

### Interfacing generic and specialized search engines on the user side

Steffen Leich-Nienhaus Corporate Information Resources – Mercedes-Benz Group AG Open Search Symposium 2023

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### Concept

- Dynamic, transparent and efficient integration of independent, distributed and domain-specific search engines into the browsing context.
- Notification and navigation in the Open Search ecosystem.



## Where we come from

- The users of our platform, a **digital library** of the most diverse **professional information resources**, are on the go on the internal company platforms and intranets
- but also "out in the wild", where all kinds of platforms and search systems and, above all, the big top dogs operate.
- Extending the closed silos with "Open Searches"

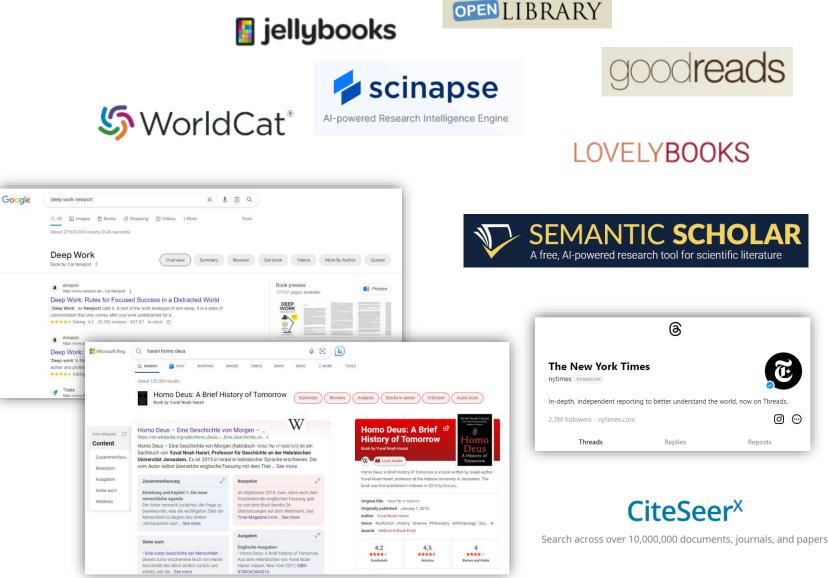






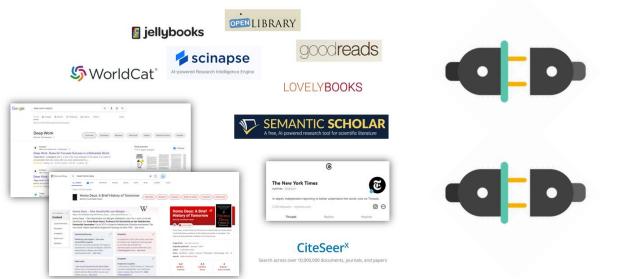
## Out in the wild: the Open Infrastructure

- Advantage for the users of our ۲ platform to use diverse external platforms, as these provide **unique added value**
- It's a valuable Open World ۲
- It can be commercial or ۲ somehow "problematic", as long as there is functional added value



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## The users always find their way home





- Besides of the added value of external resources, the users need access to licensed full texts of the internal platforms
- let users intentionally and actively operate in a different context of the info resources like in social reading
- verify the certified content at a SPOT@home

## **Content Categorization**

- Microdata: OpenGraph, Twitter Cards, META-Description, Schema.org
- by URL-Mapping
- by DOI-Resolving
- Classification
  - Vocabulary like IAB-Categories
  - proprietary databases
  - AdHoc via Concept Detection mit NLP: Semantic Browser Context
- direct search for text / data in homebase index

### Book

A Schema.org Type Thing > CreativeWork > Book

A book.

Property	Expected Type
Properties from Book	
abridged	Boolean
bookEdition	Text
bookFormat	BookFormatType
illustrator	Person
isbn	Text
numberOfPages	Integer

article - Namespace URI: https://ogp.me/ns/article#

article:author - profile array - Writers of the article.

book - Namespace URI: https://ogp.me/ns/book#

book:isbn-string-The ISBN

book: author - profile array - Who wrote this book.

article:published time - datetime - When the article was first published.

article:expiration\_time - datetime - When the article is out of date after.

article:modified time - datetime - When the article was last changed.

• article:section - string - A high-level section name. E.g. Technology

article:tag - string array - Tag words associated with this article.

book:release date - datetime - The date the book was released.

book:tag-string array - Tag words associated with this book.



