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ESTUDIOS



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Información General

UPDATE ON TOPIC MAP AND LINGUISTIC STANDARDS.

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OVERVIEW

1. WHAT'S AN INDEX?
2. KNOWLEDGE ORGANIZATION SYSTEMS IN DIGITAL LIBRARIES
3. LINGUISTIC ONTOLOGIES
4. KNOWLEDGE MANAGEMENT ONTOLOGIES: TOPIC MAPS.
5. IDENTITIES IN SUBJECTS
6. SEMANTIC RELATIONSHIPS
7. TOPIC MAPS: A CALL CENTRE TAX MAP.
8. TOPIC MAPS: MERGING OR COMMUNICATION.
9. CONCLUSIONS
NKOS 2004

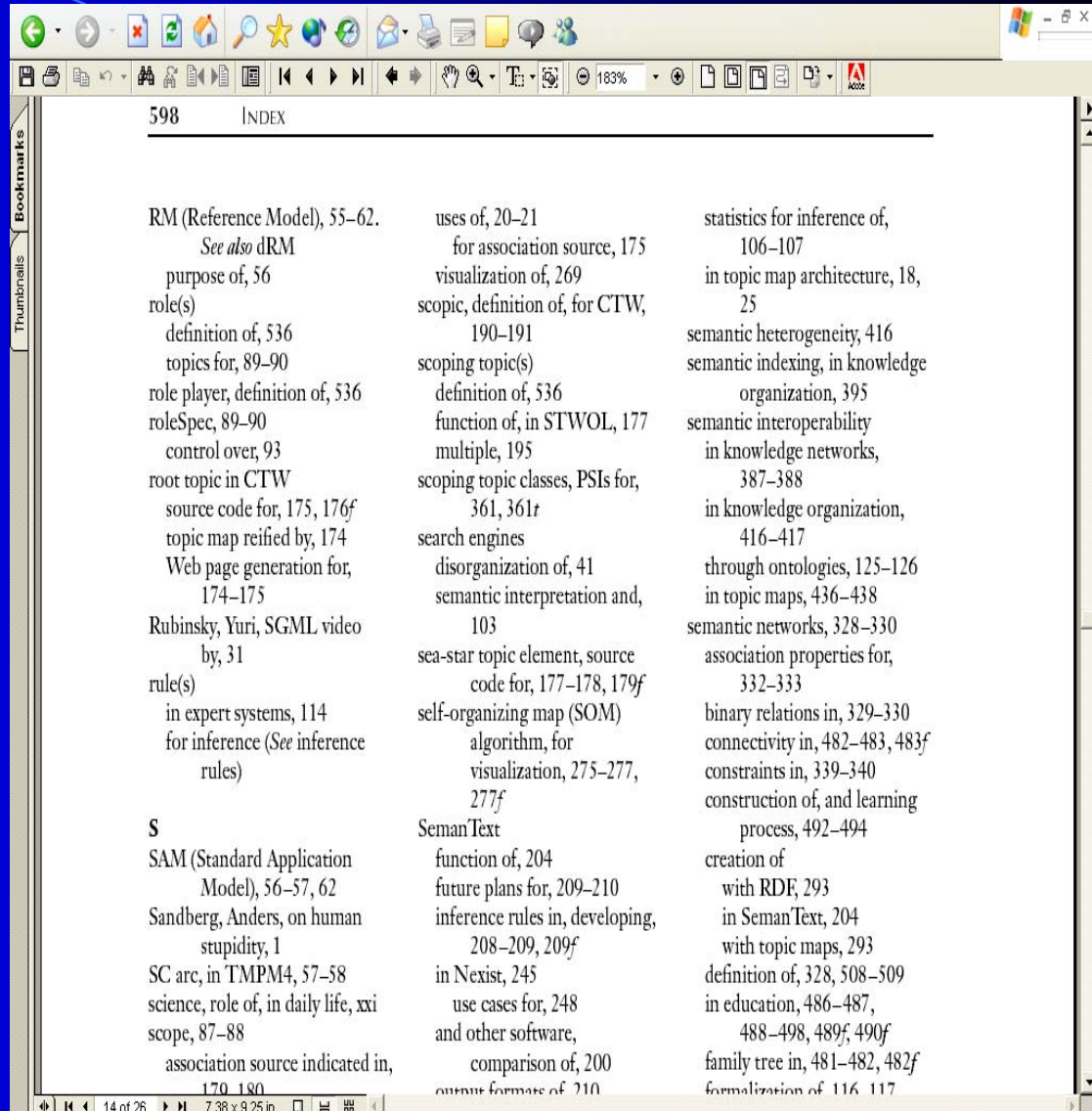
The screenshot shows a web browser window titled "[Omnigator] Puccini, Giacomo - Microsoft Internet Explorer". The address bar contains the URL "http://www.ontopia.net/omnigator/models/topic_complete.jsp?tm=opera.imlid=915". The main content area displays the "omnigator VI" interface, powered by the "ontopia topic map engine". The page title is "Puccini, Giacomo" with a type of "composer". The interface includes a navigation menu with options like "Welcome", "Italian Opera", "Manage", "Customise", "Filter", "Export", and "Statistics". The main content is organized into several sections:

- Names:**
 - Puccini, Giacomo
 - Giacomo Puccini - Scope: normal form
 - Puccini - Scope: short name
- Metadata:**
 - born
 - 1858 (22 Dec)
 - died
 - 1924 (29 Nov)
- Related subjects:**
 - born in
 - Lucca
 - composed
 - Edgar
 - Gianni Schicchi
 - Il Tabarro
 - Il Trittico
 - La Bohème (Puccini)
 - La fanciulla del West
 - La rondine
 - Le Villi
 - Madame Butterfly
 - Manon Lescaut
 - Suor Angelica
 - Tosca
 - Turandot
 - died in
 - Brussels
 - exponent of
 - verismo
 - pupil of
 - Ponchielli, Amilcar
- External resources:**
 - article
 - file:/C:/ontopia/topicmaps/opera/occurs/sni/puccini.htm - Scope: offline; Store Norske Leksikon
 - http://www.ontopia.net/topicmaps/examples/opera/occurs/sni/puccini.htm - Scope: Norwegian; online; Store Norske Leksikon
 - gallery
 - file:/C:/ontopia/topicmaps/opera/occurs/puccini-gallery.htm - Scope: offline
 - home page
 - file:/C:/ontopia/topicmaps/opera/occurs/hrh-puccini.htm - Scope: Maxos; offline
 - http://www.hnh.com/composer/puccini.htm - Scope: Maxos; online
 - http://www.r-ds.com/opera/pucciniana/gallery.htm - Scope: online; OperaResource
 - illustration
 - file:/usr/local/oks-professional/jakarta-tomcat/webapps/omnigator/WEB-INF/topicmaps/occurs/composer/puccini.gif
 - sound clip
 - http://www.puccini.it/files/vocepucc.wav - Scope: Centro studi Giacomo Puccini; Italian; online
 - web site
 - http://www.puccini.it - Scope: Centro studi Giacomo Puccini; Italian; online

UPDATE ON TOPIC MAP AND LINGUISTIC STANDARDS.

