



## Topic 3: Patent Family Concepts and Sources for Family Information

Lutz Mailänder

Head, International Cooperation on Examination and Training Section

**Riyadh**  
**January 28, 2018**

# Agenda

- Families – **why**
  - Priority rights
- Families – **which**
  - Types
- Families – **where**
  - Sources of family information

# Further reading on families

- WIPO Handbook:

<http://www.wipo.int/standards/en/pdf/08-01-01.pdf>

- EPO:

<http://www.epo.org/searching/essentials/patent-families.html>

[http://documents.epo.org/projects/babylon/eponet.nsf/0/C9387E5053AA707BC125816A00508E8D/\\$File/Patent\\_Families\\_at\\_the\\_EPO\\_en.pdf](http://documents.epo.org/projects/babylon/eponet.nsf/0/C9387E5053AA707BC125816A00508E8D/$File/Patent_Families_at_the_EPO_en.pdf)

- PIUG:

<http://wiki.piug.org/display/PIUG/Patent+Families>

- OECD:

<https://www.oecd.org/sti/inno/44604939.pdf>

# Source of family information: Espacenet

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Original document  
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INPADOC legal status  
**INPADOC patent family**

**Bibliographic data: WO2007111918 (A2) — 2007-10-04**  
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**HEAT PROCESSING SYSTEMS, APPARATUSES, AND METHODS FOR COLLECTION AND DISPOSAL OF INFECTIOUS AND MEDICAL WASTE**

Page bookmark [WO2007111918 \(A2\) - HEAT PROCESSING SYSTEMS, APPARATUSES, AND METHODS FOR COLLECTION AND DISPOSAL OF INFECTIOUS AND MEDICAL WASTE](#)

**Inpadoc ('extended') family**

Classification: - international: **A61B19/02; A61L11/00; A61M5/32; B09B3/00**  
- cooperative: **A61B19/0288; A61L11/00; B09B3/0075; B09B3/0083; A61B19/024; A61B2019/0294; A61B2019/0295; A61B2019/0296**

Application number: WO2007US07071 20070322

Priority number(s): **US20060785512P 20060323 ; US20060785548P 20060323**

Also published as: **WO2007111918 (A3) → UY30238 (A1) □ US2007224077 (A1) □ TW200812650 (A) → PE12992007 (A1) → more**

**Abstract of WO2007111918 (A2)**  
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Various embodiments of systems and methods for collection and disposal of infectious and medical waste are disclosed. An embodiment includes a system with a body having a chamber that receives a container of medical waste. The chamber may include a canister that has limited access to the interior of the

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Family list: **WO2007111918 (A2) – 2007-10-04**

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14 application(s) for: WO2007111918 (A2)

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1. HEAT PROCESSING SYSTEMS, APPARATUSES, AND METHODS FOR COLLECTION AND DISPOSAL OF INFECTIOUS AND MEDICAL WASTE

Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★	BIOMEDICAL TECHNOLOGY SOLUTION [US]	A61B19/0288 A61B2019/0213 A61B2019/0229 (+8)	(IPC1-7):A61L11/00	AR060092 (A1) 2008-05-21	2006-03-23

2. Heat processing systems, apparatuses, and methods for collection and disposal of infectious and medical waste

Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★	COX DONALD G GORDER DIANE R	A61B19/0288 A61B2019/0213 A61B2019/0229 (+8)	A61B19/02 A61L11/00 A61M5/32 (+1)	AU2007231591 (A1) 2007-10-04	2006-03-23

3. HEAT PROCESSING SYSTEMS, APPARATUSES, AND METHODS FOR COLLECTION AND DISPOSAL OF INFECTIOUS AND MEDICAL WASTE

Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★	COX DONALD G [US] GORDER DIANE R [US]	A61B19/0288 A61B2019/0213 A61B2019/0229 (+8)	A61B19/02 A61L11/00 A61M5/32 (+1)	CA2646350 (A1) 2007-10-04	2006-03-23

4. Heat processing systems, apparatuses, and methods for collection and disposal of infectious and medical waste

Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★	BIOMEDICAL TECHNOLOGY SOLUTION [US]		A61L11/00	CN101448531 (A) 2009-06-03	2006-03-23

5. HEAT PROCESSING SYSTEMS, APPARATUSES, AND METHODS FOR COLLECTION AND DISPOSAL OF INFECTIOUS AND MEDICAL WASTE

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**Page bookmark** [AU2007231591 \(A1\) - Heat processing systems, apparatuses, and methods for collection and disposal of infectious and medical waste](#)

**Inventor(s):** COX DONALD G; GORDER DIANE R ±

**Applicant(s):** BIOMEDICAL TECHNOLOGY SOLUTION ±

**Classification:** - international: [A61B19/02](#); [A61L11/00](#); [A61M5/32](#); B

- cooperative: [A61B50/362](#); [A61L11/00](#); [B09B3](#)  
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[A61B2050/0266](#); [A61B2050/0267](#); [A61B2050/0268](#); [A61B2050/0269](#); [A61B2050/0270](#); [A61B2050/0271](#); [A61B2050/0272](#); [A61B2050/0273](#); [A61B2050/0274](#); [A61B2050/0275](#); [A61B2050/0276](#); [A61B2050/0277](#); [A61B2050/0278](#); [A61B2050/0279](#); [A61B2050/0280](#); [A61B2050/0281](#); [A61B2050/0282](#); [A61B2050/0283](#); [A61B2050/0284](#); [A61B2050/0285](#); [A61B2050/0286](#); [A61B2050/0287](#); [A61B2050/0288](#); [A61B2050/0289](#); [A61B2050/0290](#); [A61B2050/0291](#); [A61B2050/0292](#); [A61B2050/0293](#); [A61B2050/0294](#); [A61B2050/0295](#); [A61B2050/0296](#); [A61B2050/0297](#); [A61B2050/0298](#); [A61B2050/0299](#); [A61B2050/0300](#); [A61B2050/0301](#); [A61B2050/0302](#); [A61B2050/0303](#); [A61B2050/0304](#); [A61B2050/0305](#); [A61B2050/0306](#); [A61B2050/0307](#); [A61B2050/0308](#); [A61B2050/0309](#); [A61B2050/0310](#); [A61B2050/0311](#); [A61B2050/0312](#); [A61B2050/0313](#); [A61B2050/0314](#); [A61B2050/0315](#); [A61B2050/0316](#); [A61B2050/0317](#); [A61B2050/0318](#); [A61B2050/0319](#); [A61B2050/0320](#); [A61B2050/0321](#); [A61B2050/0322](#); [A61B2050/0323](#); [A61B2050/0324](#); [A61B2050/0325](#); [A61B2050/0326](#); [A61B2050/0327](#); [A61B2050/0328](#); [A61B2050/0329](#); [A61B2050/0330](#); [A61B2050/0331](#); [A61B2050/0332](#); [A61B2050/0333](#); [A61B2050/0334](#); [A61B2050/0335](#); [A61B2050/0336](#); [A61B2050/0337](#); [A61B2050/0338](#); [A61B2050/0339](#); [A61B2050/0340](#); [A61B2050/0341](#); [A61B2050/0342](#); [A61B2050/0343](#); [A61B2050/0344](#); [A61B2050/0345](#); [A61B2050/0346](#); [A61B2050/0347](#); [A61B2050/0348](#); [A61B2050/0349](#); [A61B2050/0350](#); [A61B2050/0351](#); [A61B2050/0352](#); [A61B2050/0353](#); [A61B2050/0354](#); [A61B2050/0355](#); [A61B2050/0356](#); [A61B2050/0357](#); [A61B2050/0358](#); [A61B2050/0359](#); [A61B2050/0360](#); [A61B2050/0361](#); [A61B2050/0362](#); [A61B2050/0363](#); [A61B2050/0364](#); [A61B2050/0365](#); [A61B2050/0366](#); [A61B2050/0367](#); [A61B2050/0368](#); [A61B2050/0369](#); [A61B2050/0370](#); [A61B2050/0371](#); [A61B2050/0372](#); [A61B2050/0373](#); [A61B2050/0374](#); [A61B2050/0375](#); [A61B2050/0376](#); [A61B2050/0377](#); [A61B2050/0378](#); [A61B2050/0379](#); [A61B2050/0380](#); [A61B2050/0381](#); [A61B2050/0382](#); [A61B2050/0383](#); [A61B2050/0384](#); [A61B2050/0385](#); [A61B2050/0386](#); [A61B2050/0387](#); [A61B2050/0388](#); [A61B2050/0389](#); [A61B2050/0390](#); [A61B2050/0391](#); [A61B2050/0392](#); [A61B2050/0393](#); [A61B2050/0394](#); [A61B2050/0395](#); [A61B2050/0396](#); [A61B2050/0397](#); [A61B2050/0398](#); [A61B2050/0399](#); [A61B2050/0400](#); [A61B2050/0401](#); [A61B2050/0402](#); [A61B2050/0403](#); [A61B2050/0404](#); [A61B2050/0405](#); [A61B2050/0406](#); [A61B2050/0407](#); [A61B2050/0408](#); [A61B2050/0409](#); [A61B2050/0410](#); [A61B2050/0411](#); [A61B2050/0412](#); [A61B2050/0413](#); [A61B2050/0414](#); [A61B2050/0415](#); 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[A61B2050/0516](#); [A61B2050/0517](#); [A61B2050/0518](#); [A61B2050/0519](#); [A61B2050/0520](#); [A61B2050/0521](#); [A61B2050/0522](#); [A61B2050/0523](#); [A61B2050/0524](#); [A61B2050/0525](#); [A61B2050/0526](#); [A61B2050/0527](#); [A61B2050/0528](#); [A61B2050/0529](#); [A61B2050/0530](#); [A61B2050/0531](#); [A61B2050/0532](#); [A61B2050/0533](#); [A61B2050/0534](#); [A61B2050/0535](#); [A61B2050/0536](#); [A61B2050/0537](#); [A61B2050/0538](#); [A61B2050/0539](#); [A61B2050/0540](#); [A61B2050/0541](#);

