

# Patent Research and Analysis - Google Patents

Cynthia Dixon, Ford Khorsandian, Ellen Krabbe, Steve Sampson, Ian Wetherbee

## Overview and Coverage

Google Patents includes over 87 million patent publications from 17 patent offices around the world, as well as many more technical documents and books indexed in Google Scholar and Google Books.

It currently indexes full-text documents from the following major patent offices of interest for attorneys or agents in the United States: US, EP, WO, CN, JP, AU. Bibliographic information is available for over 100 countries included in DocDB.

You can see the real-time number of you can go to <https://patents.google.com/coverage>. These totals include all patents and published applications in the index, but complete coverage cannot be guaranteed.

Many documents have full-text description and claims available. The "Since ..." dates listed on the statistics graph show when full-text is available, but additional abstract-only documents are often available for earlier dates. New documents are added to Google Patents on a regular basis with a one to two week delay.

Optical character recognition (OCR) has been performed on the US patents to 1790 to make them searchable, and Google Translate has been used on all non-English patents to make the English translations searchable using only English keywords. Searches may still be performed in the original language.

Key developments include:

- 2013 expansion to cover WO, DE, CA, CN and machine translation of all foreign documents
- 2015 new version at patents.google.com with integration of Google Scholar, machine-classified and clustering by CPCs
- 2016 coverage of 11 additional patent offices, support for Boolean search syntax, graphs and downloadable results
- 2018 bibliographic information is available for over 100 countries included in DocDB; global litigation information added to display a patent, or family member, that has litigation history anywhere in the world with a link to Darts-ip patent cases database; and documents are added from PriorArtArchive.org - <https://www.blog.google/outreach-initiatives/public-policy/coming-together-create-prior-art-archive/>

Our search example is 'portable solar usb charger'. Non-patent literature may be included by checking the box, however, for our example we have chosen to only search patents and the search has been limited to US, EP and WO. <https://patents.google.com/?q=portable&q=solar&q=usb+charger&country=US,EP,WO&sort=new>

## Non-patent literature

To make prior art searching easier, Google Patents includes a copy of the technical documents and books indexed in Google Scholar and Google Books. These documents have been machine-classified using the Cooperative Patent Classification scheme commonly used in patent searching to make finding documents easier. You can browse the citation metrics for the top publications in [Google Scholar Metrics](#) to get an overview of the types and sources of papers included, and see Google Scholar help for [details on what papers are included](#).

## Searching

From the homepage, you can begin your search in a few ways:

- **Enter a patent publication or application number**, such as [US9014905B1], [9014905], or [US 14/166,502]. It is preferable to use the country code, no spaces and no slashes.
- **Enter freeform text**, such as [portable solar usb charger]
- If you are looking for prior art, check the "Include non-patent literature" box to include results from Google Scholar.
- Paste a large block of text, such as a paragraph, to run the **Prior Art Finder keyword extractor** to suggest search terms.
- **Boolean syntax**: Google Patents includes boolean syntax (USPTO or EPO format)
- **Proximity**: usb NEAR/3 charger
- **Searching in title, abstract, claims, CPC**: Use **TI=(solar usb charger)** to search in the title, **AB=** for the abstract and **CL=** for the claims. For CPCs, **CPC=H01M10/465** will match documents with exactly this CPC, **CPC=H01M10/low** matches documents with this CPC or a child classification of this CPC.
- **Wildcards, truncation**: See the "?" next to Search Terms for additional information



2

Include non-patent literature (Google Scholar)

## Landing Page

1. Initial syntax search
2. Click to include non-patent literature

## Results List View – Example

<https://patents.google.com/patent/US8080975B2/en?q=portable&q=solar&q=usb+charger&country=US,EP,WO&sort=new>

