



分類表(Classification Schemes)

- *Classification Schemes, Taxonomies, and Categorization Schemes.*

These terms are often **used interchangeably**. Although there may be subtle differences from example to example, these types of KOSs all provide ways to separate entities into "buckets" or broad topic levels. Some examples **provide a hierarchical arrangement of numeric or alphabetic notation to represent broad topics**. These types of KOSs may **not follow the rules** for hierarchy required in the ANSI NISO Thesaurus Standard (Z39.19) (NISO 1998), and they **lack the explicit relationships presented in a thesaurus**. Examples of classification schemes include the Library of Congress Classification Schedules (an open, expandable system), the Dewey Decimal Classification (a closed system of 10 numeric sections with decimal extensions), and the Universal Decimal Classification (based on Dewey but extended to include facets, or particular aspects of a topic).



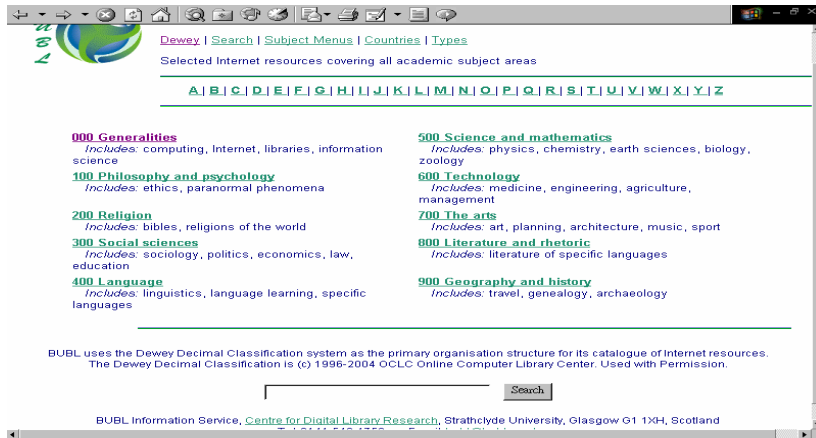
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Subject categories are often used to group thesaurus terms in broad topic sets that lie outside the hierarchical scheme of the thesaurus. **Taxonomies** are increasingly being used in object-oriented design and knowledge management systems to indicate any grouping of objects based on a particular characteristic. (The science of naming things is called **taxonomy**)



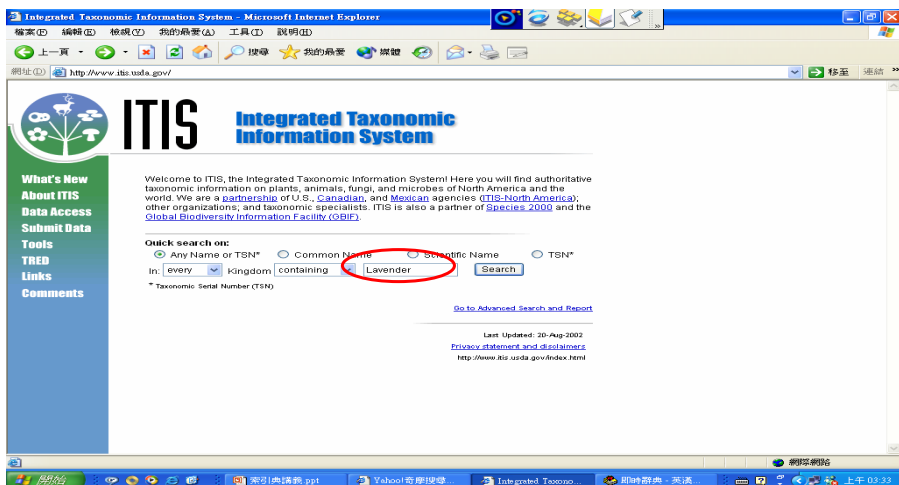
分類表(Classification Schemes)



<http://www.bubl.ac.uk/link/index.html>



分類(Taxonomies)



<http://www.itis.usda.gov/>



分類(Taxonomies)

