# Gravity Trademarks Search™

A03 Gravity for Trademark Search

What tools can Gravity Control offer for Trademark Search?

Simultaneous sorting of a data set by several criteria at once

One of the major advantages of Gravity control for performing trademark search is the possibility to sort and search by several criteria simultaneously. As the screenshot below shows, each individual criterion is assigned a grouping point on the work plane and attracts the documents relevant to it.
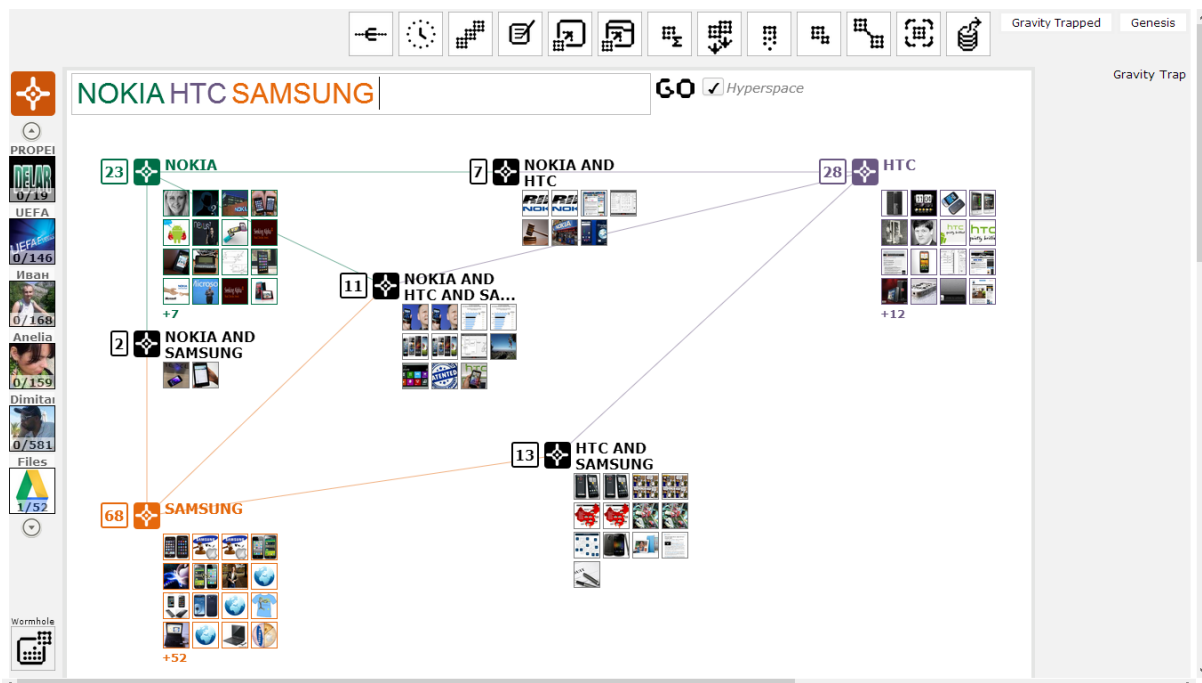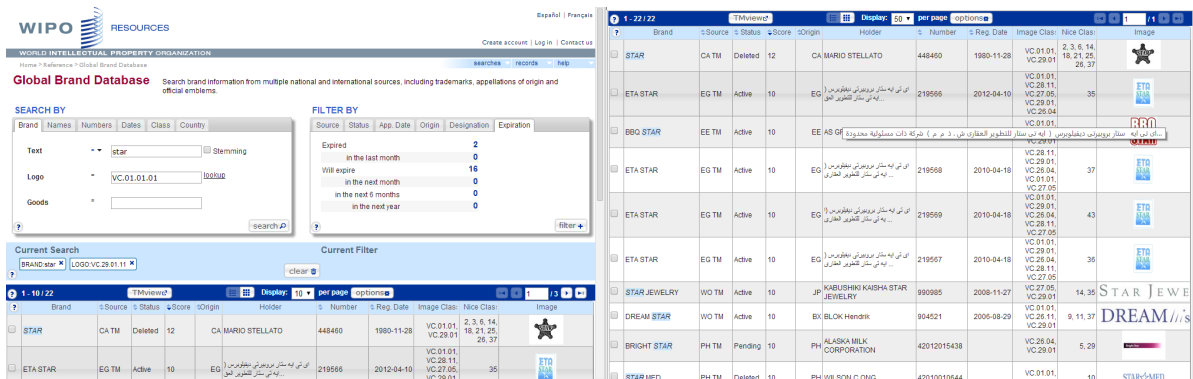
However, if a document is relevant to more than one of the defined criteria it will be attracted to a resultant grouping point. This allows the user to conduct very complex searches on a single screen and work with a large number of combinations of single criteria together, as well as separately. In trademark search this would mean for example being able to not just filter the result of a straight forward character string search in the textual field of the trademark by Nice class but to use the description of related goods for sorting out the most relevant hits, easily discarding the least relevant items and instantly discovering brands with the most area of overlap.

