

Semantische Technologien: Status Quo und Herausforderungen für die Zukunft

Christian M. Meyer



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UBIQUITOUS
KNOWLEDGE
PROCESSING

Intensiv-Workshop „Semantik“
i-views, Darmstadt, 27. Juni 2013.

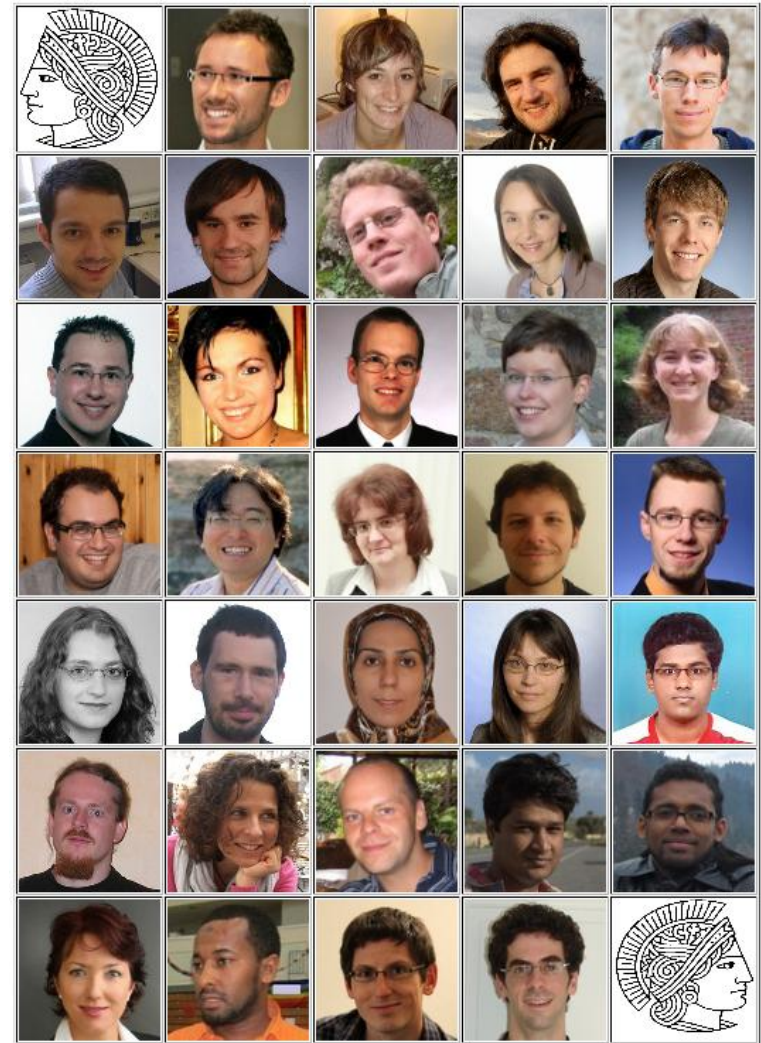
Forschungsprofil UKP Lab

Ubiquitous Knowledge Processing Lab

2006 gegründet unter der Leitung
von Prof. Dr. Iryna Gurevych

rund 30 Wissenschaftler/-innen
forschen in den Bereichen
Computerlinguistik und
Sprachtechnologie

<http://www.ukp.tu-darmstadt.de>



Forschungsprofil UKP Lab



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UKP

Ubiquitous Knowledge Processing

**Lexikalisch-
semantische
Algorithmen**

**Lexikalisch-
semantische
Ressourcen**

**Semantische
Suche**

**Statistische
Semantik**

**Bildungs-
bezogene
Sprach-
verarbeitung**

**Sprach-
technologie
für
eHumanities**

Das UKP Lab befasst sich mit hochaktueller Grundlagenforschung im Bereich der Computerlinguistik und Sprachtechnologie mit Schwerpunkt lexikalisch-semantischer Verarbeitung. Es werden neuartige Anwendungsgebiete im Bereich der Bildungsforschung, Digital Humanities und Informationsmanagement erforscht. Besonderen Wert legen wir auf derzeit nur wenig erforschte Diskurstypen im Web.

Einstieg



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...silva = Wald]: tro-
Sem, das; -s, -e [griech. sēma = Zeichen, Merk-
mal] (Sprachwiss.): kleinste Komponente einer
Wortbedeutung.
Se|man|tik, die; - [zu griech. sēmantikós =
bezeichnend, zu: sēmaínein = bezeichnen, zu:
sēma, ↑Sem] (Sprachwiss.): **1.** Teilgebiet der Lin-
guistik, das sich mit den Bedeutungen sprachli-
cher Zeichen u. Zeichenfolgen befasst. **2.** Bedeu-
tung, Inhalt (eines Wortes, Satzes od. Textes).
se|man|tisch <Adj.> (Sprachwiss.): **1.** die Seman-
tik (1) betreffend: -e Forschungen. **2.** die Seman-
tik (2) betreffend: ein -er Unterschied.
Se|ma|sio|lo|gie, die; -, -n [zu griech. sēmaínein = bezeichnen]
das Bezeichnen

Einstieg



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barkasse



Semantische Informationssuche



TECHNISCHE
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Search
Engine



Suche

Ungefähr 337.000.000 Ergebnisse (0,20 Sekunden)

Alles

Bilder

Maps

Videos

News

Shopping

Mehr

Das Web

Seiten auf Deutsch

Übersetzte Seiten

Mehr Optionen

[Jaguar Deutschland - Jaguar Cars](#)

www.jaguar.com/de/de/

5+ Einträge – Top of page. Skip to main menu. Skip to search. Skip to ...
F-TYPE Ein völlig neuer, offener Sportwagen, inspiriert durch das ...
XJ ULTIMATE Der **Jaguar** XJ Ultimate. Luxus, Handwerkskunst und ...
↳ [XF - Gebrauchtwagen](#) - [Xj modelle & preise](#) - [Konfigurator](#)

[Bilder zu jaguar](#) - Unangemessene Bilder melden



[Jaguar – Wikipedia](#)

de.wikipedia.org/wiki/Jaguar

Der **Jaguar** (*Panthera onca*) ist die größte Katze des amerikanischen Doppelkontinents. Äußerlich sieht dieses Raubtier dem Leopard der Alten Welt ähnlich.

[Jaguar Cars – Wikipedia](#)

de.wikipedia.org/wiki/Jaguar_Cars

Jaguar Cars Ltd kurz **Jaguar** (engl. Aussprache: [ˈdʒæɡjuːə] in Großbritannien, [ˈdʒæɡ.wu] in den Vereinigten Staaten), ist eine britische Automobilmarke ...

