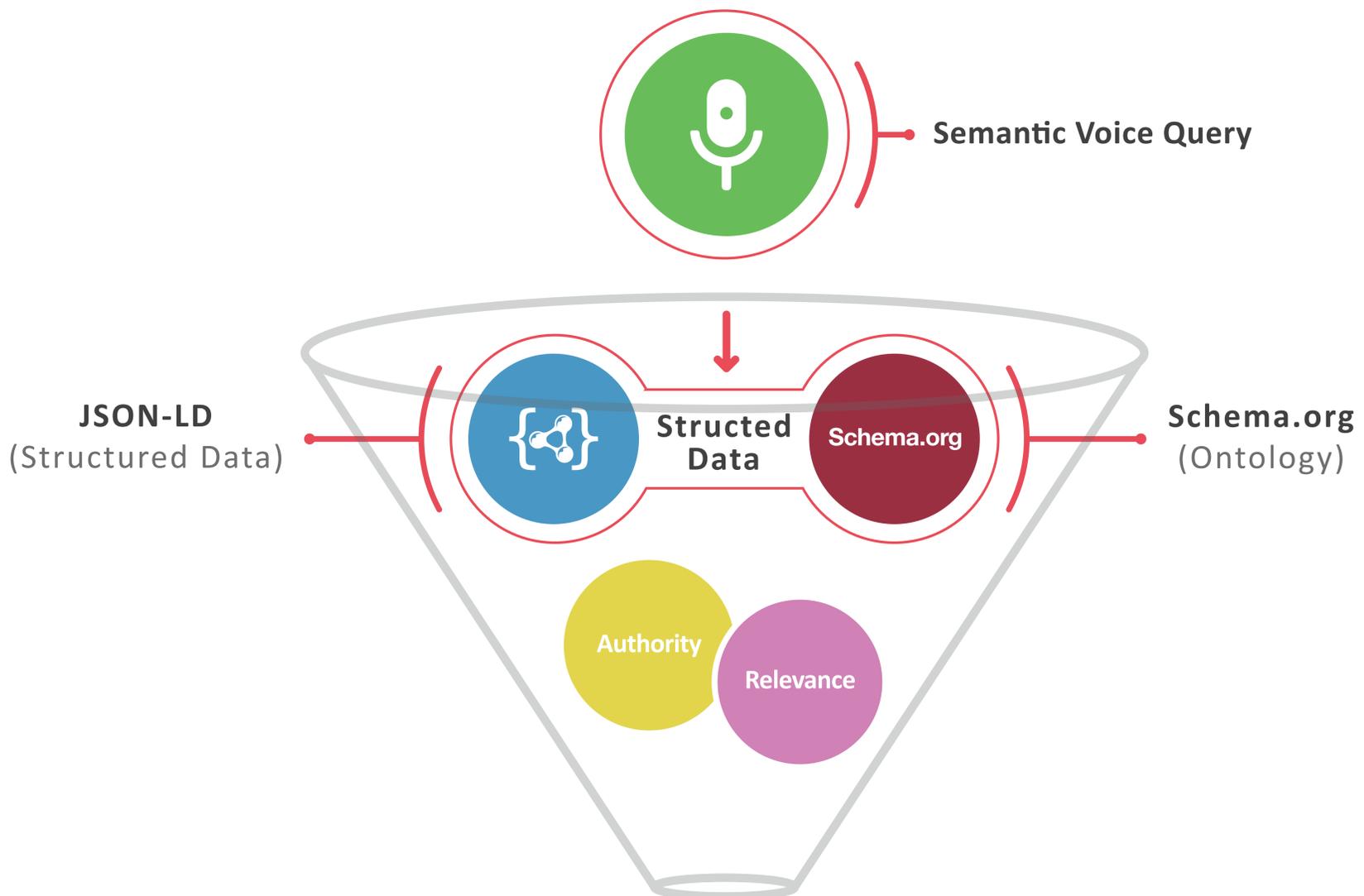


Ontology and Linked Data as indicators for voice query success – application for digital libraries

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Background

- Information contained on library Web pages was originally designed to be human-readable.
- Information currently available on the Web is kept in large collections of textual documents.
- There is an increasing need for structuring data on Web pages to meet search engines' aims of offering direct answers through Semantic voice queries.
- Semantic Web technologies provide an answer to this issue by proposing some novel and sophisticated solutions.
- The Schema.org ontology provides a formal framework to organize data using JSON-LD for browsing, searching and accessing information on library Web pages.

