

STN[®]

Full Text Patent Databases on STN

FIZ Karlsruhe

Dr. Ursula Klemm

Agenda

- Reasons to use fulltext patent databases
- The Databases
 - content
 - file-specific strategies
- **SEARCH** and **DISPLAY** tools
- Case study – the mecanum wheel
- Summary

Reasons to use full-text patent databases

- Comprehensiveness
- Timeliness
- Searching poorly indexed subjects
- Searching new technologies
- Finding additional scientific details
- Finding additional bibliographic information

Full-text patent databases

PNTTEXT cluster	Others to consider
PCTFULL	IFIPAT/IFICLS
EPFULL	
PATDPAFULL	
FRFULL	
GBFULL	
USPATFULL	<p>These three U.S. databases make up their own cluster, USPATALL.</p>
USPAT2	
USPATOLD	
AUPATFULL	
CANPATFULL	
RDISCLOSURE	

PCTFULL

- PCT patent applications from 1978 on
 - WO A1, WO A2
- Fulltext in **EN**, FR, DE, or ES
 - [English machine translations](#) for DE, ES, FR, JP, RU
 - other languages optional (IT, PT, FI,...)
- [English transliteration](#) of names
 - inventor, applicant, agent, address for CN, JP, KR, RU
 - original characters available as well
- [Numeric Property Search](#) feature available
- Representative drawing (TIFF) image
- Updated within 4 days of publication

Languages in PCTFULL

TIEN WATER PURIFICATION SYSTEM AND WATER PURIFICATION METHOD EMPLOYING BIOLOGICAL ACTIVATED CARBON AND ...

TIFR SYSTEME DE PURIFICATION D'EAU ET PROCEDE DE PURIFICATION D'EAU UTILISANT DU CHARBON ACTIF BIOLOGIQUE ET ...

TIOR 생물 활성탄과 입상 활성탄을 이용한 정수 시스템 및 정수 방법

ABEN

Provided is a water purification system able to remove water-borne dissolved organic matter and microorganisms which are harmful to the human body ...

ABFR

L'invention concerne un systeme de purification d'eau permettant d'eliminer les micro-organismes et les matieres organiques aqueuses dissoutes qui ...

ABOR

본 발명은 인체에 유익한 미네랄 성분을 제거하지 않고 인체에 유해한 수중 용존 유기물 및 미생물을 제거할수있는정수시스템을제공한다. 본발명의 정수 시스템은, 생물 활성탄 처리부를포함하고, 생물 활성탄처리부에 포함된미생물을 이용하여

The PCTFULL PA field

PA

POSITEC POWER TOOL (SUZHOU) CO., LTD, **Number 18 Dongwang Road, Industrial Park, Suzhou,**

Jiangsu 215123, CN, [NAT: CN, RES: CN], for all designated states except US;

HUO, Lixiang, Number 18 Dongwang Road, Industrial Park, Suzhou, Jiangsu 215123, CN, [NAT: CN, RES: CN], for US only

PAOR

Address details searchable in field /PA.T

苏州宝时得电动工具有
限公司, 中国江苏省苏州 市工
业园区东旺路**18号**,

Nationality and country of residence of
the patent assignee are searchable in
PA.NAT and PA.RES

Jiangsu 215123, CN, [NAT: CN, RES: CN];

霍立祥, 中国江苏省

苏州市工业园区东旺

路18号, Jiangsu 215123, CN, [NAT: CN, RES: CN]

Numeric Property Searching in PCTFULL

- Numeric Property Data is extracted from the full text and made available for searching by FIZ Karlsruhe for improved retrieval.
 - more than **30 physical properties** in almost **400 units**
 - automatic unit conversion
- Searchable property data is available in all English-language text fields (TIEN, ABEN, CLMEN and DETDEN)
 - proximity searching with numeric properties and keywords
 - flexible data input (open or closed ranges, tolerances, exact values)

Numeric Property Searching in PCTFULL

```
=> S (LIGHT EMITTING DIODE OR LED) (S) ALGAINP (S) 500-  
570NM/SIZ
```

Proximities work just as with regular text.

```
L2          16 (LIGHT EMITTING DIODE OR LED) (S) ALGAINP (S) 500-  
570NM/SIZ
```

```
=> D KWIC
```

```
L2          ANSWER 3 OF 16 PCTFULL COPYRIGHT 2011 LNU on STN
```

```
DETDEN
```

```
...The LED can be based on different materials, such as, without  
limitation, GaN, AlGaN, InGaN, AlInGaN, AlInGaN/AIN , AlInGaN (emitting  
from 285 nm to 550nm), GaP, GaP:N, GaAsP, GaAsP:N, AlGaInP (emitting from  
550nm to 660nm) SiC, GaAs, AlGaAs, BaN, InBaN, (emitting in near infrared  
and infrared). ...
```

```
L2          ANSWER 12 OF 16 PCTFULL COPYRIGHT 2011 LNU on STN
```

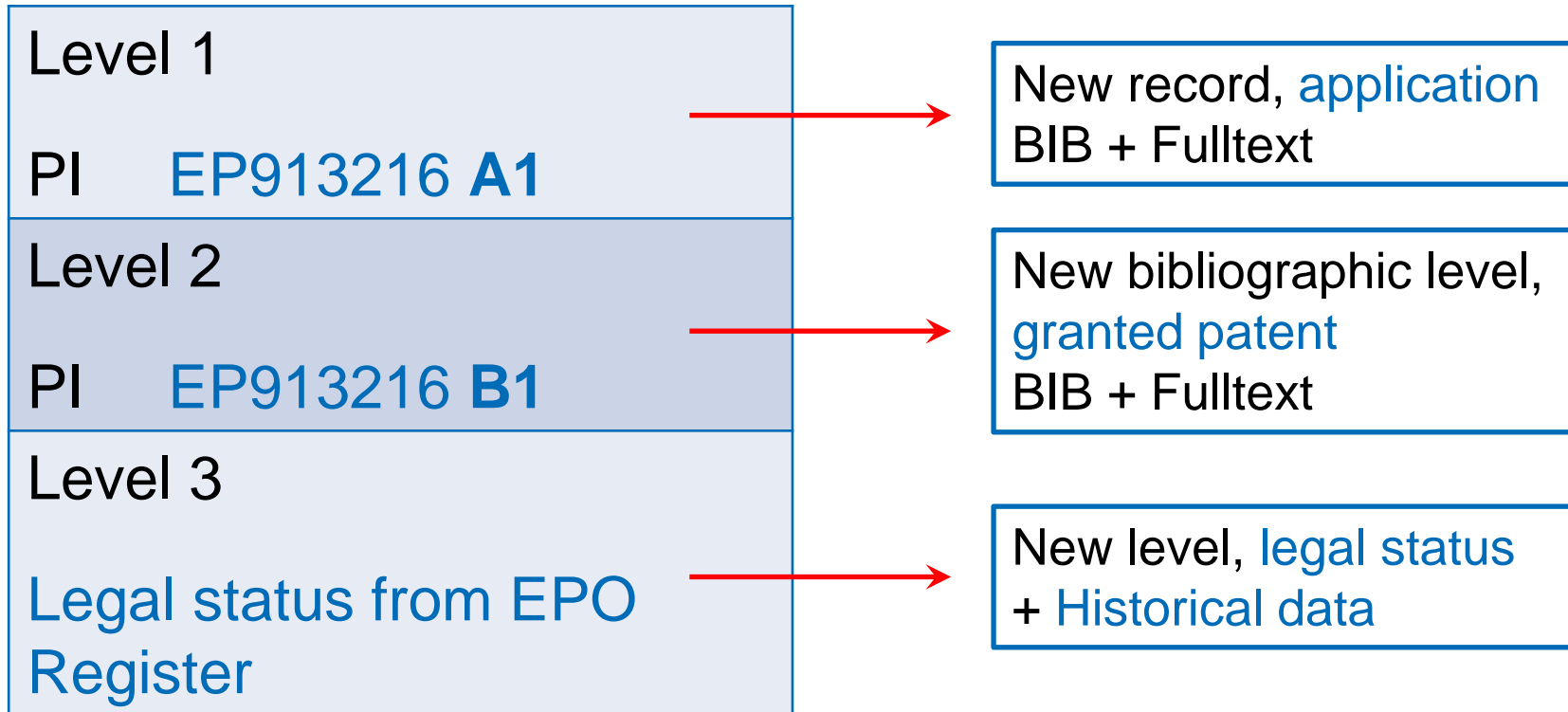
```
DETDEN
```

```
... A prior art class of LEDs based on GaAsP and AlGaInP semiconductor  
technology are capable of emitting at the PMMA attenuation windows of 510  
and 570 nm. ...
```

