

## Trademarks & Designs

With ACSEPTO®, you will manage both your verbal and figurative search procedures, from TM & DS classification to the printing of your result reports.

### ACSEPTO®'s key features:

- A wide range of tools to simplify your verbal and figurative coding operations
- Integration of the verbal and figurative questions into a single operation
- Production of a single, customizable results report, integrating both verbal and figurative hits
- Search on different databases: national marks, IR (WIPO), EUTM (EUIPO), INN (WHO), Art 6ter (UN), plant varieties, geographical indications, Company names...

### Fast, easy & efficient Figurative search

The visual representation of the question by ACSEPTO® limits the risk of errors. The coding and the figurative search can be based on the Vienna and Locarno classifications or any other hierarchical classification. Coding and construction of figurative questions is simplified by powerful navigation tools. Image recognition is used to order search results by decreasing similarity and to obtain additional results based on shape and colour.

### Exhaustive & discriminating Verbal search on TM names as well as on TM applicants

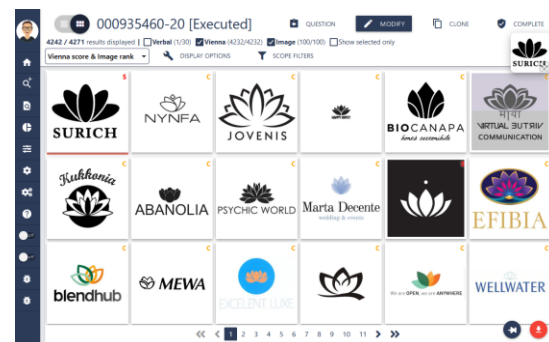
- ACSEPTO® calculates a global value integrating all aspects of verbal similarity (anagrams, prefix, suffix and infix similarity, word structure, etc.) and simultaneously processes the phonetics of different languages as well as transliteration.
- Unicode support allows management of all scripts and alphabets.
- Automatic coding of trademark names and of search queries is proposed by default.
- Templates are used to tailor queries to different search corpora or specific search types, by adjusting the level of similarity.
- Similarity and/or identity searches apply to each TM word or to the full denomination.
- Number mapping, Acronym detection and more search features available

### ACSEPTO® MARK automating verbal and figurative Trade Mark searching:

- Integrates your verbal and figurative searches into a single operation.
- Manages all types of TM search procedures: preliminary searches, examination, coding and watching.
- Integrated Image Recognition Engine for classification based on shape and color

### ACSEPTO® DESIGN automating title and Locarno-based Design searching

- Manages multiple views per article and several articles per application.



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## A flexible question execution procedure

ACSEPTO® is adapted to various working practices and search services:

- Interactive and batch searches
- Three search needs are covered: Preliminary searches, TM examination and TM watching

## Rich presentation of results and filter facilities

During the verbal and figurative processing of results, the user has instant access to a wide range of information on cited marks (denomination, application number and date, figurative coding and images, and full bibliographic data such as the name and address of the applicant and G&S description). The display options allows you to hide part of the results according to various criteria.

## Interfaces to external systems

ACSEPTO® is ready to be interfaced by your IT team with your own Trademark administration or invoicing systems, using mechanisms for importing details of Trademarks and of searches and exporting results, in different formats (Structured flat files or XML), or web services.

Coexya SDU component updates your search database from external entities such as the EUIPO or WIPO.



## Coding Prediction

Automatic Vienna Coding Prediction of Images based on Machine Learning technology.

## ACSEPTO® SDK

Several levels of integration with your IS are possible. Tight integration can be reached using ACSEPTO SDK. This can also be used to put search services available on the web for IP agents or your on-line clients.

## Statistics and integrity checks

Administration modules detect all search data integrity problems and provide statistics on search databases

## ACSEPTO® WATCH

Trademark watch is an essential element of effective trademark maintenance. ACSEPTO® implements watch services to alert subscribers about potentially conflicting trademark applications and registrations.

## ACSEPTO® DESIGN

Using Locarno classification, the same facilities are available as for Trademarks. ACSEPTO® DESIGN also supports multi-view display for multi-items applications, including 3D display.

