

# IN TERMINO QUALITAS

IN HUMAN AND  
MACHINE TRANSLATION



1<sup>st</sup> World Congress on Translation Studies  
Workshop on Computer Assisted Translators vs Human  
Translation  
Paris, Nanterre University, 11-12 April 2017

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Maslias**

# Overview

- The challenge of legislating in 24 languages
- The role of terminology for linguistic and legal consistency
- On-line cooperation between the EU institutions in terminology
- The role of terminology in CAT tools
- The role of terminology in machine translation and in quality assurance



# The multilingual reality of the European Union



# 28 Countries

# 24 Languages

## ONE LAW

The European Union is the largest union of states, with a common body of legislation which is applied in numerous areas of life.

EU legislation is transposed into national law and applied in the official language of each country.

In most domains, a big number of the laws of the Member States are based on European legal acts.



# Mutual influence

The relationship between the European, national and local level leads to a mutual transfer of knowledge.

In the same way that legal systems, cultures and languages of the Member States have influenced the legal system of the Union, the latter redounds on the legal systems of the Member States and their linguistic and cultural environment.

The EU introduces terminology in the internal and external institutional network, which is then fixed by usage in the Member States and their customs, and fed back to the institutional level.

The fact that the official language of a Member State has at the same time become the official language of the Union has, in many countries, promoted the emergence of a conscious language policy.



# Cultural diversity

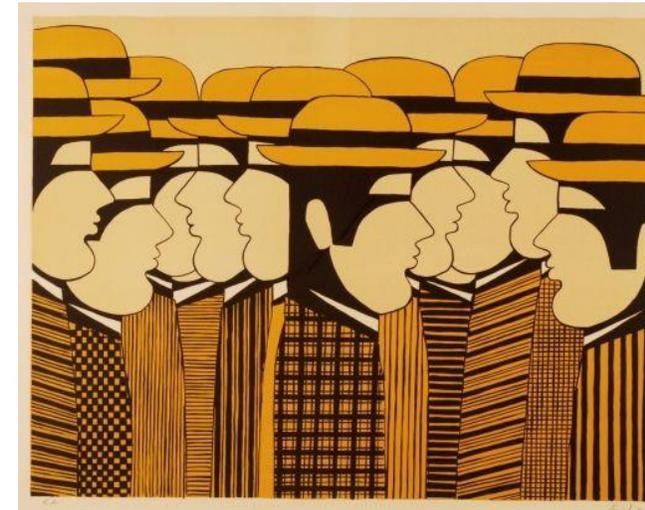
‘EU legislation’ is based on a codecision system between representatives of the Member States: Commissioners, Ministers and Parliamentarians. At the Institutions, each of them reflects the culture of their own people.



# The EU and Multilingualism

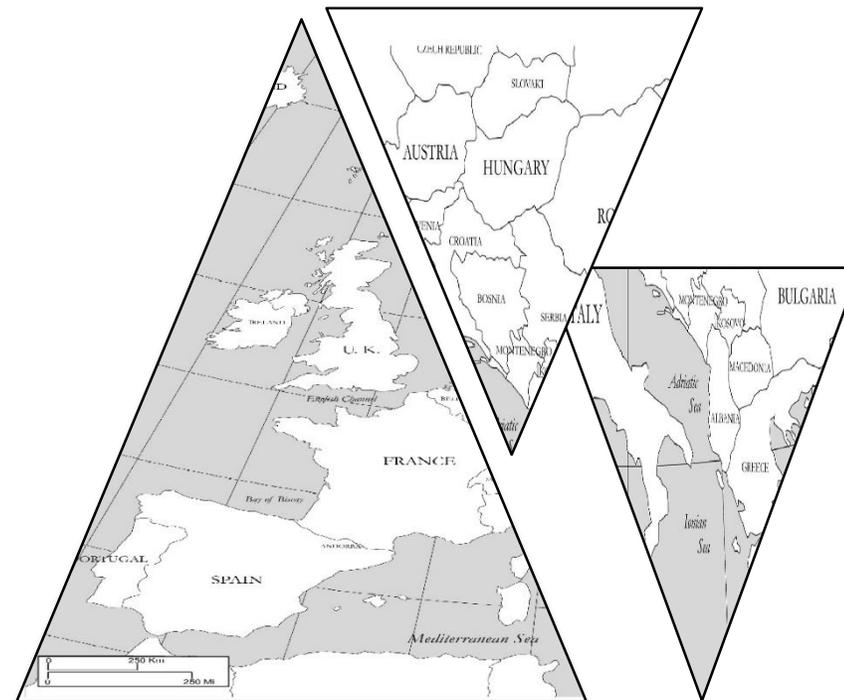
The very first regulation of the European Union stipulated that all official languages, of which there were 4 at the time, were to be treated on a footing of equality and that all documents should be translated into those languages. This meant that each official language was recognised as original for each legal act.

Symbolically, the multilingualism regulation has retained its number – 1 – while the number of official languages has gradually increased, with the addition of further 20 languages.

