This Powerpoint Presentation is a basic introduction on patents and on how to search patents.

Outline of Presentation

• Introduction to Patents

• How to Read a Patent Document

• How to Search for Patents
You can say it's like a contract between the inventor and the government authority. The authority in Singapore that issues patent is the Intellectual Property office of Singapore (IPOS). When a patent is granted, you have the right to stop others from making, using or selling the invention for a term of years. To be given this rights, the inventor must give a complete disclosure of his/her invention.

Patents is one type of intellectual property (IP). The others examples of IP include copyright, trademarks, etc.

You can find more information on IP in Singapore, please go to [https://www.ipos.gov.sg](https://www.ipos.gov.sg).
The same invention can be filed in one or more countries. Filing for patents is very expensive and it is often a business decision to decide which countries or jurisdiction you want to file for patents protection.

Patent may first be published as a patent application. This is not the same as granted patent. Patent application does not have the same legal protection as granted patents. If the patent is granted, the granted patent document is also published. Thus, there may be two or more documents published for the same invention, a patent application as well as a granted patent document. If the invention is filed in several countries, there will be multiple documents for the same invention.

Although patent protection is typically 20 years from application, renewal fees must be paid. Failure to pay fees may result in lapse of patent protection. Once the patent lapsed or expired, it may be freely available for anyone to use.

You may have invented something and you think it’s wonderful. You feel there is a market for your product and you want to stop others from copying or selling your invention. But what makes an invention patentable? Here are some general principles on patentability and types of patents.

Patents are broadly divided into 3 types – utility, plant and design (registered designs).

(See IPOS website for more details: https://www.ipos.gov.sg/understanding-innovation-ip/patent)
Usefulness of Searching Patents

“Patents fit at every stage of R&D, from ideation to commercialisation. Patents are an important source of technical information. Engineers should read patents during the innovation process to understand R&D trends, emerging technologies and white spaces. According to a survey by nature,** 60% of all patent readers and 72% of those reading for scientific reasons reported that they found useful scientific information, in the most recent patent read in their field.”

“... Patents are typically granted at a later stage of the R&D process but looking at patent literature should start at ideation. If you have an idea, it may be worthwhile checking whether a patented invention covers it. Looking at patent information prevents you from duplicating effort, and equips you to improve your invention and build around an existing patent.”

Source: https://blog.patsnap.com/ip-data-supercharge-rd
** https://www.nature.com/articles/nbt.3864

As a students, you can search patents to generate ideas for your projects or research. Or search patents to see what have been done before and not duplicate the research work that been done. Patent information is often freely available on the Internet.

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Additional Resources

- Here are some links which you may want to read further on this topic:

- **What is Intellectual Property?**
  The World Intellectual Property Organization (WIPO) website gives information on the different forms of intellectual property (IP) protection

- **The Importance of Intellectual Property (IP) to Your Research**
  Mr. Daniel Poh (Patent Attorney & Partner at Marks & Clerk Singapore LLP) gave a presentation on 24 October 2018 at NUS Libraries. His presentation included an overview of IP and its relevance to research. Part 2 was on the patent system.

1. WIPO link (http://www.wipo.int/about-ip/en/)
2. Mr Daniel Poh’s presentation (https://libportal.nus.edu.sg/media/ms_ru/20181024ru-intellectualpropertypart2.pdf)
Usually patents have a cover page which consists of bibliographic information, abstracts or representative drawings.
Next, it will give descriptions or details like how it works. Lastly, there is a section on claims. This defines the legal boundaries of the invention.

US7,249,913

USD677664S1
https://patents.google.com/patent/USD677664?oq=patent:D677664
Besides looking at title, abstracts, a suggested approach is to look at the claims section. Sometimes the title or abstracts may be vague or contain too much information.

Start with the first claim (Claim 1) which is the preamble.

This is a patent application publication.

This is an example of a granted patent.
Country Code
You will see the patent number with the country indicated in front of the number.

Kind Code
The Alphabet indicated after the number is the Kind Code. It gives an indication of the kind of patent. For example, if you come across a journal article with “US7,249,913 B2”, you know that this is a granted US patent (http://wwwcan.uspto.gov/learning-and-resources/support-centers/electronic-business-center/kind-codes-included-uspto-patent). For patent application which are published, often it is indicated with “A” kind code. However, it is best to check with the individual country’s patent office to see the kind codes used for that country.

For more information on country code, kind code, please visit the NUS Libraries’ Patent Libguide (http://libguides.nus.edu.sg/c.php?g=145610&p=954737)

You can also find related patents using the information found in the References Cited Field.

This is an example of a granted patent. This is a relatively old patent. You will notice that there is no kind code indicated in this patent document.
**Additional Information**

- Here are some links which you may want to read further on this topic:

  - **Journal Article**

  - **Book Chapter**

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**Book Chapter** -

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**How to Search Patents**

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Here are some questions to consider when you want to use patents to generate ideas

Searching patents are just only one aspect, there are other factors to consider if you want to develop your ideas further, e.g. commercializing your products/

Besides patents, you also need to look at other sources e.g. business information, news articles, journal articles.
In summary, in order to retrieve a comprehensive results in your search, you need to look at several factors like identify the right keywords/concepts. Also identify the best database or search engine to use, etc.

Whether you are searching in Patsnap or any databases e.g. Scopus, Web of Science, try to identify appropriate keywords and databases and apply the correct search techniques. You may need to search more than one databases to get the best results.
In most databases, you can combine different concepts together in your search using “NOT”, “AND”, “OR” Boolean search operators.

**NOT**  
You want information containing BED, but not those with FRAME or BED FRAME. Sometimes, it is called AND NOT operator. Using this search operator would retrieve fewer records/results.

**AND**  
You want information containing BED FRAME, not those with just BED, FRAME. Using this search operator would retrieve fewer records/results.

**OR**  
You want information containing BED, FRAME, BED FRAME. Using this search operator would retrieve more records/results. However, it may include irrelevant results as the search terms may occur in the same record but not necessarily what you want!
First break down the topic you want to search into different concepts. For the above topic on “use of artificial grass for landscape purposes”, you may come up with 3 concepts, “artificial”, “grass”, “landscape”.

For each concept, try to identify alternative terms/words.

Combine similar terms using “OR” operator.

Besides combining the words using AND, OR, NOT Boolean Operators, you also have to think about synonyms.

The Lens database is a good alternative to Patsnap and has many useful features. It allows you to find journal articles cited within patent documents.

Espacenet (Worldwide) - [https://worldwide.espacenet.com/](https://worldwide.espacenet.com/)

Google Patents - [https://patents.google.com/](https://patents.google.com/)

The Lens - [https://www.lens.org/lens/](https://www.lens.org/lens/)
The NUS Libraries has a library guide or libguide on patents (http://libguides.nus.edu.sg/patents). If you cannot remember where to look for relevant information, go to this guide.

Go to the Patent Libguide to access the subscribed and free Internet patent resources.

Free Internet Sources - http://libguides.nus.edu.sg/c.php?g=145610&p=954678
Please contact me if you further queries.

Loh Mee Lan  
Senior Librarian  
(Patent Lead & Science Resource Team)  
NUS Libraries  
lohmee@nus.edu.sg

Thank you!!

Prepared by:  
Loh Mee Lan  
Senior Librarian,  
NUS Libraries  
National University of Singapore  
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