

The Patent Cooperation Treaty: Challenges and Successful Examples



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WIPO | PCT
The International
Patent System

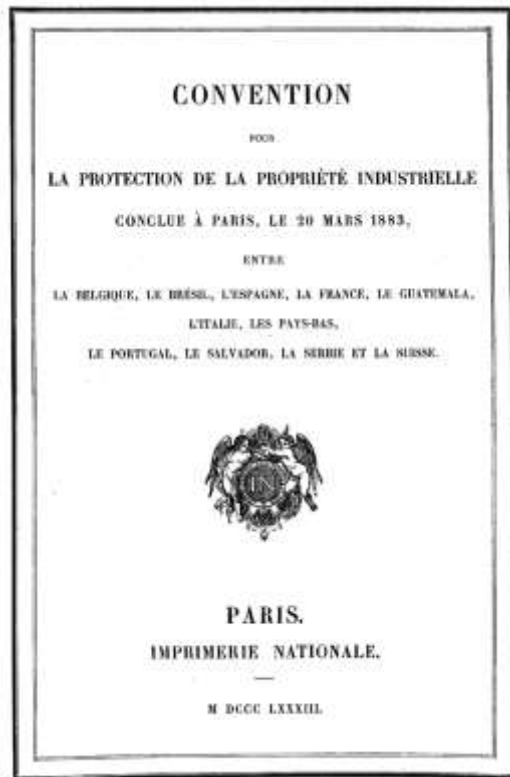
Brief PCT Basics

Context

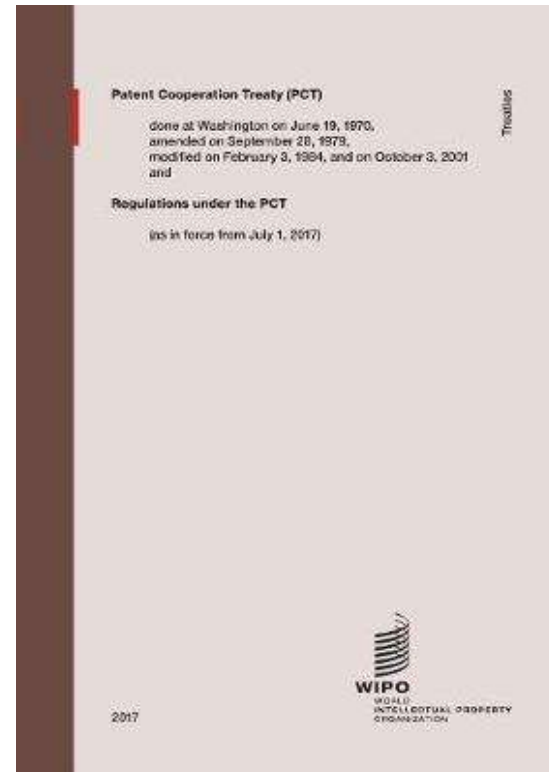
- Inventions
- Protecting inventions via the patent system
- Desire to at least investigate the possibility of obtaining patent protection for inventions in more than one country

Two routes for seeking multinational patent protection

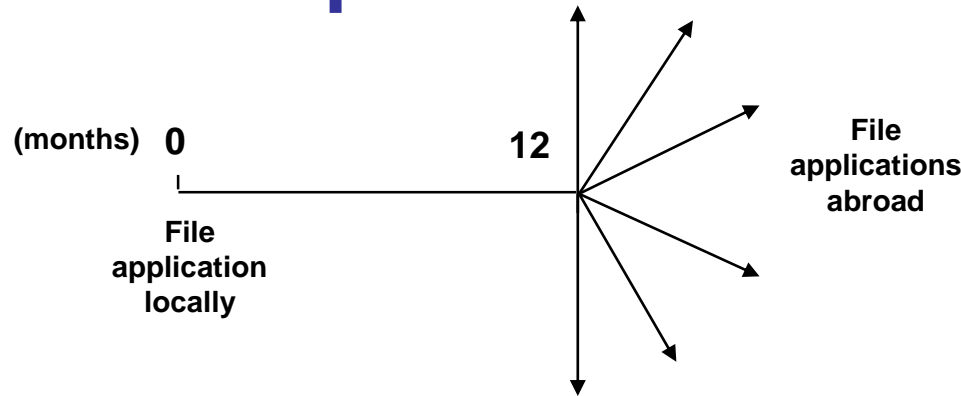
Paris Convention



Patent Cooperation Treaty (PCT)



Using the traditional patent system (Paris Convention) to seek multinational patent protection



Local patent application followed within 12 months by multiple foreign applications claiming priority under the Paris Convention:

- multiple formality requirements
- multiple searches
- multiple publications
- multiple examinations and prosecutions of applications
- translations and national fees required at 12 months

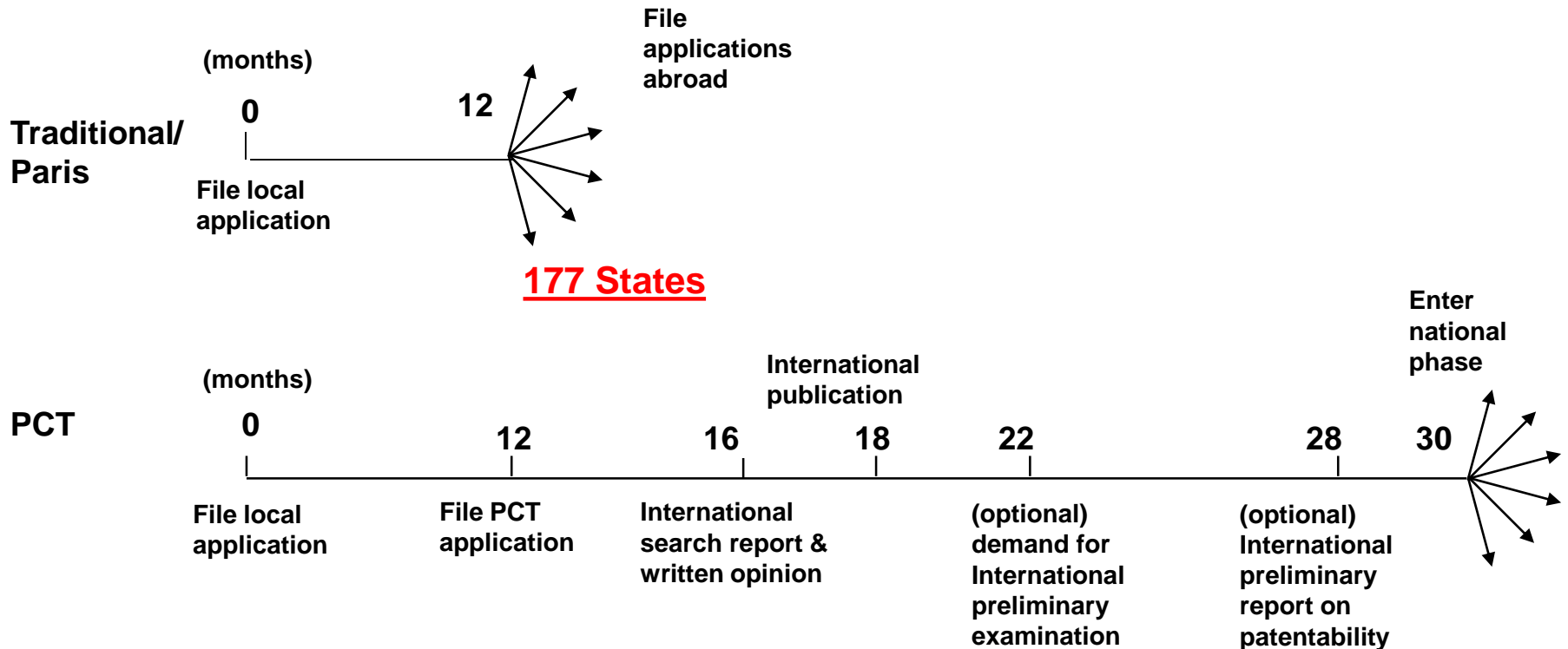
Some rationalization because of regional arrangements:

