

InnovationQ PLUS

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Partnering on Patent Search and Analytics

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About the IEEE

- World's largest technical membership association with more than 430,000 members in over 160 countries
- Not for profit organization “Advancing Technology For Humanity”
- Four Core areas of activity
 - Membership organization
 - Conferences organizer
 - Standards developer
 - Publisher of journals, conferences, standards, ebooks and elearning
- IEEE *Xplore* by the numbers:
 - Nearly 4 million total documents
 - Over 3 million unique users
 - More than 8 million downloads per month
 - 15 year anniversary in 2015!



IEEE student volunteers in Mumbai

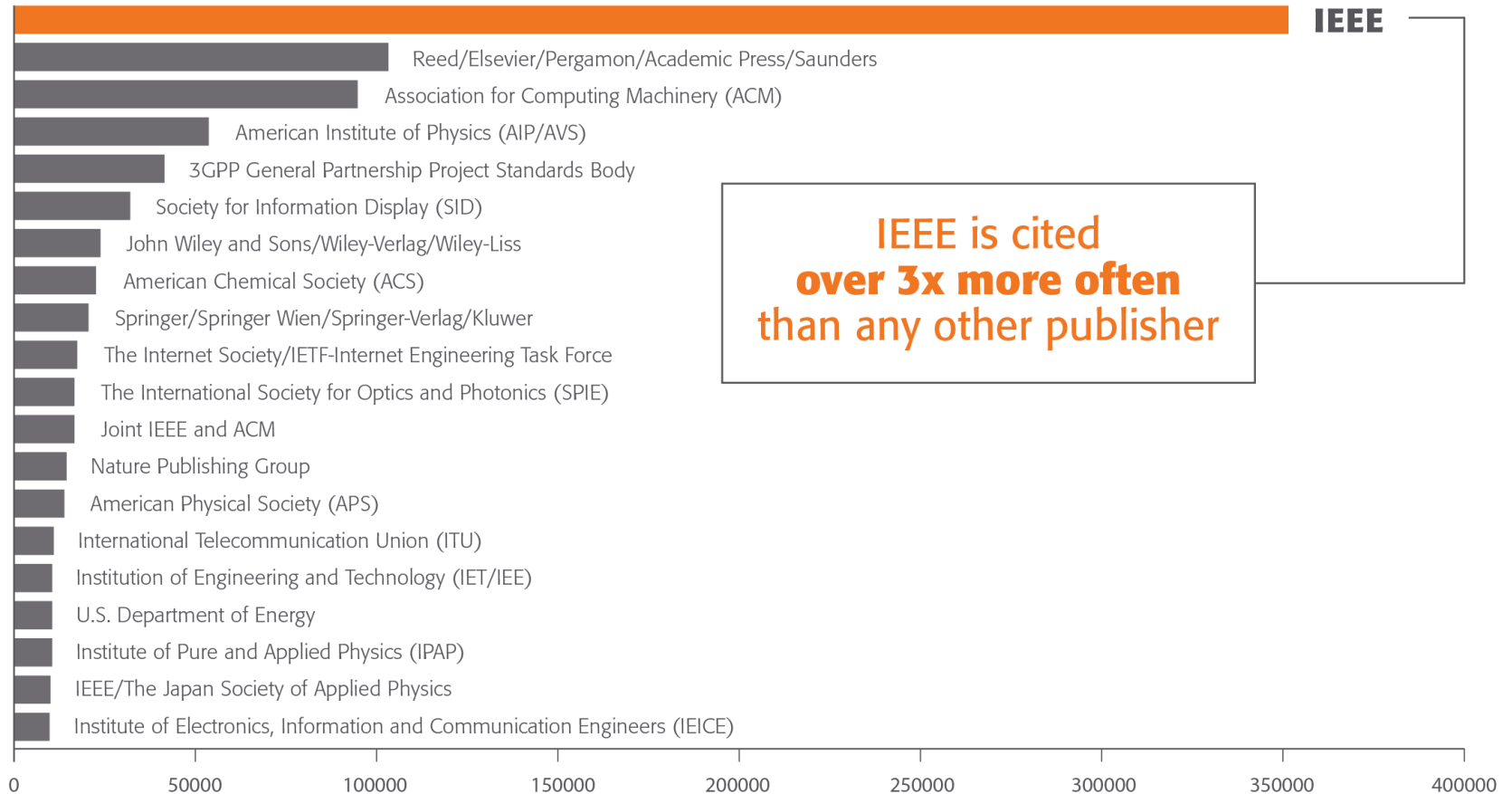


IEEE Day Contest Winner, Colombia



IEEE Leads US Patent Citations

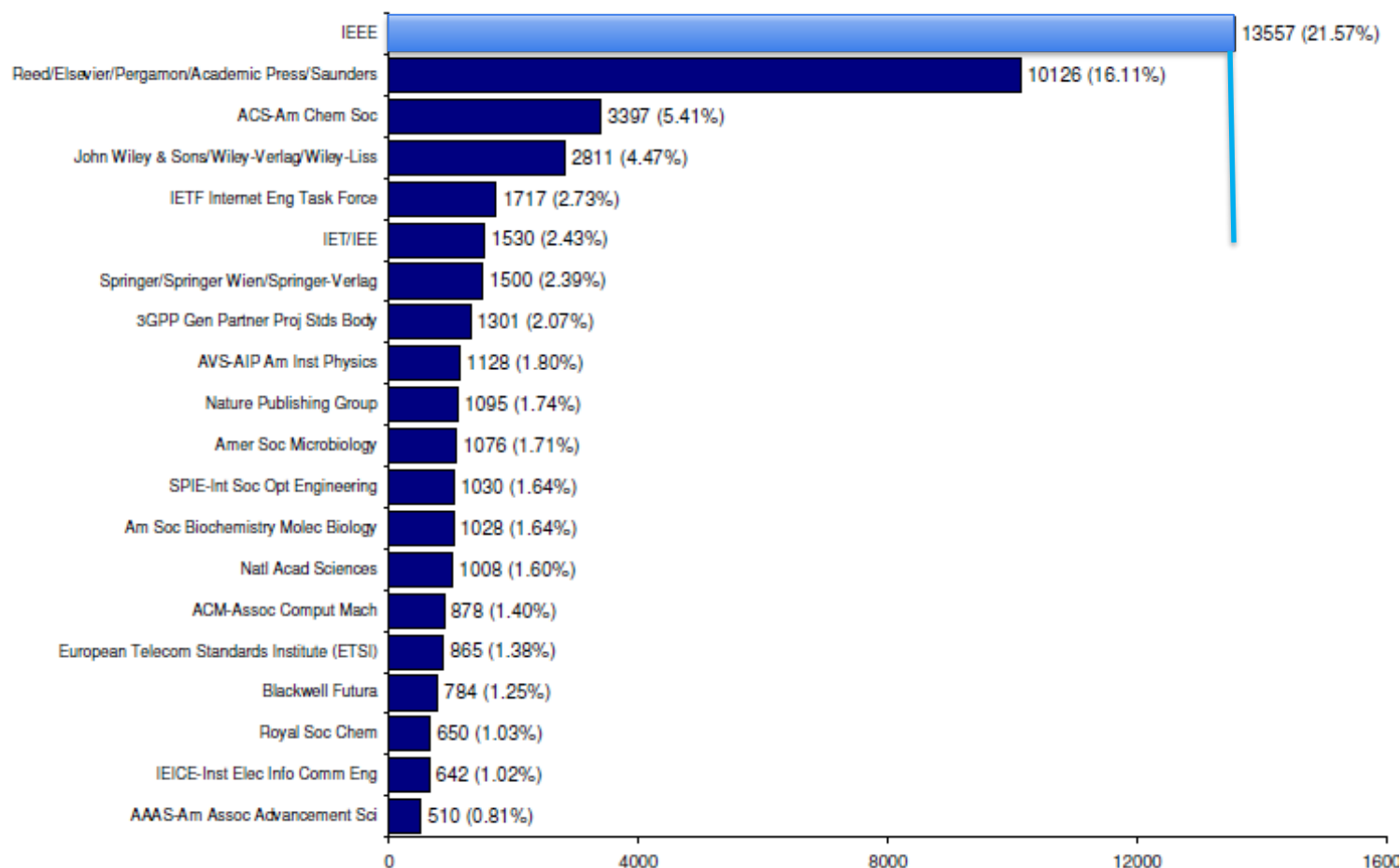
Top 20 Publishers Referenced Most Frequently by Top 40 Patenting Organizations



