



# Gravity Control

The simplest system for complex  
data search and management

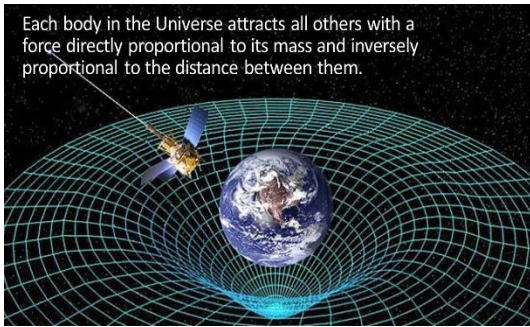
Gravity Office Space™

What It Does

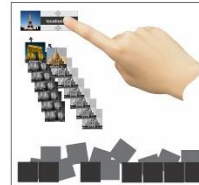
# The Original Idea

All products in the Gravity product family are based on the innovative Gravity Control™ graphic user interface for searching, sorting and managing information.

It uses a new graphic organization of the workspace, which allows the user to search and sort the results and group the results by several criteria simultaneously while viewing levels of relevance and connections between groups.



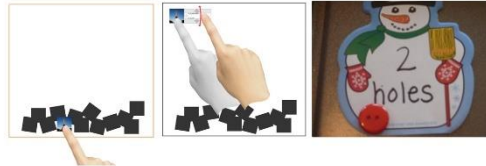
In Gravity Control™ every data object attracts others with a force directly proportional to their coinciding attributes or the extent of similarity between them.



Loading objects onto the work space



Choosing an object of interest



Grouping similar objects together



Simultaneous sorting by multiple criteria



Reports on grouping results



Performing further actions



# Gravity Office Space™ - What It Does?

Current office packages are format focused. They contain a number of different programs, each providing editing functionality for one type of format, and neglect the need to manage the produced files in the physical context of an office space. Gravity Office™ does not substitute these programs. It creates a layer above them that handles every format we work with from any source in one environment and provides easy access and a context based overview.

## 1. Gathers all your data from all your sources

- Works with data and files in all formats - office documents, emails, contacts, media files, etc.
- Data from local, network and online drives - Microsoft Active Directory, Onedrive, Dropbox, Google Drive, etc.
- Data from email platforms - Outlook Server and standardized protocols
- Data from databases and SQL-based APIs - open, professional and custom databases
- Data from standardized APIs - web search engines like Bing and Google, social networks like Facebook and LinkedIn, e-trade sites, etc.
- RSS sources - news, blogs, stock quotes, etc.
- Data from URLs - crawling of content, links, media, files and structured data
- Data from files - importing from other users and applications

## 2. Searches, sorts and groups all your data in a natural way

- By keywords
- By example
- By classification
- Simultaneous sorting by several criteria
- Simultaneous handling of all data types from all sources

## 3. Manages your data and files in a natural way

- Internal viewing and editing
- Open in another program
- Send by email as attachment or report
- Tag internally and by changing system attributes
- Mathematical calculations
- Best interface for tactile devices of any size

## 4. Analyses and processes data

- Advanced data analysis for big data
- Term frequency analysis
- Search term propositions based on similarities and differences
- Statistical calculations
- Cross table analysis

## 5. Generates data reports and presentations

- Timeline presentations
- CSV, XLS, PDF, HTML reports
- Export and import capabilities

## 6. Provides collaboration in a natural way

- Simultaneous access of several contributors to the same workspace
- Sharing results and workspaces with importable spreadsheet files
- Data access secured by certified systems

**1. GATHERS ALL YOUR DATA FROM ALL YOUR SOURCES**  
 The tool currently used Provides collaboration in a natural way in the most common search engines

