
An in-depth view behind the scenes: grammar, semantics and management of thesauri

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UK Data Service



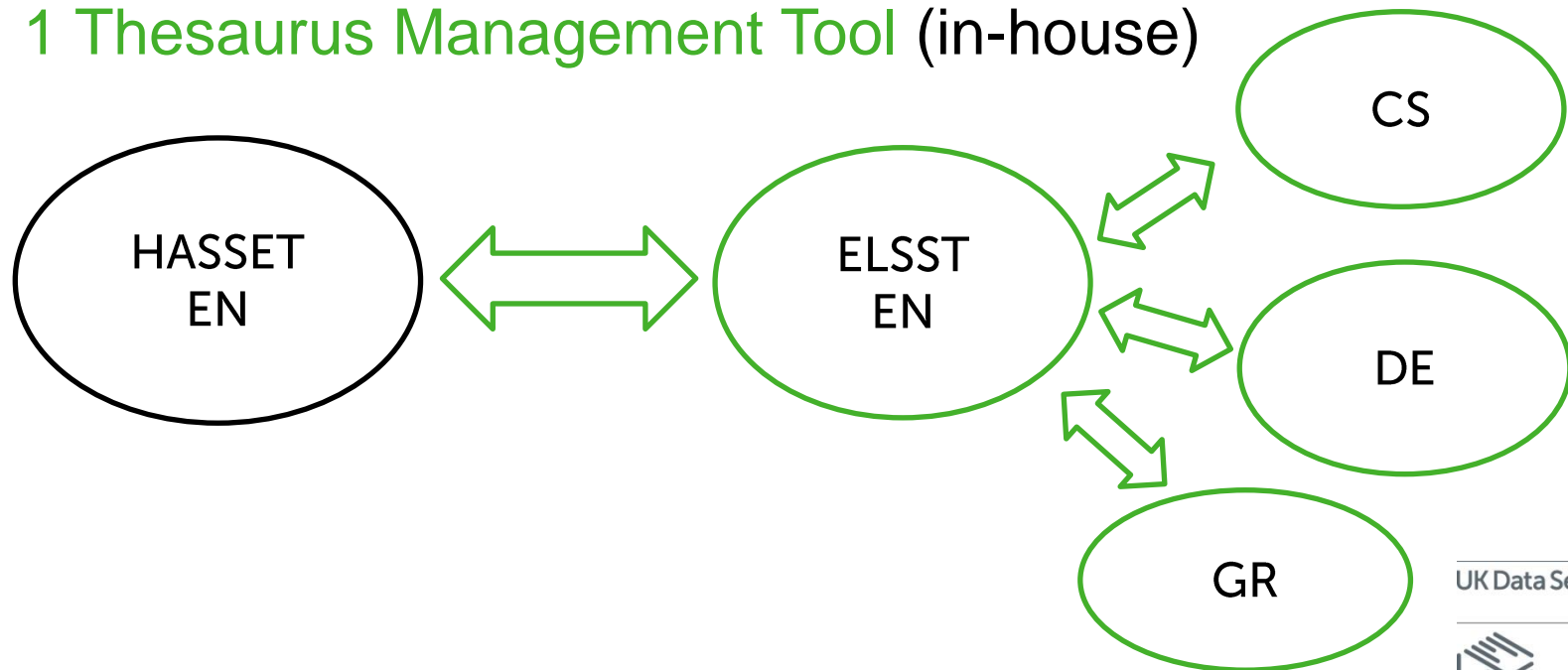
UKDS HASSET - CESSDA ELSST

- **UKDS:** UK Data Service – UK Data Archive, University of Essex
- **HASSET:** Humanities and Social Science Electronic Thesaurus, monolingual English, UK coverage
- **CESSDA:** Consortium of European Social Science Data Archives
- **ELSST:** European Language Social Science Thesaurus, multilingual (13 languages), EU coverage
- **Usage:** indexing and retrieval, fully integrated data archives infrastructure



EN extension–EN international–EU Lang

- **13 languages:** Czech, Danish, English, Finnish, French, German, Greek, Lithuanian, Norwegian, Romanian, Slovenian, Spanish, Swedish
- **Monolingual mapping:** HASSET and ELSST
- **Multilingual translations:** within ELSST
- **1 Thesaurus Management Tool** (in-house)



ELSST Participants



FINNISH SOCIAL SCIENCE
DATA ARCHIVE



ČSDA

Český sociálněvědní datový archiv
Sociologický ústav AV ČR, v.v.i.