Source: 1790 Analytics LLC 2015. Based on number of references to papers/standards/conferences from 1997-2014

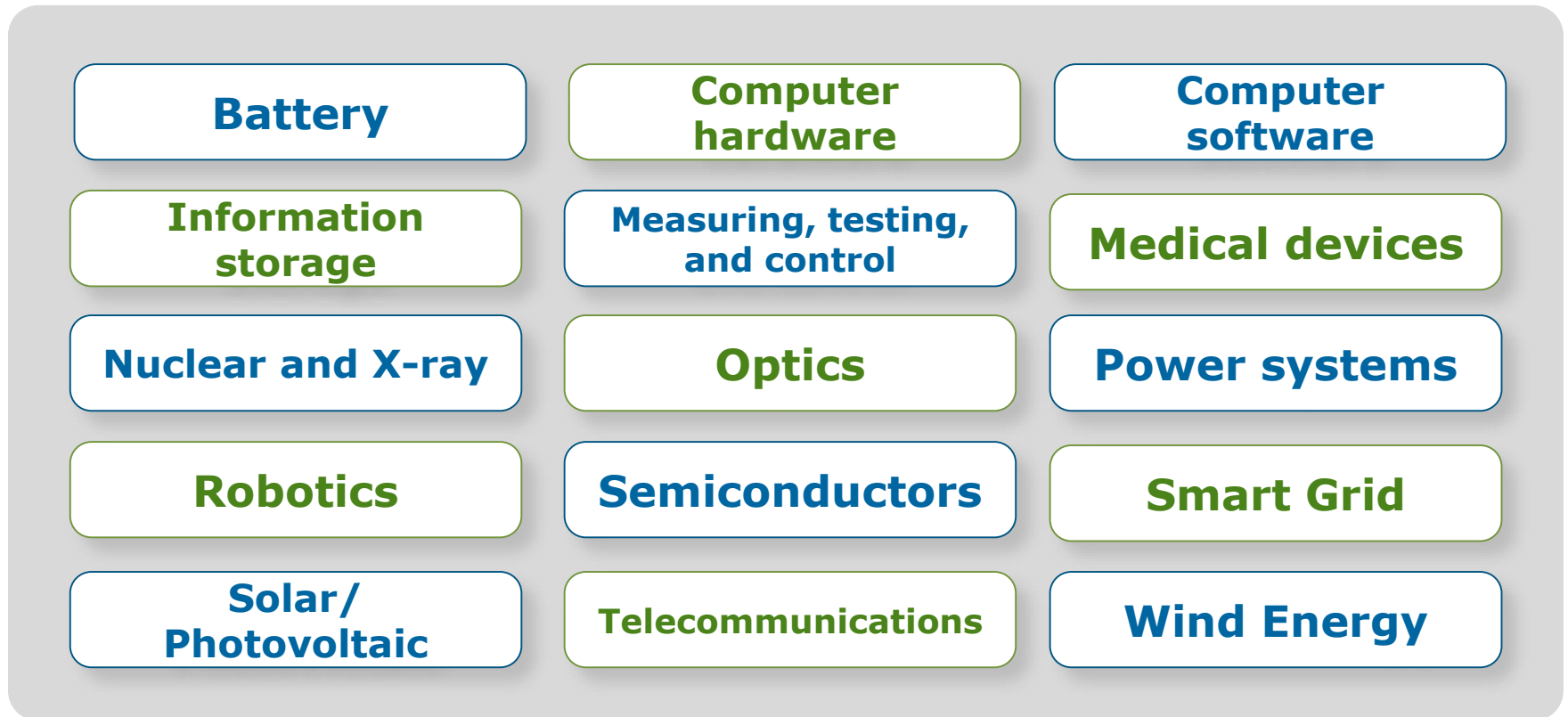
IEEE Leads European Patent Citations

Top 20 Publishers Referenced Most Frequently by Top 25 Patenting Organizations



Source: 1790 Analytics LLC 2012, Science References from 1997-2011

Technology areas where patents cite IEEE most



Source: 1790 Analytics LLC 2015

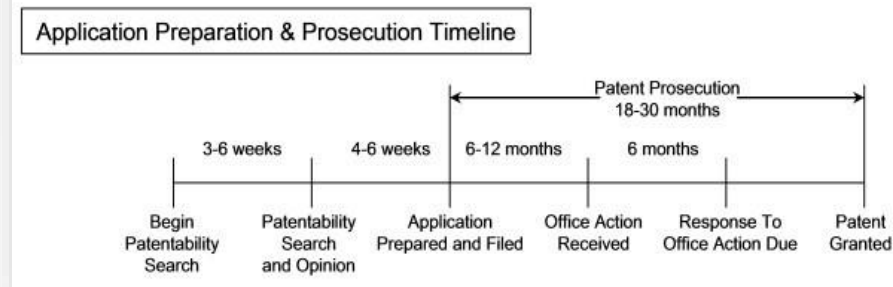
InnovationQ PLUS

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InnovationQ Plus is a powerful new innovation discovery and analytics platform that **combines IEEE literature with IP.com's global patent and non-patent literature.**

The system was developed for IP professionals at **corporations, IP law firms, patent offices and academic tech transfer offices.**

Model Patent Timeline



InnovationQ Plus addresses key IP Professional pain points:

- Ensure invention is viable and worth development cost
- Minimizes costs associated with prior art searching and protection of patent portfolio
- Shortens patent process to start monetizing the invention quickly

Chart source: HepnerLaw.com

Unique Value to Patent Professionals

IEEE full text publications **+** IP.com global patent database **=** Unique value

InnovationQ Plus indexes IEEE full text publications alongside one of the largest global patent literature databases in the industry. Content includes:

- Over 4 million documents from IEEE journals, conference and standards – cited in patents 3x more than other publishers
- Global database of 82+ million patents and applications
 - USPTO, EPO, WIPO, Canada, Germany, UK, China, Japan, Australia, India
- IP.com's proprietary Prior Art Database
- Licensable technology from universities
- Other non-patent literature including Pub Med Central



Discover a rich set of prior art via one integrated solution.