EPFULL

- Fulltext of EP applications and granted patents
 - EP applications from 1978
 - EP granted patents from 1980
 - Bibliography of Euro-PCT applications from 1978
 - Either in EN, FR, or DE
- Titles in EN, FR, and DE from 1987
- Granted patent claims in EN, FR, and DE
- EP Register legal status data from 1978
- First page images and applicant citations
- Updated on the day of publication

EPFULL multilevel record structure



- Standard displays (**ALL**, etc.) display **only** the most recent publication => which is **EP-B1** here
 - Append **.M**-suffix to display all publications (**ALL.M**)

EPFULL legal status & family information

- Display formats:
 - LSEP – from European Patent Bulletin, including historical data
 - LS, LS2, CFAM – from INPADOCDB, for display **only**
- Search and selectively monitor all legal status events and historical data for all published document levels
 - Pinpoint opponents, license information, priority, and patent assignee
- Updated weekly

EP application & grant in a single record

L1 ANSWER 1 OF 1 EPFULL COPYRIGHT 2011 EPO/FIZ KA/LNU on STN

AN 1996:66709 EPFULL UP 20050518
DUPD 20050518 DUPW 200520

D BIB.M LSEP format, cont.

TIEN METHOD AND APPARATUS FOR DISPLAYING TEXTUAL OR GRAPHIC DATA. . .
TIFR PROCEDE ET DISPOSITIF D'AFFICHAGE DE DONNEES TEXTUELLES OU . . .
TIDE VERFAHREN UND VORRICHTUNG ZUR ANZEIGE VON TEXT- ODER GRAFIKDATEN. .
IN KWOH, Daniel, S., 3975 Hampstead Road, La Canada/Flintridge, . . .
PA GEMSTAR DEVELOPMENT CORPORATION, (DEVELOPMENT CORPORATION, . . .
AG Kinsler, Maureen Catherine, et al, Ki.
AGN 87471
DT Patent
PIT EPB1 Granted patent
PI EP 862831 B1 20040616
WO 9718673 19970522
DS BE DE ES FR GB IT
AI EP 1996-940784 A 19961113
WO 1996-US18236 A 19961113
RLI EP 2004-76523 20040524 EP 1458188 Divisional Application
PRAI US 1995-6629P P 19951113
REP EP 47414 A
EP 128093 A
WO 9429840 A
GB 2257000 A . . .

Published patent application
EP 862831 A1 (previous slide)
leads to granted patent
EP 862831 B1.

Plus legal status data from EP Bulletin

LEGAL STATUS INCLUDING HISTORY

D BIB.M LSEP format, cont.

```
AN      1996:66709   EPFULL
19980909 EPB241     Request for examination
19980615
19980909 EPB430     Unexamined document without grant, (first publication)
19980909
19980909 WOB870     PCT publication data
19970522
19980909 EPB840     Designated contracting states
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
EP 862831           A1 19980909
19981021 EPB840R    Designated contracting states (c
BE DE ES FR GB IT
19981202 EPB300R    Priority data (correction)
OLD:   US 1995-662P           P 19951113
NEW:   US 1995-6629P          P 19951113
19991020 EPB565EP    Drawing up and dispatch of supplementary search report
(EPA4)
19990902
20000112 EPB840R    Designated contracting states (correction)
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
. . . . .
```

Historical data, e.g.,
old priority numbers.

Selectively search legal status events

20030102	EPB242	Dispatch of the first ex report	D BIB.M LSEP format, cont.
20021120			
20040616	EPB452EP	Intention to grant	/LSTX field, defining the legal status code.
20031209			
20040616	EPB840R	Designated contracting states (correction)	
		BE DE ES FR GB IT	
20040616	EPB450	Document with grant, second publication	
		20040616 . . .	/LSC field, legal status code.

/LSD field, legal status date.

/LSTX field, defining the legal status code.

/LSC field, legal status code.

Link the legal status fields with the (P) operator to limit to a single event:
=> S EPB452EP/LSC (P) 20040616/LSD

Monitor event “Intention to Grant”

=> FILE EPFULL

=> S HITACHI/PA

L1 21043 HITACHI/PA

=> E EPB452EP/LSC

E1 662711 EPB451EP/LSC

E2 662711 EPB451EP ANNOUNCEMENT OF INTENTION TO GRANT/LSC

E3 685817 --> EPB452EP/LSC

E4 685817 EPB452EP INTENTION TO GRANT/LSC

E5 3664 EPB452EPD/LSC

E6 3664 EPB452EPD INTENTION TO GRANT (DELETED)/LSC

E7 10663 EPB452EPR/LSC

E8 10663 EPB452EPR INTENTION TO GRANT (CORRECTION)/LSC

E9 132 EPB4530EP/LSC

E10 132 EPB4530EP AMENDED PATENT

E11 1 EPB4530EPD AMENDED PATENT

E12 605583 EPB475/LSC

=> S L1 AND EPB452EP/LSC(P)UPLS=20061108

L2 8 L1 AND EPB452EP/LSC(P)UPLS=20061108

Expand in /LSC, as shown here, or in the descriptive text, /LSTX, to find relevant legal status codes.

Use (P) operator to combine the relevant code /LSC with the legal status update date UPLS.

Monitor event “Intention to Grant”

=> D BIB.M HIT

Display bibliographic information for all publication stages (BIB.M) followed by the legal status event HIT.

L2 ANSWER 1 OF 8 EPFULL COPYRIGHT 2011 EPO/FIZ KA/LNU on STN
AN 2004:150498 EPFULL EDP 20050928 ED 20050928 UP 20061108
DUPD 20061108 DUPW 200645
TIEN Storage apparatus for asynchronous remote copying.
TIFR Dispositif de stockage de donnees permettant le miroitage asynchrone
de donnees a distance.
TIDE Speichervorrichtung fuer asynchrone entfernte Datenspiegelung.
IN Muto, Yoshiakic/o Hitachi Ltd, Intel Prop Group6-1, Marunouchi 1-
chome,Chiyoda-kuTokyo 100-8220, JP; . . .
PA Hitachi, Ltd., 6-6, Marunouchi 1-chome Chiyoda-ku, Tokyo, JP
PIT EPA1 Application published with search report
PI EP 1580662 A1 20050928
DS DE FR GB
AI EP 2004-256190 A 20041006
PRAI JP 2004-85032 A 20040323
PA Hitachi, Ltd., 6-6, Marunouchi 1-chome Chiyoda-ku, Tokyo, JP
. . . .

From L1:
=> S HITACHI/PA.

Monitor event "Intention to Grant"

LEGAL STATUS

AN 2004:150498 EPFULL
20061108 EPB452EP Intention to grant
20061011

Combine data within one legal status entry with (P).

