

Web Application for Semantic Network Editing

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Introduction

DEB – Dictionary Editor and Browser

- platform for development of dictionary writing systems
 - all the data stored in *XML*, *Unicode*
 - free data structure, any language
- client-server architecture
- *server*
 - data manipulation, most of the functionality
 - data storage
 - user and dictionary management, cooperation
 - modules - building blocks
- *client*
 - lightweight applications
 - graphical or web interface

Semantic network editing

- VisDic – offline desktop application
- DEBVisDic – online reimplementaion in DEB II platform
 - developed as an extension for Mozilla Firefox browser

DEBVisDic 2

- reimplementation as a general web application
- no requirements for specific browser
- based on JQuery
- new possibilities for cross-dictionary linking
- enhanced server-side support (e.g. saving user setting)

Hypero-hyponymic tree

English Wordnet 3.0 - Google Chrome

about:blank

stone:

[a] stone:1
 [n] gem:2, gemstone:1, stone:4
 [n] rock:1, stone:1
 [n] rock:2, stone:3

```

graph TD
  entity1[entity:1] --> physicalEntity1[physical entity:1]
  physicalEntity1 --> matter3[matter:3]
  matter3 --> solid1[solid:1]
  solid1 --> crystal1[crystal:1]
  crystal1 --> gem2[gem:2, gemstone:1, stone:4]
  gem2 --> cabochon1[cabochon:1]
  gem2 --> opaqueGem1[opaque gem:1]
  gem2 --> derivedLapidary1["[derived] lapidary:1"]
  gem2 --> transparentGem1[transparent gem:1]
  
```

Querying a dictionary is complete Item(s): 10

Entry preview

English Wordnet 3.0 - Google Chrome

about:blank

car:

[n] cable car:1, car:5
 [n] car:1, auto:1, automobile:1, machine:6, motorcar:1
 [n] car:2, railcar:1, railway car:1, railroad car:1
 [n] car:3, gondola:3

POS: n ID: ENG30-02958343-n
 Synonyms: car:1, auto:1, automobile:1, machine:6, motorcar:1
 Definition: a motor vehicle with four wheels; usually propelled by an internal combustion engine
 Usage: he needs a car to get to work
 --> [hypernym] motor vehicle:1, automotive vehicle:1
 --> [eng_derivative] automobile:1
 --> [eng_derivative] machinist:1, mechanic:1, shop mechanic:1
 --> [eng_derivative] motorist:1, automobilist:1
 <<-- [mero_part] window:2
 <<-- [hyponym] subcompact:1, subcompact car:1
 <<-- [mero_part] gasoline engine:1, petrol engine:1
 <<-- [category_member] backseat:2
 <<-- [hyponym] sedan:1, saloon:3
 <<-- [mero_part] fender:1, wing:10
 <<-- [category_member] rental:2, renting:1
 <<-- [category_member] passenger:1, rider:4
 <<-- [hyponym] gas guzzler:1
 <<-- [mero_part] buffer:6, fender:4
 <<-- [mero_part] accelerator:1, accelerator pedal:1, gas pedal:1, gas:5, throttle:2, gun:6

Querying a dictionary is complete Item(s): 5

Entry XML representation

The screenshot shows a web browser window titled "English Wordnet 3.0 - Google Chrome" with the address bar set to "about:blank". A search box contains the word "train", and a list of related terms is displayed below it:

- [n] caravan:1, train:3, wagon train:1
- [n] gearing:1, gear:2, geartrain:1, power train:1, train:6
- [n] string:4, train:2
- [n] train:1, railroad train:1

Below the list are buttons for "Preview", "Tree", "Revtree", "Edit", and "Xml". The "Xml" button is selected, and the XML representation of the word "train" is shown in a text area:

```

train
</LITERAL>
<WORD>
  train
</WORD>
</SYNONYM>
<ILR link='ENG30-04576971-n' type='hypernym'>
  wheelwork:1
</ILR>
<ILR link='ENG30-03287733-n' type='holo_part'>
  engine:1
</ILR>
<DEF>
  wheelwork consisting of a connected set of rotating gears by which
  transmitted or motion or torque is changed
</DEF>
<USAGE>
  the fool got his tie caught in the geartrain
</USAGE>
<RILR link='ENG30-03292736-n' type='hypernym' literal=''>
  epicyclic train:1, epicyclic gear train:1
</RILR>
<RILR link='ENG30-04066767-n' type='hypernym' literal=''>
  reduction gear:1
  
```

At the bottom of the browser window, a status bar indicates "Querying a dictionary is complete" and "Item(s): 17".

Entry editing

Cornetto Synset - Google Chrome

about:blank

cdb_synset.wn_equivalence Search Search in all

d_n-33276 [noun] derailleur:1 | versnelling v.e. sportfiets;
 n_n-524944 [noun] radenwerk:1, wielwerk:1 | TECHN | geheel van op elkaar werkende radere
 n_n-530300 [noun] tandwieloverbrenging:1, tandradoverbrenging:1 |

Concept Relations Tree Revtree Edit Xml

Name: dwn10_pwn16_pwn20_mappi Remove

Rel. name: + Arg1: Arg2:

Device negative status

Add

Semantic Relations: Target, Relation

versnelling:2 HAS_HYPERONYM Remove

Coordinative Disjunctive reversed Factive Negative

Add

Equivalence Relations

Target20: [n] gearing:1, gears:1, geartr Remove

Target30: [n] gearing:1, gear:2, geartrai

Name: EQ_NEAR_SYNONYM

Version: pwn_1_6

Pos:

Author score: 43.0

Cross-dictionary links

Concept Relations Tree Revtree Edit Xml

C_SY_ID: [d_n-33276](#)

Synonyms: [deralleur:1/r_n-10703](#)

PoS specific: NOUN_MASCULIN

Definition: [versnelling v.e. sportfiets](#);

SUMO: (+, , Device)

Internal relations:

[\[HAS_HYPERONYM\]](#) [versnelling:2/d_n-25990](#)

coordinative: [false](#), disjunctive: [false](#), reversed: [false](#), negative: [false](#)

Search in	>
WN EN 3 synsets	>
SUMO relations	>
WN EN 2 synsets	>
synonym LUs	>
Search in (by)	>
AutoLookUp in	>
AutoLookUp by	>
AutoLookUp by search	>

Equivalence relations:

[\[EQ_NEAR_SYNONYM\]](#) [/ENG20-03306506-n](#) | [/ENG30-03431745-n](#)

version: [pwn_1_6](#) score: [43.0](#) source_id: [Wordnet Aligner v2.0](#)