NSD

NORWEGIAN CENTRE FOR RESEARCH DATA

Danish Data Archive - DDA



RIGSARKIVET

FORS



SND Swedish National Data Service

**EK
KE**

NATIONAL CENTRE FOR SOCIAL RESEARCH

gesis

Leibniz Institute
for the Social Sciences

AUSSDA

AUSTRIAN
SOCIAL SCIENCE
DATA ARCHIVE



LISER

LUXEMBOURG INSTITUTE OF
SOCIO-ECONOMIC RESEARCH



Vilnius
University
Library



ROMANIAN SOCIAL DATA ARCHIVE



ADP - SOCIAL SCIENCE DATA ARCHIVES

Analyze data! Deposit study! Promote science!

1997 - 2017

UK Data Service



Overview

- Semantic types
- Semantic relationships
- Requirements: behind the scenes/(user interface)
- Rules and constraints: mapping 2 English thesauri
- Editing 2 monolingual thesauri
- Editing multilingual thesaurus (13 languages)

- History/change management
- Suggestions/input management
- Bulk upload



Semantic types

- **Terms = labelled concepts**
 - Preferred terms (PT)
 - Use for terms (UF): synonyms of PT
 - Qualifiers in PTs and UFs disambiguate homographs
- **Notes**
 - Scope note: disambiguate polysemes, sets the semantic scope
 - Scope note source: trusted reference
 - Use note: reference to other terms in thesaurus
 - History note: information about the history of the term
 - Editorial note: Admin/Translators of a specific language



Example semantic types

Welcome Jeannine. You are logged into ELST as admin | UK Data Service home

UK Data Service
ELST

ELST search | ELST suggestions | ELST guide | ELST history | SKOS-ELST | Translators

Elst > Thesaurus search > View concept > Next version

View concept

Enter search term...

Current version | Visual graph current version | **Next version** | Visual graph next version

Edit concept | Add new concept | Delete concept

Language: English

Refine

- CRIME AND SECURITY
 - CRIMES AGAINST HUMANITY**
 - GENOCIDE
 - WAR CRIMES
 - CYBERCRIME
 - FINANCIAL CRIME
 - NATIONAL SECURITY
 - POLLUTION
 - TRAFFICKING

Preferred term (core)
CRIMES AGAINST HUMANITY

+ Language equivalents

- Scope note
OFFENCES CONSIDERED TO BE OF SUCH A MAGNITUDE THAT ARE ANSWERABLE TO THE WHOLE OF HUMANITY AND NOT TO A SPECIFIC JURISDICTION.

- Scope note source
UNICRI

- Use for
HUMANITARIAN CRIMES

+ Broader terms

+ Narrower terms

+ Related terms

- History note
TERM ADDED 6 MARCH 2009

+ Links



Semantic relationships

- **Clustering**
PTs and UFs
- **Hierarchical**: taxonomy, reverse relationship
 - top terms (TT)/broader terms (BT)
 - reverse narrower terms (NT)
 - polyhierarchies: more than 1 BT
- **Associative**: ontology, symmetrical/reciprocal relationship
 - relational terms (RT)



Example semantic relations: tree view

The screenshot shows the 'View concept' page for 'CRIMES AGAINST HUMANITY' in the ELSSST interface. The page is divided into several sections:

- Navigation:** Home, New search, Suggest a change, Language (English), and a Refine button.
- Search:** A search bar with the text 'Enter search term...' and a 'GO' button.
- Versioning:** Tabs for 'Current version', 'Visual graph current version', 'Next version', and 'Visual graph next version'.
- Tree View:** A hierarchical tree structure showing 'CRIME AND SECURITY' as the parent term, with 'CRIMES AGAINST HUMANITY' as a child. Other children include GENOCIDE, WAR CRIMES, CYBERCRIME, FINANCIAL CRIME, NATIONAL SECURITY, POLLUTION, and TRAFFICKING.
- Preferred term (core):** 'CRIMES AGAINST HUMANITY'.
- Language equivalents:** A section for language equivalents.
- Scope note:** A section for scope notes.
- Scope note source:** A section for scope note sources.
- Use for:** A section for use for.
- Broader terms:** 'HUMANITARIAN CRIMES' and 'CRIME AND SECURITY'.
- Narrower terms:** 'GENOCIDE' and 'WAR CRIMES'.
- Related terms:** 'INTERNATIONAL HUMANITARIAN LAW'.
- History note:** A section for history notes.
- Links:** 'Version History' and 'SKOS Concept'.