**2. SEARCHES, SORTS AND GROUPS DATA IN A NATURAL WAY**

**The Search Bar**  
 The tool currently used in the most common search engines

**The workSPACE**  
 The field where all operations with data files are performed

**The Predefined Classifications** Gives an option to browse through predefined classifications in different areas

**The Feed Panel**  
 Contains internal Gravity database feeds with objects and external dynamic feeds

**The Landing Zone**  
 For entering data by hand or via a link or file.

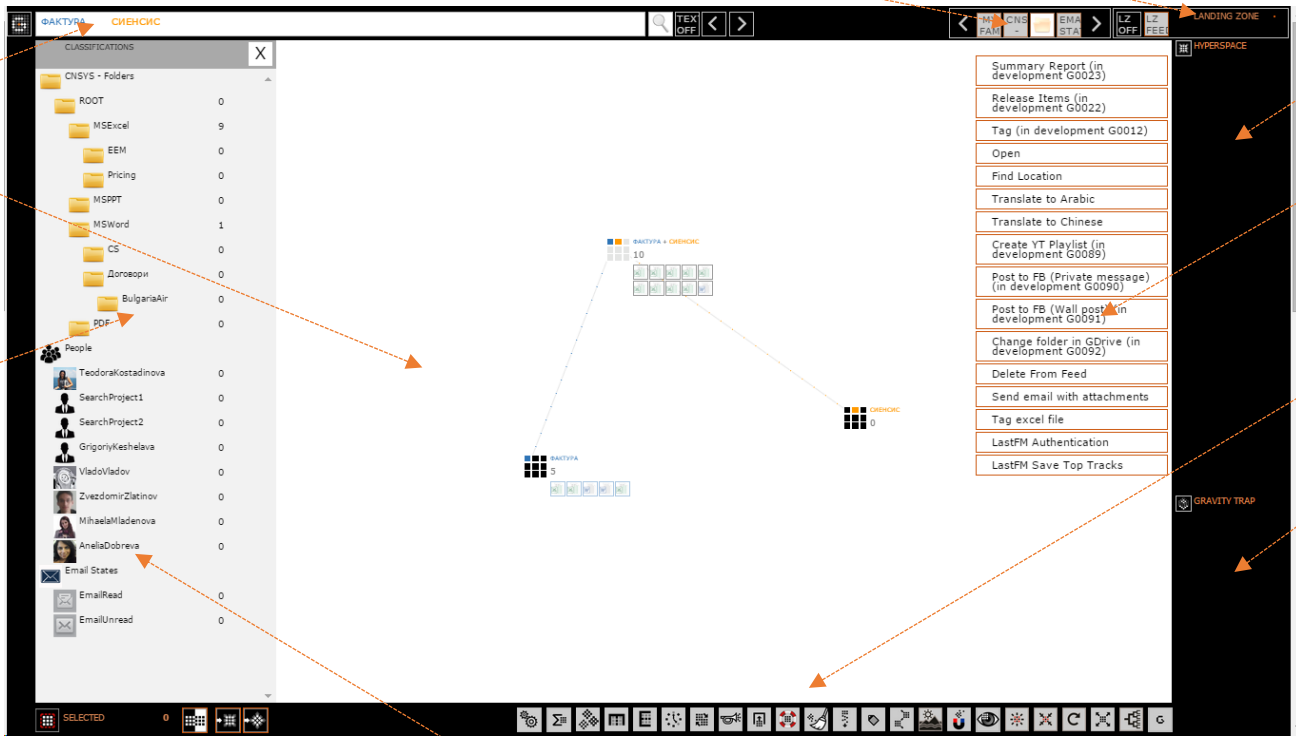
**3. MANAGES ALL YOUR DATA AND FILES IN A NATURAL WAY**

**The Hyperspace**  
 A field designated to operate with objects from different containers

**The Hyperspace Operations**

**The Application Control**  
 A variety of operations and actions with the grouping points and objects in the workSPACE

**The Gravity Trap**  
 A field where the user can place any objects that are not currently needed in the



Frequency analysis

The Event Horizons

**The Control Panel**  
 Displays information about an object, a feed, a grouping point, the SPACE, etc.

List reports

Standardized export/import files

**Multiuser environment**  
 Displays information about an object, a feed, a grouping point, the SPACE, etc.

**4. ANALYZES AND PROCESSES DATA**

**5. GENERATES DATA REPORTS AND PRESENTATIONS**

**6. PROVIDES COLLABORATION IN A NATURAL WAY**

## The Gravity Office™ workspace

The screenshot above shows the results of an actual search. In this case there are feeds with files on a server drive and email attachments retrieved from an email client. The search terms user are **INVOICE** and **CNSYS** (company name). The example will be explained in below. Files from @@@ MS Active directory and mail client

### Loading data

There are **four basic sources** for obtaining data to work with:

- **The Feed Panel** on the top right part of the screen it contains the internal Gravity database feeds or local data that has already been mapped by the application. Feeds can contain objects (or files) of all types with original in different locations. Loading them on the Workspace allows the user to look through them and **search by example**. Objects can be:
- **The Search Bar** – on top left allows **searching for key words** in the Gravity Database and/or external search engines. Search engines include global and site specific searches and are configurable. Search options can also be turned on and off according to user preference.
- **The predefined classifications** or other hierarchical structures are displayed on demand in the Control Panel. In the example we have shown a folder structure. This allows the user to **search by known location or category**. The
- **The Landing Zone** in the top right-hand corner of the screen is the tool for entering data that is not in the application database. It analyzes items dropped in it and can retrieve objects from.
  - URLs
    - Single
    - List of URLs in a file
  - RSS
  - Tabular files such as:
    - CSV
    - XLS
    - Tab delimited
    - other

### The Spaces

The **SPACES** are the areas where objects are displayed, sorted and handled. These are:

- **The workspace** - this is the field where all operations with data files are performed including searching, sorting and managing (white central area)
- **The Hyperspace** - a field designated to operate with objects from different containers. (right panel – upper part)
- **The Gravity Trap** – a field where the user can place any objects that are not currently needed in the workspace (right panel – lower part)

### Handling of objects and object attributes

Objects on the works space can not only be searched and sorted but also managed or handled. The number and type of operations available depends on the type of object and can be configured. Management operations can be found in three places:

- **Control panels** are shown below the search bar on the left-hand side. They display all the information about an object, a feed, a grouping point, the SPACE, etc. It also contains active buttons for a number of different operations depending on the panel. Most offer selection options for single objects or groups and moving objects between SPACES.

- **The Application Control** panel at bottom of the screen provides a variety of operations and actions with the grouping points and objects in the workspace
- **Hyperspace Specific Operations** can be accessed through the Hyperspace menu and are applied to all objects currently in the Hyperspace.

## What it does

### 1. Gathers all your data from all your sources

The Gravity Interface retrieves, indexes and handles data from all sources and in all formats. This includes office file formats, media files, emails with attachments, calendar events, contacts, web pages and specific data from webpages, folders and their contents, data from databases and data files. The information can be retrieved from local, networks and online drives, RSS, database and webservice APIs, including social networks and search engines or the Internet. Web crawling allows gathering large amounts of data and tracking corporate visibility or trends and term.

