



Topic 2: Patent Families

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Agenda

- Families – why
- Families – which
 - Types
 - Unity of patents
- Families – implications for examination
 - External results, worksharing
 - Prior art
- Families – where

Further reading

- WIPO Handbook:

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

- EPO:

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

- PIUG:

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

- Landon IP:

http://www.intellogist.com/wiki/Patent_Families

Origin of patent families

- Patent protection for particular invention is territorial, i.e. inventors have to seek protection in different countries
 - **Office of first filing (OFF)** is usually in country of residence of inventor or applicant
- Applicants seek protection abroad (“extensions”)
 - **Office(s) of second filing (OSF)**
 - Parallel with OFF (cost), or
 - Deferred, delayed, e.g. if claiming priority of OFF
- Subsequent filings of improvements at OFF
- All filings/applications for “same invention” constitute a **patent family**

Origin of patent families

- Patent applications can claim priorities of earlier applications (filed in same or other IPOs)
- Priorities create (legal) family relations between respective earlier and later filings
- Family relations may exist also without claiming priorities (e.g., technical families)

Types of patent families

Priorities are claimed

- National families (national priority)
- Filings abroad: Paris convention (&TRIPS) family
- Filings abroad: PCT system family

Without priorities

- Technical families
- Domestic families
- PCT

Families on national level

National second filings

Patent of addition

- 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

National second filings

Division

- E.g. for healing a lack of unity
- Possible usually anytime until grant enters into force

„Continuation in part“

- New national application claiming priority of one or several previous national application
- Up to 12 months after filing date of claimed priority

National and domestic families

National family

- Any national patent applications having at least one priority in common, e.g. additions, divisions, continuations

Domestic family

- Subsequent domestic publications of same application, i.e. with same application number:
 - E.g., same publication number but with different **kind codes**, e.g.
 - A1: Publication of application (18 months after filing date)
 - B1: Publication of granted patent
 - Various national publication policies, e.g. US use different numbers for A1 and B1
- see WIPO Standard ST.16 for kind codes:

http://wipo.int/export/sites/www/standards/en/pdf/03_16-01.pdf

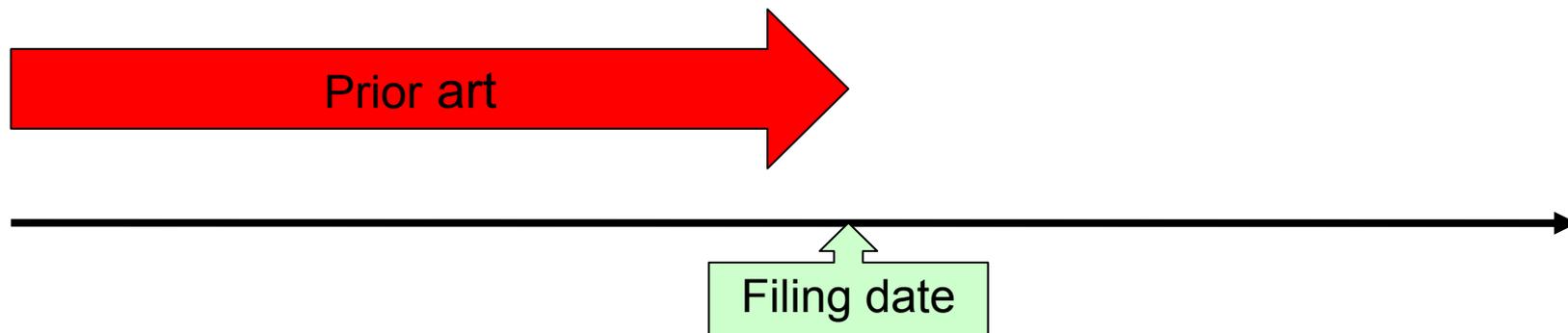
Second filings abroad

Paris Convention of 1883

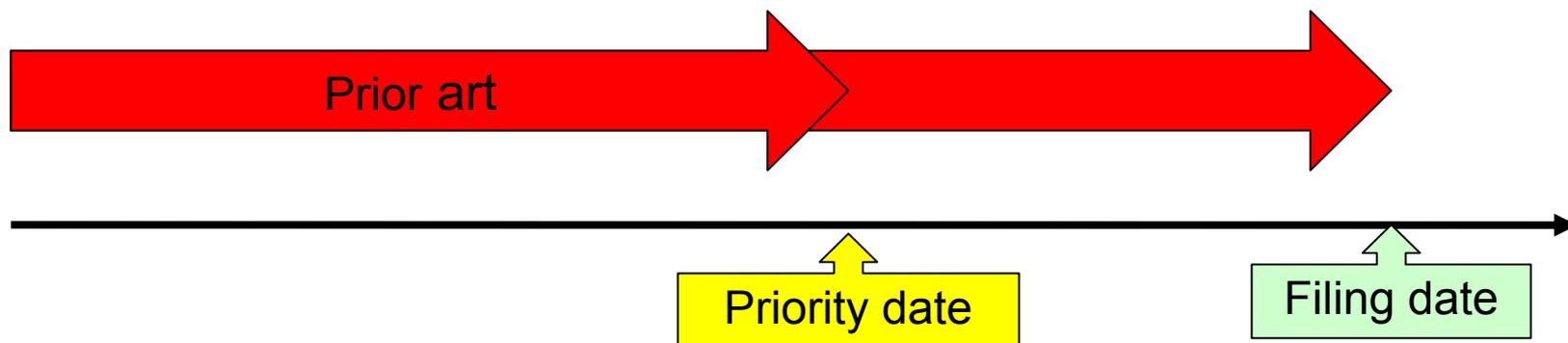
- Covers patents, designs, trademarks,..
- Facilitates second filings abroad
- Equal protection to nationals and foreigners
 - Foreigners: nationals and residents of Union country
- Mutual recognition of (Paris Convention) **priority rights**:
 - at OSF: Treatment of application as if filed on date of first filing, i.e. same prior art
 - 12 month period to claim priority
- Permits combination of **multiple priority rights** (same or different countries)
- As long as national definition of **unity** is met

Benefits of claiming priorities

■ OFF



■ OSF



TRIPS agreement

- Agreement on Trade Related Intellectual Property 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 rights

Patent Cooperation Treaty - PCT

- „One-stop shop“ for parallel filing in several states
- Filing with „receiving office“
- Paris priority may be claimed or not
- **International phase** administered by WIPO: preliminary search and examination by selected ISAs (International Searching Authority; eg EP, AT, SE, US, JP)
- **National phase** administered by national IPOs:
 - Decision on entry into national phase at the latest 30 months after filing/priority date
 - National granting procedures
- Total of national patents/publications constitute **family**

Summary: Filing patents abroad

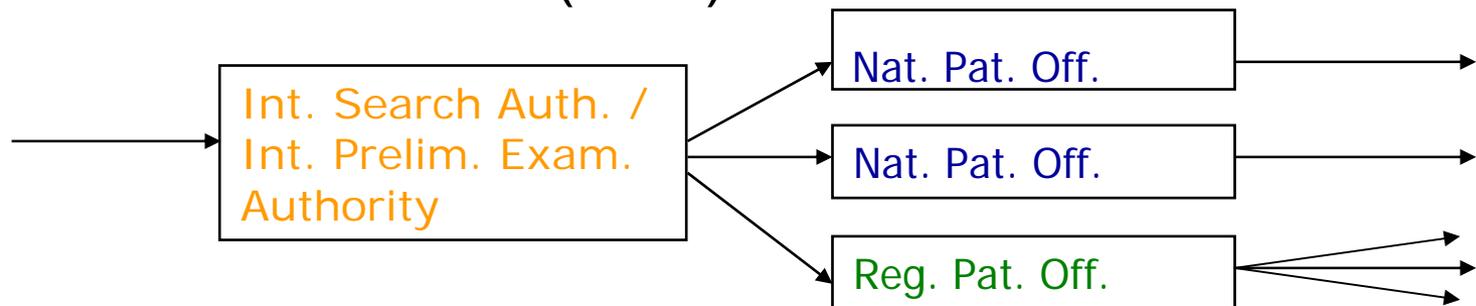
1. National Routes



2. Regional Route



3. International Route (PCT)



[International phase]

[National phase]

Timelines to be observed for OSF filing

Options for extension to other jurisdiction, i.e. to Offices of Second Filing (OSF):

- Paris convention & TRIPS : 12 months
- PCT : 30 months
- Without priority claim : anytime,
but effectively impossible after first publication of OFF
since published **first filing becomes prior art**
(e.g. 18 month where OFF publishes applications)