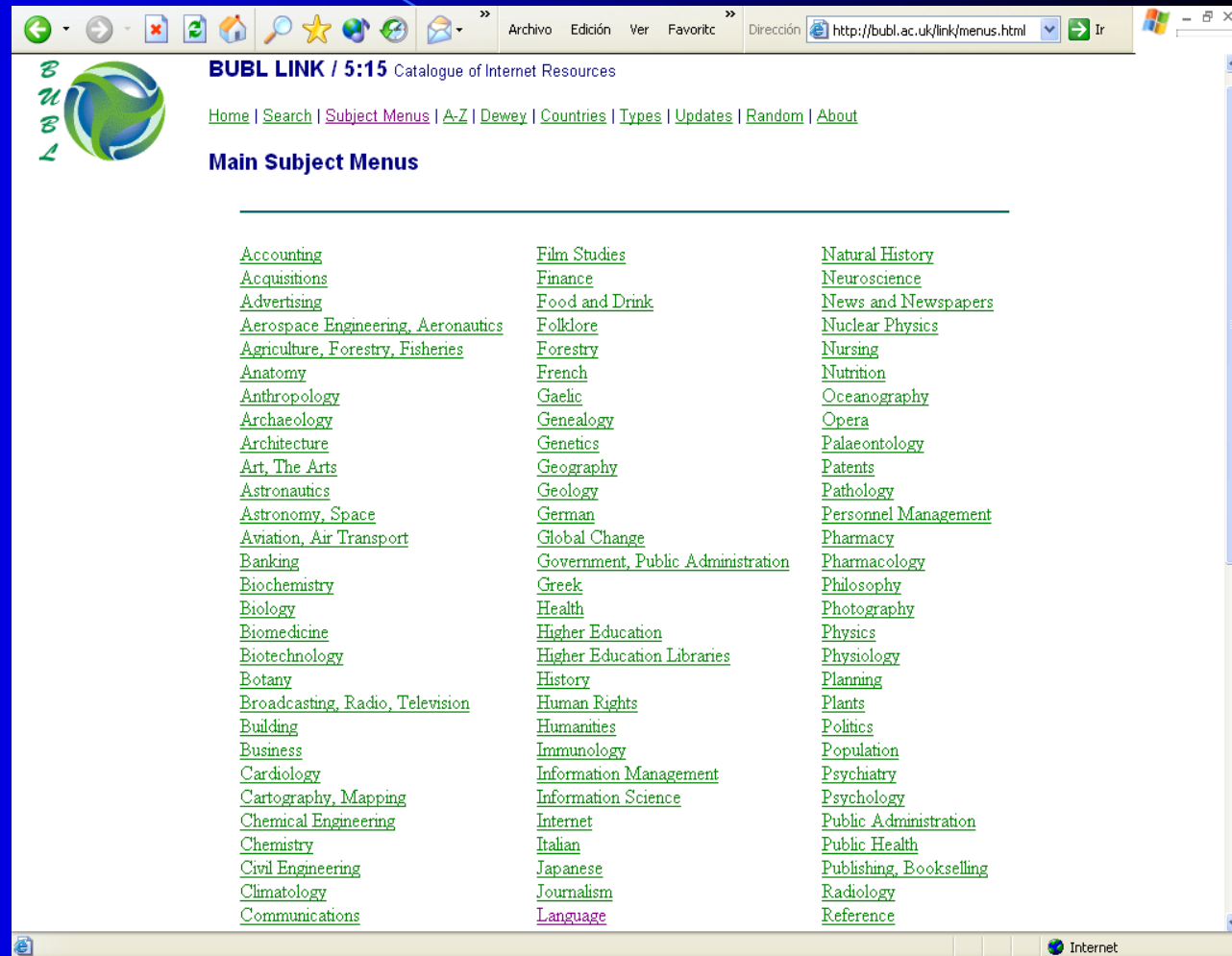
WHAT'S AN INDEX?

- TOPICS
- TOPIC NAMES
- TOPIC CLASSES
- OCCURRENCES
- OCCURRENCES
- CLASSES
- ASSOCIATION
- ASSOCIATION
- CLASSES.



SUBJECT BASED CLASSIFICATION: CONTROLLED VOCABULARIES

● LIST OF TERMS
SORTED
ALPHABETICALLY
WITHOUT
RELATIONSHIPS
BETWEEN EACH
ITEM.



The screenshot shows a web browser window displaying the BUBL LINK website. The browser's address bar shows the URL <http://bubl.ac.uk/link/menus.html>. The website header includes the text "BUBL LINK / 5:15 Catalogue of Internet Resources" and a navigation menu with links for Home, Search, Subject Menus, A-Z, Dewey, Countries, Types, Updates, Random, and About. Below the header, the page is titled "Main Subject Menus" and features a grid of 30 subject categories, each represented by a blue underlined text link. The subjects are listed in three columns: Accounting, Acquisitions, Advertising, Aerospace Engineering, Aeronautics, Agriculture, Forestry, Fisheries, Anatomy, Anthropology, Archaeology, Architecture, Art, The Arts, Astronautics, Astronomy, Space, Aviation, Air Transport, Banking, Biochemistry, Biology, Biomedicine, Biotechnology, Botany, Broadcasting, Radio, Television, Building, Business, Cardiology, Cartography, Mapping, Chemical Engineering, Chemistry, Civil Engineering, Climatology, Communications, Film Studies, Finance, Food and Drink, Folklore, Forestry, French, Gaelic, Genealogy, Genetics, Geography, Geology, German, Global Change, Government, Public Administration, Greek, Health, Higher Education, Higher Education Libraries, History, Human Rights, Humanities, Immunology, Information Management, Information Science, Internet, Italian, Japanese, Journalism, Language, Natural History, Neuroscience, News and Newspapers, Nuclear Physics, Nursing, Nutrition, Oceanography, Opera, Palaeontology, Patents, Pathology, Personnel Management, Pharmacy, Pharmacology, Philosophy, Photography, Physics, Physiology, Planning, Plants, Politics, Population, Psychiatry, Psychology, Public Administration, Public Health, Publishing, Bookselling, Radiology, and Reference.