# Origin of patent families

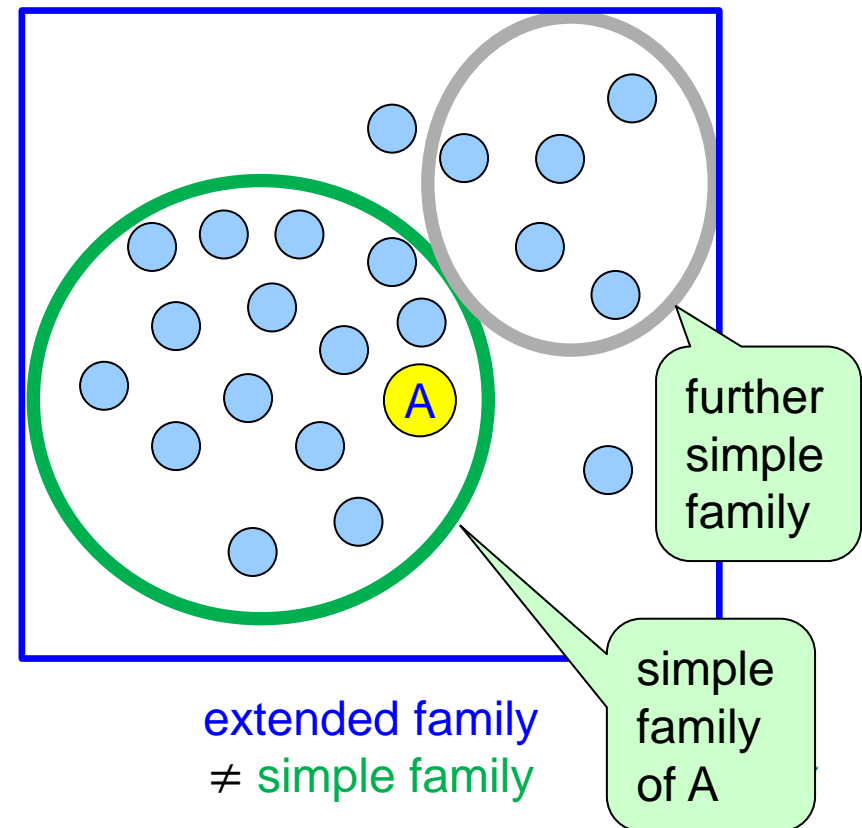
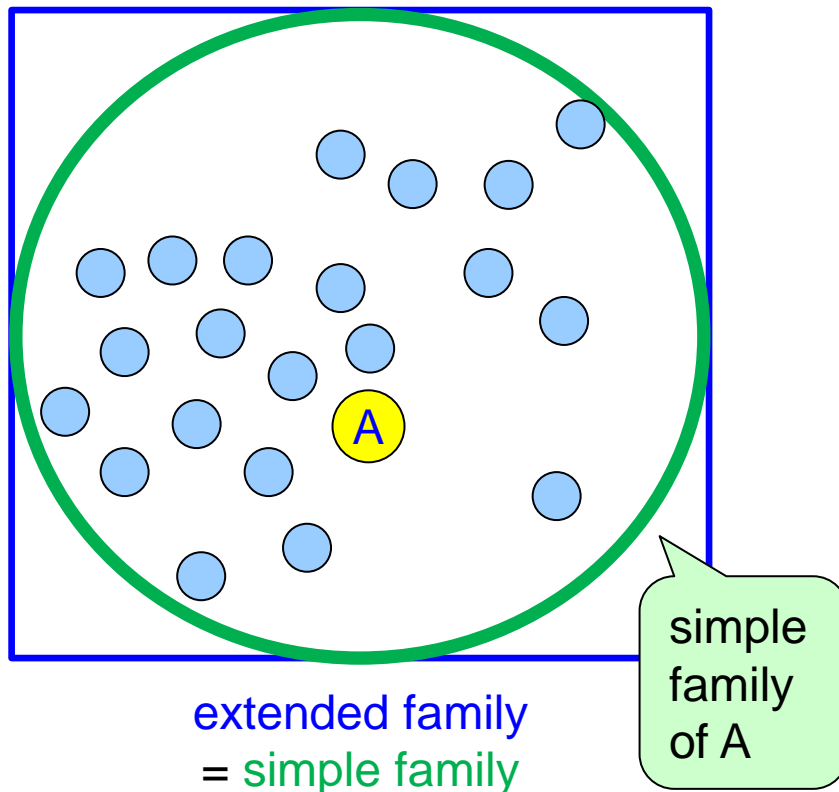
There are **various reasons** for patent family relations between **distinct applications/filings**:

- A. Patent protection is territorial, i.e. inventors/investors may have to seek protection in various different jurisdictions (“**extensions**”)
- B. ....

- Foreign applications usually claim **priorities** of earlier applications filed in other jurisdictions based on
  - Paris Convention
  - TRIPS agreement
- **Priorities create family relations between earlier and later filings**
- **N.B.: Family relations may exist also without claiming priorities !**
  - Families of PCT national phase entries

# Extended - Simple Family of A

- Extended family is the biggest possible family of application **A** (*blue square*)
- Simple family of application **A** is either equal or smaller (*green circle*)
- If simple family of A is smaller then the extended family includes further simple families





# Domestic families

EA domestic family  
with 2 members

## 7. STABLE PHARMACEUTICAL COMPOSITION CONTAINING DOCETAXEL AND METHOD OF PREPARING SAME

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
KIM NAM, HO, LEE JIN, YOUNG, (+8)	SK CHEMICALS	Publication numbers		EA200870559 (A1) 2009-04-28	2006-05-22
				EA014071 (B1) 2010-08-30	

## 8. STABLE PHARMACEUTICAL COMPOSITION CONTAINING DOCETAXEL AND A METHOD OF MANUFACTURING THE SAME

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
KIM NAM HO [KR] LEE JIN YOUNG [KR] (+8)	SK CHEMICALS CO LTD [KR]	<u>A61K2300/00</u> <u>A61K31/337</u> (+9)	A61K9/08	ECSP088951 (A) 2009-02-27	2006-05-22

## 9. STABLE PHARMACEUTICAL COMPOSITION CONTAINING DOCETAXEL AND A METHOD OF MANUFACTURING THE SAME

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
KIM NAM HO [KR] LEE JIN YOUNG [KR] (+8)	SK CHEMICALS CO LTD [KR]	<u>A61K2300/00</u> <u>A61K31/337</u> (+9)	A61K31/337 A61K47/40 A61K9/00 (+1)	EP2019664 (A1) 2009-02-04 EP2019664 (A4) 2013-03-13 EP2019664 (B1) 2016-01-06 i Global Dossier	2006-05-22

9th application  
included in the  
family

EP domestic family  
with 3 members

# Domestic family

A **Domestic Family** comprises all **subsequent domestic publications** of the **same application** at different prosecution stages, e.g. publication of

- unexamined application (usually 18 months after filing date)
- search report
- granted patent specification
- modified grant after opposition

Such publications are usually distinguished by different **kind codes**, e.g.

- EP123456 A1: Publication of application
- EP123456 B1: Publication of granted patent
- See overview of kind codes:

<http://www.wipo.int/export/sites/www/standards/en/pdf/07-03-02.pdf>

N.B.: Some countries, e.g. US or EA use for a single application different publication numbers in addition to the different kind codes

# Domestic families

## 7. STABLE PHARMACEUTICAL COMPOSITION CONTAINING DOCETAXEL AND METHOD OF PREPARING SAME

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
KIM NAM, HO, LEE JIN, YOUNG, (+8)	SK CHEMICAL			EA200870559 (A1) 2009-04-28 EA014071 (B1) 2010-08-30	2006-05-22


Kind code B1 for grant

## 8. STABLE PHARMACEUTICAL COMPOSITION CONTAINING DOCETAXEL AND METHOD OF MANUFACTURING THE SAME

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
KIM NAM HO [KR] LEE JIN YOUNG [KR] (+8)	SK CHEMICALS CO LTD [KR]	<u>A61K2300/00</u> <u>A61K31/337</u> (+9)	A61K9/08	ECSP088951 (A) 2009-02-27	2006-05-22

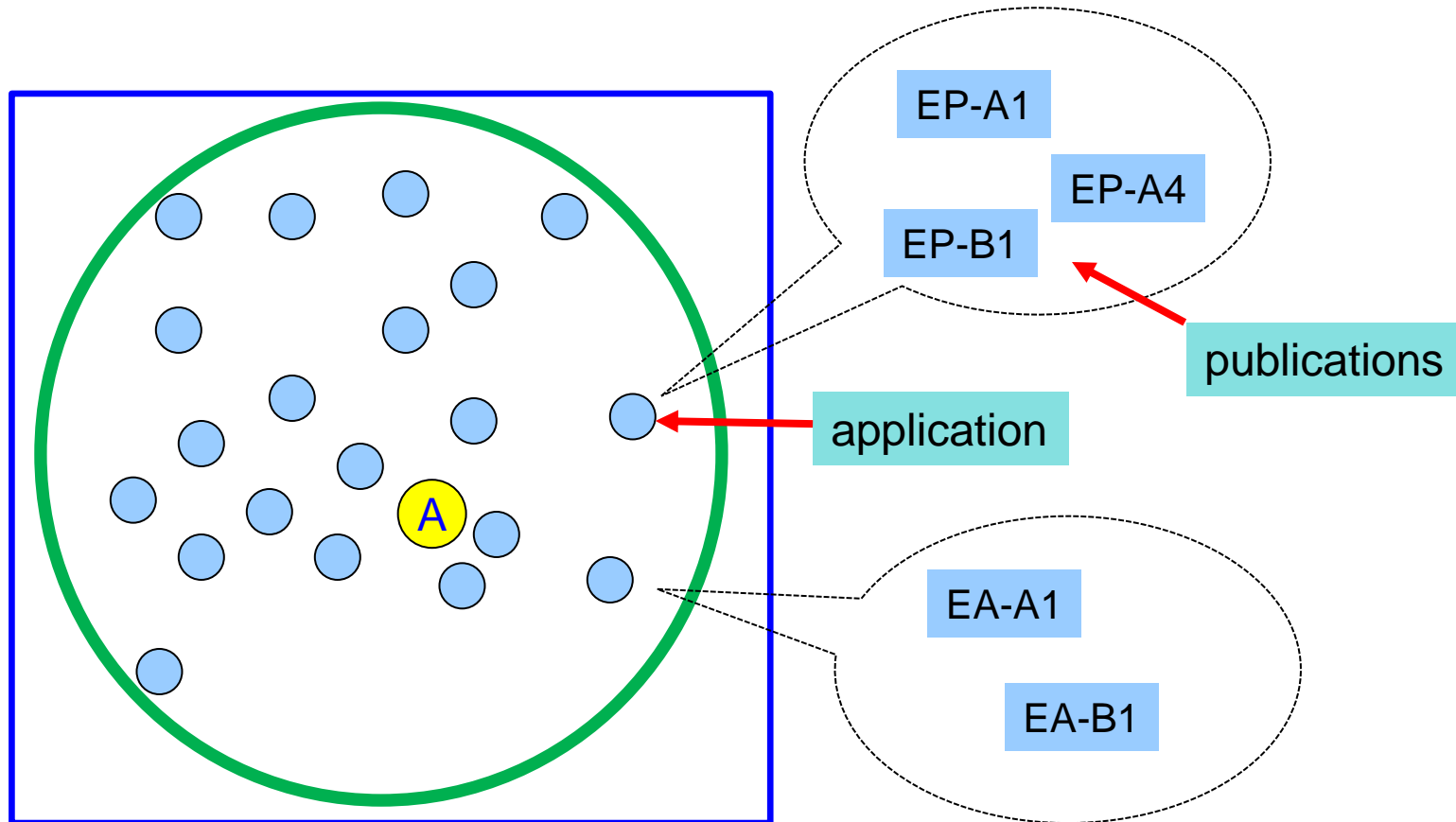
Publication date of grant

## 9. STABLE PHARMACEUTICAL COMPOSITION CONTAINING DOCETAXEL AND A METHOD OF MANUFACTURING THE SAME

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
KIM NAM HO [KR] LEE JIN YOUNG [KR] (+8)	SK CHEMICALS CO LTD [KR]	<u>A61K2300/00</u> <u>A61K31/337</u> (+9)	A61K31/337 A61K47/40 A61K9/00 (+1)	EP2019664 (A1) 2009-02-04 EP2019664 (A4) 2013-03-13 EP2019664 (B1) 2016-01-06  <a href="#">Global Dossier</a>	2006-05-22

