Overview of WIPO and its Activities –

with a focus on the Patent Cooperation Treaty (PCT)



Matthew Bryan
Director
Patent Cooperation Treaty
Legal and User Relations Division





Who we are

- International intergovernmental organization
- 193 member states
- 350 + accredited observers
- 1300 staff from 120 countries
- 26 treaties



What we do



We help governments, businesses and individuals make intellectual property work for innovation and creativity



How do we do it?

Make it easy to protect IP assets

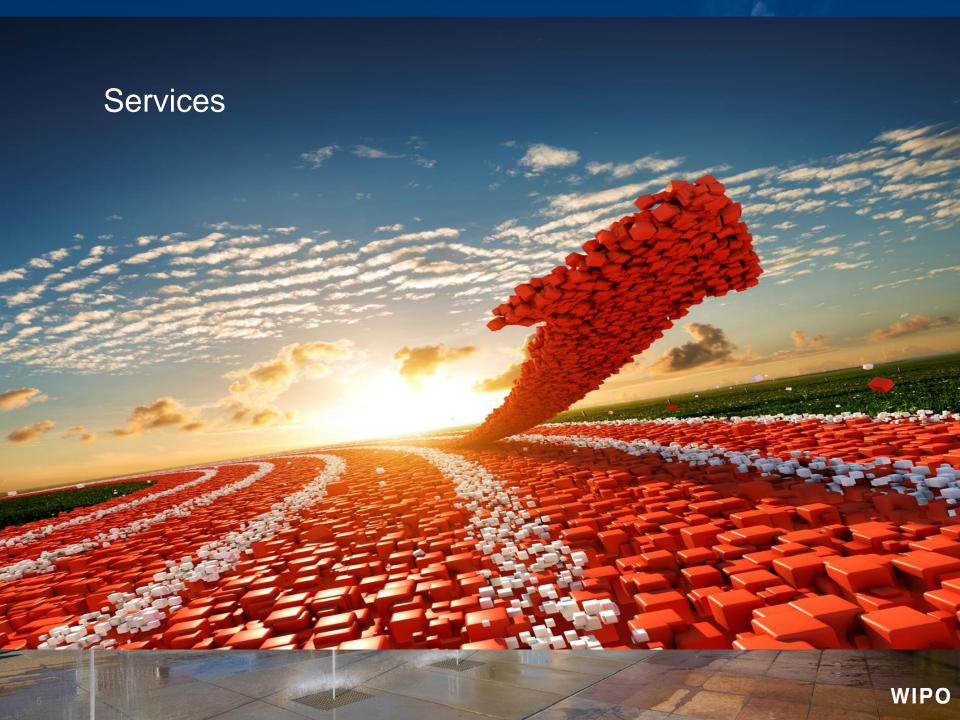
Support consistent IP laws

Support policymakers

Make IP work for development

Improve access to the IP system













IP-related dispute resolution



Domain names



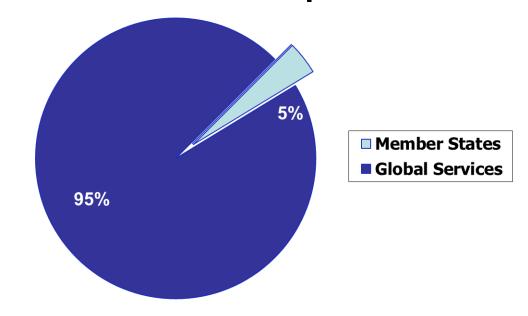
Record 4,204 cases filed by trademark owners under the UDRP in 2020.

WIPO Proof





Sources of Income/Expenditure



2020-2021:

Income: CHF 882.8 million (+6.4%)

Expenditure: CHF 768.4 million (+5.9%)



How do we do it?

Make it easy to protect IP assets

Support consistent IP laws

Support policymakers

Make IP work for development

Improve access to the IP system

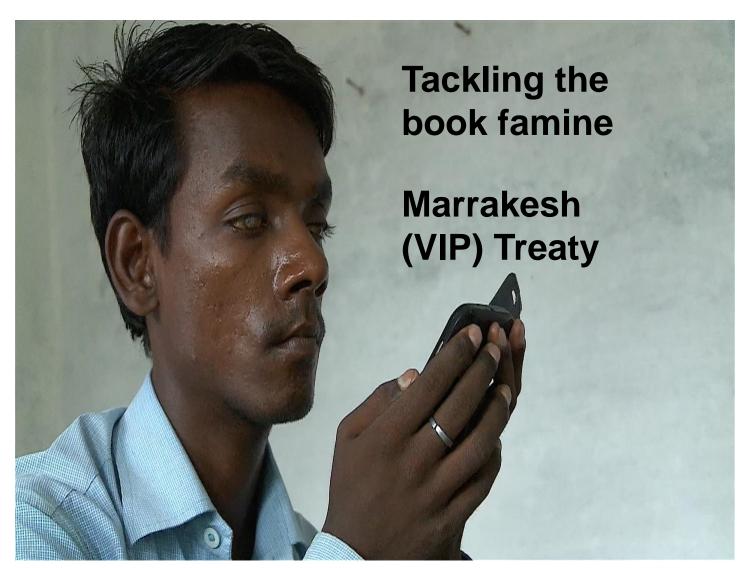














How do we do it?

Make it easy to protect IP assets

Support consistent IP laws

Support policymakers

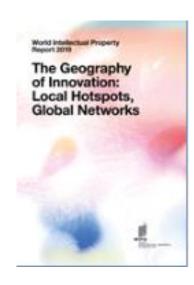
Make IP
work
for
development

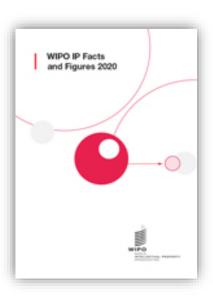
Improve access to the IP system



Supporting policymakers

World-class economic analyses, statistics, data on IP







Every year WIPO produces research and analyses on a variety of topics relating to IP, innovation and creativity.