Boolean Search: Traditional Prior Art Searching

Boolean search has been the mainstay of patent research for years however, Boolean is not without its flaws:

- Requires lengthy training or **expert searchers** to effectively employ
- **Limited to the words included** in the query and variations thereof, you may miss unusual keywords or phrases
- Some patents use **purposefully misleading verbiage**
- Different industries can use different terms, **terms can change over time** especially at the beginning of the technologies lifecycle

What if You Could Turn This...

Query:

```
ALL=(surgical OR curve OR segment) AND  
suture AND  
(((intervertebral OR cutting OR member OR  
arcuate OR guide)  
NEAR5 (bone OR seal)) SAME (tissure OR  
jaw*)) AND (Instrument OR  
cannula*1) AND DP>=(19930101) AND  
IC=(H01L 39/02 OR H01L  
39/12 OR H01F 38/14)
```

Into This?

Query:

A surgical cannula with curved segments used to guide a medical instrument through a curved or bowed path

PRIOR ART SEARCH

Boolean Search



Autonomous vehicle

InnovationQ Plus Search



Autonomous vehicle

Car

Automobile

Driver

Robot

Truck

Transport

GPS

Satellite

Passenger

Navigation

Route

Locomotive

Brake

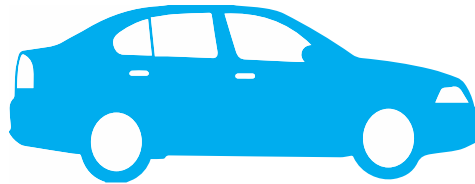
Accelerator

Engine

Network

Fuel

Boolean Search



Autonomous vehicle

InnovationQ Plus Search



Autonomous vehicle

Car

Automobile

Driver

Robot

Truck

Transport

GPS

Satellite

Passenger

Navigation

Route

Locomotive

Brake

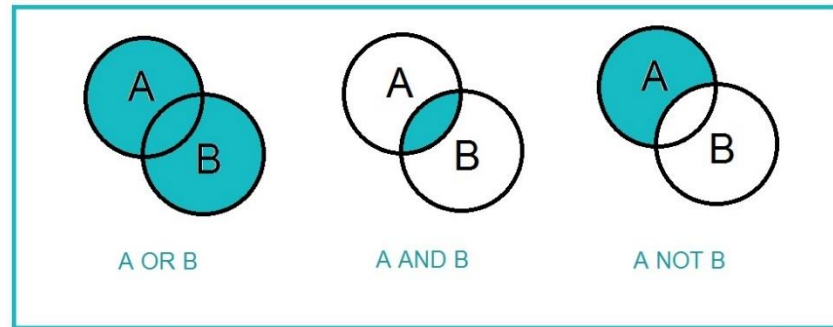
Accelerator

Engine

Network

Fuel

Semantic Search: It's Importance



- **Semantic search** relies on natural language queries to **reduce search complexity** while returning concepts the researcher may have otherwise missed
- Many types exist, **neural network based** are the newest ones, analyzing word patterns and distribution natively occurring in massive collections of documents,
- **machine learning** employs statistical models and algorithms, they detect significant patterns

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Workspaces: Discover

Search here by Concept, Document ID or Filter

Manage Discover Map Analyze

Patents & Applications

A surgical cannula with curved segments used to guide a medical instrument through a curved or bowed path

+ Filter

Discover

+ SHOW OPTIONS

HIDE QUICK TIPS ^

Main Concept

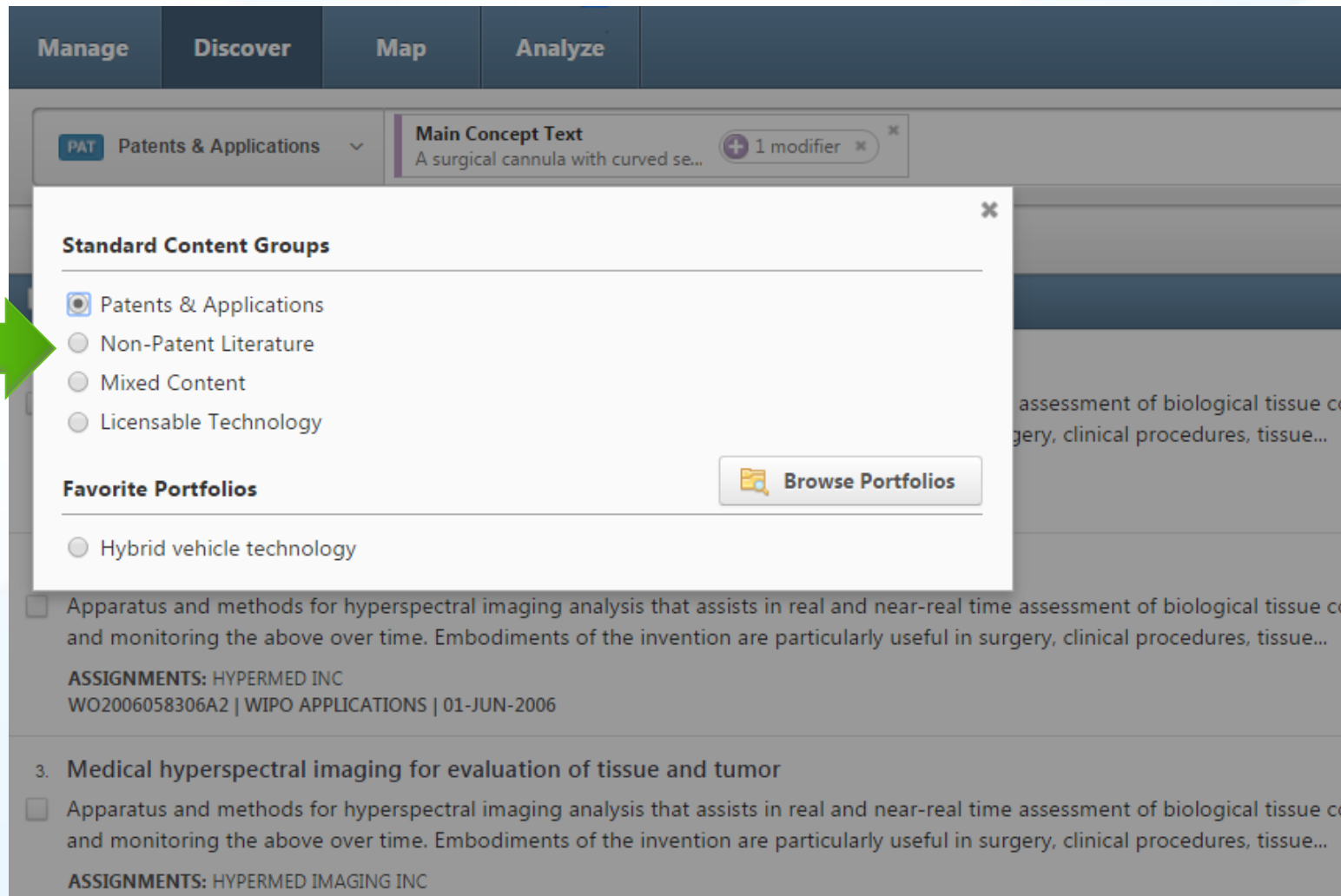
A surgical cannula with curved segments used to guide a medical instrument through a curved or bowed path