SUBJECT BASED CLASSIFICATION: TAXONOMIES

- **TAXONOMIES:
LIST OF TERMS
SORTED BY
HIERARCHICAL
RELATIONSHIPS**

BUBL LINK Catalogue of selected Internet resources

[Home](#) | [Search](#) | [Subject Menus](#) | [A-Z](#) | [Dewey](#) | [Countries](#) | [Types](#) | [Updates](#) | [Random](#) | [About](#)

400 Language

[400 Language: general resources](#)
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[407 Language education and research](#)
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[414 Phonology and phonetics](#)
[415 Grammar](#)
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[420 English language](#)
[430 German language](#)
[439.31 Dutch language](#)
[439.7 Swedish language](#)
[439.82 Norwegian language](#)
[440 French language](#)
[450 Italian language](#)
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[460 Spanish language](#)
[469 Portuguese language](#)
[470 Latin language](#)
[480 Greek language](#)
[490 Other languages](#)

SUBJECT BASED CLASSIFICATION: THESAURI

THESAURI RELATIONSHIPS

1. HIERARCHICAL
2. EQUIVALENCE
3. ASSOCIATIVES

The screenshot shows a web browser window displaying a thesaurus entry for 'couple roofs'. The browser's address bar shows the URL 'http://www.getty.edu/vow/AATFull'. The page content includes the following information:

- ID:** 300002181
- Record Type:** concept
- Definition:** couple roofs (<roofs by construction: truss and beam structure>, <roofs by construction>, ... Components)
- Note:** Use for roofs without tie or collar beams, and depending on walls to resist thrust.
- Terms:**
 - couple roofs (preferred, C,U,D,American English-P)
 - couple roof (C,U,AD,American English)
 - coupled roofs (C,U,UF,American English)
 - roofs, couple (C,U,UF,American English)
 - roofs, coupled (C,U,UF,American English)
- Facet/Hierarchy Code:** V.PJ
- Hierarchical Position:**
 - Objects Facet
 - Components
 - components
 - <components by specific context>
 - architectural elements
 - <structural elements and structural element components>
 - <structural elements>
 - <enclosing structural elements>
 - <roofs and roof components>
 - roofs
 - <roofs by construction>
 - <roofs by construction: truss and beam structure>
 - couple roofs
- Sources and Contributors:**
 - coupled roofs..... [VP]
 - Fleming et al., Penguin Dictionary of Architecture (1981)
 - Harris, Historic Architecture Sourcebook (1977)
 - Sturgis, Dictionary of Architecture and Building (1902) Vol. 3, 354
 - couple roof..... [VP]
 - Getty Vocabulary Program
 - couple roofs..... [VP Preferred]

SEMANTIC NETWORKS: WORDNET

- **LEXICAL DATABASE** composed by lexical unities and their relationships.
- It organizes around a words collection with same root wich can be interchanged in a specific context: **SYNSET**

Web WordNet 1.7.1 - Microsoft Internet Explorer

Archivo Edición Ver Favoritos Herramientas Ayuda

WordNet 1.7.1 Search

Search word: Find senses

Overview for "taxonomy"

The noun "taxonomy" has 3 senses in WordNet.

1. **taxonomy** -- (a classification of organisms into groups based on similarities of structure or origin etc)
2. **taxonomy** -- ((biology) study of the general principles of scientific classification)
3. **taxonomy** -- (practice of classifying plants and animals according to their presumed natural relationships)

Search for Synonyms, ordered by estimated frequency of senses

Show glosses
 Show contextual help

Return to [WordNet home](#)

Inicio TESINA.PPT VISUALIZACIÓN EN TOPI... Web WordNet 1.7.1 ... 17:11

SEMANTIC NETWORKS: FRAMENET

- **LEXICAL DATABASE** which provides a corpus of sentences noted syntactically and semantically that it evokes their different meanings or scopes of one term.

- It's a script-like structure of inferences linked to meanings of linguistic units.

- Each frame identifies a set of frame elements (FEs) which are frame specific semantic roles.

- The description of each lexical item identifies the frames which underlie a given meaning and the ways in which the (FEs) in structures headed by the word.

- It documents range of semantic and syntactic combinatory possibilities (valences) of each word in each of its senses, through manual annotation of example sentences and automatic summarization of the resulting annotations.

- It has been translated to **RDF** and **OWL**

INDEX BY FRAME

- DEFINITION.

- FRAME ELEMENTS

- RELATIONSHIPS BETWEEN FRAMES

- LEXICAL UNITS

- RECORD CONTROL: Created by infinity on Thu Aug 16 10:34:25 PDT 2001

FrameNet II Home - Microsoft Internet Explorer

Archivo Edición Ver Favoritos Herramientas Ayuda

Criminal_process

Definition:

A Suspect is arrested by an Authority on certain Charges, then is arraigned as a Defendant. If at any time the Defendant pleads guilty, then the Defendant is sentenced, otherwise the Defendant first goes to trial. If the Verdict after the trial is guilty, then the Defendant is sentenced. In the end, the Defendant is either released or is given a Sentence by a Judge at the sentencing. The core roles in this frame include Jury, Judge, Defendant, District Attorney, Defense Attorney, an Authority such as the police/sheriff. Non-core roles include Witness, Accomplice and Victim.

FEs:

Core:

- Charges [Chrg]** This FE identifies the Charges brought against the Defendant.
- Court [Crt]** This FE identifies the court involved in a trial.
- Defendant [Dfnd]** The Defendant is charged with an offense.
- Defense [Dfns]** The Defense represents the interests of the Defendant.
- Judge [Judge]** The Judge heads the court where arraignment occurs and the case is tried.
- Jury [Jury]** This FE identifies the people who are charged by the Court to listen to the testimony, evidence, and arguments, and come to a consensus about the guilt or innocence of the Defendant.
- Offense [Off]** This FE identifies the Offense which the Defendant is accused of committing.
- Prosecution [Prsc]** This FE identifies the attorney(s) prosecuting the Defendant.

Inherits From:
Is Inherited By:
Subframe of: [Crime scenario](#)
Has Subframes: [Arraignment](#), [Arrest](#), [Sentencing](#), [Trial](#)

Inicio Microsoft PowerPoint ... FrameNet II Home - ... ES 11:43

INDEX OF LEXICAL UNITS

- It is an index to alphabetical lists of the names of the lexical units (LUs).
- Each LU name is followed by the part of speech, the name of the relevant frame, and its status
- The lexical entry provides two tables with information about the LU: Frame Elements and their Syntactic Realizations; and Valence Patterns