Kind code B1 for grant

# Extended – Simple – Domestic Families



extended family  
= simple family

# Members of a patent family

- A patent family comprises
  - Distinct patent **applications**
    - For each application: one or several patent **publications**
- Size of a patent family is usually counted in terms of the number of distinct applications
  - Useful indicator for number of jurisdictions where technology is potentially protected → value of an application

# Patent families with priorities

# Priority claims - sample

**Bibliographic data: WO2008004425 (A1) — 2008-01-10**

★ In my patents list    ↗ EP Register    📄 Report data error

🖨 Print

## PANTS-TYPE WEARING ARTICLE

**Page bookmark**    [WO2008004425 \(A1\) - PANTS-TYPE WEARING ARTICLE](#)

**Inventor(s):**    KENMOCHI YASUHIKO [JP]; KINOSHITA AKIYOSHI [JP]; AOYAGI NATSUKO [JP]; TANAKA KAYOKO [JP] ±

**Applicant(s):**    UNI CHARM CORP [JP]; KENMOCHI YASUHIKO [JP]; KINOSHITA AKIYOSHI [JP]; AOYAGI NATSUKO [JP]; TANAKA KAYOKO [JP] ±

**Classification:**    - international: [A61F13/49](#); [A61F13/496](#); [A61F13/56](#)

- cooperative: [A61F13/15](#); [A61F13/15756](#); [A61F13/56](#)

**Application number:**    WO2007JP62104 20070615

**Priority number(s):**    [JP20060187165](#) [20060706](#)

1 priority

**Also published as:**    📄 [US2008009816 \(A1\)](#)    📄 [US7833207 \(B2\)](#)    → [UA91294 \(C2\)](#)    📄 [TW200819114 \(A\)](#)    📄 [TWI336619 \(B\)](#)    → [more](#)

# Priority claims - sample

**Bibliographic data: WO2008035580 (A1) — 2008-03-27**

★ In my patents list    ↗ EP Register    📄 Report data error

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## PLANT CULTIVATION SYSTEM

**Page bookmark**    [WO2008035580 \(A1\) - PLANT CULTIVATION SYSTEM](#)

**Inventor(s):**    OKAMOTO AKIHIRO [JP]; FUJII MANABU [JP]; YOSHIOKA HIROSHI [JP]; MORI YUICHI [JP] ±

**Applicant(s):**    MEBIOL INC [JP]; OKAMOTO AKIHIRO [JP]; FUJII MANABU [JP]; YOSHIOKA HIROSHI [JP]; MORI YUICHI [JP] ±

**Classification:**    - international: **A01G1/00; A01G13/00; A01G25/00; A01G27/00; A01G7/00**

                          - cooperative: **A01G31/02; Y02P60/216**

**Application number:**    **WO**2007JP67578 20070910    ⓘ [Global Dossier](#)

**Priority number(s):**    [JP20060254439 20060920](#) ; [JP20070144202 20070530](#)

2 priorities

**Also published as:**    📄 [EP2064942 \(A1\)](#)    📄 [EP2064942 \(A4\)](#)    📄 [US2010186298 \(A1\)](#)    📄 [US8001721 \(B2\)](#)    → [UA93268 \(C2\)](#)    → [more](#)



# Priority claims - sample

## Bibliographic data: WO2008060725 (A3) — 2008-07-10

★ In my patents list   ➤ EP Register   📄 Report data error

🖨 Print

### SECURE UNIVERSAL TRANSACTION SYSTEM

Page bookmark   [WO2008060725 \(A3\) - SECURE UNIVERSAL TRANSACTION SYSTEM](#)

Inventor(s):   FRANCHI JOHN FRANCO [GB] ±

Applicant(s):   FRANCHI JOHN FRANCO [GB] ±

Classification:   - international: *H04L9/00*

- cooperative:   [G06F21/32](#); [G06F21/34](#); [G06Q20/12](#); [G06Q20/4014](#)

Application number:   WO2007US74327 20070725

Priority number(s):   [US20060532580 20060918](#) ; [EP20060256440 20061219](#) ; [GB20060025304 20061219](#)

Also published as:   📄 [WO2008060725 \(A2\)](#)   📄 [WO2008060725 \(A8\)](#)   📄 [EP1901248 \(A1\)](#)   ➔ [ZA200901870 \(B\)](#)   📄 [US2011125613 \(A1\)](#)  
➔ [more](#)

The more priorities are claimed, the more complex the family relations may be!

3 priorities  
3 countries

# Second filings abroad

Patent protection for a particular invention is territorial, i.e. inventors may have to seek protection in different additional jurisdictions abroad ("**extensions**")

- **Office of first filing (OFF)**: where an invention is filed for the first time; usually in the country of residence of inventor or applicant
- **Office(s) of second/subsequent filing (OSF)**: where the invention is filed subsequently again to get geographically extended protection ("extensions"), either
  - With claiming priority of OFF (Paris/Trips), or
  - Without claiming priority rights
- (there are no 'offices of 3<sup>rd</sup> filing')

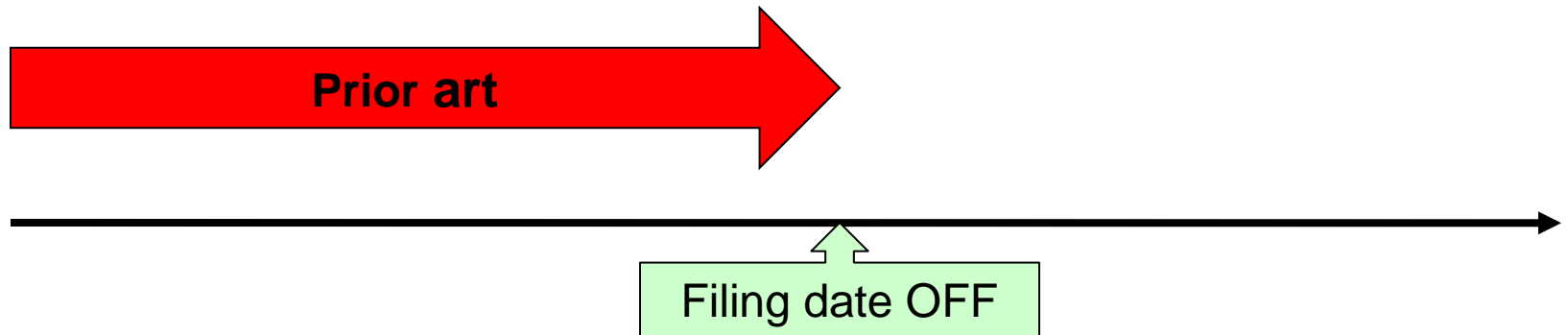
All filings/applications including the "same invention" or parts thereof constitute a **patent family**, e.g. the applications for one invention filed in different countries

# Priorities: Paris Convention of 1883

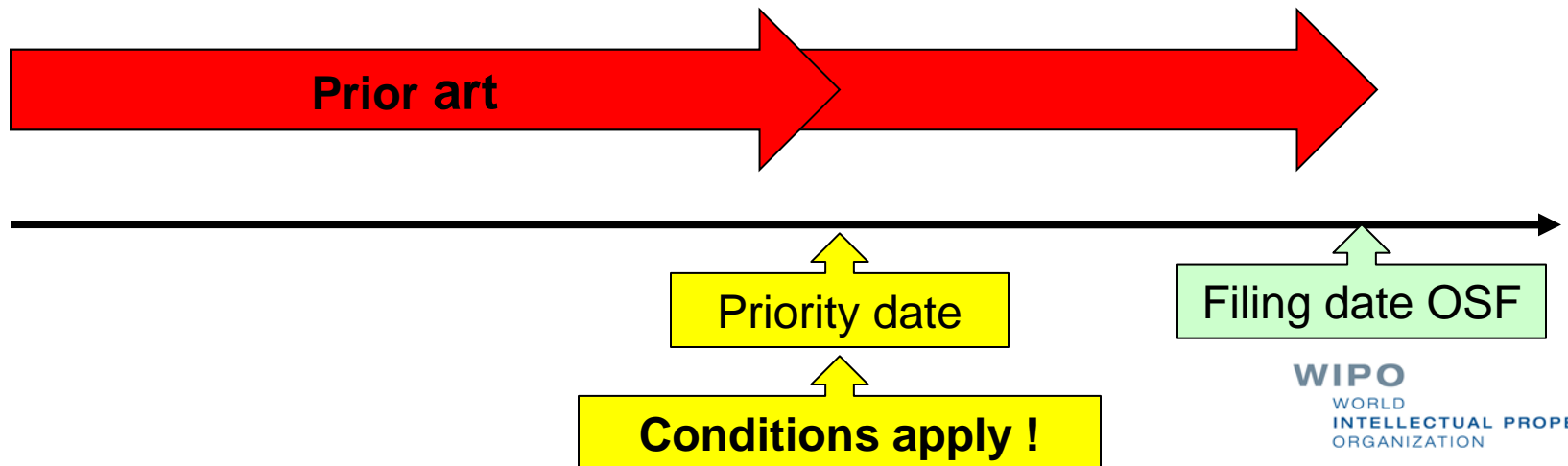
- Covers patents, designs, trademarks,..
- Facilitates second/subsequent filings abroad
- Equal protection to nationals and foreigners (non discrimination)
  - Foreigners: nationals and residents of any Union country
- Mutual recognition of (Paris Convention) **priority rights**:
  - at OSF: Treatment of application as if filed on date of first filing, i.e. same prior art is to be applied if claimed subject matter is fully disclosed in priority
  - 12 month period to file an application claiming the priority of an earlier application (Art. 4 C (1))
- Permits combination of **multiple priority rights** (same or different countries) (Art. 4 F)
- Permits **additions of technical subject matter** (Art. 4 F)
  - As long as national definition of **unity** is met

# Priorities: Benefits of claiming priorities

## ■ OFF



## ■ OSF



# Article 4 F Paris Convention

"No country of the Union may refuse a priority or a patent application on the ground

that the applicant claims **multiple priorities**, even if they originate in **different countries**, or on the ground

that an application claiming one or more priorities contains one or more elements that were not included in the application or applications whose priority is claimed,

provided that, in both cases, there is unity of invention within the meaning of the law of the country.