[Jaguar - Wikipedia, the free encyclopedia](#)

en.wikipedia.org/wiki/Jaguar - Diese Seite übersetzen

Lesarten-
disambiguierung

Semantische Informationssuche



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Search
Engine

jaguar



Meinten Sie...?

Suche

Ungefähr 337.000.000 Ergebnisse (0,20 Sekunden)

Automobil

Raubtier

Band

Militär

Das Web

Seiten auf Deutsch

Übersetzte Seiten

Mehr Optionen

[Jaguar Deutschland - Jaguar Cars](#)

www.jaguar.com/de/de/

5+ Einträge – Top of page. Skip to main menu. Skip to search. Skip to ...
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XJ ULTIMATE Der **Jaguar** XJ Ultimate. Luxus, Handwerkskunst und ...
↳ XF - Gebrauchtwagen - Xj modelle & preise - Konfigurator

[Jaguar Österreich - Jaguar Cars AT](#)

www.jaguar.com/at/de/

5+ Einträge – XJ ULTIMATE. Das neue Flaggschiff von **Jaguar**. Der XJ ...
F- TYPE Ein völlig neues Sport-Cabriolet, inspiriert durch das ...
How alive are you Werden Sie Teil einer neuen Generation von **Jaguar** ...

[Jaguar Switzerland - Jaguar.ch](#)

www.jaguar.com/ch/de/

Jaguar hat eine Mission: wunderschöne schnelle Fahrzeuge zu entwerfen und zu bauen. Der XK, XF und der neue XJ garantieren unübertroffene Fahrfreude.

[Jaguar International - Market selector page](#)

www.jaguar.com/ - Diese Seite übersetzen

Official worldwide web site of **Jaguar** Cars. Directs users to pages tailored to country-specific markets and model-specific websites.

[Jaguar Cars – Wikipedia](#)

de.wikipedia.org/wiki/Jaguar_Cars

Jaguar Cars Ltd kurz **Jaguar** (engl. Aussprache: [ˈdʒæɡjuːə] in Großbritannien, [ˈdʒæɡ.wɑː] in den Vereinigten Staaten), ist eine britische Automobilmarke ...

Clusterbildung,
Lexikonvergleich,
Intelligentes
User-Interface,

...

Semantische Informationssuche



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Search Engine

jaguar

Suche

Ungefähr 3.000 Ergebnisse (0,20 Sekunden)

Automobil

Raubtier

Band

Militär

Das Web

Seiten auf Deutsch

Übersetzte Seiten

Mehr Optionen

Jaguar Deutschland - Jaguar Cars

www.jaguar.com/de/de/

5+ Einträge – Top of page. Skip to main menu. Skip to search. Skip to ...

F-TYPE Ein völlig neuer, offener Sportwagen, inspiriert durch das ...

XJ ULTIMATE Der **Jaguar** XJ Ultimate. Luxus, Handwerkskunst und ...

↳ XF - Gebrauchtwagen - Xj modelle & preis Konfigurator

Jaguar Österreich - Jaguar C

www.jaguar.com/at/de/

5+ Einträge – XJ ULTIMATE. Das n

F- TYPE Ein völlig neues

How alive are you Werden Sie Teil

Jaguar Switzerland - Jaguar

www.jaguar.com/ch/de/

Jaguar hat eine Mission: wundersch

bauen. Der XK, XF und der neue XJ

Jaguar International - Market

www.jaguar.com/ - Diese Seite über

Official worldwide web site of **Jagua**

specific markets and model-specific

Jaguar Cars – Wikipedia

de.wikipedia.org/wiki/Jaguar_Cars

Jaguar Cars Ltd kurz **Jaguar** (engl.

[ˈdʒæɡ.wɑː] in den Vereinigten Staaten), ist eine britische Automobilmarke ...

WIKIPEDIA

The Free Encyclopedia

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Swallow Sidecar Company

From Wikipedia, the free encyclopedia

The **Swallow Sidecar Company** was founded on 4 September 1922 by **Walmsley** (b. 1892) and **William Lyons** (b. 1901). Both families lived in **Blackpool**, England. Walmsley had previously been making **sidecars** and reconditioned motorcycles. Lyons had served his apprenticeship at **Cr** Manchester before moving to Brown and Mallalieu as a junior salesman. Lyons, having recognised the commercial potential for these sidecars, together they obtained premises in Blackpool with the assistance of a small team of employees they were able to begin commercial production of sidecars.^[2]

The company diversified in 1926, changing its name to the **Swallow**

Synonyme,
orthogr. Varianten,
verwandte Begriffe,...

Question Answering



TECHNISCHE
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Search
Engine

Wo kann man in Frankfurt einen Jaguar kaufen?

Suche

Automobil

Raubtier

Band

Militär

Das Web

Seiten auf Deutsch
Übersetzte Seiten

Mehr Optionen

[Impressum](#)