ARIPO, EAPO, EPO, OAPI

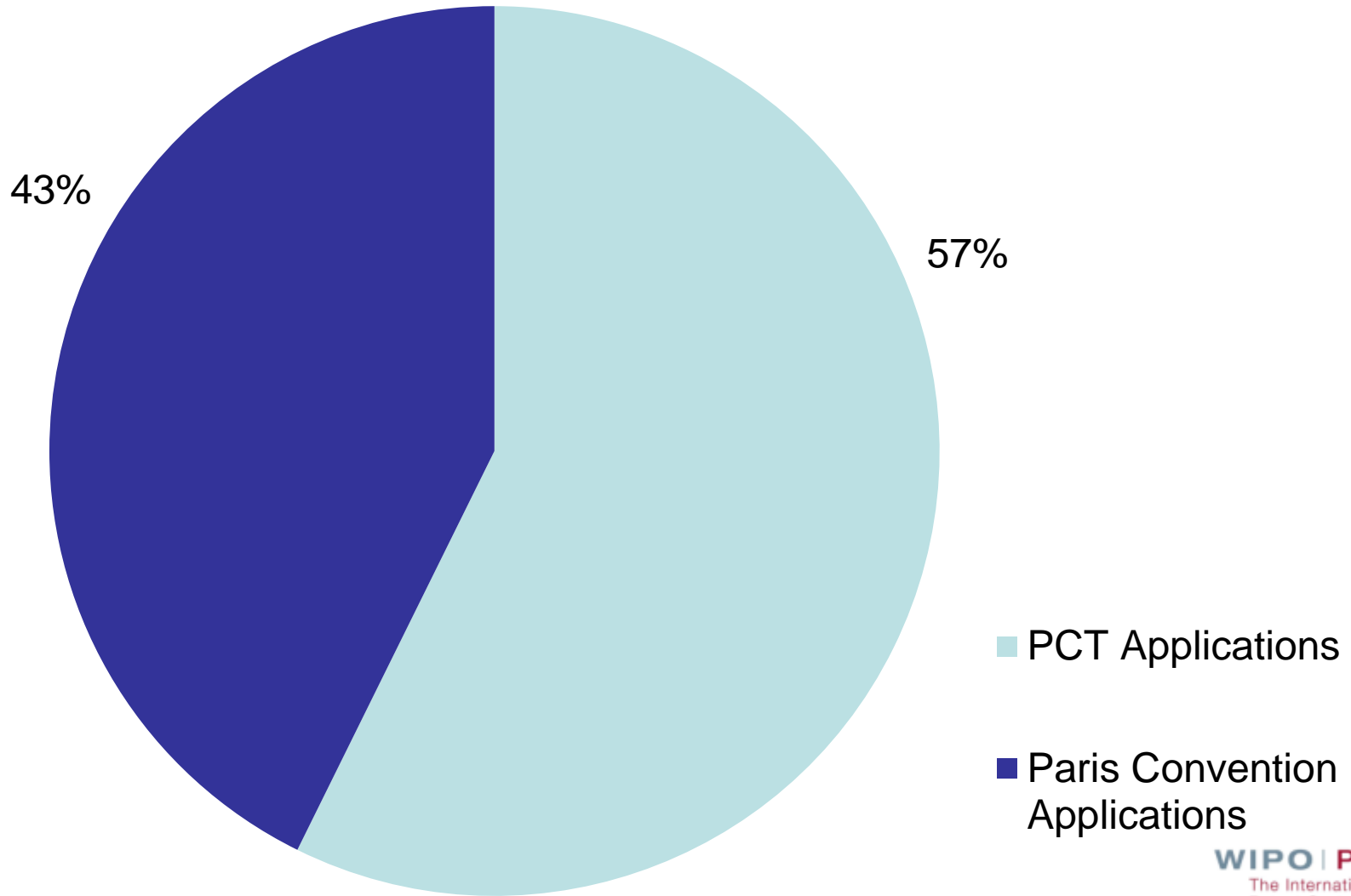
The PCT System



Seeking patents multinationally: traditional patent system vs. PCT system



The PCT has overtaken the Paris Convention

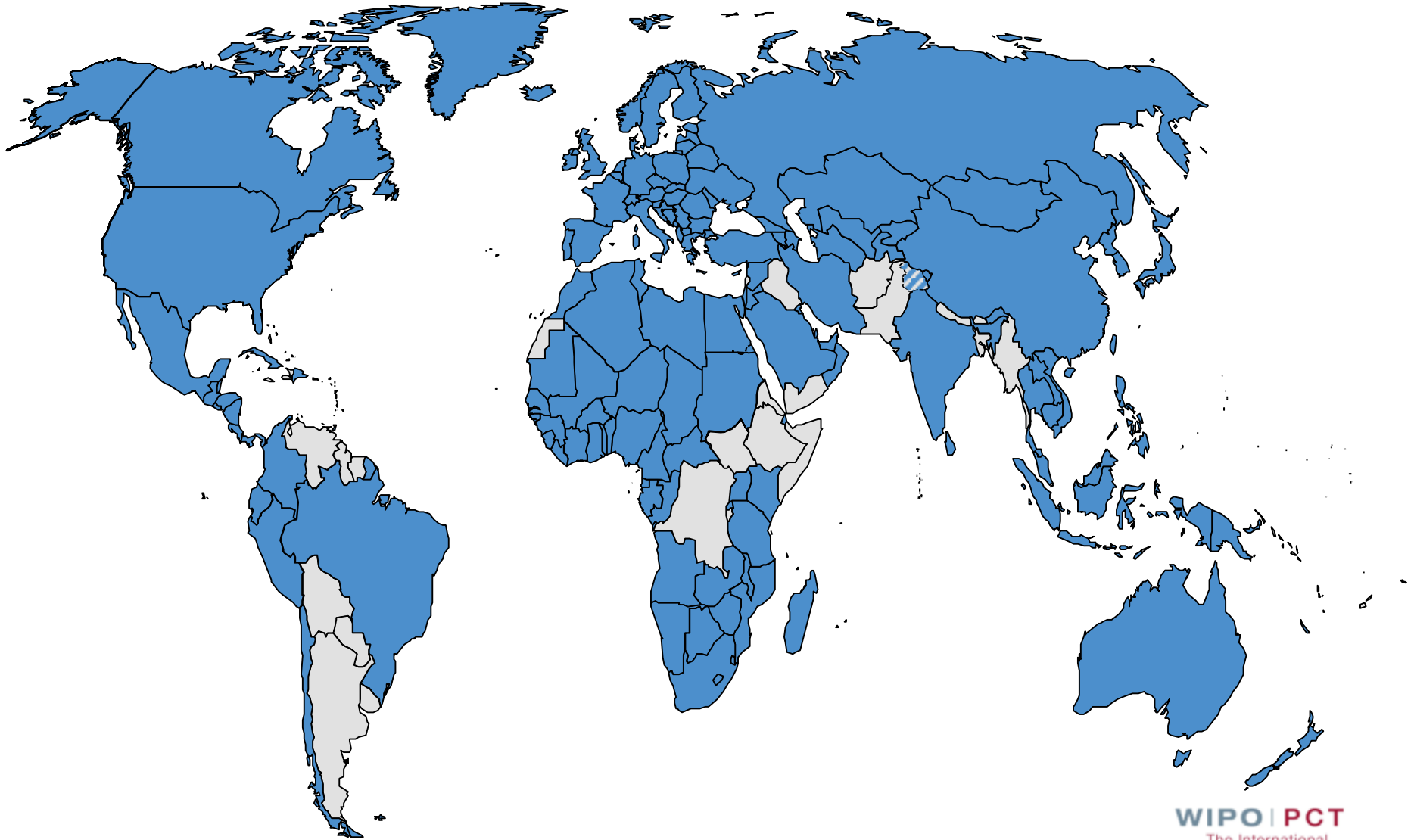


Certain PCT Advantages

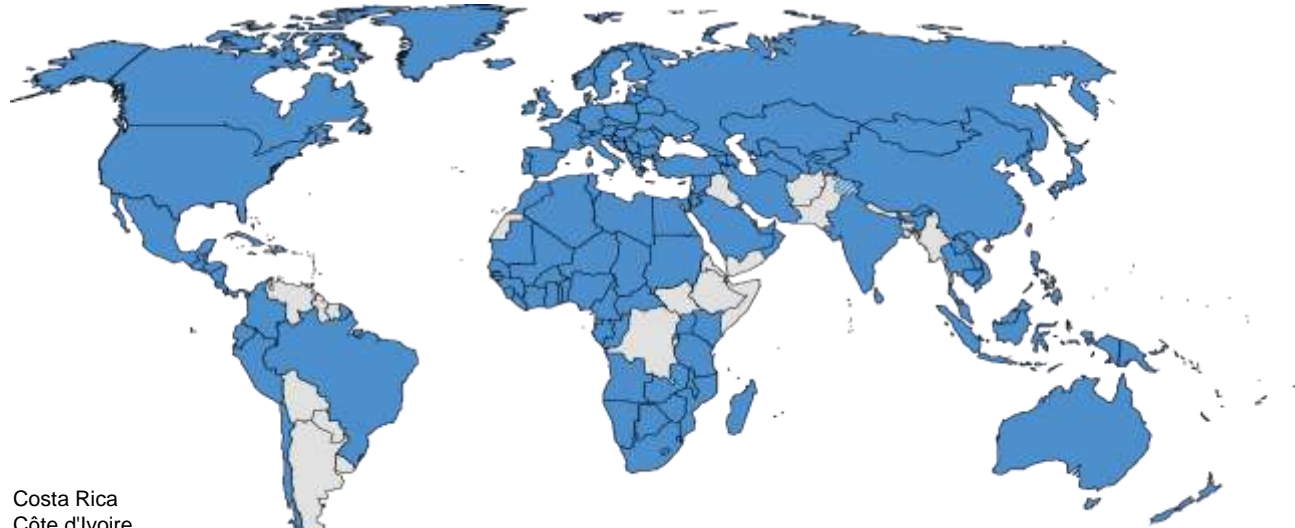
The PCT, as the cornerstone of the international patent system, provides a worldwide system for simplified filing and processing of patent applications, which—

1. postpones the major costs associated with internationalizing a patent application
2. provides a strong basis for patenting decisions
3. harmonizes formal requirements
4. protects applicant from certain inadvertent errors
5. evolves to meet user needs
6. is used by the world's major corporations, universities and research institutions when they seek multinational patent protection
7. can result (if PCT reports are positive) in accelerated national phase processing

PCT Coverage Today



152 PCT States



Albania
Algeria
Angola
Antigua and Barbuda
Armenia
