Comparing and Combining First-Level and Value-Add Patent Data

Steve Hajkowski
Product Manager

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Agenda

- Overview of patent search types
  - using full-text and value-add databases
    - advantages and disadvantages

- Case study

- Summary & conclusions

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Patent search options - Full text databases

- **Advantages**
  - Comprehensive search of the entire document or specific parts, e.g. claims
  - Large backfiles available
  - Data loaded quickly following patent publication
  - Low cost or no cost

- **Disadvantages**
  - May be overloaded with results
  - Relevancy could be low
  - Specialized indexing & structure searching not available

- **Other factors - multiple languages, patent families…**

Patent search options - value add databases

- Advantages
  - critical information extracted & presented
  - data in standard format
  - higher relevancy searches
  - details all in English
  - patent families compiled
  - search via deep indexing & structure searching

- Disadvantages
  - higher cost
  - time delay from publication to loading
  - extra step to find the original patent

Patent search options - which to choose

- **Many factors**
  - expertise of the searcher
  - budget
  - type of search request, e.g. freedom-to-operate

- **Traditionally difficult to combine the two approaches**
  - results from different sources require de-duplication
  - requires a good understanding of patent families

- **So what's the current situation?**

Case Study

- Subject - patents for magnetic nano-structures used in drug delivery

  - many uses possible, e.g.

    - to deliver chemotherapy drugs directly to cancer cells
    - tracking movement of molecules towards a target site
    - to remove pathogens e.g. viruses from blood

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Case study

- Objectives
  - compare what's available from full-text and value add databases
  - can they be successfully combined in a single search?

- Searches run on Thomson Innovation
  - provides full text searching for US, WO, EP, DE, FR, GB
  - Japanese full-text Machine Assisted Translations additionally available
  - value-add data via *Derwent World Patents Index (DWPI)*
    - 41 authorities covered; specially written titles, abstracts & indexing
  - Literature and business databases also available

Case study

- Three searches will be run
  - #1 full-text patents only
  - #2 *Derwent World Patents Index (DWPI)* only
  - #3 full text and *DWPI* combined in a single search

- Search #1 - Full text

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Search terms

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Text Fields ▾ ? (*NANO* NEAR4 *MAGNETIC*) SAME (DELIVER* OR ADMINIST* OR TARGET* OR LOCAT* OR SITE OR RELEAS*)

(printer AND scanner)

AND ▾ Any IPC ▾ ? A61K Browse *B65H002912 \ (A61K39205 O.*

AND ▾ Assignee/Applicant ▾ ? Browse *Fanuc Ltd \ Sony \ XI NING*

AND ▾ Publication Date ▾ ? From: 2000-01-01 To:

A61K = IPC for medical preparations

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| ⌄ | **Refine Search** | 654 records found out of 22931491 records searched (Display Limit 30000) |

654 results produced from full text + JP MAT search

⌄ Filter R

Patent Result Set

http://www.thomsoninnovation.com - Thomson Innovation - Mozilla Firefox

Display and Sort Options

Select the fields you want displayed on your result set

☐ Relevancy   ☐ DWPI Drawing   ☑ Title   ☐ DWPI Title
☐ Abstract   ☑ Assignee/Applicant   ☐ DWPI Assignee   ☑ Publication Number
☑ Publication Date   ☐ Application Number   ☐ Application Date ☐ Priority Number
☐ Priority Date   ☑ Current IPC   ☐ ECLA   ☐ Main US Class
☐ DWPI Main Class   ☐ DWPI Update   ☐ Inventor   ☐ DWPI Accession Number
☐ DWPI Assignee Code

Reduce to one member per patent family

Select icons to display: Sort by: default
📕 ☑ Patent copy   Default: 10 ▾ records per page   Preferred document: None
📙 ☑ Notes (work files only)   Drawing Size: Thumbnail ▾   Authority: INPADOC Family
                                                                                          Derwent Family
*Collapsing reverts back ~~to none after each search~~   ~~Set in your preferences~~   Application Number
if you want this option retained*

Default   Cancel   OK

Done

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Patent Result Set
(440 Derwent Families)

440 results now displayed as one patent per family (cf 362 Inpadoc families)

| Save ▼ | Alerts ▼ | Marked List ▼ | Document Delivery ▼ | Print ▼ | Highlight |