The individual criteria can also be composite or compiled using regular logical expressions such as *and, or* and *not*. In combination with grouping by several criteria at once this may prove very effective when looking for visually similar logos. Using the image description codes, where provided, will produce very detailed results even without the use of an image recognition software.

As at the activation of the sorting process the objects start moving to their respective grouping points, this creates the opportunity to use their speed of movement as a visualization tool for their level of relevance, when calculable. As more relevant objects move faster than less relevant objects, the user gets immediate visual information on which objects might be of greatest interest to them.

Efficient representation of large amounts of data
The new graphic organization of the Gravity Control work plane makes it possible to comfortably represent some 24 times more individual objects on the same screen compared to scroll page view in list organizations.

Easy access to individual item details and available operations
The large amount of data objects represented on one screen naturally limits the amount of detail available for each of them at a glance. As reviewing the details of individual objects is crucial to conducting an effective research, Gravity Control provides easily accessible detail panes that may not even require a click. Depending on the chosen object, these reveal useful data about single documents (including but not limited to image, name, link, file details, attributes, tags, summary and active buttons for available operations) or details about a group (list of elements, summarized data, most common and uncommon attributes among the elements, etc.)

Search by example
The new graphic organization also provides the tools for easily reversing the direction of a search. After finding an object of interest, through browsing or using user-defined search criteria, the researcher can review all its attributes and choose to turn one or more or a combination of them into grouping criteria thus finding similar objects or documents. This would be especially useful when reviewing the list of covered goods and services with the end of both eliminating irrelevant brands and finding relevant ones that have not been retrieved by string

and classification searches.

Simultaneous work with different data types and sources
The Gravity control interface can simultaneously load into the work plane data objects of different types and sources, including patents, scientific publications, media publications, corporate sites, e-trade sites, blogs, professional networks, private documents, correspondence, contents of custom databases, and many more. It can also work with live feeds - from RSS sources or crawlers for instance. This makes it well suited for tracking events, products, technologies and even publishers across fields, identifying more possibilities for cooperation or development.

See demo video at http://gravitycontrol.net/fce

Keeping results and adding to them
Gravity control makes it easy to add both new search criteria and new data items to the work plane. The addition of items can even be automated if they come from a live source such as an RSS feed for stock exchange rates or business news. The good news is that by adding to the work plane the software does not dismiss previously achieved results. All the user defined grouping points with their groups of relevant documents remain on the screen while new data is added to them. Refining and adding search criteria will only affect those of the already sorted items that are also relevant to them.