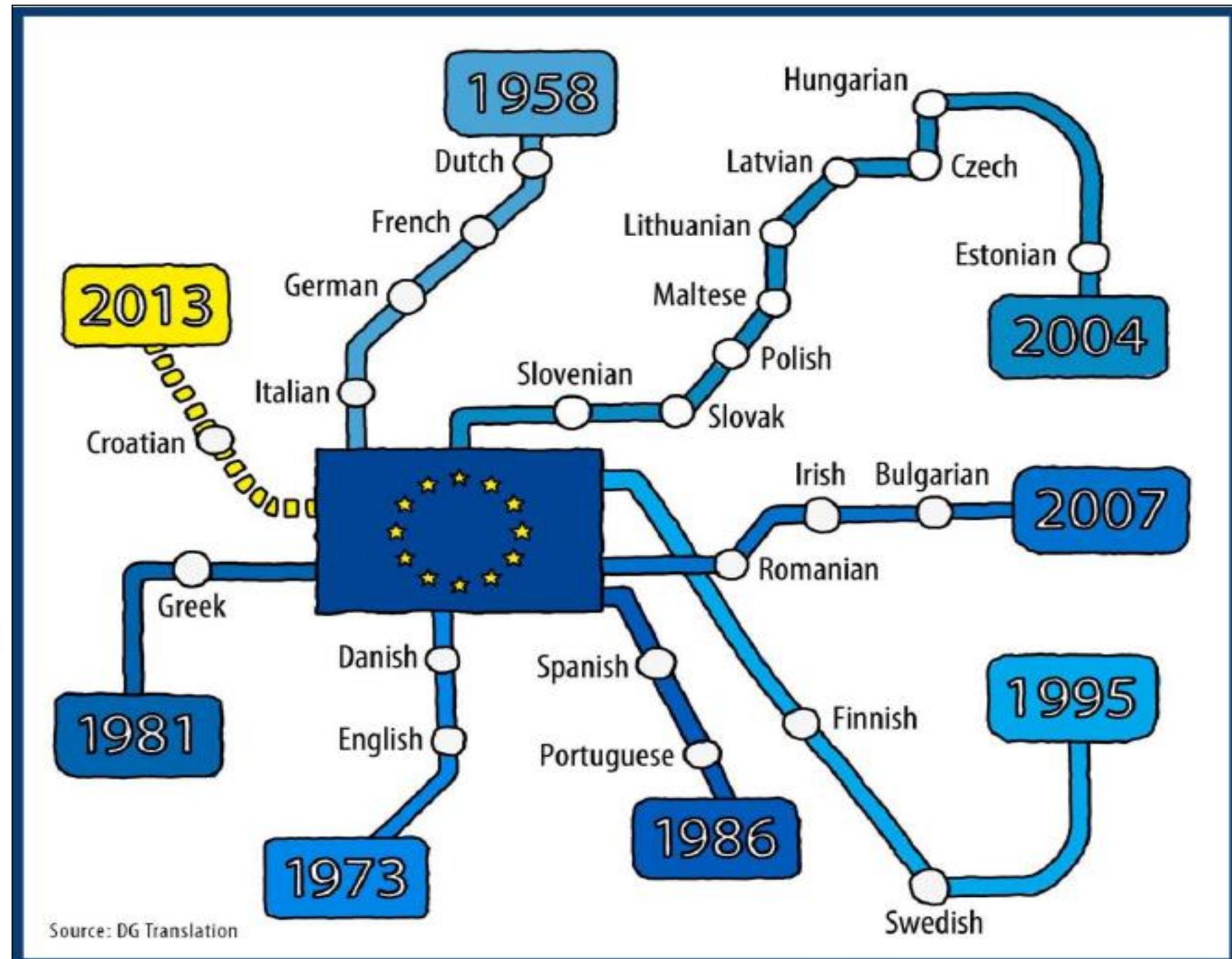


# Regulation N°1/1958

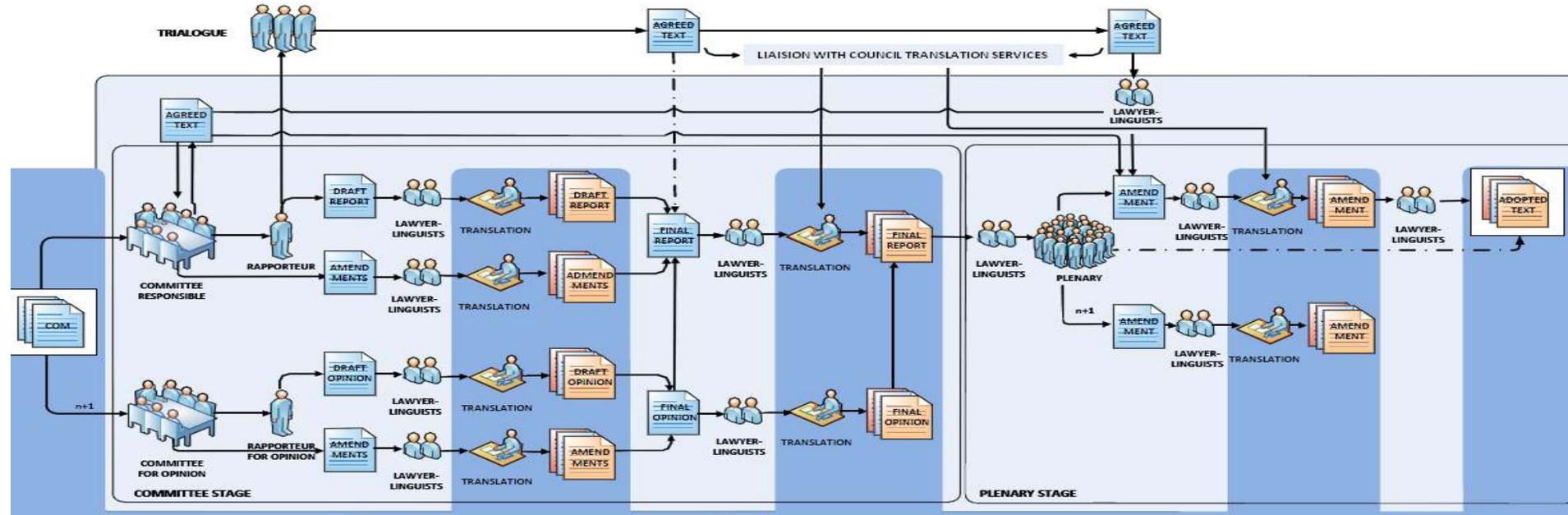
The official languages and the working languages of the institutions of the Union shall be Bulgarian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Irish, Italian, Latvian, Lithuanian, Maltese, Polish, Portuguese, Romanian, Slovak, Slovenian, Spanish and Swedish.



# The EU and Multilingualism



# The way through translation



Translation is present at every step in the legislative process; from the first draft, which originates with the Commission's experts, through all the negotiations with national departments and with the Council and Parliament, to the ultimate legal act, on which a vote is taken in each national Parliament, and which then becomes an 'original law'.

# The role of Terminology

In implementing the same legal acts in all States and in all the languages of the European Union, the most important point is that fundamental **linguistic concepts** should be understood in the same way everywhere.

This is only possible thanks to a shared and consistent terminology.

IATE is a concept-oriented database covering more than 100 fields.



# Different uses of Terminology

- **Sentimental analysis:** the terms used in a text regarding capital markets can have an influence on the behavior of investors. Example: the translation of "hedge funds" in several languages using or choosing not to use the word "risk" as part of the term.
- **Terminology in journalism and communication:** the language used to communicate news and to pass messages is different than administrative language.
- **Adaptability of terminology according to the audience:** for some target groups a different level of language – example: medical terminology database of the "medecins sans frontières".