Muck Automobile GmbH

Herr Muck
Victor Slotosch Str. 26
60388 Frankfurt am Main

Suchen Sie in unserem Fahrzeugbestand

Marke Modell Kraftstoff Preis bis

1 bis 4 von 4 Fahrzeugen

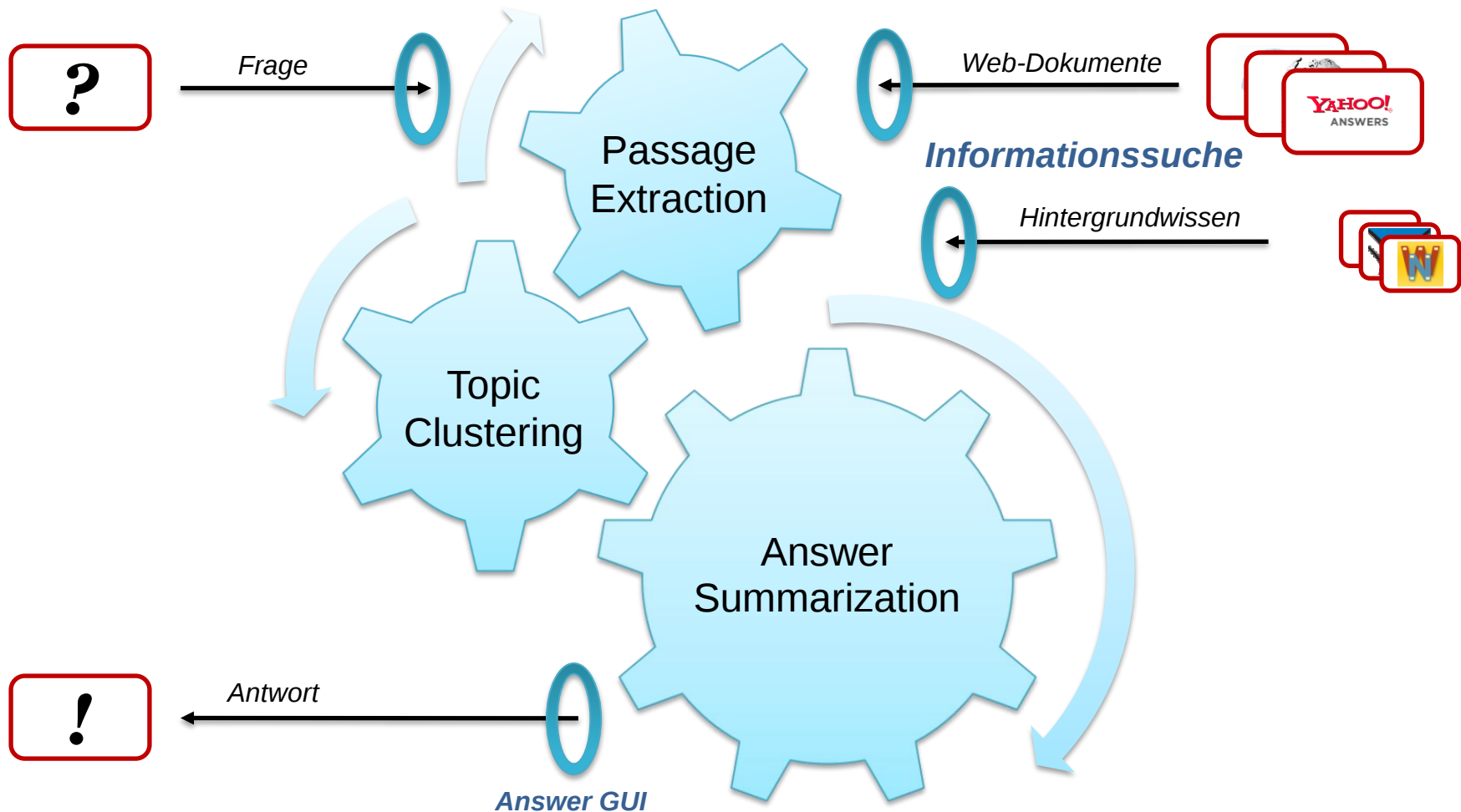


	Marke / Modell	Aufbau / Farbe	EZ	Laufleistung	Preis
	Jaguar XJ6 3.0 Executive Details Zu den Favoriten	Limousine, 4-Türer schwarz	Mai 2003	317000 km	EUR 9990 MwSt. ausw.
Kraftstoffverbr. (komb./innerorts/außerorts): 10.5/15.6/7.4 l/100km*, CO2-Emissionen komb.: 249 g/km, CO2-Effizienz: G					
	Jaguar XJR Leder Exclusiv / Navi / Xenon Details Zu den Favoriten	Limousine, 4-Türer schwarz	Mai 2004	84150 km	EUR 22490 MwSt. ausw.
Kraftstoffverbr. (komb./innerorts/außerorts): 12.1/17.9/8.7 l/100km*, CO2-Emissionen komb.: 289 g/km, CO2-Effizienz: G					
	Jaguar XK 3.5 L V8 Coupe CATS Fahrwerk/Navigation! Details Zu den Favoriten	Coupé, 2-Türer schwarz	August 2007	56000 km	EUR 35900 MwSt. ausw.
Kraftstoffverbr. (komb./innerorts/außerorts): 11.3/17.2/8.1 l/100km*, CO2-Emissionen komb.: 269 g/km, CO2-Effizienz: G					
	Jaguar XK 4.2 Cabrio Details Zu den Favoriten	Cabrio, 2-Türer grau	Juli 2007	49000 km	EUR 41900

* Weitere Informationen zum offiziellen Kraftstoffverbrauch und den offiziellen spezifischen CO₂-Emissionen neuer Personenkraftwagen können dem "Leitfaden über den Kraftstoffverbrauch, die CO₂-Emissionen und den Stromverbrauch neuer Personenkraftwagen" entnommen werden, der an allen Verkaufsstellen und bei der [Deutschen Automobil Treuhand GmbH \(DAT\)](#) unentgeltlich erhältlich ist.

