

Analyze the Competitive Landscape in a Technology Space

Who are the players in a technology space? Which technologies are they interested in? Where might there be growth opportunities?

You need to understand the competitive landscape for a technology space. Derwent Innovation makes it easy to research the competition.

Simple Steps for Competitive Intelligence

1. Run a Smart Search for the technology you want to research
2. Examine the Results Dashboard for quick answers
3. Analyze competitor activity with ThemeScape
4. Segment competitor portfolios by technology with text clusters

Step 1 – Research a Technology Domain with Smart Search

Find a Document that Exemplifies Technology in the Domain

The screenshot shows a patent document interface. On the left, the 'Abstract' section is visible, containing a DWPI title, novelty text, a detailed description of independent claims, and a use section. On the right, the 'Images' section displays 'Image 1/16', which is a technical drawing of a device with various components labeled with letters and numbers. Below the main image, there are three smaller thumbnail images labeled 1, 2, and 3.

Smart Search makes it easy to find patents similar to existing documents, such as patents or invention disclosures. Smart Search analyzes the text in the document and extracts key terms - smart themes - for you.

Tips for Smarter Searches

- Use text with distinct terms about the unique characteristics of the invention
- Text from a patent's title, abstract, and claims often provides good results

The editorially enhanced DWPI title and abstract are particularly effective, because they highlight the main use and invention in standardized language

Use the Example Document to Run a Smart Search

The screenshot shows the 'SMART SEARCH' interface. At the top, there is a search box containing the text: 'Method for controlling augmented reality enabled device (ARD) e.g. mobile phone, involves rendering augmentation with object when determining that object is selected based on set of selection criteria'. Below the search box, there are five icons representing different categories: Patent, Literature, Business, Saved Work, and My Account. At the bottom, the 'QUICK SEARCH' section shows a list of extracted keywords: 'AUGMENTED REALITY', 'RECEIVING IMAGE', 'REALITY REPRESENTATION', 'CHARACTER', 'REFERENCE BACKGROUND', 'REALITY INTERFACE', 'OBJECT', 'ARD', 'USER', 'SET OF SELECTION CRITERIA', 'VOCALIZATION', 'PHONE', 'PLAY', 'PLAYING GAME', 'EXPLORATION', 'BATHTUB', 'BRAIN STIMULATION'. The search results section shows '1,000 record(s) found out of 10,011,303 searched (display limit 1,000) 0 record(s) selected'.

You can run a Smart Search right from the Derwent Innovation Dashboard.

1. Open Thomson Innovation
2. Paste the text from your example document into the search box on the Dashboard and click

Smart Search analyzes the text you enter, extracts key terms, and finds patents relevant to the technology described by your text.

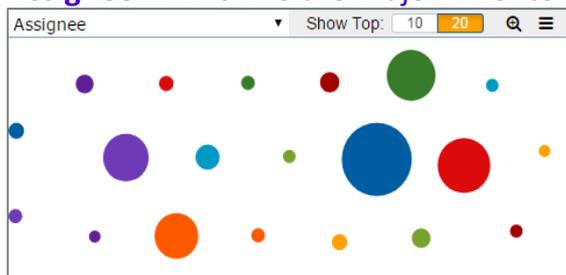
- Smart Search displays the extracted above your results and uses patent-pending algorithms to find patents similar to those keywords

The 1,000 top results display so you see the most important results first

Step 2—Examine the Results Dashboard for Key Competitor Information

The Results Dashboard helps you understand the competitive landscape. Review specific visuals for at-a-glance information, such as major players in the market or filing trends. Then, select data points in visuals and filter your results to perform deeper analysis, such as technologies patented by specific assignees or collaborations between different assignees and inventors. The following four visuals in particular provide immediate insight into the competitive landscape. Start by examining the visuals, then filter on specific points to watch how the other visuals change.

Assignee—Who Are the Major Inventors?