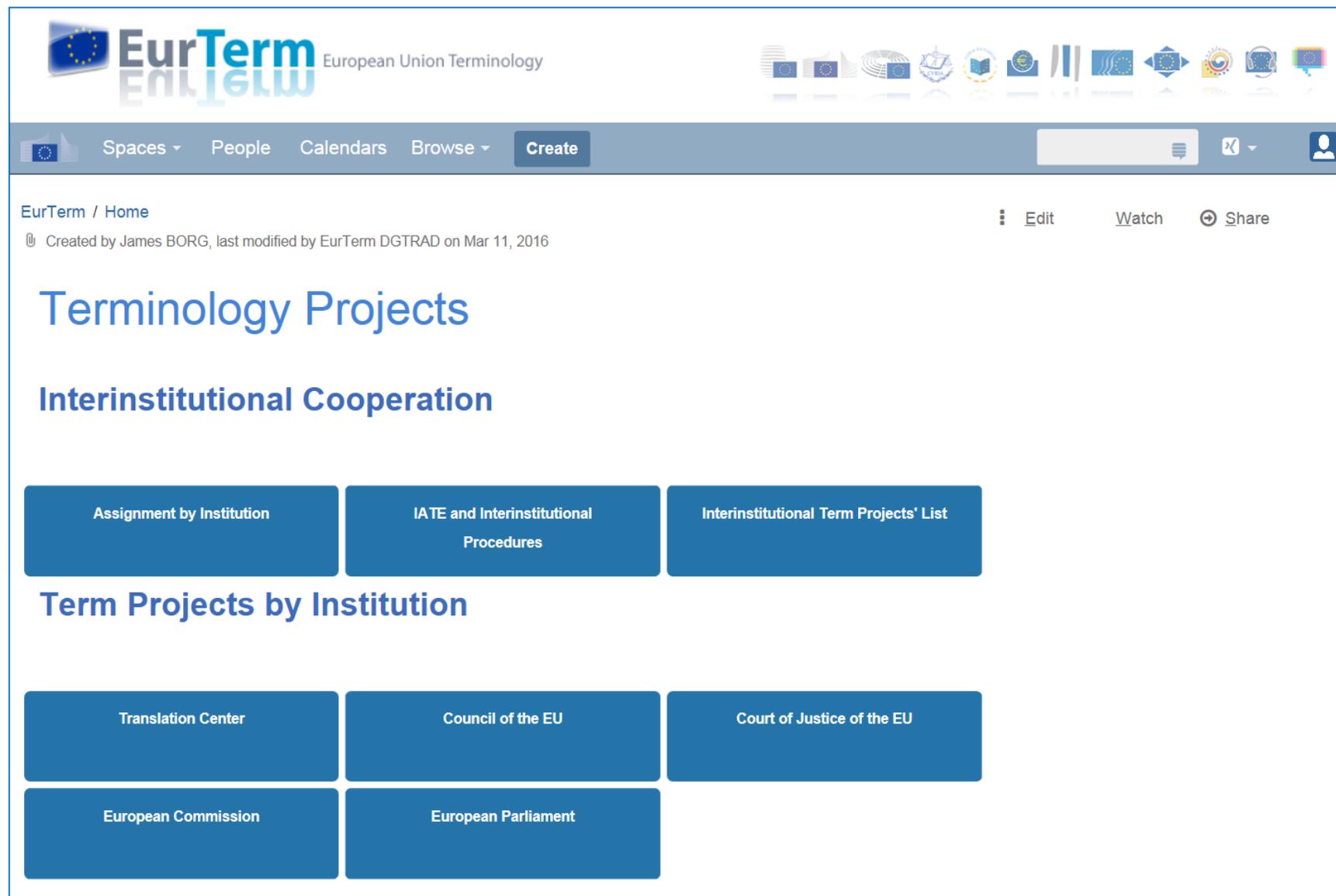
# Interinstitutional communication and cooperation

The screenshot displays the EurTerm website, which is dedicated to European Union Terminology. The page features a top navigation bar with options like 'Spaces', 'People', 'Calendars', 'Browse', and 'Create'. A search bar is prominently placed at the top center. Below the navigation, there are several main content areas:

- Navigation Menu:** A grid of buttons for 'EU Terminology Material', 'EU Terminology Administration', 'EU Terminology Projects', 'Technical Aspects', 'Training Resources', and 'External Material'.
- What's on:** A section titled 'The future of termbases in Studio' by Manuel LEAL, dated Feb 11, 2016. It discusses the benefits of working with termbases exported from IATE.
- Latest posts Blog Posts:** A list of recent posts, including 'Workshop on BabelNet, the largest multilingual encyclopedic dictionary' and 'New features and updates for IATE'.
- Featured:** A video player showing '01 General navigation on EurTerm'.
- Recently Updated:** A section listing the latest content updates, such as '04 Mar 2016 - ELISE Guidelines' and '18 Feb 2016 - Latest version of Terminology Framework of EESC/CoR added'.
- Calendar:** A calendar view for Monday, Mar 14, 2016, with events for 'TRANSLATION FORUM: Interpreting European Law in 24 Languages' and 'Translation quality and agency - hands-on workshop'.
- International Conferences 2016:** A dedicated section for upcoming conferences.

The right sidebar contains various utility and community links, including 'EurTerm works best with Firefox!', 'Late Internal Access', 'Contacts', 'Discuss', 'Language Wikis' (with buttons for various languages like bg, cs, da, de, en, es, et, fr, ga, hr, hu, it, lv, mt, nl, pl, pt, ro, sk, sl, sv), and a 'Tools' section with links to ELISE, Euramis, Quest, EUR-Lex, EuroVoc, I-Lex, and others. A 'Help' section at the bottom right provides links to video guides, manuals, and FAQs.

# Collaborative platform



The screenshot shows the EurTerm website interface. At the top left is the EurTerm logo with the text "European Union Terminology". To the right of the logo is a row of icons representing various European institutions. Below the logo is a navigation bar with "Spaces", "People", "Calendars", "Browse", and a "Create" button. The main content area has a breadcrumb "EurTerm / Home" and a metadata line "Created by James BORG, last modified by EurTerm DGTRAD on Mar 11, 2016". The primary heading is "Terminology Projects", followed by a sub-heading "Interinstitutional Cooperation". Below this are three blue buttons: "Assignment by Institution", "IATE and Interinstitutional Procedures", and "Interinstitutional Term Projects' List". The next section is "Term Projects by Institution", which contains five blue buttons: "Translation Center", "Council of the EU", "Court of Justice of the EU", "European Commission", and "European Parliament".