Australia
Austria
Azerbaijan
Bahrain
Barbados
Belarus
Belgium
Belize
Benin
Bosnia and Herzegovina
Botswana
Brazil
Brunei Darussalam
Bulgaria
Burkina Faso
Cambodia
Cameroon
Canada
Central African Republic
Chad
Chile
China
Colombia
Comoros
Congo

Costa Rica
Côte d'Ivoire
Croatia
Cuba
Cyprus
Czech Republic
Democratic People's
Republic of Korea
Denmark
Djibouti
Dominica
Dominican Republic
Ecuador
Egypt
El Salvador
Equatorial Guinea
Estonia
Finland
France
Gabon
Gambia
Georgia
Germany
Ghana
Greece
Grenada
Guatemala
Guinea

Guinea-Bissau
Honduras
Hungary
Iceland
India
Indonesia
Iran (Islamic Republic of)
Ireland
Israel
Italy
Japan
Jordan
Kazakhstan
Kenya
Kuwait
Kyrgyzstan
Lao People's Dem Rep.
Latvia
Lesotho
Liberia
Libyan Arab Jamahiriya
Liechtenstein
Lithuania
Luxembourg
Madagascar

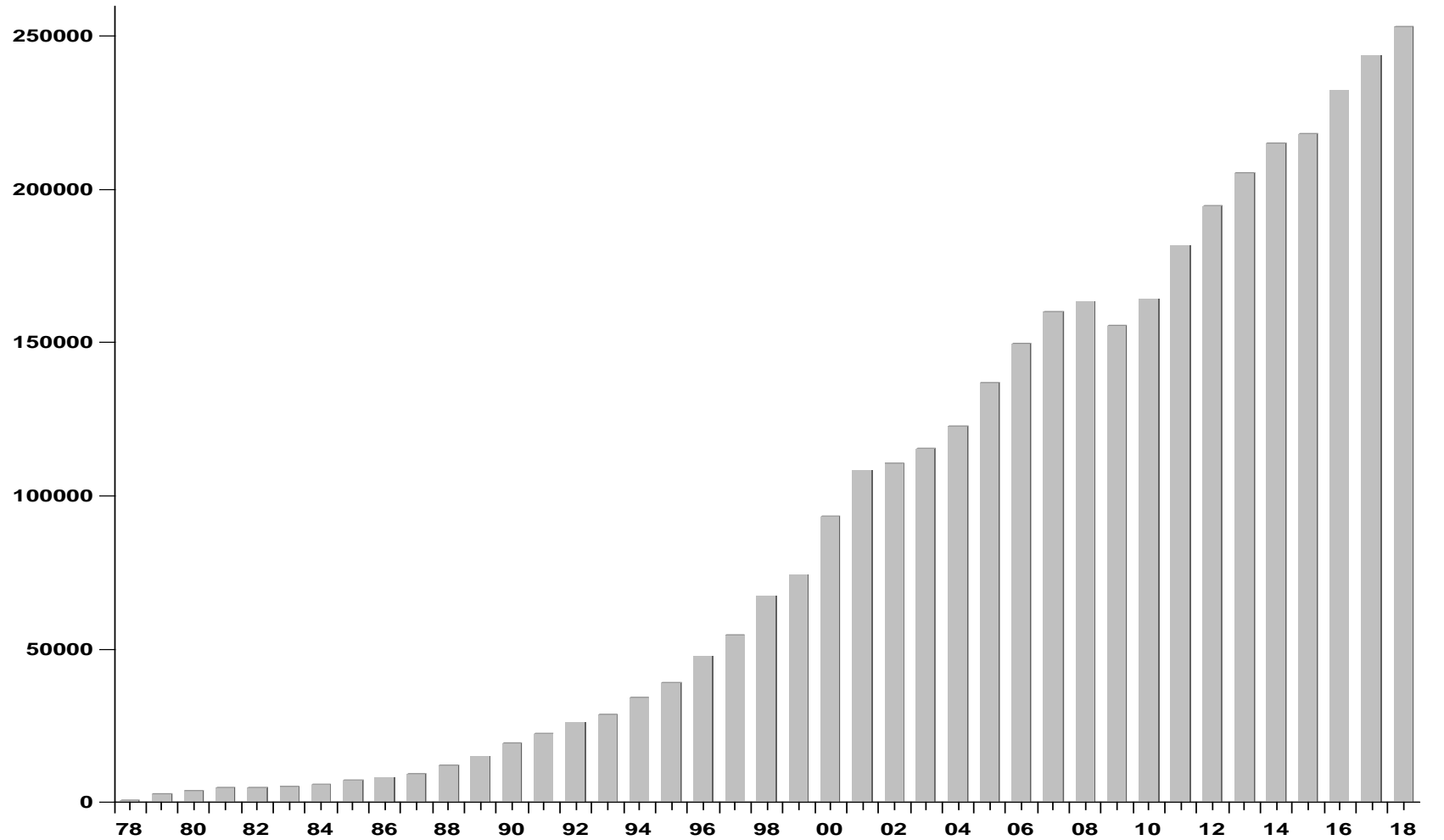
Malawi
Malaysia
Mali
Malta
Mauritania
Mexico
Monaco
Mongolia
Montenegro
Morocco
Mozambique
Namibia
Netherlands
New Zealand
Nicaragua
Niger
Nigeria
Norway
Oman
Panama
Papua New Guinea
Peru
Philippines