/UPLS20061108

=> **QUE L1 AND EPB452EP/LSC(P)UPLS/LAST**
L3 QUE L1 AND EPB452EP/LSC(P)UPLS/LAST

=> **SDI L3**
ENTER UPDATE FIELD CODE (UP) OR ?:**UPLS**

. . .
ENTER PRINT FORMAT (STD.M) OR ?:**MAX**
HIGHLIGHT HIT TERMS? (Y)/N:**Y**

ARCHIVE ANSWERS? Y/(N):**N**
REDISTRIBUTE ANSWERS? Y/(N):**N**

ENTER MAXIMUM NUMBER OF HITS TO BE PRINTED PER RUN (100):**100**

. . .
QUERY L9 HAS BEEN SAVED AS SDI REQUEST 'HITACHI/S'

To use this functionality for SDI's, (P)-link the specific legal status code to the last update date, **UPLS/LAST**, and use **UPLS** for the SDI update field code.

MAX = ALL.M + LSEP

Searching for EP applications requires BOTH EPFULL and PCTFULL

- Euro-PCT application:
 - PCTFULL captures **fulltext** => **WO-A**
- Entry into the national phase EP
 - EN, FR, DE-language are not “republished” by EPO
 - EPFULL captures **bibliographic** information only => **EP-A**
 - JP, CN, RU-language translations are published by EPO as EP-A documents
 - EPFULL contains **fulltext** translations
 - PCTFULL captures **BIB** and **AB** (in EN/FR) only
- Granted EP publication
 - EPFULL captures **fulltext** => **EP-B**

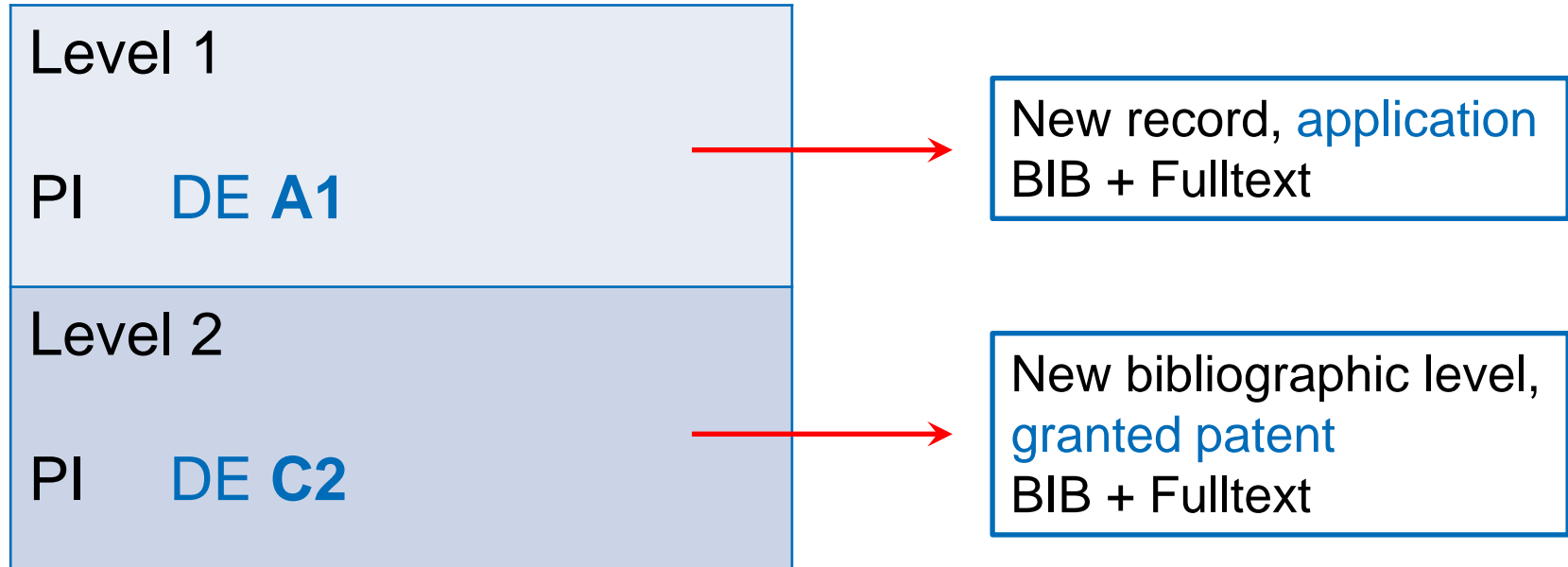
Searching for PCT applications requires BOTH PCTFULL and EPFULL

- PCT's published in JP, CN, or RU only have **bibliography** in English in **PCTFULL** and full-text in original language from 2006
- Euro-PCT's in JP, CN, or RU are translated and appear as EP-A documents in **EPFULL** in English **full-text**

PATDPAFULL

- Full-text of DE applications and granted patents from the German Patent Office (DPMA)
 - Applications from 1981 (A1)
 - Granted patents from 1981 (C2)
 - Translations of non-DE language DE-PCT's (T5)
 - Translations of granted DE-EP's from 1992 (T2-T4)
 - Utility models from 1981
 - Full claims from 1998
 - Full-text from 2004
- First page images from 1993
- Updated on the day of publication

PATDPAFULL multilevel record structure



- To display data from all publication stages, use **.M**-suffix, e.g., **ALL.M**, **BIB.M**
- Use patent kind code suffix to display data from specific levels, e.g., **CLM.A1**

Searching for DE applications requires PATDPAFULL, EPFULL and PCTFULL

- DE-language PCT's that designate DE are only published by WIPO (DE-PCT's)
 - Fulltext is only in PCTFULL => WO-A
 - Entry into national phase DE only bibliography in PATDPAFULL => DE-A5
 - Granted patent with fulltext in PATDPAFULL => DE-B...
- DE-language EP applications that designate DE are only published by the EPO (DE-EP's)
 - Fulltext is only in EPFULL =>EP-A
 - Granted national patent with fulltext in PATDPAFULL
- Full-text of national German applications and translations of non-DE language DE-PCT's and DE-EP's are in PATDPAFULL