Technical families

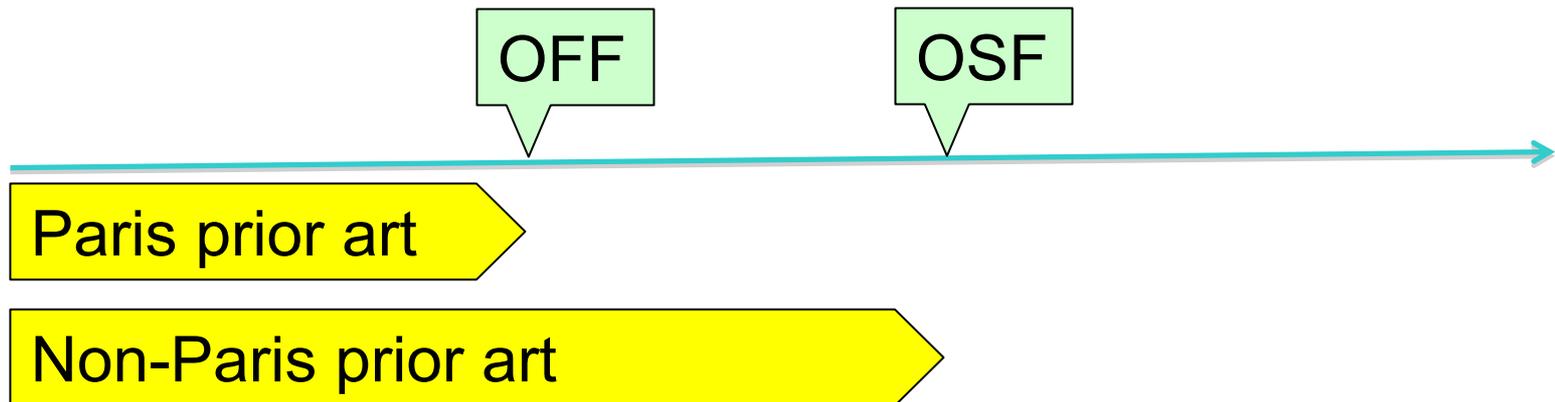
- Applications for the same invention filed in different countries **without claiming priority** constitute a technical family
- Indicators:
 - Inventor name (should be the same)
 - Drawings
 - Title
 - (Claims)

Technical/artificial/intellectual family

- No priorities claimed explicitly but still same or similar invention, e.g. filings abroad after 12 months Paris period
- Has to be determined intellectually:
 - Same inventor
 - (Same applicant)
 - Same or similar title, abstract
 - Same drawings
- Is therefore 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 to-up searches may reveal more prior art than other search reports obtained for family members using the priority

Family concepts

- Claiming multiple and different priorities in and from different countries may lead to complex family structures, e.g.:

OFF: two applications, e.g. JP-xx, JP-yy

OSF: single application claiming priorities of JP-xx+ JP-yy

- Various concepts / rules exist for constructing families
- Largely built on the principle of shared priorities
- See WIPO Handbook definitions