GLOBAL INNOVATION INDEX 2020

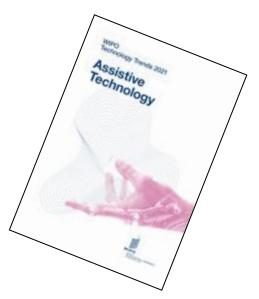
Who Will Finance Innovation?





WIPO Technology Trends 2021: Assistive Technology

The second in a series from WIPO tracking the development of technologies through the analysis of data on innovation activities.





How do we do it?

Make it easy to protect IP assets

Support consistent IP laws

Support policymakers

Make IP work for development Improve access to the IP system



Making IP work for development



WIPO Development Agenda Building national capacity



WIPO Academy IP education and training

www.wipo.int/academy/en/



General and specialized courses on IP for:

- Policymakers and government officials
- Inventors and creators
- · Business manager and IP professionals
- · Students and teachers of IP
- Civil Society



How do we do it?

Make it easy to protect IP assets

Support consistent IP laws

Support policymakers

Make IP work for development Improve access to the IP system







IP and SMEs:

Taking your ideas to market



April 26, 2021



Follow us

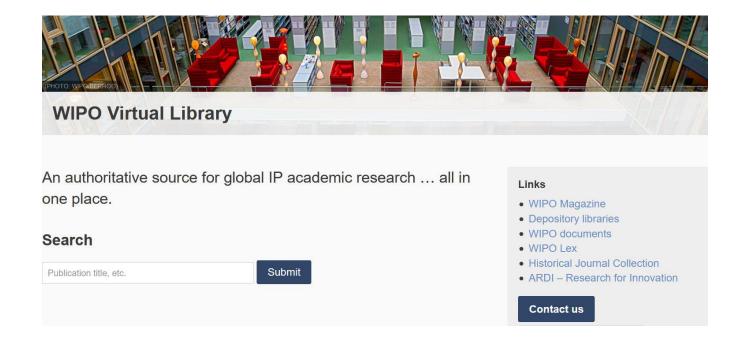
•Twitter: @wipo

- WIPO Magazine www.wipo.int/wipo_magazine/en/
- WIPO Wire: www.wipo.int/newsletters/en





WIPO Knowledge Center (WKC)



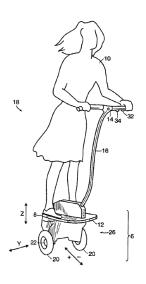


The Patent Cooperation Treaty (PCT)



Context

Inventions

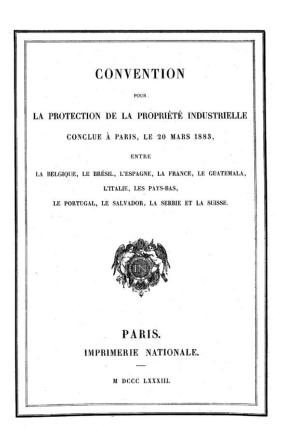


- Protecting inventions via the patent system
- Desire to at least investigate the possibility of obtaining patent protection for inventions in more than one country



Two routes for seeking multinational patent protection

Paris Convention

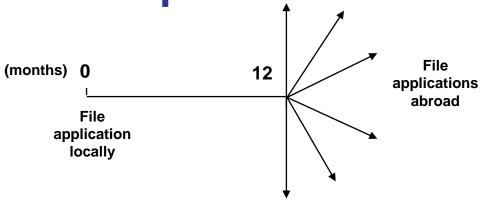


Patent Cooperation Treaty





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



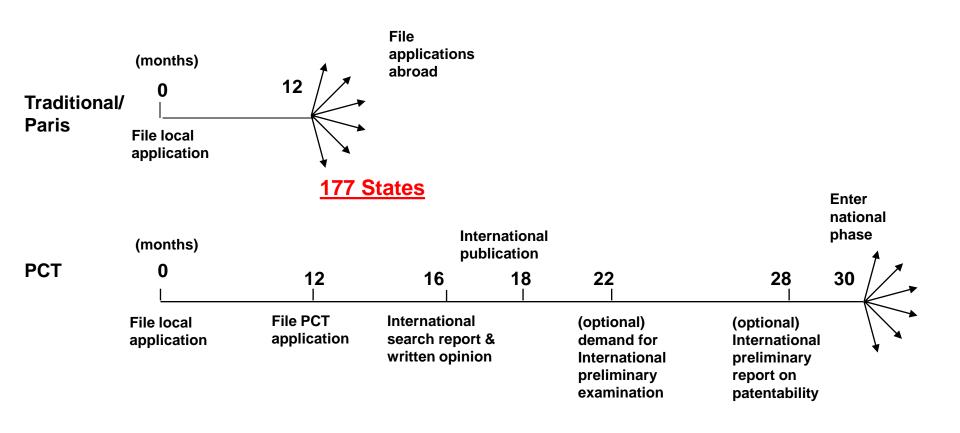
Local patent application followed within 12 months by multiple foreign applications claiming priority under the *Paris Convention*:

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

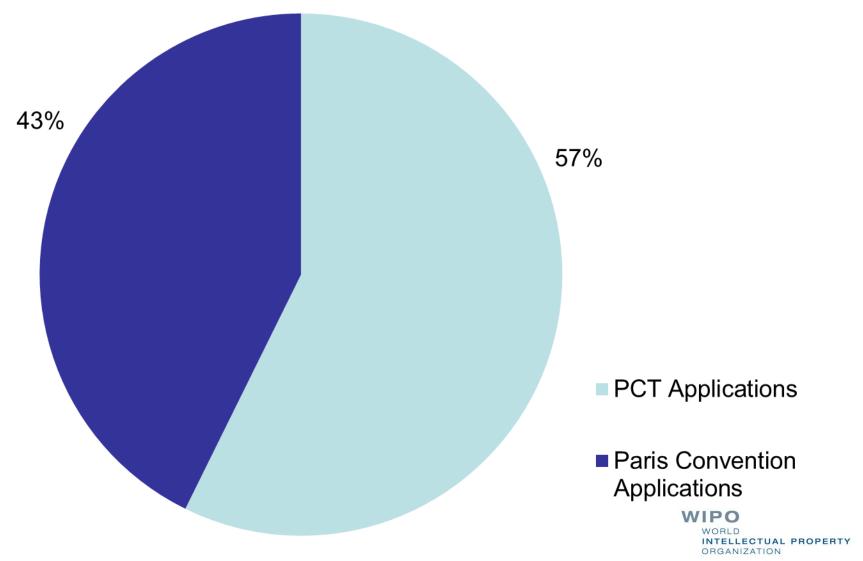
Some rationalization because of regional arrangements: wipo

INTELLECTUAL PROPERTY
ORGANIZATION

Seeking patents multinationally: traditional patent system vs. PCT system



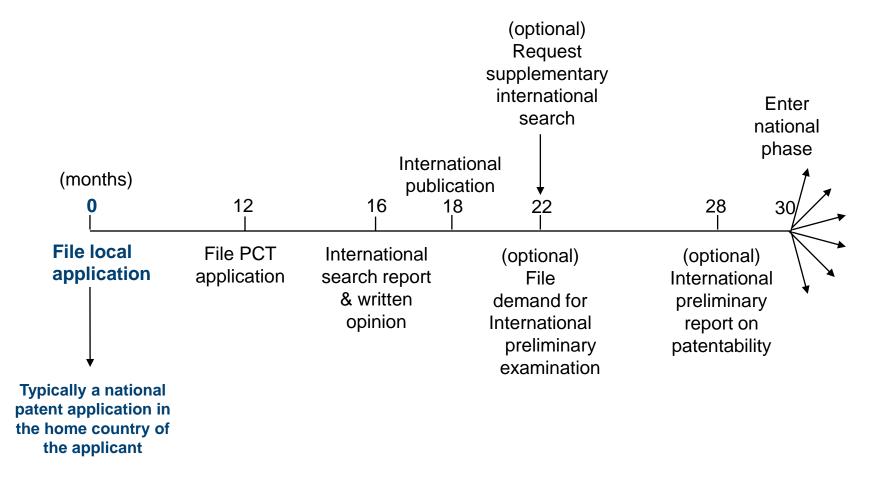
The majority of non-resident patent applications are filed through PCT



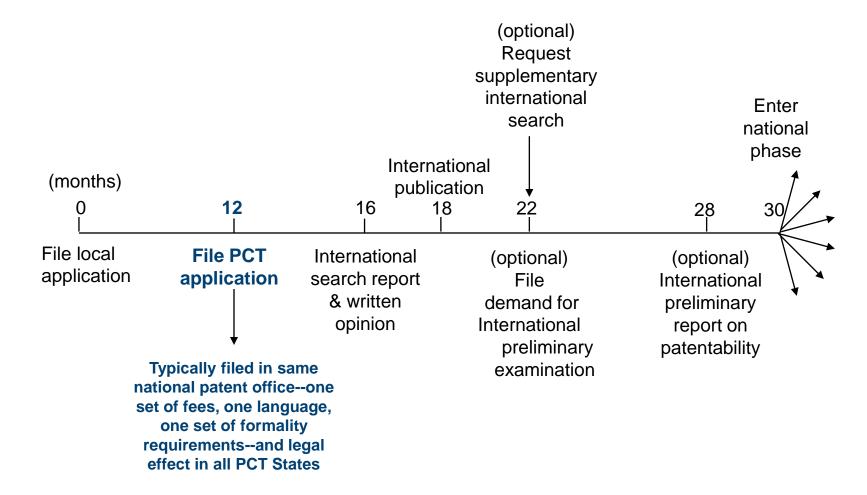
General remarks on the PCT system

- The PCT system is a patent application "filing" system, not a patent "granting" system; there is no "PCT patent," "international patent" or "global patent"
- The decision on granting patents is made exclusively by national or regional Offices in the national phase
- Only inventions may be protected via the PCT by applying for patents, utility models and similar titles
- Design and trademark protection cannot be obtained via the PCT; there are separate international conventions dealing with these types of industrial property protection (the Hague Agreement and the Madrid Agreement and Protocol, respectively)

