



Protection and Access to Innovation on the Net

Madrid May 2002

Derwent Web Innovations

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Good afternoon everyone.

First of all, many thanks to OEPM and the Ministry of Science and Technology for their kind invitation to speak today. That appreciation comes from my company, Derwent, and from me personally.

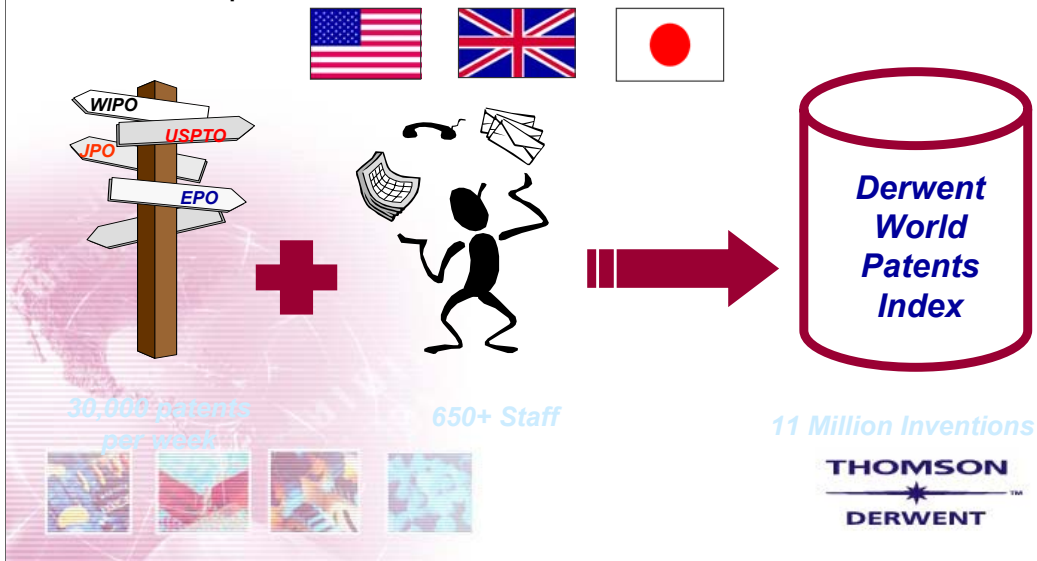
Just as the legal systems for intellectual property protection themselves are complex, so are all the issues surrounding their information and documentation.

Having first discovered patents as a research chemist joining industry from university some 40 years ago, and now spending most of my time with our users in patent offices, I am certainly still learning.

Patent information must be about the users. Those of us involved with running the information systems need to work together for their benefit

Derwent Information

- ❑ A global company, part of the Thomson Corporation



We're a global company, part of the International Thomson Organisation, with over 700 employees located worldwide in London, Manchester, Glasgow, Tokyo and Washington DC.

We take patent documents from 40 patent issuing authorities around the world - on average 30,000 documents per week - and extract the business critical information from these complex documents through a process of translation, standardisation, abstracting and indexing.

The major output is the Derwent World Patents Index - a database that now contains 11 millions records representing over 20 million patent filings since 1963.



Introducing Derwent

- ❑ World's leading supplier of value-added patent and scientific information

- ❑ Derwent World Patents Index
 - World's largest value-add database
 - ❑ 11 million "basic patents" plus equivalent filings from other issuing authorities
 - ❑ Covers 40 issuing authorities including:
 - USPTO
 - JPO
 - Major European Offices



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The Web is Latest in a Continuum

- ❑ **1950s Printed Abstracts Bulletins. Paper Indexes**
- ❑ **1960s Punched Cards and Some Magnetic Tape Files for in-house Database Management Systems**
- ❑ **1970s ARPANET and NASA systems lead to DIALOG and ORBIT**
- ❑ **1980s DIALOG, ORBIT grow rapidly. Backfile text keyboarded. Structural Chemical searching**
- ❑ **1990s STN as new Host, First Web services**



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As an information scientist, I really have to view the Web as the latest in a string of developments, each one of which seems to be more absorbing and useful than the last.