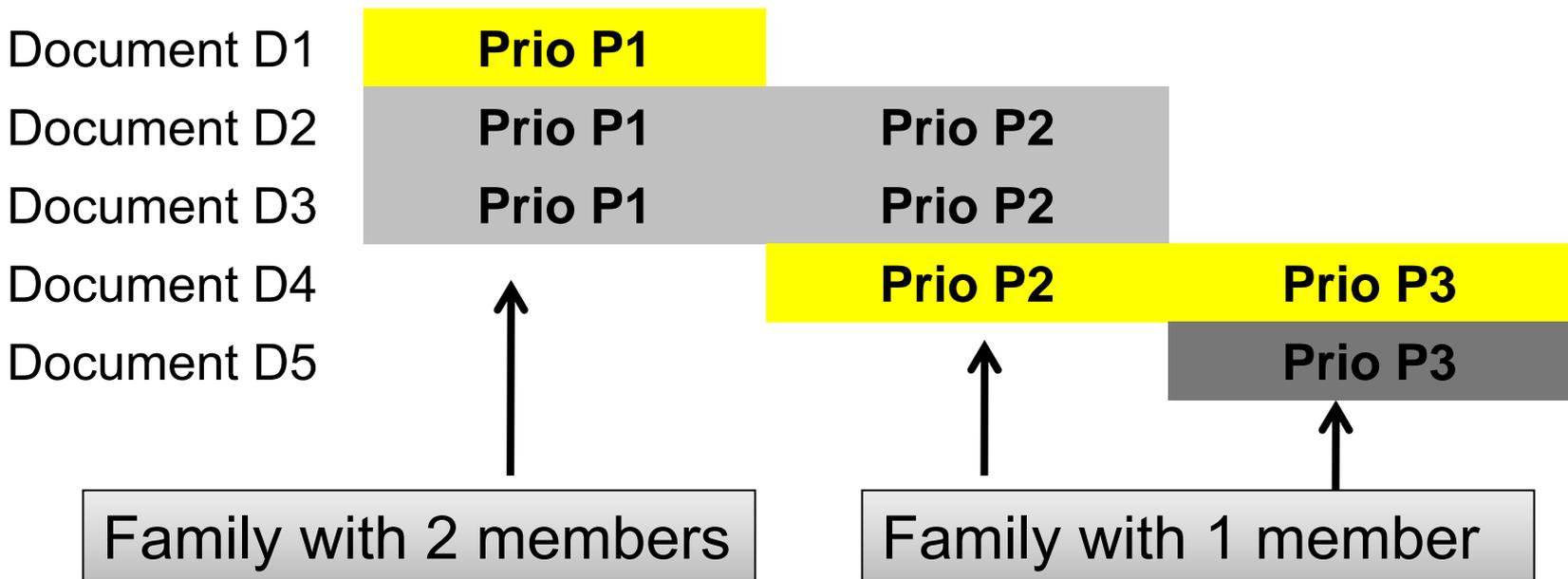
Samples

Document D1	Prio P1		
Document D2	Prio P1	Prio P2	
Document D3	Prio P1	Prio P2	
Document D4		Prio P2	Prio P3
Document D5			Prio P3

Simple family

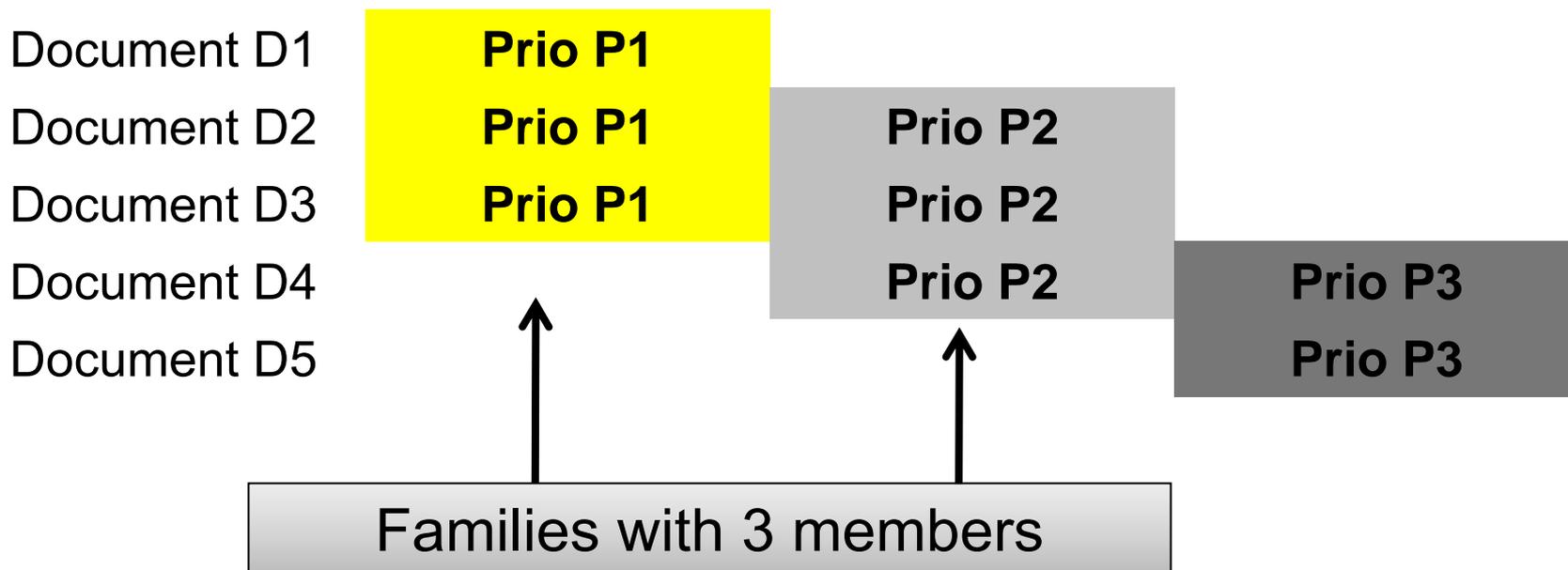
All members of a family have same priority or priorities

→ “Equivalents”