**EurTerm** European Union Terminology

Spaces ▾ People Calendars Browse ▾ **Create**

EurTerm / Home Edit Watch Share

Created by James BORG, last modified by EurTerm DGTRAD on Mar 11, 2016

## Terminology Projects

### Interinstitutional Cooperation

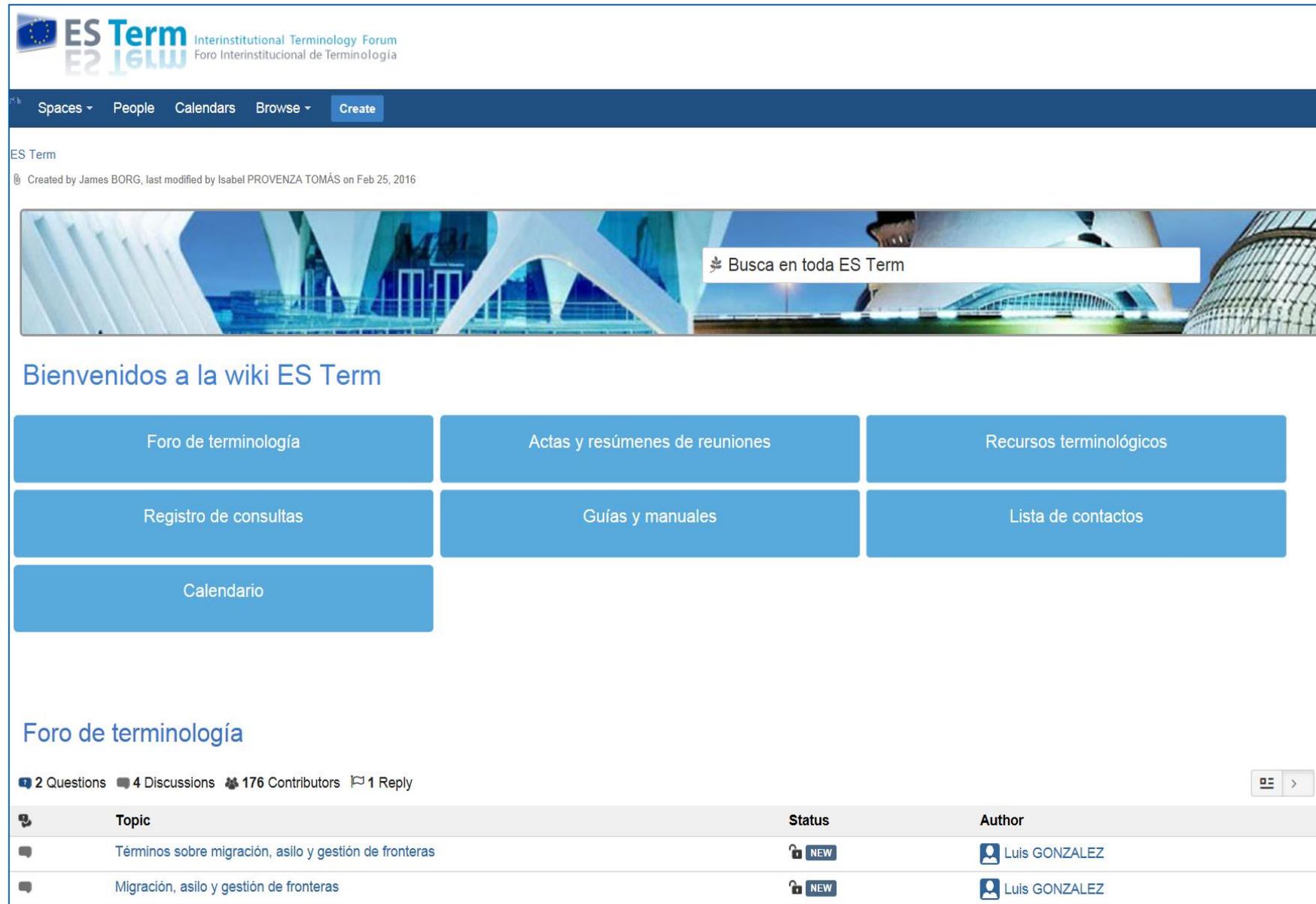
Assignment by Institution IATE and Interinstitutional Procedures Interinstitutional Term Projects' List

### Term Projects by Institution

Translation Center Council of the EU Court of Justice of the EU

European Commission European Parliament

# Language Wikis of EurTerm



The screenshot shows the homepage of the ES Term wiki. At the top, there is a navigation bar with links for Spaces, People, Calendars, Browse, and a Create button. Below this, the page title 'ES Term' is displayed, along with a creation and modification date: 'Created by James BORG, last modified by Isabel PROVENZA TOMÁS on Feb 25, 2016'. A search bar is prominently featured with the text 'Busca en toda ES Term'. The main content area is titled 'Bienvenidos a la wiki ES Term' and contains six blue buttons arranged in a grid: 'Foro de terminología', 'Actas y resúmenes de reuniones', 'Recursos terminológicos', 'Registro de consultas', 'Guías y manuales', and 'Lista de contactos'. Below this, there is a section for the 'Foro de terminología' with statistics: '2 Questions', '4 Discussions', '176 Contributors', and '1 Reply'. A table lists the forum topics, including 'Términos sobre migración, asilo y gestión de fronteras' and 'Migración, asilo y gestión de fronteras', both marked as 'NEW' and attributed to 'Luis GONZALEZ'.

ES Term Interinstitutional Terminology Forum  
Foro Interinstitucional de Terminología

Spaces People Calendars Browse Create

ES Term  
Created by James BORG, last modified by Isabel PROVENZA TOMÁS on Feb 25, 2016

Busca en toda ES Term

### Bienvenidos a la wiki ES Term

- Foro de terminología
- Actas y resúmenes de reuniones
- Recursos terminológicos
- Registro de consultas
- Guías y manuales
- Lista de contactos
- Calendario

### Foro de terminología

2 Questions 4 Discussions 176 Contributors 1 Reply

Topic	Status	Author
Términos sobre migración, asilo y gestión de fronteras	NEW	Luis GONZALEZ
Migración, asilo y gestión de fronteras	NEW	Luis GONZALEZ

# External Communication termcoord.eu

The screenshot shows the homepage of the Terminology Coordination website. At the top, there is a navigation bar with the logo of the European Parliament and DG TRAD. The main content area is titled "Admin Panel" and includes a "Welcome to TermCoord" section with a video player, a "DISCOVER MORE" section with a booklet download button, and a search form. Below this is a "Latest from our Blog" section featuring a "#MondayReading" article and a "IATE Term of the week" section with a list of recent terms.

termcoord.eu

DG TRAD  
Terminology Coordination

Home About IATE Explore Traineeships Intra EU Interpretation Universities Termania Catalogue Blog Resources

Admin Panel

Welcome to TermCoord

Terminology Coordination...  
by TermCoord EP

TERMINOLOGY  
IN THE EUROPEAN  
PARLIAMENT

Start Prezi

DISCOVER MORE

DG TRAD  
TERMINOLOGY  
COORDINATION  
TERMS, OUR NECTAR

DOWNLOAD OUR  
BOOKLET

Term to Search...

Source Target

Domain

Search

Latest from our Blog

#MondayReading

The Translator's Invisibility

A history of translation

IATE Term of the week

Interested in the current affairs? Then you cannot miss this section where every Friday we choose the "IATE Term of the week". A term directly related with what is happening in the world, particularly in Europe, based on IATE's entries. Stay tuned and help us by contributing to the IATE's database.

