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Software support for developing semantically well-structured thesauri

TermMaster and the Alcohol and Other Drug (AOD) Thesaurus

Examples

Paper presented at the Getty Workshop on Semantic Systems
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Purpose

1 Illustrate advanced features of thesaurus development software

2 Illustrate a thesaurus format that expressly represents the semantic structure of a thesaurus
Software support for thesaurus development and display

Principles

Support the development and management of hierarchies

Database with multiple thesauri

Use the combined knowledge in creating new thesauri
Functions

Flexible display of thesaurus data

Support for thesaurus development and maintenance.

Database of multiple thesauri

Use multiple sources

Maintain multiple thesauri, establish conversion

Output formats to support use of a thesaurus in retrieval systems
Flexible display of thesaurus data, especially hierarchies

Examples from the AOD Thesaurus

Overview of thesaurus parts (exhibit A)

Detailed outline (B)

Quick hierarchy (C)

Annotated hierarchy (D)

KWOC index (E)

Annotated alphabetical list (F)
Simple example for data input and display

Entries from the AAT arranged in a hierarchy with meaningful sequence

Input file (G)

Resulting annotated hierarchy (H)

Note preservation of hierarchical sequence and generation of notations

Print command file for annotated hierarchy (I)

Note instructions for inclusion of terms, type size, and other formatting options

Note mapping of (detailed) internal relationship types to (broad) external relationship types
Support for thesaurus development

Import, input, and editing of thesaurus data, esp. hierarchies

Input files for three thesauri (J)

Print command files and publication output examples (K)

Pulling in data from other thesauri through an "edit print"

Reference print for lexicographer (L)

File for editing and reinput (M)

Comparison with other thesauri (N)

Amended AOD hierarchy (O)

Generating draft hierarchy from BT/NT relationships

No example, but see expanded hierarchy (P)
Pulling in data from other thesauri
Individual entries

Thesaurus aod

.. adolescent
  SN Girl age 11 - 18, boy age 13 - 19.
  ET pubescent
  BT special populations
  NT high risk youth
  RT youth (stage of life)
  RT adolescence

Thesaurus s1 (Fig. 2b, p. 163):

Teenager   DE
  ET Pubescent
  NT Pregnant teen
  NT Teenage mother

Thesaurus s2 (Fig. 2c, p. 164):

. Teenagers
  ST Youth (Young Person)
  RT Junior High Students
  RT High School Students
  . Runaway Youths
Pulling in data from other thesauri
Cumulative entry

Thesaurus aod, enhanced
Edit print, reference print for lexicographer (L)

\textsuperscript{2}TA8 . . adolescent (aod: DE)
SN Girl age 11 - 18, boy age 13 - 19.
ST teenager (s1: DE, s2: DE, s2: SW)
ST youth (young person) (s2: NP)
ET pubescent (aod: NP, s1: NP, s1: SW)
ET teenager (s1: DE, s2: DE, s2: SW)
NT TZ2.2 high risk youth
NT pregnant teen (+)
NT runaway youths (+)
NT teenage mother (+)
BT +TZ4 special populations
BT persons by age (+)
RT +LJ6 youth (stage of life)
RT LJ6.4 adolescence
RT TN6 junior high school student (+)
RT TN8 high school student (+)

Thesaurus aod, enhanced
Edit print, file for editing and re-input (M)

. . adolescent
SN Girl age 11 - 18, boy age 13 - 19.
ST teenager
ST youth (young person)
. . .
Comparison with other thesauri

AOD comparison print, long. (N)

adults B10 (aod: DE, s2: DE, s2: SW)
adult +TA10

*aged persons B10-5 (aod: NP, s2: DE)
aged person
elderly TA10.2 (aod: DE, s1: NP, s1: SW)

...#retirement homes M5 (s1: NP, s2: DE)

^#home (aod: SW, s1: SW, s2: SW)
nursing home resident TU2.2.2 (aod: DE, s2: DE)

^#retirement (s1: SW, s2: SW)

Other example (Fig. 6b3, p. 178)

#alcohol treatment facility
^*alcohol [stopword]
^treatment [stopword]
^*facility (aod: DE, ...)

... AÖDD treatment facility +A20.16 (aod:DE)
Output formats to support use of a thesaurus in retrieval systems

Expanded hierarchy to support inclusive searching (P)

Builds on the basic hierarchy, preserves its structure

Export formats

Comma-delimited, quoted ASCII file for import into Dbase (P2, left column)

Export format for DB TextWorks (Inmagic) for online display of the thesaurus