1. New search, click on “Google Patents”
2. Search string corresponding to search terms on the left, terms or patent numbers may be added directly here
3. Search patent alone or with non-patent literature
4. Number of results
5. Narrow or broaden searches by adding terms in boxes. CPC codes may be proposed for words in the search terms box
6. Searches can be narrowed by dates, assignee, inventor
7. Searches may also be narrowed by patent office, language, status, citing patent and CPC (in this example the search is limited to US, EP and WO shown by the US +2 in the Patent Office box)
8. “Sort by” feature to order results by relevance, newest or oldest
9. “Grouped by” feature provides a drop-down menu that allows for sorting by “CPC Classification” or “None”
10. “Results/page” display feature provides a drop-down menu that allows for displaying “10”, “25”, “50”, or “100” results per page.
11. Title with like to the document view
12. List of countries this simple family is filed in. Each result represents the best-scoring publication from the simple family. (Bold means the simple family has at least one active (in-force) application in that country, strikethrough means they're all expired or abandoned, normal means they're still pending or unknown), “Application” means that the document is a pre-grant publication. “Grant” means the publication is for a granted patent. Note: this does not mean that the application is not granted just because it says “Application”, only that the pre-publication version matches or scores higher for your search string. The publication number has a link to the PDF of the document. These are followed by first inventor name and first assignee.
13. Priority date, filing date, publication date
14. One or more snippets of text from anywhere in the document containing your keywords
15. Drawings thumbnails, by clicking on an image a new view presents all of the patent drawings. Use the scroll wheel to zoom in and out, and hover over the thumbnail to change the focused region. Click on the arrow on the right side of the drawings to return to the list view
16. Graph of top assignees,
17. Graph of top inventors and CPCs (click on tabs)
18. Hyperlink to assignee documents within the results list, the name of the company will appear in the “Assignee box on the left
19. Click on “Expand” to view top 20 Assignees, Inventors or CPCs
20. Download first 1,000 results in a CSV file, or ~5,000 for similar document searches
21. Side by side view on a wide or extended screen

The screenshot shows the Google Patents search results page for the query "(portable) (solar) (usb charger) country:US,EP,WO". The page is annotated with yellow circles and numbers 1 through 21, corresponding to the list of features provided. Key elements include:

- 1:** Google Patents logo
- 2:** Search bar containing the query "(portable) (solar) (usb charger) country:US,EP,WO"
- 3:** Search button
- 4:** "About 18,380 results" text
- 5:** Search terms input boxes for "portable", "solar", and "usb charger"
- 6:** "Inventor" filter box
- 7:** "Patent Office" filter box showing "US, +2"
- 8:** "Sort by" dropdown menu set to "Newest"
- 9:** "Grouped by" dropdown menu set to "None"
- 10:** "Results / page" dropdown menu set to "10"
- 11:** "Date · Priority" filter box
- 12:** "Assignee" filter box
- 13:** "Download" button
- 14:** "Side-by-side" button
- 15:** First search result: "Unmanned vehicle control and operation in a marine environment" with a drawing thumbnail.
- 16:** "Top 1000 results by filing date" bar chart.
- 17:** "Relative count of top 5 values" table with tabs for Assignees, Inventors, and CPCs.
- 18:** "Samsung Electronics Co., Ltd." entry in the top 5 values table.
- 19:** "Expand" button at the bottom of the top 5 values table.
- 20:** "Download" button for the first result.
- 21:** "Side-by-side" button for the first result.

## Patent document view- Example

<https://patents.google.com/patent/US8080975B2/en?q=portable&q=solar&q=usb+charger&country=US,EP,WO&sort=new>

By clicking on the title of the document in the document list view, a new view will open to review detailed information concerning the document. Clicking on any of the images below the abstract will open an image viewer either below the classifications box for a smaller screen or on the right side of a wide screen. When the image box is on the right, it will remain visible when scrolling down information in the two left-hand columns. In this example, the abstract, images, classifications and description are in the left-hand column, bibliographic information and claims are in the center column and images are located on the right

1. Click on Google Patents for a new search
2. Search string and button to include non-patent literature

- (Scholar), terms or publication numbers may be added
3. Arrows to view the next document in the list
  4. Return to the results list view
  5. Click on the pen to edit the search terms
  6. Key words are highlighted in the text
  7. CPC Classifications with definition, click on "View 3 more classifications" for additional information, classification are hyperlinked to documents in that classification code, click on the description to open the tree of parent classifications
  8. PDF, Find Prior Art, Similar
  9. Family Members for countries listed under coverage
  10. Litigation information
  11. Citations, Legal events, Similar documents, Related applications
  12. Links to USPTO, USPTO Assignment, Espacenet, Global Dossier (WO documents link to Patentscope, not USPTO)

The screenshot shows the Google Patents interface for patent US8080975B2. Callouts 1-12 highlight various features: 1. Google Patents logo; 2. Search bar with query '(portable) (solar) (usb charger) country:US,EP,WO'; 3. Document title; 4. Back to results button; 5. Search terms; 6. Abstract text; 7. Classifications box; 8. Patent title and number; 9. Family information table; 10. Litigation information; 11. Citations and legal events; 12. External links. On the right, an image viewer shows a technical drawing of a portable electronic device with callouts 100, 105, and 110.

You may need to adjust the zoom on your web browser, use a wide screen or extended monitor to view patent drawings on the right side of the screen.