1. File Types – Gravity office space works with every type of file and data format.
  - Office files - DOC, DOC, RTF, PPT, XLS, CSV, Goggle Doc formats, open formats, etc.
  - Media files – MP3 and other audio, MOV and other video, PNG, JPEG, GIF, etc.
  - Other file formats according to user needs.
  - Emails – EML, etc.
  - Calendar events and tasks
  - Web pages
  - Folders - folders objects remain linked to the files and subfolders they contain. Files and folders remain linked to the containing folder.
2. Data and files from local, network and online drives
  - 2.1. Files from a local hard drive or a network drive – using Microsoft Active Directory
  - 2.2. Data from online drives via standardized APIs
    - OneDrive
    - Dropbox
    - Google Drive
    - Others
3. Data from emails – via Outlook Server and standardized protocols
  - 3.1. Emails
    - Retrieves contents
    - Retrieves status and tags
  - 3.2. Attachments – automatically creates separate file objects. Objects are linked to the containing email and emails are linked to all contained files and objects
  - 3.3. Contacts – Creates contact objects
    - Contact list
    - Email senders and addressees
  - 3.4. Calendar – Creates event objects
4. Data from external databases and SQL-based APIs
  - Data from online drives as mentioned in 1.4. above
  - Data from open, professional or custom databases
5. From standard APIs – configured according to provider formats and user needs

- Bing search
  - Facebook
  - Google search
  - Google News
  - YouTube
  - Others
6. Data from RSS
- 6.1. On demand retrieval
- 6.2. Preconfigured retrieval
- At opening feed
  - At app startup
  - At fixed intervals
7. Data from a single URL or list of URLs – URLs may be provided by the user as individual links or in a file or they may be retrieved by the system from another object, i.e. email, web page, RSS feed.
- Extraction of page content and creation of a gravity object
  - Links on page
    - Automatic extraction as links – data is saved in the original URL object
    - Extraction of data as new URL objects to – the process is repeated to a user set depth
  - Extraction of video on page – automatic extraction of all video files and embedded video as separate video objects
  - Extraction of images on page – automatic extraction of image files and linked images that are stored in the original URL object
  - Extraction of files on page – automatic extraction of known or preconfigured file formats and creation of separate file objects
  - Extraction of structured data on page – prices, nutritional information, ratings, etc. Data is stored as attributes in the original URL object.
8. Data from files
- 8.1. As single file objects
- Office documents – DOC, RTF, etc.
  - TXT
  - Images
- 8.2. Gravity data report files
- CSV
  - XLS
- 8.3. Structured data files - TXT, XLS, CSV, tab delimited
- Setting structure filters on import - manual setup of correspondence between columns/rows/fields and attributes in the structure of the object
  - Saving structure filters – for repeated use on files with matching structures; makes possible the automated creation of objects from report files of other systems.
9. Data indexing on import
- System attributes
  - Tags
  - Full text search
  - Relevance to predefined classifications
  - Indexing by search term set

## 2. Searches, sorts and groups all your data in a natural way

The gravity interface allows the user to comfortably view and handle all their data in a uniform way regardless of the file format or source. There are three possible search strategies – by keyword, by example and by classification. The user can easily switch between them or combine them on the same search in order to obtain more relevant results. The new multidimensional graphic organization allows simultaneous grouping and sorting by several criteria and graphically representing levels of relevance of the objects.

### 1.1 Search capabilities

1. Searching by keywords and logical expressions
  - Searching in online sources – See *Data Gathering*
  - Searching in object attributes of existing objects
  - Full text search of existing objects
2. Searching by similarity
  - Searching in object attributes
  - Full text search – activated on demand
3. Searching by classification
  - Predefined classifications
  - Flexible user classification
  - Classification editing capabilities
  - Tools for searching by related terms
    - In attributes
    - Full text
  - External sources

### 1.2 Sorting capabilities

1. Grouping Points – automatic grouping
2. Manual
  - 2.1. Gravity Trap
  - 2.2. Hyperspace
  - 2.3. Selected items
    - Selecting individual items
    - Selecting groups of items
      - Selecting grouping points
      - Selecting all from a feed
      - Selecting all containing attribute
    - Invert selection
      - For an object list
      - Overall

### 1.3 Grouping

- Automatic – grouping points
- Manual - Selections tools

## 3. Manages your data and files in a natural way

Data can be managed from the workspace, special fields and control panels. Operations can be used on single objects or groups of objects. Some of them are performed within the application only. Others use



external programs (Open, Translate, Send as Email, etc.) or change the original file (Tag, etc.) so that the changes can be detected and used by other applications and systems. This makes it possible to manage corporate document flow, manage and edit data in databases, start routine operations on objects and use sorting and tagging results in across applications and systems.

#### 1.4 The workspace

- Operations in grouping points
- Draggable operations

#### 1.5 The Gravity Trap

- Reserving
- Sending back to feed
- Deleting from feed

#### 1.6 The Hyperspace

- Open
  - In another program
  - View details
- Edit
  - Edit details
  - Tag
- Report
- Send via email
  - As an attachment
  - As a report
- Apply analysis tools
- Create a new Space

## 4. Analyses and processes data

Advanced tools include frequency analysis that can outline similarities and differences within groups of documents and/or relevance to classifications based on the classification definitions or similarity to other files in a category. Numeric data can be used to perform calculations that can range from simple to very complex.

1. Lexical spectra
  - Frequency Analysis
    - Relevance to a classification
    - Relevance to a group of documents
  - Similarities
  - Differences within a group
2. Calculations

## 5. Generates data reports and presentations

The gravity interface can be used as a dynamic presentation tool that demonstrates processes and tendencies over time according to user set criteria. It is especially suited for touch screens including large touch boards. The results of searching, sorting, grouping, and data analysis are exportable into reports and saved in different formats.

- Reporting
- Timeline

## 6. Provides collaboration in a natural way

Multiple users can share the same workspace with adjustable viewing rights. They can either take turns managing the screen or view without making changes. Access to the data itself is determined according to each user's credentials and the system access rights associated with them. When sharing a workspace online is not an option, reports exported by one user can be sent to another as a file and imported into another instance of the application or viewed and modified in other programs and systems allowing collaboration even when not all participants are using a gravity application.

- Multiuser access to the same workspace
- Export/import tools

## 7. System Functions

This is a description of functions that are not mentioned above but are a part of the gravity application core.

