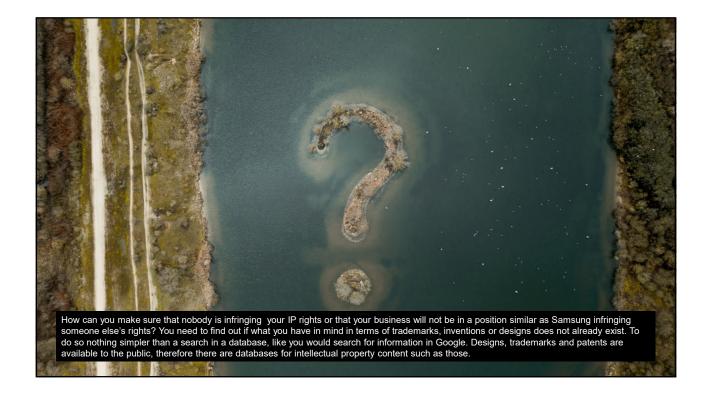


# \$539 Million

Could you guess how this huge amount of money five hundred thirty nine million dollars was spent? Imagine what you could buy with this amount. You could definitely buy a couple of private jets, some luxurious cars and a few houses all over the world and many more! If you guessed right, the money was not spent to buy such nice items. In fact, back in May 2018, this is the amount that a U.S. jury said Samsung had to pay Apple Inc for infringing intellectual property rights.





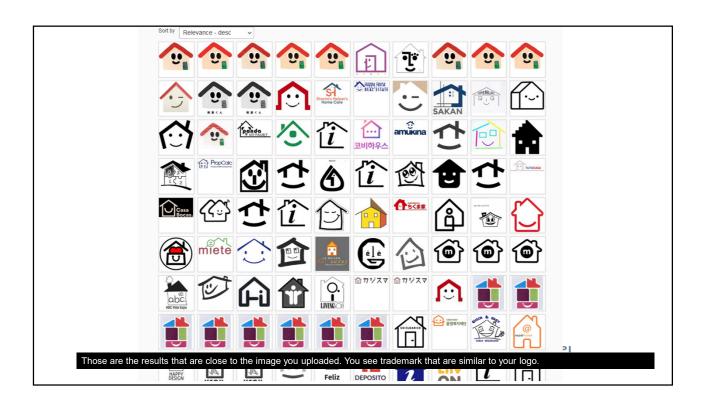
# **WIPO GLOBAL DATABASES**

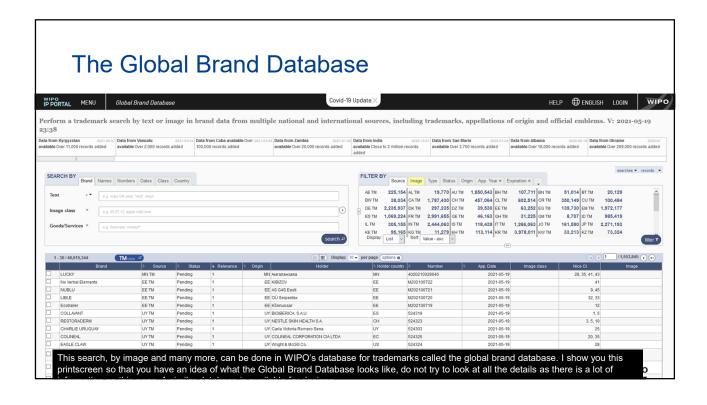
Provided by WIPO. These databases are available online and they are free of charge and very easy to use. Let's take a look at some concrete examples.

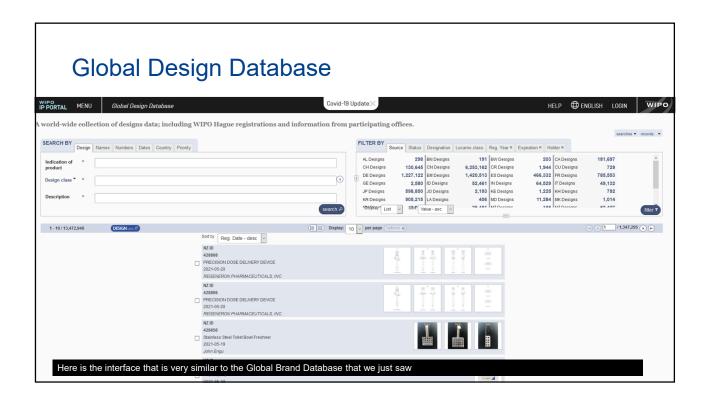
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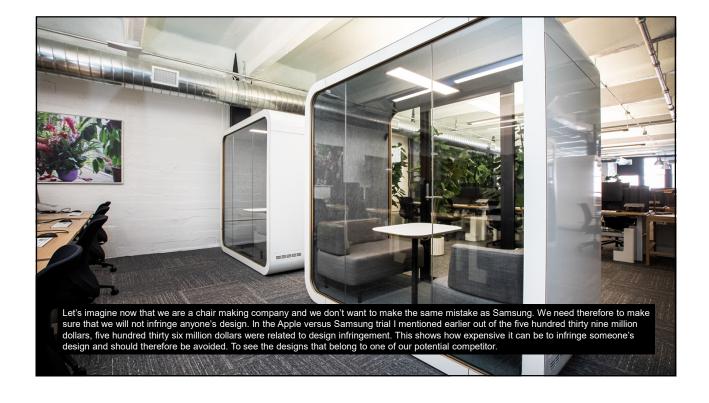


If you or you company wanted to include such a house in your trademark, by using WIPO Global Brand Database, you can find out if logos similar to your already exists. To obtain this information you just need to upload your image into the Global Brand Database in which your image is compared to the images contained in the database using artificial intelligence.