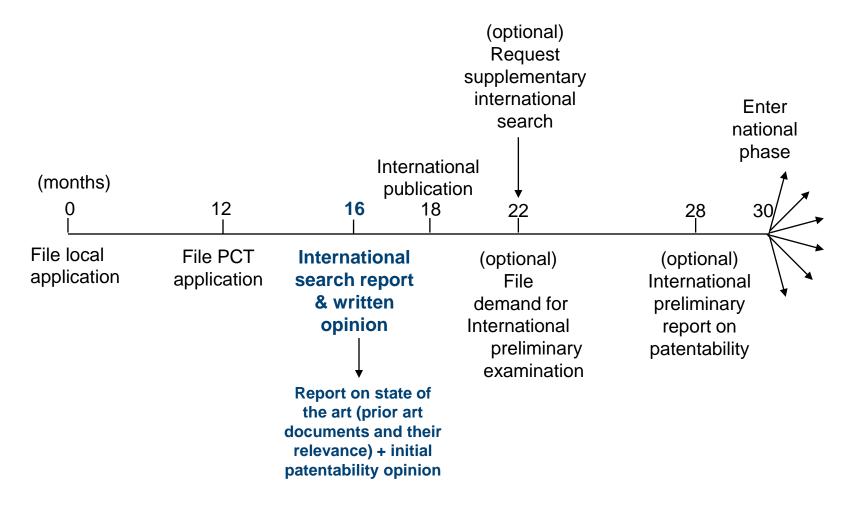














PCT International Searching Authorities

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

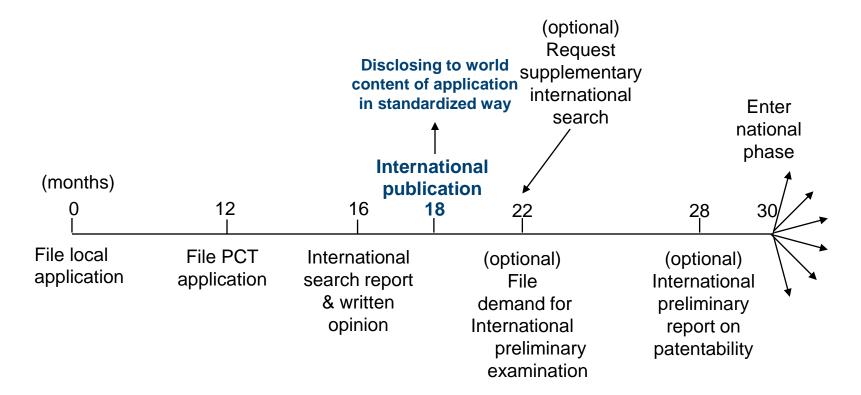
Turkey

Ukraine

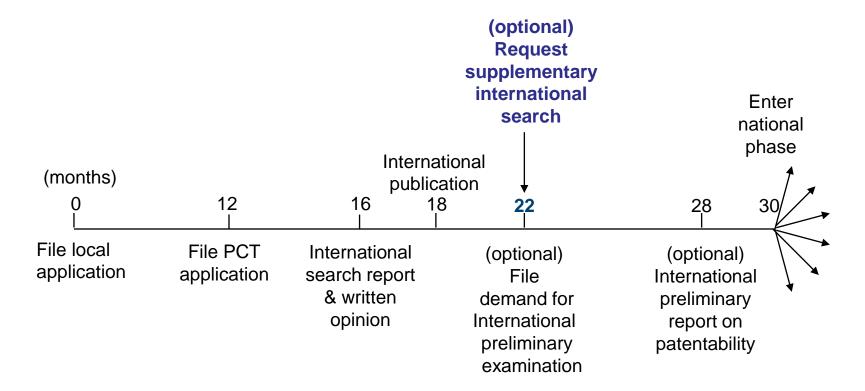
United States of America

Visegrad Patent Institute

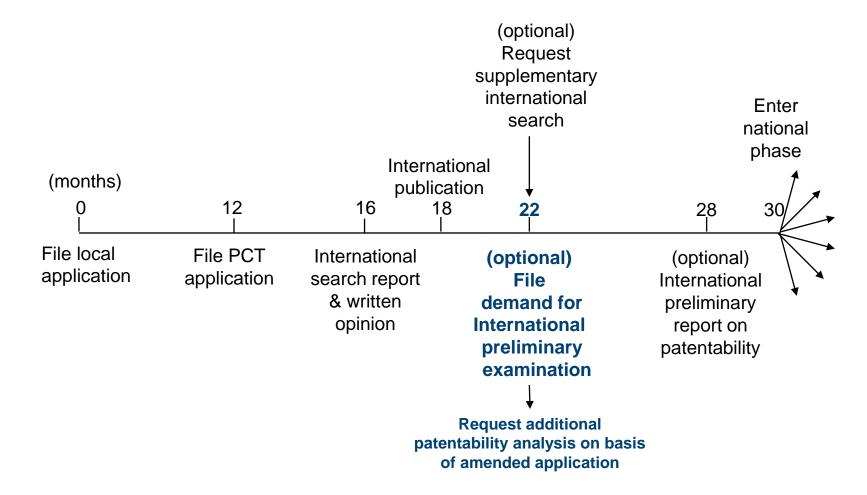
WIPO
WORLD
INTELLECTUAL PROPERTY
ORGANIZATION



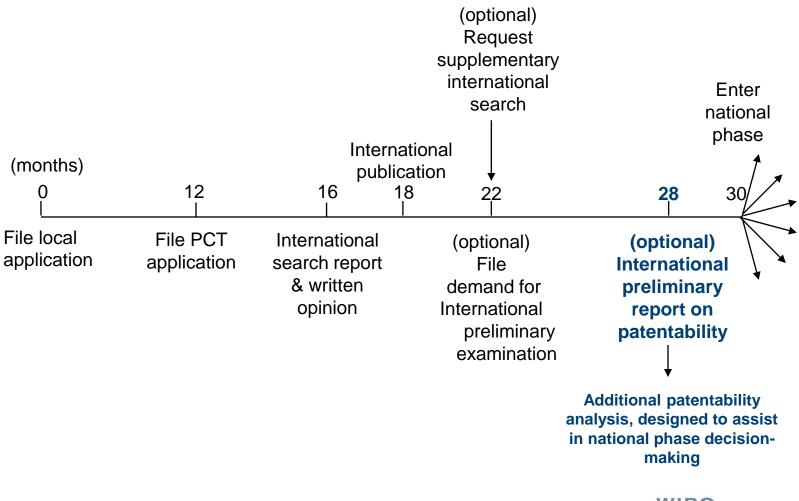


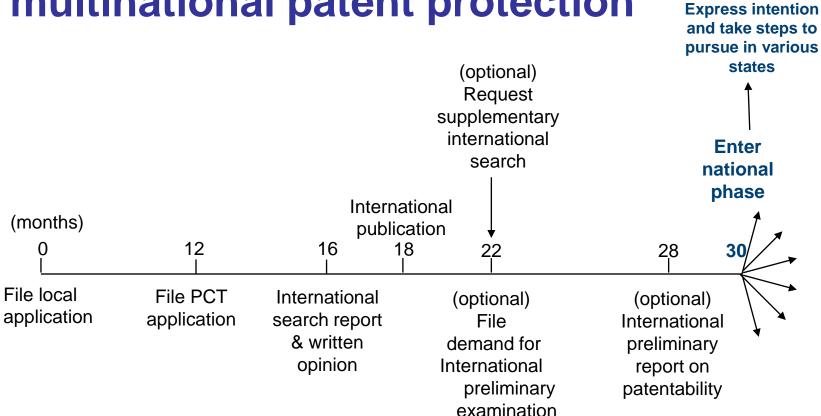


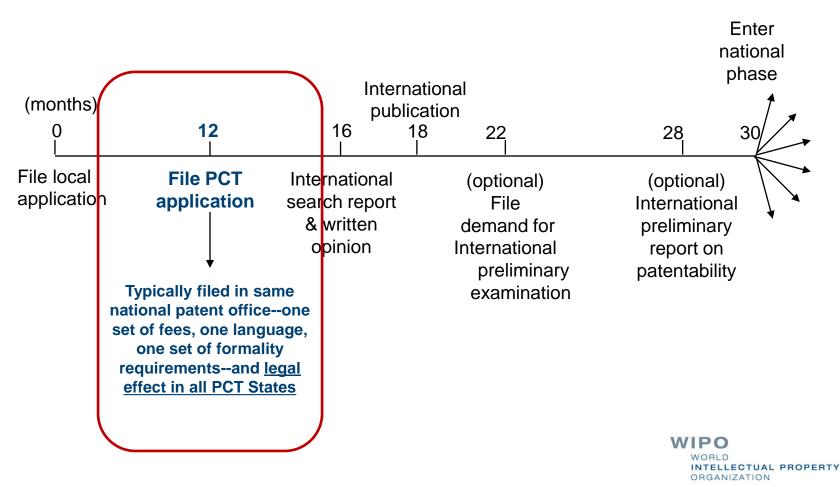




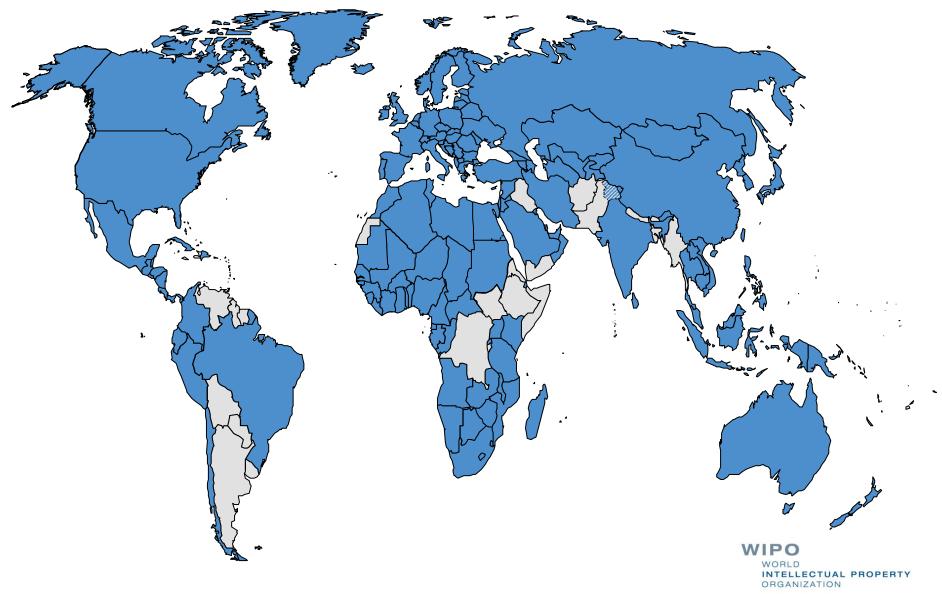








PCT Coverage Today



153 PCT States