### Loading data on the workspace

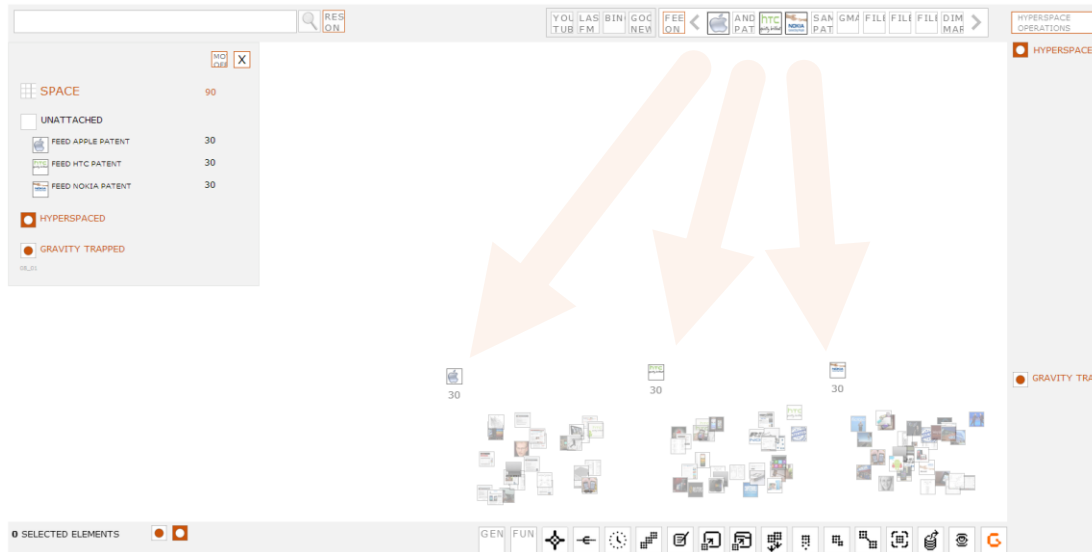
1. Manual
  - Dragging feeds from feed panel
  - Dragging files from feeds that have not been loaded
  - Loading remaining files from partially loaded feeds
2. Automatic
  - 2.1. Preconfigured
    - RSS
    - Updates in file system
    - Saved sessions
    - Others set by user
  - 2.2. Data from landing zone after import (points 5-7 in part 1 above)
3. Selective – loading only relevant
  - 3.1. From search results – keywords and/or logical expressions typed in the search bar
    - Internal database – existing objects
    - External sources – online search engines and services
  - 3.2. From object attribute – dragged from control panel. Searching by example
    - Internal database – existing objects
    - External sources – online search engines and services

## A detailed example

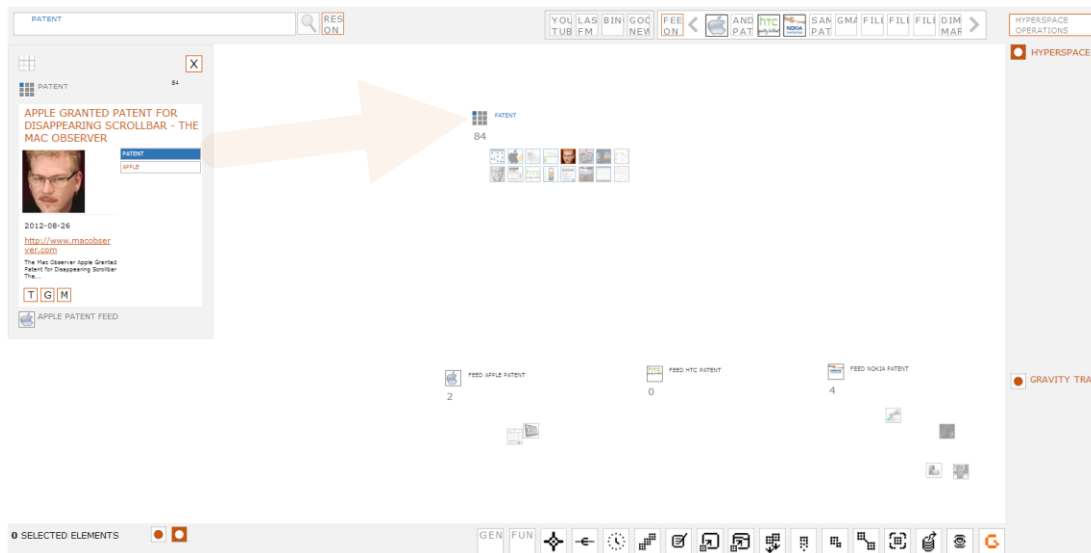
In order to visualize everything explained above the following example is demonstrated.

### Via the Feeds

1. For starters, create some chaos in the workspace by loading feeds onto it. In this case – these are the feeds APPLE PATENT, HTC PATENT, NOKIA PATENT.