Zusammenfassung,
Tabellen, Fakten,
Abbildungen,...
statt Linkliste

Question Answering



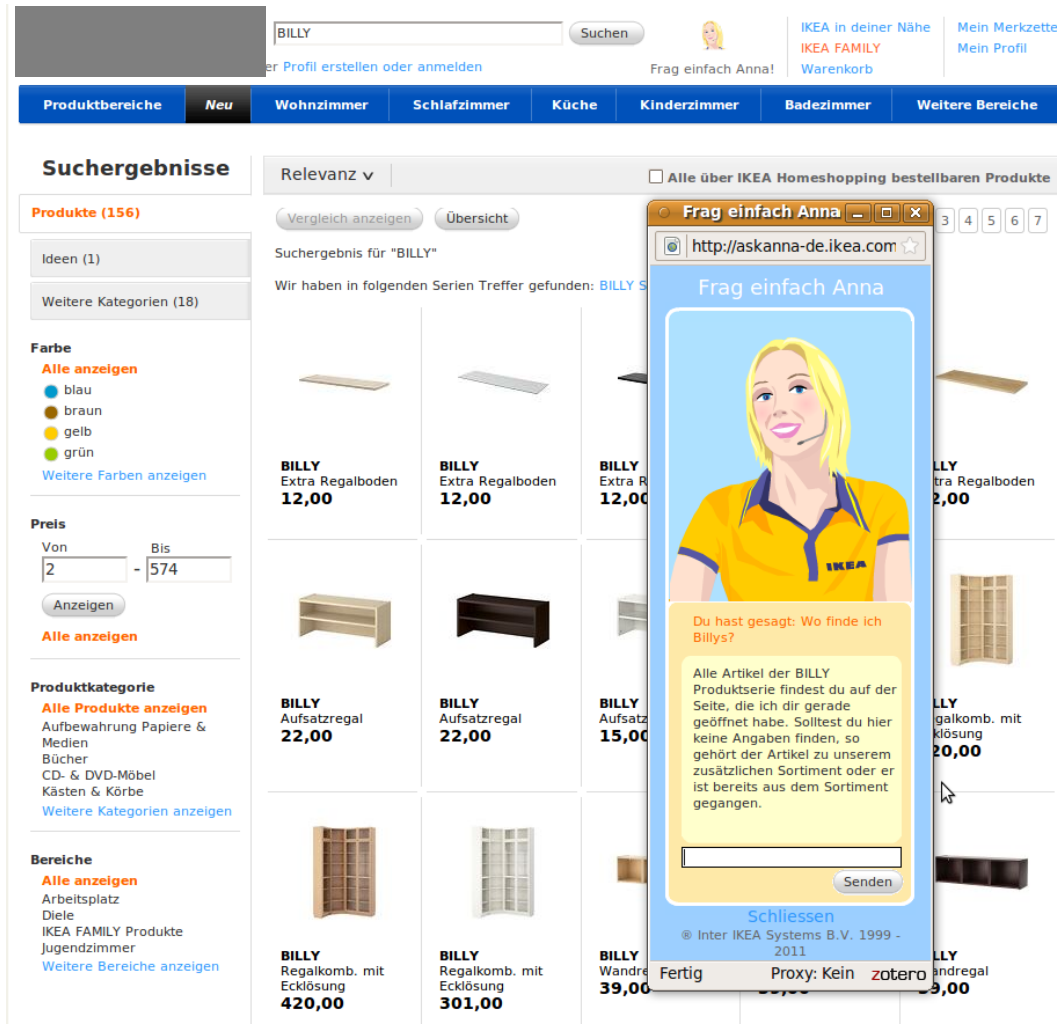
Question Answering



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Question Answering



The screenshot shows the IKEA Germany website. At the top, there's a search bar with 'BILLY' entered and a 'Suchen' button. Below the search bar, there's a navigation menu with categories like 'Wohnzimmer', 'Schlafzimmer', 'Küche', etc. The main content area displays search results for 'BILLY', showing various products like 'BILLY Extra Regalboden' and 'BILLY Aufsatzregal' with their prices. A pop-up window titled 'Frag einfach Anna' is overlaid on the search results. The pop-up features a cartoon character of a woman in a yellow IKEA shirt. The text in the pop-up says: 'Du hast gesagt: Wo finde ich Billys? Alle Artikel der BILLY Produktserie findest du auf der Seite, die ich dir gerade geöffnet habe. Solltest du hier keine Angaben finden, so gehört der Artikel zu unserem zusätzlichen Sortiment oder er ist bereits aus dem Sortiment gegangen.' There is a search input field and a 'Senden' button. At the bottom of the pop-up, it says 'Schliessen' and '© Inter IKEA Systems B.V. 1999 - 2011'.

Wie geht es dir?

Danke, mir geht es gut und ich freue mich auf deine Frage.

Wo gibt es Billys?

Alle Artikel der BILLY Produktserie findest du auf der Seite, die ich dir gerade geöffnet habe. Solltest du hier keine Angaben finden, so gehört der Artikel zu unserem zusätzlichen Sortiment oder er ist bereits aus dem Sortiment gegangen.

Globalisierte Märkte



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<http://www.wordle.net> – Font size represents article count (logarithmic scale)

Maschinelle Übersetzung



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Translate

From: English ▾



To: Chinese (Traditional) ▾

Translate

English Chinese Turkish

I'm selling these fine leather jackets.



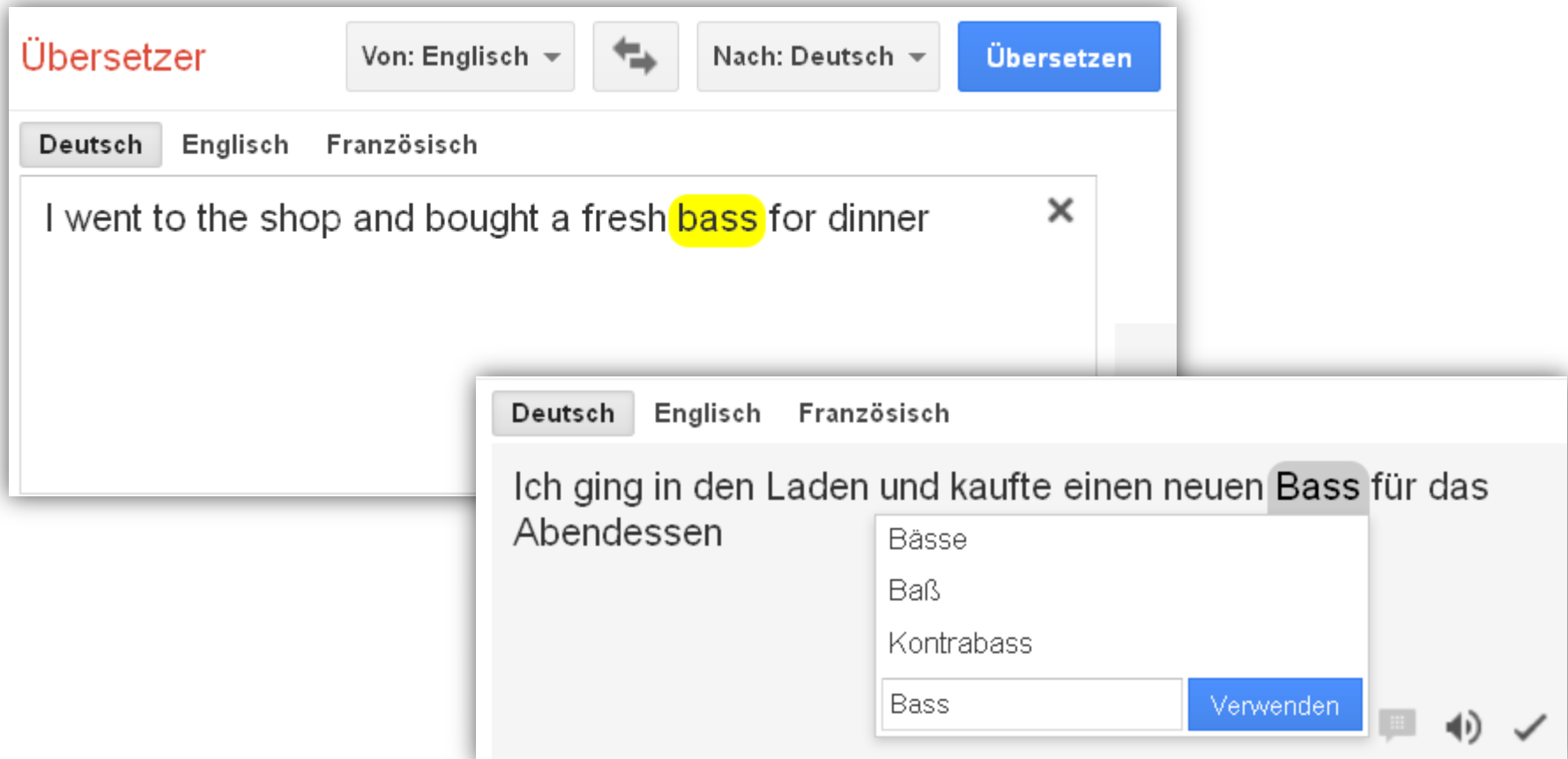
Turkish Chinese (Traditional) English

我賣的這些精美的皮夾克。

New! Hold down the shift key, click, and drag the words above to reorder. [Dismiss](#)

Maschinelle Übersetzung

Aber: auch hier müssen Mehrdeutigkeiten aufgelöst werden!



