# UNITED STATES PATENT AND TRADEMARK OFFICE



# **Considerations and Options for** Foreign Filing Including the PCT

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### **Overview**

- Information about foreign patents
- General considerations in deciding whether to pursue patent protection outside of the United States
- Options available for pursuing foreign patent protection
- Review the structure and function of the Patent Cooperation Treaty (PCT)
- Avoiding common mistakes



## **Foreign Patent Protection**

- Patent protection can be an important part of overall business strategy in today's global marketplace
- In general, patent rights are territorial in nature
  - Protect against infringing activities occurring within the country or region in which the patent was granted
- To obtain patent rights in foreign countries, U.S. applicants must apply for a patent in each country or region of interest
  - A world-wide patent does not exist



### **Who Grants Patents?**

- National patent offices
  - E.g., USPTO, JPO, KIPO, etc.
- Regional patent offices
  - Grants patents with effect in some or all member countries
    - European Patent Office (EPO)
    - African Regional Intellectual Property Organization (ARIPO)
    - Eurasian Patent Convention (EA)
    - African Intellectual Property Organization (OAPI)
    - Patent Office of the Gulf Cooperation Council (GCC)



# **Regional Patent Offices**

AP (ARIPO)	EP (EPO)	OA (OAPI)
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BW GH GM KE LR LS MW MZ NA RW SD SL SZ TZ UG ZM ZW	Botswana Ghana Gambia Kenya Liberia Lesotho Malawi Mozambique Namibia Rwanda Sudan Sierra Leone Swaziland United Republic of Tanzania Uganda Zambia Zimbabwe	AL TEBC CYZEKES FIRBGRHUE	Albania Austria Belgium Bulgaria Switzerland Cyprus Czech Republic Germany Denmark Estonia Spain Finland France United Kingdom Greece Croatia Hungary Ireland	IS IT LIT LV C K T L NO L T O S S I K M R S S S S K T R	Iceland Italy Liechtenstein Lithuania Luxembourg Latvia Monaco Macedonia Malta Netherlands Norway Poland Portugal Romania Serbia Sweden Slovenia Slovakia San Marino Turkey	BF BJ CF CG CI CM GN GQ ML MR NE SN TD TG	Burkina Faso Benin Central African Rep. Congo Côte d'Ivoire Cameroon Gabon Guinea Equatorial Guinea Guinea-Bissau Mali Mauritania Niger Senegal Chad Togo
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#### EA (EA)

AM	Armenia
ΑZ	Azerbaijan
BY	Belarus
KG	Kyrgyzstan
ΚZ	Kazakhstan
RU	Russian Fed.
TJ	Tajikistan
TM	Turkmenistan

#### **EP (EPO) Extension Countries**

BA	Bosnia and Herzegovina
ME	Montenegro
MA	Morocco
MD	Republic of Moldova
	Email questions to:

inventorinfochat@uspto.gov

#### GC (GCC)

BL	Bahrain
KW	Kuwait
OM	Oman
QA	Qatar
SA	Saudi Arabia
A E	United Arch E

SA Saudi Arabia
AE United Arab Emirates

# General Considerations in Filing Foreign Patent Applications (1)

- Market size and potential of country/region
- Manufacturing potential
- Industry size and growth
- Competition activity
- Patent procurement costs



# General Considerations in Filing Foreign Patent Applications (2)

- Patent law considerations
  - Standards of patentability in country/region
    - Patentable subject matter differences
    - Prior art differences
      - Grace periods
      - Geographical restrictions
      - First-to-file
  - Enforceability of patents
    - Does the country/region have effective laws and procedures for enforcing the patent?