Albania Algeria Angola Antiqua 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 Diibouti Dominica Dominican Republic Ecuador Egypt FI Salvador **Equatorial Guinea** Estonia

Finland

France,

Gabon

Gambia

Georgia

Ghana

Greece

Guinea

Grenada

Guatemala

Germany

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 Libya 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 Samoa San Marino Sao Tomé e Principe Saudi Arabia Senegal Serbia Sevchelles 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 7imbabwe WORLD

WIPO

INTELLECTUAL PROPERTY ORGANIZATION

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

Solomon Islands

Somalia

South Sudan

Suriname

Timor-Leste

Tonga

Tuvalu

Uruguay

Vanuatu

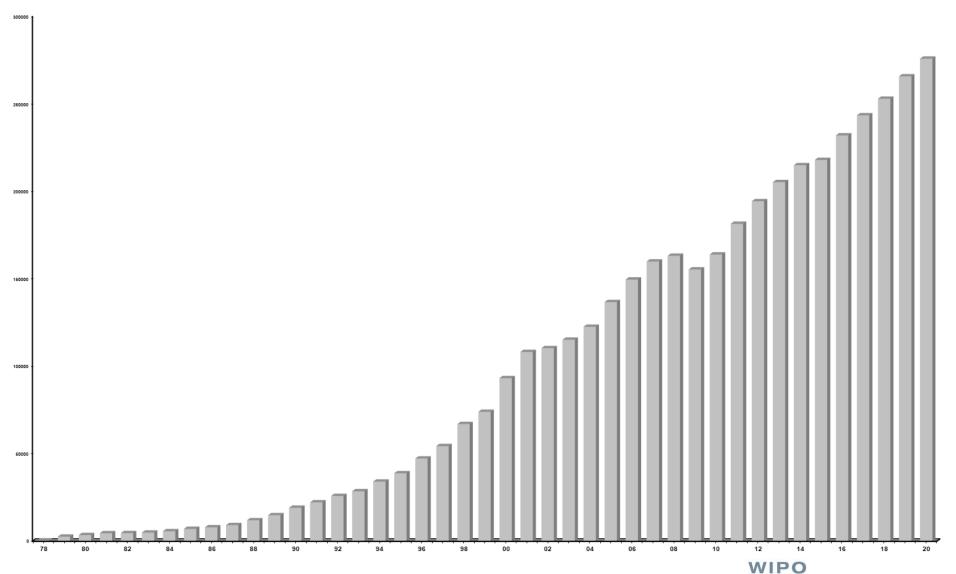
Venezuela

Yemen

(40)