The screenshot shows a web-based machine translation interface. At the top, there's a header with the word "Übersetzer" in red. Below it, there are dropdown menus for "Von: Englisch" and "Nach: Deutsch", a double-headed arrow icon, and a blue "Übersetzen" button. Below the header, there are tabs for "Deutsch", "Englisch", and "Französisch". The main text area contains the English sentence "I went to the shop and bought a fresh bass for dinner", with the word "bass" highlighted in yellow. A popup window is displayed over the text, showing the German translation "Ich ging in den Laden und kaufte einen neuen Bass für das Abendessen". The word "Bass" in the German sentence is highlighted. A dropdown menu is open below "Bass", listing the following options: "Bässe", "Baß", "Kontrabass", and "Bass". The "Bass" option is selected. To the right of the dropdown is a blue "Verwenden" button. At the bottom right of the popup, there are icons for a grid, a speaker, and a checkmark.



Datenflut

Heterogene Infrastrukturen

Dynamische Anforderungen

Keyphrase Extraction



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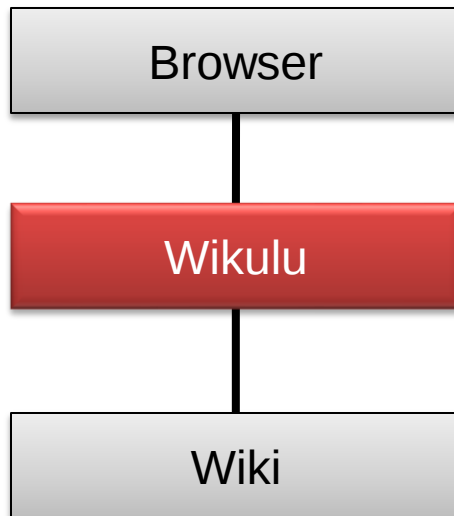
CHICAGO, Oct 29 - Kraft Foods Inc and Kellogg Co posted better-than-expected third-quarter profits on Wednesday as price increases and new products helped lift sales in a weak economy. Kraft also stood by its forecasts for 2008 earnings before one-time items as well as for 2009 net income, while Kellogg said its profit this year should hit the high end of its previous targeted range. Both Kraft, the largest North American food maker, and Kellogg, the world's largest cereal company, have taken steps to cut costs and put more money into advertising. Both have also bolstered new product development to attract consumers even as rising commodity costs pushed them to raise prices. Commodities like wheat and energy have become less expensive in recent months, but food companies may not see a big benefit until next year, in part because they lock in their costs months ahead. Kraft, which makes Oreo cookies, Tang breakfast drink and Oscar Mayer hot dogs, reported a profit of 45 cents a share before one-time items, a penny above what analysts polled by Reuters Estimates had expected. The company hiked prices on products, leading to a 0.9 percent drop in volume. However, that key result was still better than the company had expected. Analysts are watching to see how much consumers cut back on buying branded products in the face of rising food prices and a slumping economy. Kraft sales rose 19.4 percent to \$10.46 billion. Organic sales, which exclude the impact of currency, acquisitions and divestitures, rose 7.1 percent due to higher pricing. Over the past several years, Kraft has closed factories, cut jobs and divested brands to focus on areas like cookies and crackers, pizza and healthier foods. Shares of Kraft rose 1.8 percent to \$29.39 in premarket trading from Tuesday's closing price of \$28.88 on the New York Stock Exchange, while Kellogg stock was not active. Kellogg, the maker of Rice Krispies and Eggo waffles, said net income rose to 89 cents a share from 76 cents a year earlier. The results were far better than the 80 cents analysts had forecast.

Keyphrase Extraction



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CHICAGO, Oct 29 - **Kraft Foods Inc** and **Kellogg Co** posted **better-than-expected third-quarter profits** on Wednesday as **price increases** and new products helped **lift sales** in a **weak economy**. **Kraft** also stood by its forecasts for 2008 earnings before one-time items as well as for 2009 net income, while **Kellogg** said its profit this year should hit the high end of its previous targeted range. Both **Kraft**, the **largest North American food maker**, and **Kellogg**, the **world's largest cereal company**, have taken steps to cut costs and put more money into advertising. Both have also bolstered new product development to attract consumers even as rising commodity costs pushed them to raise prices. Commodities like wheat and energy have become less expensive in recent months, but food companies may not see a big benefit until next year, in part because they lock in their costs months ahead. Kraft, which makes Oreo cookies, Tang breakfast drink and Oscar Mayer hot dogs, reported a profit of 45 cents a share before one-time items, a penny above what analysts polled by Reuters Estimates had expected. The company hiked prices on products, leading to a 0.9 percent drop in volume. However, that key result was still better than the company had expected. Analysts are watching to see how much consumers cut back on buying branded products in the face of rising food prices and a slumping economy. **Kraft sales** rose 19.4 percent to \$10.46 billion. Organic sales, which exclude the impact of currency, acquisitions and divestitures, rose 7.1 percent due to higher pricing. Over the past several years, **Kraft** has closed factories, cut jobs and divested brands to focus on areas like cookies and crackers, pizza and healthier foods. Shares of **Kraft** rose 1.8 percent to \$29.39 in premarket trading from Tuesday's closing price of \$28.88 on the New York Stock Exchange, while **Kellogg** stock was not active. **Kellogg**, the maker of Rice Krispies and Eggo waffles, said net income rose to 89 cents a share from 76 cents a year earlier. The results were far better than the 80 cents analysts had forecast.



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► Interaction



Screencast und weitere Informationen:

<http://www.ukp.tu-darmstadt.de/research/current-projects/wikulu>

Keyphrase Extraction



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WIKIPEDIA
The Free Encyclopedia

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ArticleDiscussionReadEditView history

Linguistics

From Wikipedia, the free encyclopedia

*This article is about the field of **study**. For the journal, see [Linguistics \(journal\)](#).*

Linguistics is the scientific **study** of human **language**.^{[1][2][3][4]} **Linguistics** can be broadly broken into three categories or subfields: the **study** of **language** form, of **language meaning**, and of **language** in context.

The first is the **study** of **language** structure, or **grammar**. This focuses on the systems of rules that are followed by **speakers** or a **language**. It encompasses **morphology** (the formation and composition of **words**), **syntax** (the formation and composition of phrases and sentences from these **words**), and **phonology** (sound systems). **Phonetics** is a related branch of **linguistics** concerned with the actual properties of **speech** sounds, non**speech** sounds, and how they are produced and perceived.

