



STN®: Improving Searches by Including Patent Classification Codes

Classification codes provide a guide to the technological content of patent documents

- Classification coding is intellectually assigned by a patent office and printed on the front page of granted patents or published applications
- Patent classification can
 - Identify **claimed** technology
 - Define technical areas for further search
 - Obtain answers missed by a keyword search
 - Refine a search with too many answers
 - Reveal technological trends
 - Help identify competitors for analysis

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Goals for this seminar include...

- An overview of patent classification systems and the STN databases that contain them
- Using STN patent classification resources to identify patents pertaining to a particular technology
- Understanding STN patent classification displays
- Learning techniques for effective retrieval of patent documents based on classification codes

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What is Patent Classification?

- A uniform way for Intellectual Property Offices (IPO's) to describe the subject content of granted patents or published applications using
 - A **hierarchical** directory
 - An **alphanumeric** code
- A searchable collection of patents grouped together based on similarly claimed subject matter
- A search tool that can be capitalized to improve search results!

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Several patent classification systems are available on STN

- International Patent Classification (**IPC**)
- U.S. National Classification (**NCL**)
- European Classification (**ECLA**)
- Japanese **F-term** classification in CAplusSM
- Additional classification in INPADOCDB includes
 - European ICO and IDT
 - AT, BR, CA, DE, DK, ES, GB, MX, NL classification for select date ranges
- >50 STN files can be searched using at least one of these classification systems

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Utilizing classification codes can lead to better search results

- ***A keyword search may not be comprehensive***
 - Relevant patent documents may not contain the specific keywords you searched
 - The same keyword (including acronyms) may be used in more than one field
- ***Adding classification may enhance retrieval***
 - NCL's more accurately describe U.S. patent content
 - Codes from another classification system may be more appropriate for a specific topic
- More precise codes including IPCs, ECLA, or F-terms may help refine search results

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Identifying appropriate classification codes on STN

- Use Classification Code Thesauri on STN
 - IPC Thesaurus
 - NCL Thesaurus
 - F-term Thesaurus
- View classifications from a select few “good” patent records
- Analyze classification from an answer set obtained by a keyword search
 - ANALYZE on STN
 - STN® AnaVist™

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International Patent Classification (IPC) is used by the most patent authorities

- World-wide classification system administered by WIPO with the assistance of the EPO
- IPC had a major reform in the latest 8th Edition beginning in January 2006
- Several major IPC 8 improvements include
 - Classification divided into Core and Advanced levels
 - Reclassification of pre-2006 documents
 - More in-depth indexing of disclosure
 - More frequent revisions planned
- Most STN patent databases now include IPC 8 enhancements!

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IPC Reform provides *more comprehensive* results

- IPC Reform brings more consistency to IPC code assignment
 - **Core** level is assigned by smaller authorities
 - **Advanced** level provides additional subgroups for larger patent authorities
- The advanced level may adapt quicker to rapidly changing technology areas
- Reclassification of family members provides more comprehensive and accurate IPC indexing
 - Small authorities had minimal initial IPC assignments
 - Some authorities had frequent errors in assignment



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STN files have changed to accommodate IPC 8 reform

- A 8-digit Group number for IPC 8 format has been added to most files containing patents
 - On initial assignments from 2006 to date
 - For backfile reclassified records prior to 2006
- Advanced subgroups with additional digits
- New search, display, and select fields
- SET ICFORMAT to provide consistent length for IPC displays and selects
- An IPC thesaurus in all IPC 8 compliant files to help find and identify appropriate IPCs



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IPC's from earlier pre-reform editions are still available in pre 2006 records

- Use the IPC super field (**//IPC**) to search **either** form of the IPC
 - Searches 7-digit group pre-reform (IPC 1-7) codes
 - Searches 8-digit group code in IPC 8 format
- **ONLY** use old IPC fields for **pre-reform codes**
 - IC, ICM, ICS, ICA, ICI are not valid for IPC 8
- Use **SET ICFORMAT PERM** to provide IPC 8 formats for pre-reform codes
 - Displays pre-reform code in IPC 8 format
 - Creates IPC 8 term when using SELECT
 - Provides consistent crossfile format



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New DISPLAY fields are available for IPC data

- **IPC** - displays all IPC data
 - Includes pre-reform and IPC 8 codes
 - IPC.M required to display all publication stages for EPFULL, INPADOC, and DWPI
- **IPCI** - Displays initial IPC
- **IPCR** - displays reclassified IPCs
- **IPC.TAB** - Displays additional metadata for both IPCI and IPCR codes
- Use **SET ICFORMAT** to convert pre-reform IPC displays and selects into IPC 8



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SELECT/ANALYZE codes are available for IPC 8 data

- **IPC** **Selects all IPC classification**
- **IPCI** IPC Initial Classification
- **IPCR** IPC Reclassification
- **IPC.F** Selects first IPC starting in 2006 or ICM for pre-reform codes
- **IPC.A** Selects all advanced level
- **IPC.AI** Selects all advanced level for invention
- **IPC.C** Selects all core level
- **IPC.CI** Selects all core level for invention
- **IPC.B** Basic patent IPCs in CPlus only

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The IPC layout consists of 8 **Sections**

- **A** HUMAN NECESSITIES
- **B** PERFORMING OPERATIONS;
TRANSPORTING
- **C** CHEMISTRY; METALLURGY
- **D** TEXTILES; PAPER
- **E** FIXED CONSTRUCTIONS
- **F** MECHANICAL ENGINEERING; LIGHTING;
HEATING; WEAPONS; BLASTING
- **G** PHYSICS
- **H** ELECTRICITY

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The IPC code is further subdivided into **Class, Subclass, and Group**

- The **Class** consists of the section symbol followed by a two-digit number
 - Class title describes content of the class
 - **Example: H01 BASIC ELECTRIC ELEMENTS**
- The **Subclass** adds an additional letter to subdivide the Class, e.g. **H01S**
- The Subclass is further subdivided into the **Group** 1-3 digits, a slash, and additional digits
 - The **Main Group** displays as a subgroup of /00
 - **Example: H01S 3/00 Lasers**

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A **Subgroup** consists of a numeric symbol and a text description of content

- The **Subgroup** consists of two or more digits
 - Any third or subsequent digit after the slash is a further subdivision of the digit preceding it
 - **Example: 3/036** follows 3/03 and is before 3/04
- The number of dots (indentation) preceding subgroup titles determines position in hierarchy
- **Example: H01S 3/00 Lasers**
 - 3/09 • Processes or apparatus for excitation,
e.g. pumping
 - 3/091 •• by optical pumping
 - 3/094 ••• by coherent light

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IPC codes are searchable at class, group, and subclass levels

- Section C Chemistry
 - Class: ANN (INORGANIC CHEMISTRY) => S C01!/IPC
 - Use truncation to include all subclasses
 - Subclass: ANNA (NON-METALLIC ELEMENTS; COMPOUNDS THEREOF) => S C01B/IPC
 - Group: ANNANNN* (Peroxides; Peroxyhydrates; Peroxyacids or salts thereof;) => S C01B0015/IPC
 - *Search group in either 7 or 8 digit format
 - Subgroup: ANNANNN-NN (Hydrogen peroxide) => S C01B0015-01/IPC