However, we are a long way from being able to have instant wisdom.

We are equally far from any thought of a single system fitting everyone's needs.

Innovation applies as much to our IP information systems as it does to technology in general



Impact of Classic Online

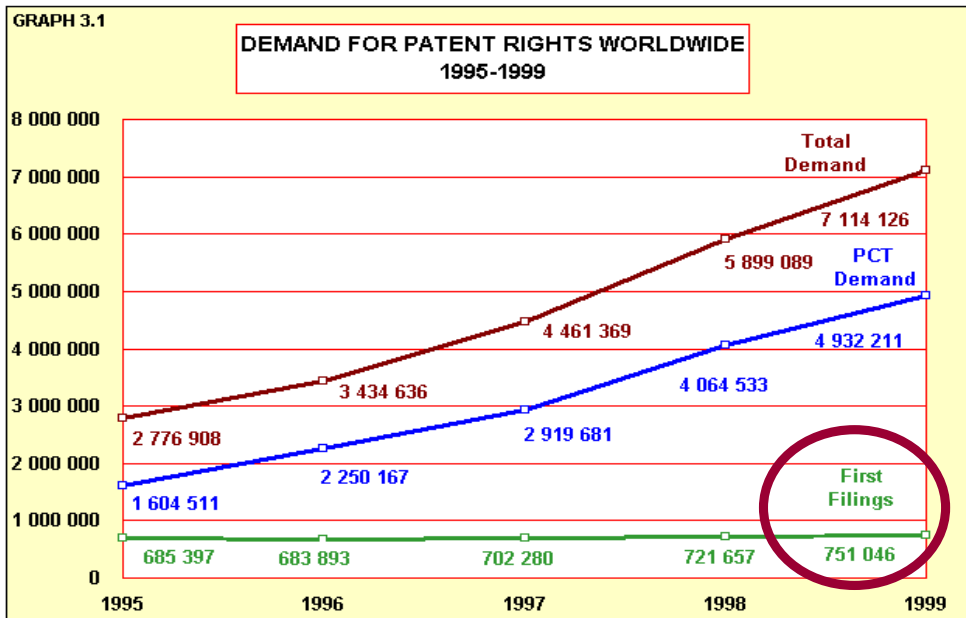
- ❑ **Approx 50% of Derwent's £70M Revenue from Online**
- ❑ **Business-critical users stay with classic online**
- ❑ **Hosts offer Web options**
- ❑ **Derwent develops Web services as basis for future**
- ❑ **Younger graduates begin to demand web-only options**



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From our Derwent viewpoint, this is what we see happening at this moment.

Without doubt most end-users with occasional use prefer the intuitive web systems.



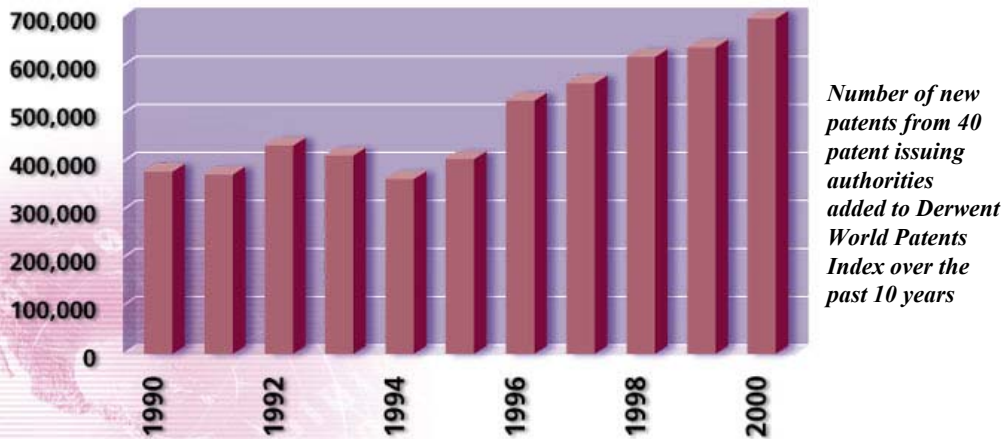
Source = 2000 Trilateral Statistical Report

This graph is from the Trilateral Report, which is on the EPO web site.