- A. Rotate image
- B. Next or previous image
- C. View enlarge image, open in a new tab. Pan is also possible by clicking on an image and dragging it to a new location. If you have a mouse with a scroll wheel, mouse over the image and use up or down wheel to enlarge or reduce the size of the image. The A and D keys will move forward and backward one figure, W and S will rotate the figure.
- D. Close
- E. Select an image from the group

Note: the numbers in the drawings are not searchable. You can, however, use Ctrl + F to open your browser's search box and search the text for the numbers.

The screenshot shows the image viewer interface for the patent drawing. Callouts A-E highlight navigation controls: A. Rotate image; B. Next or previous image; C. Enlarge image; D. Close; E. Select an image from the group. The drawing shows a portable electronic device with callouts 100, 105, and 110.

## Bibliographic Information Box

1. Document number (See “Family” to find other simple family documents)
2. Download PDF link
3. Find Prior Art link (extracts 5 keywords from the full text and ANDs them together to find similar documents based on the priority date)
4. “Similar” uses a machine learning model on the full text to retrieve documents with similar topics
5. Inventor (link to other documents by the same inventor)
6. Assignee (link to other commonly owned documents, may be non-English)
7. Priority and Filing dates (if the dates are the same there is only priority date). Filing date is the un-indented date in the family list, to the left of each application number. Publication date is indented next to each publication number.
8. Family and Legal Status (Verify status or expiration in country database)
9. Litigation links to information in Darts-ip
10. Patent Citations (backward searching references)
11. Non-patent citations include non-patent literature sited in prosecution
12. Cited by (forward searching references)
13. Legal events (useful for events like assignment information)
14. Similar documents (very useful to find other closely related documents)
15. External links (for additional information about status, prosecution history, family members, etc. “Discuss” was a Google Patents project to allow users to add comments to patent documents. This option is not widely used despite its goal to promote research)

**US8080975B2**  
US Grant

Download PDF Find Prior Art Similar

**Inventor:** Jerry S. Bessa, Martin Cox, Donald K. Moore  
**Current Assignee:** iPowerUp Inc  
**Original Assignee:** iPowerUp Inc  
**Priority date:** 2008-05-09

**Family:** US (2) WO (1)

Date	App/Pub Number	Status
2009-05-11	US12454108	Active
2009-11-19	US20090284216A1	Application
2011-12-20	US8080975B2	Grant
2011	US13244419	Active

**Litigation (from darts-ip):** [View patent family cases](#)

**Info:** Patent citations (34), Non-patent citations (8), Cited by (112), Legal events, Similar documents, Priority and Related Applications

**External links:** [USPTO](#), [USPTO Assignment](#), [Espacenet](#), [Global Dossier](#), [Discuss](#)

## Results Manipulation Capabilities

The list results include graphs of the top five assignees, inventors and CPCs. You can download a CSV file of the top 1000 results.

## Privacy and Security – Cited From Google’s Web Page

### How does Google use information provided through patent search queries?

When Google Patents receives a search request, it is processed automatically by computers.

- Access to individual search queries and associated request metadata from Google Patents is limited to Google employees, contractors and agents who need to know that information, as described in the [Privacy Policy about Information Security](#).
- For example, for security reasons, they may inspect records when they see unusually large traffic spikes; if they start receiving a hundred patent search requests a second from a single source, that source is probably automated abuse of the system. They analyze those logs to protect Google Patents.
- But Google does not inspect Google Patents logs to inform its own patenting strategies.
- The [Google Privacy Policy](#) also describes the limited situations in which Google will share user information with third parties.

For more information, please visit the [Google Privacy homepage](#).

## Other Resources

- [About Google Patents](#)

These help files include additional information about searching using keywords, classifications, metadata, patent or application number.

- [Advanced Patent Search](#)

Easy tool for searching in fields for specific information.

- [Google Scholar](#)

Used to search non-patent literature but also includes patents and case law searching.

### How does Google protect my information?

Access to Google Patents is encrypted over HTTPS. For more information, please read about [Google's security](#) and [Frequently Asked Questions](#).

## IPO Search Committee Suggested Best Practices For Protecting Your Patent Search Information

When using free search tools on the Internet, consider the following tips:

1. Only search on encrypted (HTTPS) sites (protects against eavesdroppers on WiFi networks)
2. Delete your browser history after you have finished, or search in an “incognito window” (prevents information access in the event of computer theft)
3. Store your search notes on your computer’s encrypted hard drive, or in the Cloud (prevents information access in the event of computer theft)