+ Add Concept Modifier

Update Cancel

Discover: Content Groups

Search Patents & Applications, Non-Patent Literature, Mixed Content or Licensable Technology



The screenshot displays the 'Discover' tab in a software interface. A modal window titled 'Standard Content Groups' is open, showing four radio button options: 'Patents & Applications' (selected), 'Non-Patent Literature', 'Mixed Content', and 'Licensable Technology'. A green arrow points to the 'Patents & Applications' option. Below the modal, a 'Main Concept Text' box shows 'A surgical cannula with curved se...'. The background interface includes a navigation bar with 'Manage', 'Discover', 'Map', and 'Analyze' tabs. Below the modal, there is a 'Favorite Portfolios' section with a 'Hybrid vehicle technology' option and a 'Browse Portfolios' button. The main content area shows a list of patent entries, including one for 'Apparatus and methods for hyperspectral imaging analysis...' with an 'ASSIGNMENTS: HYPERMED INC' and 'WO2006058306A2 | WIPO APPLICATIONS | 01-JUN-2006'.

Manage **Discover** **Map** **Analyze**

PAT Patents & Applications ▾

Main Concept Text
A surgical cannula with curved se... + 1 modifier ×

Standard Content Groups

- ☒ Patents & Applications
- ☐ Non-Patent Literature
- ☐ Mixed Content
- ☐ Licensable Technology

Favorite Portfolios

☐ Hybrid vehicle technology

 **Browse Portfolios**

assessment of biological tissue co
gery, clinical procedures, tissue...

☐ Apparatus and methods for hyperspectral imaging analysis that assists in real and near-real time assessment of biological tissue co
and monitoring the above over time. Embodiments of the invention are particularly useful in surgery, clinical procedures, tissue...

ASSIGNMENTS: HYPERMED INC
WO2006058306A2 | WIPO APPLICATIONS | 01-JUN-2006

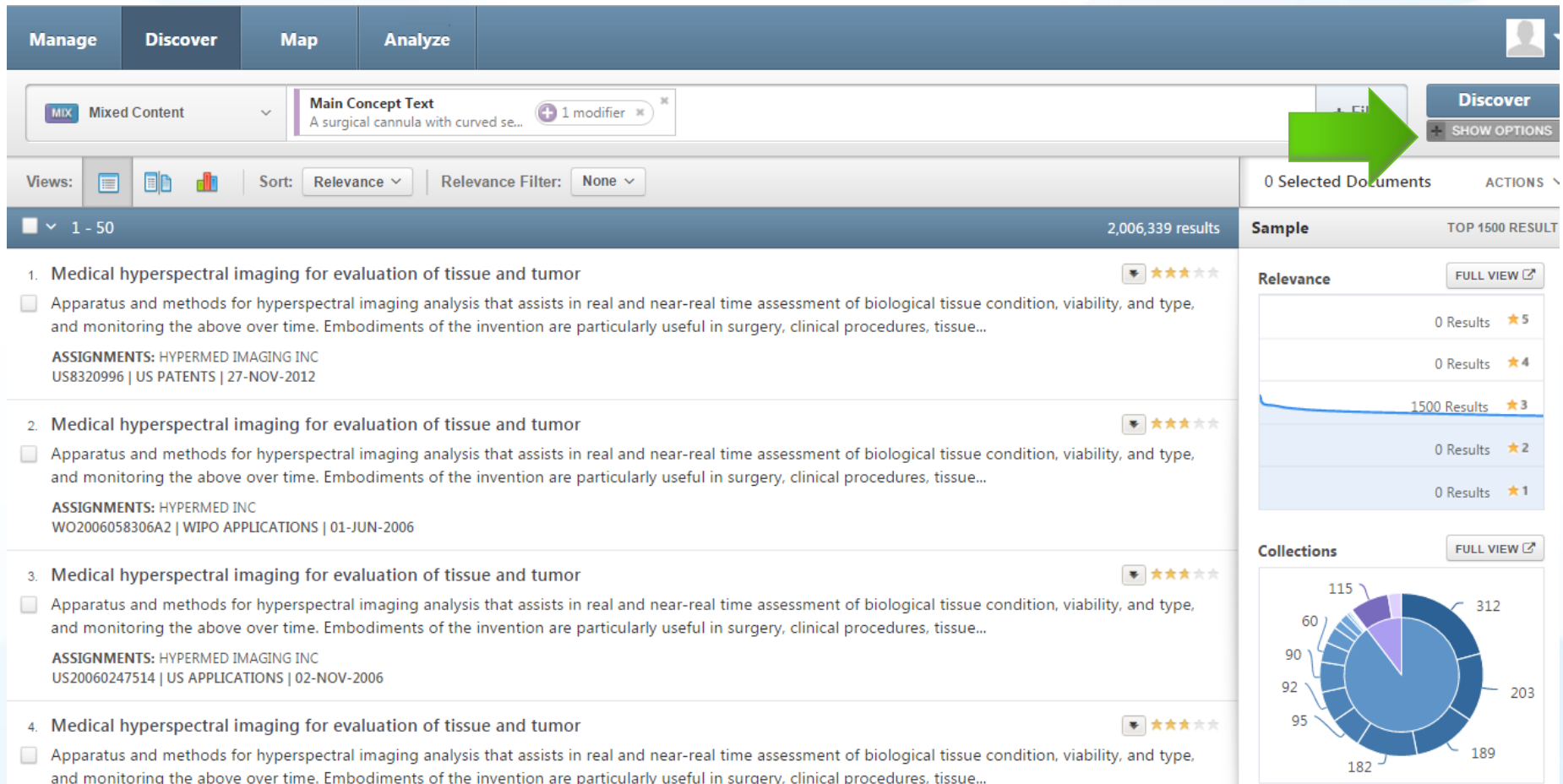
3. Medical hyperspectral imaging for evaluation of tissue and tumor

☐ Apparatus and methods for hyperspectral imaging analysis that assists in real and near-real time assessment of biological tissue co
and monitoring the above over time. Embodiments of the invention are particularly useful in surgery, clinical procedures, tissue...