Notice the increase in the numbers of patent documents and the relationship to numbers of actual inventions as defined by “first filings”



Annual increase in patented inventions



Number of new patents from 40 patent issuing authorities added to Derwent World Patents Index over the past 10 years



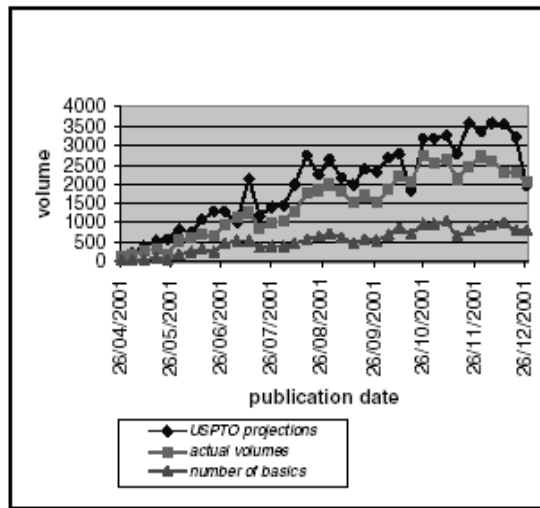
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One of the important things which Derwent does is to cover 40 “countries” and organise the records so that, more or less, you have one record per invention.

This year we expect to cover 1.5 million new inventions



Growth in New US Applications



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By far the largest impact in 2001 to 2002, and continuing has been from the new US Applications.

It is the cost of covering such volumes of information, making abstracts and indexing, which makes Derwent relatively expensive.

For us, new information policies of patent offices have not changed the economics, but streamlining production processes has helped to reduce the scale of increases.

One of the re-discoveries of the Web age, is that content is important.

Basically, Derwent's services, right from the beginning, have been influenced continually by customer needs



Finding the right patent

- Millions of documents X
- Various languages X
- Deliberately obscure X
- Hundreds of pages X
- Legal jargon X
- Unlikely to be instantly to hand X



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These are the obstacles that all users are faced with in trying to get the right answers.

Worldwide, over 30-40 million patents have been published to date, and over four million* are currently in force.

The patents may be filed at one of over 40 patent offices, in a variety of languages.

Because patents are usually filed well before the inventions they describe are ready for market, the patent experts who write them frequently try to obscure the novelty of the invention, to reduce the chance of competitors finding the information.

To add to these problems, some patents contain well over 200 pages of technical information, or even thousands of pages in the case of genetic sequences

And they are written using legal terminology unfamiliar to those more used to scientific or technical text.

The sheer numbers of patents published also make it unlikely that an original patent document of particular interest will be "on the shelf" for instant browsing



Adding value to patent information

- Abstract** key information
- Remove** legal jargon
- Add** subject indexing
- Assign** patentee codes
- Select** the key drawing/structure
- Write** completely in English



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One of the main ways we add value to this information is by extracting the key information from the patent.

Our editors create an enhanced title and **abstract** which summarises the most salient points and key technologies described in each patent. We remove any **legal jargon** so that the technical content of the patent is easily understood, and make it easy to find related patents by grouping them together in "patent families"

We add **subject indexing** to our patent records to enable precise, technology-specific searching of our data - more about this later.

We also assign **patentee codes** to the 21,000 organisations worldwide that patent frequently, enabling rapid searching for applications from specific companies.