Growth in PCT applications since 1978

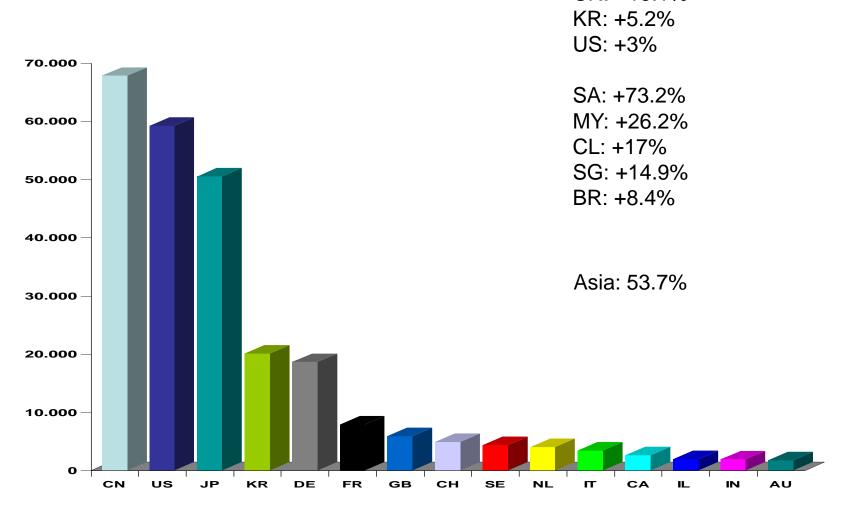


2020: 275,900 filed (+4%)

WORLD
INTELLECTUAL PROPERTY
ORGANIZATION

International applications in 2020 by country of origin

CN: +16.1%



- 24.9% originating in China, 21.5% in US, 18.3% in Japan
- 64.7% from the top 3 countries, 78.8% from top 5 countries, 88.7% of filings from top WIPO

 15 countries

PCT applications 2020 by technology field

Annex 4: International applications by field of technology (PCT System)

	Technical Field	2018	2019	2020	Share (%)	Growth (%)
Т	Electrical engineering					
1	Electrical machinery, apparatus, energy	16,556	17,194	17,363	6.6	1.0
2	Audio-visual technology	8,187	8,899	11,527	4.4	29.5
3	Telecommunications	6,132	5,861	6,442	2.4	9.9
4	Digital communication	20,233	19,050	22,068	8.3	15.8
5	Basic communication processes	1,712	1,554	1,610	0.6	3.6
6	Computer technology	19,181	21,495	24,332	9.2	13.2
7	IT methods for management	4,803	5,747	5,889	2.2	2.5
8	Semiconductors	7,183	8,048	8,863	3.4	10.1
Ш	Instruments					
9	Optics	7,610	8,018	8,369	3.2	4.4
10	Measurement	10,775	11,451	12,698	4.8	10.9
11	Analysis of biological materials	1,940	1,917	2,059	0.8	7.4
12	Control	5,212	5,363	5,456	2.1	1.3
13	Medical technology	15,798	16,916	17,493	6.6	3.
III	Chemistry					
14	Organic fine chemistry	5,787	5,887	6,354	2.4	7.
15	Biotechnology	6,640	7,404	7,988	3.0	7.
16	Pharmaceuticals	9,130	9,785	10,763	4.1	10.
17	Macromolecular chemistry, polymers	4,249	4,425	4,654	1.8	5.
18	Food chemistry	2,104	2,214	2,381	0.9	7.
19	Basic materials chemistry	5,573	5,589	5,710	2.2	2.
20	Materials, metallurgy	4,334	4,416	4,681	1.8	6.
21	Surface technology, coating	3,680	3,851	4,015	1.5	4.
22	Micro-structural and nano-technology	395	390	456	0.2	16.
23	Chemical engineering	4,886	5,074	5,279	2.0	4.
24	Environmental technology	2,732	2,705	3,010	1.1	11.
IV	Mechanical engineering	•				
25	Handling	5,889	5,954	6.409	2.4	7.
26	Machine tools	4,077	4,299	4,310	1.6	0.
27	Engines, pumps, turbines	5,656	5,366	5,122	1.9	-4.
28	Textile and paper machines	2,757	2,769	2,952	1.1	6.
29	Other special machines	6,959	7,235	7,474	2.8	3.
30	Thermal processes and apparatus	3,866	4,085	4,306	1.6	5.
31	Mechanical elements	6,187	5,952	5,843	2.2	-1.
32	Transport	10,941	11,226	11,288	4.3	0.
	Other fields	10,0-11	,	,200	-1.0	0.
33	Furniture, games	4,669	4,625	4,715	1.8	1.
34	Other consumer goods	5,403	5,444	6,044	2.3	11.
35	Civil engineering	6,121	6,386	6,498	2.5	1.

Note: For confidentiality reasons, data are based on published applications and on the publication date.