Literature Study

- The Semantic Web provides ontologies for recording how the data relates to real world objects.
- Google's "Hummingbird" algorithm focuses on user intent and contextual relevance.
- Authority, relevance and structured data are fundamental indicators for search success.
- JSON-LD and Schema.org were recently accepted by the W3C as recommended standards.

Methodology

- Web pages without any intentional data structuring will be developed.
- Voice queries for content on these Web pages will be executed, to determine search success.
- Data on the same Web pages will be structured with JSON-LD using the Schema.org ontology.
- Voice queries will be repeated.
- Results will be compared to measure the effect of structured data on voice query success.

Expected Results

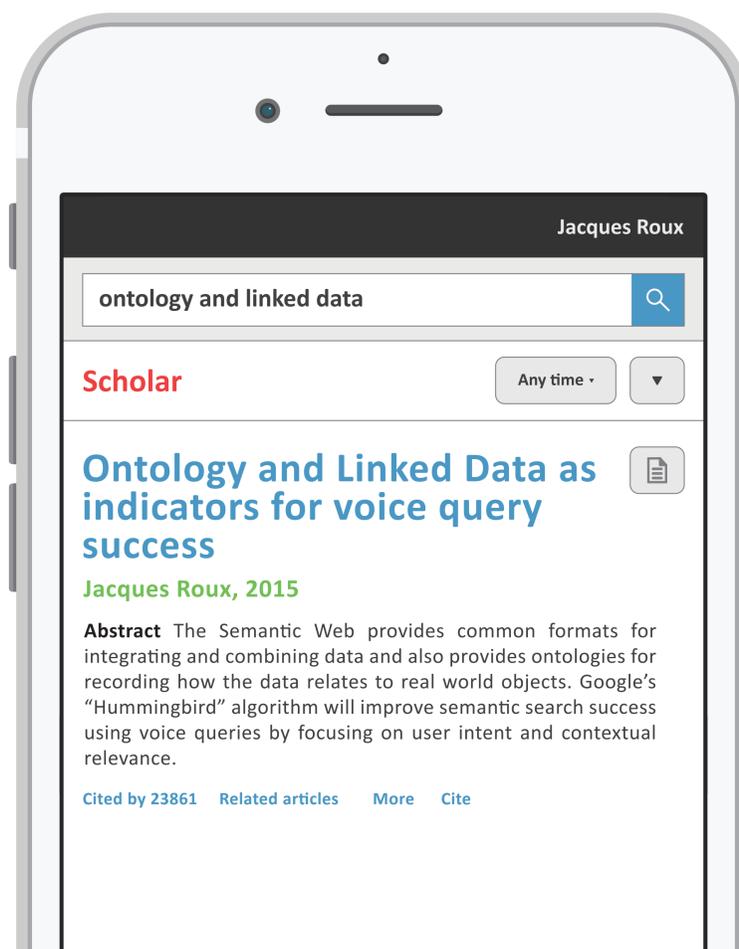
- Previous research confirms the positive effect of data structuring on search success.
- The authors expect that search success using voice queries will significantly improve when data on library Web pages is structured with JSON-LD using the Schema.org ontology.

Proposed Model

A model for structuring data on digital library Web pages using Schema.org and JSON-LD will be developed.

Summary

Structuring data using the Schema.org ontology and JSON-LD may help Semantic search engines provide a more engaging experience for the user searching digital libraries using voice queries.



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