FrameNet II Home - Microsoft Internet Explorer

Archivo Edición Ver Favoritos Herramientas Ayuda

- critical.a.A ([Judgment](#)) Fnl_sent Lexical entry Annotation
- criticism.n.N ([Judgment communication](#)) Fnl_sent Lexical entry Annotation
- criticize.v.V ([Judgment communication](#)) Fnl_sent Lexical entry Annotation
- critique.n.N ([Judgment communication](#)) Finished_initial Lexical entry Annotation
- critique.v.V ([Judgment communication](#)) Insufficient attestations Lexical entry
- croak.it.v.V ([Death](#)) Created Lexical entry
- croak.v.V ([Make Noise](#)) Fnl_sent Lexical entry Annotation
- croak.v.V ([Death](#)) Finished_initial Lexical entry Annotation
- croak.v.V ([Communication noise](#)) Fnl_sent Lexical entry Annotation
- crock.n.N ([Containers](#)) Finished_initial Lexical entry Annotation
- croissant.n.N ([Food](#)) Finished_initial Lexical entry Annotation
- croon.v.V ([Make Noise](#)) Fnl_sent Lexical entry Annotation
- croon.v.V ([Communication noise](#)) Fnl_sent Lexical entry Annotation
- crop.n.N ([Aggregate](#)) Finished_initial Lexical entry Annotation
- cropped.a.A ([Hair configuration](#)) Finished_initial Lexical entry Annotation
- cross-examination.n.N ([Court examination](#)) Finished_initial Lexical entry Annotation
- cross-examine.v.V ([Court examination](#)) Finished_initial Lexical entry Annotation
- cross-eyed.a.A ([Body description part](#)) Finished_initial Lexical entry Annotation
- cross.a.A ([Emotion directed](#)) Fnl_sent Lexical entry Annotation
- cross.n.N ([Court examination](#)) Insufficient attestations Lexical entry
- cross.v.V ([Path shape](#)) Fnl_sent Lexical entry Annotation
- cross.v.V ([Body movement](#)) Fnl_sent Lexical entry Annotation
- crossbow.n.N ([Weapon](#)) Finished_initial Lexical entry Annotation
- crosswalk.n.N ([Roadways](#)) Finished_initial Lexical entry Annotation
- crouch down.v.V ([Change posture](#)) Finished_initial Lexical entry Annotation
- crouch.v.V ([Posture](#)) Fnl_sent Lexical entry Annotation
- crouch.v.V ([Change posture](#)) Finished_initial Lexical entry Annotation
- crouched.a.A ([Posture](#)) Created Lexical entry
- crow.v.V ([Communication noise](#)) Fnl_sent Lexical entry Annotation
- crowd.n.N ([Aggregate](#)) Finished_initial Lexical entry Annotation
- crowd.v.V ([Mass motion](#)) Finished_initial Lexical entry Annotation
- crowd.v.V ([Filling](#)) Finished_initial Lexical entry Annotation
- crowded.a.A ([Abundance](#)) Finished_initial Lexical entry Annotation
- crown.n.N ([Observable bodyparts](#)) Finished_initial Lexical entry Annotation
- crown.n.N ([Accoutrements](#)) Finished_initial Lexical entry Annotation
- crucial.a.A ([Importance](#)) Finished_initial Lexical entry Annotation

Inicio Microsoft PowerPoint ... FrameNet II Home - ... ES 11:55

LEXICAL ENTRY

- It is the classical entry of a dictionary

- It defines his morphological form

- It gives their frame elements, number of texts annotated with this word in each realization.

- Valence Patterns

FrameNet II Home - Microsoft Internet Explorer

Archivo Edición Ver Favoritos Herramientas Ayuda

probe.n

Frame: Criminal_investigation

Definition

COD: an investigation.

Frame Element	Number Annotated	Realizations(s)
Incident	8	N.Mod 4 PP[into].Comp 4
Investigator	4	N.Mod 2 PP[by].Comp 2

Valence Patterns:

These frame elements occur in the following syntactic patterns:

Number Annotated	Patterns
1 TOTAL	Incident Incident
1	N Mod PP[into] Comp
5 TOTAL	Incident
3	N Mod
2	PP[into] Comp
1 TOTAL	Incident Investigator
1	PP[into] Comp N Mod
3 TOTAL	Investigator

Inicio Microsoft PowerPoint ... FrameNet II Home - ... ES 12:15

ANNOTATION

- It acts as a dictionary and a thesaurus. Like a thesaurus words are linked to the semantics frames in which they participate, and frames are linked to wordlists and to related frames.

- It provides all texts used for analyzing frame elements of each entry.

- Each sense of a polysemous word belongs to a different semantic frame.

- A script-like structure of inferences that characterize a type of situation, object or event.

