

Benefits: First Look provides users with tools to help them quickly identify what's changed in their information space and what's stayed the same. Users can sift through the new information and quickly determine what demands their attention.

National Visualization and Analytics Center™

FIRST LOOK

Reducing the time to productive analysis

MISSION NEED

Before information can be used as knowledge, it must be put into context—understood in relationship to the passage of time, the user's prior knowledge, and the task at hand. This is especially true of information or data spaces that change constantly—which these days, seems to be all of them!

Many existing analysis tools help users work with large amounts of data, but they typically fail to answer questions that are fundamental to almost any knowledge worker: “what's new?” and “what's important?” Developing tools that allow a user to quickly get useful answers to these questions remains an important problem in information visualization and analysis.



APPROACH

First Look takes a three-pronged approach to the problem of rapidly changing data streams:

- Recognizing the importance of narrative
- Emphasizing importance over relevance
- Providing a test bed for walk-up analytics.

Recognizing the importance of narrative

Narrative helps us put information in the proper sequence and ties information to what we already know. First Look exploits this concept both in the underlying analysis of data—by assembling information into persistent stories that connect related documents over time—and by the use of a storytelling approach to reporting this data. We are also exploring the use of story archetypes—templates that describe the way certain types of information tend to evolve over time.

Emphasizing importance over relevance

Over the past decade, web search engines have focused on *relevance* of information to a user's search terms. But in an ever-growing information space, depending on relevance alone risks missing information that may be *important* for other reasons—its timeliness, its source, its centrality to a user's task. While traditional search concepts are maintained in First Look, our emphasis is on using importance as a key criterion in selecting information that the user needs.

Providing a test bed for walk-up analytics

Walk-up analytics is a design philosophy for analytical user interfaces that

are intended to be minimally interactive; they are meant to be starting points and jumping off spots for information discourse. First Look is being implemented around a flexible web-based reporting architecture that will serve as a laboratory for easily testing new ideas related to this style of information presentation.

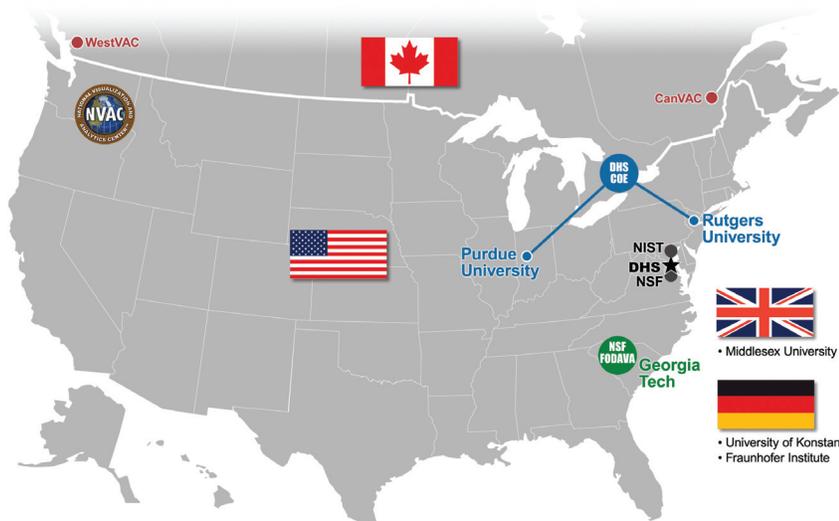
IMPACT

First Look is intended to complement, rather than replace, existing analytical tools and practices. By linking what's new to what an analyst already knows, information can be put into context—and thus applied—more rapidly. By helping users focus on what's new,

what's changed, and what's important, First Look lets users spend more time analyzing data and developing new insights and less time merely keeping up.

With the pace of information increasing exponentially in all aspects of our daily lives, the promise of these ideas extends far beyond applications to law enforcement and information analysis. The First Look team is interested in engaging with potential partners and collaborators to explore applications to web search, scientific computing and data analysis, financial and technology tracking, and other innovative applications of the First Look concept.

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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.

Contact

Richard May

National Visualization and Analytics Center Director

Pacific Northwest National Laboratory

P.O. Box 999, MSIN J4-32

Richland, WA 99352

Phone: (509) 375-6976

richard.may@pnl.gov

nvac.pnl.gov

For more information, contact:

Scott Butner

Phone: (509) 372-4946

scott.butner@pnl.gov

Bill Pike

Phone: (509) 375-2689

william.pike@pnl.gov

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