## **Options for Foreign Filing**

- File a patent application directly in a national or regional patent office (Paris Convention)
  - A foreign filing license from the USPTO may be required
- File an international patent application under the Patent Cooperation Treaty (PCT)
  - A foreign filing license from the USPTO may be required, if filing in a foreign receiving Office



# International Agreements and Treaties Governing Priority (1)

#### Paris Convention

- Provides applicant with a 12-month right of priority, triggered by the first filing of a patent application, in which to file a subsequent application in another Paris Convention member country for the same invention
  - The subsequent application must claim the priority of the first application in order to make use of the right of priority
- Most countries are party to the Paris Convention
  - Currently 177 Contracting Parties
- Excludes countries not recognized by the United Nations, e.g.,
   Taiwan

# International Agreements and Treaties Governing Priority (2)

- Patent Cooperation Treaty (PCT)
  - Effectively permits the filing of a single international application to be treated as "a regular national application in each designated State as of the international filing date" (PCT Article 11)
  - Currently 152 Contracting States are party to the PCT

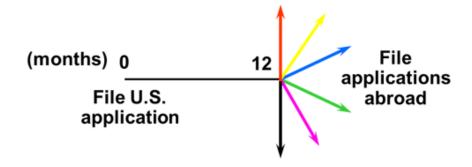


# Direct Filing in a Foreign National or Regional Patent Office

- May be cost effective if filing in only a few countries
- Applicant is certain as to which countries applications are to be filed
- Applicant is prepared to pay the filing costs early
  - E.g., filing fees, translation costs, attorney fees
- Necessary for countries not party to the PCT

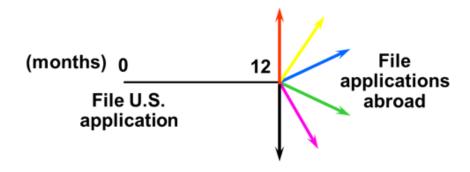


# **Example: Direct Foreign Filing under the Paris Convention (1)**



- U.S. patent application followed within 12 months by one or more foreign applications filed in Paris Convention or WTO member countries
- The foreign application(s) may claim priority to the earlier U.S. application
- If the invention in the foreign application(s) is entitled to the priority, the filing date of the U.S. application will be used for prior art purposes

# Example: Direct Foreign Filing under the Paris Convention (2)



- Some additional considerations when multiple foreign applications at 12 months and claiming priority under the Paris Convention
  - Multiple formality requirements
  - Multiple prosecutions of applications
  - Translations and national/regional fees required at 12 months

## **The Patent Cooperation Treaty**

- A United Nations Treaty
  - Signed June 1970
  - Became operational June 1978
  - Administered by the International Bureau (IB)
    - Of the World Intellectual Property Organization (WIPO) in Geneva, Switzerland





### **International Patent?**

- An international application is filed under the PCT but...
  - There is no "international patent"
  - The PCT functions as a patent application filing system
  - The international application must still be prosecuted
    - In each national or regional office where patent protection is desired



## **Purposes of the PCT**

- To simplify the process of filing foreign patent applications
- To give every regional and national patent Office and the applicant the benefit of
  - A search and written opinion on patentability by an International Searching Authority (ISA)
  - An optional further examination by an International Preliminary Examining Authority (IPEA)



## **PCT Contracting State**

- A country which is a signatory to the PCT
- Eighteen (18) Contracting States in 1978
- Currently 152 Contracting States
  - Jordan became bound by the PCT on 09
     June 2017