With respect to the elements not included in the application or applications whose priority is claimed, the filing of the subsequent application shall give rise to a right of priority under ordinary conditions."

# Article 4 F Paris Convention

"No country of the Union may refuse a priority or a patent application on the ground

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provided that, in both cases, there is unity of invention within the meaning of the law of the country.

With respect to the elements not included in the application or applications whose priority is claimed, the filing of the subsequent application shall give rise to a right of priority under ordinary conditions."

# TRIPS agreement

- Agreement on **T**rade **R**elated **I**ntellectual **P**roperty Rights
- Provides for 'derived' Paris Convention priority, termed "convention priority":  
Members to TRIPS agreement need not sign Paris Convention but need to apply respective provisions on priority right (**Art. 2 (1)**)

## ***Article 2***

### *Intellectual Property Conventions*

1. In respect of Parts II, III and IV of this Agreement, Members shall comply with Articles 1 through 12, and Article 19, of the **Paris Convention** (1967).

# Patent families without priorities

- An international application is filed for the first time ever with the PCT, i.e. without claiming of any priority
  - All national phase entries together with the international application constitute a '**PCT family**'
  
- **Technical patent families**



# PCT application without priority

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
3 September 2009 (03.09.2009)

(10) International Patent No.  
WO 2009/000451

no priority  
first filing with IB

- (51) International Patent Classification:  
C07C 46/02 (2006.01)
- (21) International Application Number:  
PCT/IB2008/000451
- (22) International Filing Date:  
29 February 2008 (29.02.2008)
- (25) Filing Language: English
- (26) Publication Language: English
- (71) Applicant (for all designated States except US): **LABORATOIRE MEDIDOM S.A.** [CH/CH]; Enetriederstrasse 44, CH-6060 Sarnen (CH).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **DI NAPOLI, Guido** [CH/MC]; 8, Lacets Saint-Leon, MC-98000 Monaco (MC). **DI NAPOLI, Alessandro** [CH/CH]; Chemin du Vent-Debout 18, CH-1245 Collonge Bellerive (CH).
- (74) Agent: **REUTELER & CIE, S.A.**; Chemin de la Vuarpillière 29, CH-1260 Nyon (CH).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ,

EC, EE, EG, ES, FI, FR, GB, GR, HR, HU, ID, JP, KR, LA, LU, LV, MA, MK, LR, LS, LT, LU, LC, LI, LX, LY, MA, MD, ME, MG, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

**Published:**

- with international search report (Art. 21(3))



# PCT application without priority

**Bibliographic data: WO2009106910 (A1) — 2009-09-03**

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## PROCESS FOR THE PREPARATION OF ALOE-EMODIN

**Page bookmark**   [WO2009106910 \(A1\) - PROCESS FOR THE PREPARATION](#)

**Inventor(s):**   DI NAPOLI GUIDO [MC]; DI NAPOLI ALESSANDRO [CH] ±

**Applicant(s):**   MEDIDOM LAB [CH]; DI NAPOLI GUIDO [MC]; DI NAPOLI ALESSANDRO [CH] ±

**Classification:**  
- international: **C07C46/02**  
- cooperative: **C07C46/02** → [more](#)

**Application number:**   WO2008IB00451 20080229

**Priority number(s):**   WO2008IB00451 20080229

**Also published as:**   📄 [AR072768 \(A1\)](#)

NO priority  
first filing with IB  
Espacenet repeats application number among priority numbers!

# PCT family

- 'PCT family' includes the international application and all its national phase entries
- Linked through the PCT application number
- Linked as well through the priorities - if any were claimed – which the national phase entries inherit from the international application

# Family sharing PCT application numbers

**Bibliographic data: CA2646350 (A1) — 2007-10-04**

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CA family member

**HEAT PROCESSING SYSTEMS, APPARATUSES, AND METHODS FOR COLLECTION AND DISPOSAL OF INFECTIOUS AND MEDICAL WASTE**

Page bookmark

CA2646350 (A1) - HEAT PROCESSING SYSTEMS, APPARATUSES, AND METHODS FOR COLLECTION AND DISPOSAL OF INFECTIOUS AND MEDICAL WASTE

Inventor(s):

[S] ±

Applicant(s):

[S] ±

Classification:

M5/32; B09B3

- cooperative: A61B50/311/00; B09B3/0075; B09B3/008; A61B2050/001; A61B2050/0014;  
A61B2050/006; A61B2050/0074; A61B2050/0084; A61M5/3278

Application number: CA20072646350 20070322

Priority number(s): US20060785512P 20060323 ; US20060785548P 20060323 ; WO2007US07071 20070322

Also published as:  WO2007111918 (A2)  WO2007111918 (A3) → UY30238 (A1)  US2007224077 (A1)  TW200812650 (A)  
→ more

Shared priority numbers

Shared PCT application number

# PCT family – simple family

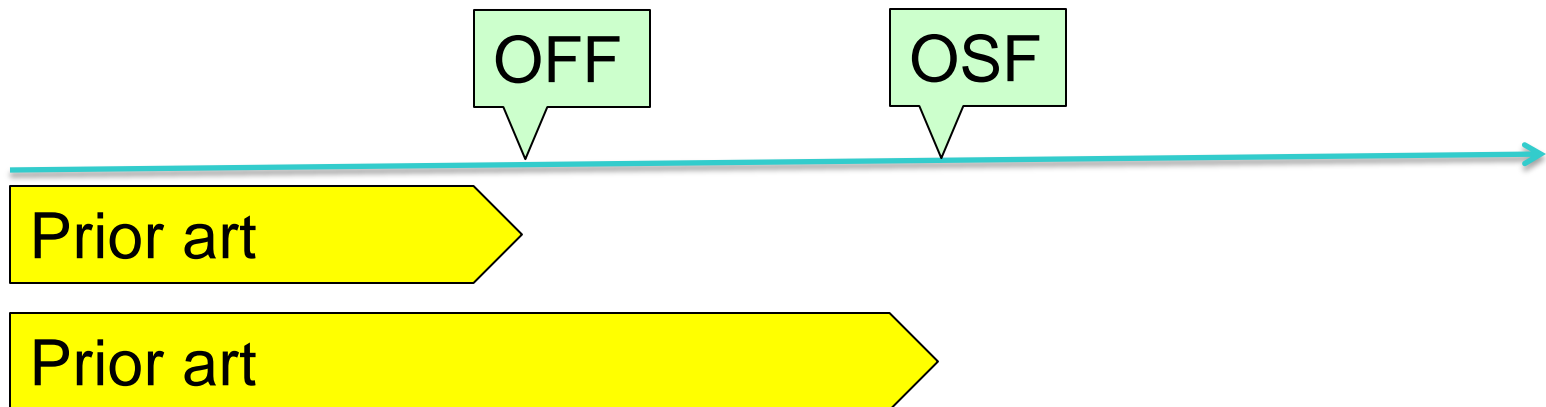
- 'PCT family' includes the international application and all its national phase entries
- Linked through the PCT application number
- Linked as well through the priorities - if any were claimed – which the national phase entries inherit from the international application
- There may be additional applications in the simple family which are not PCT NPEs
- For example, a GCC application filed through the Paris route and claiming the same priorities like the PCT application
- It may happen that a simple family includes several distinct PCT families; for example PCT/DK2006/000477

# Technical families

- Applications for the same invention or parts thereof filed in different jurisdictions **without claiming priority** constitute a technical family
- Indicators for technical family relation:
  - Same inventor name(s)
    - Right to invention belongs to the inventor(s)
  - Same or similar drawings
    - It is very unlikely that new drawings are prepared for further filings
  - (Same applicant): the right to invention may be transferred/assigned to third parties
  - (Same or similar title)
  - (Same or similar claims)
  - (Same or similar descriptions)
- Technical family relations are usually not recorded in any database (Inpadoc to some extent if detected by EPO examiner)

# Technical families

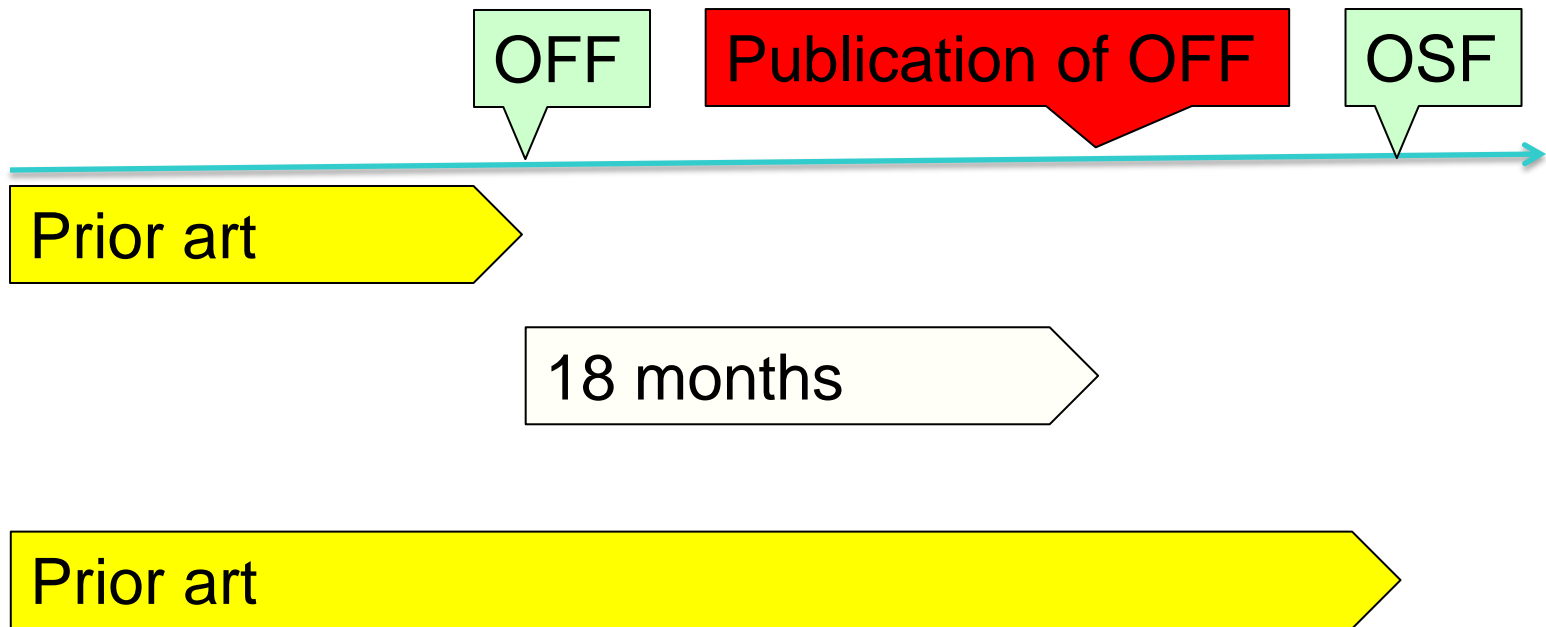
- Risk of not claiming Paris priority:  
Later filing date implies different prior art, i.e. publications between OFF and OSF filing date are included