Because there is no standard language for patents, we provide all this information **in English**, whatever the language of the original patent document

DWPI Enhanced Titles



United States Patent [19]

[11] 4,148,410
[45] Apr. 10, 1979

Brown

[64] **TAB FOR EASY - OPEN ECOLOGY END**

[75] Inventor: Omar L. Brown, Dayton, Ohio

[73] Assignee: Ermal C. Frazee, Dayton, Ohio

[21] Appl. No.: 875,268

[22] Filed: Jan. 30, 1978

Original title

Pull-tab can with tab retained after opening - by flap shaped to provide bending regions adjacent affixing portion and opening end

Patent Assignee: (BROWN) BROWN O L; (FRAZEE) FRAZEE E C

Author (Inventor): BROWN O L Number of Patents: 002

Patent Family: CC Number Kind Date Week

US 4148410 A 19790410 7917

(Basic)

US RE31702 E 19841009 8443

Priority Data (CC No Date): US 873268 (19780130); US 201357 (19801027)

Abstract (Basic): When the tab is lifted by its lifting end, its opening end ruptures a scored line defining a panel, and this opens the container...

**Derwent
Title**



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Both titles and abstracts are specially written by us - and that makes even simple word searching much more effective - not to mention spotting a relevant item from a long list



Derwent Indexing

Bibliographic

Patentee Codes

Technical Content

Linear Hierarchies (like IPC)

- Derwent Classes
- Manual Codes
- Genetic Sequences

Fragmentation Codes

- ### Graphic Structures
- Markush DARC (MMS)
 - ISIS/MDL



This is just a summary of current types of indexing which are also there to make retrieval easier



Derwent manual codes: refining patent searching

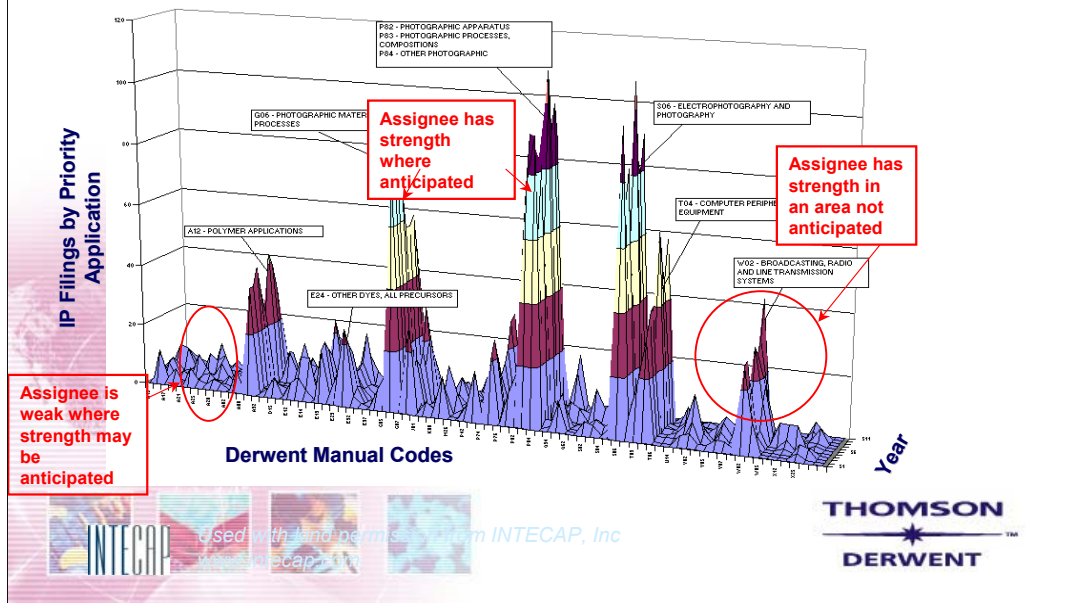
- 9000+ chemical codes
- 9000+ electrical and electronic codes
- Over 1400 new codes added Jan 2002
- Significantly improve speed and accuracy



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Easiest to use are so-called Manual Codes

IP Profiling: Assignee Activity over Time using Derwent Classification



Example of how you can use Manual codes for analysis of an organisation's patent portfolio...by courtesy of InteCap who specialise in Intellectual Asset Management studies

“This is a straightforward example of IP profiling and, I think, provides an excellent starting point for analysis. In this case, showing one assignee's filing activity, by Derwent class, over time, presents us with a chart that helps an analyst identify areas where the assignee has strength where we would expect to see strength. We can also see that there are areas that we expected strength and yet the assignee did not have that much activity. And we can quickly determine where the assignee has strength where we did not anticipate such activity.