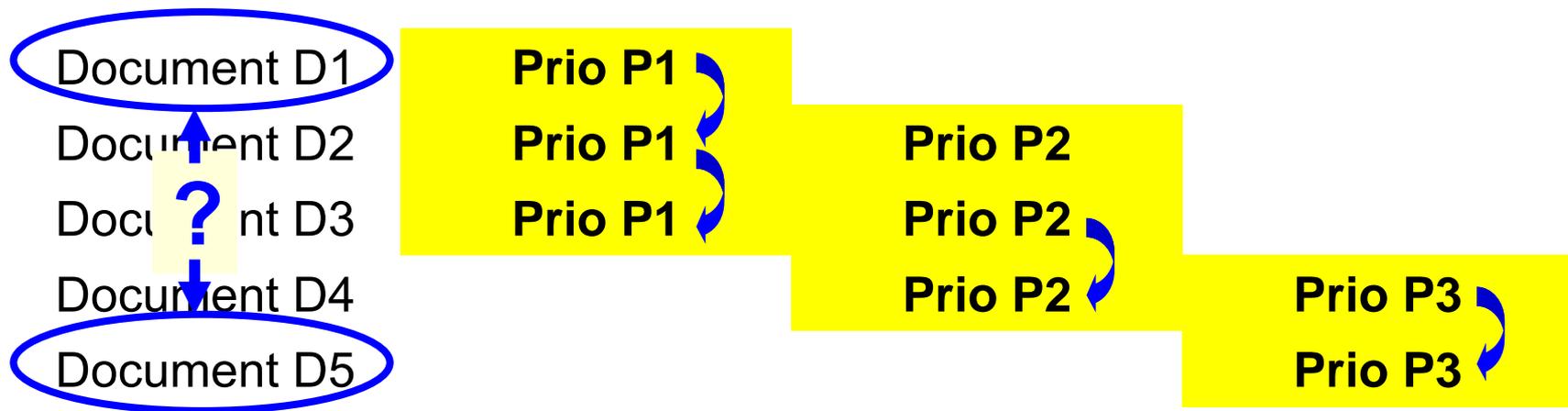
Complex family

All members of a family share at least one priority



Extended family

Any member shares at least one priority with at least one other member



All documents in same family

Summary

- An application may belong at the same time to a
 - Domestic family
 - National family
 - Simple family
 - Extended family

- An extended family may include
 - Several simple families
 - Several domestic families
 - Several national families

Content of family members

- Claiming the priority of another application for a second filing does not necessarily imply that the disclosure, e.g. descriptions, are identical !
- In case for 2nd filings abroad identity is very likely
- In case of national 2nd filings certain differences are very likely
- In general, only parts may be identical, other parts may be added to the 2nd filing, or parts of the 1st filing may be omitted (e.g. in case of continuations)
- If several priorities are claimed the content is definitively different

Similarity for simple – extended families ?

- Simple family: family members include basically same inventive subject matter
- Extended family: family members are in similar technical area; but potentially larger diversity because two family members with different priorities may cover different inventions
- Patent laws usually stipulate unity of invention for any patent application, ie for any claimed invention (not for description)

Sources of family information

- Family information has to be constructed from priority data
- EPO's INPADOC database is major source of such family information, retrievable through:
- EPO's CCD & Espacenet (simple and extended families)
- Other free patent information databases, like Depatis
- Commercial database, e.g.
 - Thomson/Derwent: WPI family
 - Questel/Orbit: Fampat family
 - CAS

Using widely INPADOC data, additional sources, and applying proprietary family construction rules

- Family information includes only information on published family members!

Sources of family information

Europäisches Patentamt
European Patent Office
Office européen des brevets

Espacenet
Patent search

Deutsch English Français
Contact
Change country ▾

◀ About Espacenet Other EPO online services ▾

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

WO2011074782 (A2)

Bibliographic data
Description
Claims
Mosaics
Original document
Cited documents
Citing documents
INPADOC legal status
INPADOC patent family

Quick help

- What does A1, A2, A3 and B stand for after a European publication number?
- What happens if I click on "In my patents list"?
- What happens if I click on the "EP Register" button?
- Why are some sidebar options deactivated for certain documents?
- How can I bookmark this page?
- Why does a list of documents with the heading "Also published as" sometimes appear, and what are these documents?
- Why do I sometimes find the abstract of a corresponding document?
- What happens if I click on the red "patent translate" button?

Bibliographic data: WO2011074782 (A2) — 2011-06-23

★ In my patents list → EP Register → Report data error

LIPOSOME COMPOSITION, PREPARATION METHOD THEREOF, AND USAGE OF THE COMPOSITION AS PNEUMONIA VACCINE

Page bookmark [WO2011074782 \(A2\) - LIPOSOME COMPOSITION, PREPARATION METHOD THEREOF, AND USAGE OF THE COMPOSITION AS PNEUMONIA VACCINE](#)

Inventor(s): [REDACTED]; KIM JIN NAM [KR]; CHOI [REDACTED]

Applicant(s): JEONNAM BIINDUSTRY FOUNDATION [KR]; JEONGPIL CORP [KR]; PARK SIN JEONG [KR]; HAN SANG IN [KR]; SEO KOOK HEON [KR]; KIM YANG JIN [KR]; KIM JIN NAM [KR]; CHOI MYEONG JUN [KR] ±

Classification:

- international: **A61K47/30; A61K47/48; A61K9/127; A61P31/04**
- Euro: **A61K39/09A; A61K39/116**

Application number: WO2010KR07762 20101104

Priority number(s): KR20090125698 20091216; KR20100106035 20101003

Also published as: [WO2011074782 \(A3\)](#)

Abstract of WO2011074782 (A2)

Translate this text into **patenttranslate** powered by EPO and Google

The present invention relates to a liposome composition including liposomes encapsulated with a pneumococcal capsular polysaccharide antigen, a method of preparing the composition, and a usage of the composition as a pneumonia vaccine, wherein the liposome composition comprises: a phospholipid selected from phosphatidylcholine and phosphatidylethanolamine; and a cholesterol.