☐	⊞	**Publication Number**	**Assignee/Applicant**	**Publication Date**	
☐	−	US20040086495A1	EUCRO EUROP CONTRACT RES GMBH	2004-05-06	A61K 31/00
📩		**Title:** Method for the treatment of arteriosclerosis			
☐	−	US20050171433A1	-	2005-08-04	A61B 5/00
📩		**Title:** Multi-functional plasmon-resonant contrast agents for optical coherence tomography			
☐	+	WO2007038249A2	UNIV CALIFORNIA	2007-04-05	A61K 49/22
📩		**Title:** ULTRASONIC CONCENTRATION OF CARRIER PARTICLES			
☐	−	WO2007116954A2	FUJIFILM CORP	2007-10-18	A61K 49/06
📩		**Title:** NANOPARTICLE			
☐	−	US20070048383A1	-	2007-03-01	A61K 9/14
📩		**Title:** Self-assembled endovascular structures			
☐	+	US6530944B2	RICE UNIVERSITY	2003-03-11	A61K 9/00
📩		**Title:** Optically-active nanoparticles for use in therapeutic and diagnostic methods			
☐	−	WO2006086716A2	XCYTE THERAPIES INC	2006-08-17	C12N 5/06
📩		**Title:** DONOR LYMPHOCYTE INFUSION OF T CELLS FOR THE TREATMENT OF CANCER			

Displaying 1 - 10 of 440   ◀◀ **1** 2 3 4 5 ▶ ▶▶ Page 1 of 44

Sample Inpadoc family – 9 members

Patent Result Set

Save ▼		Alerts ▼		Marked List ▼		Document Delivery ▼	

☐ ⊟ EP1648381A2   TRITON BIOSYSTEMS INC   DE10331439A
Title: MAGNETIC NANOPARTICLE COMPOSITIONS, AND METHODS RELATED THERETO

☐ EP1409077A2   TRITON BIOSYSTEMS INC   US2001307785P
Title: THERMOTHERAPY VIA TARGETED DELIVERY OF NANOSCALE MAGNETIC PARTICLES

☐ US20030032995A1   TRITON BIOSYSTEMS INC   US2001307785P
Title: Thermotherapy via targeted delivery of nanoscale magnetic particles

☐ US20050271745A1   -   US2003360561A
Title: Magnetic nanoparticle compositions, and methods related thereto

☐ US6997863B2   TRITON BIOSYSTEMS INC   US2001307785P
Title: Thermotherapy via targeted delivery of nanoscale magnetic particles

☐ WO2003022360A2   TRITON BIOSYSTEMS INC   US2001307785P
Title: THERMOTHERAPY VIA TARGETED DELIVERY OF NANOSCALE MAGNETIC PARTICLES

☐ WO2003022360A3   TRITON BIOSYSTEMS INC   US2001307785P
Title: THERMOTHERAPY VIA TARGETED DELIVERY OF NANOSCALE MAGNETIC PARTICLES

☐ WO2005013897A2   TRITON BIOSYSTEMS INC   DE10331439A
Title: MAGNETIC NANOPARTICLE COMPOSITIONS, AND METHODS RELATED THERETO

☐ WO2005013897A3   TRITON BIOSYSTEMS INC   DE10331439A
Title: MAGNETIC NANOPARTICLE COMPOSITIONS, AND METHODS RELATED THERETO

14

Sample Derwent family – 3 members

Patent Result Set

Save ▼ | Alerts ▼ | Marked List ▼ | Document Delivery ▼ | Print ▼

		Publication Number	Assignee/Applicant	Priority Number
☐	⊞			
☐	⊟	EP1648381A2	TRITON BIOSYSTEMS INC	DE10331439A
📄		Title: MAGNETIC NANOPARTICLE COMPOSITIONS, AND METHODS RELATED THERETO		
☐		WO2005013897A2	TRITON BIOSYSTEMS INC	DE10331439A
📄		Title: MAGNETIC NANOPARTICLE COMPOSITIONS, AND METHODS RELATED THERETO		
☐		US20050271745A1	-	US2003360561A
📄		Title: Magnetic nanoparticle compositions, and methods related thereto		

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Sample Derwent family – 3 members