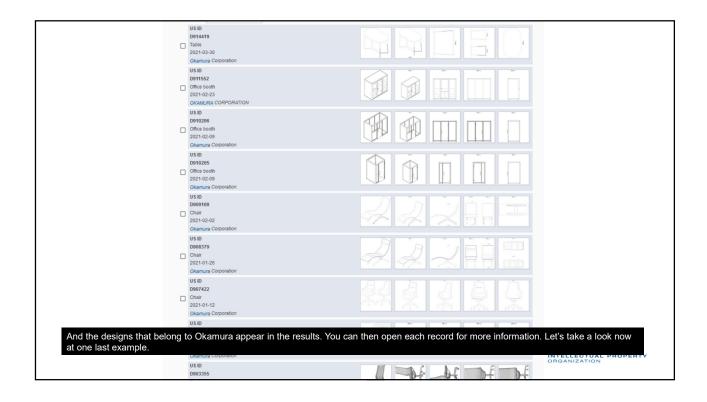


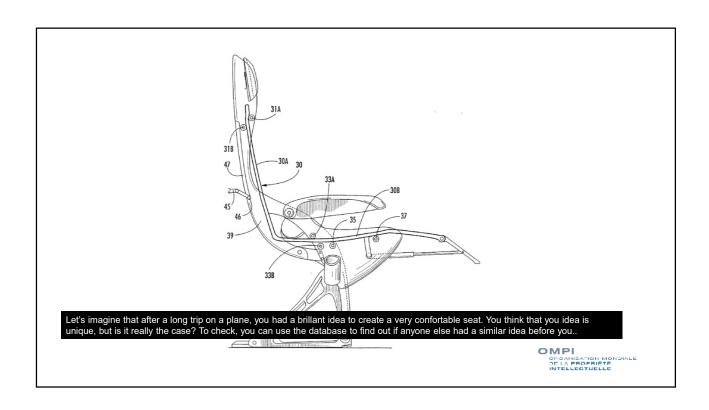


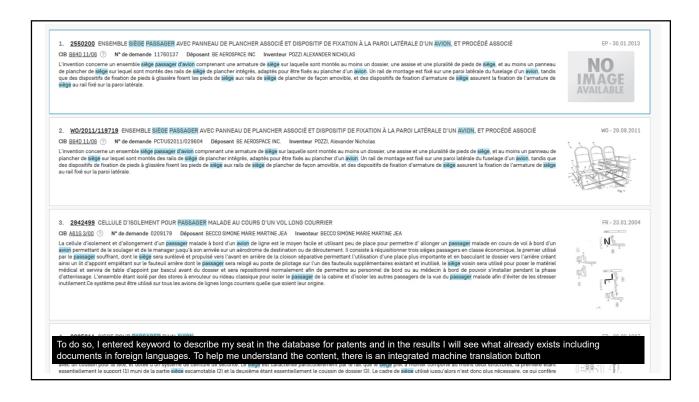














# Unique features

- Machine translation tool: WIPO Translate
- Cross-lingual expansion search
- Chemical search (including Markush)

PATENTSCOPE also includes some unique features such as the machine translation tool developed in house specifically for the translation of patent documents and using artificial intelligence. It is called WIPO Translate. In PATENTSCOPE, you will also find a tool developed in house for cross-lingual searches that will not only translate your search but also find synonyms of your search, therefore expanding the scope of your search. You can also perform chemical search in WIPO's patent database My colleagues lustin will tell you more about this feature and Magdalena and David will also show you some unique features.