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The IPC thesaurus is available for all STN patent files that are IPC 8 compliant

- The IPC 8 thesaurus includes
 - Broader (BT) and narrower (NT) terms
 - Labels for Core and Advanced codes
 - Relationship codes for Core and Advanced codes (+CORE, +ADVANCED)
 - Identification of valid pre-reform editions
 - Identification of valid date ranges for each IPC
- Separate thesauri are still available for IPC 1-7
- View revision changes with IPC version dates
- See HELP THESAURUS and HELP RCODE for more information in each file

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Identify terms using the Keyword Term (KT) relationship code

```

=> FILE CAPLUS
=> SET EXPAND CONTINUOUS

=> E DENTAL+KT/IPC
'DENTAL' NOT IN RELATIONSHIP FILE
RELATIONSHIP CODE IGNORED.
E#   FREQUENCY   AT   TERM
---   -
E1       0       1   DENSITY * ELECTRIC SWITCHES RESPONSIVE TO
                        DENSITY/IPC
E2       0       1   DENSITY * INVESTIGATING DENSITY/IPC
E3       0       0   --> DENTAL/IPC
E4       0       1   DENTAL DRILLING MACHINES; DENTAL DRILLS/IPC
E5       0       1   DENTAL FILE(S)/IPC
E6       0       1   DENTIFRICES/IPC
E7       0       1   DENTISTRY/IPC
E8       0       1   DENTISTRY * CHAIRS FOR DENTISTRY/IPC
E9       0       1   DENTISTRY * OPERATING TABLES FOR DENTISTRY/IPC
E10      0       1   DENTISTRY * PREPARATIONS FOR DENTISTRY/IPC
E11      0       1   DENTISTRY * RADIATION DIAGNOSIS FOR DENTISTRY/IPC
E12      0       1   DENTURES/IPC

```

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Use the Hierarchy (HIE) relationship code to see class and main group descriptions

```

=> E E6+ALL
E13       0   --> DENTIFRICES/IPC
E14       7888 KT A61Q0011-00/IPC
***** END *****

=> E E14+HIE
E15       59163 BT1 A61Q/IPC
                        USE OF COSMETICS OR SIMILAR TOILET PREPARATIONS
E16       7888 --> A61Q0011-00/IPC
                        Preparations for care of the teeth, of the oral
                        cavity or of dentures, e.g. dentifrices or
                        toothpastes; Mouth rinses
                        CORE
                        VALID FROM 20060101 TO PRESENT ( IPC EDITION: 8 )
E17       334 NT1 A61Q0011-02/IPC
                        . Preparations for deodorising, bleaching or
                        disinfecting dentures
                        CORE
                        VALID FROM 20060101 TO PRESENT ( IPC EDITION: 8 )
***** END *****

```

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Expand related terms to identify additional IPCs in another group

```

=> E E10+ALL
E18      0  -->  DENTISTRY * preparations for DENTISTRY/IPC
E19      5472  KT  A61K0006-00/IPC
*****  END  *****

=> E E19+HIE
E20      0  BT4  A/IPC
          SECTION A - HUMAN NECESSITIES
E21      0  BT4  HEALTH; AMUSEMENT/IPC
E22      0  BT3  A6/IPC
E23      0  BT2  A61/IPC
          MEDICAL OR VETERINARY SCIENCE; HYGIENE
E24      528464  BT1  A61K/IPC
          PREPARATIONS FOR MEDICAL, DENTAL, OR TOILET PURPOSES
          ●●●
E25      5472  -->  A61K0006-00/IPC
          Preparations for dentistry (teeth cleaning preparations
          A61K0008-00, A61Q0011-00; dentistry A61C; fastening
          dental prostheses in the mouth using adhesive foils or
          adhesive compositions A61C0013-23)
          CORE
          VALID FROM 19800101 TO PRESENT ( IPC EDITION: 3-8 )
E26      6669  NT1  A61K0006-02/IPC
          . Use of preparations for artificial teeth, for filling
          or for capping teeth
          CORE
          VALID FROM 19800101 TO PRESENT ( IPC EDITION: 3-8 )
          ●●●
    
```

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Identify specific IPC's with Narrower Terms

```

=> E A61K0008-00+NT/IPC
E39      34376  -->  A61K0008-00/IPC
          Cosmetics or similar toilet preparations (casings or
          accessories for storing or handling of solid or pasty
          toilet or cosmetic substances A45D0040-00)
          CORE
          VALID FROM 20060101 TO PRESENT ( IPC EDITION: 8 )
E40      7518  NT1  A61K0008-02/IPC
          . characterised by special physical form
          CORE
          VALID FROM 20060101 TO PRESENT ( IPC EDITION: 8 )
          ●●●
E46      3151  NT1  A61K0008-18/IPC
          . characterised by the composition
          CORE
          VALID FROM 20060101 TO PRESENT ( IPC EDITION: 8 )
E47      13306  NT2  A61K0008-19/IPC
          . . . containing inorganic ingredients
          CORE
          VALID FROM 20060101 TO PRESENT ( IPC EDITION: 8 )
E48      1705  NT3  A61K0008-20/IPC
          . . . Halogens; Compounds thereof
          ADVANCED
          VALID FROM 20060101 TO PRESENT ( IPC EDITION: 8 )
E49      1086  NT4  A61K0008-21/IPC
          . . . . Fluorides; Derivatives thereof
          ADVANCED
          VALID FROM 20060101 TO PRESENT ( IPC EDITION: 8 )
E50      1705  NT3  A61K0008-22/IPC
          . . . Peroxides; Oxygen; Ozone
          ADVANCED
          ●●●
    
```

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IPC range searching may be more focused than using +NT

```
=> S A61K0008-18:A61K0008-21/IPC
L1 15108 A61K0008-18:A61K0008-21/IPC (4 TERMS)
(A61K0008-18+NEXT3/IPC)
```

- This range search includes the initial term and the next 3 that follow it in the thesaurus
- Either a colon or dash can be used as the separator, with or without spaces
- Range searching using MGR and SGR is only valid for pre-reform IPCs

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IPC search fields provide more flexible searching in STN files

- **IPC** (IPC super field)
 - Redefined to include both post and pre-reform IPCs
 - Includes patent family members as well as basics
- **IPC.B** (IPC Basic)
 - *Applies to CASM/CAplus only*
- **IPC.OLD** (Old IPC codes)
 - Former /IPC super search field has been renamed IPC.OLD
 - Includes the IPC codes indexed in the former /IC (= /ICM + /ICS), /ICI, and /ICA fields for basic patents
 - *Applies to CA/CAplus and USPATFULL/USPAT2 only*
- **/IPC.REF** field is available for IPC Reform search
 - *Applies to DWPISM files only*
- **IPC.ACD** (IPC Action Date)
 - Indicates when the IPC code was applied to the patent or updated
- **IPC.VER** (IPC Version date)
 - Date associated with the last version

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Additional search fields can focus when and how IPCs were assigned