Finding the surprises are what make a chart like this useful. This also becomes a nice communication vehicle to non-IP professionals since it is visual in nature and can provide information at a high level for quick assessment and understanding for managers with limited time.”

Access to Derwent data

Traditional online



**Business critical &
legal decisions**

Web interfaces



**End -user friendly with
patents and literature**



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Customers like to have a choice, and always will - and each has different needs.

Classic online (Questel, STN and DIALOG) is very important for regular users with demanding searches, and it continues to develop with Web interfaces becoming more popular.

So far there is a difference in that Web services are Fixed-fee/unlimited use.



What's new on the web?

- Derwent Innovations IndexSM version 3.0
- Derwent Web of Software
- Derwent Biotechnology ResourceSM
- GENESEQ.COM
- Derwent Discovery



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All of these are important, but I need to be selective



Derwent Innovations IndexSM version 3.0

- Advanced search**
- Combined Search**
- Save search history**
- Wider selection of links to original patent documents**



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DII Combines Derwent World Patents Index and Patent Citation Index.

All the Derwent Records with the drawings are there

Patent Document Delivery in v3 has direct links to esp@cenet, MicroPatent and Delphion

It is fast and easy to use (very popular in the British Library Patents Reading Room)

It links also to the non patent literature of ISI's Web of Knowledge.

Citation searching is an innovative added bonus.

ISI Web of Knowledge (v1.0) - Microsoft Internet Explorer

Address http://newdevel.isinet.com:8526/Portal/portal.cgi?SID=PMV68Y@VzMAAEB-R1&Func=Frame&DestApp=DII

ISI Web of KNOWLEDGE™ Derwent Innovations Index GO Log out Home

DERWENT Innovations Index™ Powered by ISI Web of Knowledge™

HOME HELP DATE & DB LIMITS GENERAL SEARCH CITED PATENT SEARCH COMBINE SEARCHES

Advanced Search

General Search, Cited Patent Search, and set combination. Enter search terms (using 2-character field tags) or set numbers (using #) combined with Boolean operators.

For example: TS=(nanotub* AND carbon) NOT AU=Smalley RE
 For example: #1 NOT #2 [more examples](#)

SEARCH

Field Tag Key:
 TS=Topic
 TI=Title
 AE=Assignee Name or Code
 AN=Assignee Name
 AC=Assignee Code
 AU=Inventor
 PI=Patent Number
 IP=IPC
 B=Class Code
 MC=Manual Code
 GA=Patent
 CP=Cited Patent Number
 CX=CP + patent family
 CA=Cited Assignee
 CN=Cited Assignee Name
 CE=Cited Assignee Code
 CI=Cited Inventor
 CD=Cited Primary

Current Data Selections:
 Database(s)=Chemical Section, Electrical and Electronic Section, Engineering Section
 Timespan=1966-2002

Set	Results	Search History	Save History	Open History	Delete Sets
#5	228	TS=(nanotub* AND carbon) NOT AU=Smalley RE Database(s)=Chemical Section, Electrical and Electronic Section, Engineering Section, Timespan=1966-2002			<input type="checkbox"/>
#4	1	GA=(2001-456503) Database(s)=Chemical Section, Electrical and Electronic Section, Engineering Section, Timespan=1966-2002			<input type="checkbox"/>
#2	194	TS=(carbon nanotube*) Database(s)=Chemical Section, Electrical and Electronic Section, Engineering Section, Timespan=1966-2002			<input type="checkbox"/>
#1	>100,000	AE=(nec) Database(s)=Chemical Section, Electrical and Electronic Section, Engineering Section, Timespan=1966-2002			<input type="checkbox"/>

Field Tag Key:
 TS=Topic
 TI=Title
 AE=Assignee Name or Code
 AN=Assignee Name
 AC=Assignee Code
 AU=Inventor
 PI=Patent Number
 IP=IPC
 B=Class Code
 MC=Manual Code
 GA=Patent
 CP=Cited Patent Number
 CX=CP + patent family
 CA=Cited Assignee
 CN=Cited Assignee Name
 CE=Cited Assignee Code
 CI=Cited Inventor
 CD=Cited Primary Accession Number

SELECT ALL
DELETE

This shows two of the key new features - the all important set-searching and advanced search option.