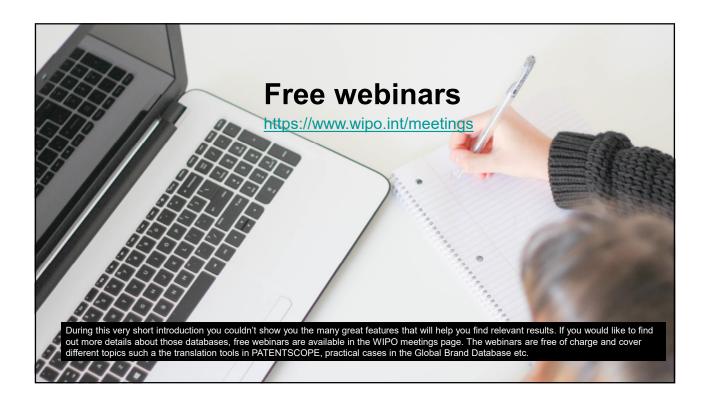
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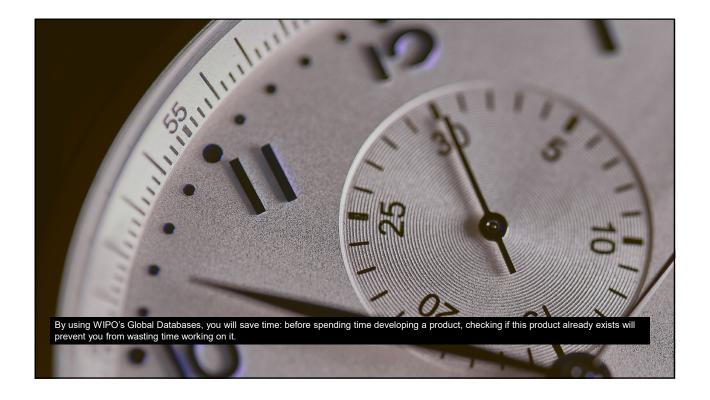
# WIPO's Global Databases

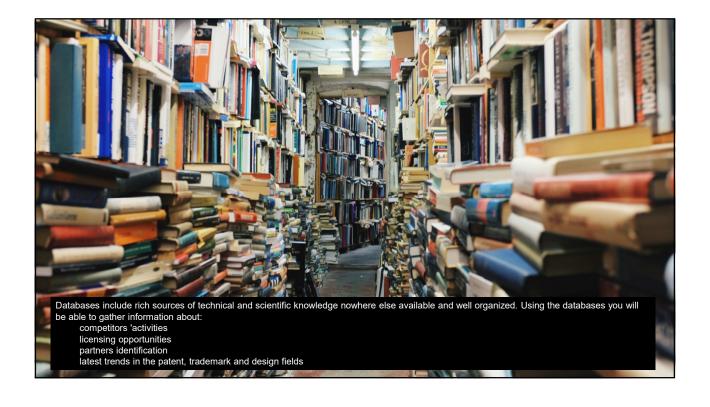
- PATENTSCOPE: Patents
- Global Brand Database: Trademarks
- Global Design Database: Designs

To summarize: WIPO provides 3 databases, all free of charge: one for patents called PATENTSCOPE, one for trademarks called the Global Brand Database and the database for designs is called the Global Design Database

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# PATENTSCOPE's strengths

- Access to international Patent Cooperation Treaty (PCT) applications, 4.5 mil
- Extensive international coverage : 100 mil patents from 75 patent offices
- Multilinguism (WIPO\* Translate, PATENTSCOPE CLIR)
- Powerful chemical search, markush capable(17 million unique chemical compounds mined from the full text of the patent collections of the IP5 and Russia)

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# Chemical Search – IP5 implementation

- This allows to get a quick draft patent landscape for drugs and to answer tough questions like:
  - What is the newest Japanese patent containing "Paracetamol"?
- Wikipedia says: Paracetamol, also known as acetaminophen, is a medication used to treat fever and mild to moderate pain.

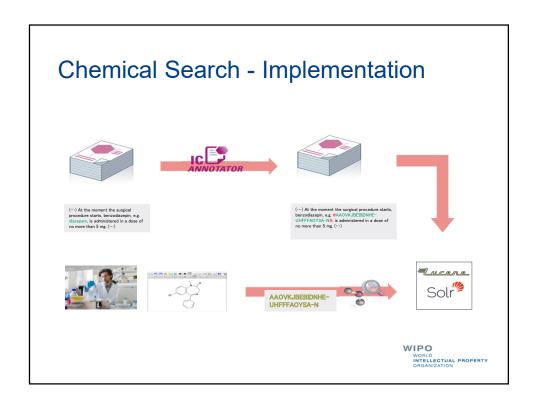
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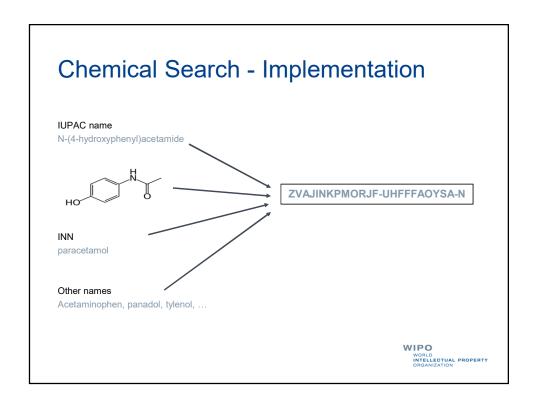
# Chemical Search - Principle

