

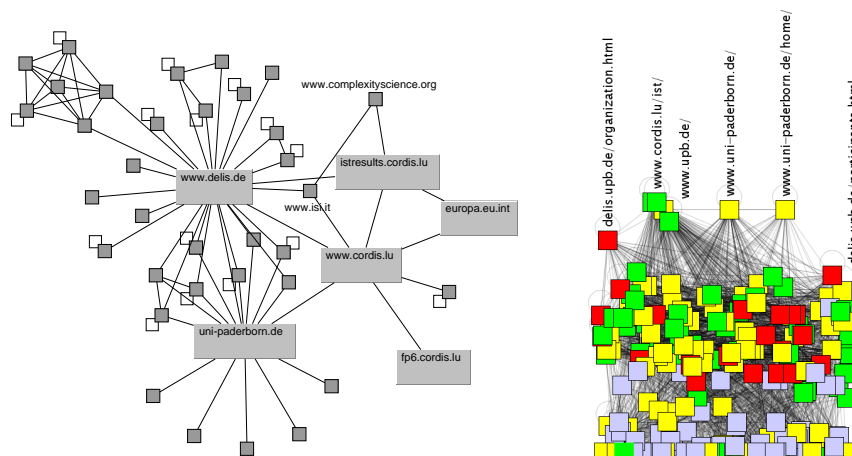
What are Complex Systems? What is DELIS?*

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Abstract

“What are Complex Systems?” – Commonly, the quest for information is accomplished by various search engines adapted to specific tasks such as Google or Yahoo! for web search and CiteSeer for publication lookup. The results of these tools are usually lists that are sorted according to one relevance concept for the items. Nowadays, search queries become more complex and ambiguous. Therefore a simple evaluation of a query may not produce satisfactory results to the user.

In the following, we present visualizations enriched with search-relevant information, e.g., pagerank [2] or authority score [1] for the sites. As an example, we study the topics *complex system* and, in particular, *delis*.



The above visualizations show a cleaned web-crawl started from the DELIS homepage. The left hand figure represents the domain-structure, i.e., sites with the same domain are grouped together and their sizes reflect the number of sites contained. In contrast, the right hand figure visualizes the pagerank value on the y -axis (color reflects domain).

Using different analyses in combination with their visualizations allows for a more individual and user-friendly exploration of search spaces.

References

- [1] Jon M. Kleinberg. Authoritative sources in a hyperlinked environment. *Journal of the ACM*, 46(5):604–632, 1999.
- [2] Lawrence Page, Sergey Brin, Rajeev Motwani, and Terry Winograd. The PageRank citation ranking: Bringing order to the web. Manuscript, 1999.

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