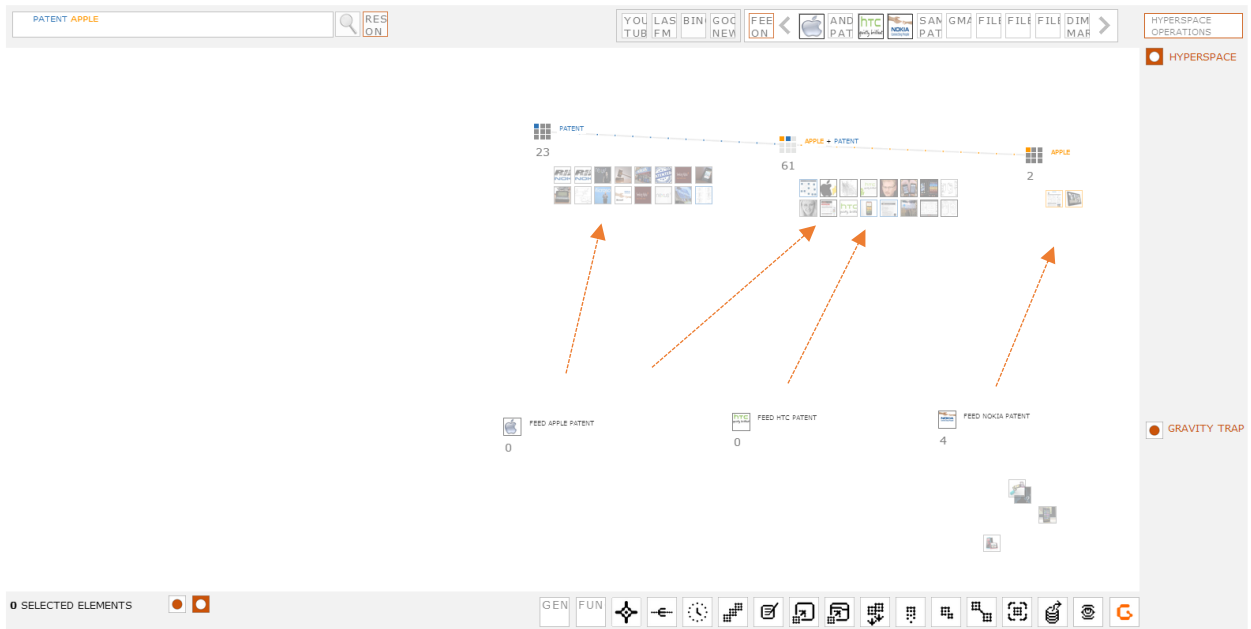


2. Find some „sense” by browsing through the objects and their properties (attributes)  
In this case: an object from the APPLE PATENT feed is selected and the attributes “PATENT” and “APPLE” from its list of attributes are dragged out onto the workspace as search criteria.



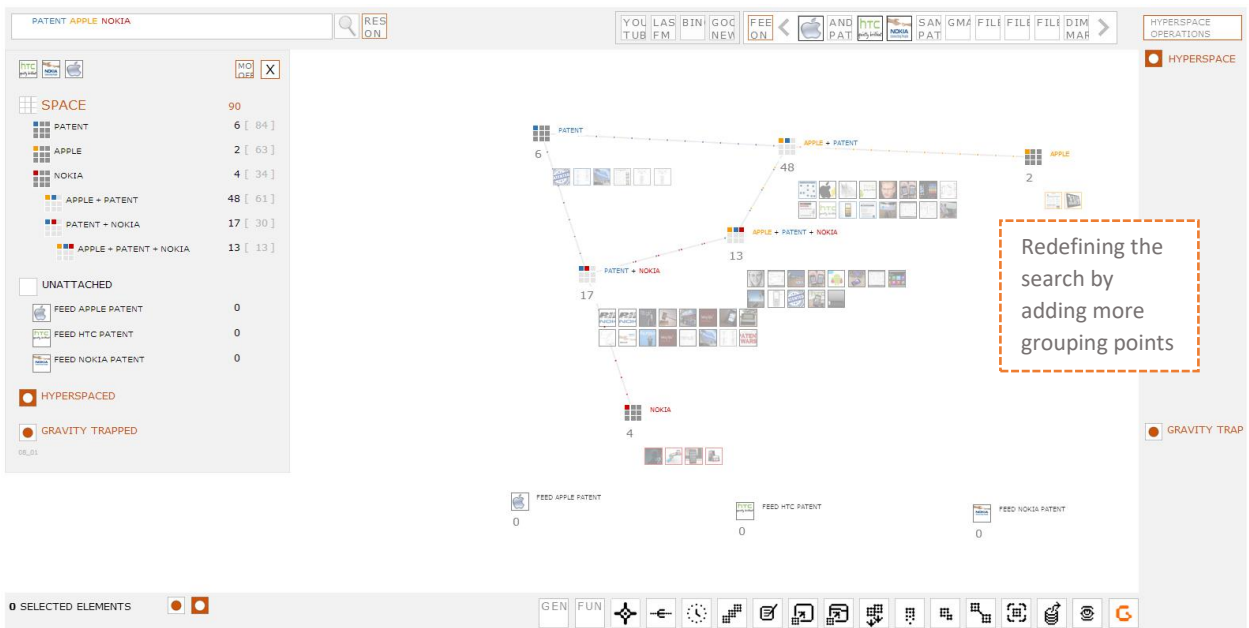
3. Let the “Gravity” to do the work

Once the grouping criteria are dragged out onto the SPACE the “grouping” automatically starts and all elements from the currently loaded feeds, which correspond to those criteria, are distributed in the respective grouping points.