[Fig. 2]

WIPO
WORLD INTELLECTUAL PROPERTY ORGANIZATION

Sources of family information

Trilateral - CCD

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

US19990300325

Hide CCD viewer Double inspector Timeline

CCD Viewer

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	

Inspector: classifications and fields searched

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

Trilateral - CCD Search ? Help

Number: 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	US IPC A61L2/10, C02F1/32 UC 210/748.11, 422/23 EC A61L2/10, C02F1/32
4	BR		Application N° BR20000010600 (BR0010600-3) - 27 April 2000	
5	CA		Application N° CA20002372427 (CA002372427) - 27 April 2000	
6	CN		Application N° CN20008008324 (CN008008324) - 27 April 2000	
7	EP		Application N° EP20000926432 (EP00926432) - 27 April 2000	
8	AR		Application N° AR1998P105591 (ARP980105591) - 5 November 1998	AU IPC A61L2/10, C02F1/32 EC A61L2/10, C02F1/32
9	AT		Application N° AT19980949742T (AT98949742) - 1 October 1998	
10	AU		Application N° AU19980096001 (AU9600198) - 1 October 1998	CA IPC A61L2/10, C02F1/32 EC A61L2/10, C02F1/32
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 (CN988009985) - 1 October 1998	
15	CZ		Application N° CZ20000001256 (CZ2000 1256) - 1 October 1998	
16	DE		Application N° DE19986014122T (DE69814122) - 1 October 1998	
17	DK		Application N° DK19980949742T (DK98949742) - 1 October 1998	
18	EP		Application N° EP19980949742 (EP98949742) - 1 October 1998	EP IPC A61L2/10, C02F1/32 EC A61L2/10, C02F1/32
19	AT		Application N° AT19990921674T (AT99921674) - 5 May 1999	
20	AU		Application N° AU19990038819 (AU3881999) - 5 May 1999	Fields searched

Simple families: 201 Total family members: 575

Simple family (rows 3-7)

Simple family (rows 8-17)

Simple family (rows 10-18)

Family information in Espacenet

- INPADOC family data
 - extended families
 - 80+ countries
 - Update weekly but depending on data supply from IPOs
- Simple families
 - “also published as” **equivalents**
 - Used for document reclassification after IPC revisions
- DE19830566 > 2 members, is national, domestic, simple
- DE19833712

Use of family information for examination

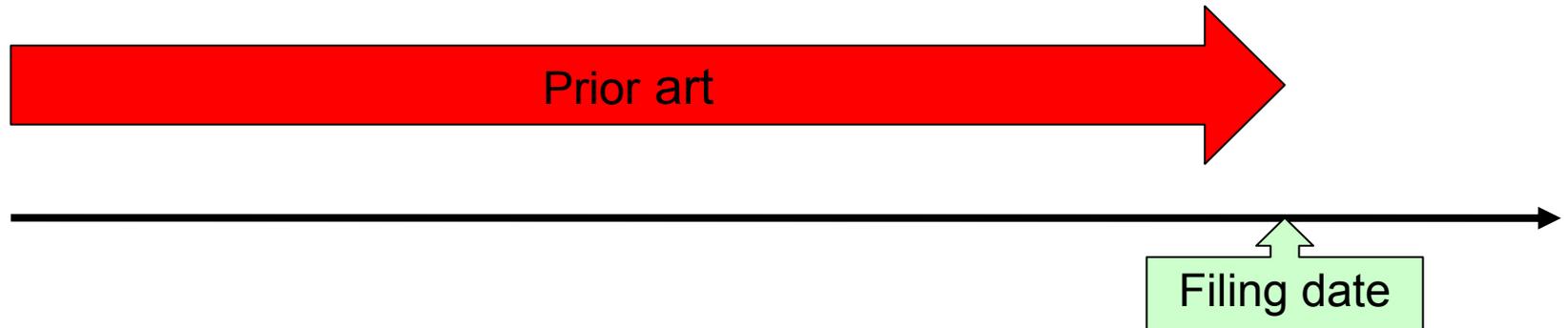
- ▶ **Passive outsourcing/worksharing:**
- Using external results of family members:
 - Final result, i.e. granted claims, rejections
 - Temporary results, i.e. search/examination reports, in particular prior art
- Planning/scheduling of active work sharing between IPOs, e.g. to avoid duplication of work
 - INPADOC data comprises family information and legal status of family members
 - Legal status data permits the assessment of examination status and an estimate for availability of final results