FrameNet II Home - Microsoft Internet Explorer

Archivo Edición Ver Favoritos Herramientas Ayuda

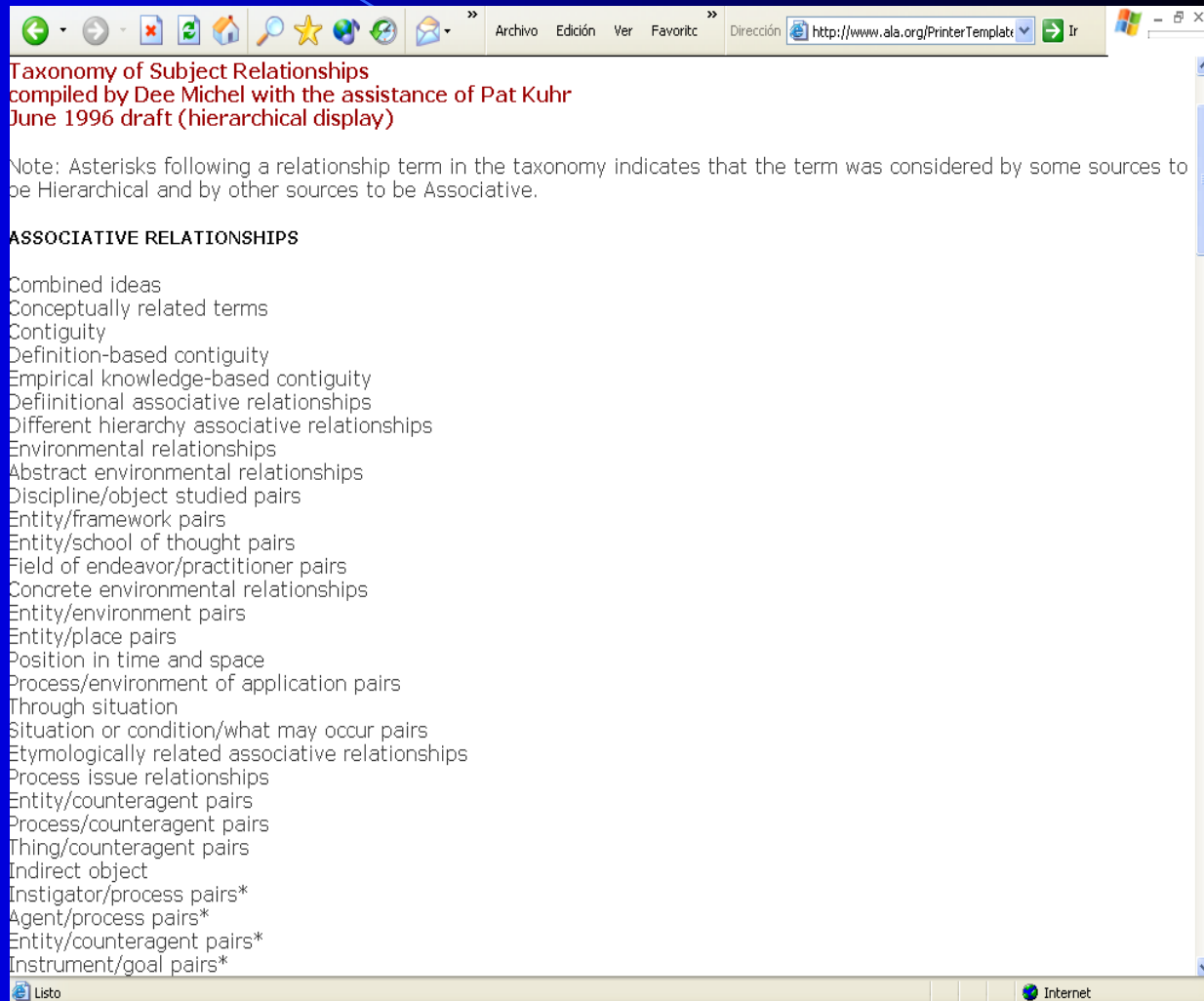
probe.v

Frame Elements	Core Type
Duration	Extra-Thematic
Incident	Core
Investigator	Core
Suspect	Core
Time	Extra-Thematic

- T-NPcrime,allegation,murder-(1)
 - Police are PROBING allegations that Sage , 16 , hatched a bizarre plan to kill his dad 's handyman .
 - SCOTLAND Yard is PROBING ballot rigging allegations in the seamen 's union -- revealed in the Daily Mirror last year .
 - AN escaped prisoner known as The Crusher was being hunted last night by police PROBING a nightwatchman 's murder .
 - SCOTLAND Yard is to PROBE allegations that British paras executed Argentine prisoners during the Falklands conflict .
- T-PPby-(1)
- NPpolice-T-(1)
 - A MINICAB driver and a woman were arrested yesterday by police PROBING a rape and kidnap .
 - Andrea was too distraught to speak as police PROBED the tragedy at Gabalfa , Cardiff , yesterday .
- T-PPin,on,at-(1)
 - Detectives are PROBING a break-in at the Smith Arms in Greatham , near Hartlepool .
- T-PPof,from-(1)
- T-PPwith,to-(1)
- matched-(1)
- unmatched-(1)
- T-PPinto-(2)
 - The Securities and Exchange Board of India , the government regulatory body , is PROBING into the dealings of stock brokers trading in Sachdeva 's company .
 - The commissioners are also PROBING into irregularities in the management of a Capital Development Fund to pay for construction projects .
- matched-(2)
- unmatched-(2)
 - BERN , Switzerland (AP) --- Switzerland 's prosecutor 's office on Wednesday approved releasing bank and corporate documents to Italian anti-corruption investigators PROBING former Prime Minister Silvio Berlusconi 's DNI .
 - But police have vet to PROBE any connection of AUM with Russian military circles . the sources said .

RELATIONSHIP FRAMENET & SEMANTIC WEB

- **Need to describe semantic relationships between different information resources for recalling by subject context in computers.**
- **In a Domain of Knowledge we can implement recognizing of nuances with semantic networks but we need use ontologies implementation languages (OWL) for computers can do it.**



The screenshot shows a web browser window with the following content:

Taxonomy of Subject Relationships
compiled by Dee Michel with the assistance of Pat Kuhr
June 1996 draft (hierarchical display)

Note: Asterisks following a relationship term in the taxonomy indicates that the term was considered by some sources to be Hierarchical and by other sources to be Associative.

ASSOCIATIVE RELATIONSHIPS

- Combined ideas
- Conceptually related terms
- Contiguity
- Definition-based contiguity
- Empirical knowledge-based contiguity
- Definitional associative relationships
- Different hierarchy associative relationships
- Environmental relationships
- Abstract environmental relationships
- Discipline/object studied pairs
- Entity/framework pairs
- Entity/school of thought pairs
- Field of endeavor/practitioner pairs
- Concrete environmental relationships
- Entity/environment pairs
- Entity/place pairs
- Position in time and space
- Process/environment of application pairs
- Through situation
- Situation or condition/what may occur pairs
- Etymologically related associative relationships
- Process issue relationships
- Entity/counteragent pairs
- Process/counteragent pairs
- Thing/counteragent pairs
- Indirect object
- Instigator/process pairs*
- Agent/process pairs*
- Entity/counteragent pairs*
- Instrument/goal pairs*

The browser's address bar shows the URL: <http://www.ala.org/PrinterTemplat>. The taskbar at the bottom shows the 'Listo' application and the 'Internet' icon.

CONCEPT OF TOPIC MAPS

STANDARD ISO/IEC 13250.

A set of information resources regarded by a topic map application as a bounded object set whose hub document is a topic map document conforming to the SGML architecture defined by this International Standard. Or it's any topic map document conforming to the SGML architecture defined by this International Standard.

The screenshot shows a Microsoft Internet Explorer window titled "XML 2002 - Topic Map". The browser's menu bar includes "Archivo", "Edición", "Ver", "Favoritos", "Herramientas", and "Ayuda". The main content area displays the "XML CONFERENCE & EXPOSITION 2002" website, dated December 8-13, 2002, at the Baltimore Convention Center in Baltimore, MD, USA. A navigation bar contains links for "Home", "Meta Index", "Home (online)", "Star Tree", "Help", and "About", along with a "Search Online:" search box. The central content is titled "Meta Index" and is divided into two columns: "Index of Indexes" and "Index of Relationships".

Index of Indexes

- ▶ Affiliations *
- ▶ Authors *
- ▶ Cities *
- ▶ Conferences *
- ▶ Countries *
- ▶ Keywords *
- ▶ Presentations *
- ▶ States / Provinces *
- ▶ Tracks *