The PCT... and business

Most businesses worldwide which seek and use patents wish to:

- control costs while preserving options
- make informed business decisions
- use the best tools available when seeking protection

The PCT responds to these objectives



PCT Advantages



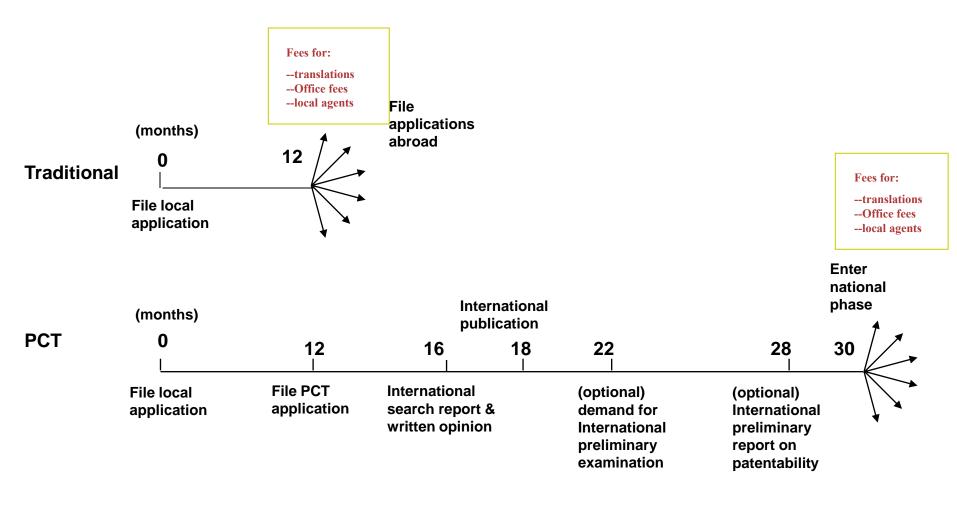
Certain PCT Advantages

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

 postpones the major costs associated with internationalizing a patent application



Traditional patent system vs. PCT system

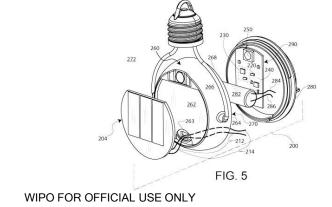


PCT Testimonial: Start-up

Nokero (produces solar-powered lights which replace kerosene lamps and candles used in developing and least-developed countries--it has so far distributed over 1.4 million lights in 120 countries and won a United States Patent and Trademark Office's Patents for Humanity Award)

"When it comes to patenting, because we operate in so many different markets, we use WIPO's Patent Cooperation Treaty (PCT). Every start-up has limited funds and the PCT is a great mechanism for delaying patent filing costs, allowing time to test the market and overcome any unforeseen technical problems. Without the PCT, protecting an invention in international markets would be a high-risk strategy with huge upfront costs."







PCT Testimonial: Inventor

Professor Shuji Nakamura—co-winner of the 2014 Nobel Prize for Physics for his work on blue LED technology—is quoted in a December 2014 WIPO Magazine article:



"... The PCT is critical for these early stage technologies because it gives us the opportunity to protect our patents globally while allowing the market and the technology to mature further before determining which countries might be most valuable to commercial partners."

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—

- postpones the major costs associated with internationalizing a patent application
- 2. provides a strong basis for patenting decisions



Example: PCT International Search Report

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 50-14535 B (NCR CORPORATION) 28 May 1975 (28.05.75), column 4, lines 3 to 27	7-9, 11
X Y	GB 392415 A (JONES) 18 May 1933 (18.05.33) Fig. 1 page 3, lines 5-7	1-3 4, 10
A	Fig. 5, support 36 GB 2174500 A (STC) 5 November 1986 (05.11.86)	11-12
X Y	page 1, lines 5-15, 22-34, 46-80; Fig. 1	1-3
A	US 4322752 A (BIXTY) 30 March 1982 (30.03.82) claim 1	1
A	GREEN, J.P. Integrated Circuit and Electronic Compass, IBM Technical Disclosure Bulletin, tober 1975, Vol. 17, No. 6, pages 1344 and 1345	1-5

Symbols indicating which aspect of patentability the document cited is relevant to (for example, novelty, inventive step, etc.)

Documents relevant to whether or not your invention may be patentable

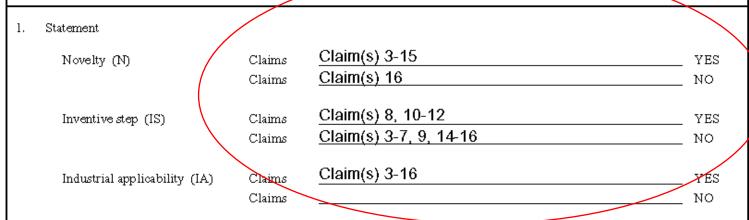
The claim numbers in your application to which the document is relevant

Example: PCT Written opinion of the International Searching Authority

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement



2. Citations and explanations:

INDEPENDENT CLAIM 3

Document US-A-5 332 238, which is considered to represent the most relevant state of the art, discloses (cf. relevant passages indicated in the ISR) a device from which the subject-matter of INDEPENDENT CLAIM 3

45-A-5-332-238, which is considered to represent the most relevant state of the art

Reasoning supporting the assessment

Patentability assessment of claims

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—

- postpones the major costs associated with internationalizing a patent application
- 2. provides a strong basis for patenting decisions
- 3. harmonizes formal requirements



Harmonization of formal requirements

PCT Article 27(1): "No national law shall require compliance with requirements relating to the form or contents of the international application different from or additional to those which are provided for in this Treaty and Regulations."

PCT Applicant's Guide, paragraph 4.011: "There is a prescribed form for the international application. This form must be accepted by all designated Offices for the purposes of the national phase, so that there is no need to comply with a great variety of widely differing formal requirements in the many countries in which protection may be sought."