- Supplementary top-up searches may reveal more prior art than other search reports obtained for family members using the priority

# Technical families

- Risk of not claiming Paris priority:  
Later filing date implies different prior art, i.e. publications between OFF and OSF filing date are included





# Family concepts

- Paris Convention permits claiming of multiple priorities
- Claiming multiple and different priorities in and from different countries may lead to complex family structures, for example:

OSF1: single application claiming only priority of **JP-xx**

OSF2: single application claiming priorities of **JP-xx + JP-yy**

OSF3: single application claiming priorities of **JP-xx + JP-yy**

OSF4: single application claiming priorities of **JP-xx + US-zz**

OSF4: single application claiming only priority of **US-zz**

- Various concepts / rules exist for constructing family relations
- Largely built on the principle of **shared priorities**
  - **Direct** sharing: completely or partially
  - **Indirect** sharing

# Article 4 F Paris Convention

"No country of the Union may refuse a priority or a patent application on the ground

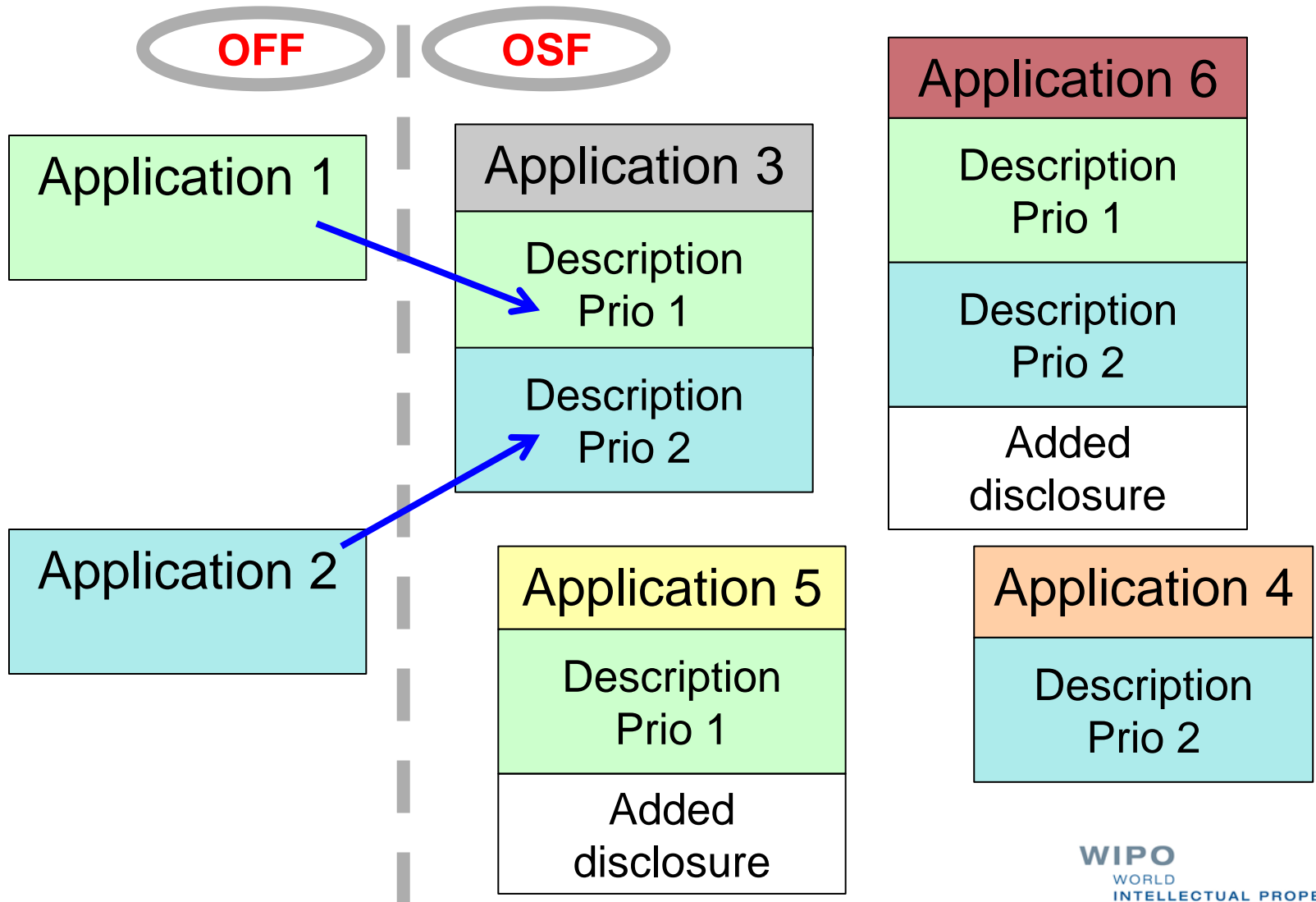
that the applicant claims **multiple priorities**, even if they originate in different countries, or on the ground

that an application claiming one or more priorities contains **one or more elements that were not included** in the application or applications whose priority is claimed,

provided that, in both cases, there is unity of invention within the meaning of the law of the country.

With respect to the elements not included in the application or applications whose priority is claimed, the filing of the subsequent application shall give rise to a right of priority under ordinary conditions."

# Combining multiple priorities



# Technical disclosures of family members

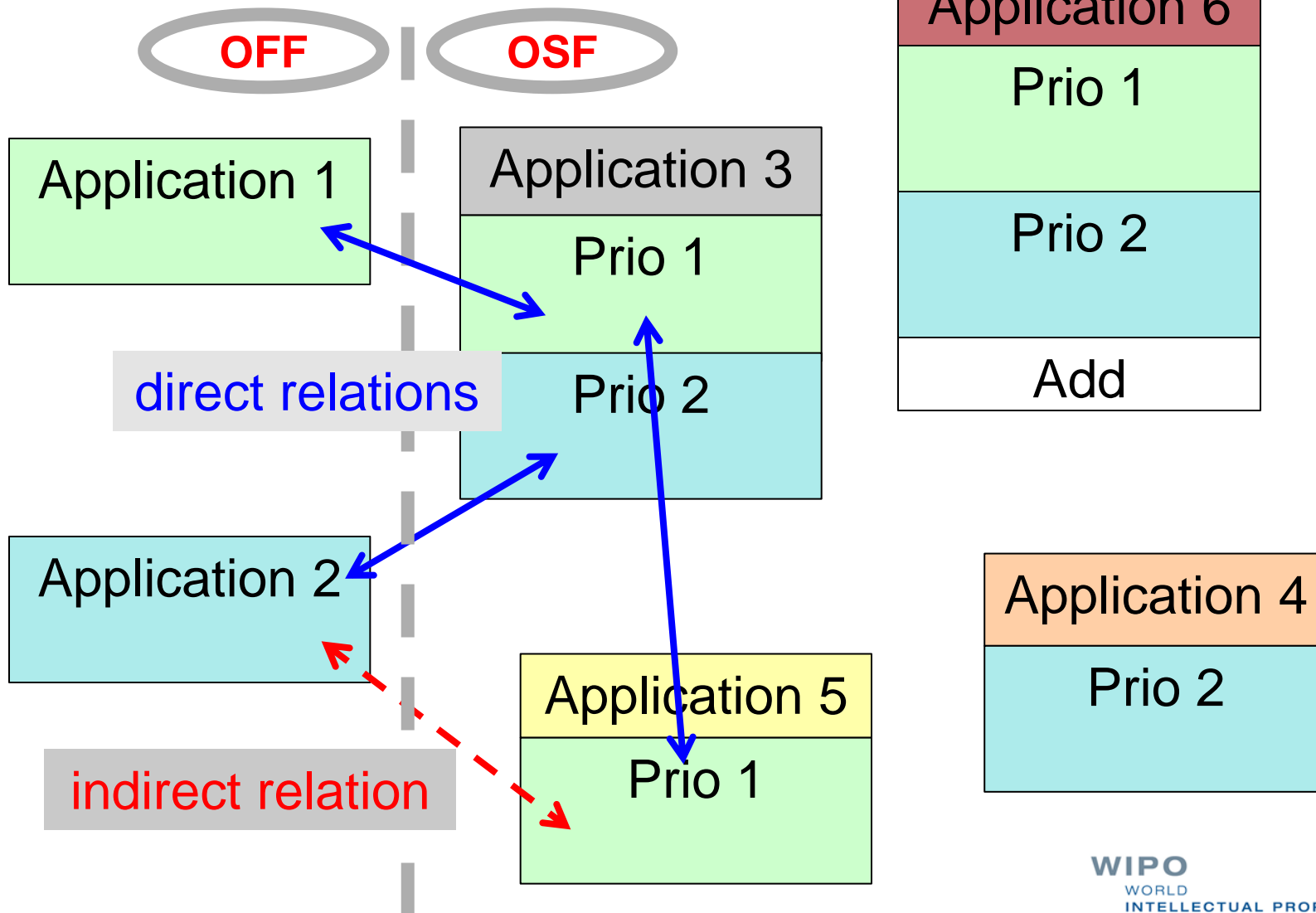
- Even though priorities are claimed, technical disclosure (descriptions and drawings) may differ:
  - Combinations of different sets of descriptions
  - Parts of descriptions may be removed
  - Technical subject matter may have been added
- Claims may also be different since claims need to be supported by description
- Differences are revealed only by comparing descriptions
- Applicants are not obliged to reveal modifications when making a new application
- When are differences least likely?
  - When all claimed priorities are the same