Index of Relationships

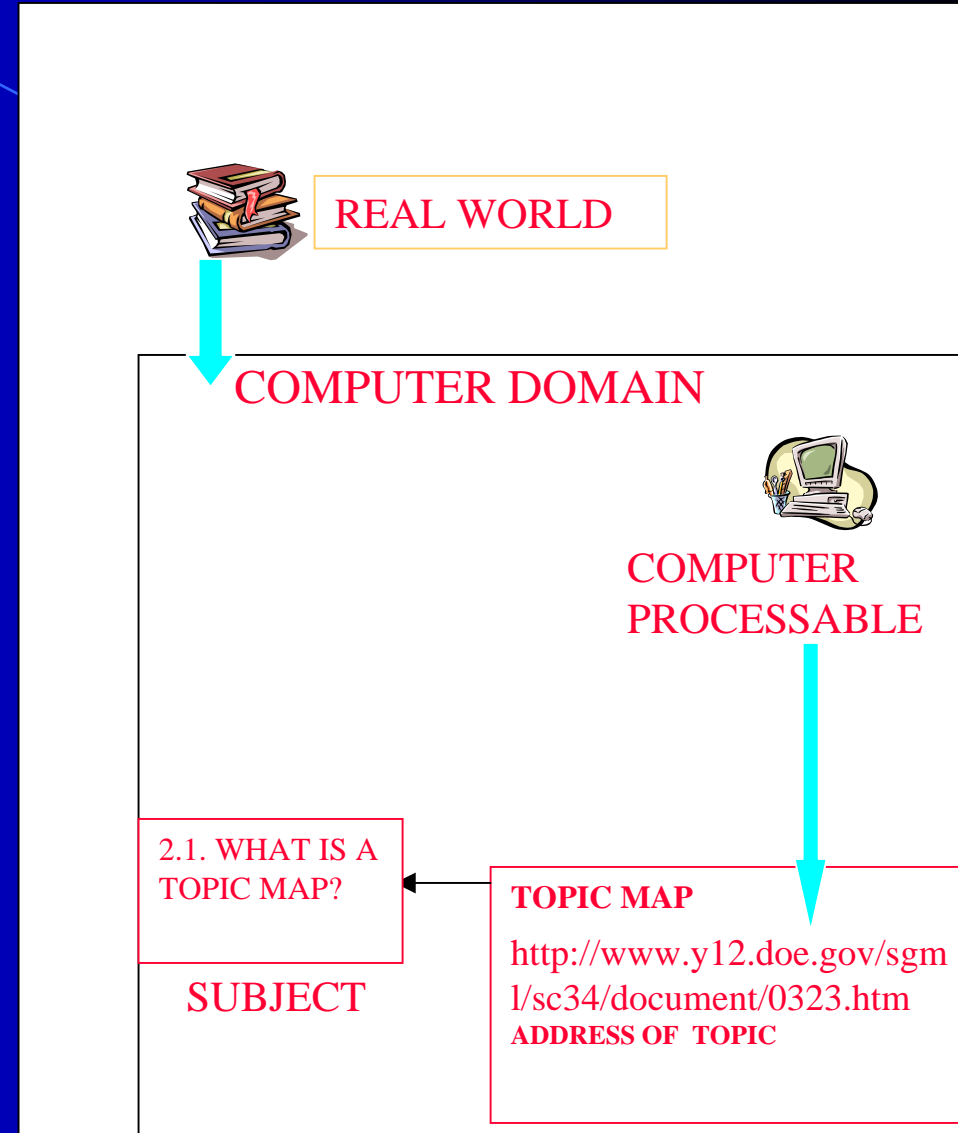
- ▶ Author's Location
- ▶ Conference's Location
- ▶ Conference's Tracks
- ▶ Employment
- ▶ Geographical Containment
- ▶ Organization's Location
- ▶ Presentation's Keywords
- ▶ Presentation's Presenters
- ▶ Track's Presentations

At the bottom of the page, it states: "Designed and Developed by empolis. Powered by empolis knowledge manager."

The Windows taskbar at the bottom shows several open applications: "Inicio", "Definitivo11.doc - Micro...", "TODO.doc - Microsoft...", "Servicio de Correo Elect...", and "XML 2002 - Topic ...". The system clock shows "18:01".

SUBJECT IDENTITY & SUBJECT INDICATORS

- **Subject Identity**: To achieve a one to one relationship between topics and the subjects that they represent, in order to ensure that all knowledge about a particular subject can be accessed via a single topic.
- When the subject is an addressable information resource, its identity may be established directly through its address. However abstract subjects are not directly addressable. This problem is solved through the use of subject indicators
- **Subject Indicator**: It's a resource that is intended to provide a positive, unambiguous indication of the identity of a subject. Because it's a resource a subject indicator has an address that can be used as a subject identifier.



PUBLISHED SUBJECT INDICATORS

- A Published Subject Indicator is a subject indicator that is published and maintained at an advertised location for the purposes of supporting topic map interchange and mergeability. A published subject is any subject for which there exists at least one published subject indicator. A published subject identifier is the subject identifier of a published subject indicator.**
- This is a set of published subject indicators useful for identifying languages by URI. The identifiers are URIs based on the bibliographic three-letter codes in the ISO 639 standard (Codes for the representation of names of languages).**

Each of the rows in the table below indicate a different subject. For each row, the subject indicated is the subject identified by the three given ISO 639 codes and the French and English names for that subject as given in ISO 639-2. The last column gives the subject identifier for each language or language group, based on the terminological code.

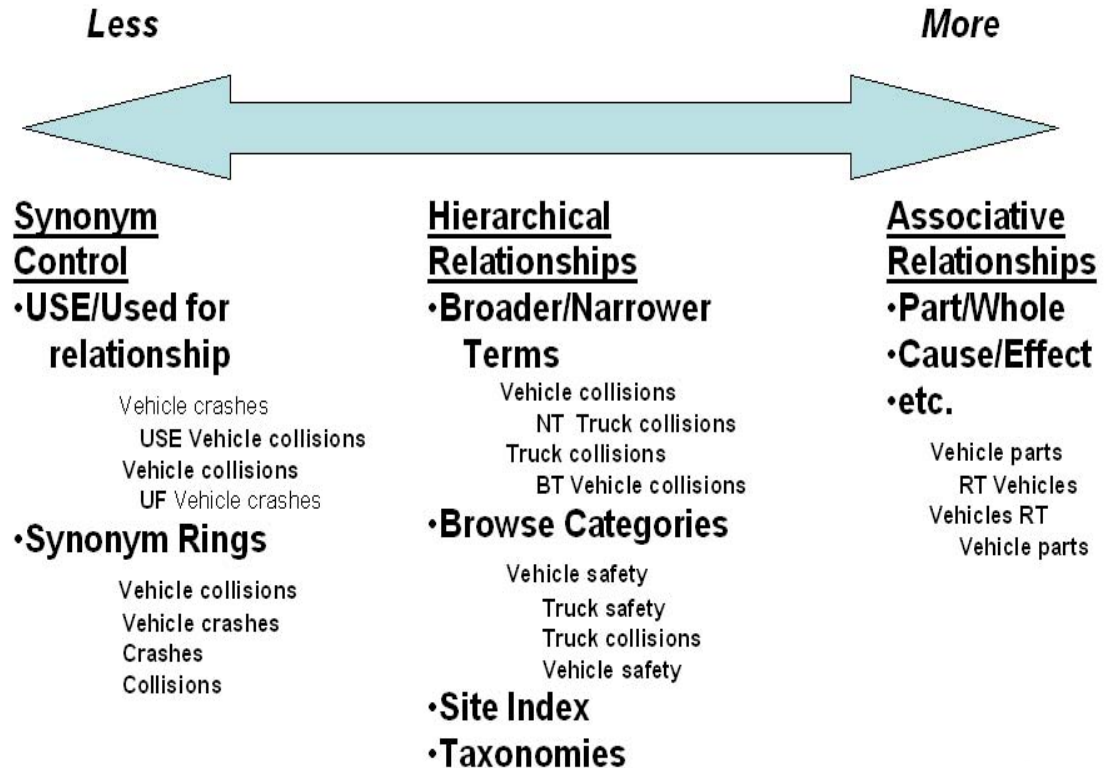
Name (English)	Name (French)	A2 A3B A3T Published subject identifier
Afar	afar	aa aar aar http://psi.oasis-open.org/geolang/iso639/#aar
Abkhazian	abkhaze	ab abk abk http://psi.oasis-open.org/geolang/iso639/#abk
Achinese	aceh	ace ace http://psi.oasis-open.org/geolang/iso639/#ace
Acoli	acoli	ach ach http://psi.oasis-open.org/geolang/iso639/#ach
Adangme	adangme	ada ada http://psi.oasis-open.org/geolang/iso639/#ada
Afro-Asiatic (Other)	afro-asiatiques, autres langues	afa afa http://psi.oasis-open.org/geolang/iso639/#afa
Afrihili	afrihili	afh afh http://psi.oasis-open.org/geolang/iso639/#afh
Afrikaans	afrikaans	af afr afr http://psi.oasis-open.org/geolang/iso639/#afr
Akan	akan	aka aka http://psi.oasis-open.org/geolang/iso639/#aka
Akkadian	akkadien	akk akk http://psi.oasis-open.org/geolang/iso639/#akk
Albanian	albanais	sq alb sqi http://psi.oasis-open.org/geolang/iso639/#alb
Aleut	aléoute	ale ale http://psi.oasis-open.org/geolang/iso639/#ale
Algonquian languages	algonquines, langues	alg alg http://psi.oasis-open.org/geolang/iso639/#alg
Amharic	amharique	am amh amh http://psi.oasis-open.org/geolang/iso639/#amh
English, Old (ca.450-1100)	anglo-saxon (ca.450-1100)	ang ang http://psi.oasis-open.org/geolang/iso639/#ang