Use of priority information for examination

- ▶ Filing or priority date (s) determine relevant prior art (own or external search results):
 - Multiple priorities may imply multiple priority dates
 - Requires application of different dates for assessing relevant prior art
 - Examiner to determine which of the dates has to be applied for the technical features of each claim
 - To be stated in examination report if different dates apply

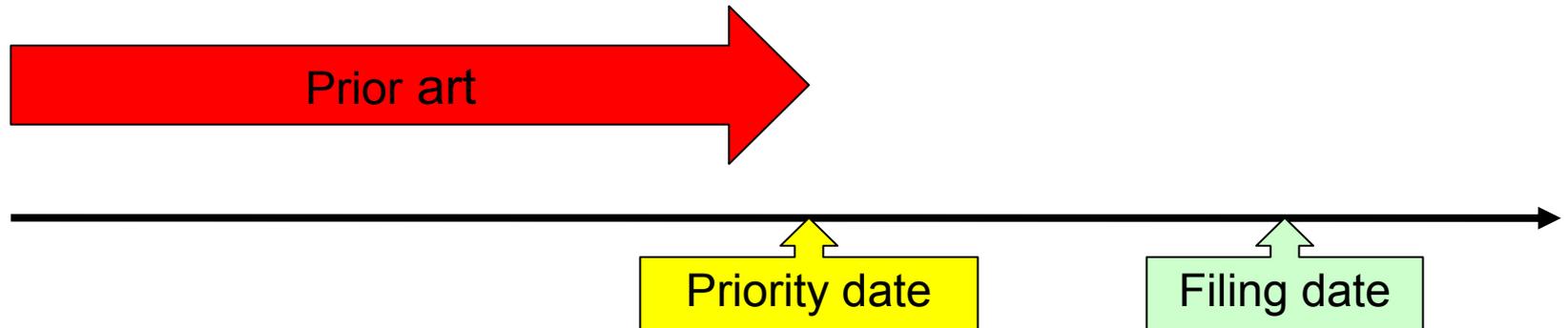
Difficulties with multiple priorities

- No priority, OFF



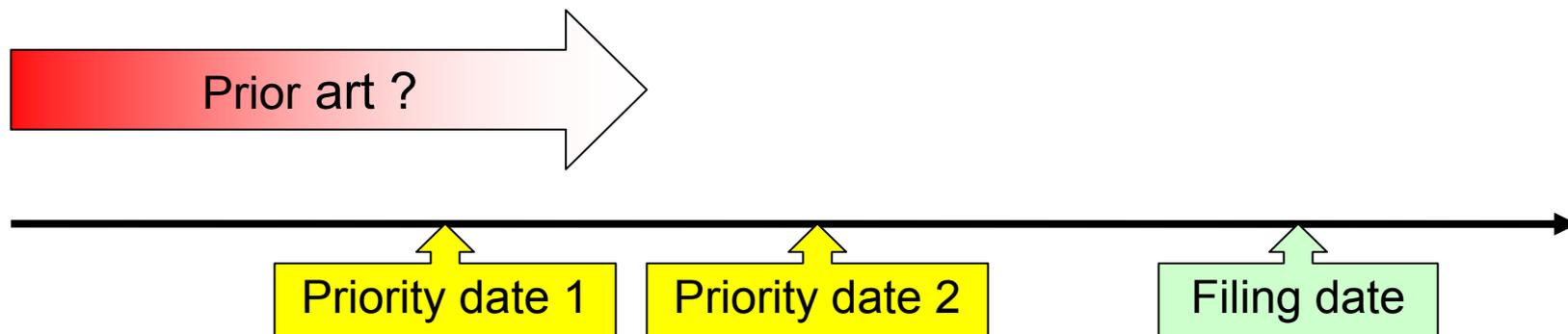
Difficulties with multiple priorities

- Single priority



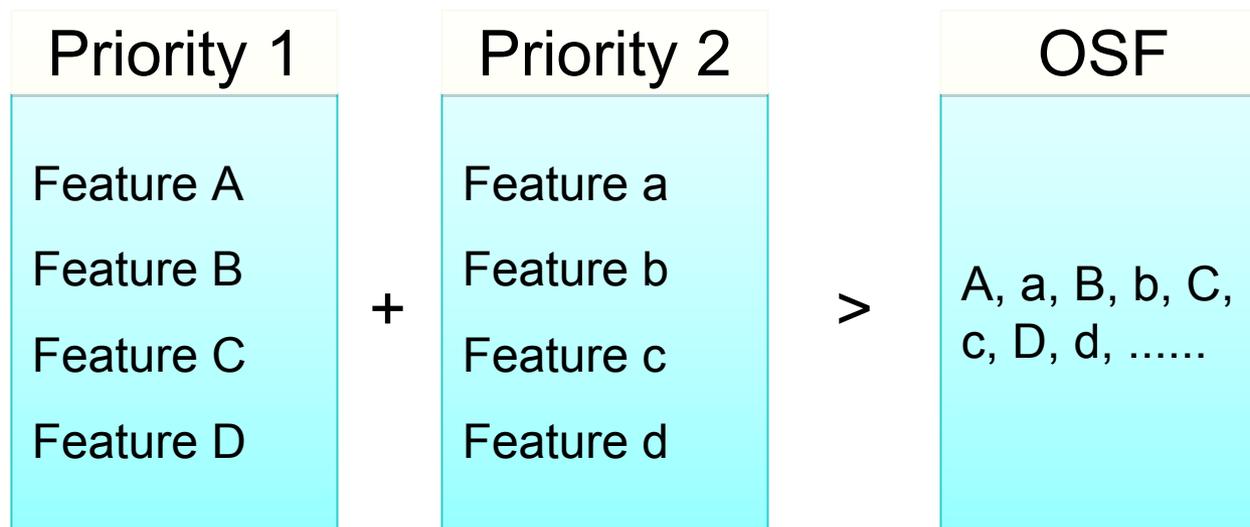