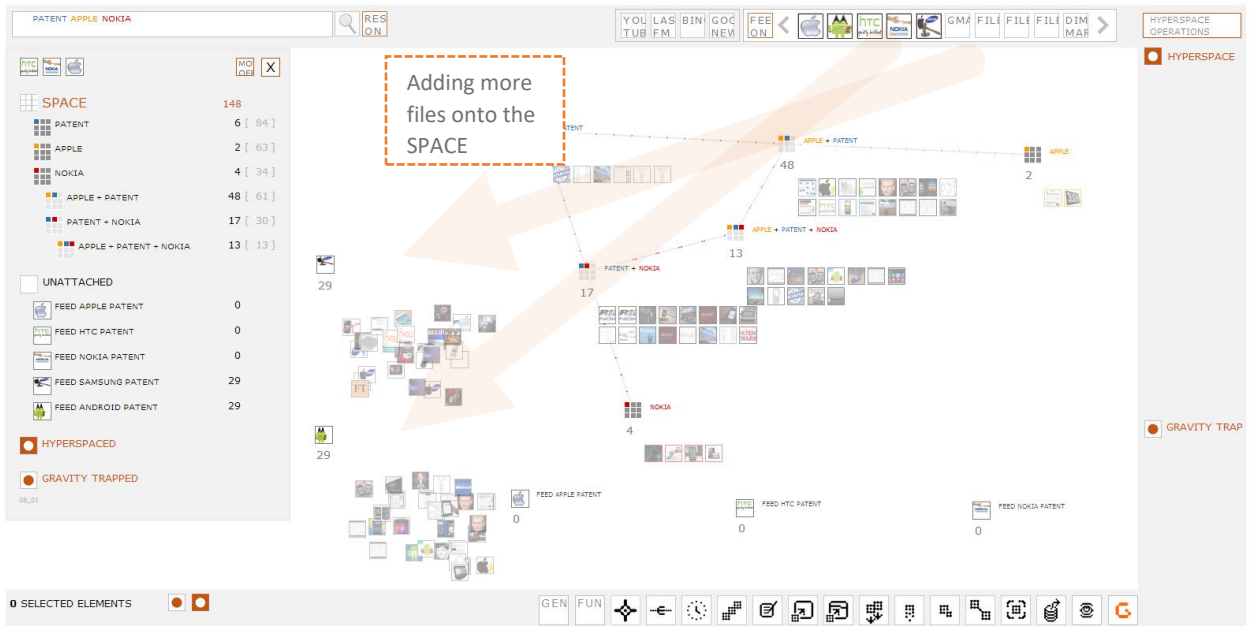


4. Increase either the “sense” by redefining the search or the “chaos” by adding more files in the workspace.

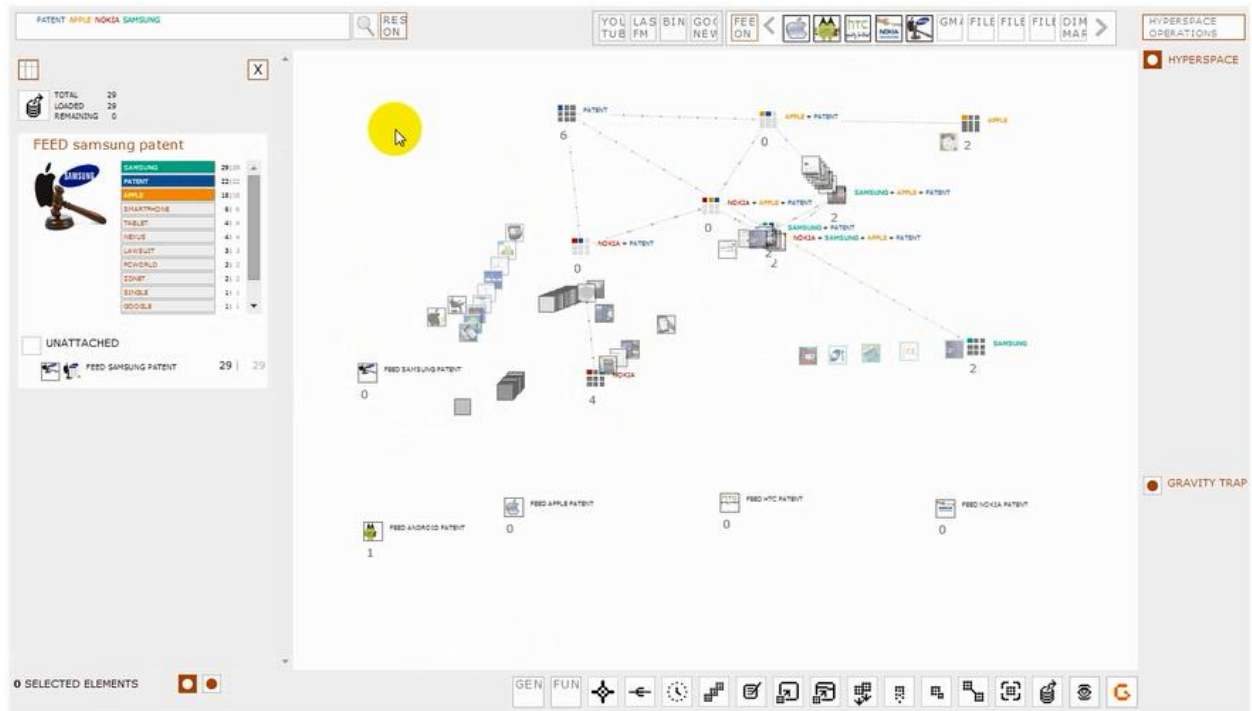
(In this case: Adding a third criterion – “NOKIA” onto the workspace.)



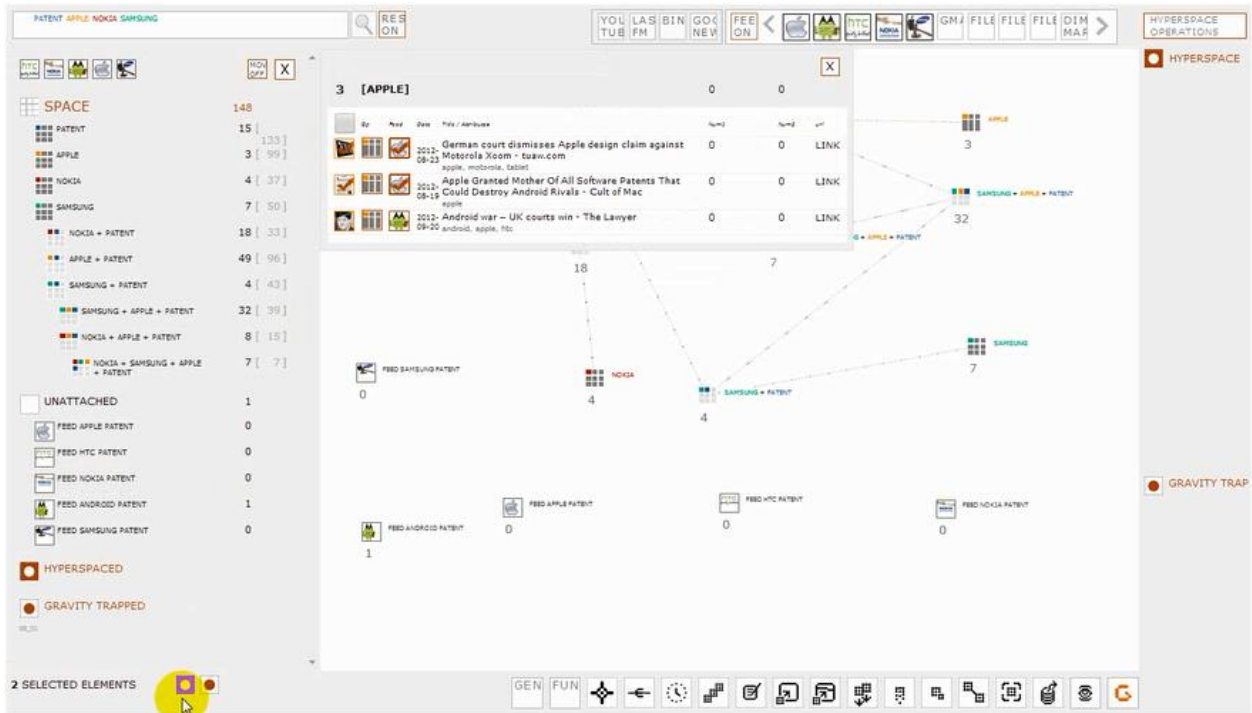
(In this case adding SAMSUNG PATENT and ANDROID PATENT feeds onto the workspace)



