- * Trend risk to critical infrastructure
- * Support semi-real time analysis of trends and patterns in streaming social media data
- * Organize and provide visual search and navigation of large document repositories.

Most recently, researchers at PNNL have lent their world renowned expertise in visualization-based analytical software tools and methods to develop a new SRS-based tool for sifting through volumes of patent documents in a simple, highly intuitive way. This new tool—called Visual Patent Search—allows for quick and easy drill-down to increase the probability of a user finding what they are looking for. It was developed to help technology seekers more manageably search and investigate the U.S. Department of Energy's (DOE's) vast collection of 17,000+ patents and patent applications, and to help DOE program managers bring additional transparency to the work they have funded. These are just a few of many potential uses for SRS, as it could form the basis of visual analytics tools for virtually any application involving volumes of data that must be categorized and somehow made easily and intuitively searchable.

ADVANTAGES

- * Flexible architecture – reusable modules encapsulate specific functionality to access, parse, enrich, model, and visualize data; new modules can be developed using a documented software development kit (SDK), and in different software languages
- * Accessing data – accessing and processing of data is isolated in the SRS architecture; as new sources and types of data become available, modules can be developed and easily plugged into existing applications and deployments
- * Scalability – most visualization components are abstract representations of the information and are scale-free; datasets commonly used are in the 10k range, however recent developments have enabled applications to interactively manage millions of documents.



* Widget library – a large and growing library of visualization widgets can be integrated into new web applications enabling users to filter and explore both structured data and unstructured text, temporal trends, and spatially organize information on geographic maps and imagery.

RELATED LINKS

» Visual Patent Search

See a newly developed SRS application in action.

<http://techportal.eere.energy.gov/POCUS/Client/>

» Documentation

See the online wiki documentation

<http://srs.pnnl.gov/wiki>

Technology Portfolio(s)

- » Building Efficiency
- » Energy Efficiency Solutions
- » Information Analytics and Visualization

Potential Industry Applications

- » Healthcare, Pharma, Biotech & Medical
- » Oil & Gas

John T. McEntire
Pacific Northwest National Laboratory
(509) 372-6960
john.mcentire@pnnl.gov
<http://availabletechnologies.pnnl.gov>



Proudly Operated by **Battelle** Since 1965