The **study** of **language meaning** is concerned with how **language** users make the inferences required to understand another's **speech**, how **meaning** is assigned and processed, and ambiguity. This subfield encompasses **semantics** (how **meaning** is inferred from **words** and concepts) and **pragmatics** (how **meaning** is inferred from context).

Textsegmentierung



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collaborate with
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Wikulu

TWiki > Wikulu Web > OWL (2011-02-09, Wikulu)

Web Ontology Language (OWL)

The Web Ontology Language (OWL) is a family of knowledge representation languages for authoring the World Wide Web Consortium. They are characterised by formal semantics and RDF/XML-based [Semantic Web](#). OWL has attracted academic, medical and commercial interest. OWL and OWL2 will be used to refer to the 2004 and 2009 specifications, respectively.

Title:

There is a long history of ontological development in philosophy and computer science. Since the 1950s efforts have explored how the idea of knowledge representation (KR) from AI could be made useful. These included languages based on HTML (called SHOE), based on XML (called XOL, later OIL), and other languages and knowledge acquisition approaches. In 2000 in the USA, DARPA started development of the OWL. In March 2001, the Joint EU/US Committee on Agent Markup Languages decided that DAML+OIL. The EU/US ad hoc Joint Working Group on Agent Markup Languages was convened to develop an ontology language. This group was jointly funded by the DARPA (under the DAML program) and the DAML+OIL was intended to be a thin layer above RDFS, with formal semantics based on a Description Logic. It started as a research-based revision of DAML+OIL aimed at the semantic web.

Title:

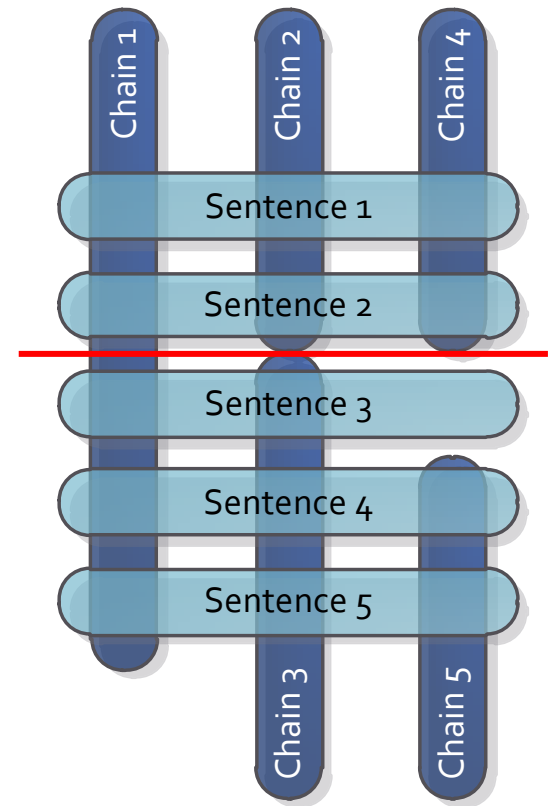
An ontology is an explicit specification of a conceptualization.
-- Tom Gruber, A Translation Approach to Portable Ontology Specifications

27.06.2013 | Computer Science Department | UKP Lab – Prof. Dr. Iryna Gurevych | Christian M. Meyer | 21



Exkurs: Segmentierung

- Finden von **Lexical Chains**
 - thematisch zusammenhängende Sätze
 - Strategien:
 - Wortwiederholungen
 - gleiche Wörterbuchkategorien
 - semantische Beziehungen (Hyponyme/Hyperonyme, Synonyme etc.)
- Wahl von **Segmentgrenzen**
 - Stellen mit hoher Anzahl beginnender oder endender Lexical Chains



Exkurs: Segmentierung



The invention of letters was preceded by the West Semitic script, which appeared in Canaan around 1000 BC. Antecedents are suspected in the Proto-Sinaitic inscriptions, dated to around 1800 BC. Virtually all alphabets have their ultimate origins from this system. The Greek alphabet, invented around 800 BC, was the first true alphabet, assigning letters not only to consonants, but also to vowels.

Some writing systems have two major forms for each letter: an upper case form (also called capital or majuscule) and a lower case form (also called minuscule). Upper and lower case forms represent the same sound, but serve different functions in writing. Capital letters are most often used at the beginning of a sentence, as the first letter of a proper name, or in inscriptions or headers. They may also serve other functions, such as in the German language where all nouns begin with capital letters.

The average distribution of letters, or the relative frequency of each letter's occurrence in text in a given language can be obtained analyzing large amounts of representative text. This information can be useful in cryptography and for other purposes as well. Letter frequencies vary in different types of writing. In English, the most frequently appearing ten letters are e, t, a, o, i, n, s, h, r, and d, in that order, with the letter e appearing about 13 % of the time.

Legende: **Invention** **History** **Case** **Form** **Begin** **Statistics**

Link Detection



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Main
Sandbox
TWiki
Wikulu

Jump Search

Wikulu > Wikulu Web > OWL (2011-02-09, Wikulu)

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The Web Ontology Language (OWL) is a family of **knowledge representation** languages for authoring by the World Wide Web Consortium. They are characterised by formal semantics and RDF/XML-based **Semantic Web**. OWL has attracted academic, medical and commercial interest.

In October 2007, a new W3C working group was started to extend OWL with several new features as p 1.1 member submission. This new version, called OWL 2, soon found its way into semantic editors such semantic reasoners such as Pellet, RacerPro and FaCT++. W3C announced the new version on 27 Oc family contains many species, serializations, syntaxes and specifications with similar names.

OWL and OWL2 will be used to refer to the 2004 and 2009 specifications, respectively.

There is a long history of ontological development in **philosophy** and **computer science**. Since the research efforts have explored how the idea of **knowledge representation** (KR) from **AI** could be n World Wide Web. These included languages based on HTML (called SHOE), based on XML (called XO various frame-based KR languages and knowledge acquisition approaches. In 2000 in the USA, DARPA of **DAML** led by James Hendler. In March 2001, the Joint EU/US Committee on **Agent Markup Language** **DAML** should be merged with **OIL**. The EU/US ad hoc Joint Working Group on **Agent Markup Language** convened to develop **DAML+OIL** as a web ontology language. This group was jointly funded by th **DAML** program) and the EU's IST funding project. **DAML+OIL** was intended to be a thin layer a semantics based on a Description Logic (DL). OWL started as a research-based revision of **DAML+OIL** semantic web.