The screenshot shows the ITIS Search Results page for the term 'Lavender'. The browser window title is 'ITIS Results of Search in every Kingdom for all containing 'Lavender' - Microsoft Internet Explorer'. The address bar shows 'http://www.itis.usda.gov/servlet/SingleRptSingleRpt'. The page has a navigation bar with links: Home, Data Access, Submit Data, Tools, and Comment. The main content area is titled 'Results of: Search in every Kingdom for Common Name containing 'Lavender''. It lists results under two categories: Kingdom Animalia and Kingdom Plantae. Under Kingdom Animalia, it lists: lavender burrowing crayfish (Species: Fallicambarus byersi (Hobbs, 1941) -- valid), lavender jollfish (Species: Pristigomoides sieboldii (Bleeker, 1954) -- valid), lavender sculpin (Species: Leiocottus hirundo Girard, 1856 -- valid), and lavender wadbill (Species: Esthilda caerulescens (Vieillot, 1817) -- valid). Under Kingdom Plantae, it lists: broadleaved lavender (Species: Lavandula latifolia Medikus -- accepted), California sea lavender (Species: Limonium californicum (Boiss.) Heller -- accepted), Carolina sea lavender (Species: Limonium carolinianum (Vahl) Britt. -- accepted), Carolina sea lavender (Species: Limonium carolinianum (Vahl) Britt. -- accepted), desert lavender (Species: Hyssopus emoryi Torr. -- accepted), English lavender (Species: Lavandula angustifolia P. Mill. -- accepted), French lavender (Species: Lavandula stoechas L. -- accepted), kidneyleaf sea lavender (Species: Limonium reniforme (Girard) Linchewski -- accepted), lavender (Genus: Lavandula L. -- accepted), lavender bladderwort (Species: Utricularia rasupinata B.D. Greene ex Bigelow -- accepted), lavender calyotus (Species: Calyophorus lavandulifolius (Torr. & Gray) Raven -- accepted), lavender cotton (Genus: Santolina L. -- accepted), lavender cotton (Species: Santolina chamaecyparissus L. -- accepted), lavender oldfield aster (Species: Symphyotrichum priceae (Britt.) Nesom -- accepted), lavender sage (Species: Salvia greatae Brandegee -- accepted), lavender scallops (Species: Kalanchoe fedtschenkoi Harms & Perrier -- accepted), lavender sundrop (Species: Calyophorus lavandulifolius (Torr. & Gray) Raven -- accepted), lavender thistle (Species: Cirsium neomexicanum Gray -- accepted), lavender thoroughwort (Species: Eupatorium pycnocephalum Less. -- not accepted), lavender thoroughwort (Species: Fleischmannia pycnocephala (Less.) King & H.E. Robins. -- accepted), lavender woodstar (Species: Eriogonum filiforme (Nutt.) Wood & Standl. -- accepted), and lavender leaf sundrops (Species: Calyophorus lavandulifolius (Torr. & Gray) Raven -- accepted).

<http://www.itis.usda.gov/>



索引典(Thesauri)

- A **thesaurus** is a structure that manages the complexities of terminology and provides conceptual relationships, ideally through an embedded classification/ontology.
- A thesaurus may specify descriptors authorized for indexing and searching. These descriptors form a **controlled vocabulary (authority list, index language)**.
- A **monolingual thesaurus** has terms from one language, a **multilingual thesaurus** from two or more language.



索引典(Thesauri)



http://www.getty.edu/research/conducting_research/vocabularies/aat/index.html



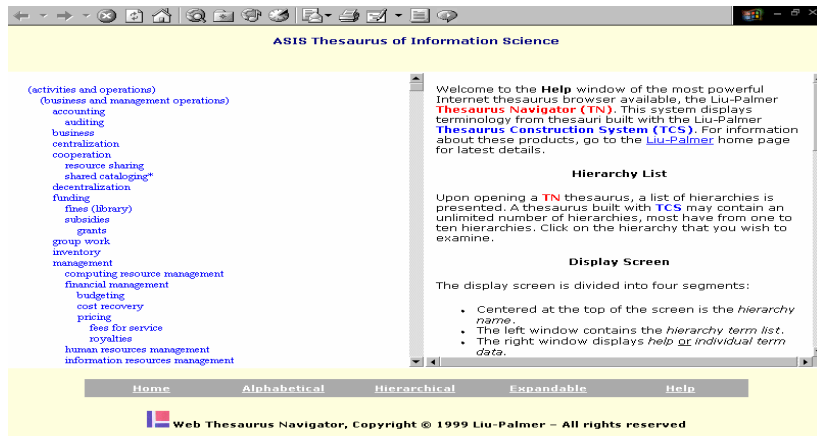
索引典(Thesauri)



http://www.getty.edu/research/conducting_research/vocabularies/aat/index.html



索引典(Thesauri)



<http://www.asis.org/Publications/Thesaurus/isframe.htm>



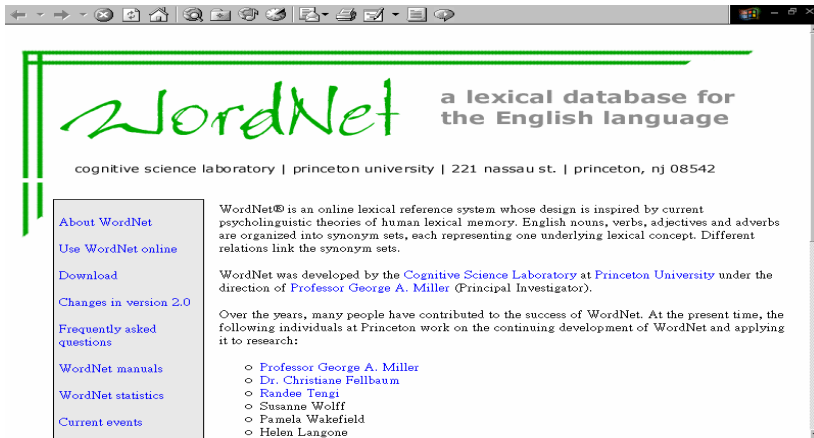
語意網路(Semantic Network)