## Image Recognition Module

This module leverages the latest AI technologies for image comparison, combining 4 different approaches to ensure consistency in the similarity process:

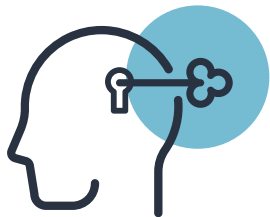
- Shape recognition & edge detection
- Color detection
- Spectral analysis
- Histogram-based comparisons.

To complement the ease of use and cover more use cases (such as compositions), it includes an image editing tool that offers image cropping, deleting and rotation functions to isolate the significant parts of the logo to search for.

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## Accepto DS

A tool for Industrial Designs search and examination

### Product features

With ACSEPTO®, you will manage your industrial design (DS) search procedures, from DS classification to printing your search reports with a highly configurable user interface. ACSEPTO®'s key features are the following:

- Multi-view display for multi-articles applications
- In-app 3D object display (.STL, .OBJ files)
- Complex search that combines textual search on DS titles and search on Locarno codes, with definition of a search corpus on different criteria such as dates (e.g. date of application), legal status (e.g. "Granted"), IPO status, search databases (e.g. national designs)
- Locarno coding interface
- Interface dedicated to the selection of relevant results (filters are also applicable here, e.g. on owners)
- Docx report generation

### Product information

The search databases are initialized with the customer. ACSEPTO® can manage several data sets or search domains (Nat. designs, Int. designs, ...) at the same time, which will be used for a consolidated search.

ACSEPTO® Design can be integrated within an examination process thanks to connectors:

- PTOLEMY® connector: to connect ACSEPTO® with PTOLEMY®, the back-office system developed by Coexya
- Public connector: to connect ACSEPTO® with the back-office used by the IPO

Data can be provided by web services, flat files or the Coexya Data Update tool (that gets data automatically from EUIPO, WIPO, ...).

### Why Coexya?

Coexya has been developing intellectual property search tools for over 20 years and works with 15 IPOs and private clients. ACSEPTO® is constantly evolving and progressively integrating the state of the art in machine learning based search technologies.

### Technical Environment

- .Net (C#, ASP.NET)
- SOAP
- MsSQL, Oracle, PostgreSQL
- Hosted on Windows server with IIS

### Product Evolution

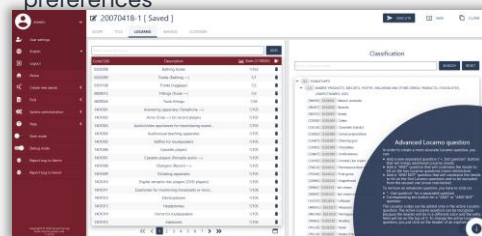
Regular updates

Major updates every 5 years (currently v.11)

### User Experience

The web app is cross device, cross browser, responsive and touch screen compatible

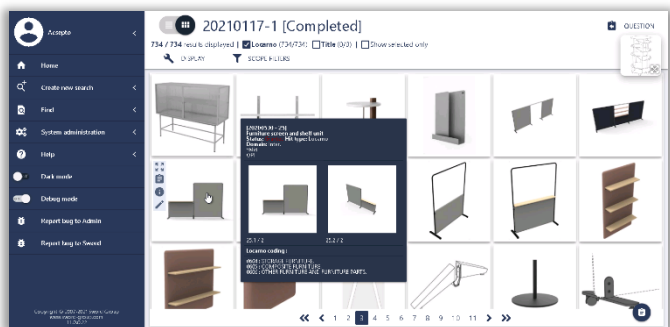
The users can configure visual preferences



A Locarno question



A 3D object display

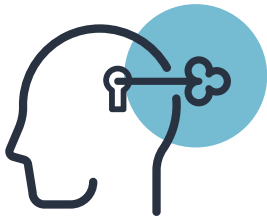


Search results display

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## Trademark Image Recognition Module

A search tool for both verbal & figurative marks (Based on Machine Learning Technology)

**ACSEPTO Image Recognition Module** is a tool designed to improve the results of Accepto searches on Figurative and Combined trademarks. The Image Recognition module is very effective when used in combination with Accepto Figurative search module (based on Vienna classification), and it can also be used independently.