Look at **Assignee** to:

- See top players in the space
- Know if the market has a few, large players or many small ones
- Find niche players in the space

Filter on **Assignee** and observe:

- The IPC-4 character visual to see top technologies for that assignee
- Other data points in **Assignee**, which could reveal collaborations

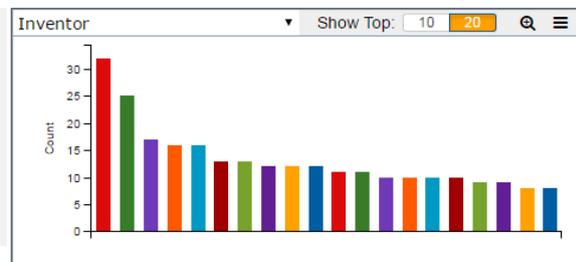
Inventor—Who Are the Major Inventors?

Look at **Inventor** to:

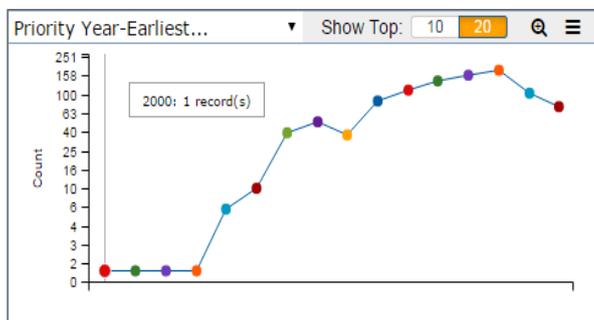
- See the top inventors in this technology space

Filter on **Inventor** and observe:

- Assignee to see who that inventor works for
- IPC-4 character to see which technologies that inventor researches
- Priority Year-Earliest to see filing trends



Priority Year—Are There Trends in New Developments?



Look at **Priority Year-Earliest** to see trends in new invention development:

- Priority Year earliest indicates a patent family's (invention) emergence
- Increased filings suggest growth in a technology domain
- Decreased filings may suggest weakening domains

Watch **Priority Year-Earliest** when you filter:

- **Assignee** or **Inventor** to see who is getting into or out of the space
- **IPC-4 character** to see filing trends for a particular technology

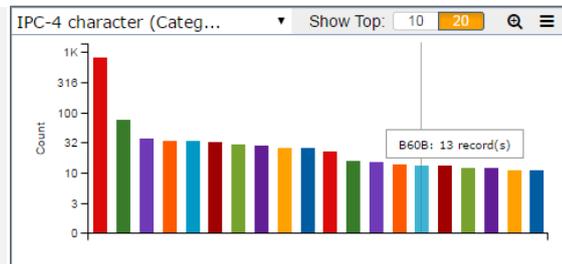
IPC-4 Character—What Are the Technology Applications?

Hover your mouse over at IPC-4 character codes to see:

- Descriptions of the broad categories records

Select an IPC-4 code and filter to find out:

- Assignees and Inventors researching a technology



Tip: Click the  icon on any visual, then click  to download a high quality snapshot of that visual that you can use in reports and presentations.

Step 3—Analyze Competitor Activity for a Technology with ThemeScope

Create a ThemeScope Map

Criteria	Assignee	Date	Score	DWPI Title
2	US20140028714A1 QUALCOMM INC	2014-01-30	G06T 19/00	60 DWPI Title: Method for maintaining continuity of augmentations, involves maintaining states of one of objects based on information other than visual information, and providing data for rendering augmentation in response to states of objects
3	US20140028713A1 QUALCOMM INC	2014-01-30	G06T 19/00	60 DWPI Title: Method for providing interactions for augmented reality enabled device, involves performing three-dimensional tracking of objects based on captured images, and causing augmentation to be rendered in response to state change of object
4	US20140028850A1 QUALCOMM INC	2014-01-30	H04N 7/18	54 DWPI Title: Method for controlling e.g. cola tin, using e.g. personal navigation device, involves causing control signals to be transmitted from augmented reality enabled device to real object via machine interface based on tracking of object
5	US6720949B1 PRYOR T R	2004-04-13		20