- *Semantic Networks.*

With the advent of natural language processing, there have been significant developments in semantic networks. These KOSs **structure concepts and terms not as hierarchies but as a network or a web**. Concepts are thought of as **nodes**, and **relationships branch** out from them. The relationships generally go beyond the standard BT, NT, and RT. They may include specific whole-part, cause-effect, or parent-child relationships. The most noted semantic network is Princeton University's WordNet, which is now used in a variety of search engines.



語意網路(Semantic Network)

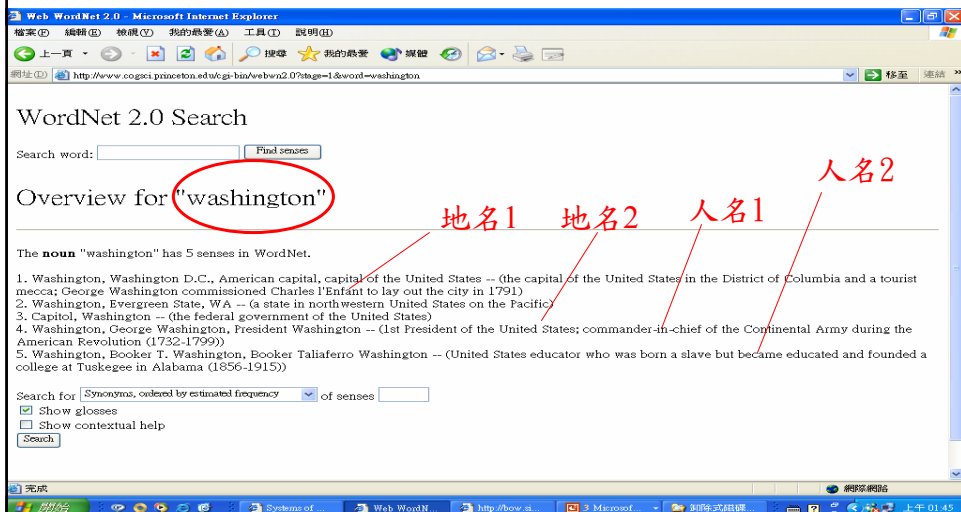


The screenshot shows the WordNet website interface. At the top, there's a navigation bar with the WordNet logo and the text "a lexical database for the English language". Below this, it says "cognitive science laboratory | princeton university | 221 nassau st. | princeton, nj 08542". The main content area is divided into two columns. The left column contains links: "About WordNet", "Use WordNet online", "Download", "Changes in version 2.0", "Frequently asked questions", "WordNet manuals", "WordNet statistics", and "Current events". The right column contains text about WordNet, its development by the Cognitive Science Laboratory at Princeton University, and a list of contributors: Professor George A. Miller, Dr. Christiane Fellbaum, Randee Teng, Susanne Wolff, Pamela Wakefield, and Helen Langone.

<http://www.cogsci.princeton.edu/%7Ewn/>



語意網路(Semantic Network)



The screenshot shows the WordNet 2.0 Search interface in a Microsoft Internet Explorer browser. The search bar contains the word "washington". Below the search bar, the text "Overview for 'washington'" is displayed. A list of 5 senses for the noun "washington" is shown, each with a red line pointing to a label: "地名1" (Location 1), "地名2" (Location 2), "人名1" (Person 1), and "人名2" (Person 2). The list includes: 1. Washington, Washington D.C., American capital, capital of the United States; 2. Washington, Evergreen State, WA; 3. Capitol, Washington; 4. Washington, George Washington, President of the United States; 5. Washington, Booker T. Washington, Booker Taliaferro Washington. The interface also includes a search bar, a "Find senses" button, and checkboxes for "Show glosses" and "Show contextual help".

<http://www.cogsci.princeton.edu/%7Ewn/>

知識本體(ontology)

- *Ontologies.*

Ontology is the newest label to be attached to some knowledge organization systems. The knowledge-management community is developing ontologies as specific concept models. They can **represent complex relationships among objects, and include the rules and axioms missing from semantic networks.** Ontologies that **describe knowledge in a specific area** are often connected with systems for data mining and knowledge management.