

## Exercises Topic 5

We are going to use two free of charge databases

EPO Espacenet: <http://worldwide.espacenet.com/>

WIPO Patentscope: <http://www.wipo.int/patentscope/search/en/search.jsf>

### Task 1: Variations of keyword searches

Q: Search documents with both key words „waste“ and „tannery“ in the title and then in the abstracts field. Do you need to use the AND operator? How many patents do you get?

A: No, the default operator in those fields is the AND; title only: 33 docs; abstract: 95 as of March 13, 2016

Q: Repeat the search with „waste“ and „tanner\*“. How many patents do you get now? Why?

A: title only: 40 docs, abstract: 141 as of March 13, 2016. The reason is that \* is a truncation operator, you therefore search both with the keywords „tannery“ or tanneries“.

**Task 2:** Select an interesting patent document with an abstract in English language in your field of expertise, e.g. US2014063577. Take the abstract and select a few characteristic keywords from it. Use these keywords for searching. Observe how many documents you get depending on the number of keywords. How many do you need to get a small enough result sets that you could screen manually for finding the document. You may also use the words in the title.

A: E.g. for US2014063577 you almost find the document by using 4 keywords: infrared, laser, projection, holographic. By playing in this way one can get a feeling for characteristic keywords and how few are needed to describe some subject matter. It will of course depend on the complexity of the subject matter.

**Task 3:** Keyword searches in Espacenet for the earlier example [WO2006138751](http://www.wipo.int/patentscope/search/en/search.jsf) of claim deconstruction to find relevant prior art. Don't worry about publication dates.

Q: Select a few keywords that you find characteristic for the subject matter described by the above claim and try to find the document itself, and relevant prior art for checking novelty. Do you need to type the AND operator? Use combinations of keywords that give small enough result lists, e.g. with 20-30 hits. If a title in the result list reads promising, screen the document by looking at the drawings/mosaics.

Here is the claim once more

1. *An electrical driven washing apparatus which includes  
a set of wheels (1),  
a cabinet fixed to the set of wheels (2),  
two tanks, one for clean water (3) and one for dirty water (4),  
a water inlet (5) to the clean water tank,  
an electric pump (6) housed in the clean water tank,  
an electrical connection (7) via an inverter (8) to a battery or to an external source of power,  
a solar panel (9) to charge the battery,  
an outlet (10) from the clean water tank to  
a spray gun (11),*

*a wax stick (12) which contains cleaning chemicals and wax placed in the spray gun for soapy water, an inlet (13) for the dirty water tank for dumping dirty water into the tank and an outlet (14) for dumping dirty water into external drains.*

A: No, the default operator in the fields title and abstract is the AND. When you use the generic expression *electrically driven washing apparatus* from the claim, you find 53 documents. The application is among them, you can easily identify it because you know it. However, if you use keywords from the claims which really describe the features of the invention. You would not find it because these keywords do not appear in the abstract and in Espacenet you can only search in title and abstract when you use the worldwide collection.

When you use (wash, pump, solar, battery, spray) you get surprisingly zero results, although they are quite characteristic.

Q: You may use e.g. „wash, spray, solar, battery, tank, wheel“ which somehow describe parts of the inventive device. When you use only keywords from the claim the search result may not very efficient, you find a lot of other cleaning apparatus, and you are most likely not even able to find the document itself. Try to further improve the searches by using a term that is not included in the claim but in the abstract (title) and which defines the application of the washing apparatus. Does the abstract define the invention in comparison to the claim?

A: When you use the above set of keywords together, you again get no hits. This example illustrates limitations of search, e.g. when you can search only in title or abstracts.

When you use (wash, spray, solar), you get some applications for washing solar panels, but no one that comes close to the invention. So you need to think about modifying the keyword search, e.g. by specifying the use, or using synonyms. The word „car“ is not mentioned in the claim but in the abstract and explains the use. The abstract as such does not define the invention, almost no keywords from the claim appear in the abstract. That is an example of how keyword searches done only in title and abstract do limit the efficiency of searches.

When you use the combination „car, wash, spray, battery“ you find a US document which describes a similar invention when looking at the drawings. It is actually in the same patent family to which the document [US2003116646A1](#) belongs which is mentioned as prior art in the WO-A1 search report.

Q: Which words are less characteristic and why? Which synonyms could you consider? Which features may be considered as obvious?

A: Water is less characteristic because washing is usually done with water. So using water in addition does not add much; using water instead of wash would widen the scope far beyond washing.

It is obvious that a tank has an „inlet“; so it is not worth searching for it explicitly. The „outlet“ feature could also be considered as obvious but the claim specifies that the outlet leads to the spray gun, which is not as obvious as the inlet.

#### Synonyms

wash: clean

battery: electric

wheels: portable

tank: container

Q: The search report of WO2006138751 cites [US2003116646A1](#) as relevant prior art. Which keywords from the claim would have led to this document (of course, with some manual screening of the result list); how many other documents are in the result set?

A: see above.

Q: We don't know how the other examiner found the document. His search strategy is not published, except for some rudimentary explanations in the WO-A1 search report. He most likely used also classification search. What is the most appropriate classification symbol for the invention? Try also a combination of this symbol with keywords that you find appropriate.

A: Classification is B60S 3/04. We know it because the subject matter of the above claim was classified there. An examiner working in the respective field would know the appropriate classification. Together with 'solar' you get 27 hits which can easily be screened manually. The classification with 'battery' gives 127 results which could also be screened manually. The [US2003116646A1](#) is among them.

**Task 4:** Find patent documents describing processes where soy beans are exposed to an acidic solution (the example from the presentation).

Here is the claim 1:

*A method of producing a soya bean product, the method including the step of exposing soya beans to an acidic aqueous solution.*

Q: Which publication number has the document, the claim was taken from?

A: [WO2005055733](#) is the document. Again, like in task 2, it is easy to find the document by searching just for the generic description 'method of producing a soya bean product' taken from the claim.

**Task 5:** Calculate recall and precision for the below search result (dashed loop)