DII is probably the basis for many future developments. Not only can we expect the appearance to change, but a great deal of innovation is in hand for chemical searching.

A range of additional content is likely



Derwent Web of Software

- ❑ Four software and e-commerce prior art sources available in a single cross searchable product
 - ❑ **Patents** – Derwent World Patents Index (T01 and T02)
 - ❑ **Literature and Conference Proceedings** – ISIs
 - Compumath (800 titles)
 - ❑ **Gale group selected coverage** (1000 titles)
 - ❑ **Technical websites** (indexed by ISI)



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An area where prior art searching always demands looking way beyond possible previous patent documents is software.

We have put together a variety of sources for launch in September and will rapidly add more

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DERWENT WEB OF SOFTWARE

Patents and literature database

Advanced Search Home Help Browse General Search New Session Log Off

General Search fields and set combination. Enter search terms (using 2-character field tags) or set numbers (using #) combined with Boolean operators.

For example: TS=(comet SAME orbit*) NOT AU=Smalley R.E
For example: #1 NOT #2 [more examples](#)

update history only

Select the data range.

Latest **1 week** (updated February 3, 2002)
 Year **2002**
 From **1969** to **2002** (default is all years)

Restrict search by document types :
(Multiple items may be selected from list)

Current Selection: Database=SPA

Field Tags	Booleans
TS=Topic EP=Base to Patent Number TI=Title PI=Patent Number AU=Author IP=International Patent Code SO=Source DC=Derwent Classification Code AD=Address DI=Derwent Industrial Code AB=Abstract DS=Derwent Database AS=Assignee DA=Derwent Update AU=Author PI=Publication Date DE=Keywords PR=Patent Family PA=Patent PP=Priority Details	AND OR NOT SAME

Set	Results	Search History	SAVE HISTORY / ALERTS	OPEN HISTORY	Delete Sets
#5	8	TS=white dwarf AND AD=Harvard <i>Doc Type = Article Database = SPA Timespan = 1969-2002</i>			<input type="checkbox"/>
#4	7	(#2 NOT #1) AND #3 <i>Doc Type = Article Database = SPA Timespan = 1969-2002</i>			<input type="checkbox"/>
#3	19	TS=(wave* OR signal*) NOT TI=thermodynam* <i>Doc Type = Article Database = SPA Timespan = 1990-1997</i>			<input type="checkbox"/>
#2	465	TS=hydro* and TI=well <i>Doc Type = Article Database = SPA Timespan = 1990-1997</i>			<input type="checkbox"/>
#1	>100,000	AU=Smith* <i>Doc Type = Article Database = SPA Timespan = 1990-1997</i>			<input type="checkbox"/>

Field Tag Key: AU=Author DI=Derwent Industrial Code
 TS=Topic DE=Keywords DS=Derwent Database
 TI=Title PI=Patent DA=Derwent Update
 SO=Source EP=Base to Patent Number DC=Derwent Classification Code
 AD=Address IP=International Patent Code DI=Derwent Industrial Code
 AB=Abstract PI=Publication Date PR=Patent Family
 AS=Assignee DC=Derwent Classification Code PP=Priority Details

The advantage of an advanced search is the ability to save search histories and search between search data sets.

The field tags listing serves as an aid to boolean searching

Alerts can be set up weekly and run for six months, at which point they will need to be renewed. Alerts can be cancelled at any time.

The max. no of alerts that can be run at any one time set up at installation.