- **IPCI** (Initial IPC codes)
 - IPC codes associated with the patent when it was first published
- **IPCR** (Reclassification IPC codes)
 - IPC codes associated with a patent that has been reclassified with IPC 8 codes including rolled-up cores
- **IPC.KW** (IPC Keyword)
 - Contains IPC attributes describing IPC assignment
 - Lists patent office and method of assignment
 - Lists status, level, section, and position of IPC



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IPC Attributes

Types for IPC 1-7

Status of the IPC codes

Assigning Patent Office

IPC Reform Level

Position of the IPC code

Value of the IPC code

Source of IPC code

(* Assigned by STN)

Attribute	Abbreviation
MAIN	ICM
SECONDARY	ICS
ADDITIONAL	ICA
INDEX	ICI
INITIAL	IPCI
RECLASSIFIED	IPCR, R
CURRENT	CUR
ORIGINAL	O
Patent Office (Code)	EP,DE,US,...
CORE	C
ADVANCED	A
SUBCLASS	S
FIRST	F
LATER	L
INVENTION	I
NON-INVENTION	N
HUMAN	-
MACHINE	-
SOFTWARE	-
ROLLED UP CORE	RC*



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Some files include “rolled-up core codes” for more complete retrieval

- Some authorities only assign core codes
- Core IPCs are up-posted from advanced IPCs for some patent files including CAplus, INPADOCDB, and Derwent World Patents Index®
- A search on a core code automatically retrieves all narrower advanced codes
 - ⇒ **S A61K0008-19/IPC**
retrieves **A61K0008-20/IPC** to **A61K0008-29/IPC**
- To avoid rolled-up core hits limited the search with **HUMAN/IPC.KW**
 - ⇒ **S A61K0008-22/IPC OR A61K0008-19/IPC(S)HUMAN/IPC.KW**

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CAplus provides the Class display format to show all indexing codes available

- Use **CLASS** display for all IPC classification codes (IPC, IPCI, IPCR)
 - Keywords codes appears in square brackets for Invention/Non-Invention, Advanced/Core, and IPC edition numbers
 - Rolled-up cores are marked with an * in Class display
- CLASS also displays other classification systems including U.S. national, European, and Japanese

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CLASS display shows initial IPC's and reclassifications for equivalents

```

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
CLASS
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES
-----
WO 2004069215 ICM A61K0007-16
IPCI A61K0007-16 [ICM,7]
IPCR A61K0008-19 [I,C*]; A61K0008-21 [I,A]; A61K0008-22
[I,A]; A61K0008-72 [I,C*]; A61K0008-81 [I,A];
A61Q0011-00 [I,A]; A61Q0011-00 [I,C*]
ECLA A61K008/21; A61K008/22; A61K008/81K6; A61K008/81R4;
A61Q011/00
US 2004185013 IPCI A61K0007-20 [ICM,7]
IPCR A61K0008-19 [I,C*]; A61K0008-21 [I,A]; A61K0008-22
[I,A]; A61K0008-72 [I,C*]; A61K0008-81 [I,A];
A61Q0011-00 [I,A]; A61Q0011-00 [I,C*]
NCL 424/053.000
ECLA A61K008/21; A61K008/22; A61K008/81K6; A61K008/81R4;
A61Q011/00
AU 2003300402 IPCI A61K0007-16 [ICM,7]
EP 1587489 IPCI A61K0007-16 [ICM,7]
IPCR A61K0008-19 [I,C*]; A61K0008-21 [I,A]; A61K0008-22
[I,A]; A61K0008-72 [I,C*]; A61K0008-81 [I,A];
A61Q0011-00 [I,A]; A61Q0011-00 [I,C*]
ECLA A61K008/21; A61K008/22; A61K008/81K6; A61K008/81R4;
A61Q011/00
JP 2006519164 IPCI A61K0006-00 [I,A]
IPCR A61K0006-00 [I,C]; A61K0006-00 [I,A]; A61K0008-19
[I,C*]; A61K0008-21 [I,A]; A61K0008-22 [I,A];
A61K0008-72 [I,C*]; A61K0008-81 [I,A]; A61Q0011-00
[I,C*]; A61Q0011-00 [I,A]
FTERM 4C089/AA20; 4C089/BA01; 4C089/BA10; 4C089/BC06;
4C089/BC07; 4C089/BD06; 4C089/BD07; 4C089/BD08;
4C089/BD09; 4C089/BE01; 4C089/BE02
    
```



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IPC.TAB shows additional attributes

```

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
PI WO 2004069215
IPCI CODE VERSION POS INV LEVEL CC ASSIGNMENT DATE STAT
-----
A61K0007-16 (7) Main WO Human 20040819 O
IPCR CODE VERSION POS INV LEVEL CC ASSIGNMENT DATE STAT
-----
A61K0008-19 (200601) I Core* EP Machine 20051008 R
A61K0008-21 (200601) I Advanced EP Machine 20051008 R
A61K0008-22 (200601) I Advanced EP Machine 20051008 R
A61K0008-72 (200601) I Core* EP Machine 20051008 R
A61K0008-81 (200601) I Advanced EP Machine 20051008 R
A61Q0011-00 (200601) I Advanced EP Machine 20051008 R
A61Q0011-00 (200601) I Core* EP Machine 20051008 R
PI US 2004185013
IPCI CODE VERSION POS INV LEVEL CC ASSIGNMENT DATE STAT
-----
A61K0007-20 (7) Main US Human 20040923 O
IPCR CODE VERSION POS INV LEVEL CC ASSIGNMENT DATE STAT
-----
A61K0008-19 (200601) I Core* EP Machine 20051008 R
A61K0008-21 (200601) I Advanced EP Machine 20051008 R
A61K0008-22 (200601) I Advanced EP Machine 20051008 R
A61K0008-72 (200601) I Core* EP Machine 20051008 R
A61K0008-81 (200601) I Advanced EP Machine 20051008 R
A61Q0011-00 (200601) I Advanced EP Machine 20051008 R
A61Q0011-00 (200601) I Core* EP Machine 20051008 R
    
```



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IPC.TAB display (continued)