## **Current List of PCT Contracting States**

AE	United Arab		Cuba	IR	Iran (Islamic		Madagascar	SD	Sudan (AP)
	Emirates	CY	Cyprus (EP) <sup>2</sup>		Republic of)	MK	The former	SE	Sweden (EP)
AG	Antigua and Barbuda	CZ	Czechia (EP)	IS	Iceland (EP)		Yugoslav Republic	SG	Singapore
AL	Albania (EP)	DE	Germany (EP)	IT	Italy (EP)2		of Macedonia (EP)	SI	Slovenia (EP) <sup>2</sup>
AM	Armenia (EA)	DJ	Djibouti	JO	Jordan	ML	Mali (OA) <sup>2</sup>	SK	Slovakia (EP)
AO	Angola	DK	Denmark (EP)	JP	Japan	MN	Mongolia	SL	Sierra Leone (AP)
AT	Austria (EP)	DM	Dominica	KE	Kenya (AP)	MR	Mauritania (OA) <sup>2</sup>	SM	San Marino (EP)
AU	Australia	DO	Dominican Republic	KG	Kyrgyzstan (EA)	MT	Malta (EP)2	SN	Senegal (OA) <sup>2</sup>
AZ	Azerbaijan (EA)	DZ	Algeria	KH	Cambodia	MW	Malawi (AP)	ST	Sao Tome and
BA	Bosnia and	EC	Ecuador	KM	Comoros (OA) <sup>2</sup>	MX	Mexico	01/	Principe (AP)
DA	Herzegovina <sup>1</sup>	EE	Estonia (EP)	KN	Saint Kitts and	MY	Malaysia	SV	El Salvador
BB	Barbados	EG	Egypt		Nevis	MZ	Mozambique (AP)	SY	Syrian Arab Republic
BE			Spain (EP)	KP	Democratic	NA	Namibia (AP)	SZ	Swaziland (AP) <sup>2</sup>
BF	Belgium (EP) <sup>2</sup>	FI	Finland (EP)		People's Republic of	NE	Niger (OA) <sup>2</sup>	TD	Chad (OA) <sup>2</sup>
1	Burkina Faso (OA) <sup>2</sup>	FR			Korea	NG	Nigeria	TG	Togo (OA) <sup>2</sup> Thailand
BG	Bulgaria (EP)		France (EP) <sup>2</sup>	KR	Republic of Korea	NI	Nicaragua	TJ	Tajikistan (EA)
ВН	Bahrain			KW	Kuwait	NL	Netherlands (EP) <sup>2</sup>	TM	Turkmenistan (EA)
BJ	Benin (OA) <sup>2</sup>		United Kingdom (EP)	KZ	Kazakhstan (EA)	NO	Norway (EP)		Tunisia
BN	Brunei Darussalam	GD	Grenada	LA	Lao People's Demo-	NZ	New Zealand		Turkey (EP)
BR	Brazil	GE	Georgia		cratic Republic	OM	Oman	TT	Trinidad and Tobago
BW	,		Ghana (AP)	LC	Saint Lucia	PA	Panama	TZ	United Republic of
BY	Belarus (EA)		Gambia (AP)	LI	Liechtenstein (EP)	PE	Peru		Tanzania (AP)
BZ	Belize		Guinea (OA) <sup>2</sup>	LK	Sri Lanka	PG	Papua New Guinea	UA	Ukraine
CA	Canada	GQ	Equatorial Guinea (OA)	LR	Liberia (AP)	PH	Philippines	UG	
CF	Central African		Greece (EP)2	LS	Lesotho (AP)	PL	Poland (EP)	US	United States of
	Republic (OA) <sup>2</sup>	GT	Guatemala	LT	Lithuania (EP)2	PT	Portugal (EP)	2 8-70	America
CG	Congo (OA) <sup>2</sup>	GW	Guinea-Bissau (OA)2	LU	Luxembourg (EP)	QA	Qatar	UZ	Uzbekistan
CH	Switzerland (EP)	HN	Honduras	LV	Latvia (EP)2	RO	Romania (EP)	VC	Saint Vincent and
CI	Côte d'Ivoire (OA)2	HR	Croatia (EP)	LY	Libya	RS	Serbia (EP)		the Grenadines
CL	Chile	HU	Hungary (EP)	MA	Morocco <sup>3</sup>	RU	Russian	VN	Viet Nam
CM	Cameroon (OA) <sup>2</sup>	ID	Indonesia	MC	Monaco (EP)2		Federation (EA)	ZA	South Africa
CN	China	IE	Ireland (EP)2	MD	Republic of	RW	Rwanda (AP)	ZM	Zambia (AP)
CO	Colombia	IL	Israel		Moldova <sup>4</sup>	SA	Saudi Arabia	ZW	Zimbabwe (AP)
CR	Costa Rica	IN	India	ME	Montenegro <sup>1</sup>	SC	Seychelles		

Extension of European patent possible.