Example semantic relations: graph

Welcome Jeannine. You are logged into ELSST as admin | UK Data Service home

UK Data Service ELSST

Home
New search
Suggest a change

Language
English

Refine

ELSST search ELSST suggestions ELSST guide ELSST history SKOS-ELSST Translators

Elsst > Thesaurus search > View concept > Visual graph current version

View concept

Enter search term... GO

Current version Visual graph current version Next version Visual graph next version

Reset graph Full screen

It's getting crowded! Would you like to go [fullscreen?](#)

UF = Use For BT = Broader Terms NT = Narrower Terms RT = Related Terms = Expanded Term

Term Click any term to expand and view related terms Click icon to navigate to term details page

```
graph TD; A[CRIMES AGAINST HUMANITY] -.- UF --- B[HUMANITARIAN CRIMES]; A -.- BT --- C[CRIME AND SECURITY]; A -.- RT --- D[INTERNATIONAL HUMANITARIAN LAW]; A --- E[GENOCIDE]; A --- F[WAR CRIMES];
```



Example: semantic polyhierarchy

View concept

Home
New search
Suggest a change

Language English

Refine

LABOUR AND EMPLOYMENT
CHILD LABOUR
CONDITIONS OF EMPLOYMENT
ECONOMIC ACTIVITY
EMPLOYMENT
JOB CHARACTERISTICS
LABOUR (RESOURCE)
LABOUR ECONOMICS
LABOUR FORCE
LABOUR MARKET
LABOUR RELATIONS
OCCUPATIONS
PERSONNEL
PERSONNEL MANAGEMENT
SLAVES
UNEMPLOYMENT
YOUTH UNEMPLOYMENT
WORKING CONDITIONS
SOCIAL PROBLEMS
ABUSE
ADDICTION
ANTISOCIAL BEHAVIOUR
DOMESTIC VIOLENCE
DRUG ABUSE
FAMILY DISORGANIZATION
RECIDIVISM
SOCIAL ALIENATION
SOCIAL CONFLICT
SOCIAL DISADVANTAGE
DEPRESSED AREAS
HOMELESSNESS
HUNGER
POVERTY
SLUMS
SOCIAL EXCLUSION
UNEMPLOYMENT
YOUTH UNEMPLOYMENT
SOCIAL ISOLATION
SUICIDE

Current version | Visual graph current version | Next version | Visual graph next version

Enter search term... GO

Preferred term (core)
UNEMPLOYMENT

Language equivalents

CS	Czech	NEZAMĚSTNANOST
DK	Danish	ARBEJDSLØSHED
FI	Finnish	TYÖTTÖMYYS
FR	French	CHÔMAGE
DE	German	ARBEITSLOSIGKEIT
GR	Greek	ΑΝΕΡΓΙΑ
LT	Lithuanian	NEDARBAS
NO	Norwegian	ARBEIDSLEDIGHET
RO	Romanian	ȘOMAJ
SL	Slovenian	BREZPOSELNOST
ES	Spanish	DESEMPLEO
SE	Swedish	ARBETSLÖSHET

Broader terms

- LABOUR AND EMPLOYMENT
- SOCIAL DISADVANTAGE

Narrower terms

Related terms

Links

Version History
SKOS Concept



Requirements 1/6

- **Compliance standards/integration (behind the scenes)**
ISO 25964, SKOS/SKOS-XL/XKOS vocabularies,
multiple display modes, multilingual, versioning
- **User management** role-based permission (+slide) (bts)
- **KO schemes (bts, UI)**
concept-based/ terminology-based, create/manage
extensible set of semantic relation types/information
types/monohierarchies and polyhierarchies (+slide)
- **Visual modes (UI)**
alphabetical, hierarchical, systematic, graphs