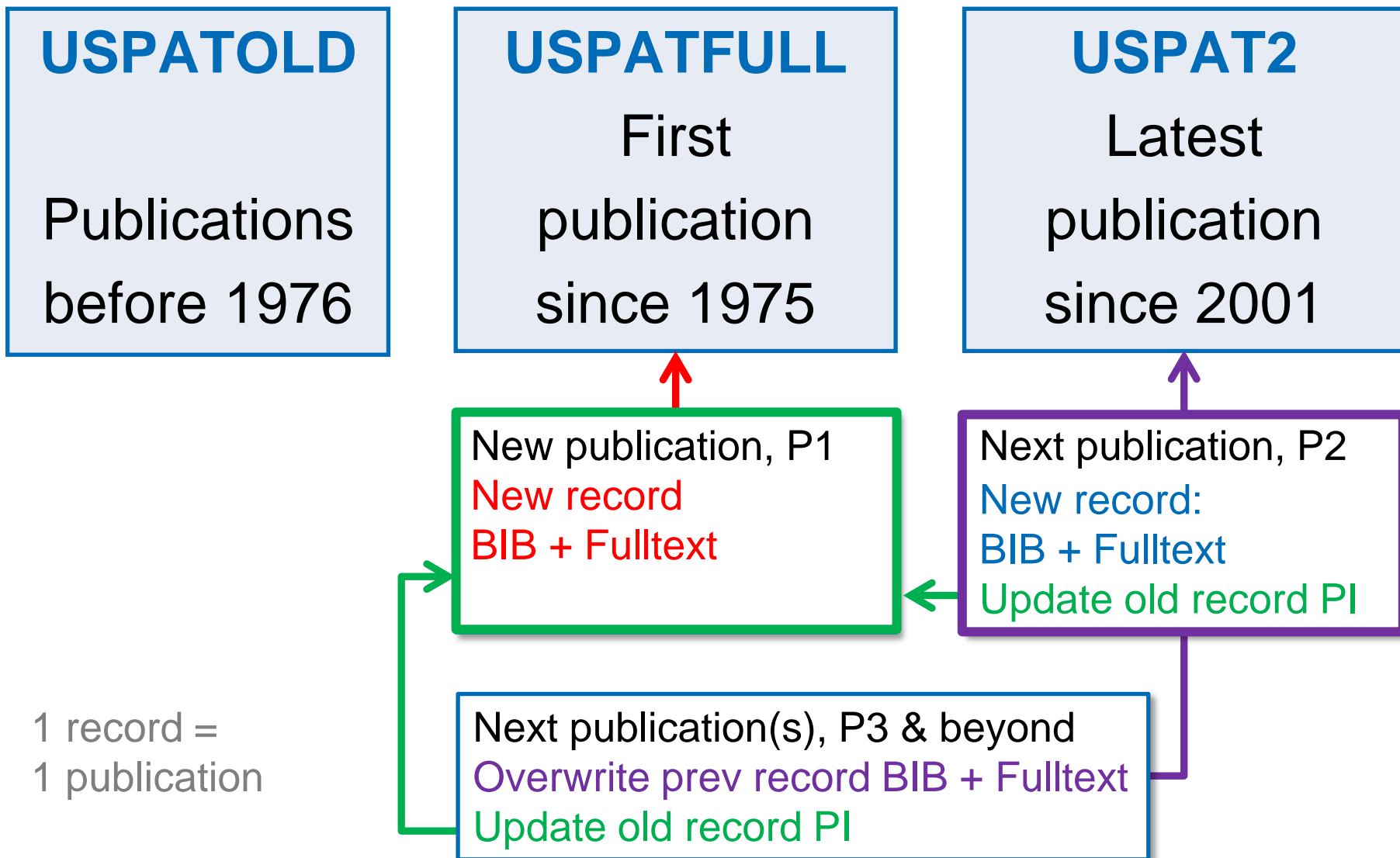
FRFULL

- Fulltext of French patent applications and **granted patents** back to **1902**
- English machine translations for titles, abstracts, **descriptions and claims from 1996**
- OCR data from UNIVENTIO
- Graphic images from **1975**
- Free display **TRIAL:**
 - Title in FR and EN
 - Number of claims and paragraphs
- Updated within 7-10 days of publication

GBFULL

- Fulltext of British patent applications and **granted patents** from **1840**
- OCR data from UNIVENTIO
- Abstracts available for most records
- Graphic images from **1897**
- Same multi-level record structure as EPFULL
- Free display **TRIAL** includes title and the number of claims and paragraphs
- Updated within 5 days of publication

USPATALL databases' record structure



1 record =
1 publication

USPATOLD

- Comprehensive source for historical U.S. fulltext patents
- 3.6 million patents from 1790-1975 (static)
- Unventio's OCR data supplemented with CAplus data of U.S. basic patents (0.5 million)
 - Title, patent assignee, and inventor
 - CAS indexing (IT, CT, ST, CC, RN numbers)
- No overlap between USPATOLD and USPATFULL or USPAT2

USPATOLD sample record

=> D BIB TI.CA PA.CA IN.CA IT

AN 1950:42701 USPATOLD
TI Method for the preparation of ether sulfonates
IN HOLLANDER CHARLES S
BOCK LOUIS H
PI US 2535677 A 19501226
AI US 1947-728957 19470215
PRAI US 1947-728957 19470215

CAS indexing can be combined with a full-text patent search.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI.CA Preparation of ether sulfonates
PA.CA Rohm & Haas Co.
IN.CA Hollander, Charles S.; Bock, Louis H.
IT Surface-active substances (capillary- or interface-active substances)
(ether sulfonates)
IT Sulfonic acids
(ether, salts)

IT Ethanesulfonic acid, 2-(1,1,3,3-tetramethylbutylphenoxy)-, sodium salt

IT 107-36-8, Isethionic acid
(alkali metal salts, reaction with alcs.)

IT 20829-85-0P, Ethanesulfonic acid, 2-(dodecyloxy)-, sodium salt
.....

USPATFULL

- **First publication** plus updated information from subsequent publications (PI-field, NCL-field)
- All patents from the USPTO from **1975**
- Includes **PI** for all publication stages
- Page images (TIFF) from **1999**
- File segments **/FS: APPLICATION** or **GRANTED**
- **EX**tended display formats (**BIB.EX**, **MAX.EX**)
 - Data from the original and latest publication stages
- CAS indexing (RN's, IT-fields) not in Basic Index
- Publications added within one day

USPAT2

- Latest publication from 2001 onward
 - If more than 2 publications are available for one invention, only the first and last are available
- PI for latest publication **ONLY**
- **EX**tended display formats (**BIB.EX**, **MAX.EX**)
 - Data from the original and latest publication stages
- CAS indexing (RN's, IT-fields) not in Basic Index
- Legal status: assignment and reassignment information from **2001**

See [STN Note 28](#) for tips on searching USPATALL.

Use extended display formats

```
=> FILE USPATFULL
```

```
=> S US2002162915/PN
```

```
L1 1 US2002162915/PN
```

```
=> D BIB.EX
```

```
L1 ANSWER 1 OF 1 USPATFULL on STN  
-- Original Publication -- (APPLICATION - A1)  
AN 2002:292896 USPATFULL  
TI Aircraft environment controller  
IN Mitani, Hisashi, Osaka, JAPAN  
PI US2002162915 A1 20021107
```

```
. . .  
-- Latest Publication -- (GRANTED - B2)  
AN 2002:292896 USPAT2  
TI Aircraft environment controller  
IN Mitani, Hisashi, Osaka, JAPAN  
PA Shimadzu Corporation, Kyoto, JAPAN (non-U.S. corporation)  
PI US---6527228 B2 20030304. . .
```

Extended formats (BIB.EX) display data from the **first** and **latest** publication stages.

First publication stage - **USPATFULL**.

Latest publication stage - **USPAT2**.

USPATFULL for comprehensive PI

BIB.EX display format

-- Original Publication -- (APPLICATION - A1)

AN 2002:292896 **USPATFULL**
TI Aircraft environment controller
IN Mitani, Hisashi, Osaka, JAPAN
PI US2002162915 A1 20021107
US---6527228 B2 20030304
AI 2001US-0926343 A1 20011016 (9)
2001WO-JP01843 20010309
PRAI 2000JP-0069159 20000313
DT Utility
FS APPLICATION
LREP ARMSTRONG, WESTERMAN & HATTORI, LLP, 1725 K STREET, NW.,
SUITE 1000, WASHINGTON, DC, 20006
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 341

USPATFULL records include the complete publication history of the application.
(USPAT2 does not.)

No indication of the patent assignee; see USPAT2.

Unique content in USPAT2 using BIB.EX

-- Latest Publication -- (GRANTED - B2)

AN 2002:292896 **USPAT2**
TI Aircraft environment controller
IN Mitani, Hisashi, Osaka, JAPAN
PA **Shimadzu Corporation**, Kyoto, JAPAN (non-U.S. corporation)
PI US---6527228 B2 20030304
WO2001068448 ← 20010920
AI 2001US-0926343 20011016 (9)
2001WO-JP01843 20010309
PRAI 2000JP-0069159 20000313
DT Utility
FS GRANTED
EXNAM Primary Examiner: Swiatek, Robert P.
LREP Armstrong, Westerman & Hattori, LLP
CLMN **Number of Claims: 8** ←
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 352

Here is the missing patent assignee!

