Search Tools and Strategies

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Innovation and Technology Support Section

WIPO
Contents

- Search Fields
  - Bibliographic data
  - Text
  - Combining fields
- Query syntax
  - Keywords and phrases
  - Operators
- Citations
- General Search Strategy Steps
- Simple Example
A patent document comprises, amongst others parts:

- **Bibliographic data** – on the front page is printed bibliographic data, which includes title and abstract, but also dates, names and classifications.

- **Text**: title, abstract, description and claims – collectively the full text.
(EN) The electric car is almost entirely covered with solar cells. In addition, transparent solar cells are incorporated into the windshield and into the other windows of the car. The various features of the car give it considerable autonomy.

(FR) La voiture électrique est pratiquement complètement recouverte de cellules solaires. De plus, des cellules solaires transparentes sont intégrées au pare-brise ainsi qu'aux autres vitres de la voiture. Les différentes caractéristiques de la voiture lui confère une autonomie considérable.
Searching patent document reference numbers and dates

- Application or filing number
- Publication number
- Priority number
- Application date or filing date
- Publication date
- Priority date
Searching applicants’ or inventors’ names

- Search an applicant or inventor’s name:
  - Novartis, BMW, Sony, Mittal, etc.
  - Dyson, Smith, etc.

- Careful since same applicant may use different versions of their name, e.g. International Business Machines Corporation, IBM, IBM Ltd., IBM GmbH, etc.
Searching by patent classification

- Similarly you can search using patent classification:
  - IPC
  - ECLA
  - F/FI Terms
  - USPC
  - Others
Combining search fields or criteria

- Fields can be combined eg: **IC:H01Q1/24 and AB:protect**
  
  (H01Q1/24 deals with aerial mounting means for mobile phones)

- This will search documents classified in **IC:H01Q1/24 and having the word “protect” in the abstract**

- Results: **19** for Criteria: **IC:H01Q1/24 and AB:protect**
Keywords and phrases

- Single words such as tennis or ball - are searched individually
- Phrases such as “tennis ball” - are searched together but nothing else, i.e. “soft tennis ball” or “tennis ball or racket”
- Searching a word or phrase in different fields also has an effect on the relative importance of that word, e.g.:
  - The full text for any mention of a “tennis ball” is general
  - The abstract mentioning of a “tennis ball” is fairly significant
  - The titles mentioning of a “tennis ball” is much more significant
Operators

Operators are used to widen or to narrow the search of keywords or phrases beyond the actual keywords or phrases entered into the search query.

- **Boolean operators**: AND, OR, ANDNOT (or NOT), XOR
- **Proximity operators**: NEAR
- **Range operators**: `term1 TO term2`
- **Wildcard operators**: ?, *, $
Boolean operators

Results in PCT collection (English titles):

- **195** (tennis)
- **2,454** (ball)
- **2,649 total**
Boolean operators: AND

Results in PCT collection (English titles)
- 34 (tennis AND ball)
Boolean operators: OR

- Results in PCT collection (English titles)
- 2,615 (tennis OR ball)
Boolean operators: NOT (or ANDNOT)

Results in PCT collection (English titles)

- 161 (tennis NOT ball)
Boolean operators: XOR

Results in PCT collection (English titles)
- 2,581 (tennis XOR ball)
Proximity operators

- Operators: NEAR
- Search terms within a certain range of each other and in some cases (not all) in any order
- Example:

  concrete NEAR building

  - concrete building
  - building made of concrete
  - building containing elements made of concrete

  NOT: building construction being made of certain elements containing concrete
Wildcard operators

- Operators: *, ?, $
- Unlimited characters: *, $
  - elect* → electric, electronic, electron, election …
- Single character (stackable): ?
  - coll?sion → collision, collusion …
  - foc?? → focus, focal …
- However, *, ?, $ cannot be used as the first character of a term
Patent databases : Special operators

- PATENTSCOPE® search service
  - Date and number ranges : -
  - Date and number ranges : [xxx TO yyy]
  - Search term weighting : ^
- USPTO
  - Date ranges : -
Parentheses and nesting

- Parentheses can be used to group words to form nested queries:
  - search for either solar or wind, together with turbine
    - use the query: \((\text{wind OR solar}) \text{ and turbine}\)
  - This will find documents containing wind and turbine
    and also documents containing solar and turbine
Using citations and references

- Application description prior art explanation
- Search report citations
  - Document categories:
    - X: novelty destroying
    - Y: inventive step destroying
    - A: state of the art technical background
**INTERNATIONAL SEARCH REPORT**

**PCT/AT 02/00172**

**A. CLASSIFICATION OF PRIORITY DATA**

| IPC | B62M5/08 |

**According to International Patent Classification (IPC) or to both national classification and IPC**

**B. FIELDS SEARCHED**

Minimum documentation searched: classification system (followed by classification symbols)

- IPC 7 B62M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

- EPO-Internal, WIPO Data, PAO

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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<tr>
<th>Category</th>
<th>Citation</th>
<th>Description</th>
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<td>X</td>
<td>FR 616 404 A (DANIEL FRANCOIS-LEOPOLD-AUG)</td>
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<td>US 5 628 710 A (HERVIB DANA F)</td>
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<td>WO 00 68067 A (BADARNEH ZIAD)</td>
<td>abstract, figures</td>
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</table>

**Further documents are listed in the continuation of this table.**

**Patent family members are listed in annex.**

**D. DOCUMENTS CONSIDERED TO BE RELEVANT**

- D: document published after the international filing date or priority data and not in conflict with the international application but cited to understand the principle of the invention
- E: document published before the international filing date or priority data and cited to understand the principle of the invention
- X: document of particular relevance; the claimed invention cannot be considered inventive step over the document cited

**Date of the actual completion of the international search**

10 September 2002

**Date of mailing of the international search report**

17/09/2002

**Name and mailing address of the ISA**

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**Authorized officer**

Wagner, H

**WIPO WORLD INTELLECTUAL PROPERTY ORGANIZATION**
Basic Search Strategy (I)  
(applicable to any patent search)

1. Find keywords expressing the essential concept of invention (*alternatively, start with IPC, i.e. in step 4. and then use keywords*)

2. Find synonyms of these keywords from:
   - technical dictionaries
   - documents already found in this technical field
   - patents classifications
   - Tools such as CLIR

3. Carry search to see first broad results indicating also more synonyms and classifications
Basic Search Strategy (II)

4. Find useful patent classification symbols

5. Use keyword search to find the most relevant classification (compare different classifications if necessary as regards their relevance to your search)

- IPC TACSY: http://www.wipo.int/tacsy/
- USPTO: http://www.uspto.gov/go/classification/

6. Carry out search to find relevant classified documents
Basic Search Strategy (III)

7. Combine the results of the classification search with additional features of the searched technology using keywords

8. Iterate this procedure

9. In general, start broadly (recall) and narrow down (precision) to relevant documents as search progresses

10. Read carefully a manageable number of documents
Thank you for your kind attention!

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