SEMANTIC RELATIONSHIPS

CURRENT STANDARD

Only accounts for explicit
Equivalence relationships.
Hierarchical relationship
only allowed for genus
-species relationship, with
few exceptions.
Associative relationship
only allowed across
categories.

Continuum of Vocabulary Control



TOPIC MAPS USE CASE: A CALL CENTRE TAX MAP

- The tax map was designed and implemented to increase the accuracy of information given to the public by optimizing access to relevant information for the call assistants.
- Tax map is an integrated navigation system that gives access to tax related information by topic.
- It also enables direct navigation between related topics, in addition to the traditional access to documents by document type and through tables of contents.

3 document types:
Publications
FAQs
Tele-Tax Topics

Hierarchical navigation to documents.

Each pub has its own table of contents.

Publication 17
Your Federal Income Tax
For use in Preparing 2002 Returns
Introduction, Useful Items and Important Changes

Part 1 - The Income Tax Return

Chapter 1 - Filing Information
Introduction, Useful Items and Important Changes

Do I Have To File a Return?

Individuals—In General
Dependents
Child Under Age 14
Self-Employed Persons
Aliens
Who Should File

Which Form Should I Use?

Form 1040EZ
Form 1040A
Form 1040

Does My Return Have To Be On Paper?

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TAX MAP: KNOWLEDGE ORGANIZATION LEVEL

- Topics originate from the collation of all indexed terms in the Tax Information Publications as well as from keywords used in the publications known as FAQ.
- Topics collated from FAQ's are considered the most frequently used topics, and are given the type of "key topic".
- The set of key topics has been enriched "by hand" by a team of tax experts.
- Key topics are accessible through an alphabetical index and topics in relation with forms are accessible through a specialized "Form topic" index.

The screenshot shows a web browser window titled "Master Index - Microsoft Internet Explorer" with the address "https://www.coolheads.com/guest/irs/tiplatq/version52/topicmap/". The page content includes a search bar with the text "Search All Topics" and a "GO" button. Below the search bar are navigation links for "Search Help" and "Navigation Help". A section titled "Integrated Indexes" contains three sub-sections: "Main Topics" (with an alphabetical index A-Z and #), "Form Topics" (with a specialized list of form-related topics), and "Browse by" (with links for "Publication", "FAQ", and "Tele-Tax Topic"). A "Feedback" section includes "Suggest a Topic" and "Comments". A list of topics is displayed on the right, including "Fair Market Value", "Farmer's Tax Guide", "Farming", "Federal tax deposit coupons", "Federal Tax ID Number", "Federal unemployment tax", "Fees>Legal", "Fellowships", "Fellowships and scholarships", "FICA Taxes", "Filing>Requirements", "Filing>Status", "Final return", "Financial aid", "First-Time Home Buyer", "Flexible Spending Account", "Flexible spending arrangement", "Foreclosure", "Foreign Tax Credit for Individuals", "Foreign>Country", "Form>1040NR", and "Form>1040X". Red circles highlight the search bar, "Main Topics", and "Form Topics" sections. Red arrows point from these sections to a yellow text box on the right.

Main Topics, enriched by a team of tax experts, are isolated from the total number of topics resulting from the integrated indexes of the publications as well as from the FAQs.

- Main topics are accessible through alphabetic indexes.
- Form topics are accessible through a specialized list.
- All other topics can be retrieved using the built-in search engine.

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TAX MAP: OCCURRENCES LEVEL

- Each topic has its own web page which gives access to all places it occurs among the various document types. In addition each topic is linked to related topics, enabling access from one topic page to another.

- When a topic has several names, they are preserved so that they can be accessed by their value in the index.

- One name is chosen as the “main name” and each of the other names are displayed as synonyms on the topic page.

The screenshot shows a Microsoft Internet Explorer browser window displaying a web page titled "Fair Market Value - Microsoft Internet Explorer". The address bar shows the URL: <https://www.coolheads.com/guest/irs/tp/faq/version52/topicmap/ts0/tp4151.htm>. The page content includes a search bar, a navigation menu, and a main content area with several sections: "Other names", "Topic main name", "Occurrence Scope", "Publications", "Occurrence Type", "Definition - Publication 225: Farmer's Tax Guide", "Occurrence Abstract", "Links to Related Topics (Main Name displayed)", and "Related Topic Links".

Annotations with red arrows point to various elements on the page:

- Other names**: Points to the "Synonym: Fair market value" and "Synonym: Value, fair market" text.
- Topic main name**: Points to the "TOPIC: Fair Market Value" header.
- Occurrence Scope**: Points to the "Publications" section.
- Occurrence Type**: Points to the "Definition - Publication 225: Farmer's Tax Guide" section.
- Occurrence Abstract**: Points to the "Fair market value (FMV). Fair market value (FMV) is the price at which property would change hands ..." text.
- Links to Related Topics (Main Name displayed)**: Points to the "Related Topic Links" section.