Target Identification - Derwent Biotechnology ResourceSM

- ❑ **Definitive source of biotechnological information**
 - Global Patents, journals and conferences
 - Expanded coverage of patents
 - Reviewed list of journals
- ❑ **Powerful text-based searching**
 - Controlled Keyword Indexing
 - Thesaurus
 - Subject Area Classification



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Derwent Biotechnology Resource is **The definitive source of biotechnological information**. It has its roots in our popular Derwent Biotechnology Abstracts, but is **much** expanded and designed for the Web

Derwent Biotechnology Resource contains a wealth of information for the pharmaceutical industry, including products, methodologies and new applications in the areas of:

- Bioinformatics (hardware, software and databases)
- Genomics and proteomics (including pharmacogenomics, toxicogenomics)
- Therapeutics (monoclonal antibodies, vaccines, gene therapy)
- Diagnostics (biochips, expression profiling and DNA probes/primers)

With global patent, journal and conference information in a single source, Derwent Biotechnology Resource offers powerful text-based searching which is vital for researching, in the case of company X, known drug targets which have been identified in GENESEQ.com.

Controlled keyword indexing terms are applied to every record in DBR by a subject expert. Also included are broader keyword terms which are also assigned. This is ideal where research is focussed on neutrophil elastase which is known to be a serine protein. You can search the narrow and/or broader terms using a controlled thesaurus to ensure highly accurate search results which are directly relevant to your research.

Target Identification - Derwent Biotechnology Resource

Subject area classification

Controlled keyword indexing

Derwent Biotechnology Resource™

HOME HELP DATE & DB LIMITS LOG OFF

Derwent Biotechnology Resource Search

Enter individual search terms, then press SEARCH below.
[Set limits and sort option.](#)

Search using terms entered below.
 Save the search as entered below for future use.
 Clear all search terms entered below.

TOPIC Enter term(s) to find from a document's title, abstract, keywords or [subject areas](#).
|pharmaceuticals Title only

DERWENT KEYWORDS Enter Derwent keyword(s) e.g., DNA PRIMER. Select from [list - thesaurus](#).
|neutrophil elastase-inhibitor

AUTHOR/INVENTOR Enter name(s) of author(s) or inventor(s), e.g., SMITH A* or DE LA ROSA E*.
|

SOURCE TITLE Enter journal or book title(s) e.g., BIOTECHNOLOGY LETTERS.
|

ADDRESS Enter word(s) from the affiliation of the author or patent assignee, e.g., TOKYO.
|

PATENT NUMBER Enter patent number(s) with a wildcard symbol, e.g., US5891645* or WO2000221*.
|

PATENT ASSIGNEE Enter assignee name(s) or code(s), e.g., NOVARTIS or NOVS.
 Search name and code Name only Code only
|

CONFERENCE Enter word(s) from the conference title, location, sponsor or date, e.g., MICROBIOLOGY AND 1998.
|

DBR ACCESSION NUMBER Enter Derwent Biotechnology Resource accession number, e.g., 1999-07172.
|

So company X chooses to search within DBR

Broad subject classifications are applied to each record. These can be selected from a controlled list. In this case, company X chooses the broad area of PHARMACEUTICALS which is entered into the TOPIC field.

Next, company X chooses to search for neutrophil elastase inhibitors using the thesaurus as a guide to ensure that the term is entered in the correct format.



The Web - in Brief

- An important focus for development
- Certainly attractive to end users
- Allows new approaches to handling indexing
- Lends itself to a portal approach
- XML standardisation of Derwent data adds even more possibilities





What's Happening??

- ❑ **Derwent** part of Thomson since 1966
- ❑ **Derwent & ISI** have been moving closer for several years - logic in latest integration and customer benefits
- ❑ **DIALOG** was an important host for Thomson companies - needed to secure continuity for users
- ❑ **Wila** an important complement to Derwent & *vice versa*.
 - Primary data
 - Wider markets
 - Synergy
- ❑ **Thomson** gives long term stability and growth



Derwent is not enormous - about 700 employees to cope with vast amounts of data and a global market, mainly of industrial customers. Many Patent Offices are larger - are very many of its customers

ISI, with a mainly academic market in literature is a little larger

Thomson comprises many specialist information companies in a variety of markets. It does not have any massive central Headquarters, but can provide investment and stability .

The sudden visibility stems from a move to a common corporate identity.



www.derwent.com