Poland
Portugal
Qatar
Republic of Korea
Republic of Moldova
Romania
Rwanda
Russian Federation
Saint Lucia
Saint Vincent and
the Grenadines
San Marino
Sao Tomé e Príncipe
Saudi Arabia
Senegal
Serbia
Seychelles
Sierra Leone
Singapore
Slovakia
Slovenia
South Africa
Spain
Sri Lanka
Sudan
Swaziland

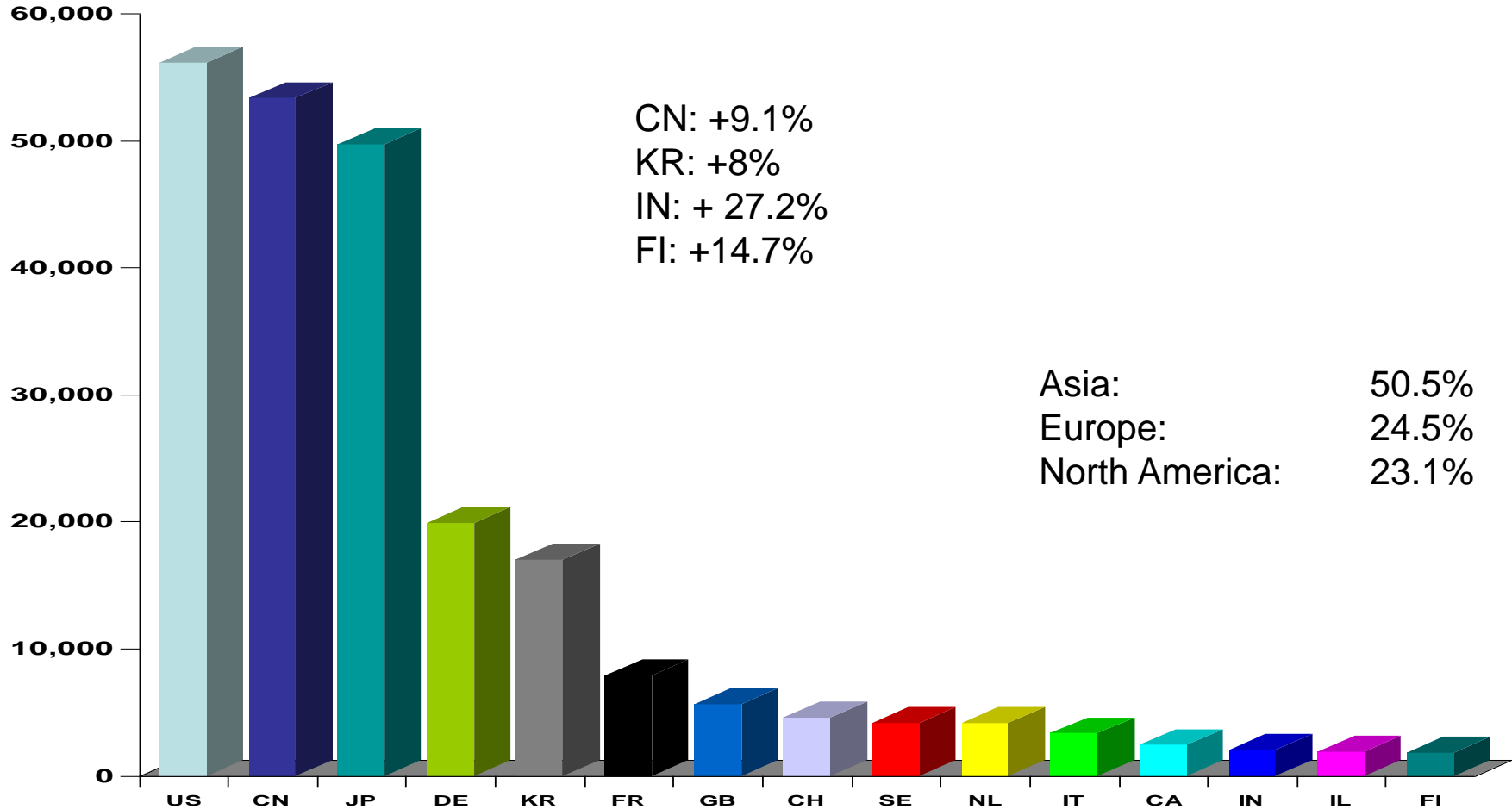
St. Kitts and Nevis
Sweden
Switzerland
Syrian Arab Republic
Tajikistan
Thailand
The former Yugoslav
Republic of Macedonia
Togo
Trinidad and Tobago
Tunisia
Turkey
Turkmenistan
Uganda
Ukraine
United Arab Emirates
United Kingdom
United Republic of Tanzania
United States of America
Uzbekistan
Viet Nam
Zambia
Zimbabwe

PCT Statistics

Tremendous growth in PCT applications since 1978



International applications received in 2018 by country of origin



- 22.1% originating in US, 21% in China, 19.6% in Japan
- 62.7% from the top 3 countries, 77.5% from top 5 countries, 92.4% of filings from top 15 countries