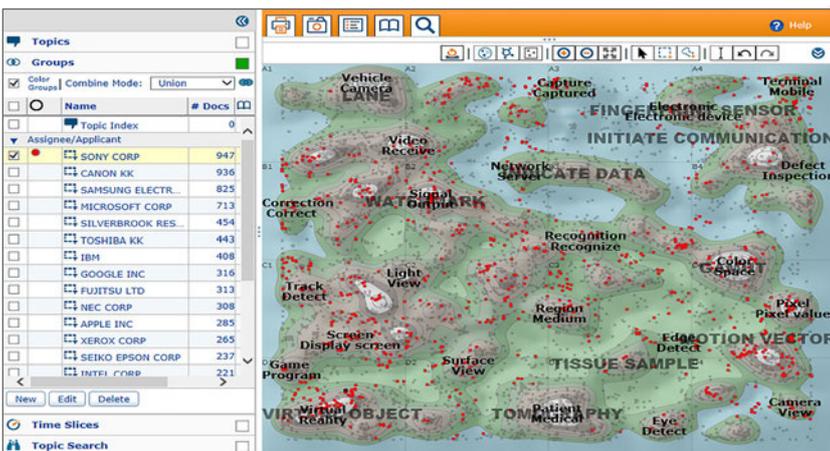
ThemeScope helps you visualize competitor activity in a technology space, which you can use to further focus your research.

1. Reset any filters on your results (e.g., filters for specific assignees)
2. Click Analyze, ThemeScope
3. Enter a Name and click Save

The ThemeScope map begins to process. You can complete other tasks while ThemeScope creates your map.

Tip: ThemeScope uses the best possible fields for general analysis by default. These include the English and DWPI versions of Title and Abstract. You can substitute abstract fields to focus your map on specific aspects. Abstract-DWPI Use focuses on technology applications. Abstract-DWPI Advantage focuses on benefits.

Explore Assignee Portfolios in the Technology Space

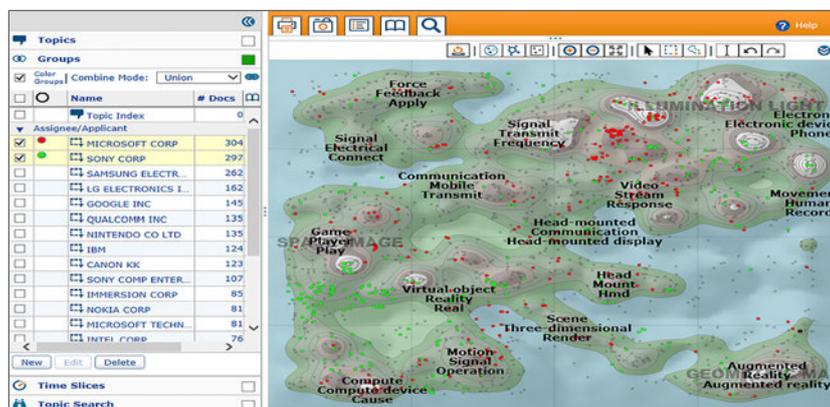


ThemeScope automatically creates groups for the top assignees. Use these groups to explore the competition's interest and investment in the space:

- Select individual assignees to visualize how their portfolios cover the space
- Look for areas of heavy activity for that assignee, which may indicate core focus technologies
- Look for areas with little or no activity by that assignee

If you notice a particular area of interest for an assignee, select the records in that area and click New to create a group with those records

Compare Assignee Portfolios



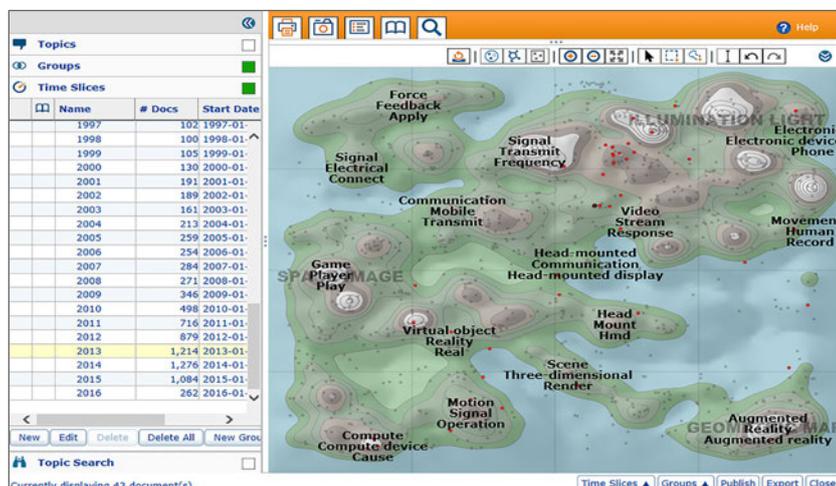
Select multiple groups in ThemeScope to see how those groups compare on the map. This is helpful for comparing the patent portfolios of two assignees.