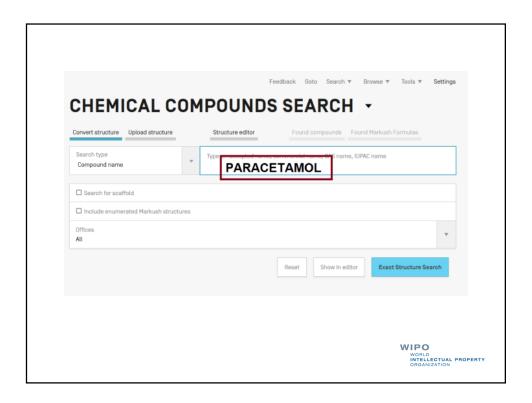
- Standardize all the different representations of chemical structures into Inchikeys
- CH3 CH3
- Recognize chemical compounds in patent texts or from embedded drawings included in patent texts.
- Implement search functions for Inchikeys that can be used by non chemists
- Data processed for the IP5 and WO patent collections



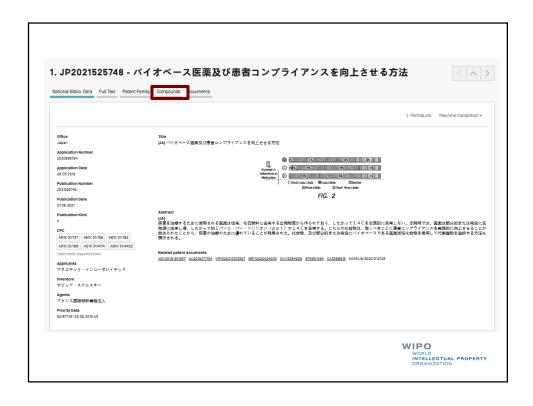
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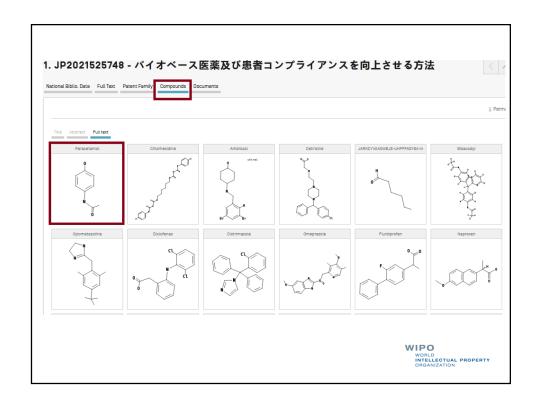














### Markush search

- Markush, what is it?
- PATENTSCOPE Markush data and coverage
- Markush simple search
- Markush advanced search

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# Markush: what is it?

- Representation of families of chemical compounds with «varying parts», usually with the purpose to specify patents claims
- Markush structures are named after Eugene A. Markush, founder of the Pharma Chemical Corporation in New Jersey. He was involved in a legal case that set a precedent for generic chemical structure patent filing. The patent filing was US Application 611,637, filed January 9, 1923. Markush was awarded a patent from the US Patent Office for "Pyrazolone Dye and Process of Making the Same" on August 26, 1924 (Wikipedia)

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# Markush: an example WO2012064632

where:

each Z is independently selected from the group consisting of N, O, S and  $\text{CH}_2$ ;

A is O (then R3 is null) or N

n=1-5; m=1-5; j=1-4

E is N, CH or CH2;

# Markush data and coverage

Professionally curated Markush Data (Derwent Markush data)

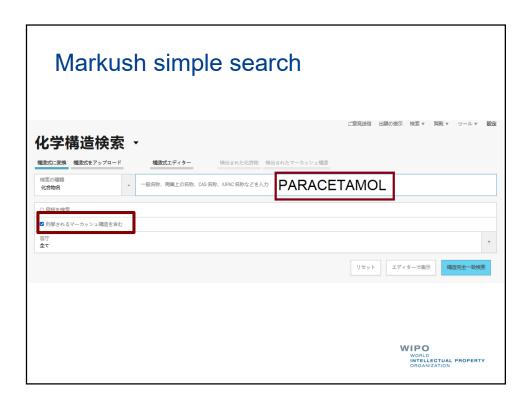
- Full coverage of organics, organometallics, inorganic salts and metal oxides, plus partial coverage of alloys, intermetallics and polymers.
- Data curated from EP, CN, JP, KR, WO and US patent documents with associated links to patent family members

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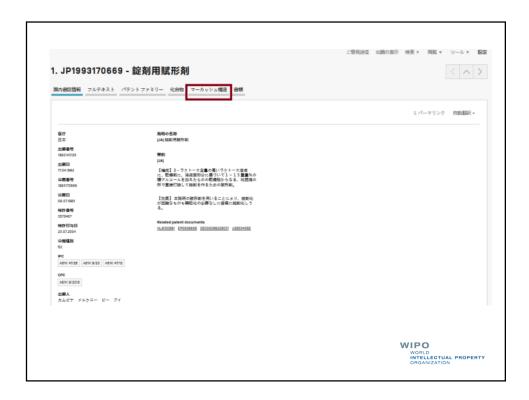
# Markush simple search