PI AU 2003300402							
IPCI CODE	VERSION	POS	INV	LEVEL	CC ASSIGNMENT	DATE	STAT
A61K0007-16	(7)	Main			AU Human	20040830	O
PI EP 1587489							
IPCI CODE	VERSION	POS	INV	LEVEL	CC ASSIGNMENT	DATE	STAT
A61K0007-16	(7)	Main			EP Human	20051026	O
IPCR CODE	VERSION	POS	INV	LEVEL	CC ASSIGNMENT	DATE	STAT
A61K0008-19	(200601)		I	Core*	EP Machine	20051008	R
A61K0008-21	(200601)		I	Advanced	EP Machine	20051008	R
A61K0008-22	(200601)		I	Advanced	EP Machine	20051008	R
A61K0008-72	(200601)		I	Core*	EP Machine	20051008	R
A61K0008-81	(200601)		I	Advanced	EP Machine	20051008	R
A61Q0011-00	(200601)		I	Advanced	EP Machine	20051008	R
A61Q0011-00	(200601)		I	Core*	EP Machine	20051008	R
PI JP 2006519164							
IPCI CODE	VERSION	POS	INV	LEVEL	CC ASSIGNMENT	DATE	STAT
A61K0006-00	(200601)	F	I	Advanced	JP Human	20060728	O
IPCR CODE	VERSION	POS	INV	LEVEL	CC ASSIGNMENT	DATE	STAT
A61K0006-00	(200601)	F	I	Core	JP Human	20060728	O
A61K0006-00	(200601)	F	I	Advanced	JP Human	20060728	O
A61K0008-19	(200601)		I	Core*	EP Machine	20051008	R
A61K0008-21	(200601)		I	Advanced	EP Machine	20051008	R
A61K0008-22	(200601)		I	Advanced	EP Machine	20051008	R
A61K0008-72	(200601)		I	Core*	EP Machine	20051008	R
A61K0008-81	(200601)		I	Advanced	EP Machine	20051008	R
A61Q0011-00	(200601)		I	Core*	EP Machine	20051008	R
A61Q0011-00	(200601)		I	Advanced	EP Machine	20051008	R

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Search Question:

- Find patents on dentifrice additives particularly tooth whitening agents

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Search Strategy

To find additional patents using IPCs

- Step 1. Run a preliminary search
- Step 2. Use ANALYZE to extract IPCs
- Step 3. Identify codes by using the IPC Thesaurus
- Step 4. Search appropriate IPCs and combine with text search

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Run a preliminary search to identify appropriate terms

```
=> S WHITEN?(S) TOOTH
      22933 WHITEN?
      39787 TOOTH
           11 TOOTH S
      23368 TEETH
           11 TEETH S
      51761 TOOTH
           (TOOTH OR TOOTH S OR TEETH OR TEETH S)
L1      620 WHITEN?(S) TOOTH

=> D SCAN HIT

L1      620 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN
IT      Oral hygiene chewing gums
      Tooth gels
      Tooth whitening products
      (cosmetic medicinal oral products and their active
      ingredients)
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1
```

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SCAN HIT display shows relevant controlled term indexing

```

L1      620 ANSWERS  CAPLUS  COPYRIGHT 2007 ACS on STN
TI      Tooth whitening
IT      Dentifrices
        Tooth
        Whitening agents
        (tooth whitening agents)
IT      124-43-6, Carbamide peroxide  7722-84-1, Hydrogen peroxide,
        biological studies
        RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
        (tooth whitening agents)
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L1      620 ANSWERS  CAPLUS  COPYRIGHT 2007 ACS on STN
IT      Bleaching agents
        Human
        Tooth whitening products
        (tooth-bleaching compns. containing persulfate-based
        agents and Ca salt aggregate-formable components)
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0
    
```

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Search enhanced strategy with terms derived from indexing and refine to patents

```

=> S (WHITEN? OR BLEACH?) (S) (TOOTH? OR TEETH OR DENT?)
    22933 WHITEN?
    84289 BLEACH?
    45487 TOOTH?
    23368 TEETH
    11 TEETHS
    23373 TEETH
        (TEETH OR TEETHS)
    83107 DENT?
L2      1083 (WHITEN? OR BLEACH?) (S) (TOOTH? OR TEETH OR DENT?)

=> S L2 AND P/DT
    5932329 P/DT
L3      832 L2 AND P/DT
    
```

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Chemical Abstracts

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Use ANALYZE to identify appropriate IPC's for the area of interest

```
=> SET DETAIL ON
SET COMMAND COMPLETED

=> ANALYZE L3 1- IPC IPCR IPCI
ANALYZE IS APPROXIMATELY 40% COMPLETE
ANALYZE IS APPROXIMATELY 93% COMPLETE
L4          ANALYZE L3 1- IPC IPCR IPCI :    3060 TERMS

=> D
L4          ANALYZE L3 1- IPC IPCR IPCI :    3060 TERMS

TERM #      # OCC  # DOC  % DOC  IPC IPCR IPCI
-----
1           3239  442   53.13  A61Q0011-00/IPC
2           2830  378   45.43  A61Q0011-00/IPCR
3           1948  382   45.91  A61K0008-19/IPC
4           1581  341   40.99  A61K0008-19/IPCR
5           1286  196   23.56  A61K0008-00/IPC
6           1255  266   31.97  A61K0008-22/IPC
7           1211  351   42.19  A61K0007-16/IPC
8           1186  176   21.15  A61K0008-00/IPCR
9           1079  294   35.34  A61K0008-30/IPC
10          1051  246   29.57  A61K0008-22/IPCR
```

SET DETAIL ON provides field code labels for display.

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PUBLISHING

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Extract terms to review in the IPC thesaurus using SELECT

```
=> SET EXPAND CONTINUOUS
SET COMMAND COMPLETED

=> SELECT L4 1 5
E1 THROUGH E2 ASSIGNED

=> D SEL
E#      FILE          FREQUENCY  TERM
--      ----          -
E1      CAPLUS          3239      A61Q0011-00/IPC
E2      CAPLUS          1286      A61K0008-00/IPC
```

STN

COS
PUBLISHING

38

Find IPC definitions with the INDEX relationship code in the IPC thesaurus

```

=> E E1+INDEX
E#   FILE           FREQUENCY  TERM
--   -
E3   CAPLUS         7888      -->  A61Q0011-00/IPC
                               Preparations for care of the teeth, of
                               the oral cavity or of dentures, e.g.
                               dentifrices or toothpastes; Mouth rinses

***** END *****

=> E E2+INDEX
E#   FILE           FREQUENCY  TERM
--   -
E4   CAPLUS         34376     -->  A61K0008-00/IPC
                               Cosmetics or similar toilet preparations
                               (casings or accessories for storing or
                               handling of solid or pasty toilet or
                               cosmetic substances A45D0040-00)

***** END *****

```

STN

COS
PUBLISHING

39

IPC definitions are not available for IPC terms that have been retired

```

=> SEL 7
E5 THROUGH E5 ASSIGNED

=> E E5+INDEX
E#   FILE           FREQUENCY  TERM
--   -
E6   CAPLUS         6440      -->  A61K0007-16/IPC

***** END *****

=> E A61K0007-00+NT/IPC
E#   FILE           FREQUENCY  TERM
--   -
E7   CAPLUS         28007     -->  A61K0007-00/IPC
                               PRE-REFORM
                               VALID FROM 19680901 TO
                               20051231
                               ( IPC EDITION: 1-7 )

***** END *****

```

STN

COS
PUBLISHING

40

Search on retired IPCs leads to additional reclassified codes to review

```

=> S E6
L5          6440 A61K0007-16/IPC

=> D IPC

L5  ANSWER 1 OF 6440  CAPLUS  COPYRIGHT 2007 ACS on STN
IC  ICM  A61K0007-16
    ICS  A61K0007-20; A61K0033-40; A61C0019-06

CLASS
PATENT NO.      CLASS  PATENT FAMILY CLASSIFICATION CODES
-----
GR 1004634      IPCI  A61K0007-16 [ICM,7]; A61K0007-20 [ICS,7];
                    A61K0033-40 [ICS,7]; A61C0019-06 [ICS,7];
                    A61C0019-00 [ICS,7,C*]<--
                    IPCR  A61C0019-00 [I,C*]; A61C0019-06 [I,A]; A61K0033-40
                    [I,C*]; A61K0033-40 [I,A]