Difficulties with multiple priorities

- Different priority dates > different prior art



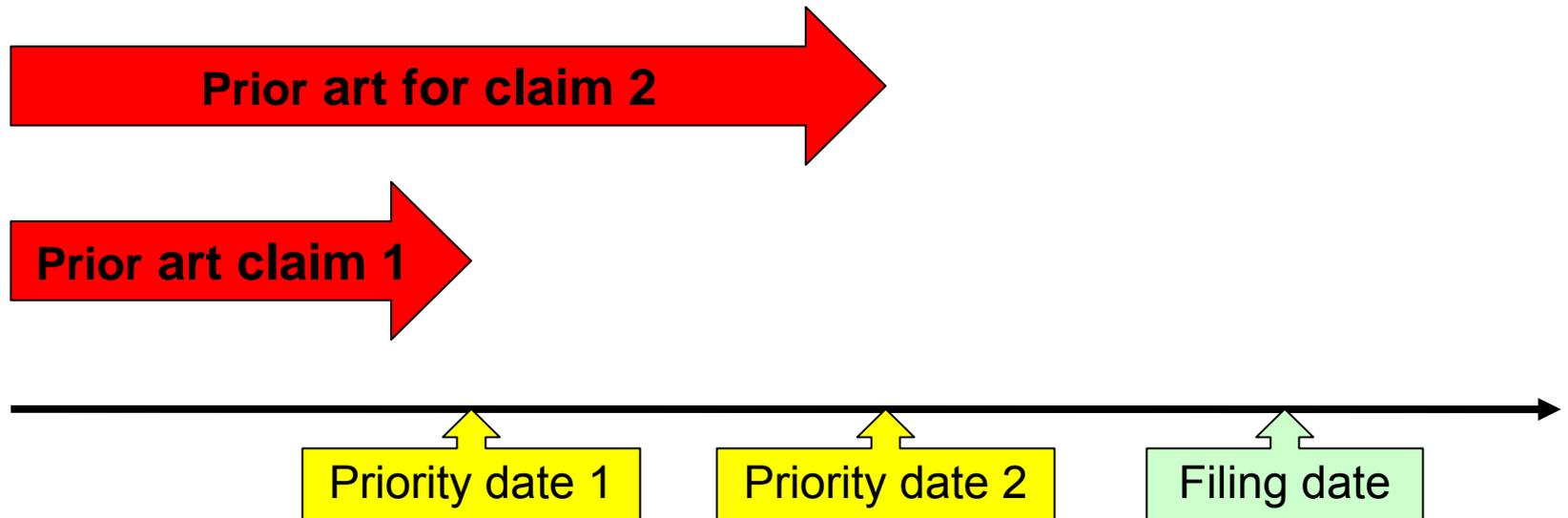
Difficulties with multiple priorities

- Combining different priority documents implies combination of different technical features



Difficulties with multiple priorities

- For each claim check which claim subject matter is disclosed in which priority ?
- If claims derive from different priority documents, different respective priority dates apply for prior art



Summary

- Various family concepts: simple, extended, technical
- Depending on priorities
- Relevant prior art depends on applicable dates

Thank you

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