ASSIGNMENTS: HYPERMED IMAGING INC

Discover: Content Coverage

Detail of content available in Content Groups



The screenshot displays the IEEE Xplore Discover interface. The top navigation bar includes tabs for Manage, Discover, Map, and Analyze. The Discover tab is active, showing a search bar with the text "Main Concept Text" and a subtext "A surgical cannula with curved se...". A green arrow points to the "Discover" button in the top right corner.

Below the search bar, the interface shows "Views" (List, Grid, Map) and "Sort" (Relevance) options. The "Relevance Filter" is set to "None". The search results are displayed in a table with 2,006,339 results. The table has columns for "Sample" and "TOP 1500 RESULT".

The search results are listed in a table with 4 rows. Each row includes a checkbox, a title, a description, and assignment information.

Sample	TOP 1500 RESULT
1. Medical hyperspectral imaging for evaluation of tissue and tumor	Relevance
2. Medical hyperspectral imaging for evaluation of tissue and tumor	Relevance
3. Medical hyperspectral imaging for evaluation of tissue and tumor	Relevance
4. Medical hyperspectral imaging for evaluation of tissue and tumor	Relevance

The "Relevance" column shows a line graph with data points for 0 Results, 1500 Results, and 1 Results. The "Collections" column shows a donut chart with segments labeled with numbers: 115, 60, 90, 92, 95, 182, 189, 203, and 312.

Discover: Content Coverage

Detail of content available in Content Groups

Collections

Query Results

PATENTS & APPLICATIONS

CHECK ALL | CLEAR ALL [VIEW COVERAGE](#)

☒ North America

- ☒ US Patents
- ☒ US Designs
- ☒ US Applications
- ☒ Canadian Patents
- ☒ Canadian Applications

☒ Europe

- ☒ European Patents
- ☒ European Applications
- ☒ French Patents
- ☒ French Applications
- ☒ German Patents
- ☒ German Applications
- ☒ Great Britain Patents
- ☒ Great Britain Applications
- ☒ Netherlands Patents
- ☒ Netherlands Applications
- ☒ Luxembourg Patents
- ☒ Denmark Patents
- ☒ Denmark Applications
- ☒ Finnish Patents
- ☒ Finnish Applications

☒ Asia

- ☒ Chinese Patents
- ☒ Chinese Applications
- ☒ Indian Patents
- ☒ Indian Applications
- ☒ Japanese Patents
- ☒ Japanese Applications
- ☒ Korean Patents
- ☒ Korean Applications

☒ Other

- ☒ Australian Patent Documents
- ☒ Russian Patents
- ☒ Russian Applications
- ☒ WIPO Applications

NON-PATENT LITERATURE

CHECK ALL | CLEAR ALL [VIEW COVERAGE](#)

☒ IEEE Xplore Publications

- ☒ IEEE Periodicals
- ☒ IEEE Conferences
- ☒ IEEE Standards

☐ Prior Art Database

- ☐ The IP.com Journal
- ☐ Internet Society RFC
- ☐ IBM TDB Archive

☐ Other Literature

- ☐ IBM Redbooks
- ☐ PubMed Central

Apply

Cancel

Discover: Results List View

Discover | Map | Analyze

Main Concept Text: A surgical cannula with curved se... 1 modifier

+ Filter | Discover | SHOW OPTIONS

Views: [List] [Grid] [Map] | Sort: Relevance | Relevance Filter: None

1 - 50 | 2,006,339 results

Sample | TOP 1500 RESULTS

Relevance | FULL VIEW

Relevance	Results	Stars
	0 Results	★ 5
	0 Results	★ 4
	1500 Results	★ 3
	0 Results	★ 2
	0 Results	★ 1

Collections | FULL VIEW

115, 60, 90, 92, 95, 182, 189, 203, 312

1. Medical hyperspectral imaging for evaluation of tissue and tumor ★★★★★

☐ Apparatus and methods for hyperspectral imaging analysis that assists in real and near-real time assessment of biological tissue condition, viability, and type, and monitoring the above over time. Embodiments of the invention are particularly useful in surgery, clinical procedures, tissue...

ASSIGNMENTS: HYPERMED IMAGING INC
US8320996 | US PATENTS | 27-NOV-2012

2. Medical hyperspectral imaging for evaluation of tissue and tumor ★★★★★

☐ Apparatus and methods for hyperspectral imaging analysis that assists in real and near-real time assessment of biological tissue condition, viability, and type, and monitoring the above over time. Embodiments of the invention are particularly useful in surgery, clinical procedures, tissue...

ASSIGNMENTS: HYPERMED INC
WO2006058306A2 | WIPO APPLICATIONS | 01-JUN-2006

3. Medical hyperspectral imaging for evaluation of tissue and tumor ★★★★★

☐ Apparatus and methods for hyperspectral imaging analysis that assists in real and near-real time assessment of biological tissue condition, viability, and type, and monitoring the above over time. Embodiments of the invention are particularly useful in surgery, clinical procedures, tissue...

ASSIGNMENTS: HYPERMED IMAGING INC
US20060247514 | US APPLICATIONS | 02-NOV-2006

4. Medical hyperspectral imaging for evaluation of tissue and tumor ★★★★★

☐ Apparatus and methods for hyperspectral imaging analysis that assists in real and near-real time assessment of biological tissue condition, viability, and type, and monitoring the above over time. Embodiments of the invention are particularly useful in surgery, clinical procedures, tissue...

Discover: Visualizations

ManageDiscoverMapAnalyze

PAT Patents & A

Main Concept Text
A surgical cannula with curved se...
+ 1 modifier

+ Filter

Discover
+ SHOW OPTIONS

Views: [Icons]