#### Results for your request:

URL: https://www.researchgate.net

Categories: Education





"domain": { "categories": [ "confidence": 0.75, "name": "/Books & Literature", "IAB1-1": "Books & Literature" "confidence": 0.7, "name": "/Reference/Libraries & Museums" ], "domain\_url": "https://openlibrary.org/",

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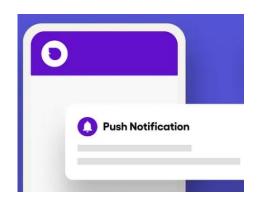
## Notification – Redirection - Navigation

### Notification

- green glowing buttons in toolbars or injected in Content
- Coloured themes
- push notifications

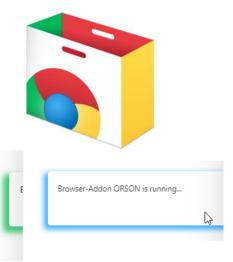
### **Redirection & Navigation**

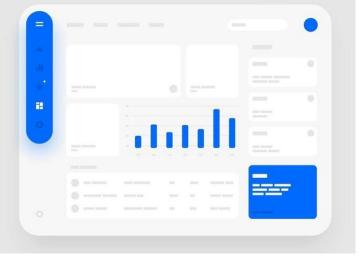
- Opening sidebars in browser or injected in content
- Dialogs
- Information and Linking



### **Chrome Browser Addon ORSON**

*Open Resources Online Navigation* on internal Webstore







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## Idea concept: Home Zone as a directory of open custom search engines

- Acess Broker for showing not alternative platforms, but for alternative search systems.
- **Connection** to the **Open Search** infrastructure
- Starting from the two pillars browsing and search queries
- the appropriate special open search engines can be determined using semantic analysis of the browsing context and search queries.





### Search engine selections

<b>Q•</b> Search You				
٩	Bing	b		
0	DuckDuckGo	d1		
Q	Qwant	q		
G	Google	g		
0	DuckDuckGo	d		
3	reddit	r		
2	stackoverflow.com	sof		
Q	qwant.com	qwant.com		
- 🐣	docs.python.org	docs.python.org		
- 🐴	You	У		
	Brave Search	search.brave.com		
OFEN	openlibrary.org	openlibrary.org		

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<shortname>[SNK]</shortname>		
<description>[Search engine full name and summary]</description>		
<inputencoding>[UTF-8]</inputencoding>		
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<url template="&lt;/td&gt;&lt;td&gt;[searchURL]" type="text/html"></url>		
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<moz:searchform>[https://example</moz:searchform>	ICON	
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	"search provider": {	
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	"favicon_url": "https://www.discogs.com/favicon.ico"	
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//	/// mdn web docs		
	Mozilla > search		
	search		
	Use the search API to retrieve the installed search engines and execute searches.		

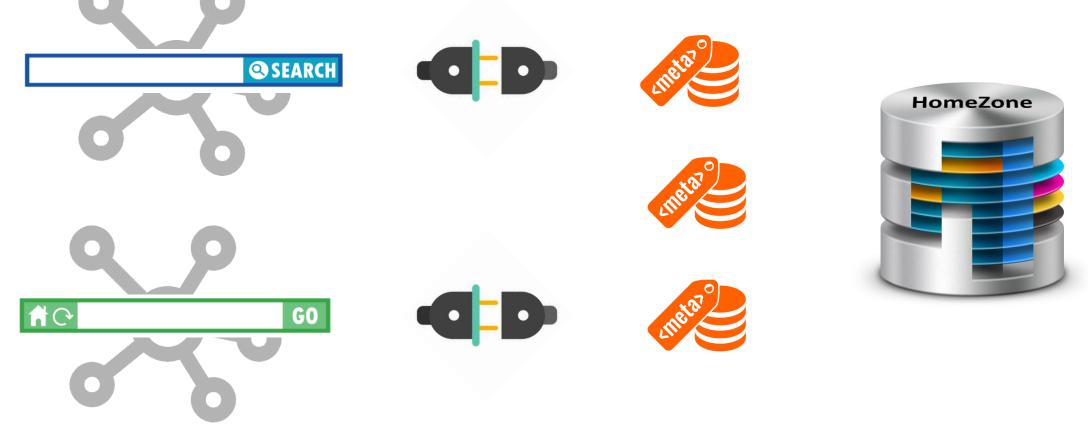
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## Automation of query and content categorization and search engine selection • Semantic Search Entry knows what you are looking for

• Semantic Browsing Addon knows which content you are on

Both select the appropriate search engine.



# Thank you

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