Permitted by  
Paris  
Convention

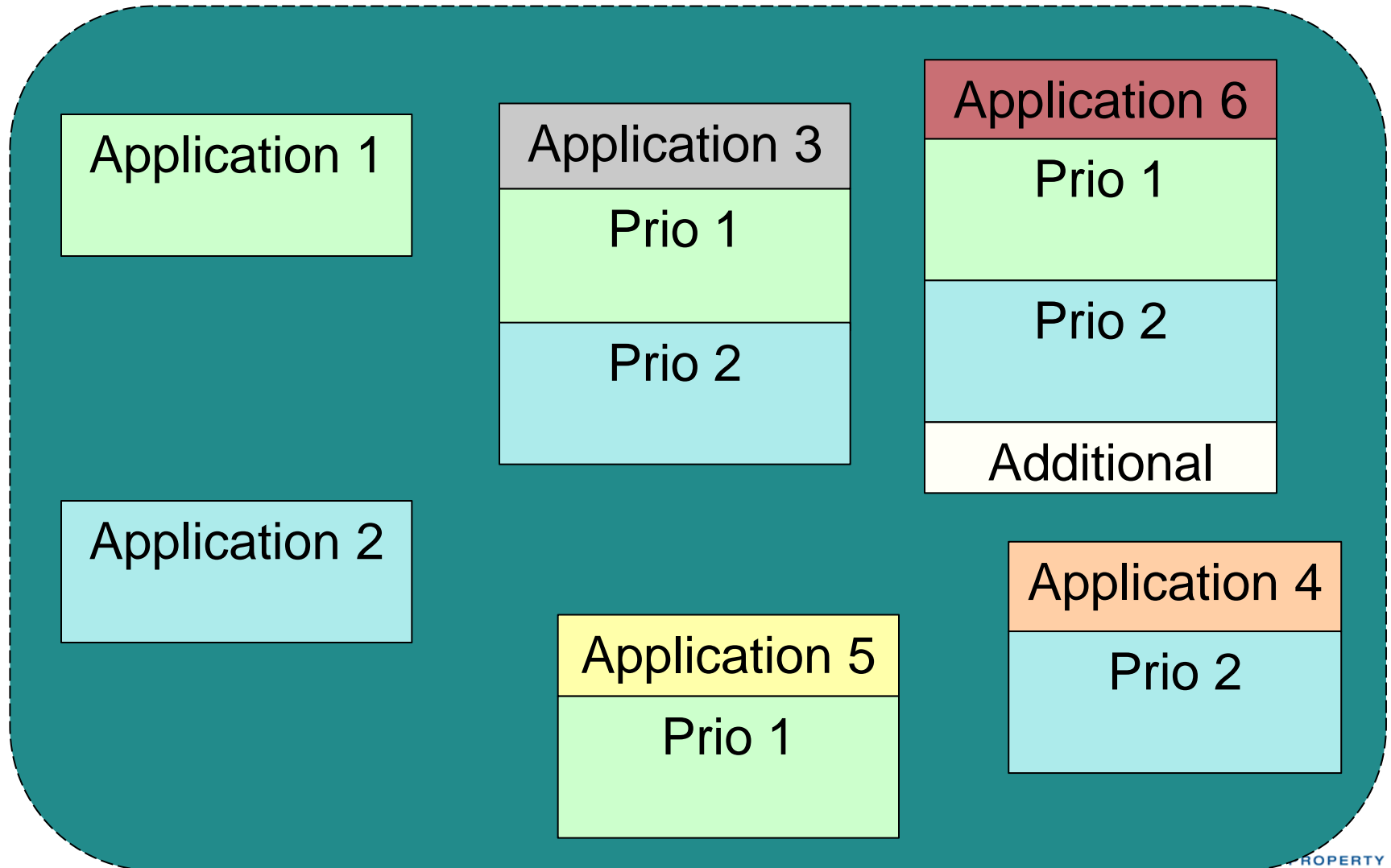
# Family concepts

- Simple family:
  - All members of the family have exactly the same priority or priorities
- Complex family:
  - All members of the family share at least one priority
- Extended family:
  - Any member shares at least one priority with at least one other member
  - Covers indirect sharing of priorities; is therefore the biggest possible family

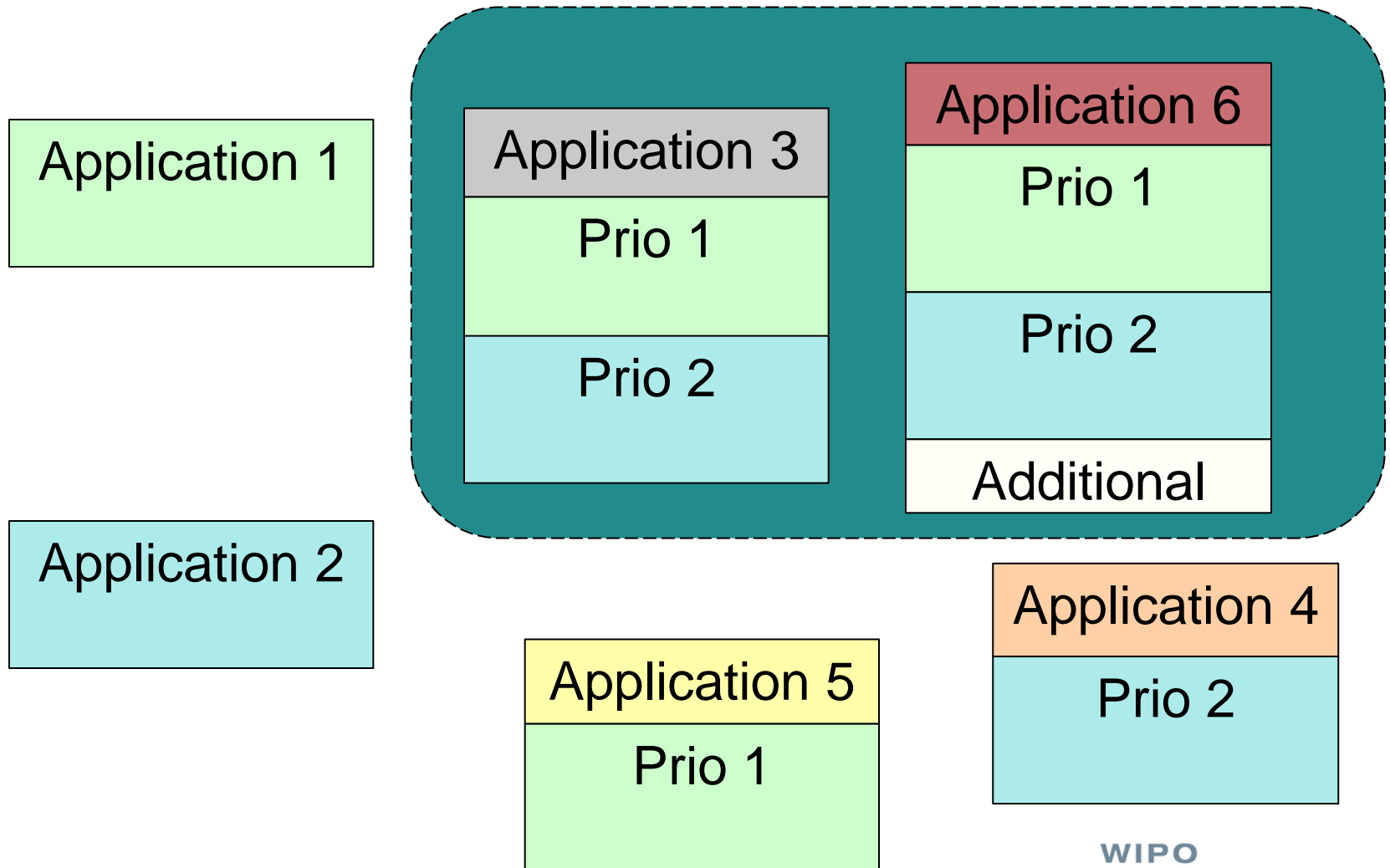
# Multiple priorities



# Extended family



# Simple family





# Simple family

Application 1

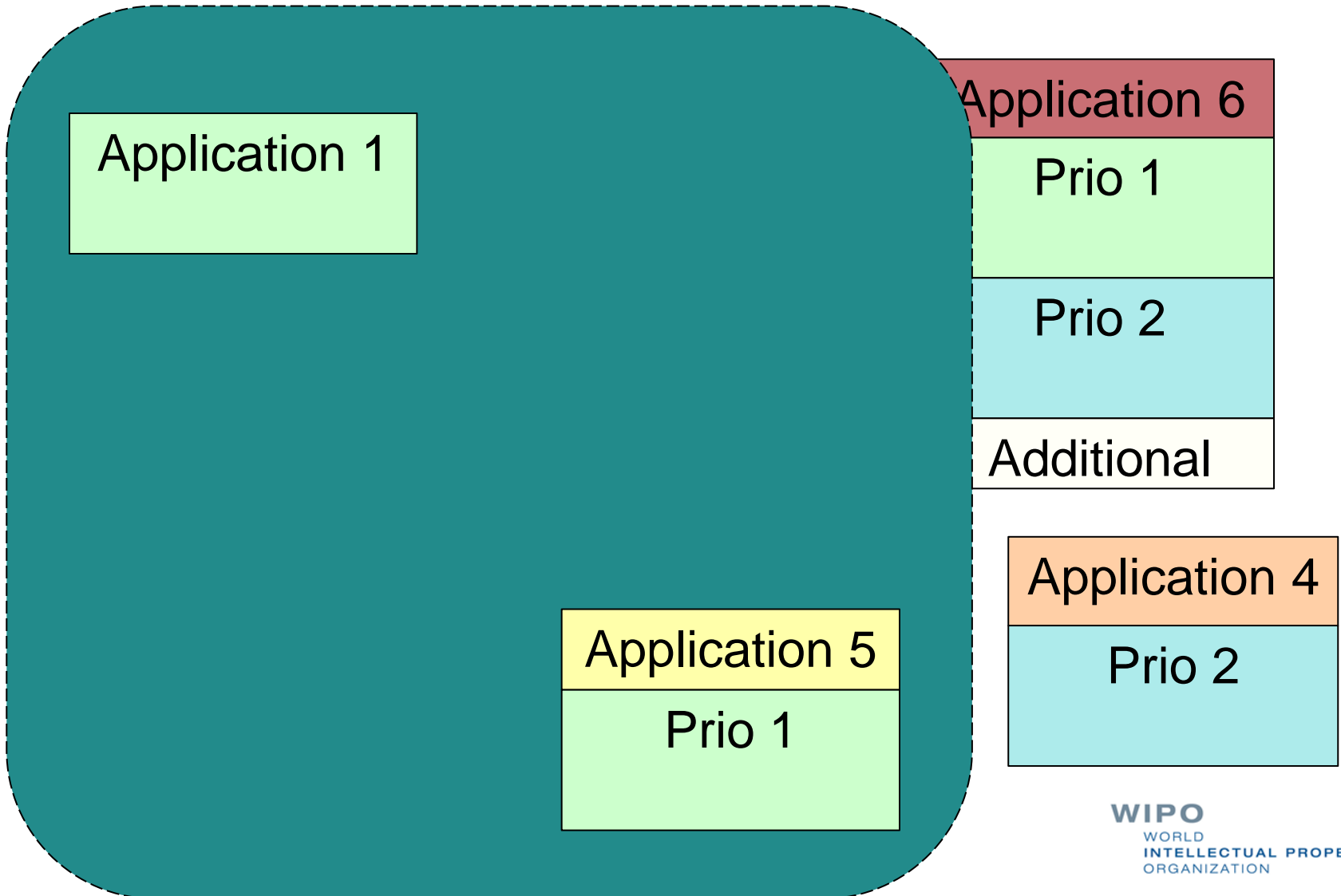
Application 3  
Prio 1  
Prio 2

Application 6  
Prio 1  
Prio 2  
Additional

Application 2

Application 4  
Prio 2

# Simple family



# Simple – extended family?

- **Simple family:** all members share the same priorities
- **Simple family (PCT w/o priority):** all members share the same PCT application number
  - It is very likely that descriptions of family members are equal or very similar
  - "Equivalents", "also published as"
  - Ideally, family members are just translations in other languages
  - However, Paris Convention permits additions of subject matter
  - "same invention" or group of very similar inventions
- **Extended (Inpadoc) family:** biggest possible family, includes applications sharing priorities indirectly
  - It is quite likely that descriptions are different
  - More likely that they cover different but related inventions in same area of technology