<sup>2</sup> May only be designated for a regional patent (the "national route" via the PCT has been closed).

Validation of European patent possible for international applications filed on or after 1 March 2015.
 Validation of European patent possible for international applications filed on or after 1 November 2015.

# **PCT World Map**

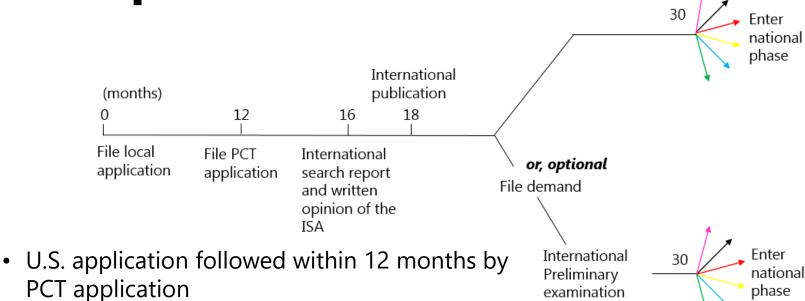


## The International Application

- A single application
  - Filed together with a request
    - By a resident/national of a PCT contracting state
  - Filed in one language
  - Filed in one patent office
    - The receiving office (RO)
    - Usually the applicant's home patent office
  - Treated as a national application
    - In each designated state as of the international filing date (IFD)
- Formalities in compliance with the PCT
  - Must be accepted during national phase



**Example: PCT Route** 



- Claiming priority to U.S. application
- One set of formalities requirements
- Translations and national/regional fees and prosecution not required until 30 months



### Two Phases of the PCT

- International phase
  - Chapter I (mandatory)
  - Chapter II (optional)

National phase (stage)