Event Horizon capabilities

In the cases when documents need to be examined in sets by date (e.g. trademarks filed in the last month or 3 months), this can easily be done with the help of the Event Horizon. This feature divides the work plane into two (and eventually more than two) dividing the loaded objects according to the user-defined criterion. The items below and above the horizon are sorted separately and can be sorted by the same criteria set, or a different criteria set. This could be useful for outlining trademarks due for activation or expiry.

The event horizon can also be modified to allow sorting by criteria other than date, such as numeric or logical values, which will significantly widen its applicability.

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Timeline capabilities

When the user has already defined a gravity system of criteria, they can follow the changes in the groups of relevant objects over time by using the Timeline. This feature adds objects to their respective groups gradually according to their timestamp. It can be particularly useful for discovering trends in development, availability of products, visibility or following media interest trends over time for instance.

Much like the Event Horizon, the Timeline can be modified to work with other types of criteria. You can see this feature in action in our demo video at http://gravitycontrol.net/fce

Reporting and data export capabilities

All of the searching and sorting results achieved through Gravity Control and its new graphic organization can also be delivered in a standard list or table format for output into other programs or presentation tools. An export to .csv is already available.

Extraction of most common attributes

While objects are grouped by common user-defined criteria, the items within the group are very likely to share more than just those. Gravity Control extracts all attributes of single items and compiles a report for those that shared by most members of the group and could point to those that are shared by least. This directs the user to possible new search criteria to be included or excluded in order to refine or widen the results. In trademark search this can facilitate the review of covered goods and services or searches by image description.

Lexical spectrum analysis
One of the features of Gravity Control that can be particularly useful in widening or refining search results is the analysis of the most and least common terms within a document. The map of these terms with number and frequency of occurrences is what we call a lexical spectrum. Lexical spectra can also be superimposed and compared to identify documents that stand out from the group and thus be used to direct the search.

Representing graphical information
The new multi-dimensional graphic organization of Gravity Control provides for convenient visualization of graphical data such as geographic coordinates. The latter can even be used as grouping points superimposed on a map image while retaining the full functionality of the interface.

Simultaneous representation of hierarchical classification structures - internationally accepted classifications, contacts, etc.
Gravity Control includes the use of classifications as both a starting point for a 'blank' search or a point of reference and a means of deriving new criteria from objects in grouping points or other parts of the work plane. We are currently working on strategies to incorporate multiple classifications of different types (e.g. internationally accepted classifications in various fields, hierarchical contact structures) so that they will be accessible when reviewing a single object's properties and markable for use as grouping criteria. The current progress inspires us to feel optimistic for the added value of this feature.

Multi-user environment
As the modern professional environment becomes more and more collaborative and collaborations take place more and more online, our plans for the development of Gravity Control have always included multi-user capabilities. The simultaneous participation of several professionals on the same work plane could yield better and even more interesting and comprehensive results.

Full text search scopes
Depending on their needs, the researcher can conduct full text searches within the documents in a particular group or groups, selected objects that have been excluded from the searching and sorting by the user, or even within the whole accessible database. Where available, it is also up to the user to decide whether to conduct it on the complete text of the documents or only on particular structured parts such as the textual content of a brand or a the field for covered products and services.

List of product features

A Gravity Control interface layer for trademark search will include the following sets of features.

Basic features
- Simultaneous loading and management of different types of objects
- Simultaneous loading of objects from different sources - including local and network drives, online databases and live internet feeds.
- Simultaneous searching and sorting by multiple criteria.
- Visualization of the level of relevance through speed of movement and object order (when calculable)
- Refining and adding criteria without removing from the screen the already received results.
- Switching between levels of detail when viewing grouping points and individual objects
- Common operations on objects in the work plane - *open, send, print,* etc.
- Reporting functions - list export of results.
- Calculative functions - basic operations with numeric attributes.
- Retrieval and summary of object attributes in a grouping point.

Additional features
- Full text search for keywords and preset criteria
- Retrieval of criteria from structured fields - names, goods, etc.
- Full text lexical spectrum analysis