Both databases can contain the parent PCT number. Here, it is only in **USPAT2**.

The number of claims has **increased** from 6 (USPATFULL) to 8!

New full-text patent database CANPATFULL

- Canadian full-text patent applications and patent specifications, from 1920 to date
- Produced by LexisNexis Univentio
- **Numeric property search**
- Legal status and family display options from the INPADOCDB database
- ECLA and IPC classification Thesauri
- Graphic images from 1920
- 2 % published in French language

CANPATFULL database summary sheet:
<http://www.stn-international.com/canpatfull.html>

New full-text patent database AUPATFULL

- IP Australia full-text patent applications and patent specifications, from 1964 to date
- Produced by LexisNexis Univentio
- **Numeric property search**
- Legal status, family and citation display options from the INPADOCDB database
- ECLA and IPC classification Thesauri
- Graphic images from 1966
- High number of Asian priorities!

AUPATFULL database summary sheet:

<http://www.stn-international.com/aupatfull.html>

RDISCLOSURE (*Research Disclosure*)

- **Defensive** publication of technical disclosures
- Fulltext and page images (TIFF, PDF, and ASCII) from **1960**
- Searchable ASCII text (via OCR)
- **IPC's** (~ 50%) & thesaurus and **ECLA's** (~30%)
- Patent file format with **PN's** (RD...), **PRN's**, etc., for full crossfile searching with DWPI, CAplus...
- Cited non-patent literature (**/REN**) with **XP** numbers (**/REXP**)
- Useful display formats: **ALLG, TRIAL KWIC GIS**

RDISCLOSURE: Search example

=> FILE RDISCLOSURE

=> S HERBICI? OR WEED(2A)CONTROL?

L1 181 HERBICI? OR WEED(2A)CONTROL?

=> S L1 AND (IPC AND EPC)/FA

L2 42 L1 AND (IPC AND EPC)/FA

=> D 2 ALLG

L2 ANSWER 5 OF 42 RDISCLOSURE COPYRIGHT 2011 QUESTEL IRELAND LTD.on STN

AN 452061 RDISCLOSURE [Full-text](#) . . .

PI RD 452061 20011210

PRAI RD 2001-452061 20011120

REN XP001087222; XP007129416 . . .

LA English

DT Patent

GIN 1

GIS 40352

IPCI A01N

IPCR A01N0041-10 [I,A]; A01N0041-00 [I,C*]

EPC A01N0041-10; A01N0041-10+M

See if IPC's and EPC's are available by searching the Field Availability field /FA or search for them in the fields /IPC and /EPC, respectively.

STN standardized PN & PRN

Graphic Image Size GIS

RDISCLOSURE ALLG display, cont.

452061

New synergistic and selective herbicide compositions

New herbicidal compositions have been found which are suitable for controlling a broad range of weeds in cultures of useful plants, in particular wheat or corn. Both monocot and dicot weeds may be controlled with the use of these compositions. The compositions are suitable for use on both unmodified crops and those that are either naturally herbicide tolerant or have been modified to be tolerant to one or both of the herbicides in the compositions. The compositions contain, beside standard formulation materials such as diluents, surfactants or adjuvants, a mixture of active ingredients comprising

- 1) 2-(2'-nitro-4'-methylsulfonylbenzoyl)-1,3-cyclohexane dione (mesotrione) and
- 2) a herbicidally effective amount of at least one further co-herbicide group consisting of bromoxynil, fluthiacet-methyl, EPTC, clopyralid, diflufenzopyr, flumiclorac-pentyl, 2,4-D, bentazone,

The display **ALLG** includes the **BIB** format plus the graphic image in TIFF format. For PDF instead, use the **DOWNLOAD** command.

IFIPAT

- U.S. granted patents and published applications
 - One publication = one record
 - File Segments (/FS): APPLICATION or GRANTED
 - Chemical patents from 1950
 - Utility patents from 1963
 - Design and plant patents from 1976
- Title, abstract, and claims (all claims from 1971)
- Standardized patent assignee names
- Probable Patent Assignees (/PPA) for U.S. published applications

IFICLS – IFI Current Patent Legal Status (U.S. only)

Static file since April
2011 !!

- Reassigned U.S. patents from 1980
- Reexamined U.S. patents from 1981
 - Including amended claims text
- U.S. patents extended beyond their normal 17-year term from 1985
- Expired U.S. patents from 1985
- Reinstated U.S. patents from 1985
- Adverse decisions in interference, disclaimer/ dedication information, reexamination requests, and certificates of correction

Overview of full-text patent file coverage (1)

	EPFULL	PCTFULL	USPAT ALL	PATDPA FULL	FRFULL
Coverage	1978- EPA, EPB	1978- WOA	1790- 1975- 2001-	1981- DEA, DEB, DEC, DET, DEU	1902- FRA FRB
Language	EN, FR, DE	DA, DE, EN, ES, FI, FR, HR, HU, IT, JA, KO, NL, NO, PT, RU, SK, SL, SV, TR, ZH	EN	DE	FR, EN
SLART	BI, CLM, TI, AB, MCLM	BI, AB, TI, CLM, MCLM	BI, AB, TI CLM, ECLM	BI, TI, AB, CLM, MCLM	BI, TI, AB, CLM, MCLM
Images	Yes	Yes	No	Yes	Yes
CAS index.	No	No	Yes	No	No
LS / FAM	LS search LS / FAM Disp	LS / FAM Disp	RAI only	LS / FAM Disp	LS / FAM Disp
Classif.	IPC	IPC, ECLA	NCL, IPC	IPC	IPC, ECLA, ICO

Overview of full-text patent file coverage (2)

	GBFULL	CANPATFULL	AUPATFULL	RDISCLOSURE	IFIPAT
Coverage	1840- GBA, GBB, GBC	1920- CAA, CAB, CAC	1964- AUA, AUB	1960-	1950- USA, USB, USS, USP
Language	EN	EN, FR	EN	DE, EN, FR, SV	EN
SLART	BI, TI, AB, CLM, MCLM	BI, TI, AB, CLM, MCLM	BI, TI, AB, CLM, MCLM	BI, TI	BI
Images	Yes	Yes	Yes	Yes	No
CAS index.	No	No	No	No	Yes (chem.)
LS / FAM	LS / FAM Disp	LS /FAM Disp	LS /FAM Disp	No	LS search (IFICLS)
Classif.	IPC, ECLA,ICO	IPC, ECLA, ICO	IPC, ECLA,ICO	IPC, ECLA	IPC, NCL

Search tips

- Presearch or expand in **STNINDEX**
 - => **INDEX *clustername(s) or databasename(s)***
 - For overview, **SET DETAIL ON**
 - To rank databases by number of hits, **D RANK**
- Consider the **language(s)** of the database(s)
 - Single or multiple languages -> additional terms
 - Differing versions of English
 - => **SET SPELLINGS ON PERM**
- To refine the search
 - Use more specific search terms and/or fields
 - Use **proximity operators**

Proximity operators

- (4A) up to 4 terms between search terms
 - in **any** order
- (2W) up to 2 terms between search terms
 - in **input** order
- (NOTA) a term must **NOT** be next to another

LINKING proximity operators (S), (P), and (L)

- Usually, (L) = Link, (P) = Paragraph, and (S) = Sentence
- BUT they mean different things in different databases depending on the RECORD structure:
 - MULTILEVEL record structure, with more than one publication per record
 - SINGLE level record structure, with ONLY one publication per record
- File specific help available, i.e., HELP (L)

MULTILEVEL databases

- More than one publication per record (i.e., EP-A1 and EP-B1)
- All foreign patent fulltext databases
 - (L) - search terms must be in the same LEVEL (i.e., publication)
 - (P) - search terms must be in the same FIELD but are NOT required to be in the same paragraph in a field
 - (S) - search terms must be in the same text paragraph in a field