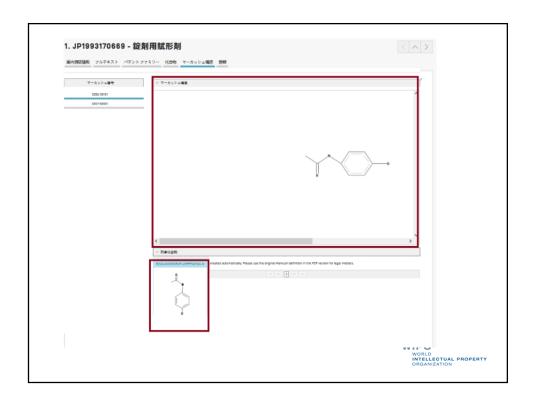
- Principle: enumerate up to 500 simplest compounds per Markush formulae
- Index the enumerated compounds in a new PATENTSCOPE search field called 'ENUM'
- search compounds expressed in Markush formulae as easily as compounds explicitly cited in patents.

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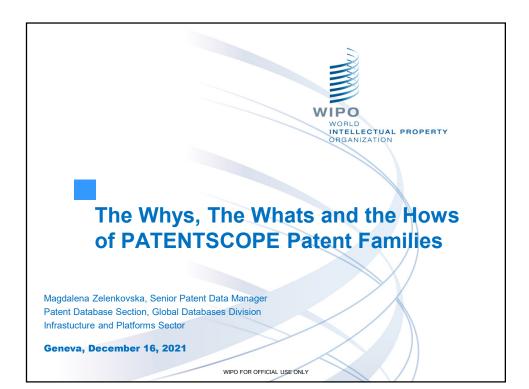




# Markush Advanced Search

- Uses a simplified, iterative search process designed for PATENTSCOPE by Infochem
- Matches searched structure with all indexed Markush structures in the system
- Finds potentially more matches than with the enumeration search
- Still easy to use (but with longer response times)
- Shows intermediate results as list of Markush numbers
- Works with drawn structures with optionally varying parts (CHK, CHE, CHY, HET, HEA, HEF, CYC, ARY)

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# What are Patent Families?

- "Simple patent family" means a patent family relating to the same invention, each member of which has for the basis of its "priority right" exactly the same originating application or applications. (WIPO Handbook)
- The relationships among the members of the patent family can be of several types: Paris Convention priorities, domestic relationships (continuations and divisionals), PCT national phase entries and technical relations.
- Types of filing
  - National Route
  - Regional Route (EPO, ARIPO,..)
  - International Route (PCT)

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# **Why Patent Families?**

- Complement bibliographic data, establish priority date
- Prior art examination
- Translation
- Economic and statistical use
  - Prevent double counting, forecast applications
  - Analyze internationalization of a technology
  - Estimate patent value
  - Refined patent indicators

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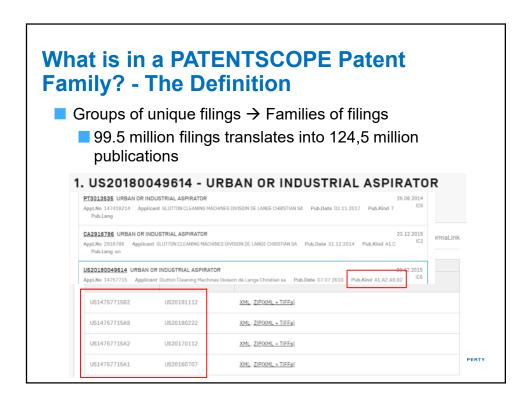
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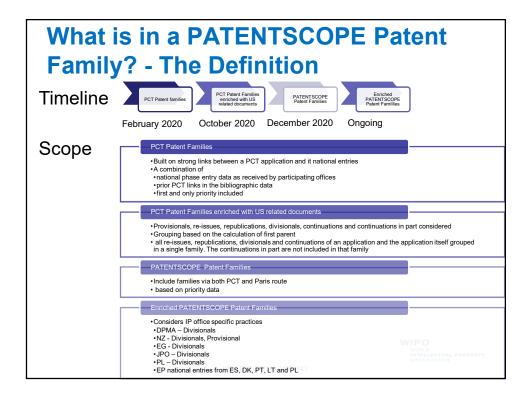
# Why PATENTSCOPE Patent Families?