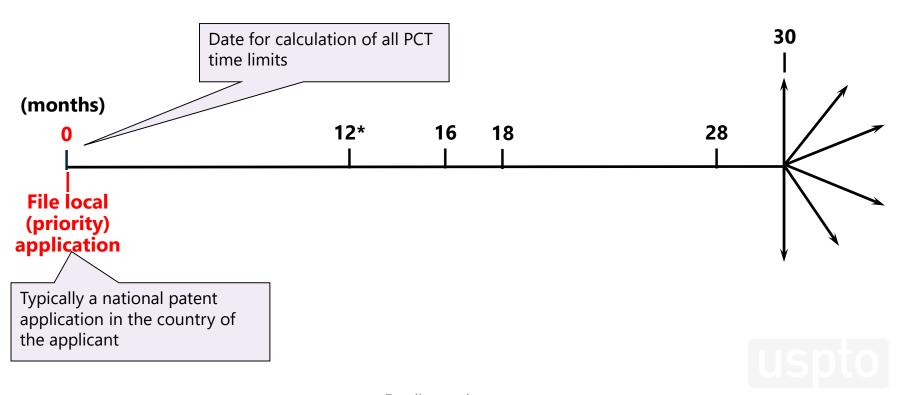


# **Chapter I**



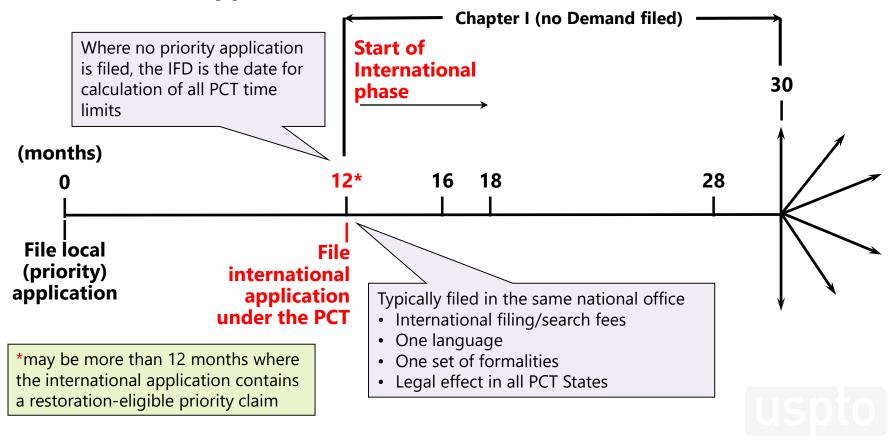
### **PCT System**

### **Priority Application Filed**



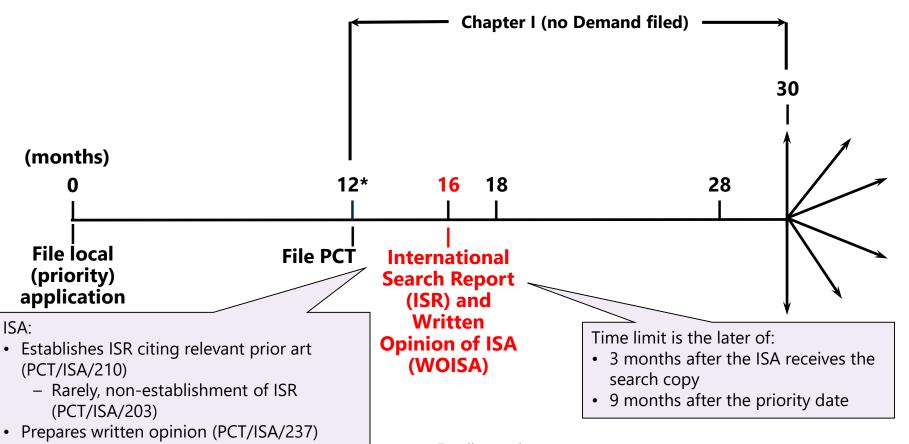
## **PCT System – Chapter I**

#### **International Application Filed**



## **PCT System – Chapter I**

ISR and WOISA Issued



#### PATENT COOPERATION TREATY

#### **PCT**

#### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference SERK-239WO	FOR FURTHER ACTION as well	see Form PCT/ISA/220 as, where applicable, item 5 below.
International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)
CT/US15/25147	09 April 2015 (09.04.2015)	10 April 2014 (10.04.2014)
Applicant THE REGENTS OF THE UNIVERSITY (	DE CALIFORNIA	· ·
according to Article 18. A copy is be This international search report consis	een prepared by this International Searching / ing transmitted to the International Bureau.  ts of a total of sheets.  a copy of each prior and document cited in this	
Basis of the report		
	he international search was carried out on the b	asis of:
	oplication in the language in which it was filed.	
a translation of the	international application into	which is the language of
a translation furnis	hed for the purposes of international search (Ru	
	report has been established taking into account to this Authority under Rule 91 (Rule 43.6bis(	
	otide and/or amino acid sequence disclosed in	
c. 🖂 with regard to any much	one major milita and orquine	
<ol> <li>Certain claims were for</li> </ol>	and unsearchable (see Box No. II).	,
3. Unity of invention is lac	dring from Box No. III)	
5. City of invention is tal	Lang (see box 110. 111).	
4. With regard to the title,		
the text is approved as so	ibmitted by the applicant.	
the text has been establis	hed by this Authority to read as follows:	
5. With regard to the abstract,		
	abmitted by the applicant.	
the text has been establis	hed, according to Rule 38.2, by this Authority as	it appears in Box No. IV. The applicant may
within one month from t	he date of mailing of this international search re	eport, submit comments to this Authority.
6. With regard to the drawings,		
	be published with the abstract is Figure No	Α
as suggested by th		
	Authority, because the applicant failed to sugge	est a figure.
	Authority, because this figure better characterize	
as selected by this		
	be published with the abstract.	zes the invention.