User management: User Roles

Role ->	General users VocabularySource: ELSST or HASSET	Viewer/Guest after login VocabularySource: ELSST or HASSET	TL administrator/ Translator with translator rights VocabularySource: ELSST TL	SL administrator/TLs administrator/ content administrator VocabularySource: ELSST SL and TLs/HASSET	Technical Administrator
Responsibility ↓					
Concept view: view and search all externally published vocabularies/Concepts and their items present in ELSST Current version SL and TLs/HASSET	√	√	√	√	√
Concept view: view and search all vocabularies/Concepts within the VocabularySource and their items whether published or not. i.e. ELSST Current and Next version SL and TLs/HASSET	x	√	√	√	√
Suggestions view: view, search within the VocabularySource, i.e. ELSST Current and Next/HASSET and edit: add to discussion within the VocabularySource, i.e. ELSST Next SL and TLs/HASSET	x	√	√	√	x
History view: view and search within the VocabularySource, i.e. ELSST Current and Next SL and TLs/HASSET	x	√	√	√	x
Suggest a change: view, search, edit: suggest add/create, suggest update/change, suggest deletion within the VocabularySource, i.e. ELSST Current and Next SL and TLs/HASSET	x	√	√	√	x
TL Translation language dependent: view, edit: add/create, change/update, delete within the VocabularySource, i.e. ELSST Next for TL	x	x	√	√	x
SL and TLs edit: add/create, change/update, delete within the VocabularySource, i.s. ELSST Next SL and all TL/HASSET	x	x	x	√	x
Publish internally ELSST Next SL and TLs/HASSET	x	x	x	√	x
Publish externally ELSST Next SL and TLs/HASSET	x	x	x	√	√
Publish externally ELSST New Release: New Current and New Next	x	x	x	x	√
Create new users	x	x	x	x	√
Give permissions for roles	x	x	x	x	√
Manage tool configuration	x	x	x	x	√



Example of SKOS concept

Funded by: Provided by: CE5SDA ELSST



CRIMES AGAINST HUMANITY@en-GB

<https://lod.data-archive.ac.uk/v2-skoselsst/en-GB/436aebf-5594-4bbc-a7b8-07591ca3dd89>

Property	Value
skos:altLabel	<ul style="list-style-type: none">■ DELITOS HUMANITARIOS@es-ES■ HUMANITAETSVERBRECHEN@de-DE■ HUMANITARIAN CRIMES@en-GB■ HUMANITÄTSVERBRECHEN@de-DE■ NUSIKALTIMAI ŽMOGIŠKUMUI@lt-LT■ RIKOS IHMISYYTTÄ VASTAAN@fi-FI
skos:broader	<ul style="list-style-type: none">■ <https://lod.data-archive.ac.uk/v2-skoselsst/en-GB/5daecb52-714d-4e40-9be4-049de382f9c8>
skos:hiddenLabel	<ul style="list-style-type: none">■ CRIMES AGAINST HUMANITY@en-GB
skos:inScheme	<ul style="list-style-type: none">■ <https://lod.data-archive.ac.uk/v2-skoselsst/en-GB/>
dcterms:issued	<ul style="list-style-type: none">■ 2017-05-15
skos:narrower	<ul style="list-style-type: none">■ <https://lod.data-archive.ac.uk/v2-skoselsst/en-GB/b12a3cca-134c-4493-946a-cb284bb6bc54>■ <https://lod.data-archive.ac.uk/v2-skoselsst/en-GB/f7d67282-82ea-4d98-9eac-c9fa2db8115d>
skos:prefLabel	<ul style="list-style-type: none">■ BROTT MOT MÄNSKLIGHETEN@sv-SE■ CRIME ÎMPOTRIVA UMANITĂȚII@ro-RO■ CRIMENES DE LESA HUMANIDAD@es-ES■ CRIMES AGAINST HUMANITY@en-GB■ CRIMES CONTRE L'HUMANITÉ@fr-FR■ DK_CRIMES AGAINST HUMANITY@da-DK■ FORBRYTELSE MOT MENNESKEHETEN@no-NO■ HUDODELSTVO ZOPER ČLOVEČNOST@sl-SL■ NUSIKALTIMAI ŽMONIJAI@lt-LT■ RIKOKSET IHMISYYTTÄ VASTAAN@fi-FI■ VERBRECHEN GEGEN DIE MENSCHLICHKEIT@de-DE■ ZLOČINY PROTI LIDSKOSTI@cs-CZ■ ΕΓΚΑΗΜΑ ΚΑΤΑ ΤΗΣ ΑΝΘΡΩΠΟΤΗΤΑΣ@el-GR
skos:related	<ul style="list-style-type: none">■ <https://lod.data-archive.ac.uk/v2-skoselsst/en-GB/7130642a-98a1-4ae6-9be0-00f178c4d128>
skos:scopeNote	<ul style="list-style-type: none">■ OFFENCES CONSIDERED TO BE OF SUCH A MAGNITUDE THAT ARE ANSWERABLE TO THE WHOLE OF HUMANITY AND NOT TO A SPECIFIC JURISDICTION.@en-GB
rdf:type	<ul style="list-style-type: none">■ skos:Concept