- Patent families are a function of data available
- PATENTSCOPE has unique coverage
- PATENTSCOPE has unique way of aggregating applications
- Accountability

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# What is in a PATENTSCOPE Patent Family? - Inclusion Criteria

### Inclusion Criteria

IC1 - PCT application from which the family originated

IC2 - National entry of a PCT application

IC3 - National entry of a PCT application not found in **PATENTSCOPE** 

IC4 - US application related to another US application already included in the family

IC5 - Sole priority inside the family

IC6 - Connected by priority field

IC7 -National application related to another application of the same national office already included in the family-o

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# What is in a PATENTSCOPE Patent Family? - Inclusion Criteria(first Release)

- ■PCT application → IC1
- PCT NPE
  - NPE found in Patentscope → IC2
  - NPE not found in Patentscope → IC3
  - National Prior PCT → IC2

PC	T priorities	sole	priority $\rightarrow$ IC5	
	Office	Entry Date	National Number	Nation

al Status Iran (Islamic Republic 20.01.2020 139850140003009756 of]

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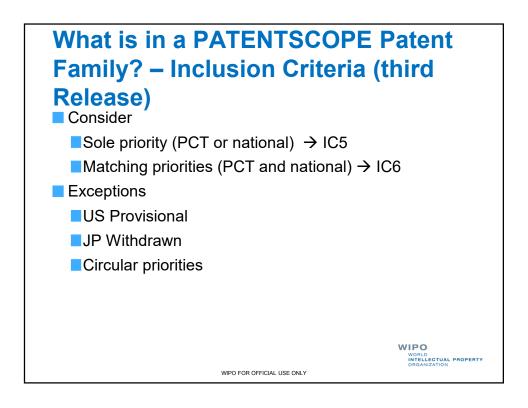
# What is in a PATENTSCOPE Patent Family? – Inclusion Criteria (second Release)

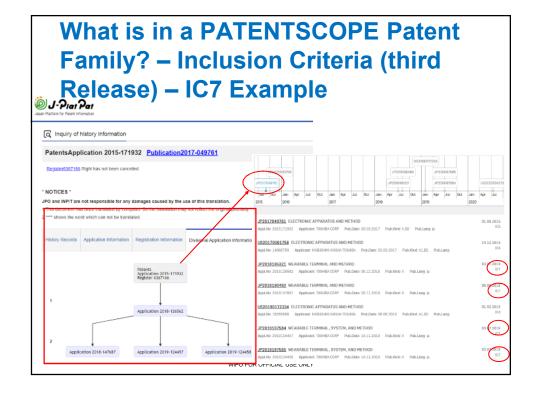
- Treated separately because of complexity
- Consider
  - Provisional applications for future referencing
  - Republications & Reissue → IC4
  - Continuations & Divisionals → IC4, defined as pairs of a parent and a child and attached to an application in a recursive manner
  - Continuations-in-part, not part of the same family

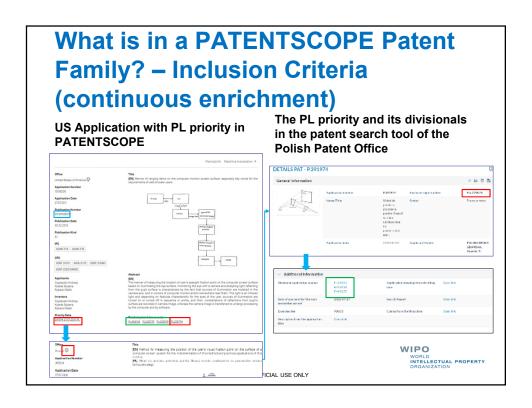
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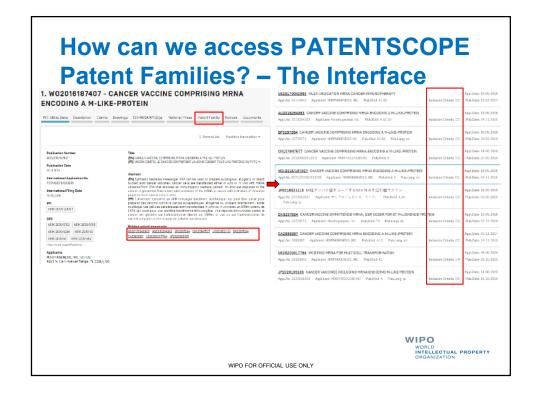
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# What is in a PATENTSCOPE Patent Family? – Inclusion Criteria (second Release) - Example Enrichment via US related documents – An example 10732326 - priorities=related documents 11387134 - priorities=related documents + application itself 12023411 - no priorities 12023410 - priorities