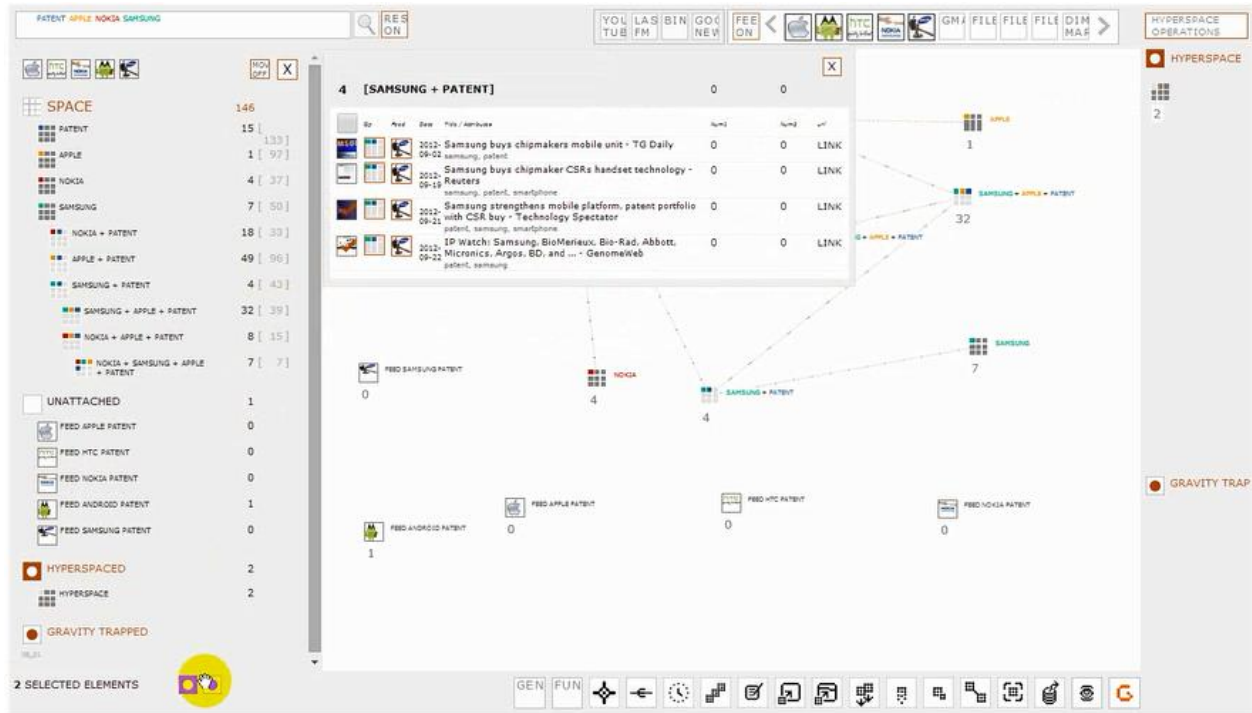
5. Dragging out onto the workspace a fourth criterion of interest – SAMSUNG.]



