Terminology across borders: the example of WIPO Pearl

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World Intellectual Property Organization (WIPO)

- Specialized UN agency for intellectual property (IP): patents, trademarks, industrial designs, copyright, traditional knowledge

- Mission:
  - deliver global services for protecting IP
  - shape international IP rules
  - use IP for development
  - provide access to the world’s IP information
Patent Cooperation Treaty (PCT)

- unified procedure for filing patent applications in 152 States
- publication languages: AR, ZH, EN, FR, DE, JA, KO, PT, RU, ES
- improve access to patents via:
  - publication in PATENTSCOPE
  - translation of titles, abstracts and drawings > EN/FR, and
  - patentability reports > EN = 160+ million words/year
About PCT Terminology…

- Translation Quality & Efficiency
- Technical Communication
- Patent-related scientific, technical & legal terms
- Multilingual Knowledge & Information
- IP-related legal terms (New)
- Training
- Sharing globally
WIPO Pearl: http://www.wipo.int/reference/en/wipopearl

**WIPO Pearl – WIPO’s Multilingual Terminology Portal**

WIPO Pearl gives access to scientific and technical terms derived from patent documents. It helps promote accurate and consistent use of terms across different languages, and makes it easier to search and share scientific and technical knowledge. Find out more in our user guide.

**Linguistic Search**  **Concept Map Search**

**Tip!** – For better user experience, we recommend using the latest browser versions and disabling ad-blocking plugins.

**Why use WIPO Pearl?**

- It’s developed by experienced WIPO language experts and terminologists.
- Features ten languages – Arabic, Chinese, English, French, German, Japanese, Korean, Portuguese, Russian and Spanish.
- Features unique concept maps.
- All content has been validated and given a term reliability score.

▶ More features...
WIPO Pearl: High Quality

- ISO-compliant termbase definition
- Human-generated, validated and QCd dataset
- Results list shows key information:
  - term
  - term usage: *head term vs. synonym/abbreviations, recommended vs. obsolete terms*
  - definition (in context)
  - other occurrences in patents
WIPO Pearl: Reliability

- Only validated content published (linguists/subject field experts)
- Term Reliability score assigned
- Clear identification of “proposed terms”
- Terms/contexts from reliable sources: patents, scholarly articles and journals
- Links to patent applications
- Term life-cycle: last modification date shown for each term
WIPO Pearl: Capability

- Terminology Unit in charge of workflow and project management
- Staff experienced in patent translation and terminology (70+)
- On-going recruitment of terminology trainees (PCT Terminology Fellowship Program)
- External collaborations (universities, other institutions)
WIPO Pearl: Across disciplines

- 29 subject fields / 311 subfields in science and technology

- Scientific/technical terms: *no phraseology/nomenclature*

- Key sectors of technological innovation: *Information Technology, Electronics, Genetics, Biochemistry, Nanotechnology*

- PCT legal terminology

Coming soon:

- New mandate: IP legal terminology

- Collections from other international institutions
WIPO Pearl: Across languages

- AR, ZH, EN, FR, DE, KO, JA, PT, RU, ES
- 45 different language combinations
- Key language combinations of interest for patents
- Other less common combinations
WIPO Pearl: Across language resources

- Terms are ontologically organized (one concept, one record)
- Concept relations clearly established at the Entry Level
- Two Search Interfaces:
  - Linguistic Search
  - Concept Map Search (integrating AI)
  = Onto-lexical resource!
Linguistic Search

LINGUISTIC SEARCH

LED

Search options | Reset

5 HITS for LED Filters

Source language: EN  Target language: FR, JA, PT  Subject field: All

Terms: LED (ELEC), LED downlight (ELEC), LED chip (ELEC), LED die (ELEC), LED lamp (ELEC), LED lighting device (ELEC)

ELEC / LASERS & OPTOELECTRONICS  Show full record

EN • light emitting diode

Reliability 3

A light emitting diode is a semiconductor photonic device that emits light upon the recombination of electrons and holes in the semiconductor material or material system. The recombination is typically driven by a voltage bias across p-type and n-type materials that form a p-n junction.

wo/2007/089460

Show concept map

Find in PATENTSCOPE  Find images
Concept Clouds (AI-powered)
WIPO Pearl: Across technologies (Corpora, MT and AI)
WIPO Pearl: Across institutions (Universities)

- Terminology Record Creation (since 2013)
WIPO Pearl: Across institutions (Governments)

- Terminology Record Creation/Subject field expert validation

**TERMIUM Plus®**

The Government of Canada’s terminology and linguistic data bank.

*Which term? (required)*

Where?

In which subject field?

Launch

**TERMIUM Plus®,** one of the largest terminology and linguistic data banks in the world, gives you access to millions of terms in English, French, Spanish and Portuguese. You can find terms, abbreviations, definitions and usage examples in a wide range of specialized fields. The data bank is an essential tool for understanding an acronym, checking an official title, finding an equivalent in another language, and much more.

**New records in** **TERMIUM Plus®**

The Translation Bureau, in collaboration with the World Intellectual Property Organization, prepared more than 100 terminology records in English, French, Spanish and Portuguese in the field of conversational interfaces. These records can be identified by the subject field “Collaboration with WIPO” are now available for consultation. Don’t hesitate to query a few terms: conversational agent; embodied conversational agent; conversational user interface; conversational browser; spoken language technology; voice font.
WIPO Pearl: Across institutions (Uni/Gov)

Validation of terms by technical subject field experts (definitions)

Astrakhan State University, Russian Federation

Institute of Nuclear Materials, Russian Federation

National Resources Wales, United Kingdom
WIPO Pearl: Across institutions (Uni/Org)

- Mutual cooperation in promoting quality, best practices, and professionalism in terminology, translation and interpreting

International Federation of Translators (FIT)  

Astrakhan State University, Russian Federation
WIPO Pearl: Across professions

Translators:

- stand-alone
- integrated in CAT tools
- leveraged by statistical and neural machine translation (WIPO Translate)
WIPO Pearl: Across professions

- Other language professionals: technical writers, interpreters
- IP professionals: patent drafters, searchers, examiners, attorneys...
- Subject field experts: research & development engineers, scientists…
WIPO Pearl: Example of real users
Awareness-raising activities

- promote best practices in terminology record compilation
- promote study of terminology in patents
- train students in countries in which terminology as a discipline is less taught
- offer terminology traineeships to young graduates native speaker of languages in which terminology is unfrequently studied
- train subject field experts on terminology validation and definition drafting
- free online module on terminology in patents (WIPO Academy)
Other dissemination activities

- Universities: Workshops on terminology work in the field of patents
- Tweets (WIPO account), WIPO Wire, PCT Newsletter
- Academic publications:
  - *Applications of Technology in the PCT Translation Division of WIPO*, Caffrey, Valentini, Handbook of Translation Technology (in print), O’Hagan et al., Routledge
Future prospects

- New Look and Feel for WIPO Pearl
- Enhanced data: 25,000+ validated terms/year (target)
- New data: IP legal terminology
- API/ontologies/taxonomies
- More promotional activities (specific hashtag)
- More partnerships
- Online course (WIPO Academy)
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