Download this resource as:

[RDF/XML](#) | [Turtle](#)

The copyright in the natural language translations is held by the individual translators or the relevant translating organisation; the database rights in the organisation and collection of the data are held by the University of Essex. The rights in the underlying application are also held by the University of Essex. You may view the thesaurus online.

Prior to downloading and/or using the full version of ELSST, SKOS-ELSST or any related product, a licence agreement must be completed between the user and the University of Essex.

Note: AltLabels share the same language code (e.g. de-DE) as their Preflabel in each language, although the AltLabels may belong to a different language variant (e.g. Austrian German).



Requirements 2/6

- **Workflow (behind the scenes)**
Editorial workflow modalities (source language, target languages), validation of alphabetical, hierarchical and visual graph presentation
- **System functions: management (behind the scenes)**
PT management (create/change/delete/promote/demote), UF management, Hierarchies management, Notes management, versioning, import/export



Requirements 3/6

- **Validation and multilinguality (behind the scenes)**
Thesaurus creation/management, unique identifiers, prevention of term duplication, warning of near term equivalences, generated lists of allowed terms (based on rules and constraints), automatic symmetrical/reciprocal relationships, multilingual management Hub-Spoke model
- **Search/browse/select (UI)**
search for PTs and UFs, autocomplete/wildcards, with/without language-specific diacritics, language-specific stemming, expanded search in all note types, filters, language-specific alphabetical glossary, switch between display modes



Requirements 4/6

- **Results (UI)**

Identify PTs/UFs, correct spelling (with diacritics), sorting options (Relevance, A-Z, Type), all translations identified by language abbreviations, mode options (expandable tree, listing, visual graph)

- **Concept views (UI)**

Different modes of display, all information types (+/-), language equivalents, links to SKOS concept, version history, navigation options (hierarchy, multilingual, versions)

- **Visual graph (UI)**

Spider network (UF, NT, BT, RT), switch language



Requirements 5/6

- Edit function (behind the scenes)
 - SL editor, TL editor
 - linked/mapped thesauri (ELSST/HASSET)
 - two important functions re validation
 - automatically generated lists of allowed BTs, NTs and RTs
 - warning messages (prevent breaching rules)
 - actions are recorded and displayed in language-specific History pages in chronological order
 - actions are input for filtered search in History

Requirements 6/6

- **History (UI)**

Language-specific, concept/PT, action, BT/NT/RT/ Scope note etc., date, responsible, export options for reports (print, pdf, excel)

- **Suggestions (UI)**

language-specific, suggest a change, comment on a suggestion, admin moderates and decides on status (accepted, rejected, under discussion), display options (Tree view), filters (= History, Edit pages), export options for reports (print, pdf, excel)

- **Bulk upload online, User guides, SKOS**



Rules and constraints mapping

HASSET – ELSST core terms 1/2

- a core term's **BTs** to the root also have to be core terms. All **TTs** that are not orphans must be core terms. TTs that are orphans, i.e. they do not have NTs, can be core or non-core.
[[PT = core] + [BTs = core]] in local tree and on every level
*[[PT = core] + [BTs = non-core]] in local tree and on every other level
- a core term's **BTs** to the root must be the same in both thesauri.
[[PT = core] + [BTs in A = BTs in B]] where A = Thesaurus A and B = Thesaurus B
*[[PT = core] + [BTs in A ≠ BTs in B]] where A = Thesaurus A and B = Thesaurus B

Rules and constraints **mapping**

HASSET – ELSST core terms 2/2

- a core term can have different **NTs** in Thesaurus A and Thesaurus B.
[[[PT + NT1] in A] + [[PT + NT2] in B]]
- a core term can have different **RTs** in Thesaurus A and Thesaurus B.
[[[PT + RT1] in A] + [[PT + RT2] in B]]