### Accepto Image Recognition Module objectives

- Calculate relevant image similarity rankings relative to image question
- Sort Vienna search results by similarity (using calculated rankings)
- Bring additional similar results out of Vienna question scope
- Shorten result browsing and examination time for officers

### Technology

Accepto Image Recognition Module is specifically designed to work effectively on Mark logos. The technologies used by this module make it very flexible and allow the engine to retrieve a wide range of similar pictures.

- Pre-Processing: On the image pool, we apply several transformations on raw logos before describing them, in order to improve their quality and the relevance of the descriptors.
- Descriptors: The engine works with several descriptors, each descriptor is designed to focus on a specific similarity process type.
- Question editing: User can transform the question picture before executing the search. Accepto Image Editing tool allows user to rotate, erase or crop parts of a logo.

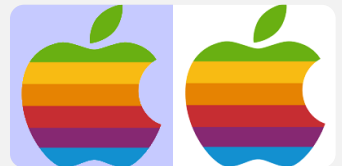
Initial picture description is a process done only once and stored on file system. Then the search servers load the descriptors in memory on a master-slave architecture, providing efficient scalability and allowing user to process a search on 500 000 pictures in around 20 seconds.

## Image Pre-processing

### Threshold



### Background



### Segmentation



### Edge Selection



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## Image Pre-processing

So as to produce relevant descriptors, Accepto Image Recognition Module normalizes entry pictures and generates several temporary images used to calculate descriptors.

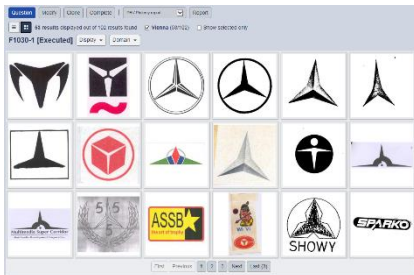
- Normalize picture size
- Threshold picture (generate black & white)
- Background extraction
- Picture segmentation
- Edge detection

## Image Description

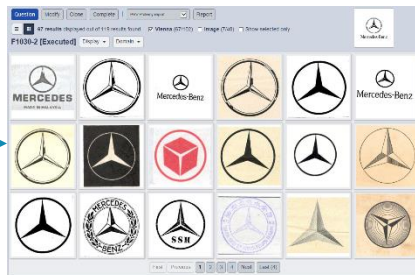
Accepto Image Recognition Module uses several descriptors; each of them focuses on a specific similarity process. Descriptors are calculated on pre-processed images, each descriptor is calculated on the image that best matches the descriptor type needs.

Users can choose dynamically to search for shape and/or color and to search on full picture or possibly segmented portions of the picture. If several criteria are selected the rankings are calculated accordingly.

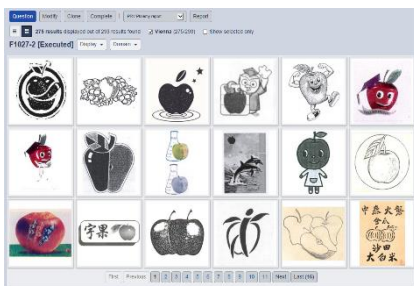
- Shape recognition & edge detection
- Color detection
- Spectral analysis
- Histogram-based comparisons



First Accepto Trademark Search on Vienna code "010108 – Stars with 3 points"



Same search coupled with Image recognition on Mercedes Logo (top right)



First Accepto Trademark Search on Vienna code "050713 – Apples"



Same search with Image recognition (result outlined in red is an extra image result not coded as Apples)



Color recognition



Shape recognition

## Ordering Vienna results:

The main usage of Accepto picture recognition module is coupled with a Vienna search, to re-order the results by similarity with the question picture. This usage is extremely useful for Vienna search on wide range codes like "260101 – Circles"

## Fetching additional results:

Still used coupled to the Vienna search, the image recognition module can bring extra results, similar to question picture but incorrectly coded, thus not appearing in the Vienna search results.

## Image recognition only:

Image recognition can be used independently, to fetch similar logos without Vienna question, we recommend using it coupled with Vienna search for complete examinations.

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