

Semantic search engine

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Google Knowledge Graph – google.com

- started in May 2012
- at first sight – table on the right side
- basic function: exact phrase, calculator, number conversions
- other function: define, filetype, related, sunrise/sunset, search by voice or picture
- search in 60 trillion individual pages

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 - Facebook has user's data
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Bibliografie



Knowledge Graph. In: *Wikipedia: the free encyclopedia* [online]. San Francisco (CA): Wikimedia Foundation, 2001– [cit. 2013-12-03]. Dostupné z: http://en.wikipedia.org/w/index.php?title=Knowledge_Graph&oldid=584415732



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DuckDuckGo. In: *Wikipedia: the free encyclopedia* [online]. San Francisco (CA): Wikimedia Foundation, 2001– [cit. 2013-12-03]. Dostupné z: <http://en.wikipedia.org/w/index.php?title=DuckDuckGo&oldid=583983635>



Wolfram Alpha. In: *Wikipedia: the free encyclopedia* [online]. San Francisco (CA): Wikimedia Foundation, 2001– [cit. 2013-12-03]. Dostupné z: <http://en.wikipedia.org/w/index.php?title=Wolfram>

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