```

STN

CS
PSEARCH

41

Check Broader Terms (BT) in the IPC thesaurus for a definition

```

=> E A61K0033-40+BT2/IPC
E20  CAPLUS          528464  BT2  A61K/IPC
      PREPARATIONS FOR MEDICAL, DENTAL, OR
      TOILET PURPOSES (bringing into
E21  CAPLUS          4139   BT1  A61K0033-00/IPC
      Medicinal preparations containing
      inorganic active ingredients
      CORE
      VALID FROM 19740701 TO PRESENT
      ( IPC EDITION: 2-8 )
E22  CAPLUS          723   --> A61K0033-40/IPC
      . Peroxides
      CORE
      VALID FROM 19740701 TO PRESENT
      ( IPC EDITION: 2-8 )

***** END *****

```

STN

CS
PSEARCH

42

Search IPCs to obtain records on peroxide containing dental or toilet preparations

```
=> S (A61K0008-22 OR A61K0033-40)/IPC
L6      2301 (A61K0008-22 OR A61K0033-40)/IPC

=> D TI 1-5

L6 ANSWER 1 OF 2301 CAPLUS COPYRIGHT 2007 ACS on STN
TI Peracetic teat dip

L6 ANSWER 2 OF 2301 CAPLUS COPYRIGHT 2007 ACS on STN
TI Dough-like polymer material enriched with hydrogen or
  carbamide peroxide for the manufacture of pre-shaped dental whitening
  sheets

L6 ANSWER 3 OF 2301 CAPLUS COPYRIGHT 2007 ACS on STN
TI Conditioner for dental composition

L6 ANSWER 4 OF 2301 CAPLUS COPYRIGHT 2007 ACS on STN
TI Treatment methods with peroxides and tertiary amines

L6 ANSWER 5 OF 2301 CAPLUS COPYRIGHT 2007 ACS on STN
TI Oxidative hair bleaches and dyes containing piperidone derivatives
```

STN

CS
Purdue

43

Refine with additional IPCs to focus on dental applications

```
=> S L6 AND A61Q0011/IPC
L7      700 L6 AND A61Q0011/IPC

=> D TI 1-3

L7 ANSWER 1 OF 700 CAPLUS COPYRIGHT 2007 ACS on STN
TI Conditioner for dental composition

L7 ANSWER 2 OF 700 CAPLUS COPYRIGHT 2007 ACS on STN
TI Denture cleaner compositions containing antimicrobial metal salts

L7 ANSWER 3 OF 700 CAPLUS COPYRIGHT 2007 ACS on STN
TI Peroxide containing oral care compositions comprising menthol and
  other coolant flavoring agents, having improved consumer esthetics
  and taste

=> S L7 NOT L3
L8      449 L7 NOT L3

=> D 4 ALL
```

The IPC search obtained many additional records to consider.

STN

CS
Purdue

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The IPC search leads to potentially new technology in this area

I8 ANSWER 4 OF 449 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2007:998724 CAPLUS
 DN 147:329878
 ED Entered STN: 07 Sep 2007
 TI Toothpaste containing micronized unencapsulated peroxide compounds
 IN Velkoborsky, Vaclav
 PA Swissdent Cosmetics AG, Switz.
 SO PCT Int. Appl., 20pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 CC 62-7 (Essential Oils and Cosmetics)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007098629	A1	20070907	WO 2007-CH103	
PRAI CH 2006-314	A	20060228		

STN

COS
Cosmetics

45

The abstract describes the composition in detailed text

CLASS
 PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

 WO 2007098629 IPCI A61Q0011-00 [I,A]; A61Q0011-02 [I,A]; A61K0008-22 [I,A]; A61K0008-19 [I,C*]; A61K0008-02 [I,A] <--

AB The present invention relates to a toothpaste comprising one or more micronized unencapsulated peroxide compds. with improved properties with regard to cleaning and visual brightening of natural teeth, false teeth and/or polymer fillings of teeth; to its production and use. Thus 100 kg toothpaste was prepared from (kg): water 51.3657; methylparaben 0.0540; glycerin (99.5%) 10.0000; Nano-Lipobelle H-EQ10 (liposomes loaded with 10% Vitamin E and 5% ubiquinone) 0.9000; sorbitol 70% 7.0000; zinc citrate hydrate 0.8700; sodium saccharine 0.0660; papain 0.2000; bromelain 0.2000; Phoskudent NA 211 (sodium monofluoro phosphate) 0.8600; Satiagel UTH 18 (Carrageenan) 0.8700; Prestige Sparkling Green 3518 containing mica, titania, tin oxide 0.8000; Martinal ON-310 3.2600; Sident 8 12.600; Sident 22 7.000; micronized calcium peroxide 0.4500; peppermint oil 1.5000; Pistacia green (CI2051 + CI19140) 0.043; Tego betaine 2.0000.

STN

COS
Cosmetics

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Indexing reveals additional information concerning the application

```

ST  toothpaste calcium peroxide micronized
IT  Liposomes
    (Nano-Lipobelle H-EQ10; toothpaste containing micronized
    unencapsulated peroxide compds.)
IT  Dental materials and appliances
    (dentures; toothpaste containing micronized unencapsulated peroxide
    compds.)
● ● ●
IT  Brightening
    Particle size
    Tooth
    Toothpastes
    (toothpaste containing micronized unencapsulated peroxide compds.)
IT  1406-18-4, Vitamin E 9001-73-4, Papain 9001-92-7, Proteinase
    37353-41-6 150977-36-9, Bromelain
    RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
    (in combination with; toothpaste containing micronized
    unencapsulated peroxide compds.)
IT  1305-79-9, Calcium peroxide
    RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
    (toothpaste containing micronized unencapsulated peroxide compds.)
    
```

STN

COS
Chemical Abstracts

47

IPC search lead to discovering a new CAPLUS controlled term for toothpastes

```

=> E TOOTHPASTES+ALL/CT
E#  FILE          FREQUENCY  TERM
--  ----          -
E35  CAPLUS          2389      BT3  Cosmetics and personal care
products/CT
E36  CAPLUS          2143      BT3  Health products/CT
E37  CAPLUS           7         BT2  Oral hygiene products/CT
E38  CAPLUS         10132     BT1  Dentifrices/CT
E39  CAPLUS           63      -->  Toothpastes/CT
                                HNTE Valid heading during volume
                                146 (2007) to present.
E40  CAPLUS          UF  Anticariogenic toothpaste/CT
E41  CAPLUS          UF  Anticariogenic toothpastes/CT
E42  CAPLUS          UF  Antitartar toothpastes/CT
E43  CAPLUS          UF  Double Cool Stripe/CT
E44  CAPLUS          UF  Tartar control toothpastes/CT
E45  CAPLUS          UF  Toothpaste/CT
E46  CAPLUS          UF  Total/CT
E47  CAPLUS          UF  Total (toothpaste)/CT
E48  CAPLUS          UF  Weleda green/CT
***** END *****
    
```