Rules and constraints **no-mapping**

HASSET – ELSST non-core terms

- a non-core term cannot be the same as all its **NTs** to its final node.
*[[PT = non-core] + [PT = NT]] in local tree and on every other lower level
- a non-core term cannot be the same as all its **RTs** to its TT.
*[[PT = non-core] + [PT = RT]] in local tree and on every other level
- none of a non-core term's **RTs** can be one of its BTs or NTs.
*[[PT = non-core] + [[RT = BT] or [RT = NT]]]
- a non-core term cannot have a **core NT**.
*[[PT = non-core] + [NT = core]]

Editing 2 English **Monolingual** thesauri

- **Process 1 English thesaurus**

Add new concept -> Edit concept -> Delete concept

- **Management 2 English thesauri**

- Promote concept (to core)

Demote concept (to non-core = delete in other thes.)

- Restriction 1) Copy core PT/BT/NT/RT/SN
2) Not copy non-core NT/RT

- Edit CORE terms: changes management

- Restriction 1) Copy core TT/BT/NT/RT/SN(S)
2) Optional copy UN/HN



Example of Edit concept

Edit concept

Edit the concept - When finished click Save, or Cancel to exit without saving changes

Current version | Next version

Cancel Save

- 4. ABILITY
 - ACADEMIC ABILITY
 - CITIZENSHIP SKILLS
 - MEDIA LITERACY
 - NUMERACY**
 - PERSONAL EFFICACY
 - SOCIAL SKILLS
 - TEACHING SKILLS

+ Add New Concept x Delete Concept

↑ Promote Concept ↓ Demote Concept

Preferred term (core)

Use for 3

Broader terms 3

Narrower terms 3

- ACCESS TO **COUNTRYSIDE**
- ACCOUNTABILITY
- ACCOUNTANTS
- ACCOUNTING
- BANK ACCOUNTS
- COUNCIL OF MINISTERS**
- COUNCILLORS**
- COUNSELLING

Scope note source

B *I* U **A**



Editing SL Multilingual thesaurus

- Exclusive for SL editing/management
 - Adding new concepts
 - Relabelling existing concepts
 - Deleting concepts
 - Adding/deleting relationships: BTs, NTs, RTs
 - Adding/changing/deleting SNs and SNSs
- SKOS concept for all languages
(currently under revision -> upgrade to SKOS-XL, XKOS;
export + import)



Editing TL spokes 1

- **Process**
Not started -> Untranslatable OR Incomplete -> Complete
- **Obligatory translation**
 - Exact/near equivalence of PTs (+Untranslatable) which can be new or have been relabelled
 - Exact/near equivalence of Scope notes and Scope note sources

Editing TL spokes 2

- Language-specific optional translation
 - Translating, adding, changing, deleting UFs
 - Translating, adding, changing, deleting Use notes
 - Translating, adding, changing, deleting History notes
- Language-specific no translations involved
 - Editorial note
 - Reindex: Y/N



Example Edit translation

Edit Translation

Edit this Romanian translation - When finished click Save, or Cancel to exit without saving changes

Cancel Save

Change language Spanish	Untranslatable? <input type="checkbox"/> Mark translation as untranslatable
Preferred term DELITO INFORMATICO	Incomplete? <input type="checkbox"/> Mark translation as incomplete
Use for FRAUDE ELECTRONICO DELITOS RELACIONADOS CON LA INFORMATICA CIBERDELITOS CORREOS ELECTRONICOS FRAUDULENTOS	Preferred term (core) RO_CYBERCRIME
Broader terms CRIMEN	Use for Enter terms
Related terms ORDENADORES VANDALISMO ACECHO HURTOS	Broader terms CRIMINALITATE
Scope note CRIMENES RELACIONADOS CON EL ACCESO ILEGAL O LA MANIPULACION DE DATOS ELECTRONICOS (OED). INCLUYE ACTIVIDADES ILEGALES ENFOCADAS EN ECONOMIAS NACIONALES E INTERNACIONALES, ASI COMO TAMBIEN EN RELACIONES Y ESTRUCTURAS POLITICAS Y SOCIALES. PUEDEN INVOLUCRAR VIOLENCIA INFORMATICA QUE PONGA EN RIESGO LA SEGURIDAD PERSONAL DE LOS CIUDADANOS. DICHS ACTOS DE	Related terms CALCULATOARE DISTRUGERI HĂRȚUIRE FURT FĂRĂ ÎNCĂLCAREA PROPRIETĂȚII