Sort: Relevance

Relevance Filter: None

0 Selected Documents

ACTIONS

TOP 1500 RESULTS

References

- CPC by Relevance
- CPC by Count
- IPC by Relevance
- IPC by Count

Names

Assignment by Relevance

Assignment by Count

Assignee/Applicant by Relevance

Assignee/Applicant by Count

Inventor by Relevance

Inventor by Count

Dates

Chart Type: AllReferencesNamesDatesResult ConceptsOther

CPC by Relevance

CPC by Count

IPC by Relevance

IPC by Count

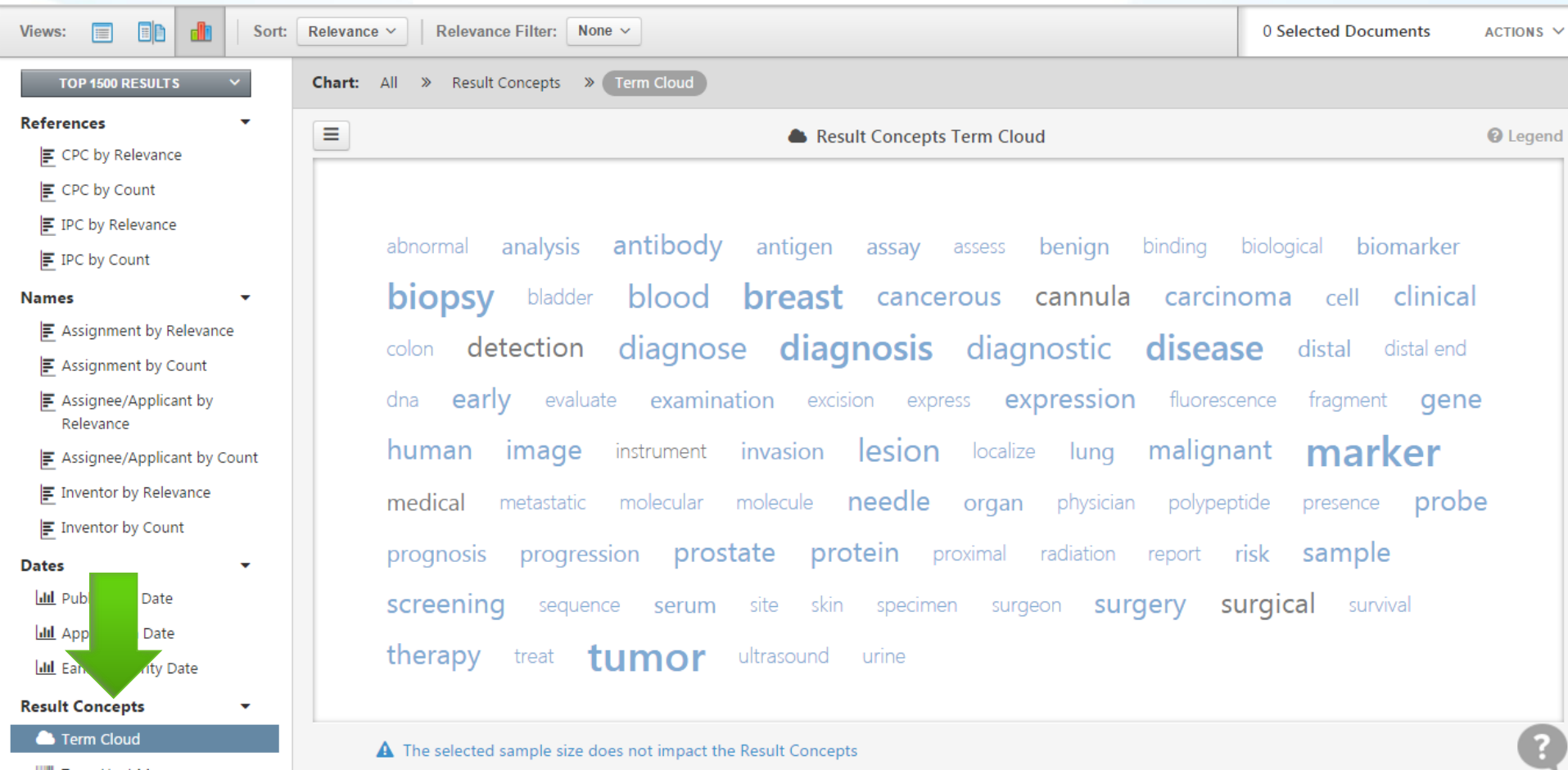
Assignment by Relevance

Assignment by Count

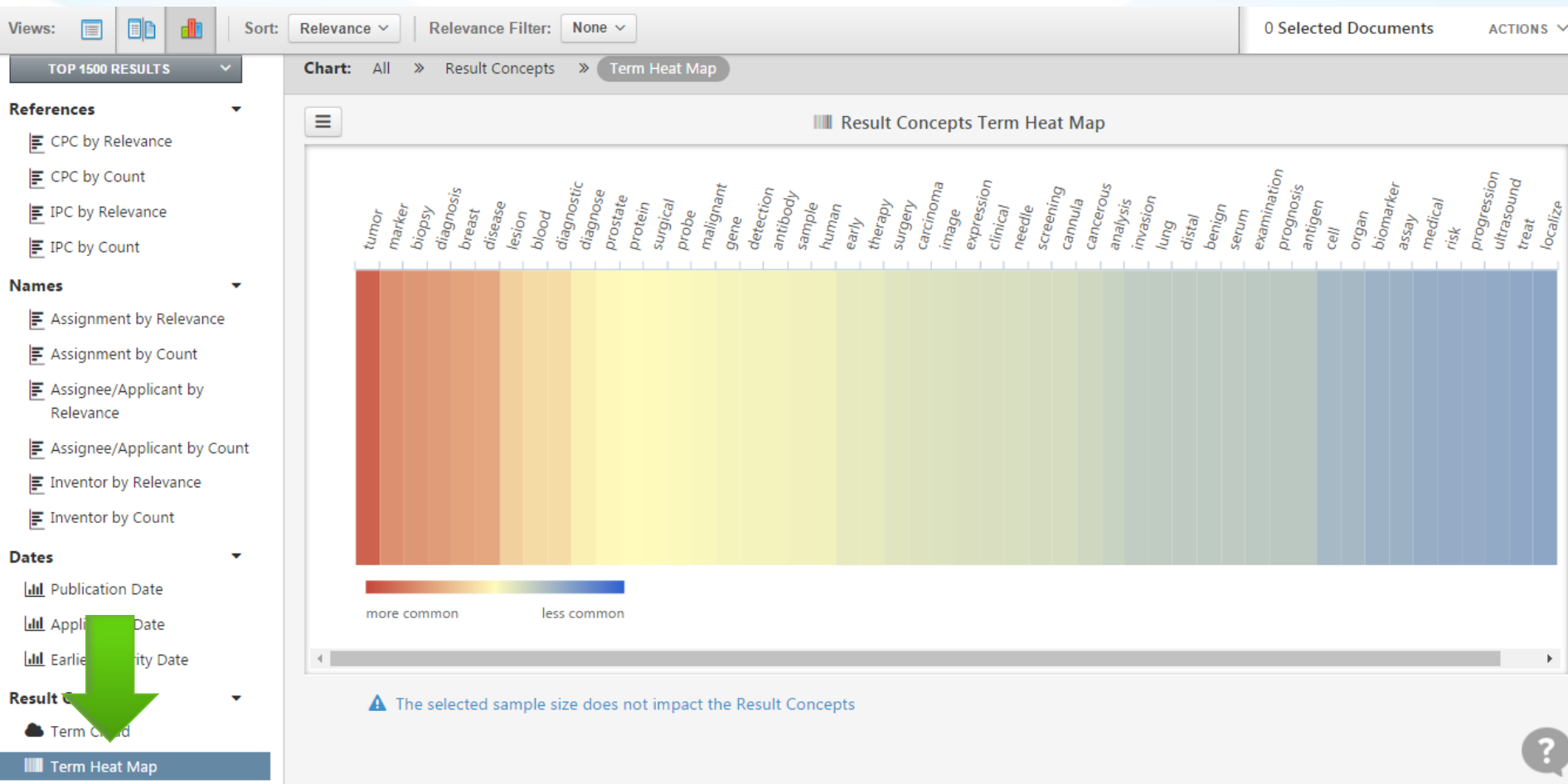
Assignee/Applicant by Relevance

Assignee/Applicant by Count

Visualizations: Term Cloud



Visualizations: Term Heat Map



Term Highlighting

Document Result #1

★ 3

NEXT >

Medical hyperspectral imaging for evaluation of tissue and tumor

Front Page

Family (7)