UN Member States not yet in PCT

Afghanistan

Andorra

Argentina

Bahamas

Bangladesh

Bhutan

Bolivia

Burundi

Cape Verde

Democratic Republic of

Congo

Eritrea

Ethiopia

Fiji

Guyana

Haiti

Iraq

Jamaica

Kiribati

Lebanon

Maldives

Marshall Islands

Mauritius

Micronesia

Myanmar

Nauru

Nepal

Pakistan

Palau

Paraguay

Samoa

Solomon Islands

Somalia

South Sudan

Suriname

Timor-Leste

Tonga

Tuvalu

Uruguay

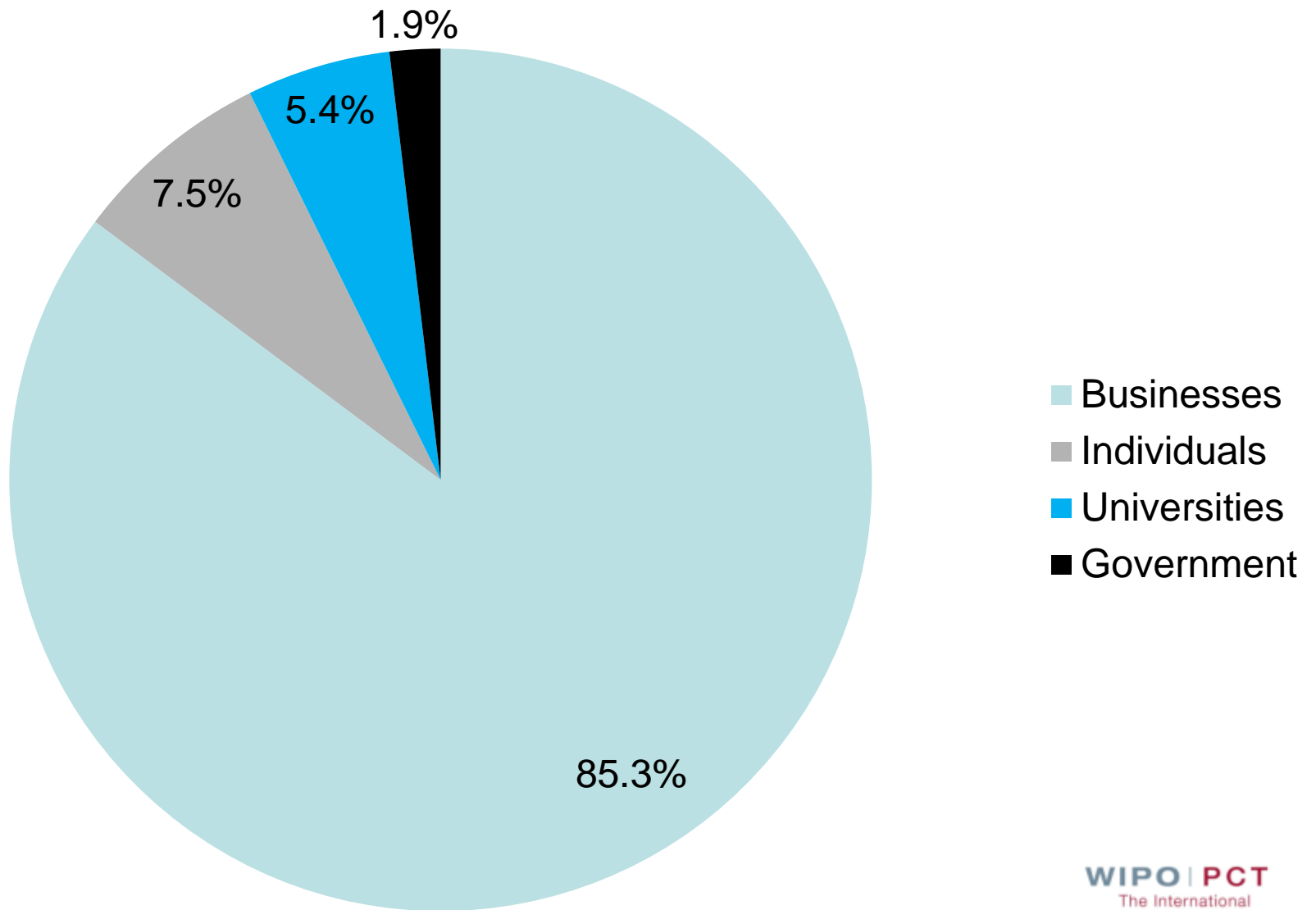
Vanuatu

Venezuela

Yemen

(41)

PCT Applicants in 2018



Top PCT Applicants in 2018

1. Huawei Technologies—CN (5,405)
2. Mitsubishi Electric—JP (2,812)
3. Intel—US (2,499)
4. Qualcomm—US (2,404)
5. ZTE—CN (2,080)
6. Samsung—KR (1,997)
7. BOE Technology Group—CN (1,813)
8. LG Electronics—KR (1,697)
9. Ericsson—SE (1,645)
10. Bosch—DE (1,524)
11. Microsoft—US (1,476)
12. Panasonic—JP (1,465)
13. Sony—JP (1,342)
14. Siemens—DE (1,211)
15. Hewlett-Packard—US (1,170)