1. Select the checkboxes for the assignees you want to compare
2. Make sure the Combine Mode is set to Union

The portfolios for the two assignees display as different colored dots on the map. Look for areas of overlap, which may indicate highly competitive areas. Areas unique to each assignee may indicate areas for licensing or where competing products could develop.

Step 3 – Analyze Competitor Activity with ThemeScape (continued)

Visualize Portfolio Evolution over Time

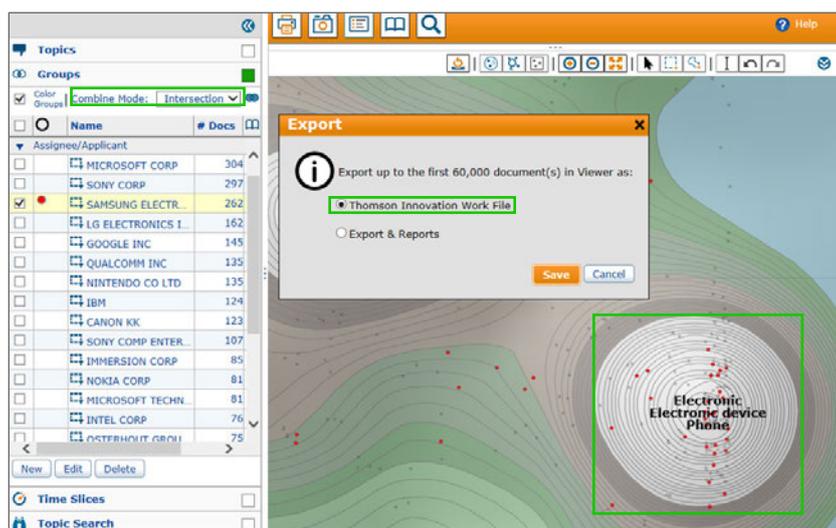


Time Slices can help reveal an organization’s research or patenting strategy over time. To see this evolution:

1. Select the group for the assignee you want to research
2. Expand the **Time Slices** panel and click **New**
3. Enter a **Name** and select **Automatic Slicing** annually
4. Click **Save**, then expand the time slice collection you created

Click through the Time Slices to see changes in patent strategy over time. See if the company stays in one domain or moves into new technology spaces.

Save Areas of Interest for an Assignee for Further Analysis



ThemeScape makes it easy to save currently selected records from the map to work files for later review. For example, you can save the focus areas that you identified for various assignees.

1. Select the group or groups you want to save
2. Set the **Combine Mode** based on the records you want to save
3. Click the **Export** button, select **Work File**, and click **Save**

Enter a **Name** and click **Save**

Tip: Combine Modes let you select multiple groups and change how you visualize those selections on map.

- Union shows you all selected records
- Intersection shows you the records in all the selected groups
- Difference shows you the records unique to each selected group

The records displayed are also considered selected so that you export them to work files.

Step 4—Further Analyze Areas of Interest with Text Clusters

Create Text Clusters for a Competitor Portfolio

Criteria	Item	Publication Number	Assignee/Applicant	Publication Date	Count
2	US20140028714A1 DWPI Drawing:	QUALCOMM INC	2014-01-30	G06T 19/00	60
3	US20140028713A1 DWPI Drawing:	QUALCOMM INC	2014-01-30	G06T 19/00	60
4	US20140028850A1 DWPI Drawing:	QUALCOMM INC	2014-01-30	H04N 7/18	54
5	US6720949B1	PRYOR T R	2004-04-13		20

Text clusters help reveal protection coverage in different segments of a competitor’s portfolio and provide a quick look at the sub-areas within a larger technology domain.