Automatisierte Zusammenfassung



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The screenshot shows the TWiki web interface. At the top left is the TWiki logo with the text 'collaborate with TWiki'. To the right is a search bar with 'Jump' and 'Search' buttons. Below the logo, a sidebar contains a list of actions: 'Summarize' (highlighted with a red box), 'Suggest Links', 'Config Manager', 'Add Content...', and 'Highlight Keyphrases'. Below these are sections for 'Wikulu' (with a 'Log In or Register' link), 'Wikulu Web' (with links to 'Create New Topic', 'Index', 'Search', 'Changes', 'Notifications', 'RSS Feed', 'Statistics', and 'Preferences'), and 'Webs' (with links to 'Main', 'Sandbox', 'TWiki', and 'Wikulu'). The main content area shows the breadcrumb 'TWiki > Wikulu Web > OWL (2011-02-09, WiKulu)' and the title 'Summary'. Below the title is a bulleted list of information about OWL. At the bottom of the main area are links for 'Edit', 'Attach', 'Print version', 'History: r40 < r39 < r38 < r37 < r36', 'Backlinks', and 'Raw View'. The footer of the main area shows 'Topic revision: r40 - 2011-02-09 - 15:10:47 - WiKulu'.

collaborate with
TWiki

Jump Search

TWiki > Wikulu Web > OWL (2011-02-09, WiKulu)

Summary

- Web Ontology Language (OWL) The Web Ontology Language (OWL) is a family of knowl for authoring ontologies endorsed by the World Wide Web Consortium.
- The OWL family contains many species, serializations, syntaxes and specifications with si
- OWL and OWL2 will be used to refer to the 2004 and 2009 specifications, respectively.
- An ontology is an explicit specification of a conceptualization.-- Tom Gruber, A Translation Specifications In computer science and information science, an ontology is a formal repre set of concepts within a domain and the relationships between those concepts.
- It is used to reason about the properties of that domain, and may be used to describe the
- Differences between the two are largely matters of focus.

[Edit](#) | [Attach](#) | [Print version](#) | [History: r40 < r39 < r38 < r37 < r36](#) | [Backlinks](#) | [Raw View](#)

Topic revision: r40 - 2011-02-09 - 15:10:47 - [WiKulu](#)

Recommender Systems



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Bewertung hilfreich



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how do I open a door? × Suche

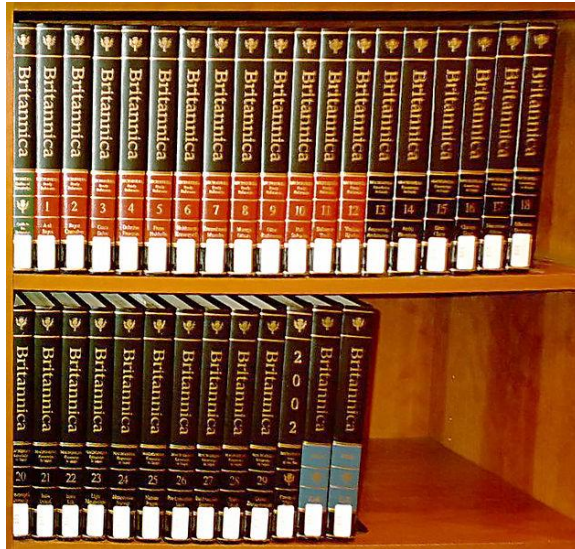
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Okt. 2010
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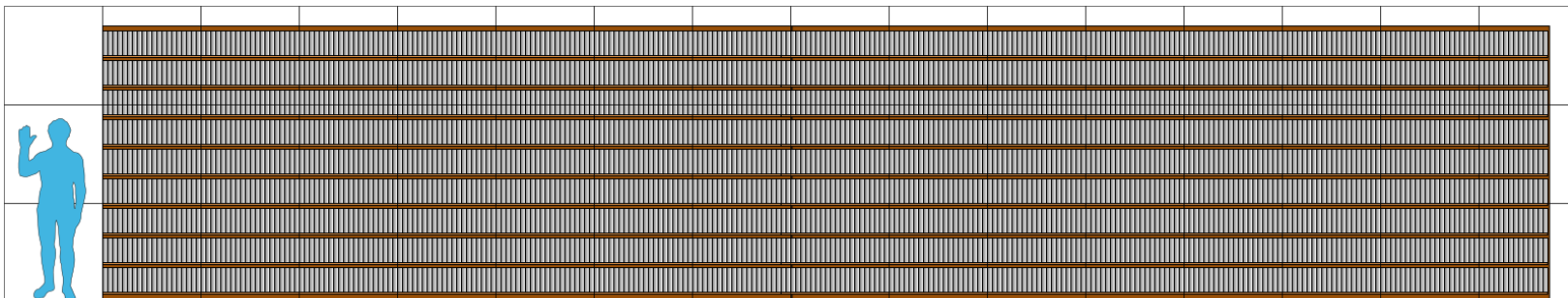
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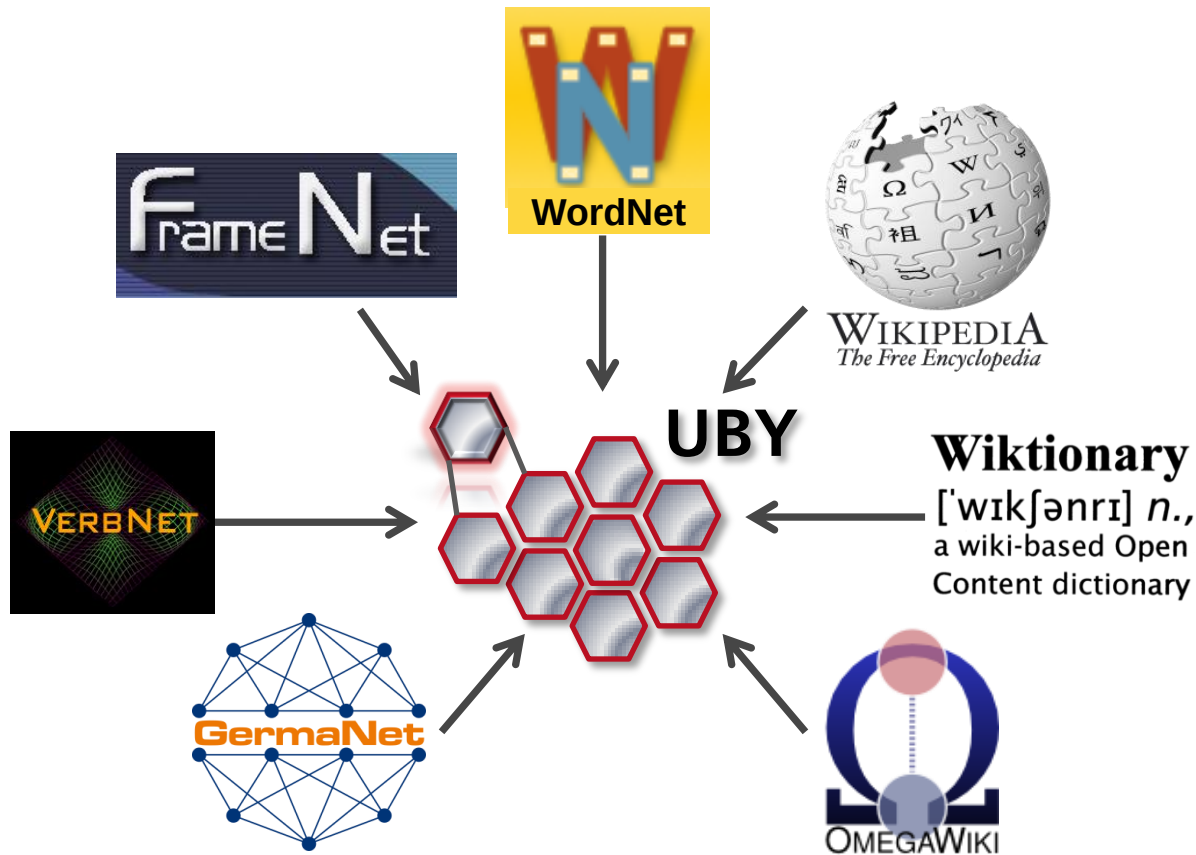
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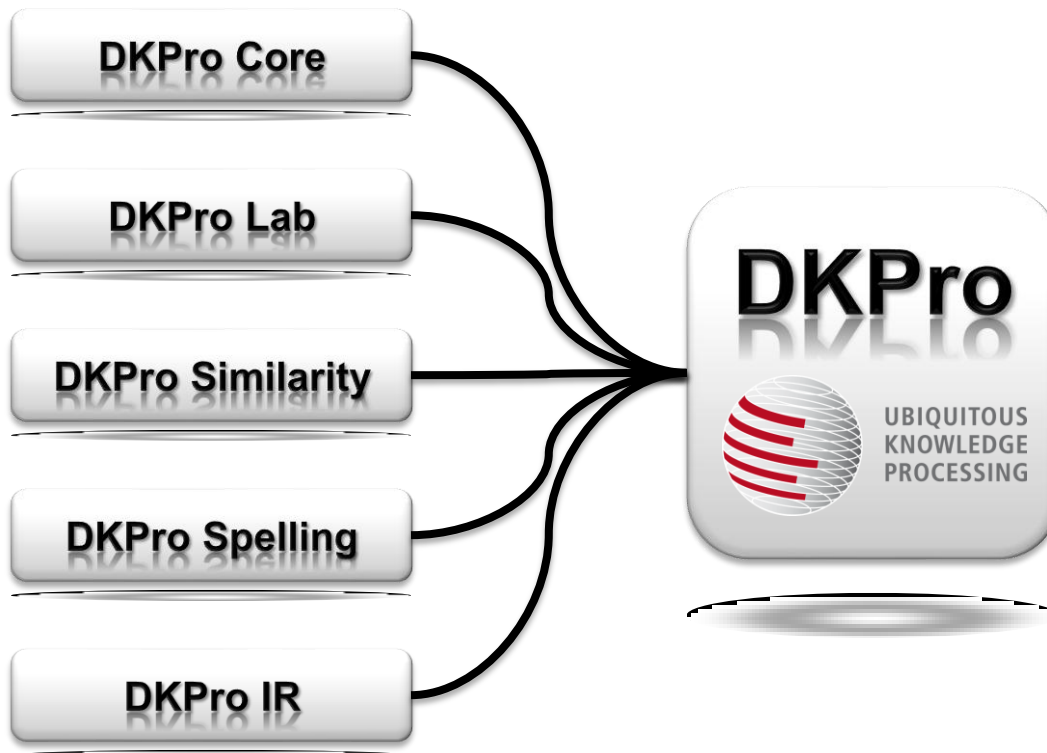