*() of published
PCT applications*

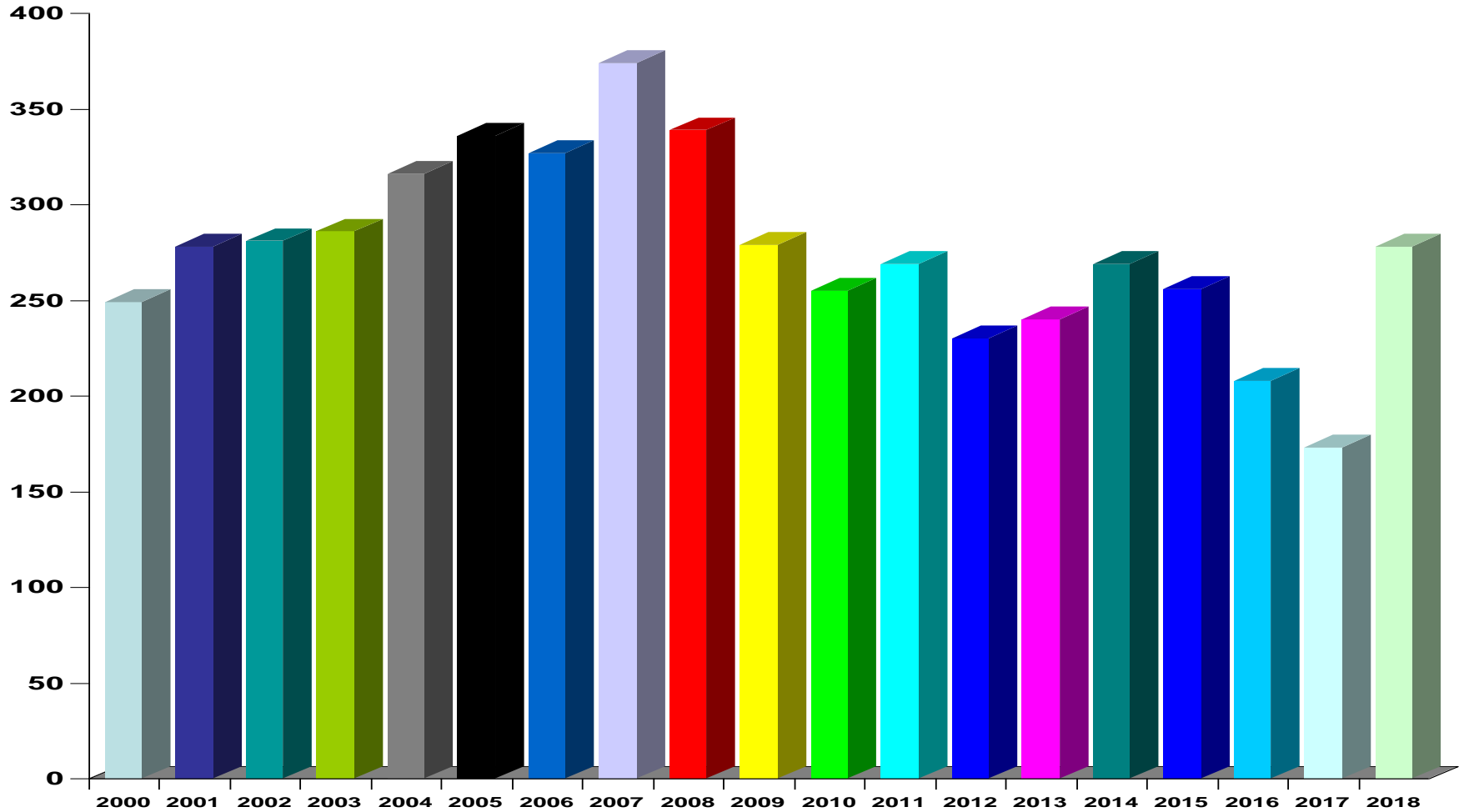
Top University PCT Applicants in 2018

1. University of California (US)
2. Massachusetts Institute of Technology (US)
3. Shenzhen University (CN)
4. South China University of Technology (CN)
5. Harvard University (US)
6. University of Texas (US)
7. Tsinghua University (CN)
8. Seoul National University (KR)
9. Stanford University (US)
10. China University of Mining and Technology (CN)
11. Osaka University (JP)
12. Johns Hopkins University (US)
13. Korea Advanced Institute of Science and Technology (KR)
14. University of Tokyo (JP)
15. Hanyang University (KR)

Top Government/PRO PCT Applicants in 2018

1. Fraunhofer-Gesellschaft (DE)
2. China Academy of Telecommunications Technology (CN)
3. Commissariat a L'Energie Atomique et aux Energies Alternatives (FR)
4. Institut National de la Sante et de la Recherche Médicale (FR)
5. National Institute of Advanced Industrial Science and Technology (JP)
6. Centre National de la Recherche Scientifique (FR)
7. Agency of Science, Technology and Research (SG)
8. Shenzhen Institute of Advanced Technology (CN)
9. United States of America, Secretary of Health and Human Services (US)
10. Mayo Foundation for Medical Education and Research (US)
11. Korea Electronics and Technology Institute (KR)
12. Riken (Institute of Physical and Chemical Research (JP)
13. Sloan-Kettering Institute for Cancer Research (US)
14. Electronics and Telecommunications Research Institute of Korea (KR)
15. Korea Institute of Industrial Technology (KR)

PCT Use in NZ



Some examples of NZ Applicants

Fisher & Paykel Healthcare Ltd

Powerbyproxi Ltd

Auckland Uniservices Ltd

Industrial Research Ltd

Agresearch Ltd

Lanzatech New Zealand Ltd

Fonterra Co-Operative Group Ltd

Fisher & Paykel Appliances Ltd

Victoria Link Ltd

University of Otago

Unova Ltd

Methven Ltd

All Weather Sportscover Ltd

Simcro Ltd

Wedglock Equipment Ltd

Dotterel Technologies Ltd

Adherium (NZ) Ltd

Opum Technologies Ltd

Introl IP Ltd

University of Canterbury

University of Auckland

New Zealand Institute for Plant and Food Research Ltd

Recent Legal and Practical PCT Developments

Recent Legal and Practical PCT Developments

■ July 2016:

- 2 additional protections/safeguards for applicants

■ July 2017:

- PCT national phase transparency
- worksharing enhancement

■ July 2018:

- PCT Schedule of Fees amended

■ July 2019

- Change to timing of IPE

■ Interim solution on color drawings

■ Contingency upload service

PCT Changes as of July 1, 2016 (1)

■ 2 additional protections/safeguards for applicants

□ Mistakenly filed/submitted “sensitive” information

- the ability to effectively remove from filed PCT applications and WIPO’s publicly accessible application-related documents (even before international publication) “sensitive” information mistakenly submitted (amendments to PCT Rules 9, 48 & 94)
- the information which is sought to be removed must be:
 - irrelevant to the disclosure
 - prejudicial to personal or economic interests, and
 - there must be no prevailing public interest in its access
- new procedures apply to applications filed on or after 1 July 2016
- ***Takeaway/Action item: make sure your staff/colleagues/outside counsel are aware of this new procedure***

PCT Changes as of July 1, 2016 (2)

- 2 additional protections/safeguards for applicants (cont.)
 - Missed time limits due to large-scale Internet outages
 - extension of *force majeure* excuse of delay provision to time limits missed due to “general unavailability of electronic communications services” (amended Rule 82*quater*)
 - covers outages that affect widespread geographical areas or many individuals, as distinct from localized problems associated with a particular building or single user
 - applies to applications filed on or after 1 July 2016, and to applications filed before that date where the “event” occurred on or after that date
 - ***Takeaway/Action item: make sure your staff/colleagues/outside counsel are aware of this new basis***

PCT Changes as of July 1, 2017 (1)

■ PCT national phase becomes more transparent

- ❑ designated Offices are required to provide IB with timely national phase entry and related data (Rules 86 & 95)
 - within 2 months from expiry of national phase deadline or asap thereafter
 - date national phase entered, national application number, number and date of any national publication, and date of grant
- ❑ PATENTSCOPE “National phase” tab will contain more information than it currently does
 - Receiving data from 43 Offices, with 30 more expected soon
- ❑ Applies to applications which entered the national phase on or after 1 July 2017
- ❑ ***Takeaway/Action item: make sure your staff/colleagues/outside counsel are aware of this change***

PCT Changes as of July 1, 2017 (2)

- PCT “Receiving Offices” required to forward any earlier search or classification results on priority applications to the PCT ISA (amendments to Rules 12*bis*, 23*bis* & 41)
 - a worksharing/efficiency measure
 - ROs were allowed to effectively opt out if this procedure was incompatible with national law when the amendments were introduced
 - USPTO (and 10 other ROs) made this notification
 - Certain ROs offer applicants the possibility to opt out
 - Applies to applications filed on or after July 2017
 - ***Takeaway/Action item: make sure your staff/colleagues outside counsel are aware of this new procedure***

PCT Changes as of July 1, 2018

■ Amendments to Schedule of Fees

- to make clear that the 90 per cent fee reductions in item 5 are intended only for persons filing an international application in their own right and not those filing an international application on behalf of a person or entity which is not eligible for the reduction, such as a director or employee of a company filing an international application on behalf of a company in order to obtain the reduction in item 5(a)

- Understanding of the PCT Assembly adopted:
 - “It is the understanding of the PCT Assembly that the fee reduction in item 5 of the Schedule of Fees is intended to apply only in the case where the applicants indicated in the request are the sole and true owners of the application and under no obligation to assign, grant, convey or license the rights in the invention to another party which is not eligible for the fee reduction.”