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—

- 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



Protection from inadvertent errors

Examples of procedures added to PCT which protect applicants from mistakes they sometimes make:

invited corrections of defects & fee payments

non-competent receiving Office

double formality review

restoration of priority

missing parts/incorporation by reference

rectification of obvious mistakes

excuse of national phase entry delay

removal of sensitive information



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—

- 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 stakeholder needs



PCT Meetings

Meeting of International Authorities—annual (usually first quarter)

PCT Working Group—annual (usually second quarter)

PCT Assembly—September/October

Conferences/seminars/webinars/presentations/training sessions for PCT users

Constant contact with PCT users

>And these all result in ideas and proposals for improving the PCT system legally, procedurally, and practically



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
- is used by the world's major corporations, universities and research institutions when they seek multinational patent protection



PCT Testimonial: Large Company

Qualcomm:

- Started in 1985 with 7 people
- Today more than 170 offices in more than 40 countries, and 33,000 employees
- \$25.3 billion in revenue in FY 2015
- #5 user of PCT in 2020: 2,173 PCT applications published



NTELLECTUAL PROPERTY

"Over the past 25 years, Qualcomm has been one of the largest users of the PCT system. To date we have filed more than 9,000 patent applications. International patent applications are important to the protection of innovations around the globe. The PCT helps put innovation into practice by providing a simple and cost-effective way to file international patent applications. The PCT is critical for Qualcomm because we are, above all, an innovation company....[PCT] has been a vital partner in the success of our company and the growth of the wireless industry." CEO Paul Jacobs, 2011

Top PCT applicants in 2020

- 1. Huawei Technologies—CN (5,464)
- 2. Samsung—KR (3,093)

() of published PCT applications

- 3. Mitsubishi Electric—JP (2,810)
- 4. LG Electronics—KR (2,759) (+67.6%)
- 5. Qualcomm—US (2,173)
- 6. Ericsson—SE (1,989)
- 7. BOE Technology Group—CN (1,892)
- 8. Guang Dong Oppo Mobile Telecom—CN (1,801)
- 9. Sony—JP (1,793)
- 10. Panasonic—JP (1,611)
- 11. Hewlett-Packard—US (1,595)
- 12. Microsoft—US (1,529)
- 13. Bosch—DE (1,375)
- 14. LG Chem, Ltd.—KR (1,374)
- 15. Nippon Telegraph & Telephone—JP (1,372)

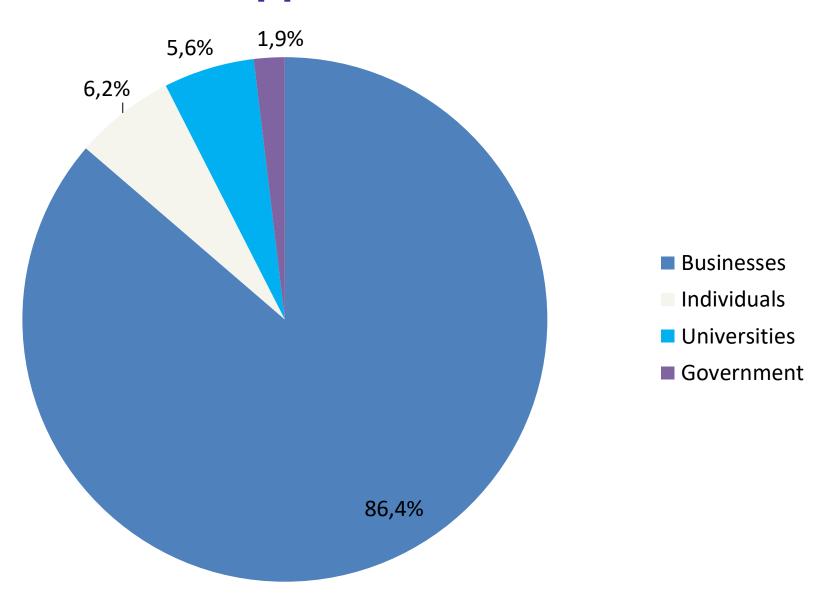


Top PCT University applicants in 2020

- 1. University of California (US)
- Massachusetts Institute of Technology (US)
- 3. Shenzhen University (CN)
- 4. Tsinghua University (CN)
- 5. Zhejiang University (CN)
- 6. University of Texas (US)
- 7. Dalian University of Technology (CN)
- 8. South China University of Technology (CN)
- 9. Stanford University(US)
- 10. University of Tokyo (JP)
- 11. China University of Mining and Technology (CN)
- 12. Seoul National University (KR)
- 13. Northeastern (CN)
- 14. Jiangnan University (CN)
- 15. Osaka University (JP)



PCT Applicants in 2019



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
- 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-Patent Prosecution Highway (PPH)

Accelerated national phase examination based on positive work product of PCT International Authority (written opinion of the ISA or the IPEA, IPRP (Ch. I or II))



 Reduction in # of office actions can result in savings between USD 2,500 & 6,500 per application (2009 AIPLA Survey)

WIPO
WORLD
INTELLECTUAL PROPERTY
ORGANIZATION

WIPO's role in the PCT

Legal development & policy:

- overall coordination of PCT system
- Secretariat to the PCT Contracting States, including in the PCT bodies (such as the PCT Assembly, PCT Working Group, Committee on Technical Cooperation, etc.)

Operational:

- process all applications, including international publication, secondary formality check, translation of certain elements, communication to designated Offices, etc.
- develop and maintain electronic tools and systems for use by users and Offices
- universal "receiving Office" with which all PCT applicants may in theory file their PCT applications
- Training/outreach/user and Office relations
 - provide PCT training, support, information and advisory functions to Offices and users



Summary

The PCT:

- embodies numerous advantages for users, including:
 - more time
 - more information on potential patentability
- also embodies advantages for national and regional patent Offices, including a significant potential for worksharing
- continues to experience strong growth, in countries and applications
- is quite possibly the most successful example of true international cooperation in the intellectual property space
 - ...and in the view of some "the greatest advance in foreign patent practice and patent portfolio management since the Paris Convention came into force in 1883"



Thank you!