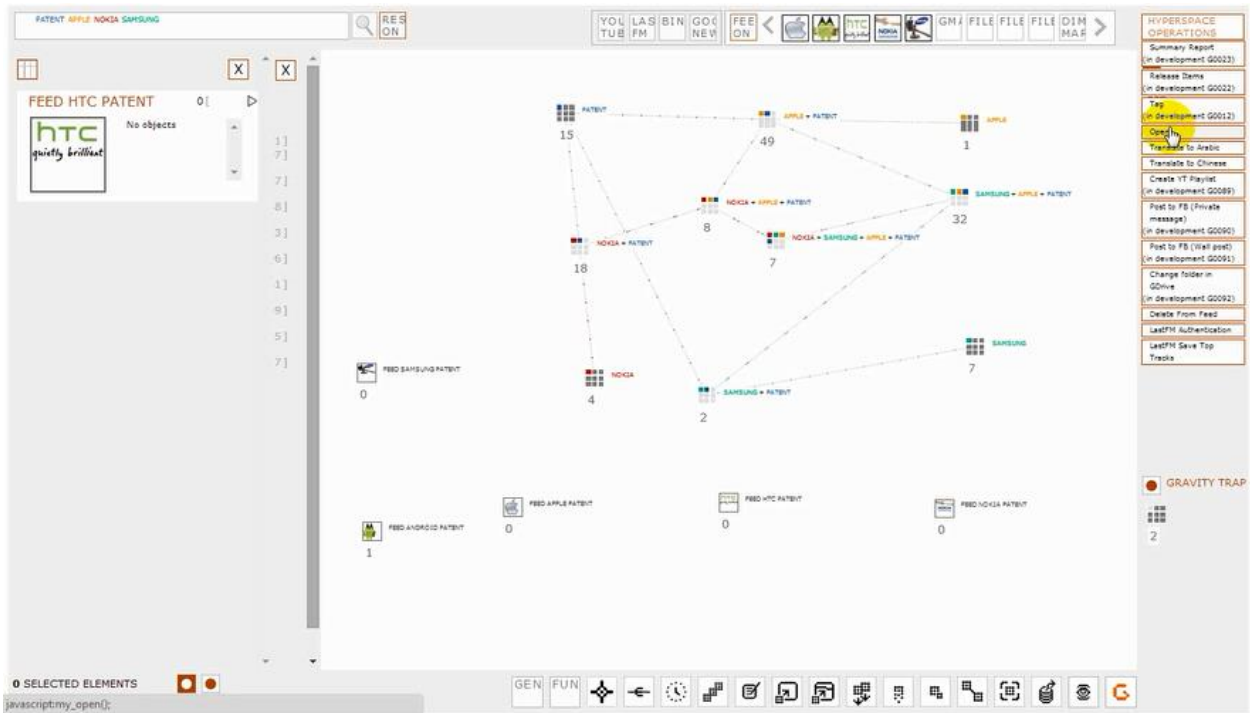
6. Using Gravity internal report feature to select a couple of objects of interest and send them to the Hyperspace for further operations.



7. Then select some more files that are not needed for the time being and send them to the Gravity trap for temporary storage.



8. Head to the Hyperspace specific operations and select “Open” to view the objects stored there in the browser.

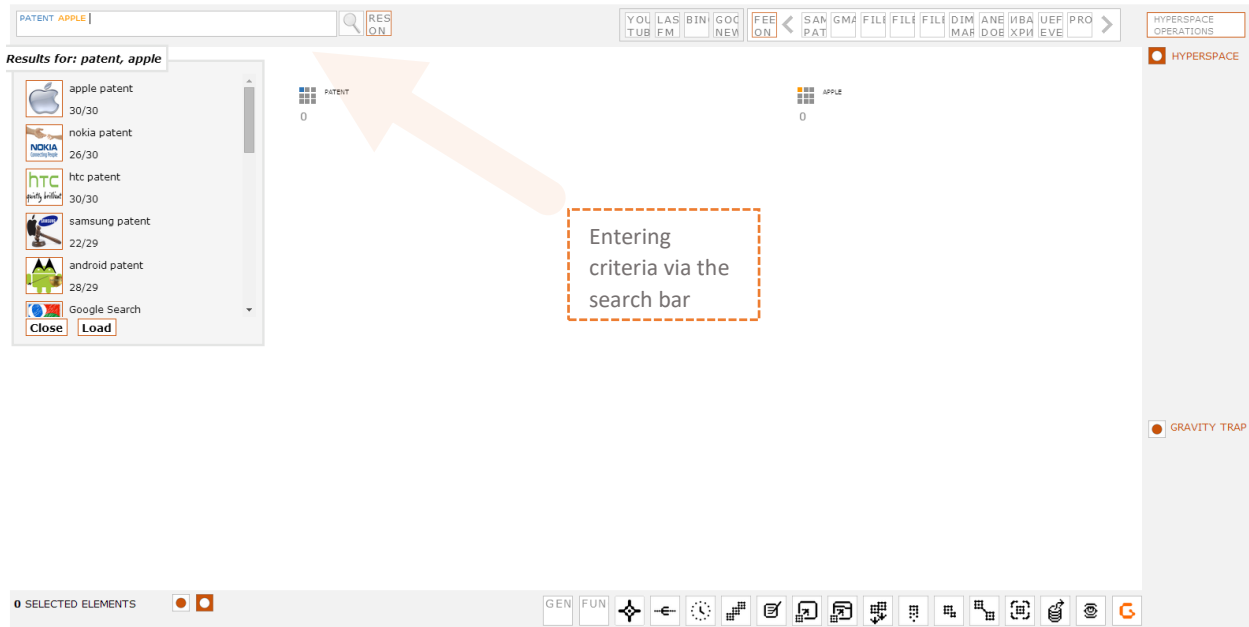


example.wmv

*Demonstration Video of the Example above*

### Via the search bar

Using the search bar approach – input PATENT and APPLE as search terms in the search bar textbox and hit on the spyglass. If the RES ON is active – the Feed Results Control Panel is displayed and the user can freely choose to load either all the files or some of them.



# New Design Concept

The interface displays a workspace management tool. At the top, there is a search bar containing "searchword1searchword2" and navigation arrows. Below the search bar is a menu with options: "feeds", "work space", "gravity trap", "hyper space", "landing zone", "history", "show all", and "hide all".

The main workspace area is titled "work space" and contains a table with columns "USED" and "UNUSED". The table lists 13 grid items, each with a 3x3 grid icon and numerical values. The 10th item, a purple 3x3 grid, is highlighted with an orange border.

In the center, a diagram shows three 3x3 grids (red, cyan, and purple) connected by lines to a larger 3x3 purple grid on the right. This larger grid is also highlighted with an orange border and is positioned above a 4x4 grid of folder icons.

On the right side, a vertical list of operations is shown, with "e-mail" highlighted in orange. The list includes: "output operations", "e-mail", "excel", "word", "compress", "convert", "winzip", and multiple instances of "output operations".

At the bottom, there is an "event horizon" section with buttons labeled "type1" through "type6" and a row of 16 small square icons, some of which are highlighted in orange.