PCT Changes as of July 1, 2019

■ Amendment to PCT Regulations

- Agreed amendment to Rule 69.1(a), allowing IPEA to begin international preliminary examination when in possession of demand, fees, ISR and WO unless applicant requests postponement (effectively reversing current default which requires the IPEA to wait until the time limit expires unless the applicant specifically requests earlier start)

Practical development: color drawings (1)

- IB has implemented an “interim solution” as to color drawings in PCT applications:
 - ❑ Electronic applications made to ROs using PCT-SAFE or ePCT-Filing can indicate (checkbox) that the application as uploaded contains color images
 - ❑ This indication triggers a notification on the front page of the published application that the originally-filed application contains color drawings which are available for download from PATENTSCOPE

- may be helpful for DOs which accept color drawings, although:
 - ❑ the legal PCT requirement still has not yet changed
 - ❑ color images or greyscale will be converted by the IB to black & white
 - ❑ DOs may still require black & white in the national phase

Practical development: color drawings (2)

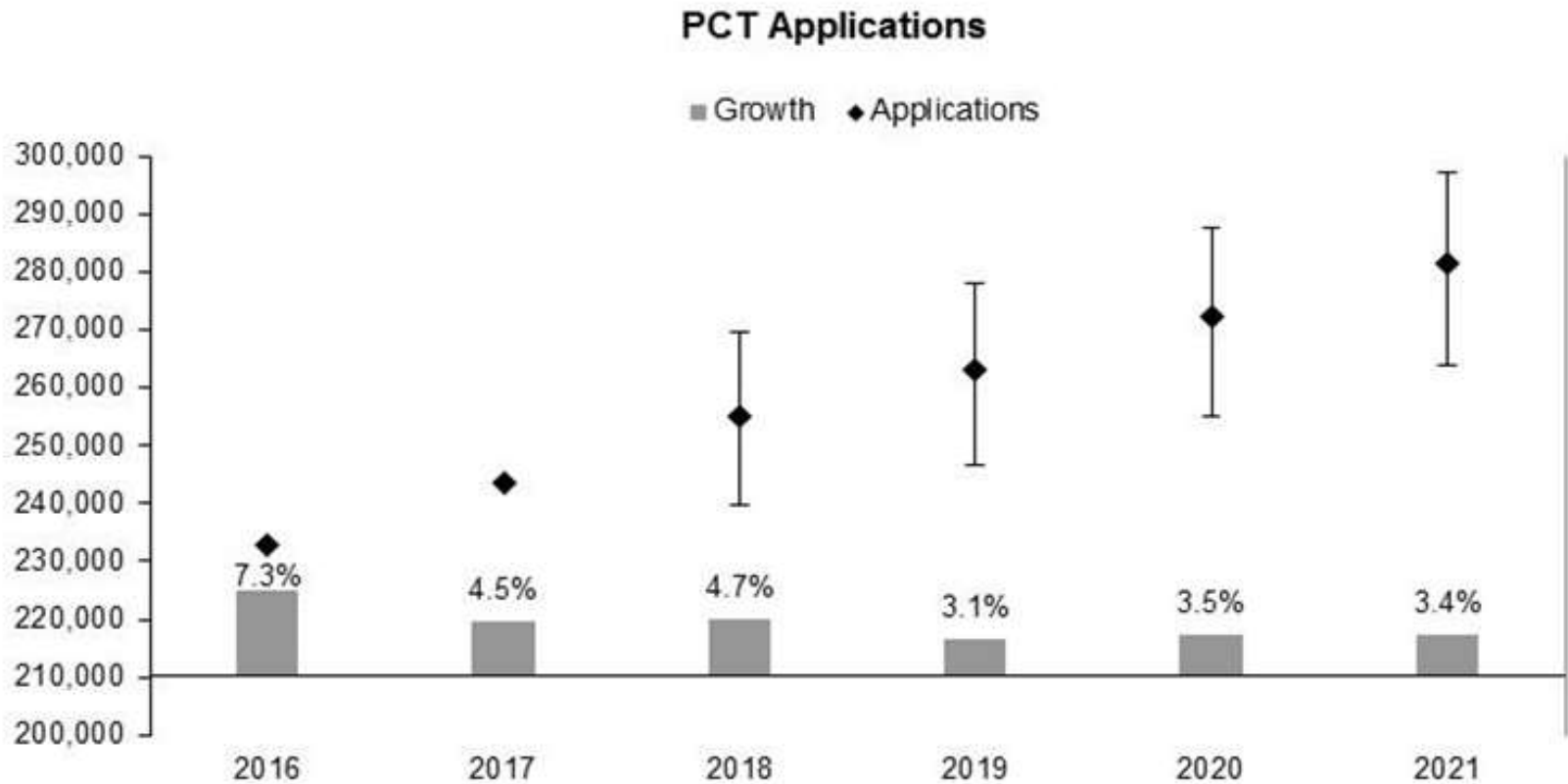
- the interim practice's purpose is not to encourage the use of color images but to recognize that many IAs do in fact contain color images and allow/assist DOs which accept them to more easily access them
 - eventual goal is to have full color processing through international phase and into national phase, and adapted legal requirements
 - 887 IAs from 27 ROs used this procedure up to end 2018

Practical development: contingency upload

- Turning off fax at IB (though not before end June 2019)
- Providing an alternate means for submitting documents and filing applications without having to use ePCT or for use in the exceptional situation that ePCT is not available
 - <https://pct.wipo.int/ePCTExternal/pages/UploadDocument.xhtml>
 - Allows uploading of PDF documents without having to sign into a WIPO account—you provide email address which is validated, then get a link to the service. You upload the document(s) and get an automated confirmation of receipt
- WIPO continues to strongly encourage use of ePCT for filing and submitting subsequent documents
- Demo version of the contingency service available for testing

Likely Developments

PCT Application Filings--projected



•Source: Economics and Statistics Division, WIPO

UN Member States not yet in PCT

Afghanistan	Kiribati	Tonga
Andorra	Lebanon	Tuvalu
Argentina	Maldives	Uruguay
Bahamas	Marshall Islands	Vanuatu
Bangladesh	Mauritius	Venezuela
Bhutan	Micronesia	Yemen
Bolivia	Myanmar	
Burundi	Nauru	(41)
Cape Verde	Nepal	
Democratic Republic of Congo	Pakistan	
Eritrea	Palau	
Ethiopia	Paraguay	
Fiji	Samoa	
Guyana	Solomon Islands	
Haiti	Somalia	
Iraq	South Sudan	
Jamaica	Suriname	
	Timor-Leste	

PCT International Searching Authorities

The appointed ISAs/IPEAs are the following 23 offices:

Australia
Austria
Brazil
Canada
Chile
China
Egypt
European Patent Office
Finland
India
Israel
Japan
Nordic Patent Institute
Philippines
Republic of Korea
Russian Federation
Singapore
Spain
Sweden
Turkey
Ukraine
United States of America
Visegrad Patent Institute

PCT WG 2019

■ Consideration of:

- new Regulation amendment proposals on “erroneously filed elements and parts”
- proposed fee reduction for universities

■ Progress reports on:

- IP5 Collaborative Search and Examination Pilot
- Netting of PCT fees
- PCT sequence listing standard
- PCT Online services
- PCT Minimum Documentation

■ ?