STN

COS
Chemical Abstracts

48

F-term classification system was developed by the Japanese Patent Office (JPO)

- “F-term” stands for file-forming term
- Developed by mapping the FI classification system onto ~ 2500 F-term themes
- FI or "File Index" is the internal classification system used by the JPO
 - FI is an extension of IPC
 - Consists of an IPC subgroup, followed by an IPC subdivision three-digit number
 - IPC subdivisions are unique to FI classes and are structured hierarchically



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F-terms can be searched and displayed on STN *only* in the CAplus file

- F-Terms from the Japanese Patent Office have been added to many patent records in CAplus
 - Classification codes for basic patents and for family members are included
 - Use **CLASS** display to view F-terms
- F-Terms are covered from January 2004 to date
- Search the /FTERM field for File Forming Terms from Japanese patent documents



50

JP patent searches in CPlus can be focused using F-terms

Search Question:

Identify relevant F-term classification for the use of peroxides in dental applications.



51

Search Strategy

To focus a JP patent search with F-terms...

- Step 1. Run preliminary search using keywords or other classification systems
- Step 2. ANALYZE to identify high occurrence F-term codes
- Step 3. Use the F-term thesaurus to confirm subject coverage
- Step 4. Use F-term codes to refine search for JP patents
- Step 5. Display answers



52

Start by searching advanced IPC selected from the IPC thesaurus

```
=> FILE CAPLUS

=> E A61K008-19+NT/IPC
E1      13306    -->  A61K0008-19/IPC
          . . containing inorganic ingredients
          CORE

● ● ●

E4      1705    NT1   A61K0008-22/IPC
          . . . Peroxides; Oxygen; Ozone
          ADVANCED
          VALID FROM 20060101 TO PRESENT
          ( IPC EDITION: 8 )

=> S A61K0008-22/IPC
L1      1705 A61K0008-22/IPC
```

STN

ACS
FullText

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Identify F-term codes using CLASS display

```
=> S L1 AND JP/PC
L2      1060 L1 AND JP/PC

=> D CLASS

L2 ANSWER 1 OF 1060 CAPLUS COPYRIGHT 2007 ACS on STN
CLASS
PATENT NO.    CLASS PATENT FAMILY CLASSIFICATION CODES
-----
JP 2007269633 IPCI A61K0008-44 [I,A]; A61K0008-19 [I,A]; A61K0008-22
                [I,A]; A61K0008-36 [I,A]; A61K0008-30 [I,C*];
                A61K0008-25 [I,A]; A61K0008-26 [I,A]; A61Q0011-02 [I,A]
                <--
                FTERM 4C083/AB012; 4C083/AB171; 4C083/AB172; 4C083/AB271;
                4C083/AB272; 4C083/AB311; 4C083/AB312; 4C083/AB381;
                4C083/AB382; 4C083/AB411; 4C083/AB412; 4C083/AC231;
                4C083/AC242; 4C083/AC292; 4C083/AC661; 4C083/AC662;
                4C083/AC782; 4C083/AD042; 4C083/BB05; 4C083/BB48;
                4C083/CC42; 4C083/DD15; 4C083/DD16; 4C083/DD17;
                4C083/EE07; 4C083/EE31
```

STN

ACS
FullText

54

ANALYZE to identify frequent F-term codes in answer set obtained from IPC search

```

=> ANALYZE L2 FTERM 1-1000
L3          ANALYZE L2 1-1000 FTERM :    1668 TERMS

=> D L3
L3          ANALYZE L2 1-1000 FTERM :    1668 TERMS

TERM #    # OCC  # DOC  % DOC  FTERM
-----
   1      222   210   21.00  4C083/AB411
   2      181   169   16.90  4C083/AB412
   3      167   152   15.20  4C083/CC36
   4      148   137   13.70  4C083/EE26
   5      111    98    9.80  4C083/AC852
   6      109   101   10.10  4C083/AC122
   7      106   100   10.00  4C083/AC532
   8      102    95    9.50  4C083/AB082
   9      101    98    9.80  4C083/DD23
  10      99    91    9.10  4C083/AC851
  
```

STN

COS
Chemistry Online Search

55

Use the F-term thesaurus in CAplus to obtain a definition for the F-TERM

```

=> E 4C083/AB411+NT1/FTERM
'4C083/AB411' NOT IN RELATIONSHIP FILE
RELATIONSHIP CODE IGNORED.
E#  FREQUENCY  AT  TERM
-----
E1      122      --  4C083/AB382/FTERM
E2      617      2  4C083/AB41/FTERM
E3      311     --> 4C083/AB411/FTERM
E4      534      --  4C083/AB412/FTERM
...

=> E E2+ALL
E1      0  BT5  FTCLA/FTERM
      FTERM CLASSIFICATION OF THE JAPANESE PATENT OFFICE
E2      0  BT4  4/FTERM
      . Chemistry
E3     73415  BT3  4C/FTERM
      . . Medical Science
E4     11603  BT2  4C083/FTERM
      . . . Cosmetics
E5      4  BT1  4C083/AB00/FTERM
      . . . . INORGANIC INGREDIENTS
E6     617  --> 4C083/AB41/FTERM
      . . . . Peroxides
***** END *****
  
```

If F-term has no associated terms use the next highest term.

STN

COS
Chemistry Online Search

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U.S. Patent Classification System is administered by the USPTO

- Preferred classification for US patent documents
 - U.S. Classification divides patents based on claims
 - Patent documents are reclassified at regular intervals
- United States Patent Classifications (USPCs) are designated by classes and subclasses
 - The first number is the **class** of the invention
 - Approximately 450 classes
 - The second number is the **subclass** of the invention
 - Approximately 150,000 subclasses



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The ordered listing of subclasses that make up a class is called a **class schedule**

- The number assigned to a subclass title further provides an address for the technology
- **Mainline** subclasses do not have a dot between the title and number for the subclass
- **Indented** subclasses are referred to by the number of indent levels
 - A **parent** subclass is a subclass under which another subclass is indented
 - A **one-dot** subclass is indented one level below a mainline subclass
 - **Coordinate** subclasses are positioned at the same level of indentation and have the same parent subclass



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Search USPCs in the National Patent Classification Code (NCL) field

- Searchable fields exist relating to current USPCs
 - National Patent Classification Code including the Current, Main and Secondary (**NCL**)
 - Current Main National Patent Classification Code (NCLM)
 - Current Secondary National Patent Classification Code (NCLS)
- Searchable fields exist relating to issued USPCs
 - National Patent Classification including the Issued, Main and Secondary (**INCL**)
 - Main Issue National Patent Classification Code (INCLM)
 - Secondary Issue National Patent Classification Code (INCLS)



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Proposed changes to U.S. patent law may require more detailed knowledge of NCL

- Determining the appropriate NCL class may be required when filing certain patent applications
- A thorough analysis of NCLs in a technology area may be required to determine an appropriate class to search for required preexamination search document
- The ANALYZE command may be utilized to extract out all the NCLs for a technology area
- A spreadsheet may be created with these codes to guide you to definitions on the USPTO site



60

Classification codes can be used to augment text searches

Search Question:

What United States Patent
Classifications exist for polymers in golf
balls and golf ball covers?