Citations

Description

Claims

Figures (13)

Pages (27)

Legal

Notes

US PATENT PUBLICATION

[USPTO](#) [EPO](#)

PUBLICATION NUMBER: US 8320996 B2

PUBLICATION DATE: 27-Nov-2012

APPLICATION NUMBER: US 11/288,410

FILING DATE: 29-Nov-2005

SIMPLE FAMILY NUMBER: 36498610

EARLIEST PRIORITY DATE: 29-Nov-2004

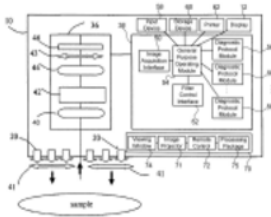
PRIMARY INFORMATION (SOURCE: USPTO)

Abstract (English):
Apparatus and methods for hyperspectral imaging analysis that assists in real and near-real time assessment of **biological tissue** condition, viability, and type, and monitoring the above over time. Embodiments of the invention are particularly **useful** in surgery, clinical procedures, **tissue** assessment, diagnostic procedures, health monitoring, and **medical** evaluations, especially in the **detection** and treatment of **cancer**.

Inventors/Applicants:
Panasyuk, Svetlana V. (Lexington, MA, US) • Freeman, Jenny E. (Weston, MA, US) • Panasyuk, Alexander A. (Lexington, MA, US)

Assignees:
Hypermed Imaging, Inc. (Greenwich, CT, US)

FIGURES



HIDE WIDGET

Keyword Highlighting

Query + Manual Terms

TERMS (112)

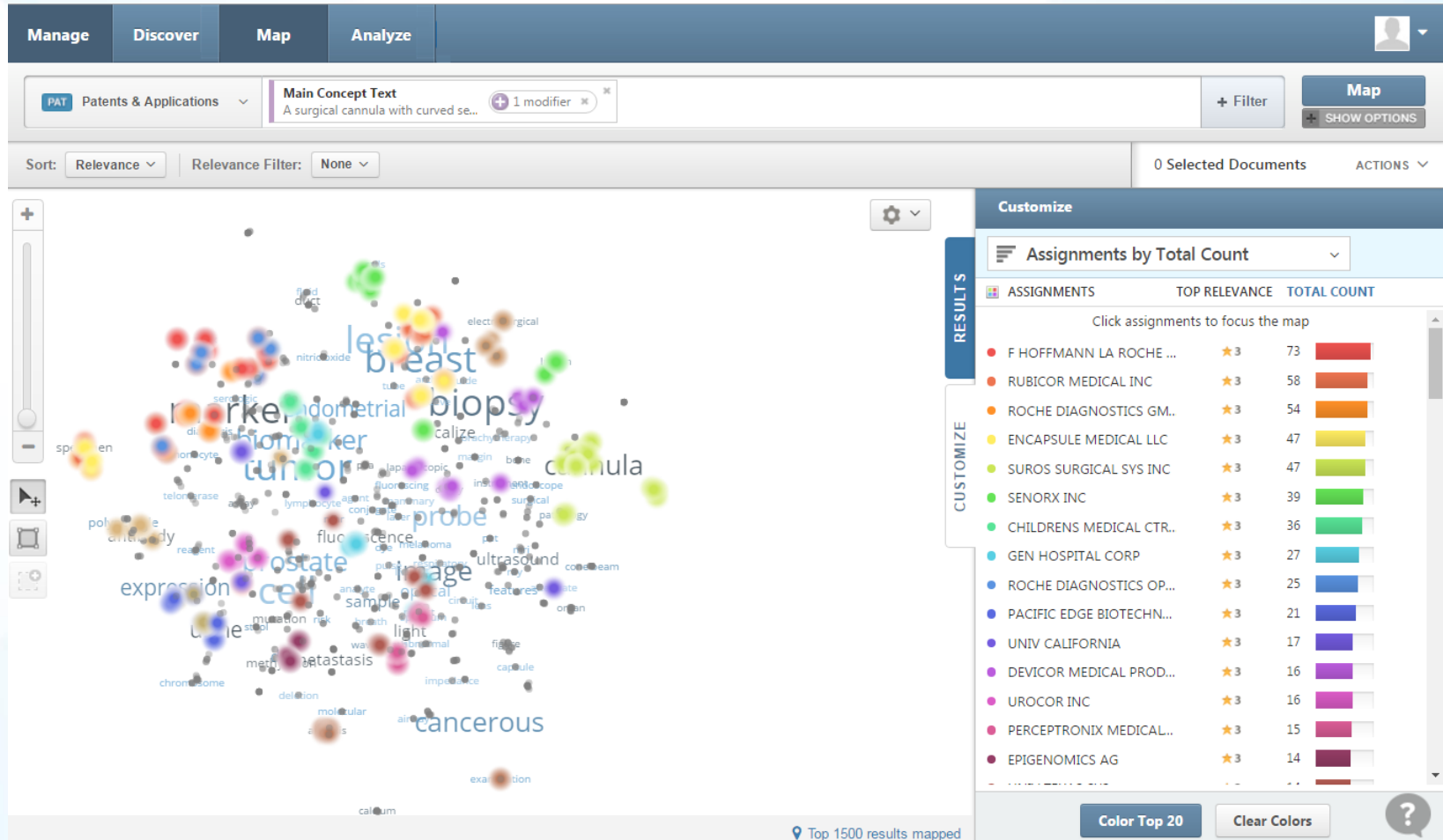
	Fr	Des	Clm
Click term(s) to toggle highlighting			
base station	0	0	0
cancer detection	0	4	0
curve segment	0	0	0
medical instrument	0	3	21
acid	0	0	0
antenna	0	0	0
apoptosis	0	0	0
architecture	0	0	0
backhaul	0	0	0
beam	0	1	0
beamforming	0	0	0
biological	1	7	0
biomarker	0	1	0
bowed	0	0	0
cancer	1	75	3
cannula	0	0	0
cell	0	18	0
communication	0	2	0