Large-Scale Unified Lexical-Semantic Resource

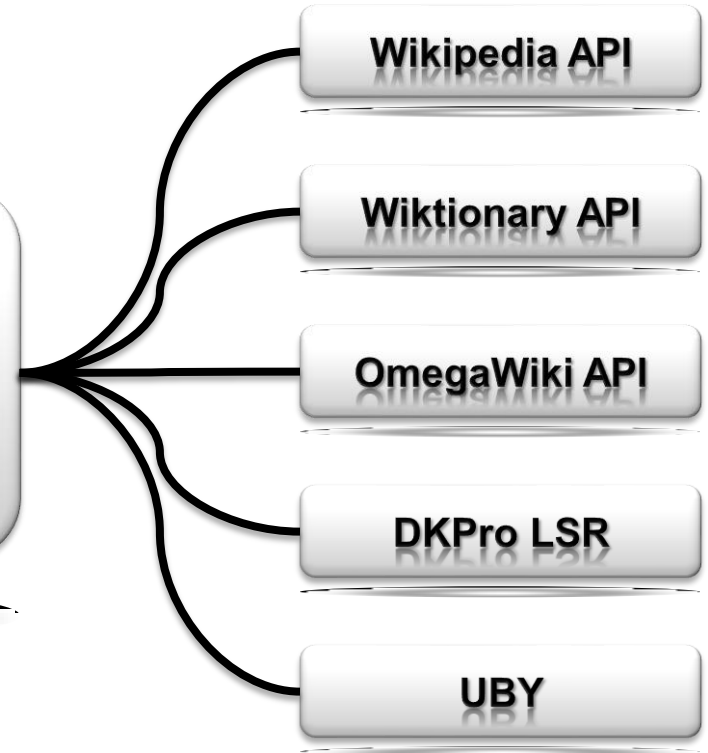


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Vielen Dank für die Aufmerksamkeit!



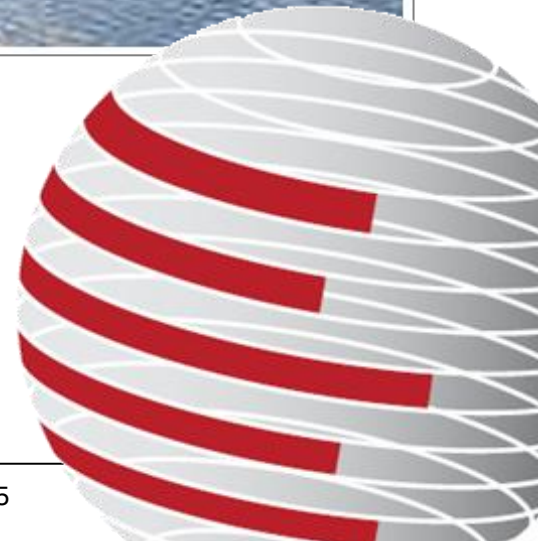
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