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TAX MAP: BROWSING

- Occurrences of a topic are represented on its topic page and are linked to the relevant locations in the publications.
- Occurrences are differently represented according to the publication type in which they are found.
- The occurrences are grouped (scoped) according to the type of document in which they are found.

The screenshot shows a Microsoft Internet Explorer window with the address bar displaying <https://www.coolheads.com/guest/irs/tipfaq/version52/topicmap/pubs/p225-44.htm#N601>. The page content includes:

You trade a tract of farm land with an adjusted basis of \$5,000 for a tractor that has an FMV of \$6,000. You must report a taxable gain of \$3,000 for the land. The tractor has a basis of \$6,000.

Nontaxable Exchanges

A nontaxable exchange is an exchange in which you are not taxed on any gain and you cannot deduct any loss. A nontaxable gain or loss also is known as an *unrecognized* gain or loss. If you receive property in a nontaxable exchange, its basis is usually the same as the basis of the property you transferred.

Example.

You traded a truck you used in your farming business for a new smaller truck to use in farming. The adjusted basis of the old truck was \$10,000. The FMV of the new truck is \$14,000. Because this is a nontaxable exchange, you do not recognize any gain, and your basis in the new truck is \$10,000, the same as the adjusted basis of the truck you traded.

Like-Kind Exchanges

The exchange of property for the same kind of property is the most common type of nontaxable exchange.

For an exchange to qualify as a like-kind exchange, you must hold for business or investment purposes both the property you transfer and the property you receive. There must also be an exchange of like-kind property. For more information, see *Like-Kind*

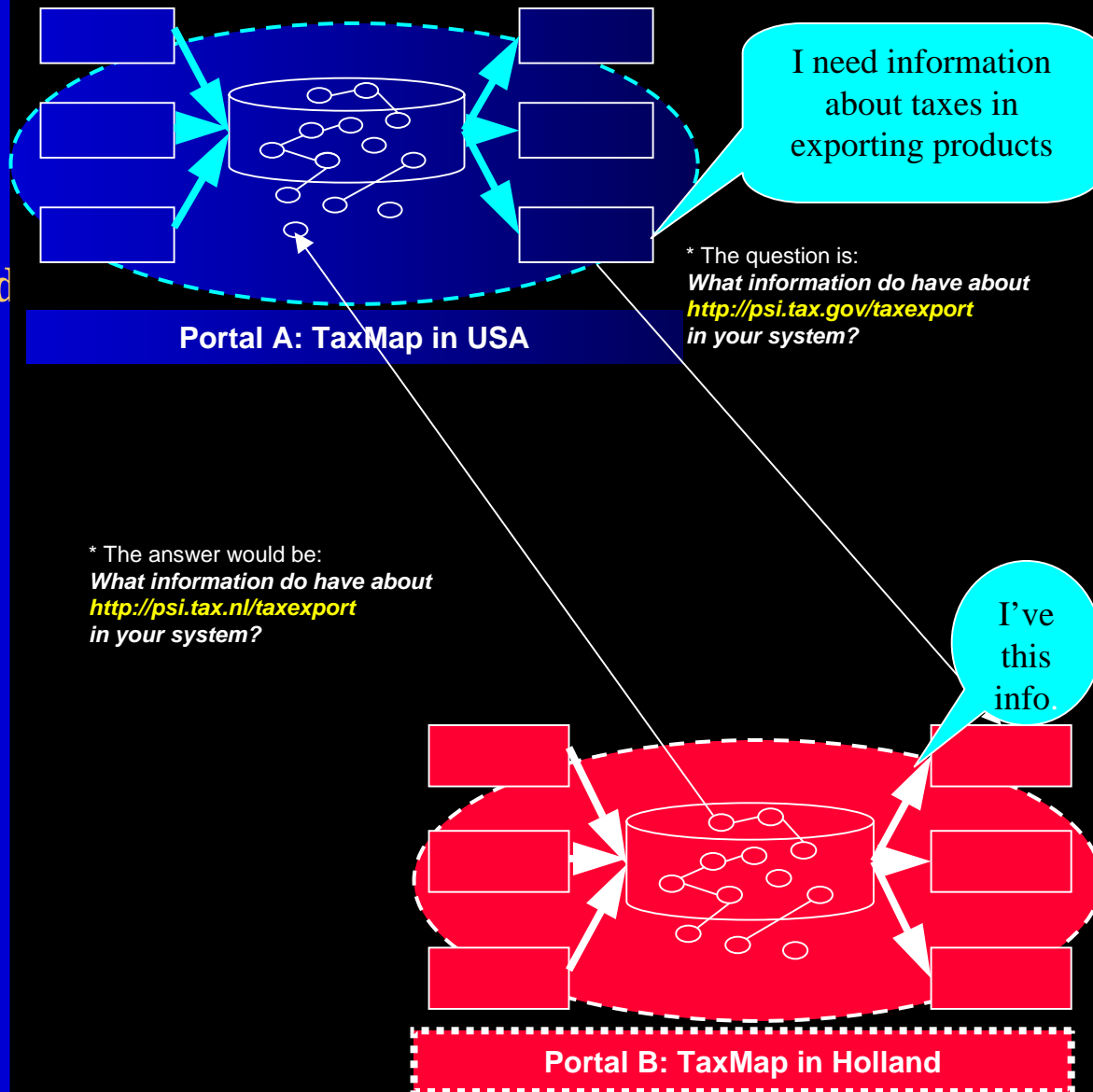
Navigation links are shown in a grey box on the right side of the page:

- Basis of assets>Exchanges>Nontaxable Exchanges>Basis>Nontaxable (highlighted with a red arrow pointing to the "Nontaxable Exchanges" section)
- Basis of assets>Exchanges>Like-kind Exchanges>Basis>Like-kind < Like-kind exchange > (highlighted with a red arrow pointing to the "Like-Kind Exchanges" section)

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TOPIC MAPS REMOTE ACCESS PROTOCOL

- Service for communicating between topic maps applications
- It defines a set of operations for construction of integrated topic map portals
- It works with integration of topic pages, topic occurrences and topic map portal services.
- The key is subject-based organization of information
- It is expected that the improvement of additional services based on TMQL help the communication and networks of topic maps.



CONCLUSIONS

- 1. Topic Maps are a Metaindex with properties are improved with interaction between distributed topic maps.**
- 2. Framenet is a Lexicographic System tied to last works in computational linguistics about terminological information retrieval and lexicography . It could provide a lexicographic database for automatic building of knowledge organization systems.**
- 3. Framenet could help to disambiguation of topics in knowledge organization systems through treatment of marked corpora.**
- 4. The bigger problem is the identity of subjects represented by PSI**
- 5. We will need measures of identity of subjects for communication distributed topic maps.**
- 6. Progressive appearance of standards for communication and queries to different topic maps.**
- 7. Development of topic maps will go tied to development of Portals and Digital Libraries.**

THANK YOU VERY MUCH