Likely Directions

The PCT – 1970 to Today

- 2020 will be 50 years since the PCT Diplomatic Conference
- IB's perceptions:
 - As filing tool: PCT has been extremely successful
 - However: as work sharing tool not as effective in practice for addressing national quality of examination and (for some Offices) backlogs
 - Expectation was: “flying start” for offices; completing, checking and criticizing ...
 - Reality is: some Offices still “start from scratch”, perhaps not in complete isolation, but ...
 - What is needed: while PCT will always respect national sovereignty as to substantive conditions of patentability, further trust between Offices is needed, so that duplicative international phase and national phase processing can be further reduced

DG quote

■ PCT 3 Million “food for thought” memo

“The key to future [PCT] improvements lies in putting renewed emphasis on the ‘Cooperation’ aim which underpins the Treaty... in the view of the International Bureau, it is now mainly up to the Contracting States and the national and regional Offices which perform roles under the Treaty to put further life into that ‘Cooperation’ aim with a view towards making the PCT system fully effective as the tool to support innovation, investment and development that those same Contracting States designed it to be.”

Direction 1

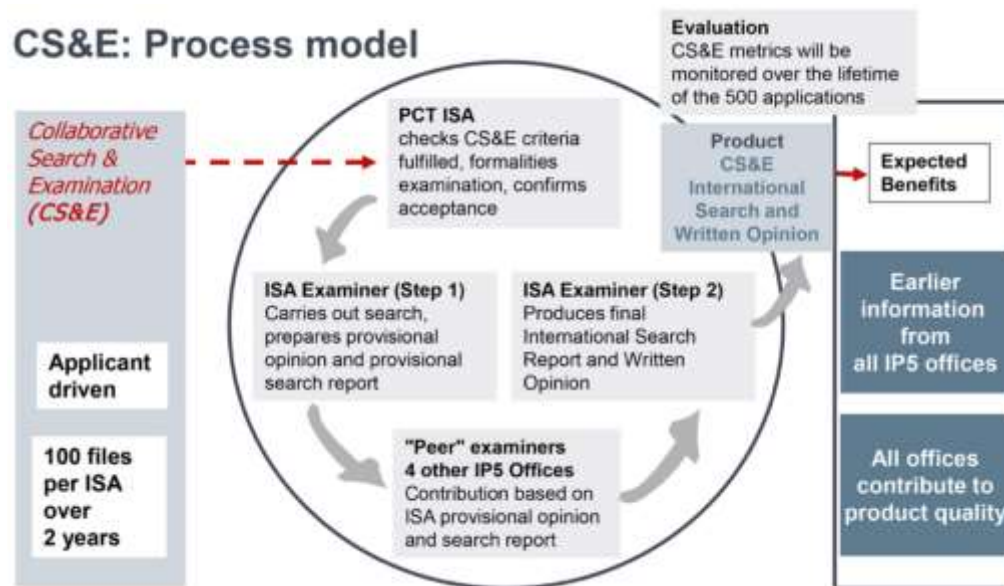
--int'l search/examination--

- Quality of international work products (paramount to PCT's role as work sharing tool for Offices)
 - Need to improve the **quality and consistency** of PCT international phase work products (also includes timeliness)
 - Develop quality metrics for measuring usefulness of work products and identifying areas of further work
 - IB reports on characteristics of international search reports
 - Role of DOs: provide feedback on quality of reports they are receiving
 - As evidence of quality engagement, full faith and credit should be given by Offices to their own ISA workproducts

Direction 1 (cont.)

--int'l search/examination--

- Explore collaborative search and examination: IP5 Pilot
 - measure effects and benefits in national phase
 - results to be reported to PCT/WG, for possible integration into PCT at later stage
 - ePCT to serve as CS&E platform for IP5 Offices



- ISA choice:
 - Competition to play a greater role?

Direction 2

--accessibility of system--

- Making PCT accessible to applicants of all types from all Contracting States
 - Fee reductions (SMEs, universities, research institutes, individual applicants)
 - BR proposal
 - Other proposals?

Direction 3

--assistance to Offices--

- Help DOs more easily access and better understand & utilize reports
 - PATENTSCOPE, WIPO CASE, Global Dossier
 - Training of DO examiners in access to and use of PCT reports
 - WIPO is very grateful to Offices which, either directly or indirectly (or both!) contribute to these training efforts
 - Particularly important for developing and least developed countries

Direction 4

--data/money transfer efficiencies--

- Optimize PCT data and financial flows
 - PCT was designed in another era...
 - Some online payment possible, but potential to have more centralized and user-friendly payment facilities
 - “Netting structure” currently being piloted, to reduce exposure of International Bureau to currency exchange rates and administration of fees by receiving offices and International Authorities

Direction 5

--technical cooperation--

- Improve the technical environment and level of technical cooperation between Offices
 - ePCT and beyond: great opportunities
 - proposed ePCT national phase entry functionality for applicants
 - Goals should be:
 - end-to-end e-processing
 - real-time, secure access by all to up-to-date, accurate data throughout international phase and into national phase
 - promote XML filing and processing
 - improved machine translation
 - develop IT systems/standards to support sharing information with other Offices more effectively

■ And what it can do for you...

□ Online portal providing:

- Web-based PCT application preparation and filing
 - Real-time validation of data against the electronic processing system of the International Bureau
 - Real-time online payment to the International Bureau of filing fees by credit card or by debiting a WIPO Current Account (only for filings with RO/IB)
 - Manage access rights
 - E-mail alerts for most of these time limits can be set up in Notification Preferences
- Secure and direct interaction with existing PCT applications, providing for carrying out most PCT transactions electronically (eActions) with the International Bureau
- User interface in all PCT publication languages
- Services for Offices as well (ROs, ISAs, IPEAs, DOs)

WIPO IP Portal

- Single common portal which consolidates the customer experience when accessing all WIPO services
 - revenue management and data assets capture and management across the business lines and associated ICT systems
- To enable customers with little prior knowledge of IP to better access WIPO's services and easily manage fee payments:
 - universities, SMEs and individual businesses
 - particularly in developing countries

Direction 6

--applicant incentives--

- Create incentives for applicants to use system efficiently
 - Encourage high quality applications and early correction of defects and filing of amendments
 - PCT/PPH, formal integration of PPH into the PCT?

PCT Best practices/reminders

- Remember that the PCT contains many useful features, such as:

- third party observations
- restoration of priority procedures
- a way to draw attention to individual applications by including licensing-related information
- being able in theory to request excuse of delay in meeting national phase entry deadline

- Always:

- view and review filed application online asap after filing (ePCT)
- review published application immediately after publication (PATENTSCOPE)
- respect national phase entry time limit
- request RO to prepare and transmit priority document
- consider submitting any restoration of priority requests to RO/IB
- file *92bis* requests only with IB directly
- call/email when you have a doubt or question

- Never:

- submit a notice of withdrawal to the RO or any authority other than the IB

PCT Information and Training

- 29 video segments about specific PCT topics on WIPO's Youtube channel and WIPO's PCT webpage
- PCT Distance learning course content available in the 10 PCT publication languages, and a 2nd detailed PCT DL course under preparation
- PCT Webinars
 - free updates on developments in PCT procedures, and PCT strategies—previous webinars are archived and freely available
 - upon request also for companies or law firms, for example, for focused training on how to use ePCT
- Videoconference and audio possibilities also available
- In-person PCT Seminars and training sessions: see PCT seminar calendar (<http://www.wipo.int/pct/en/seminar/seminar.pdf>)
- Monthly Newsletter (<http://www.wipo.int/pct/en/newslett/>)
- Extensive information resources on PCT website (<http://www.wipo.int/pct/en/>)
- If you'd like to discuss PCT training, contact us