Scope note

B *I* U **A**



SL and Language equivalents

The screenshot shows a web interface for viewing a concept. On the left, there is a navigation menu with 'Home', 'New search', 'Suggest a change', and 'Language' (set to English). A search bar at the top contains 'Enter search term...' and a 'GO' button. Below the search bar are tabs for 'Current version', 'Visual graph current version', 'Next version', and 'Visual graph next version'. The main content area is titled 'View concept' and displays a hierarchical tree of terms under 'CRIME AND SECURITY', with 'CRIMES AGAINST HUMANITY' selected. To the right, the 'Preferred term (core)' is 'CRIMES AGAINST HUMANITY'. Below this, a section titled 'Language equivalents' lists terms in various languages: Czech (ZLOČINY PROTI LIDSKOSTI), Finnish (RIKOKSET IHMISYYTTÄ VASTAAN), French (CRIMES CONTRE L'HUMANITÉ), German (VERBRECHEN GEGEN DIE MENSCHLICHKEIT), Greek (ΕΓΚΛΗΜΑ ΚΑΤΑ ΤΗΣ ΑΝΘΡΩΠΟΤΗΤΑΣ), Lithuanian (NUSIKALTIMAI ŽMONIJAI), Norwegian (FORBRYTELSER MOT MENNESKEHETEN), Romanian (CRIME ÎMPOTRIVA UMANITĂȚII), Slovenian (HUDODELSTVO ZOPER ČLOVEČNOST), Spanish (CRIMENES DE LESA HUMANIDAD), and Swedish (BROTT MOT MÄNSKLIGHETEN). A 'Scope note' section follows, stating: 'OFFENCES CONSIDERED TO BE OF SUCH A MAGNITUDE THAT ARE ANSWERABLE TO THE WHOLE OF HUMANITY AND NOT TO A SPECIFIC JURISDICTION.' Below the scope note are sections for 'Scope note source', 'Use for' (listing 'HUMANITARIAN CRIMES'), and 'Broader terms'.



TL and Language equivalents

The screenshot displays the UK Data Service ELSSST interface. The top navigation bar includes links for 'ELSSST search', 'ELSSST suggestions', 'ELSSST guide', 'ELSSST history', 'SKOS-ELSSST', and 'Translators'. The breadcrumb trail reads 'Elsst > Thesaurus search > View concept > Next version'. The main heading is 'View concept'. Below this is a search bar with the placeholder 'Enter search term...' and a 'GO' button. A navigation bar below the search bar has tabs for 'Current version', 'Visual graph current version', 'Next version' (which is selected), and 'Visual graph next version'. An 'Edit translation' link is located on the right side of this bar. On the left, there is a 'Language' dropdown menu set to 'German' and a 'Refine' button. The main content area is divided into two columns. The left column shows a hierarchical tree of terms: 'KRIMINALITÄT UND SICHERHEIT' (expanded), 'CYBERKRIMINALITÄT', 'ILLEGALER HANDEL', 'NATIONALE SICHERHEIT', 'UMWELTVERSCHMUTZUNG', 'VERBRECHEN GEGEN DIE MENSCHLICHKEIT' (expanded), 'KRIEGSVERBRECHEN' (highlighted in green), 'VÖLKERMORD', and 'WIRTSCHAFTSKRIMINALITÄT'. The right column contains the following sections: 'Preferred term (core)' with 'KRIEGSVERBRECHEN' highlighted in green; 'Language equivalents' with a list of terms in various languages: CS (Czech) 'VÁLEČNÉ ZLOČINY', DK (Danish) 'KRIGSFORBRYDELSE', EN (English) 'WAR CRIMES', FI (Finnish) 'SOTARIKOKSET', FR (French) 'CRIMES DE GUERRE', GR (Greek) 'ΕΓΚΛΗΜΑΤΑ ΠΟΛΕΜΟΥ', LT (Lithuanian) 'KARO NUSIKALTIMAI', NO (Norwegian) 'KRIGSFORBRYTELSE', RO (Romanian) 'CRIME DE RĂZBOI', SL (Slovenian) 'VOJNI ZLOČIN', ES (Spanish) 'CRIMENES DE GUERRA', and SE (Swedish) 'KRIGSFÖRBRYTELSE'; '+ Broader terms'; '+ Related terms'; '+ Links'; and 'Notation code' 'O02.27'.



Questions

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