Check out our latest terms:

IATE term of the week  
Sexism

IATE term of the week  
Wildlife Trafficking

IATE term of the week  
Exploit

IATE term of the week  
Green Infrastructure

The sidebar contains several utility sections: "Glossaries" with links to "EU GLOSSARIES" and "GLOSSARY LINKS"; "IATE" with a search form; "ToolBox" with links to "PUBLIC IATE", "SEARCH TOOLS", "IATE TBX", "WEBSITES", "DocHound", "TERMBASES", "EMBED WIDGETS", "EU AGENCIES", "IATE ADD-ON", and "DOWNLOAD OUR APP"; "Blog" with a "IATE term of the week" feature; "Subscribe to Blog via Email" with an email input field and a "Subscribe" button; and a "Calendar" section for "seminars and other events".

Glossaries

EU GLOSSARIES

GLOSSARY LINKS

IATE

Search

Term to Search...

en en

Any domain

Search

ToolBox

PUBLIC IATE

SEARCH TOOLS

IATE TBX

WEBSITES

DocHound

TERMBASES

EMBED WIDGETS

EU AGENCIES

IATE ADD-ON

DOWNLOAD OUR APP

Blog

IATE term of the week

Female Poverty

Subscribe to Blog via Email

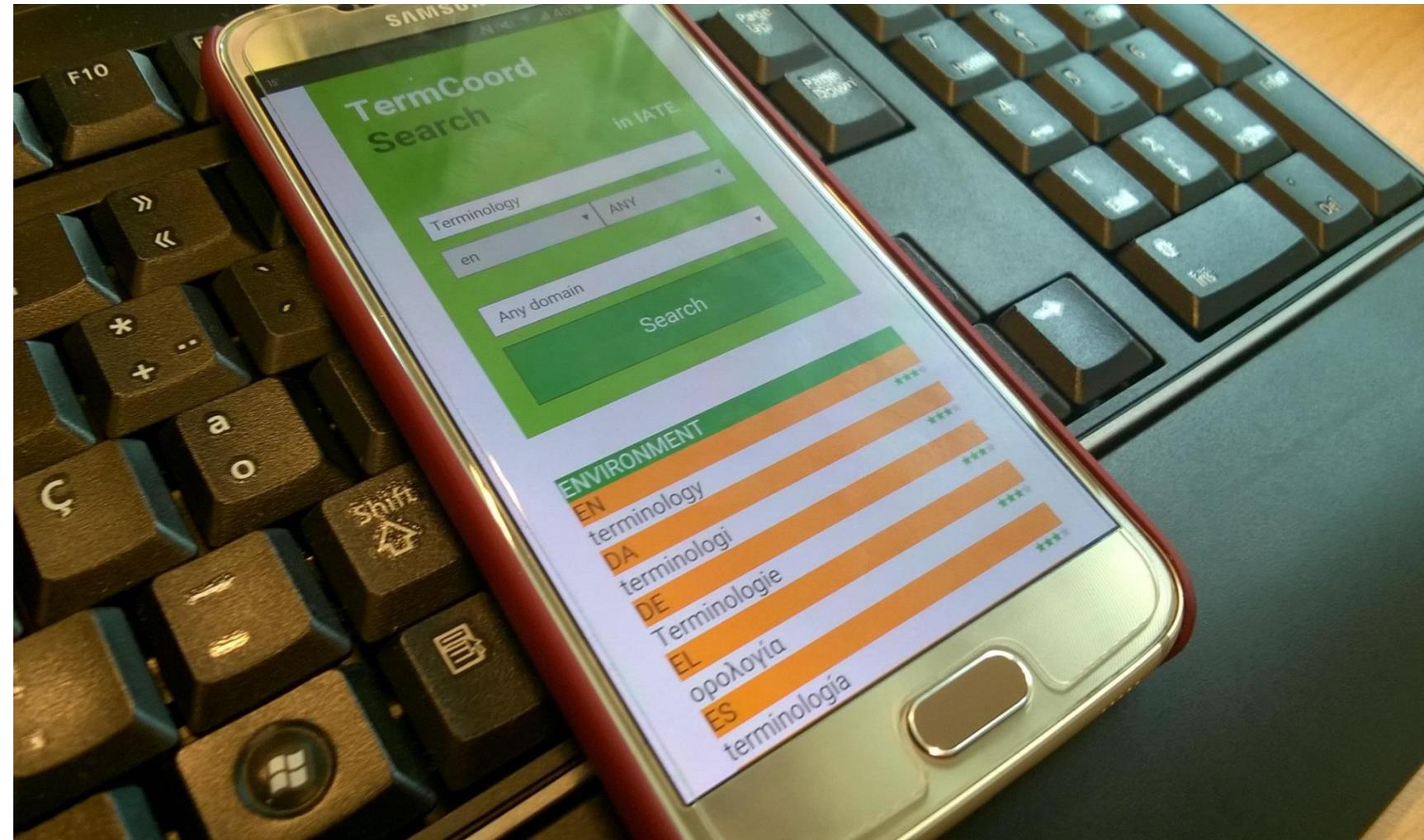
Insert your Email

Subscribe

Calendar

seminars and other events

# TermCoord APP



# Terminology and technological progress

- 
- ▷ Ontology and semantic web
  - ▷ Quality assurance in CAT tools and MT
  - ▷ Normative terminology for proactive use
  - ▷ Terminology resources for post-editing
  - ▷ Terminology and artificial intelligence – bioethics
  - ▷ Technical aspects – Term extraction etc.
  - ▷ Interlinking of terminology – Cloud technology and Metasearch

# Added value of Terminology

TRANSLATION MEMORIES	TERMINOLOGY
How something <u>was</u> translated	How something <u>should be</u> translated
From the past	For the future
Variety	Consistency
Segment level (phrase)	Subsegment level (term)



# Screenshot from Studio



EMPL EN RO - test 1 - consult\_term and add\_term\_5 EMPL EN RO - Translation Results

Project Settings

Bleak labour market prospects for youth and to the resolution and conclusions of the 101st Session of the International Labour Conference, Geneva, 2012, entitled 'The youth unemployment crisis:'

No matches found.