Save Term List

Highlight None

Workspaces: Map Tool

Presents the IP landscape at a glance



Workspaces: Analyze

Reveal trends and derive insights from a Portfolio of patent documents

Innovation^Q PLUS
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Manage

Discover

Map

Analyze



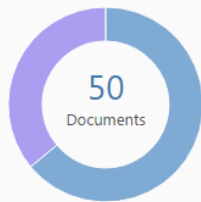
Overview

50
Documents

0
Filters

0 Selected Documents

Collection Breakdown



■ US Applications
■ US Patents

Top Current Assignees

32	SENORX INC
18	ENCAPSULE MEDICAL LLC
	RUBICOR MEDICAL INC
	ACTIS LTD
	HYPERMED IMAGING INC
	INTACT MEDICAL CORP
	JOHNS HOPKINS UNIV
	PASSIVE IMAGING MEDICAL SYS ENG LTD PIMS
	UNIV ILLINOIS
	UNIV TEXAS SYS

Enforceability

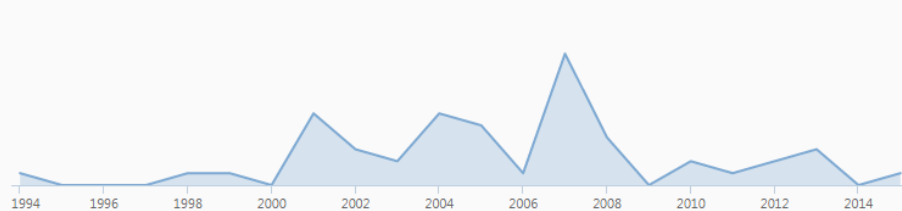
14	Likely	15
9	Unlikely	3
5	Issued	14
4	Undetermined	18

Top 3 CPC Subclasses

2	A61B	42
2	C12Q	3
2	G01J	2

Application Date Trend

1994 - 2015



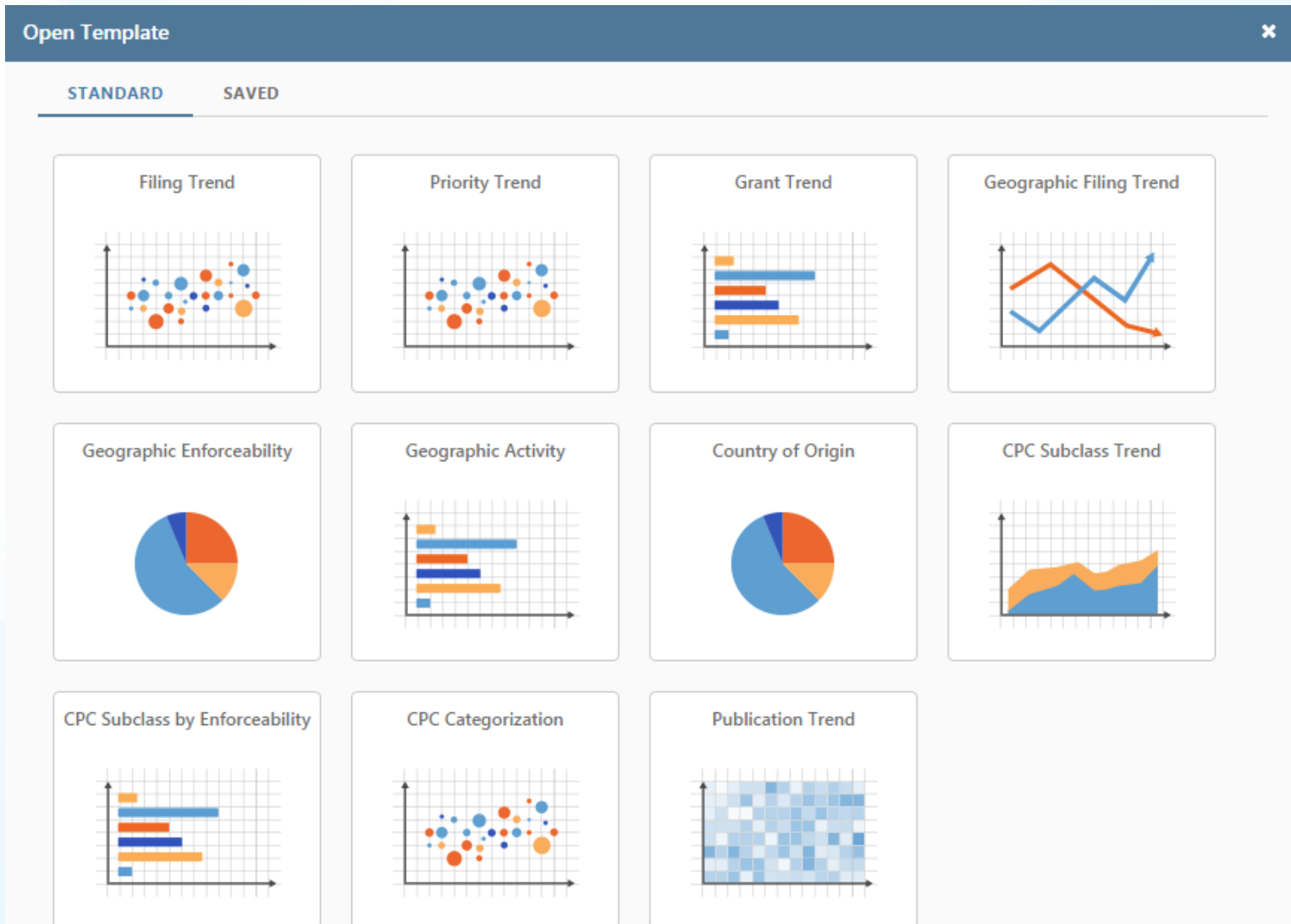
Publication Date Trend

1996 - 2015



Workspaces: Analyze

Use Charts to highlight trends and focus on companies



Manage Functions

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New Query

Save Query

Create Alert

Generate Report

Export Results

Quick Downloads

Recent Items

COLLAPSE MENU

ManageDiscoverMapAnalyze

PAT Patents & Applications

Main Concept Text
A surgical cannula with curved se...
+ 1 modifier

Views: Sort: Relevance Relevance Filter: None

1 - 50 1,857,925 results Document Result #

1. Medical hyperspectral imaging for evaluation of tissue and tumor
ASSIGNMENTS: HYPERMED IMAGING INC
US8320996 | US PATENTS | 27-NOV-2012

2. Medical hyperspectral imaging for evaluation of tissue and tumor
ASSIGNMENTS: HYPERMED INC
WO2006058306A2 | WIPO APPLICATIONS | 01-JUN-2006

3. Medical hyperspectral imaging for evaluation of tissue and tumor
ASSIGNMENTS: HYPERMED IMAGING INC
US20060247514 | US APPLICATIONS | 02-NOV-2006

Medical hypersp
and tumor

Front Page

Pages (27)

US PATENT PUBLICATI

PUBLICATION NUMBE
APPLICATION NUMBE
SIMPLE FAMILY NUMB

PRIMARY INFORMATI



THANK YOU!

Eszter Lukács

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