# Utility of simple families

Since publications belonging to the same simple family are quite likely equivalent, simple family relations are used for

- **Family reduction** of search results: Databases like Espacenet and other professional patent databases include in the search result list only one publication per simple family (which represents the family) because other documents of the same family add no value and only blur up the result list (Patentscope has so far no family reduction)
  
- **Retrieval of language equivalents**
  - Find an equivalent in a language that you understand best
  
- **Database maintenance**, e.g. by EPO, also for, i.e. some data are stored and propagated on the family level, e.g. reclassification data

# PCT family

## Article 28

### Amendment of the Claims, the Description, and the Drawings, Before Designated Offices

(1) The applicant shall be given the **opportunity to amend the claims, the description, and the drawings**, before each designated Office within the prescribed time limit. No designated Office shall grant a patent, or refuse the grant of a patent, before such time limit has expired except with the express consent of the applicant.

(2) **The amendments shall not go beyond the disclosure in the international application as filed** unless the national law of the designated State permits them to go beyond the said disclosure.


Disclosures (descriptions and drawings) of PCT national phase entries are usually equivalent (usually nothing was added; parts may have been removed, though)

# Sources of family information

- **Family building:** family relations are derived from priority and PCT application data
- EPO processes accordingly bibliographic data of all publications included in its database (90+ jurisdictions) as reported by data sharing offices
- EPO's INPADOC database is major source of such family information, retrievable through:
  - Espacenet & EPO's CCD (simple and extended families)
  - Other free patent information databases, like Depatis, Google Patents,...
  - Commercial database, e.g.
    - Thomson/Derwent: **WPI family**
    - Questel/Orbit: **Fampat family**
    - CAS

use widely INPADOC data and additional sources; and apply proprietary family building rules and data cleaning
- Family information (in public databases) includes only information on published family members and only for jurisdictions sharing bibliographic data!

# CCD access via Inpadoc family list



Europäisches Patentamt  
 European Patent Office  
 Office européen des brevets

## Espacenet

Patent search

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◀ About Espacenet Other EPO online services ▼

Search
Result list
★ My patents list (0)
Query history
Settings
Help

EP2570899 (A2) → US2013069890 (A1) → Family page 1

WO2011113363 (A1)  
 Bibliographic data  
 Description  
 Claims  
 Mosaics  
 Original document  
 Cited documents  
 Citing documents  
 INPADOC legal status  
**INPADOC patent family**

### Family list: WO2011113363 (A1) — 2011-09-22

Select all (0/25)
☰ Compact
↔ Export (CSV | XLS)
↓ Download covers
➤ **CCD**
🖨 Print

29 application(s) for: WO2011113363 (A1)
 1 2 ▶

Sort by Priority date Sort order Descending Sort  show citations

**1. AGOMELATINE HYDROBROMIDE HYDRATE AND PREPARATION THEREOF**

★ Inventor:	Applicant:	CPC:	Citations:	Publication info:	Priority date:
SHAN HANBIN [CN] YUAN ZHEDONG [CN] (+4)	SERVIER LAB [FR] SHAN HANBIN [CN] (+5)	A61K31/165 C07C233/18	CN101481321 A CN101585779 A	WO2011113363 (A1) 2011-09-22	2010-03-17

**2. Agomelatine hydrobromide hydrate and preparation thereof**

★ Inventor:	Applicant:	CPC:	Citations:	Publication info:	Priority date:
ZHANG PENG [CN] ZHU XUEYAN [CN] (+1)	SERVIER LAB [FR]	A61K31/165 C07C233/18		AP3199 (A) 2015-03-31	2010-03-17

**3. Agomelatine hydrobromide hydrate and preparation thereof**

★ Inventor:	Applicant:	CPC:	Citations:	Publication info:	Priority date:
SHAN HANBIN [CN] YUAN ZHEDONG [CN] (+4)	SERVIER LAB [FR]	A61K31/165 C07C233/18	US201113198 A1	AU2011229619 (A1) 2012-09-27 AU2011229619 (B2) 2014-05-22	2010-03-17

**4. AGOMELATINE HYDROBROMIDE HYDRATE AND PREPARATION THEREOF**

★ Inventor:	Applicant:	CPC:	Citations:	Publication info:	Priority date:
SHAN HANBIN [CN] YUAN ZHEDONG [CN] (+4)	SERVIER LAB [FR]	A61K31/165 C07C233/18		CA2792430 (A1) 2011-09-22 CA2792430 (C) 2015-12-08	2010-03-17

Quick help

- Can I export this list?
- What happens if I click on "Download covers"?
- Can I sort the list?
- What happens if I click on the star icon?
- What is a patent family?
- What happens if I tick the "show citations" box?
- What is an INPADOC patent family?
- Are all the documents in an INPADOC family equivalents?
- Why is the same document published several times in the same country?

# Sources of family information: CCD

Trilateral - CCD

Number: **US6565803** Search examples: EP1612402, US2006000447A1, JP20090214944

US19990300325

Hide CCD viewer Double inspector Timeline

CCD Viewer Inspector: classifications and fields searched

Citations only view Expand view Sort by country Filter Classifications & fields searched

#	CC	Cat.	Citation details	Claims
1	US		Application N° US19990300325 (US09300325) - 27 April 1999	
2	AR		Application N° AR2000P102013 (ARP000102013) - 27 April 2000	
3	AU		Application N° AU20000044961D (AU4496100) - 27 April 2000	
4	BR		Application N° BR20000010600 (BR0010600-3) - 27 April 2000	
5	CA		Application N° CA20002372427 (CA002372427) - 27 April 2000	
6	CN		Application N° CN20008008324 (CN00808324) - 27 April 2000	
7	EP		Application N° EP20000926432 (EP00926432) - 27 April 2000	

Classifications

US  
IPC A61L2/10, C02F1/32  
UC 210/748.11, 422/23  
EC A61L2/10, C02F1/32

CA  
IPC A61L2/10, C02F1/32  
EC A61L2/10, C02F1/32

CN  
IPC A61L2/10, C02F1/32  
EC A61L2/10, C02F1/32

EP  
IPC A61L2/10, C02F1/32

Simple families: 3 Total family members: 7 Get all family members

Simple family ("equivalents")  
Family members are identified through application numbers

Estimated number of simple families in extended family

Retrieve extended family



# Sources of family information: CCD

**Trilateral - CCD** Search ? Help

Number:   examples: EP1612402, US2006000447A1, JP20090214944

**US19990300325**

**CCD Viewer** Inspector: classifications and fields searched

Citations only view | Expand view | Sort by country | Filter

#	CC	Cat.	Citation details	Claims
1	US		Application N° US19990300325 (US09300325) - 27 April 1999	
2	AR		Application N° AR2000P102013 (ARP000102013) - 27 April 2000	
3	AU		Application N° AU20000044961D (AU4496100) - 27 April 2000	
4	BR		Application N° BR20000010600 (BR0010600-3) - 27 April 2000	
5	CA		Application N° CA20002372427 (CA002372427) - 27 April 2000	
6	CN		Application N° CN20008008324 (CN00808324) - 27 April 2000	
7	EP		Application N° EP20000926432 (EP00926432) - 27 April 2000	
8	AR		Application N° AR1998P105591 (ARP980105591) - 5 November 1998	
9	AT		Application N° AT19980949742T (AT98949742) - 1 October 1998	
10	AU		Application N° AU19980096001 (AU9600198) - 1 October 1998	
11	AU		Application N° AU19980096001D (AU9600198) - 1 October 1998	
12	BR		Application N° BR19980015240 (BR9815240-8) - 1 October 1998	
13	CA		Application N° CA19982305762 (CA002305762) - 1 October 1998	
14	CN		Application N° CN19988009985 (CN98809985) - 1 October 1998	
15	CZ		Application N° CZ20000001256 (CZ2000 1256) - 1 October 1998	
16	DE		Application N° DE19986014122T (DE9814122) - 1 October 1998	
17	DK		Application N° DK19980949742T (DK98949742) - 1 October 1998	
18	EP		Application N° EP19980949742 (EP98949742) - 1 October 1998	
19	AT		Application N° AT19990921674T (AT99921674) - 5 May 1999	
20	AU		Application N° AU19990038819 (AU3881999) - 5 May 1999	

**Simple family**

**Simple family**

**Simple family**

**Classifications**

**US**  
 IPC **A61L2/10, C02F1/32**  
 UC 210/748.11, 422/23  
 EC A61L2/10, C02F1/32

**AU**  
 IPC **A61L2/10, C02F1/32**  
 EC A61L2/10, C02F1/32

**CA**  
 IPC **A61L2/10, C02F1/32**  
 EC A61L2/10, C02F1/32

**EP**  
 IPC **A61L2/10, C02F1/32**  
 EC A61L2/10, C02F1/32

**Fields searched**

Simple families: 201      Total family members: 575

# Families in EP-Register

	US78551206	23.03.2006
Type	<b>M</b> Patent family member	
	<b>Publication No.</b>	<b>Date</b>
	➤ <a href="#">ZA200808077</a>	30.09.2009
	<b>Priority number</b>	<b>Date</b>
	US78551206	← 23.03.2006
Type	<b>E</b> Equivalent	
	<b>Publication No.</b>	<b>Date</b>
	➤ <a href="#">AR060092</a>	21.05.2008
	<b>Priority number</b>	<b>Date</b>
	US78554806	← 23.03.2006
	US78551206	← 23.03.2006

# National phase entries in Patentscope

The screenshot displays the WIPO Patentscope interface. At the top, the WIPO logo and 'PATENTSCOPE' are visible, along with a search bar and navigation links. The main content area shows a search result for '1. (WO1999007319) A MULTI-FUNCTIONAL FASTENER FOR DISPOSABLE...'. Below this, a navigation bar includes tabs for 'PCT Biblio. Data', 'Description', 'Claims', 'National Phase', 'Notes', 'Drawings', and 'Documents'. The 'National Phase' tab is highlighted with a red circle. A table below provides details on national phase entries, with columns for Office, Entry Date, National Number, and National Status. A green callout bubble points to the 'National Phase' tab with the text 'National application numbers'. Another green callout bubble points to the 'National Number' column with the text 'Hyperlinked to national registers'.