# ON THE TRAILS OF A PATENTSCOPE PATENT FAMILY...

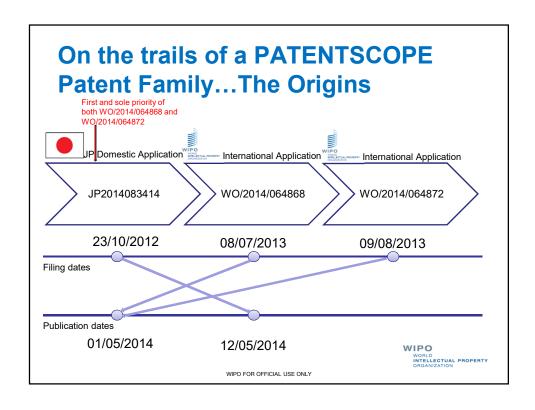
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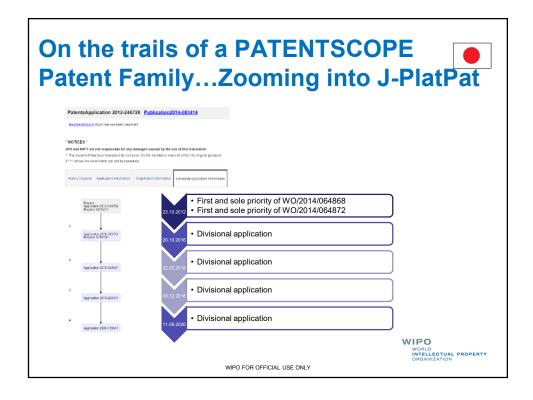
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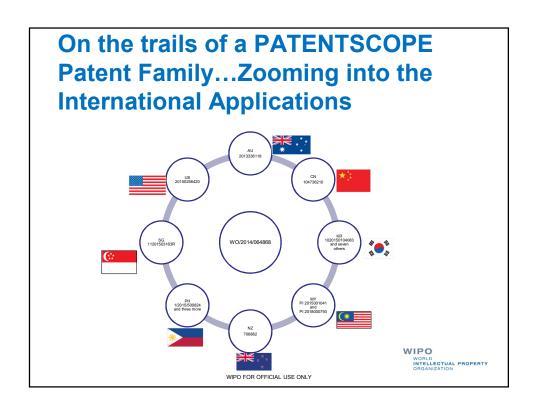
# On the trails of a PATENTSCOPE Patent Family...The Domestic Application

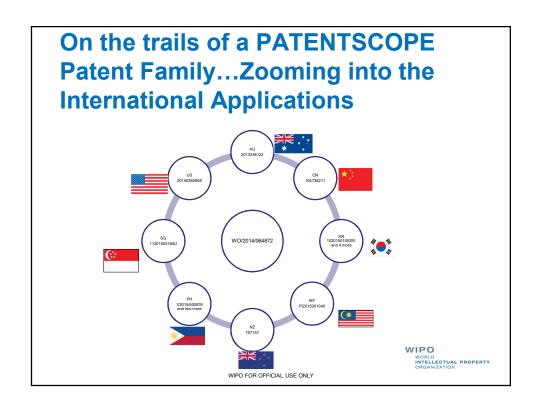


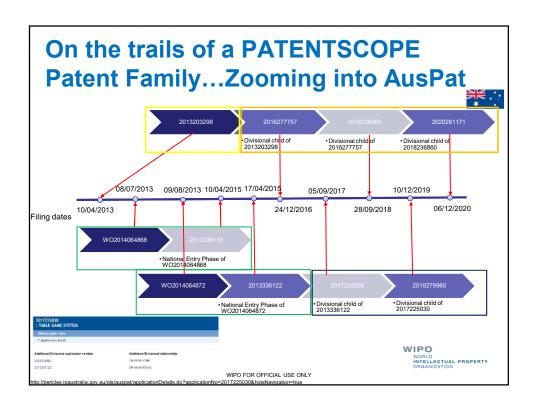
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	the trails of a PATE ent FamilySumm	
8 A	U applications	
8 0	CN applications	
5 JI	P applications	
13	KR applications	
9 M	1Y applications	
6 N	IZ applications	
7 P	H applications	
12	SG applications	
8 U	IS applications	
2 W	VO applications	
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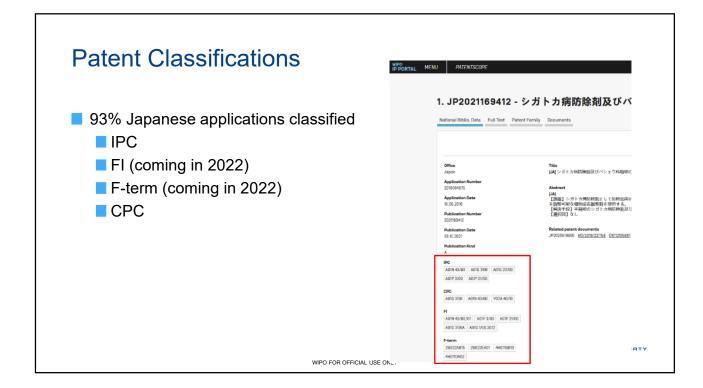


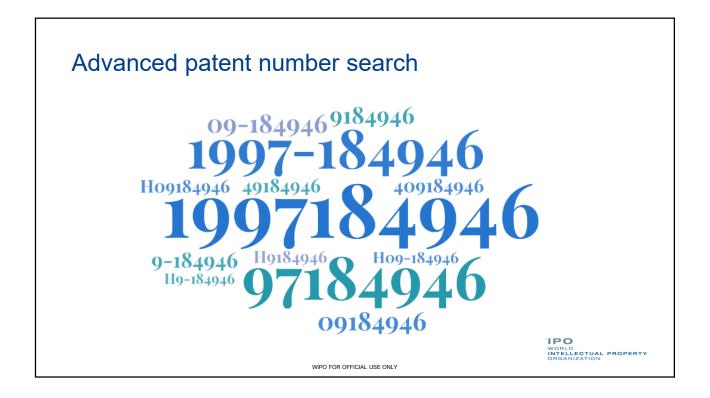
# PATENTSCOPE with focus on JP collection