Term Recognition

- rezoluție
- 20140206\_IATE full\_RO
- rezoluție
- concluzie
- 20140206\_IATE full\_RO
- concluzie
- international labour migration
- 20140206\_IATE full\_RO
- migrație a forței de muncă
- migrație internațională a forței de muncă
- entitlement
- 20140206\_IATE full\_RO
- drept
- unemployment
- 20140206\_IATE full\_RO
- somaj

Termbase Search Term Recognition

Termbase Viewer

Flags layout (No input model)

International Federation of National Red Cross and Red Crescent Societies  
International Federation of Red Cross and Red Crescent Societies  
International Finance Corporation  
international financial institution  
International Financial Reporting Interpretations Committee  
International Financial Reporting Standard  
International Financial Reporting Standards  
International Force East Timor  
International Fragrance Association  
International Fund for Agricultural Development  
international health regulation  
International Humane Trapping Standard  
International Hydrographic Organisation  
International Institute for the Unification of Private Law  
International instrument to enable States to ratify treaties  
International Investment Agreement  
International Laboratory Accreditation Cooperation  
international labour migration  
International Labour Office  
International Labour Organisation  
international law  
international legal order  
International Lesbian and Gay Association

Entry number: 4140  
Primary: 1  
Domain: 2811-Migration;4406-Employment

English

Definition: process by which a person changes their country of usual residence for the purpose of employment

international labour migration  
Reliability: Very reliable  
Institution: Council

labour migration  
Reliability: Reliable  
Institution: Council

Romanian

migrație a forței de muncă  
Reliability: Reliable  
Institution: Council  
Evaluation: 0

migrație internațională a forței de muncă  
Reliability: Reliable  
Institution: Council  
Evaluation: 0

5 EMPL- PR RSP youth guarantee EN - full small text.doc.sdxliff [Translation]

September 2012 annual global employment outlook.

34 Bleak labour market prospects for youth and to the resolution and conclusions of the 101st Session of the International Labour Conference, Geneva, 2012, entitled 'The youth unemployment crisis:'

35 A call for action',

36 [http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms\\_188810.pdf](http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_188810.pdf)

37 [http://www.ilo.org/wcmsp5/groups/public/@ed\\_norm/@relconf/documents/meetingdocument/wcms\\_185950.pdf](http://www.ilo.org/wcmsp5/groups/public/@ed_norm/@relconf/documents/meetingdocument/wcms_185950.pdf)

38 -- having regard to Rules 115(5) and 110(2) of its Rules of Procedure,

39 A. whereas, due to the economic crisis, the overall unemployment rate had by October 2012 risen to the unprecedented level of 10.7 %, with 25.91 million people looking for work;

40 Eurostat, November 2012:

41 [http://epp.eurostat.ec.europa.eu/cache/ITY\\_PUBLIC/3-30112012-BP/EN/3-30112012-BP-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/3-30112012-BP/EN/3-30112012-BP-EN.PDF)

42 B. whereas the youth unemployment rate has soared to 23.4 %, leaving 5.68 million young people unemployed, in part reflecting mismatches between skills supply and labour market demands though often regardless of the education levels of job seekers; whereas research shows that youth unemployment often leaves permanent scars, such as an increased risk of

September 2012 annual perspective privind ocuparea forței de muncă la nivel mondial:

migrație a forței de muncă

migrație internațională a forței de muncă

98%

având în vedere articolul 115 alineatul (5) și articolul 110 alineatul (2) din Regulamentul său de procedură,

A. întrucât, ca urmare a crizei economice, rata globală a șomajului a crescut în octombrie 2012 la un nivel fără precedent de 10,7% , 25,91 milioane de persoane fiind în căutarea unui loc de muncă;

Eurostat, noiembrie 2012:

AT [http://epp.eurostat.ec.europa.eu/cache/ITY\\_PUBLIC/3-30112012-BP/EN/3-30112012-BP-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/3-30112012-BP/EN/3-30112012-BP-EN.PDF)

# IATE in CAT tools

- **Termbase retrieval from IATE:** interinstitutional tool for retrieving relevant terminology from IATE in termbase format to be used in CAT tools
- **Term recognition mechanism:** automatically marks relevant terms in the translation environment on the basis of IATE contents
- **Autosuggest:** automatically proposes term suggestions when words are being typed
- **Add a term:** allows users to save search results in a termbase for new terminology, and share them with all translators using the same termbase



**There is a new kind of document-specific termbases which can be exported through a recently developed interface of IATE and allows for the retrieval of IATE data relevant for any uploaded text. This new interface, called Term Recognition Module, is now available in production for all terminologists and translators in the EP.**



**A Task Force within the IATE Management Group identifies data sets in IATE which can be used as prescriptive terminology.**

**The EP is developing its own CAT tool (CAT4Trad) allowing for the treatment of multilingual documents where the retrieval of IATE data will also be foreseen.**



# Download IATE.tbx via [termcoord.eu](http://termcoord.eu)

IATE Public provides now the possibility to download TBX files filtered by languages and domains. Users can extract subsets of data as follows, using the extraction tool **IATEExtract**:

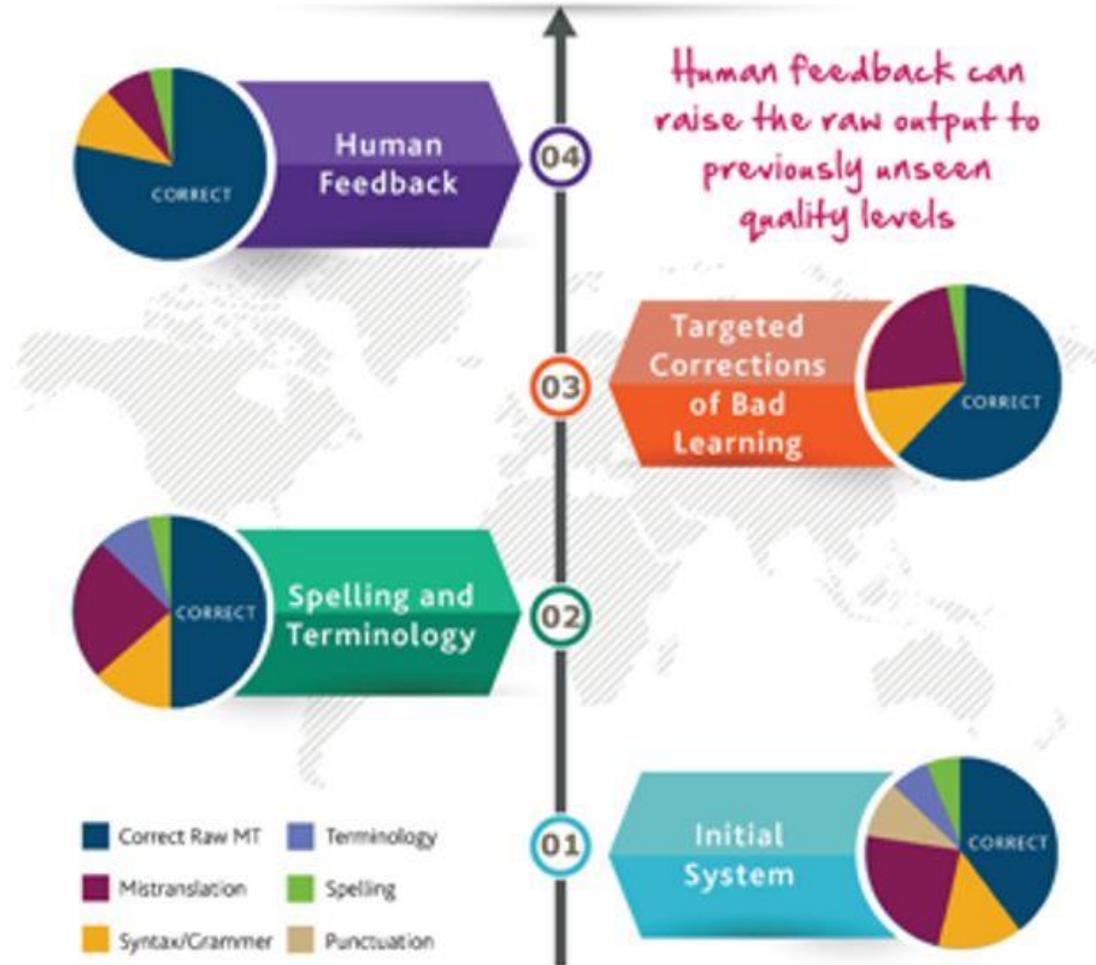
download  
iate.tbx

The screenshot shows the 'Extract language pairs' window. It has a 'File' menu and two buttons: 'Select IATE Export File' and 'Set Extract Output Folder'. Below these are labels for 'IATE TBX/ZIP File:' and 'TBX Output Folder:'. A section titled 'Choose languages' contains a grid of checkboxes for various languages: BG, CS, DA, DE, EL, EN, ES, ET, FI, FR, GA, HR, HU, IT, LA, LT, LV, MT, NL, PL, PT, RO, SK, SL, SV, MUL, and ALL. There are two radio buttons: 'Extract ALL selected languages' (which is selected) and 'Extract ANY selected language'. Below this is a section 'Choose a domain to filter on' with a dropdown menu currently set to 'Any domain'. At the bottom of this section are 'Find' and 'Reset' buttons. A large 'Start' button is located at the very bottom of the window.

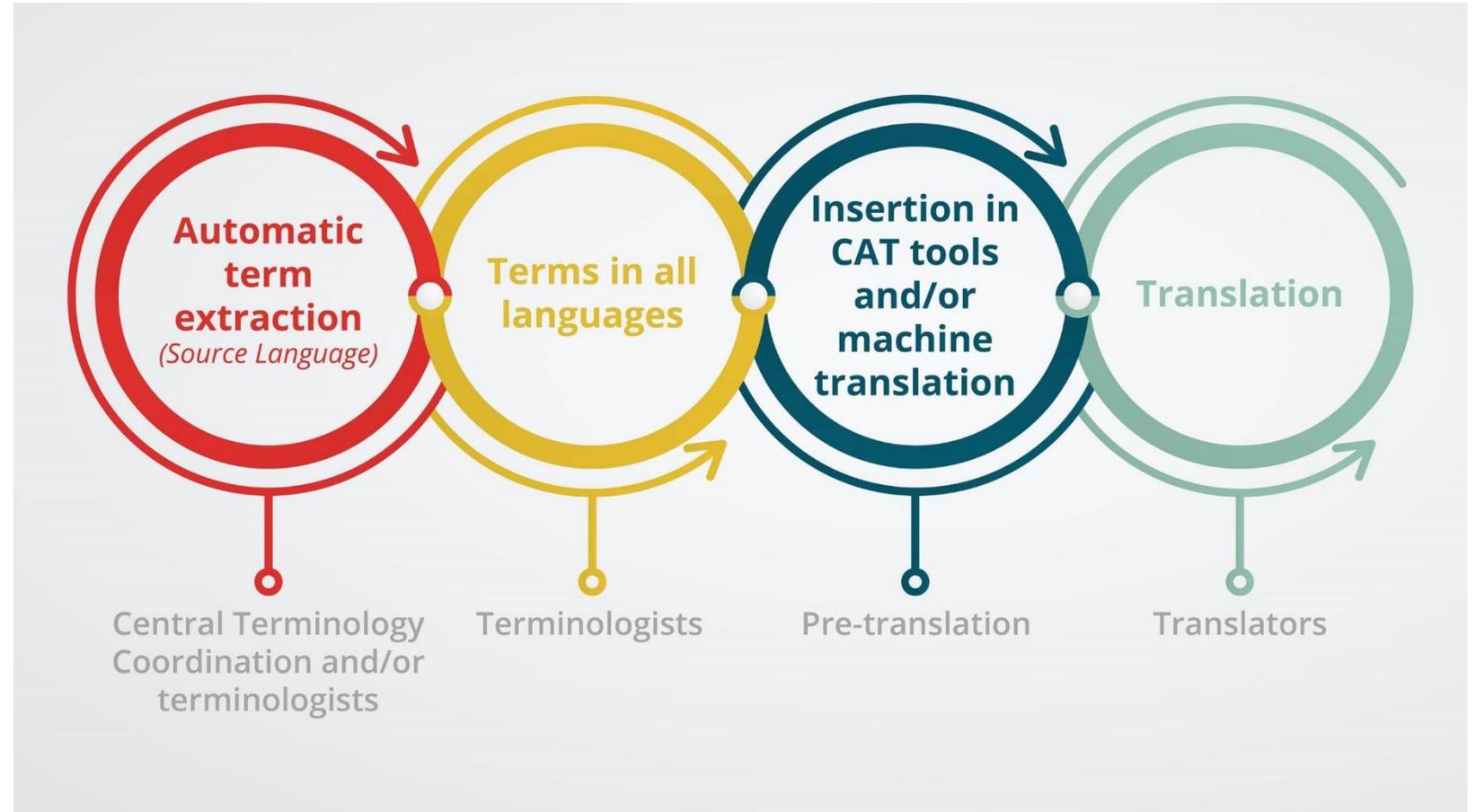
# Terminology in Machine Translation

## MACHINE TRANSLATION

Translation Quality & Human Feedback



# Terminology Workflow



# Quality Control in Post-Editing



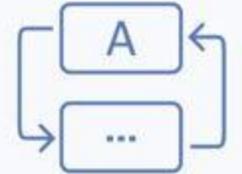
Grammar, syntax  
and spelling



Correct and  
consistent  
terminology



Style according to  
the rules and  
audience targeted



Use of same  
references as for  
manual translation  
(TMs, glossaries,  
termbases, etc.)

