



mergeflow technology radar

The goal of a technology radar is to discover relevant technological developments as early as possible. This is particularly relevant for research-intensive sectors like the aerospace industry.

With our web application **mergeflow.stream**, users can set up a technology radar that uses any internet-available information stream as input. mergeflow.stream analyzes the contents of these information streams, and prepares them for effective navigation.

What we do

Status quo

In order to stay informed, many people in research and development constantly have to monitor many information streams (e.g. web sites, portals, blogs, new results from search engines, internal sources, etc.). However, monitoring these information streams quickly results in a daily flood of information that is too large for effective analysis or interpretation. This results in growing information backlog and therefore lack of situational awareness.

In order to address these issues, we have developed our software mergeflow.stream, which helps analysts and researchers capture and explore information streams more effectively.

Our approach

Capturing information streams: we use web feeds for capturing information streams. Web feeds allow users to capture internet-available as well as internal information streams.

Discovering new topics: we have developed new algorithms that help distinguish new from known information. These algorithms can also spot topics with higher than normal activity.

Redundant information: our clustering methods group together similar content, thus also helping users navigate redundant information more effectively.

Language and topic independence: currently we do not use methods that are language or topic dependent.

Integration with other applications: mergeflow.stream is a web application with RestAPI. Via RestAPI, other applications (e.g. GIS systems) can access results from mergeflow.stream.

Humans, not machines, evaluate: mergeflow.stream does not evaluate information (e.g. with respect to reliability or credibility). We believe that only humans can really do this well. Our goal with mergeflow.stream is to support, not replace, human users with this task.

System architecture

Our system has three core components, which are architecturally independent: (1) collect information, (2) analyze it, (3) display the results.

Collect

Information streams are captured via web feeds. We distinguish source feeds and search feeds.



Source feeds are used for capturing all information from a certain source on any topic (e.g. feeds from a certain publication, portal, or organization).



Search feeds are used for capturing all information on a certain topic from any source. Almost all major search engines offer such search feeds, for example.

Analyze

Detect relevant text passages – we use machine learning to automatically distinguish relevant text from teasers, links, comments etc.

Extract keywords – statistical methods extract keywords for each text that represent the content of the document.

Discover new and unusually active topics – based on the extracted keywords, mergeflow.stream discovers new and unusually active topics. Often these unusually active topics are the ones which are most interesting.

Display

Browser-based web application– mergeflow.stream can be used via any modern browser and via tablets (e.g. iPad). No installation is required.

RestAPI – via a RestAPI, other applications (e.g. GIS systems) can access results from mergeflow.stream.



Aerospace technology radar

The goal of using mergeflow.stream as a technology radar is to discover relevant technological developments or applications as early as possible. Here are a few use cases from the aerospace industry:

Overview of relevant publications

Almost all technical or scientific publications (e.g. journals or preprints) are available via internet. Most of these publications make abstracts or news available via web feed. The contents of these web feeds can then be explored with mergeflow.stream.

Applications of new materials

Aerospace is an industry where information on new materials and their applications is particularly important. This includes up-to-date information from and on relevant actors (e.g. companies, research institutes, DARPA, etc.), as well as relevant publications. Capturing and analyzing this information is done via source feeds (e.g. DARPA announcements) and search feeds (in order to find recent information on certain keywords or topics).

Aerospace technology concepts

In order to capture and analyze information pertaining to technology concepts (e.g. ,more electric aircraft'), search feeds are particularly useful. Most search engines offer such search feeds (sometimes called ,alerts').

,Unknown unknowns' are particularly relevant here. Unknown unknowns are pieces of information that are relevant but that one does not know might exist. An example could be a new company in a certain technological sector. By detecting topics with unusual activity, mergeflow.stream helps spot such unknown unknowns.

Contact information

mergeflow AG
Buelowstr. 27
Muenchen

Phone: ++49 (0)89 43 7777 94-0
Fax: ++49 (0)89 43 7777 94-99
Email: info@mergeflow.com
WWW: www.mergeflow.com