STN

CS
SEARCHERS

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Search Strategy

- Step 1. Enter USPATFULL
- Step 2. Perform a search for golf ball covers
- Step 3. Analyze the answer set according to NCL and INCL
- Step 4. Display the answer set with the NCL and INCL; Revise search according to NCL
- Step 5. Display the answer set with the NCL and INCL in the DELIM format
- Step 6. Copy and paste your display into the Excel[®] spreadsheet
- Step 7. Click on the hyperlink to the USPTO website
- Step 8. Get the definition of the class and subclass of the NPC

STN

CS
SEARCHERS

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An answer set is needed to analyze for current National Patent Classification

```

=> FILE USPATFULL
...
=> S GOLF (3A) BALL (3A) COVER AND (ACUSHNET/PA OR
    BRIDGESTONE/PA OR CALLAWAY/PA) AND POLY?
    35685 GOLF
    37 GOLFS
    35685 GOLF
        (GOLF OR GOLFS)
    359353 BALL
    108815 BALLS
    393957 BALL
        (BALL OR BALLS)
    1125205 COVER
    424695 COVERS
    1302506 COVER
        (COVER OR COVERS)
    2492 GOLF (3A) BALL (3A) COVER
    656 ACUSHNET/PA
    4278 BRIDGESTONE/PA
    643 CALLAWAY/PA
    1612867 POLY?
L1      680 GOLF (3A) BALL (3A) COVER AND (ACUSHNET/PA OR
        BRIDGESTONE/PA OR CALLAWAY/PA) AND POLY?

```

STN

CS
PattentLife

63

ANALYZE answer set and display the NCLs

```

=> ANALYZE L1
ENTER ANSWER NUMBER OR RANGE (1-):1-
ENTER DISPLAY CODE (TI) OR ?:NCL INCL
L2      ANALYZE L1 1- NCL INCL :          1138 TERMS
...
=> D L2 1-30 NCL
L2      ANALYZE L1 1- NCL INCL :          1138 TERMS

```

TERM #	# OCC	# DOC	% DOC	NCL INCL
1	273	264	38.82	473378000
3	203	195	28.68	473371000
5	171	169	24.85	473374000
6	145	144	21.18	473377000
8	126	126	18.53	473373000
10	93	93	13.68	473372000

STN

CS
PattentLife

64

Expanding on an NCL shows the number of documents with that classification

```
=> E 473/378.000+ALL/NCL
E1      21493  BT3   473/NCL
        GAMES USING TANGIBLE PROJECTILE
E2      223   BT2   473131000/NCL
        GOLF
E3      374   BT1   473351000/NCL
        .Ball
E4      1026  --> 473378000/NCL
        ..Particular cover (e.g., size, material, dimple
        pattern, etc.)
E5      58    NT1   473379000/NCL
        ...Icosahedral dimple pattern
...

```

1026 documents exist in
USPATFULL dealing with covers of
golf balls.

STN

COS
PASCAL

65

The classification search finds additional records of interest

```
=> S E4
L3      1026 473378000/NCL
=> S L3 NOT L1
L4      763 L3 NOT L1
=> D L4 1-20 TI PA
...
L4      ANSWER 3 OF 763  USPATFULL on STN
TI      Molded rubber material for golf ball, method of
        making the material and golf ball
PA      BRIDGESTONE SPORTS CO., LTD. (non-U.S. corporation)

L4      ANSWER 4 OF 763  USPATFULL on STN
TI      Golf ball and golf ball mold
PA      BRIDGESTONE SPORTS CO., LTD. (non-U.S. corporation)
...

```

STN

COS
PASCAL

66

The DELIM display format allows users to copy and paste results into a spreadsheet

==> D NCL DELIM

L2 ANALYZE L1 1- NCL : 1138 TERMS

1;273;264;38.82;473378000
 3;203;195;28.68;473371000
 5;171;169;24.85;473374000
 6;145;144;21.18;473377000
 8;126;126;18.53;473373000
 10;93;93;13.68;473372000
 12;80;80;11.76;473385000
 13;78;78;11.47;473351000
 14;74;74;10.88;473365000
 17;58;58;8.53;473376000

Answers displayed in the DELIM format are easily converted from text to columns.

STN

COS
PatentLife

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A hyperlink directs you to the USPC class/subclass definition

	A	B	C	D	E	F	G	H
1	Term	OCC	DOC	DOC %	Term	ANS	Term without Field	Description
2	1	273	264	38.82	473378000/NCL		473378000	Click for NCL Description
3	2	217	216	31.76	473378000/INCL		473378000	Click for NCL Description
4	3	203	195	28.68	473371000/NCL		473371000	Click for NCL Description
5	4	186	183	26.91	473371000/INCL		473371000	Click for NCL Description
6	5	171	169	24.85	473374000/NCL		473374000	Click for NCL Description
7	6	145	144	21.18	473377000/NCL		473377000	Click for NCL Description
8	7	133	132	19.41	473374000/INCL		473374000	Click for NCL Description
9	8	126	126	18.53	473373000/NCL		473373000	Click for NCL Description
10	9	11	11	10.88	473377000/INCL		473377000	Click for NCL Description
11	10	9	9	13.68	473372000/INCL		473372000	Click for NCL Description
12	11	8	8	11.76	473385000/INCL		473385000	Click for NCL Description
13	12	8	8	11.47	473351000/INCL		473351000	Click for NCL Description
14	13	7	7	10.88	473365000/INCL		473365000	Click for NCL Description
15	14	7	7	8.53	473376000/INCL		473376000	Click for NCL Description
16	15	6	6	8.38	473351000/INCL		473351000	Click for NCL Description
17	16	6	6	8.38	473385000/INCL		473385000	Click for NCL Description
18	17	58	58	8.53	473376000/INCL		473376000	Click for NCL Description
19	18	57	57	8.38	473351000/INCL		473351000	Click for NCL Description
20	19	57	57	8.38	473385000/INCL		473385000	Click for NCL Description

Clicking on any of these hyperlinks will automatically take you to the respective USPC class/subclass definition at www.uspto.gov.

STN

COS
PatentLife

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Hyperlink takes you directly to the subclass which encompasses the invention

The first entry from our answer set is in Class 473 (Games Using Tangible Projectile).

378 Particular cover (e.g., size, material, dimple pattern, etc.):
This subclass is indented under subclass 351. Subject matter wherein significance is attributed to a physical (e.g., size, resiliency, dimple pattern, etc.) or chemical (e.g., kind of material, chemical composition, etc.) characteristic of a striking surface on the spherical object.

379 Icosahedral dimple pattern:
This subclass is indented under subclass 378. Subject matter wherein the striking surface includes a plurality of depressions; imaginary lines divide the striking surface into a polyhedron having twenty (20) faces, and significance is attributed to a physical property (e.g., size number, etc.) of the depressions arranged in each of the faces.

