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Want to find? Break the rules!

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ABSTRACT

My search strategies are messy; what does this mean? Is it a sign of intelligent quick and dirty searching? I sure hope so, but is it? That patent searching is an art after all? Could be, but it's probably only an art when conducted by the unconsciously competent ones among us and that brings me to the question: am I unconsciously incompetent or unconsciously competent?

I am going to investigate this by taking a look at what my drivers are when I conduct searches: these drivers are the requirements of the client and my personal objectives which combined translate into a set of general objectives that I seem to use for most of my searches (primarily novelty and validity searches). These general objectives in turn determine how I tackle searching in practice. It turns out that I basically break every search rule there is.

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1. Introductions

This article focuses on how to find the most relevant records in a patent database with worldwide coverage typically containing tens of millions of records. More specifically, it focuses on how to find a *single* novelty destroying document for a patentability or validity search. It is expected however, that the contents of this article may prove to be useful for patent searching in general. The article is more of a personal account of the way the author searches rather than being intended as a guideline for other searchers; readers should decide for themselves whether and how some of the content of this article can be of use to them in their searching practice.

1.1. Considerations

For most searches only a limited amount of time is available. You will therefore need to find fast (enough) or perhaps you will find not at all.

This means that for many searches effectivity is determined by efficiency: do more of the most useful in less time to increase the chance of finding.

To be efficient we need to skip everything that costs time and does not (sufficiently) contribute to finding fast.

Finding fast or at least learning fast; In case finding fast does not seem to be an option then aim at creating a collection: a process which will provide you with clues which may point you in the right

direction to continue your search.

If there is something to be found most often it is found during the earlier stages of the search rather than later **because** a searcher should start searching there where there is a relatively high chance of finding relevant material, for instance:

- review by descending priority date for novelty searches (look at most recent filings first)
- search in title and abstract (and claims) rather than in full text
- review publications of known assignees
- use very specific keywords or phrases
- use very specific classes

This translates to “start small, expand carefully”; Start small to have high *precision* (precision being defined as the fraction of the retrieved documents that are relevant to the query) and few hits. Don't worry about *recall* (recall being defined as the fraction of the relevant documents that are retrieved by the query) just yet, but make sure most hits are relevant and worthwhile review; Expand carefully to increase recall while at the same time avoiding to unnecessarily clutter results with noise.

1.2. The KISS principle

To be efficient we also need to apply the KISS principle: Keep It Simple and Straightforward:

- Don't try to be complete right from the beginning (too difficult, at least for me)

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- Don't use all classes but only the most useful ones
- Don't use all keywords but only the most useful ones
- Don't search full text but start searching title, abstract (and claims)
- Don't use proximity operators, especially when searching title and abstract, but rather use AND first. This contradicts to start as precise as possible but is in line with the consideration not to apply any unnecessary restrictions.
- Don't use many wildcards for a single character at the end of a word but rather use truncation. Also this contradicts to start as precise as possible but is in line with the consideration not to apply any unnecessary restrictions.
- To avoid long queries, don't combine all aspects in one query but rather search each aspect separately first and then combine the different queries
- Aim for small result sets, e.g. 50 records at a time and then expand with 50 new ones with slightly less precision but nevertheless increasing recall

In general, the searcher should start as precisely as possible [1]. Search the unusual terms. Search by AND-ing precise words (or phrases) and/or classes. Then expand carefully (to obtain higher recall if and when necessary): start searching abstracts or claims before turning to full text searching. Work your way down from the high precision words and classes to the lower precision words and classes. Also citation and company or inventor name searches may be of help to carefully expand the collection of publications for review.

1.3. Ignorance is bliss ...

Ignorance may be bliss; however, I'd rather be blissfully ignorant of being competent rather than being blissfully ignorant of being incompetent.

You may have heard of the *The Conscious Competence Learning Model* (as developed by Noel Burch back in the 1970's) which tries to explain how we get better at acquiring a skill:

1. Unconsciously incompetent – we don't know that we don't have the skill, or that we need to learn; we are blissfully ignorant:)
2. Consciously incompetent – we know that we don't have the skill; chances are we become depressed, but hey, we moved one step up the ladder
3. Consciously competent – we know that we have the skill; Yes we can!
4. Unconsciously competent – we don't know that we have the skill or we somehow just forgot, and once again we are blissfully ignorant:)

As a patent information professional I believe I made the journey from 1 to 2, from 2 to 3 and perhaps even from 3 to 4, but did I? When looking at some recent search strategies of mine, I must confess they look an awful lot like the ones you'd expect from an unconsciously incompetent searcher rather than from an unconsciously competent finder.

So the question is: Did I really make it all the way up to learning stage 4? Or did I somehow manage to end up back where I started at 1? As I'm blissfully ignorant either way, there is no way for me to tell.

In summary: My search strategies are messy; but what does this mean? Is it a sign of intelligent quick and dirty searching? I sure hope so, but is it? That searching is an art after all? Could be, but it's probably only an art when conducted by the unconsciously competent ones among us and that brings me back to the question: *am I unconsciously incompetent or unconsciously competent?*

I am not going to provide an answer but I am willing to investigate this by taking a look at what my drivers are when I conduct searches.

2. What determines how I search? What are my drivers?

My *drivers* are the requirements of the client and my personal objectives which combined translate into a set of general objectives that I seem to use for most of my searches (primarily novelty and validity searches). These general objectives in turn determine how I tackle searching in practice. It turns out that I basically break every search rule there is.

2.1. Requirements of the client who requested the search

- the intended use of the results determines the type of search required: for instance a novelty-, validity- or freedom to operate search
- specific report format requirements if any
- disclosure of search strategy in the report if required: necessitates the need for a clean strategy (or the need to clean up afterwards)
- the available budget which in turn determines the maximum amount of time available for the search
- the question whether the full budget should, or is expected to be used or that the search should be stopped, at least temporarily, as soon as a single very relevant document has been found
- technical subject matter

2.2. My personal objectives

- A satisfied customer no matter what (i.e. find or make sure to do a comprehensive search)
- Willing to spend more time than budget allows at my own expense
- The adrenaline rush of searching when I'm getting close or actually find

2.3. Translation to general objectives

For novelty and validity searches the above requirements most often boil down to the following general objectives for my searches:

- **Find** a novelty or validity destroying document (which from hereon will be called "a very relevant document") **as quickly as possible**; for me, every search is a puzzle waiting to be solved, solved quickly.
- If finding quickly seems to be a reasonable possibility, i.e. if I believe that very relevant prior art should indeed exist then I proceed by implicitly/subconsciously asking the following question:

Where and how can I "cut corners" in the more or less standard search process to increase the chance of finding a very relevant document fast/ASAP/quickly?

3. Break the rules!

3.1. Guidelines

The general objectives discussed in section 2 in turn provide me with the following guidelines. *Caveat*: many of these guidelines suggest breaking each and every rule for searching that you may be

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