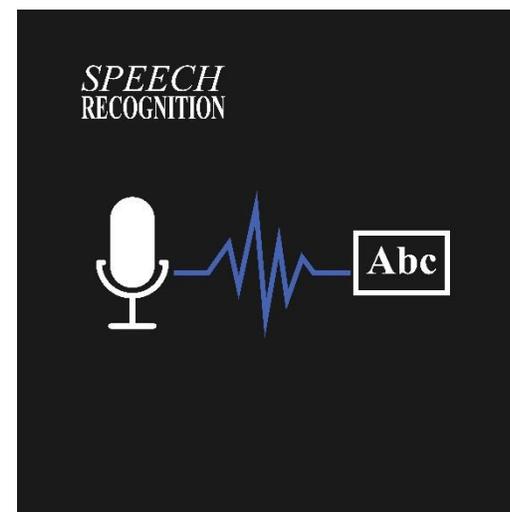


# Terminology in Voice Recognition

Bilingual term bases extracted from IATE are used for the direct translation of recorded speeches

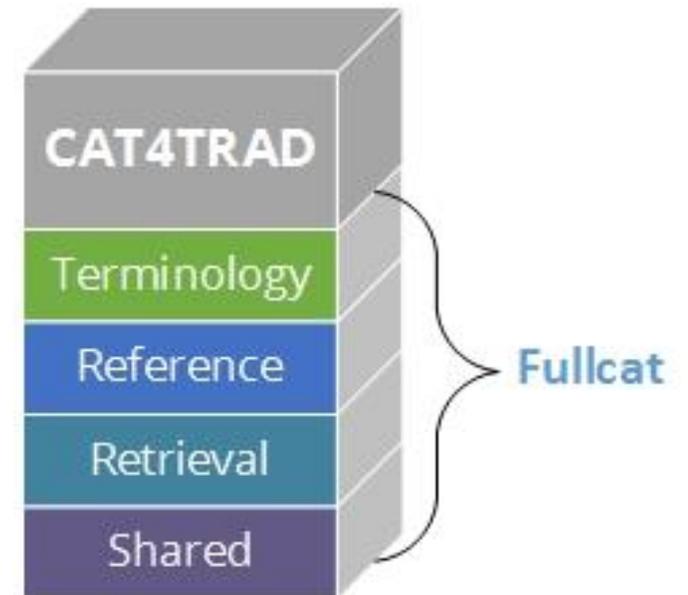


download  
iate.tbx

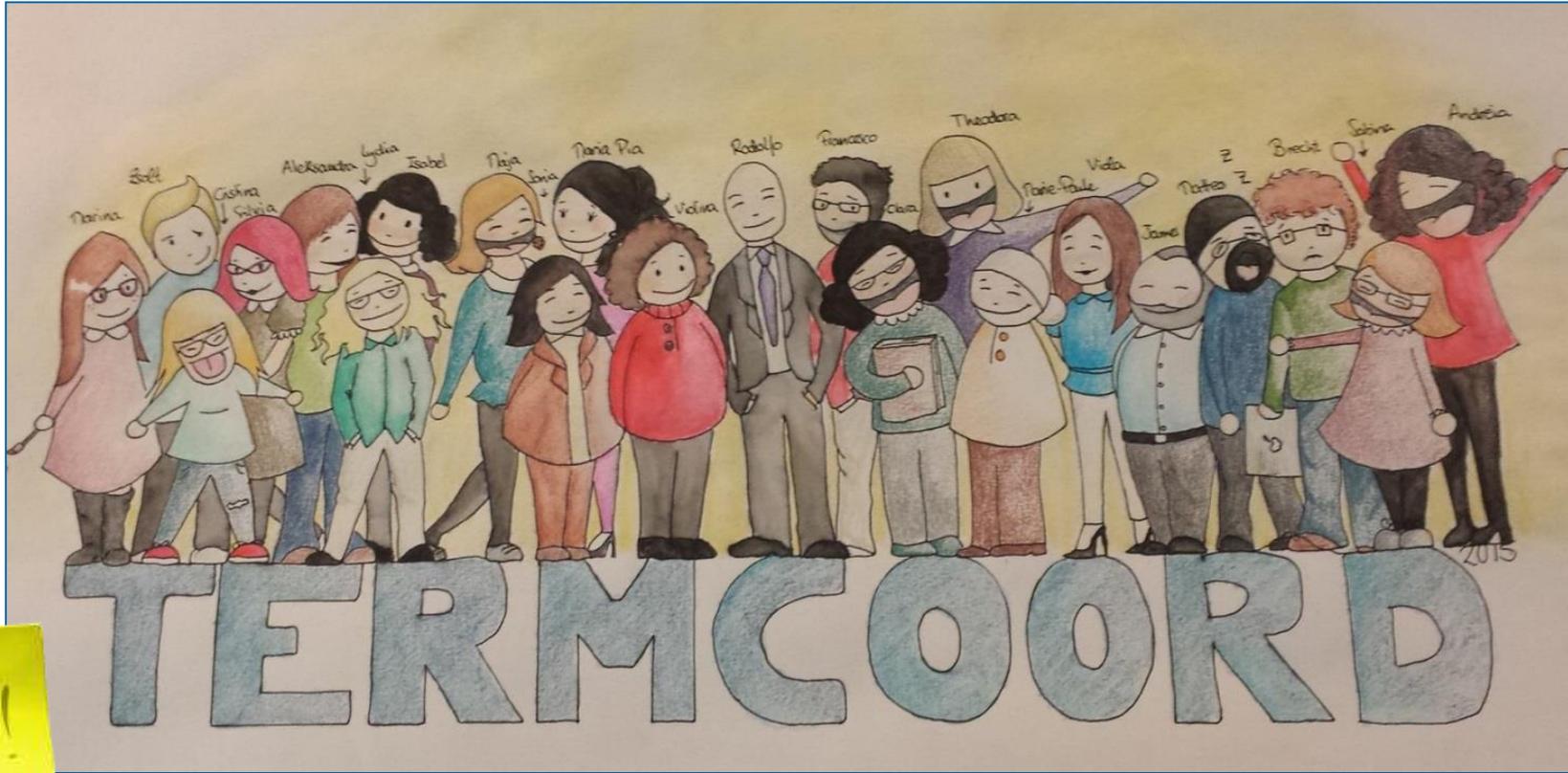


# CAT4Trad and FullCAT

The European Parliament is creating an own CAT tool to cover the needs of translating multilingual documents and specially amendmends containing modifications on several languages. This CAT tool called CAT4Trad is using a repository with several resources and among them terminology from IATE.



Thanks!



*Thank you for your attention!*