380 Cuboctahedral dimple pattern:
This subclass is indented under subclass 378. Subject matter wherein the ball-striking surface includes a plurality of depressions; imaginary lines divide the striking surface into a polyhedron having eight (8) triangular faces and six square faces, and significance is attributed to a physical property (e.g., size number, etc.) of the depressions arranged in each of the faces.

381 Dodecahedral dimple pattern:
This subclass is indented under subclass 378. Subject matter wherein the ball-striking surface includes a plurality of depressions; imaginary lines divide the striking surface into a polyhedron having twelve (12) faces, and significance is attributed to a physical property (e.g., size number, etc.) of the depressions arranged in each of the faces.

382 Octahedral dimple pattern:
This subclass is indented under subclass 378. Subject matter wherein the ball-striking surface includes a plurality of depressions; imaginary lines divide the striking surface into a polyhedron having eight (8) faces, and significance is attributed to a physical property (e.g., size number, etc.) of the depressions arranged in each of the faces.

This entry is also in Subclass 378, as highlighted in red (Particular cover); its USPC is 473/378.

STN

COS
PACIFIC

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The ECLA classification system is an extension of IPC

- European Patent Classification provides more detailed classification with ~130K subclasses
- ECLA codes are
 - Assigned by EPO examiners from 1920 to date
 - Revised continuously and reclassified retrospectively so one code can cover entire search period
 - An EC subgroup added to the IPC symbol in the form of a letter, optionally followed by additional numbers or letters (e.g. C23C016/27**B2**)

<http://v3.espacenet.com/eclasrch?ECLA=/espacenet/ecla/>

STN

COS
PACIFIC

70

Search ECLA for more precise retrieval in CPlus and INPADOCDB

- ECLA codes are assigned after patents are published and not used in selection process for CAS databases
- Added to both basic patents and family members in the /ECLA field (search aliases: /EPC and /EPCLA)
- Coverage in CPlus is retroactive to 1993
- Coverage in INPADOCDB is back to 1978
- Browse ECLA definitions at <http://v3.espacenet.com/eclasrch>

STN

COS
FORUM

71

ECLA codes can be used
to refine large answer sets or extend the
search into new technology areas

Search Question:

Identify ECLA codes for CVD of diamonds.
Search to find applications using plasma
jets to prepare coating material.

STN

COS
FORUM

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Index A B C D E F G H e.g. mast sail Go e.g. A23C Go

Previous page: C23C14/00 Next page: C23C18/00

CHEMISTRY; METALLURGY C

COATING METALLIC MATERIAL; COATING MATERIAL WITH METALLIC MATERIAL (by metallising textiles D06M11/63; decorating textiles by locally metallising D06Q1/04); CHEMICAL C23

[N: Control of diamond crystallography] [N0008] C23C16/27M4

[N: using other elements in the gas phase besides carbon and hydrogen] [N0008] C23C16/27M4B

[N: using plasma jets] [N0008] C23C16/27P

[N: using other elements in the gas phase besides carbon, hydrogen and inert gas] [N0008] C23C16/27P2

[N: Doping or introduction of a secondary phase in the diamond] [N0008] C23C16/27P2B

[N: Control of diamond crystallography] [N0008] C23C16/27P4

STN COS **73**

Identify ECLA codes to search

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=> E C23C016/27M/ECLA
E1      3      C23C016/27K2B/ECLA
E2      1      C23C016/27K4/ECLA
E3      56 --> C23C016/27M/ECLA
E4      50      C23C016/27M2/ECLA
E5      26      C23C016/27M2B/ECLA
E6      12      C23C016/27M4/ECLA
E7      10      C23C016/27M4B/ECLA
E8      41      C23C016/27P/ECLA
E9      10      C23C016/27P2/ECLA
E10     6       C23C016/27P2B/ECLA
E11     7       C23C016/27P4/ECLA
E12     18      C23C016/28/ECLA

=> S C23C016/27P?/ECLA
L8      59      C23C016/27P?/ECLA
```

CLASS display shows ECLA classifications that subdivide the IPC

=> D CLASS 2

L8 ANSWER 2 OF 59 CAPLUS COPYRIGHT 2007 ACS on STN

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1460147	ICM	C23C0016-50
	ICS	C23C0016-26; H01J0037-32; H05H0001-44; C23C0016-27; C23C0016-513
	IPCI	C23C0016-50 [ICM,7]; C23C0016-26 [ICS,7]; H01J0037-32 [ICS,7]; H05H0001-44 [ICS,7]; H05H0001-26 [ICS,7,C*]; C23C0016-27 [ICS,7]; C23C0016-513 [ICS,7]
	ECLA	C23C016/27P; C23C016/513; C23C016/54; H01J037/32D1B; H05H001/44 <--
EP 985742	IPCI	C23C0016-50 [ICM,6]; C23C0016-26 [ICS,6]; H01J0037-32 [ICS,6]; H05H0001-44 [ICS,6]; H05H0001-26 [ICS,6,C*]
	IPCR	C23C0016-26 [I,C*]; C23C0016-27 [I,A]; C23C0016-44 [N,A]; C23C0016-44 [N,C*]; C23C0016-50 [I,C*]; C23C0016-513 [I,A]; C23C0016-54 [I,A]; C23C0016-54 [I,C*]; H01J0037-32 [I,A]; H01J0037-32 [I,C*]; H05H0001-26 [I,C*]; H05H0001-44 [I,A]
	ECLA	C23C016/27P; C23C016/513; C23C016/54; H01J037/32D1B; H05H001/44 <--

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	IPC	NCL	ECLA	F-Term
CA/Caplus	Yes	Yes	Yes	Yes
INPADOCDB	Yes	Yes	Yes	
WPIFV	Yes	Yes		
IFIPAT	Yes	Yes		
WPIINDEX	Yes	Yes		
JAPIO	Yes			

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- US NCL
<http://www.uspto.gov/web/offices/opc/>
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<http://www.cas.org/EO/ipcguar.html>
- ECLA
<http://l2.espacenet.com/espacenet/ecla/index/index.htm>
- JP F-terms
http://www.ipdl.ncipi.go.jp/homepg_e.ipdl
(click on the Patent Map Guidance, then F-term)



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Summary

- Adding patent classification codes can improve your searching by
 - Finding additional records missed by keywords alone
 - Focusing your broad searches to specific areas of interest
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 - ANALYZE answer sets to determine appropriate codes for additional searching



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November 27, 2007 13:00- 14:00 EDT	STN Case Study: Finding Petroleum/Petrochemical Information
December 2007	
December 13, 2007 9:00- 10:00 EDT	STN Case Study: Finding Petroleum/Petrochemical Information
December 13, 2007 13:00- 14:30 EDT	STN Continuing Education – STN: What's New?
December 18, 2007 13:00- 14:00 EDT	STN Case Study: Approaches for Finding Biotech Prior Art
January 2008	
January 10, 2008 9:00- 10:00 EDT	STN Case Study: Approaches for Finding Biotech Prior Art
January 29, 2008 13:00- 14:00 EDT	STN: Ready, SET, Go!

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