Office	Entry Date	National Number	National Status
Australia	07.03.2000	<a href="#">86022/98</a>	Granted: 12.07.2001
Canada	03.11.1999	<a href="#">2289029</a>	
European Patent Office	07.03.2000	<a href="#">1998937274</a>	Published: 24.05.2000 Granted: 15.12.2004
Israel	29.07.1998	<a href="#">132595</a>	Published: 19.03.2001 Granted: 11.02.2005
Republic of Korea	07.02.2000	<a href="#">1020007001251</a>	Published: 26.03.2001 Granted: 27.04.2006
Mexico	Not_Available		

National application numbers

Hyperlinked to national registers

# National phase entries in Patentscope

- National phase entries in (NPEs) Patentscope are reported by designated/elected offices
  - Obligation to report such data as of July 1, 2017
- Simple family ('Equivalents') of Espacenet includes national phase entries as determined by comparing PCT application numbers/priorities included in the bibliographic data national publications that offices share with EPO
  - Complemented by NPE data from WIPO

# NPEs in Patentscope/Espacenet

	<b>Patentscope NPE</b>	<b>Espacenet Inpadoc/simple fam</b>
<b>WO2011162752</b>	CA, CN, EP, IN, JP, KR, MX	<b>AU, CA, CN, EP, JP, KR, MX, ZA</b>
<b>WO2011162753</b>	-	2xUS
<b>WO2011162754</b>	US	US
<b>WO2011162755</b>	CA, CN, <b>CO</b> , EP, JP, MX, <b>PH</b> , RU, SG, TH, US	<b>AU, BR, CA, CN, EP, JP, MX, RU, SG, TW, US</b>
<b>WO2011162756</b>	CA, CN, <b>CO</b> , EP, IN, JP, MX, <b>PH</b> , RU, TH, US	<b>AU, BR, CA, CN, EP, HK, JP, MX, RU, TW, 2xUS</b>
<b>WO2011162757</b>	CA, CN, MX	<b>BR, CA, CN, MX, RU, US</b>
<b>WO2011162758</b>	CA, CN, <b>CO</b> , EP, IN, JP, MX, RU, TH	<b>AU, BR, CA, CN, EP, JP, MX, RU, TW, US</b>
<b>WO2011162759</b>	US	US
<b>WO2011162760</b>	-	-
<b>WO2011162761</b>	CN, EP, IN	<b>BR, CN, EP</b>

# Patent family in WIPO CASE

Table of family members

## WIPO CASE

Preferences Users Notifications Notifications Data Coverage Statistics User Guide About

Application Number \* /US2014/052705 Extended Simple e.g.: ( IL224004, GB1108683.2 )

Compare Maximize Close all tabs

PCTUS2014052705 x

Time Line Tabular View Family Citations Discussion

Application/Priority #	Filing/National Entry Date	Publications	PCT Application #
ARP140103202	2014-08-26	AR 097461.A1	
US61/870,089	2013-08-26		
AU2014311324	2014-08-26	AU 2014311324	PCT/US2014/052705.
US61/870,089	2013-08-26		
<b>PCT/US2014/052705</b>	2014-08-26	WO 2015/031	
US61/870,089	2013-08-26		
CN201480046997.2	2014-08-26	CN 105492095	PCT/US2014/052705.
US61/870,089	2013-08-26		
MY2016700460	2014-08-26	MY PI 2016700460.A.2015-02-26	PCT/US2014/052705.2014-08-26
US61/870,089	2013-08-26		
MX2016002410	2016-02-24	MX 2016002410.A.2016-05-31	
US61/870,089	2013-08-26		
IN6520/MUMNP/2016	2016-02-25	IN 201627006520.A.2016-07-22	PCT/US2014/052705.2014-08-26
US61/870,089	2013-08-26		

Dont interpret as simple and extended families!!  
WIPO CASE families are so-called complex families

# Patent family in Global Dossier (USPTO)



## Global Dossier

Home Public Pair Common Citation Document Current Service Status Service Hours Help Email Us

Office WIPO Type PCT Application PCT/US2014/052705

Collections 0 History 1

PCT/US2014/052705 12 Members in Patent Family (12 currently shown)

Domestic families

Extended family, no option to select simple family

Office	Application	Applicant	Title	App. Date	Priority #	Pub. #	Pub. Date	Action
PE	0002862016			08/26/2014	US 61870089	PE 03542016 A1	05/11/2016	
MX	2016002410			08/26/2014	US PCT/US14/52705 US 61870089	MX 2016002410 A	05/31/2016	
EA	201690475			014	US PCT/US14/52705 US 61870089	EA 201690475 A1	06/30/2016	
AR	P140103202			014	US 61870089	AR 097461 A1	03/16/2016	
AU	2014311324 <a href="#">View Dossier</a>	1) Red Leaf Resources, Inc.,	Gas barrier	014	US PCT/US14/52705 US 61870089	AU 2014311324 A1 AU 2014311324 B2	04/07/2016 11/10/2016	(2) <a href="#">Add to ★</a>
AP	201609052			014	US PCT/US14/52705 US 61870089	AP 201609052 D0	02/29/2016	
US	14469062 <a href="#">View Dossier</a>	1) Patten, James W. 2) Bunger, James W. 3) Seely, Dan	GAS COM	014	US 61870089 US 14469062	<a href="#">US 20150053269 A1</a>	02/26/2015	(1) <a href="#">Add to ★</a>
CA	2922019			08/26/2014	US PCT/US14/52705 US 61870089	CA 2922019 A1	03/05/2015	

- IP Office Type
- All IP5 Offices
  - EPO
  - SIPO
  - KIPO
  - JPO
  - USPTO
  - Non-IP5 Offices

# Request to disclose family information

- India, for example, systematically requires applicants to disclose family information
- Disclosure to be found in dossier
- [WO2011162761](#) in Patentscope NPEs: 9632/DELNP/2012
- [WO2011162761](#) in Espacenet family: no India
- [Example](#)



# Families within one jurisdiction

- National, regional, PCT jurisdictions
  - National families
  - Domestic families

# Origin of patent families - reasons

There are **various reasons** for patent family relations between **distinct applications/filings**:

- A. Patent protection is territorial, i.e. inventors/investors may have to seek protection in different jurisdictions (“extensions”)
- B. An application may have certain deficiencies (e.g. lack of unity,...); a subsequent application seeks to heal them
- C. Further improvements of an invention; a subsequent application includes additional further improvements, i.e. new art is added
- D. (Modification/amendment of claims without adding new art)

These reasons may co-occur, i.e.

- a later foreign filing may include added art and/or new claims
- a subsequent domestic filing may include both corrections and added art!

# Origin of patent families - priorities

- Foreign applications usually claim **foreign priorities** of earlier applications filed in other IPOs according to
  - Paris Convention
  - TRIPS agreement
  - (PCT)
- Domestic filings (at same office for reasons B and C) may claim a **domestic/internal priority** of an earlier domestic filing
  - Claiming of domestic priority rights is regulated by respective national legislation



# Domestic second filings

## „Continuation (in part)“

- New national/local application claiming priority of one or several previous national/local applications
- "in part": **Additions of technical subject matter to initial disclosure** of parent (priority) application or other amendments are **permitted**, and usually **intended**, only part of the new application originates in earlier application
- (Up to 12 months after filing date of claimed priority)

## Patent of addition (in some jurisdictions)

- Improvement of original invention of parent patent
- **Unity** with parent patent to be given; i.e. as if further independent claim of parent patent
- Depends on validity of parent patent
- Request possible up to 18 months after filing of parent patent

# Domestic second filings

## Division (US continuations)

- E.g. for healing a lack of unity: **mandatory division** Paris Art. 4 G (1)
- Permits filing of an application with new set of claims based on previously filed disclosure (i.e. **no additions to initial disclosure** permitted): **voluntary division** Paris Art. 4 G (2)
- Initial disclosure (parent application) may comprise several inventions
- Lack of unity is given only if different inventions are "claimed", i.e. if covered explicitly by claims
- Strategic approach by some applicants
- Divisions are possible usually anytime as long as parent application is pending (EPC: only within 24 months after 1st office communication)
- Retains application date and claimed priorities; no explicit priority claim type relation to parent application

# Further sources of family information

- National registers (e.g. US PAIR) include patent family information on national level (domestic families, national families (continuation in part), **divisions**)
- WIPO CASE
  - Applies concept of 'complex families'
  - Derived from priority data in CASE database
  - Families includes therefore (currently) only applications recorded in CASE database
  - Espacenet family information is (currently) more comprehensive
- Patentscope has no family information except for PCT national phase entries

# EP-Register - divisions

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Parent application(s) 

EP04771314.4 / ➤ [EP1651658](#)



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Divisional application(s)

EP14194507.1 / ➤ [EP2896397](#)



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The date of the Examining Division's first communication in respect of the earliest application for which a communication has been issued (EP20040771314) is 20.10.2011

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# US-PAIR: national family/divisions



11/689,638		Heat Processing Systems, Apparatuses, and Methods for Collection and Disposal of Infectious and Medical Waste				57015-340945		
Select New Case	Application Data	Transaction History	Image File Wrapper	Continuity Data	Published Documents	Address & Attorney/Agent	Display References	
<b>Parent Continuity Data</b>								
<b>Description</b>	<b>Parent Number</b>	<b>Parent Filing or 371(c) Date</b>	<b>AIA(First Inventor to File)</b>	<b>Parent Status</b>	<b>Patent Number</b>			
This application Claims Priority from Provisional Application	<a href="#">60/785,512</a>	03-23-2006	-	Expired	-			
Claims Priority from Provisional Application	<a href="#">60/785,548</a>	03-23-2006	-	Expired	-			
<b>Child Continuity Data</b>								
No Child Continuity Data Found								

# Overview of types of patent families

## Family relations **based** on priorities

- National families (national/internal/domestic priority)
- Filings abroad:
  - Using Paris convention (or TRIPS) priority only
  - Second filings with PCT with Paris (TRIPS) convention priority claim(s)

## Family relations **not based** on priorities

- Technical families
- (Continuations/Divisions)
- First filings with PCT
- Domestic families

# Summary

- Extended families are the largest possible families and may include
  - Several simple families
  - Several domestic families
  - Several national families
- A single application belongs at the same time to
  - One domestic family
  - One national family
  - One simple family
  - One extended family
- A simple family may include
  - Several domestic families
  - Several national families
- Families may have only a single member

Thank you

[lutz.mailander@wipo.int](mailto:lutz.mailander@wipo.int)