SINGLE level databases

- EXACTLY one publication per record
- All U.S. patent full-text databases
 - (L) - search terms must be in the same field
 - (P) - search terms must be in the same paragraph in a single field
 - (S) - search terms must be in the same sentence within the field

Proximity operators in patent full-text databases

	<i>EPFULL (*)</i>	<i>PCTFULL</i>	<i>FR/GB/PATDPA/CANPAT/AUPAT/FULL (*)</i>	<i>USPATFULL/USPAT2</i>	<i>IFIPAT</i>
Same Record	AND	AND	AND	AND	AND
Same Publication	(L)	(L)	(L)	AND	AND
Same Text Field	(P)	(P)	(P)	(L)	(L)
Same Text Paragraph	(S)	(S)	(S)	(P)	(P)
Same Text Sentence				(S)	(S)
(*) more than one publication per record possible					

Adapting strategies for full text searching

- Due to the typical wording and structure of patent documents, adapted strategies are necessary to ensure optimum retrieval

15. The thermoplastic composite of claim 8, wherein said block copolymer is
15 formed by a nitroxide-mediated controlled radical polymerization.

16. The thermoplastic composite of claim 1, wherein said block copolymer has a
molecular weight from 30,000 to 500,000 g/mol.

20 17. The thermoplastic composite of claim 1, wherein said block copolymer has a
molecular weight from 50,000 to 200,000 g/mol.

Excerpt from the claims of a typical patent document. The claims are cross-referenced to other claims. As a result, not all information related to one claim can be found in the description of that claim alone.

Adapting strategies for full text searching

```
=> FILE PCTFULL
=> S ((?BLOCK?(T)?POLYMER? OR ?BLOCK?(W)?POLYMER?) (S)
    ?ELASTOMER?/CLM (S)(?POLYMER? OR ?BLOCK?)/CLM (S) MW>75000)
L1          5 ((?BLOCK?(T)?POLYMER? OR ?BLOCK?(W)?POLYMER?) (S)
    ?ELASTOMER?/CLM (S) (?POLYMER? OR ?BLOCK?)/CLM (S)
    MW>75000 G/MOL )
```

In PCTFULL, using the (S)-operator requires the search terms to be within one paragraph or one claim.

```
=> S ((?BLOCK?(T)?POLYMER? OR ?BLOCK?(W)?POLYMER?) (S)
    ?ELASTOMER?/CLM AND (?POLYMER? OR ?BLOCK?)/CLM (S) MW>75000)
L2          13 ((?BLOCK?(T)?POLYMER? OR ?BLOCK?(W)?POLYMER?) (S)
    ?ELASTOMER?/CLM AND (?POLYMER? OR ?BLOCK?)/CLM (S)
    MW>75000 G/MOL )
```

```
=> S L2 NOT L1
L3          8 L2 NOT L1
```

The AND-operator allows the information to be spread out over several claims. You could use (P) to restrict your search to the claims in one language.

Adapting strategies for full text searching

=> D CLM 2

L3 ANSWER 2 OF 8 PCTFULL COPYRIGHT 2011 LNU on STN

CLMEN

1. A toughened transparent thermoplastic composite comprising:
a) 50 to 99 weight percent of a transparent thermoplastic matrix B; and b) 1 to 50 weight percent of a **block copolymer** comprising:
a. 5 - 98 weight percent of a random copolymer comprising copolymerizable ethylenically unsaturated monomers α and β ; and
b. an **elastomeric** block;

. . .

This document could only be retrieved with a strategy that accounts for the typical structure of full text documents.

16. The thermoplastic composite of claim 1, wherein said **block copolymer** has a molecular weight from 30,000 to 500,000 g/mol.

17. The thermoplastic composite of claim 1, wherein said **block copolymer** has a molecular weight from 50,000 to 200,000 g/mol.

SORT and DISPLAY Tips

- To sort by relevance, **SORT OCC** (free) or **FOCUS** (small charge)
- Helpful display formats
 - **OCC** – number of hit terms in each field (i.e., claims)
 - **TRIAL** – patent titles and other file-specific free-of-charge fields
 - **KWIC** – hit terms in context (up to 20 words on each side of the hit term is the default), free for **/BI** search
 - **HIT** – entire field containing the hit terms
 - **.M** – Display whole family information
 - **CFAM, FAM, LS, LS2** – Display of corresponding INPADOC content
 - **.EX** – USPATFULL, USPAT2, IFIPAT

Case study: the mecanum wheel



From <http://robotics.ee.uwa.edu.au/eyebot/robots/omni.html>.

The mecanum wheel – search strategy

1. Select databases and develop search query
2. Run the multi-file search
3. Sort results to review one patent per family
4. Browse and locate relevant records
5. Display more details from records of interest

Step 1a: Find relevant databases

```
=> IND PNTTEXT IFIPAT IFICLS -PATDPAFULL
```

```
=> SET DETAIL ON  
SET COMMAND COMPLETED
```

Use **STNINDEX** with **PNTTEXT** cluster
plus **IFIPAT/IFICLS** minus **PATDPAFULL**.

```
=> E MECANUM
```

E#	FILE	FREQUENCY	TERM
--	----	-----	----
E3		63 -->	MECANUM/BI
	AUPATFULL	0	MECANUM/BI
	CANPATFULL	1	MECANUM/BI
	EPFULL	11	MECANUM/BI
	FRFULL	0	MECANUM/BI
	GBFULL	2	MECANUM/BI
	PCTFULL	13	MECANUM/BI
	RDISCLOSURE	0	MECANUM/BI
	USPATFULL	26	MECANUM/BI
	USPATOLD	0	MECANUM/BI
	USPAT2	4	MECANUM/BI
	IFIPAT	6	MECANUM/BI
	IFICLS	0	MECANUM/BI
E4	FRFULL	2	MECANUME/BI

```
=> SET PLURALS ON  
SET COMMAND COMPLETED
```

Step 1b: Develop search query

```
=> S (MECANUM OR OMNI DIRECT? OR OMNIDIRECT?)  
  (S)(WHEEL OR ROBOT OR VEHICLE)  
  (S)(BALL OR SPHERICAL ROLLER)
```

Search for mecanum wheels and rollers.

```
L1  QUE (MECANUM OR OMNI DIRECT? OR OMNIDIRECT?)(S)(WHEEL OR  
      ROBOT OR VEHICLE)(S)(BALL OR SPHERICAL ROLLER)
```

```
=> D RANK
```

F1	130	USPATFULL
F2	84	CANPATFULL
F3	78	FRFULL
F4	57	PCTFULL
F5	26	IFIPAT
F6	25	GBFULL
F7	25	USPAT2
F8	17	AUPATFULL
F9	12	EPFULL
F10	4	USPATOLD
F11	1	RDISCLOSURE

Use **DISPLAY RANK** to organize results by number of answers in each database.

```
=> FIL HITS
```

```
=> SET MSTEPS ON
```

```
SET COMMAND COMPLETED
```

SET MSTEPS ON to create a separate L-number for each database.

