

A guide to 'State of the Art' searching

Have you checked what information has been publicly disclosed about similar ideas/products, in your home country and in others around the world?

What is this tool?

This tool will guide you through a 'State of the Art' search process to help you determine if your idea has already been publicly disclosed and/or already exists, and to help you decide if you have the option to commercialise your technology solution.

What is a 'State of the Art' search?

A 'State of the Art' search will help you identify and understand which knowledge and information has already been publicly discussed/disclosed (i.e. public disclosures) at the time of the search.

This type of search is a snapshot of published documents related to your idea or technology solution within a particular geographic range, e.g. country, region, or worldwide. The search includes both scientific literature (e.g. filed patents, academic publications, as well as conference papers) and grey literature (e.g. instruction manuals, promotional materials, and other sources of ideas such as blogs, commercial websites like Amazon).

1. Nigel S. Clarke (2018) The basics of patent searching. World Patent Information. Vol 54 Supplement September 2018 Pages S5-S10 DOI: <https://doi.org/10.1016/j.wpi.2017.02.006>

Why use this tool?

Once you or someone else has disclosed research results in the public realm, the ability to protect and commercialise your idea is greatly reduced. By undertaking a "State of the Art" search you can better manage this risk as the results can help you answer the following questions:

- Which technologies already exist in a given field?
- What are the kinds of technology your competitors are focusing on, or moving away from?
- Who is active in the field that your technology solution falls into? Also consider, who is your competition or who are the key players active in the technology space, and what are their relative strengths and weaknesses in terms of intellectual property?
- Which companies are active in a prospective or new market?
- Can your technology solution fill a gap in the intellectual property landscape and, ultimately, the market?
- Which competitors are citing your earlier patents?
- What are the general innovation trends in the market and if there are any areas open to further exploration?
- What is the patent situation on a global scale, i.e. are there countries where there is more or less patent activity in your technology area?
- Who are the companies that are partnering with competitor inventors to apply their technology solutions?



Before you start ...

- Do not ignore unfavourable evidence: The purpose of a 'State of the Art' search is to go looking for evidence you may not like.
- Search results are for a point in time: Periodically undertaking a 'State of the Art' search as you develop your idea will help ensure that you are up to date with publicly disclosed knowledge or information. The available information is always changing. An absence of information at the time of one search may not be an indicator of a permanent absence.

Tool Searching steps

Use the follow these steps to help you identify any publicly disclosed knowledge or information which could be related to your technology solution.



Step 1.

Take stock of what you already know or can easily find out and use this knowledge to help you start to define your search.

For example, if a market leader is well-known for a particular product, finding their corresponding patents may lead you to finding other patents from competitors. You may even find patents for additional inventions for which a market leader is not well known.



Step 2.

Brainstorm and search for other things you may know which could be helpful. This could include patent numbers of similar products, inventor names, patent applicant names, and patent classes.

Remember to keep a record of these ideas!



Step 3.

Develop a list of keywords that best describe your technology solution/invention, including:

- a. What the technology does.
- b. Synonyms for key terms.
- c. Different ways to describe your invention, including how a layperson would describe your technology.
- d. Different names for it in different geographical regions e.g. vegetables: courgette (UK) - zucchini (USA), or packaged food: crisps (UK) - chips (USA), biscuit (UK) - cookie (USA). Include any other related terms.



Step 4.

Search free to use/publicly available patent databases. We recommend using the following patent search tools to kickstart your search:

- Google Patents
<https://patents.google.com/>
- Espacenet
<https://worldwide.espacenet.com/>
- PatentScope (WIPO)
<https://www.wipo.int/patentscope/en/>
- Derwent World Patents
<https://clarivate.com/derwent/solutions/derwent-world-patent-index-dwpi/>



Note

Things to look for ...

Examples of different types of public disclosure includes:

- Discussing the research at a conference (this includes presenting research results in a poster), etc.
- Publishing a journal article.
- Manuscripts submitted with no reviewer confidentiality.
- Creators discussing the idea with a third party (who is external to your organisation) without the appropriate Confidentiality Agreements in place.
- Students publishing their PhD thesis.
- Messages posted online describing the invention.
- Selling a prototype.
- Open-source software.
- Submitting grant progress reports.



Step 5.

Review search results in the database (Step 4) to identify if they relate to the intellectual property found in your technology solution.



Step 6.

If any of the search results look relevant, click on the link and read their abstracts to determine if they could be useful.



Step 7.

Record key information that relates to your technology solution, for example:

- The names of source/search result documents
- The relevant intellectual property details
- Where it was disclosed
- A link so you can easily refer to the original source
- Keywords to help further refine searches



Tip

When developing your key word list, consider:

- a) Commonly accepted terminologies in an industry may have changed over time.
- b) Different industries may use alternative keywords to describe similar concepts.
- c) Many patent filings are translated from other languages to English so check for variations of spelling or alternative words and synonyms.
- d) If you know who your competitors are, you might find it useful to search for your competitors' patent applications to see what type of language they use to help inform your search key words.



Tip

Use your search results to continue to inform and refine your future searches.



Step 8

Expand your search beyond patent databases. Consider searching the following databases:

- Google Scholar
<https://scholar.google.com/>
and Web of Science
<https://www.webofscience.com/wos/woscc/basic-search> for scholarly publications.
- Non-patent literature like articles, conferences, publications, or journals (printed or electronic).
- Amazon or other commercial sites.
- The product pages of companies that might be innovating in the same industry.



Note

Find more searching tips click [here](#)



Tip

Your goal is not to examine everything that has been publicly disclosed, but instead review enough information to gain a comprehensive understanding of where the technology solution stands in the industry.

So use common sense to judge when it is time to call it a day... don't keep searching if you are no longer finding many new results.



Step 9.

Record key information from these additional searches, such as:

- The names of source/search result documents
- The relevant intellectual property details
- Where it was disclosed
- A link so you can easily refer to the original source
- Keywords to help further refine searches



Step 10.

Using the results of your searching, create a “map of the landscape” for your idea/ technology solution will be applied.

The following questions can help:

- Which publicly disclosed knowledge and information is relevant to my idea/ technology solution?
- Who are the main competitors and/or collaborators (i.e. companies & researchers)?
- What are the existing market applications for your technology or solutions?

What do my results mean?

I found some published intellectual property that relate to my idea/technology solution...

If the published documents include information about the novel aspect of your idea/technology solution, you may not be able to patent that idea.

Talk to your local IP Office to learn more about what if any IP protection is possible for your idea/technology solution?

For example, “Design Around Options” for your technology solution can be explored.

You may need to do further research before you have enough information to be confident that you can proceed with your commercialisation plans.

I did not find any published documents that relate to my idea/technology solution ...

This is a good sign. You are in a good position to continue with your Commercialisation PLUS journey.

Return to your Commercialisation PLUS Readiness Assessment and continue answering the questions.

Remember to update your search as your ideas evolve over time.

My landscape map (Step 10) identified a number of other inventors and similar products on the market to my idea/technology solution...

Depending on the outcomes of your discussions with your local IP Office, you may want to consider collaborating with them to progress your idea/technology solution towards a commercialisation pathway.



Note

This tool has been developed to help you complete a ‘State of the Art’ search. However, you can also engage an IP expert who specialises in IP searching. These experts typically have access to additional databases.

Consequently, they can complete a more comprehensive check using their specialist experience in IP data collection and interpretation. In addition, their access to paid databases can ensure that you can overcome common search mistakes and ensure that results are interpreted within appropriate contexts. Check with your local IP Office to see who they recommend to help you with your IP State of the Art search.