- Japanese "Standardized data"
- Japanese national relations are taken into account for building PATENTSCOPE families
- National Japanese classifications (coming in 2022)
  - FI (File index)
  - F-term (File forming terms)
- Advanced patent number search

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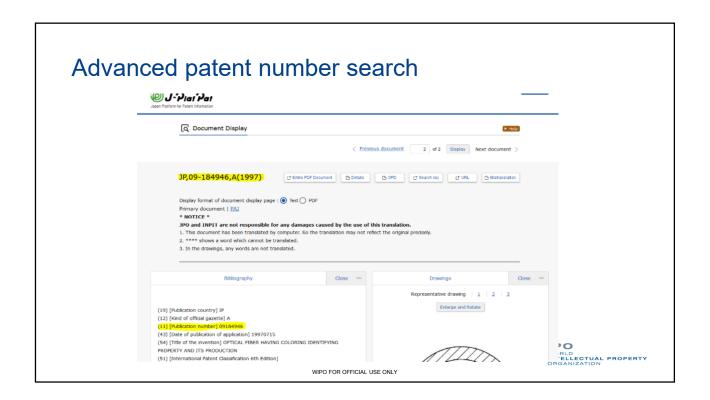
### Advanced patent number search PATENT COOPERATION TREATY **PCT** INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty) (PCT Rule 44bis) FOR FURTHER ACTION Applicant's or agent's file reference PIB507109KST See item 4 below International filing date (day/month/year) 30 November 2015 (30.11.2015) Priority date (day/month/year) 11 February 2015 (11.02.2015) International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237 Applicant KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY 2. 인용문헌 및 설명: 참고한 인용문헌은 다음과 같습니다. D1: KR 10-1347557 B1 (한국과학기술원) 2014.01.03 D2: JP 2002-228572 A (CANON INC.) 2002.08.14 D3: JP 2002-139414 A (SHARP CORP.) 2002.05.17 D4: JP 07-229906 A (CANON INC.) 1995.08.29

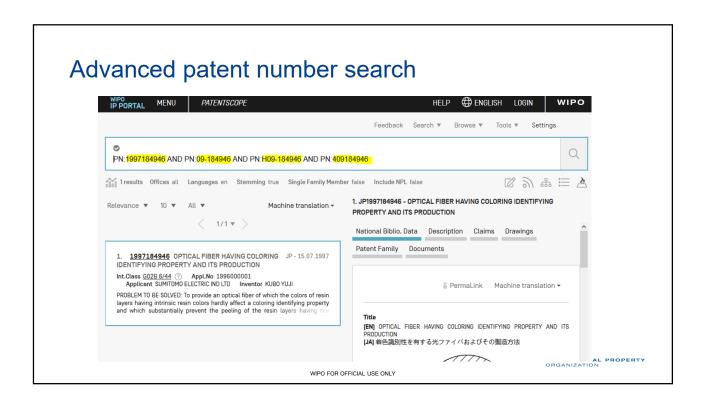
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D5: US 2007-0289369 A1 (XUEFENG WANG 등) 2007.12.20

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# Advanced patent number search

Pattern		Example
YYYYNNNNNN	Four-digit Western year + six-digit serial number	1997184946
YYYY-NNNNNN	Four-digit Western year + hyphen (-) + six-digit serial number	1997-184946
yyNNNNNN	2-digit Western year + six-digit serial number	97184946
XX-NNNNNN	two-digit Japanese year (Era omitted for applications published before 2000) + hyphen (-) + six-digit serial number	09-184946
XXNNNNN	two-digit Japanese year (Era omitted for applications published before 2000) + six-digit serial number	09184946
xxNNNNNN	two-digit Japanese year (Era omitted for applications published before 2000) removing leading zeros + six-digit serial number	9184946
xx-NNNNNN	two-digit Japanese year (Era omitted for applications published before 2000) removing leading zeros + hyphen (-) + six-digit serial number	9-184946

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# Advanced patent number search

Pattern		Example
eXXNNNNN	Japanese era sequence number ("5" or "r" for Reiwa, "4" or "h" for Heisei, "3" or "s" for Showa, "2" or "t" for Taisho, or "1" or "m" for Meiji) + two-digit Japanese year zeros + six-digit serial number	409184946
exxNNNNNN	Japanese era sequence number+ two-digit Japanese year removing leading zeros + six-digit serial number	49184946
EXXNNNNN	Japanese era name symbol + two-digit Japanese year + six-digit serial number	H09184946
ExxNNNNNN	Japanese era name symbol + two-digit Japanese year removing leading zeros + six-digit serial number	H9184946
EXX-NNNNNN	Japanese era name symbol + two-digit Japanese year + hyphen (-) + six-digit serial number	H09-184946
Exx-NNNNNN	Japanese era name symbol + two-digit Japanese year removing leading zeros + hyphen (-) + six-digit serial number	H9-184946

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