Step 2: Perform multi-file search

```
=> S L1
FILE 'USPATFULL'
L2          130 (MECANUM OR OMNI DIRE
              OR ROBOT OR VEHICLE)(S)(BALL OR SPHERICAL ROLLER)

FILE 'CANPATFULL'
L3          84 (MECANUM OR OMNI DIRECT? OR OMNIDIRECT?)(S)(WHEEL...

FILE 'FRFULL'
L4          78 (MECANUM OR OMNI DIRECT? OR OMNIDIRECT?)(S)(WHEEL...

FILE 'PCTFULL'
L5          57 (MECANUM OR OMNI DIRECT? OR OMNIDIRECT?)(S)(WHEEL...

FILE 'IFIPAT'
L6          26 (MECANUM OR OMNI DIRECT? OR OMNIDIRECT?)(S)(WHEEL...

FILE 'GBFULL'
L7          25 (MECANUM OR OMNI DIRECT? OR OMNIDIRECT?)(S)(WHEEL...

FILE 'USPAT2'
L8          25 (MECANUM OR OMNI DIRECT? OR OMNIDIRECT?)(S)(WHEEL...
```

Searching in a multi-file environment with **SET MSTEPS ON** and **SET DETAIL ON**.

```
TOTAL FOR ALL FILES
L13          459 L1
```

The 459 records from L13 include family equivalent documents.

Step 3b: Sort answers into patent families

=> **FSORT L13**

L14 459 FSO L13

81 Multi-record Families Answers 1-234

 Family 1 Answers 1-6

 Family 2 Answers 7-8

 Family 3 Answers 9-11

 . . .

 Family 79 2

 Family 80 2

 Family 81 2

225 Individual Records Answers 235-459

0 Non-patent Records

Sort the records into patent families.

81 patent inventions from 459 answers in the full-text databases and 225 individual records.

Review the first record in each family (i.e., by patent title) by using **DISPLAY PFAM** or use the patent family display wizard in STN Express!

=> **DISPLAY PFAM**

ENTER (L14) OR L#:L14

ENTER PATENT FAMILY NUMBER OR RANGE (1):1-

ENTER ANSWER NUMBER OR RANGE (1):1

ENTER DISPLAY FORMAT (FILEDEFAULT):TI

Step 4: Browse to locate relevant records

Patent family number – one record per family.

L14 ANSWER 1 OF 459 USPATFULL on STN **FAMILY 1**
TI Omni-Directional Aircraft Transporter with Hinged Gate for Moving Aircraft

L14 ANSWER 7 OF 459 USPATFULL on STN **FAMILY 2**
TI FRICTION DRIVE DEVICE AND OMNI-DIRECTIONAL VEHICLE USING THE SAME

L14 ANSWER 9 OF 459 USPATFULL on STN **FAMILY 3**
TI LONGITUDINALLY SPINNING SUSPENSION ROLLER COASTER

. . .

L14 ANSWER 457 OF 459 USPATOLD on STN
TI Inertia operated mechanism

No patent family number – non-patent literature.

L14 ANSWER 458 OF 459 USPATOLD on STN
TI Particle smoothing apparatus

L14 ANSWER 459 OF 459 **RDISCLOSURE** COPYRIGHT 2011 QUESTEL IRELAND LTD. On STN
TI Web tracking device with ramp support means

Step 4: Browse records, cont.

=> DISPLAY PFAM

ENTER (L14) OR L#:L14

ENTER PATENT FAMILY NUMBER OR RANGE (1):1-

ENTER ANSWER NUMBER OR RANGE (1):1

ENTER DISPLAY FORMAT (FILEDEFAULT):occ

L14 ANSWER 1 OF 459 USPATFULL on STN FAMILY 1

FIELD COUNT

DETD(11) 4

DETD(16) 9

. . .

L14 ANSWER 114 OF 459 USPATFULL on STN FAMILY 29

FIELD COUNT

SUMM(23) 4

SUMM(32) 5

. . .

DETD(14) 14

DETD(24) 8

DETD(28) 5

CLM(7) 22

CLM(8) 17

. . .

Use DISPLAY OCCURRENCE (free) to find the best candidate answer quickly.

Pick out the best answers and the best fields from the answers.

Step 5: Display interesting records

=> D L14 7 TI HIT

This record seems to be good !!

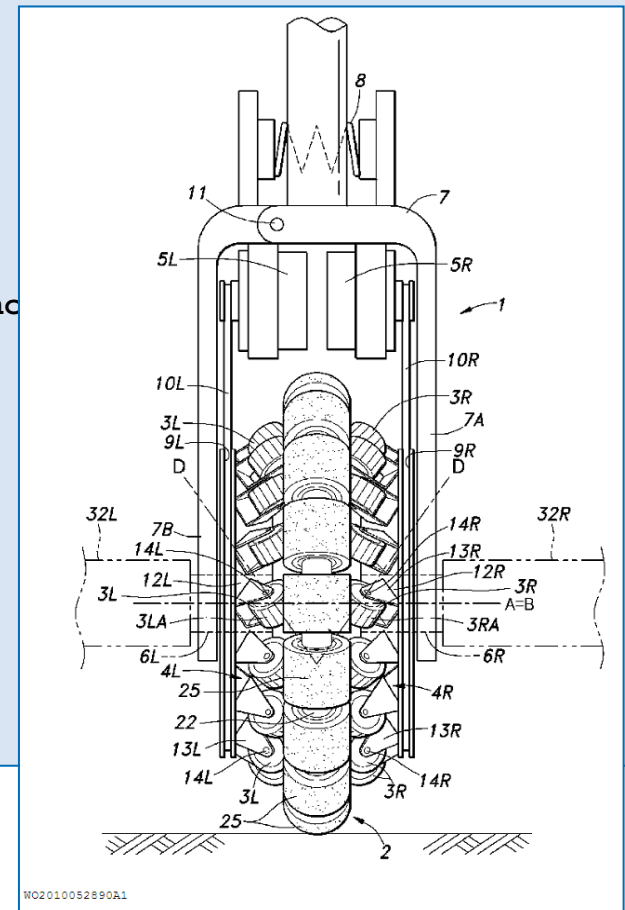
L18 ANSWER 7 OF 459 USPATFULL on STN FAMILY 2
TI FRICTION DRIVE DEVICE AND OMNI-DIRECTIONAL VEHICLE USING THE SAME
SUMM The **omni-directional vehicle** of the present invention comprises a friction drive device as defined above, and may be configured to travel by the first free rollers engaging a road or floor surface, or may further comprise a rollable **ball** that are actuated by the first free rollers so that the **vehicle** may be enabled to travel by the **ball** engaging a road or floor surface.

DETD The **omni-directional vehicle** 100 of this embodiment includes a **vehicle** body 101 formed as a box having an open bottom end, a propelling **ball** 102 received in the **vehicle** body 101 so as to be enabled to roll in any direction, and a friction drive device 110. The lower part of the propelling **ball** 102 is exposed from the lower opening 103 of the **vehicle** body 101, and engages a floor surface or road surface by rolling over the surface. The propelling **ball** 101 is . . .

Step 5: Display interesting records, cont.

=> D L14 7 BIB

14 ANSWER 7 OF 459 USPATFULL on STN FAMILY 2
AN 2011:291790 USPATFULL
TI FRICTION DRIVE DEVICE AND OMNI-DIRECTIONAL VEHICLE USING THE SAME
IN Takenaka, Toru, Saitama, JAPAN
Hirano, Makoto, Saitama, JAPAN
Izumi, Hideharu, Saitama, JAPAN
Kuwabara, Kazuya, Saitama, JAPAN
Koyama, Taiji, Saitama, JAPAN
Kobashi, Shinichiro, Saitama, JAPAN
Gomi, Hiroshi, Saitama, JAPAN
Sasaki, Masao, Saitama, JAPAN
PA HONDA MOTOR CO., LTD., MINATO-KU, TOKYO, JAPAN (no
PI US 20110260523 A1 20111027
AI US 2009-127347 A1 20091102 (13)
WO 2009-JP5832 20091102
20110601 PCT 371 date
PRAI JP 2008-283474 20081104
DT Utility
FS APPLICATION
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 12 Drawing Page(s)
LN.CNT 1004



Step 5: Display interesting records, cont.

