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## Information retrieval systems in scientific and technological libraries: from monolith to puzzle and beyond.

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Tema: information sources, and information technologies

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Paul Nieuwenhuysen Universiteit Antwerpen and Vrije Universiteit Brussel Information retrieval systems in scientific and technological libraries: from monolith to puzzle and beyond

## Abstract:

This contribution presents an overview of the evolution of the retrieval systems implemented in scientific and technological libraries to bring user to relevant information sources.

We observe a growth in complexity, starting from classical catalogues over the monolith online public access catalogue to a puzzle of software tools that try to cope with the growing complexity of the information sources and services offered by libraries.

This evolution is most probably going on and we suggest that some pieces of the puzzle are still missing, so that software developers and librarians may consider these for their future activities. More concretely we think of

- -tools to improve the queries made by users, by expansion or refinement;
- -tools to cope with ambiguity of queries by categorizing search results in topical clusters;
- -tools to visualize information in a map on the user's computer display to assist analysis and decision making by the user; such visualization tools can be applied to show and reveal
- --the characteristics of the collection(s) of information sources that are made available to the user.
- --the relations among words, terms, classification codes and so on, in the process of formulating and improving queries,
- --the characteristics of the set of documents that results from a query by a user.

In conclusion: significant progress is still possible in the area of information retrieval tools offered by libraries.

## Keywords:

Libraries, information retrieval, thesaurus systems, catalogues, OpenURL, clustering, federated searching, meta-searching, visual maps, visualisation