Form PCT/ISA/210 (first sheet) (January 2015)

### **International Search Report**

Form PCT/ISA/210 (first sheet)

#### Indications concerning:

- Basis of the report
- Unsearchable claims
- Unity of Invention
- Title and abstract
- Figure to be published

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#### INTERNATIONAL SEARCH REPORT International application No. PCT/US15/25147 CLASSIFICATION OF SUBJECT MATTER IPC(8) - C12N 15/63; C12P 19/34; C07K 14/195 (2015.01) CPC - C12N 15/63; C07H 21/02; C07K 14/195 According to International Patent Classification (IPC) or to both national classification and IPC Minimum documentation searched (classification system followed by classification symbols) IPC(8): C12N 15/63, 15/00; C12P 19/34; C07H 21/02; C07K 14/195 (2015.01) CPC: C12N 15/63; C07H 21/02; C07K 14/195; USPC: 435/91.1, 440, 455, 89, 85, 84, 72, 41; 536/23.1, 22.1, 18.7, 1.11 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Patseer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, INPADOC); TheLens.org PatSeq; PubMed/NCBi Blast; EBSCO; Google; Google Scholar: target, 'nucleic acid,' 'RNA,' nucleotide, Argonaute, Ago, protein, 'Marinitoga piezophila,' mpago, 'Guide RNA,' 'gRNA,' 'Targeting nucleotide sequence,' binding, complementary, homologous, 'expression vector,' 'modified cell,' kit C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. 1-4, 47-49, 51-53, 55-58 US 2006/0141600 A1 (JOSHUA-TOR, L et al.) June 29, 2006; paragraphs [0015], [0134]-[0138] I-4, 47-49, 51-53, 55-58 US 2013/0217592 A1 (THE WASHINGTON UNIVERSITY) August 22, 2013; paragraph [0022] LUCAS, S et al. Complete Genome Sequence Of The Thermophilic, Piezophilic, Heterotrophic 1-4, 47-49, 51-53, 55-58 Bacterium Marinitoga piezophila KA3. J Bacteriol. November 2012, Vol. 194, No. 21; pages 5974-5975; Genbank Supplement, pages 1, 2; DOI: 10.1128/JB.01430-12. WO 2007/092181 A2 (UNVERSITY OF MASSACHUSETTS) August 16, 2007; abstract 1-4, 47-49, 51-53, 55-58 1-4, 47-49, 51-53, 55-58 WO 2007/048629 A2 (MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN E.V.) May 3, 2007; abstract See patent family annex. Further documents are listed in the continuation of Box C. Special categories of cited documents: later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document defining the general state of the art which is not considered to be of particular relevance earlier application or patent but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other appeal reason (as special reason (as specified) step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination document referring to an oral disclosure, use, exhibition or other being obvious to a person skilled in the art document published prior to the international filing date but later than "&" document member of the same patent family the priority date claimed Date of mailing of the international search report 2 8 JUL 2015 Date of the actual completion of the international search 10 July 2015 (10.07.2015) Name and mailing address of the ISA/ Authorized officer Mail Stop PCT, Attn: ISA/US, Commissioner for Patents Shane Thomas

PCT Helodesk: 571-272-4300

PCT OSP: 571-272-7774

P.O. Box 1450, Alexandria, Virginia 22313-1450

Form PCT/ISA/210 (second sheet) (January 2015)

Facsimile No. 571-273-8300

### **International Search Report**

Form PCT/ISA/210 (second sheet)

Documents Considered to be Relevant

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International Search Report Cited Documents (References)

DOCUMENTS CONSIDERED TO BE RELEVANT Category\* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. US 2007/0125844 A1 (LIBIN et al.) 07 June 2007 (07.06.2007), entire document, especially 1-2, 4-5, 7-15, 17-18, 20-**Document Categories** para [0002]-[0003], [0005], [0015]-[0017], [0021]-[0025], [0030], [0036] and abstract 3, 6, 16, 19 US 2005/0222873 A1 (NEPHIN et al.) 06 October 2005 (06.10.2005), entire document, 3, 6, 16, 19 especially para [0102], [0223]-[0227] US 2009/0043611 A1 (NADAS et al.) 12 February 2009 (12.02.2009) 1-22 US 2005/0086071 A1 (FOX et al.) 21 April 2005 (21.04.2005) 1-22 US 2008/0149701 A1 (LANE) 26 June 2008 (26.06.2008) 1-22 **Document Citations &** Relevant Passages