1. Use Results Dashboard to filter your results to a specific assignee, or open a focused work file saved from your analysis in ThemeScope above
2. Click **Analyze, Text Clustering**
3. Select the fields you want to analyze, then click **Create**

Tip: Use specific fields to analyze different aspects of the technology domain. Title-DWPI provides a concise explanation of the patent invention. The DWPI Abstract - Use focuses on application areas. DWPI Abstract- Advantage and Novelty focus on benefits. All DWPI fields use clear, standardized language that makes it easy for text clustering - to provide precise, insightful analysis.

Review Coverage by Sub-Area with Text Clusters

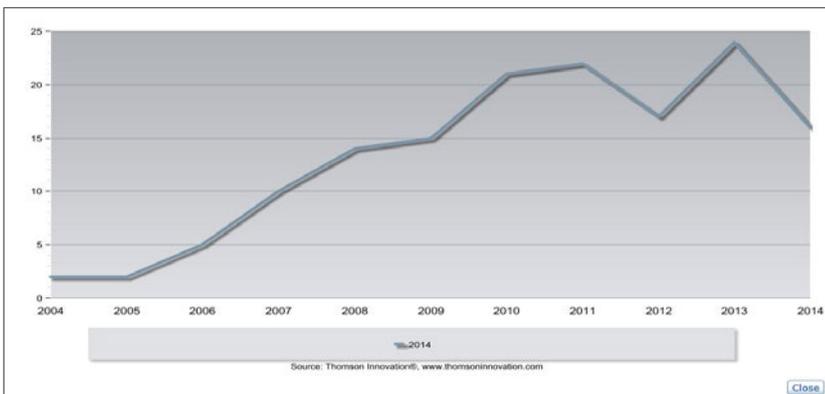
Item	Publication Number	Assignee/Applicant	Publication Date
1	US9213890B2 DWPI Drawing:	SONY CORP	2015-12-15
2	US20150227795A1 DWPI Drawing:	GOOGLE INC	2015-08-13
3	US9165404B2 DWPI Drawing:	SAMSUNG ELECTRONICS CO LTD	2015-10-20
4	US20140016871A1 DWPI Drawing:	POSTECH ACADEMY INDUSTRY LTD	2014-01-16
5	US9087408B2	GOOGLE INC	2015-07-21

Use the text clusters to see coverage levels for sub-areas of the technology within for the selected assignee.

- Examine which sub-areas have lots of protection vs. low protection numbers
- Select a cluster to see the patents associated with that sub-area
- Expand clusters to see patents for specific uses of the sub-area
- Select specific clusters to create charts for aspects of the technology space

Review the Uncategorized cluster and sort by Publication Date (descending) to see patents that may represent new technologies for the company

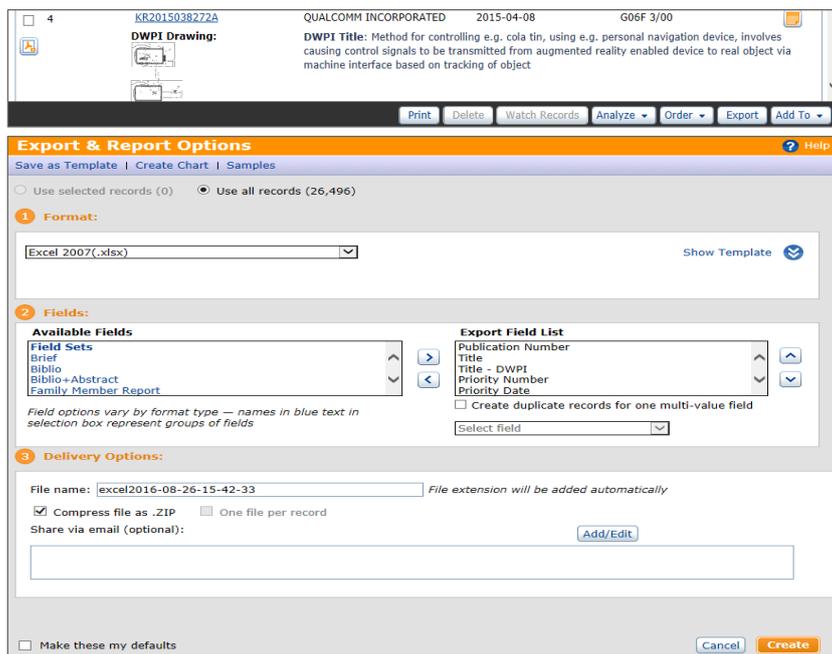
Plot Technology Evolution with Charts



Charts can reveal the evolution for a specific technology domain over time:

1. Select the technology domain (or sub-domain) you want to analyze
2. Click Analyze, Charts
3. Under Create Custom Chart, click Line, then click the Line chart
4. Create a chart that analyzes Priority Year Earliest as the primary field. Include the top 20 items, and collapse by DWPI family with Basic Patent as the preferred document. (Users without DWPI should collapse by INPADOC Family, with Earliest Document.)

Export Data from Records for Further Analysis in Excel



Derwent Innovation offers robust data exports in many formats, including Excel, so that you can:

- Clean and normalize assignee data provided by patent authorities
- Create pivot charts or detailed filters
- Analyze fields unavailable in the built-in analysis tools

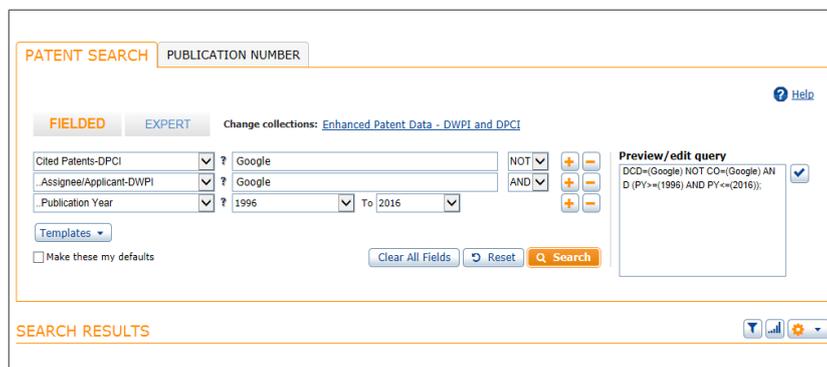
You can easily create data exports from selected data:

- From result sets, work files, or text cluster, click the **Export** button at the bottom of the screen; exports account for any filters, subsearches, or selected text clusters
- ThemeScape can export all records on the map, or the currently selected records (e.g., from groups, Time Slices, contour lines, searches, or free-form selections)

On the export screen, choose the format for your export and the fields you want. There are several predefined field sets for convenience (e.g., Assignee Report).

Take Competitive Intelligence Further With Derwent Patent Citations

The Derwent Patent Citations Index (DPCI) provides citation data at the family level, corrected and standardized by the DWPI editorial team. This can help you find competitor patents that cite your work. The standardized data in DWPI also helps remove citations your company made to your work (self citations) from the results.



1. Access the patent search form
2. Click the Change Collections link and make sure Enhanced Patent Data - DWPI and DPCI is selected
3. Select Cited Patents-DPCI, enter your company's name, and select the NOT operator after the field
4. Select Assignee/Applicant-DWPI and enter your company's name
5. Select Publication Year, select the past 20 years, and click Search

Additionally, competitive intelligence often overlaps licensing analysis. Please refer to the [Identify License Opportunities Blueprint for Success](#) for additional details on citation analysis.

Blueprint for Success - [Identify License Opportunities in Your Patent Portfolio](#)

Learn More with These Tips & Tricks and Quick Reference Guides

- [Using The New Results Dashboard](#)
- [Easily Identify The Owner Of Us Patents And Applications](#)
- [Make Your Assignee Searches More Comprehensive And Accurate](#)
- [How To Use DPCI Data To Identify Your Key Competitors](#)
- [Assessing Competitor Trends By Using Groups And Time Slicing In ThemeScope](#)
- [How To Find A More Complete Competitor's Portfolio](#)
- [Assignee Searching Quick Reference Guide](#)