=> D L14 TI CLM(7) 114

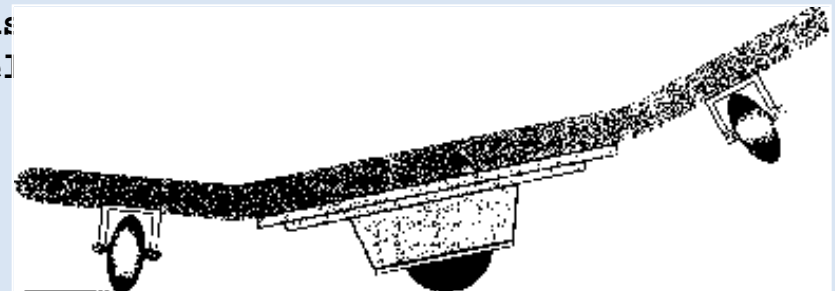
This record appears to be irrelevant!

L14 ANSWER 114 OF 459 USPATFULL on STN FAMILY 29

TI Omnidirectional spherical roller caster

CLM What is claimed is:

7. An **omnidirectional** skateboard, comprising: a. an integral, elongated, structurally rigid, single-piece platform for supporting a user, the platform having i a flat central portion with a longitudinal axis, bilateral upwardly-inclining extensions from the central portion, and ii fore and aft upwardly-angled extensions; b. at least one **spherical roller** assembly longitudinally spaced and centrally attached to the underside of the flat central portion of the platform, each assembly having i. a housing, comprising (1) at least one downwardly-open spherical cavity defined by at least three shallow cylindrical bores in the inner, upper surface of the housing defining the spherical cavity, positioned to form an equilateral geometrical configuration with the axis of each bore aligned to the center nucleus of the **spherical roller**, ii. a plurality of proportionately small internal caster assemblies extending in a spherical geometrical relationship to the center of the.....



Step 5: Display interesting records, cont.

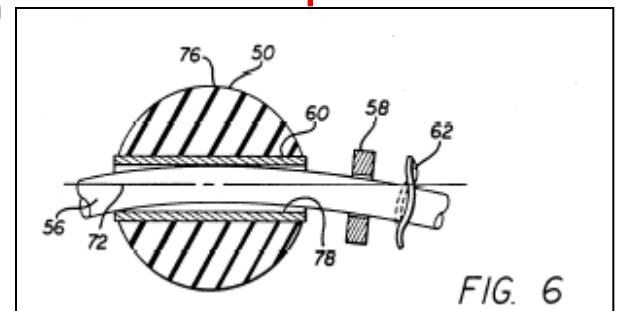
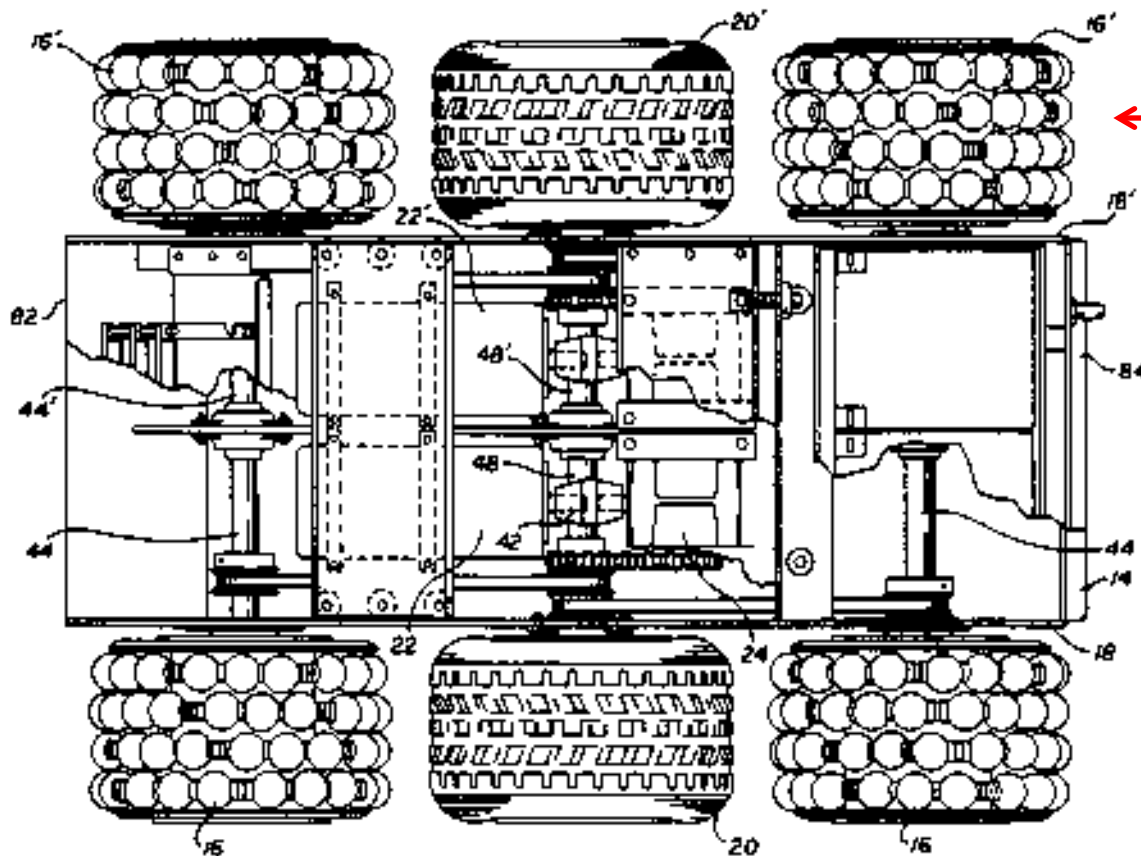
=> D L14 BIB AB ECLM 151

Display more from this record

L14 ANSWER 151 OF 459 USPATFULL on STN FAMILY 45
AN 94:54691 USPATFULL
TI **Robot transport platform with multi-directional wheels**
IN Griffin, Ronald, 17614 Lahey St., Agua Dulce, CA, US
Allard, Eric J., 17614 Lahey St., Granada Hills, CA, US
91344
PA Allard, Eric J., Granada Hills, CA, United States
PI US---5323867 19940628
AI 1992US-0847627 19920306 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Swinehart, Edwin L.
LREP Blatt, Jeffrey J.
CLMN Number of Claims: 3
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 522
AB A **robot** transport platform adapted for locomotion, having a
base with

Step 5: Display more details

Drawings from US 5323867 show the omnidirectional wheels with balls/spherical rollers.



Highlights to remember

- All non-US full-text patent files
 - Multilevel records (all publications in **ONE** record)
 - **LS** & **LS2** legal status and **CFAM** family displays
 - Formats with **.M**-suffix display **ALL** publication stages
- All U.S. full-text patent files
 - Single level records (one publication/record)
 - Formats with **.EX**-suffix display the original and most current publications
- **Numeric property search** possibility in PCTFULL, AUPATFULL, CANPATFULL
- **EPFULL** contains the most current EP legal status
- Comprehensive application searching
 - EP = EPFULL + PCTFULL
 - PCT = PCTFULL + EPFULL
 - DE = PATDPAFULL + EPFULL + PCTFULL
- Use multiple languages + **SET SPELLINGS ON**

Summary

- Patent full-text searching is an important part of any thorough patent search
- STN offers many useful search and display tools in order to identify relevant answers quickly
- Include current and complete family priority information from value-added patent family databases in order to perform accurate family sorting on full-text patent records (FSORT)
- Bibliographic databases like DWPI, CAplus, and INPAFAMDB should also be included for a comprehensive search

STN[®]

For more information ...

CAS

E-mail: help@cas.org

Support and Training:

www.cas.org

FIZ Karlsruhe

helpdesk@fiz-karlsruhe.de

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