Patent Result Set

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☐ ⊞	Publication Number	Assignee/Applicant	Priority Number
☐ ⊟	EP1648381A2	TRITON BIOSYSTEMS INC	DE10331439A
	Title: MAGNETIC NANOPARTICLE COMPOSITIONS, AND METHODS RELATED THERETO		
☐	WO2005013897A2	TRITON BIOSYSTEMS INC	DE10331439A
	Title: MAGNETIC NANOPARTICLE COMPOSITIONS, AND METHODS RELATED THERETO		
☐	US20050271745A1	-	US2003360561A
	Title: Magnetic nanoparticle compositions, and methods related thereto		

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- Search #2 - *DWPI*

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☆ **Collections to Search:** *Enhanced patent data from DWPI*

Select Collections ⊙ **Enhanced Patent Data - DWPI** ○ **Patent Collections by A**

Search Criteria

All Text Fields - DWPI ▾ **?** | (*NANO* NEAR4 *MAGNETIC*) SAME (DELIVER* OR ADMINIST* OR TARGET* OR LOCAT* OR SITE OR RELEAS*)|

((printer AND scanner) NOT inkjet)

✕ AND ▾ | Any IPC ▾ **?** | A61K | Browse | *B65H002912 \ (A61K39205 O*

✕ OR ▾ | DWPI Class ▾ **?** | B | Browse | *F01 / D11 / P32*

✕ AND ▾ | Publication Date ▾ **?** | From: 2000-01-01 | To: |

Add Field | Show All Fields | Display and Sort Options | *Queries are not case sensitive — this includes operators, fields, and*

Click to see the command language

�> **Query Previewer** | *View and edit your query or enter a new query*

DWPI Class B = pharmaceuticals

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Results management + de-duplication

Saved searches can be combined with AND, OR, NOT

- Search #3 - full-text and *DWPI* together in one search…

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Patent Result Set
(484 Derwent Families)

484 hits after collapsing by Derwent family

| Save ▼ | Alerts ▼ | Marked List ▼ | Document Delivery ▼ | Print ▼ | Highlight | E |

☐	➕	**Publication Number**	**Assignee/Applicant**	**Publication Date**	
☐ 📄	➕	WO2003072803A2	NANOFRAMES INC	2003-09-04	B82B 1/00
		Title: NANOSTRUCTURES CONTAINING ANTIBODY ASSEMBLY UNITS			
☐ 📄	➖	US20050171433A1	-	2005-08-04	A61B 5/00
		Title: Multi-functional plasmon-resonant contrast agents for optical coherence tomography			
☐ 📄	➕	US20050136258A1	-	2005-06-23	B32B 5/16
		Title: Bioconjugated nanostructures, methods of fabrication thereof, and methods of use thereof			
☐ 📄	➕	US20020103517A1	-	2002-08-01	A61K 9/00
		Title: Optically-active nanoparticles for use in therapeutic and diagnostic methods			
☐ 📄	➕	CN1785161A	UNIV ZHONGSHAN	2006-06-14	A61K 9/16
		Title: Magnetic nano-balls carried with cisplatin and its prepn. method			
☐ 📄	➖	US20070154397A1	IND TECH RES INST	2007-07-05	A61K 49/06
		Title: Thermosensitive nanostructure for hyperthermia treatment			
☐ 📄	➖	WO2007097473A1	JAPAN GOVERNMENT	2007-08-30	A61K 49/00
		Title: ORGANIC MAGNETIC NANOCOMPLEX HAVING FUNCTIONAL MOLECULE INTRODUCED THEREIN			

Displaying 1 - 10 of 484   ◀◀ 1 2 3 4 5 ▶ ▶▶ Page 1 of 49

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Summary

Search		Records
1.	Full text only	654
	..collapsed by INPADOC family	362
	..collapsed by Derwent family	**440**
2.	DWPI only	193
	..hits unique to DWPI	**99**
	1 and 2 combined	*539*
3.	Single search of full-text + DWPI	*484*

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Search summary

- Full text gives the highest number of hits
  - collapsing by INPADOC gives a smaller set than by *DWPI* family
    - *DWPI* has more strict rules for applying family relationship between documents

- *DWPI* gives a smaller set than full-text
  - higher relevance titles and abstracts are searched

- Making separate searches allows more precision
  - can tailor each search with e.g. indexing terms
  - extra combining/de-duplication step required

- A single combined search improves on either separate search, and is more convenient

Conclusions

- Important to search both full text and value-add datasets

- Single search approach gives a good result but can be improved by using specialist indexing

- New tools offer the user easier de-duplication and patent family manipulation from disparate sources

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