# Three Main Categories of Prior Art in an International Search Report

- "X" document
  - Claimed invention lacks
    - Novelty, or
    - Inventive step when considered alone (lacks inventive step = obvious)
  - "Stand alone" reference
- "Y" documents
  - Claimed invention lacks inventive step
    - When two or more documents are used in combination
- "A" document
  - General state of the art reference



#### PATENT COOPERATION TREATY INTERNATIONAL SEARCHING AUTHORITY PCT To: Paula A. Borden 1900 University Circle, Suite 200 East Palo Alto, California 94303 WRITTEN OPINION OF THE United States of America INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1) Date of mailing 2 8 JUL 2015 (day/month/year) Applicant's or agent's file reference FOR FURTHER ACTION BERK-239WO See paragraph 2 below International application No. International filing date (day/month/year) Priority date (day/month/year) 09 April 2015 (09.04.2015) 10 April 2014 (10.04.2014) PCT/US15/25147 International Patent Classification (IPC) or both national classification and IPC IPC(8) - C12N 15/63; C12P 19/34; C07K 14/195 (2015.01) CPC - C12N 15/63; C07H 21/02; C07K 14/195 Applicant THE REGENTS OF THE UNIVERSITY OF CALIFORNIA This opinion contains indications relating to the following items: Box No. I Basis of the opinion Box No. II Non-establishment of opinion with regard to novelty, inventive step and industrial applicability Lack of unity of invention Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement Box No. VI Certain documents cited Box No. VII Certain defects in the international application Box No. VIII Certain observations on the international application FURTHER ACTION If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered. If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later. For further options, see Form PCT/ISA/220. Authorized officer Name and mailing address of the ISA/ Date of completion of this opinion Mail Stop PCT, Attn: ISA/US Shane Thomas 10 July 2015 (10.07.2015) P.O. Box 1450, Alexandria, Virginia 22313-1450 PCT Helydesk: 571-272-4300 Facsimile No. 571-273-8300 PCT OSP: 571-272-7774

# Written Opinion of the ISA (Cover Sheet)

Form PCT/ISA/237 (cover sheet)

Contents of the Written Opinion of the ISA

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# Written Opinion of the ISA Basis of this Opinion

#### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International	application	No

PCT/US15/25147

Box No.	I Basis of this opinion
1. With	regard to the language, this opinion has been established on the basis of:
$\boxtimes$	the international application in the language in which it was filed.
	a translation of the international application into which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2.	This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a)).
3.	With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established on the basis of a sequence listing:
	a. of forming part of the international application as filed:
	in the form of an Annex C/ST.25 text file.
	on paper or in the form of an image file.
	b. furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
٠.	c. furnished subsequent to the international filing date for the purposes of international search only:
	in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
	on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4.	In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5 Add	itional comments

Form PCT/ISA/237 Box No. I

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#### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US 11/40256

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

1.	Statement

Novelty (N)	Claims	4-5, 11-12, 15-16, 18-19	YES
	Claims	1-3, 6-10, 13-14, 17, 20	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	, NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

#### 2. Citations and explanations:

Claims 1-3, 6-10, 13-14, 17, and 20 lack novelty under PCT Article 33(2) as being anticipated by US 2003/0004859 A1 to Shaw et al. (hereinafter 'Shaw').

Regarding claims 1 and 14, Shaw teaches a method, and computer readable medium, for smart matching electronic orders for a tradeable object, comprising: comparing a new working order to at least one pending order prior to suiting the new working order to at least one pending order prior to suiting the new working order to at least one pending order prior to suiting the readable object and the pending order is for a second quantity for the tradeable object, the new working order and the at least one pending order derived from at least one common trading strategy of one or more traders (a system automatically pairs users who have similarly entered counter-side transactional interest indications in the same item, where a secure station stores user data and transaction data in the form of multiple prospective transaction retries received from the user terminals, each entry including a fungible item indication and a transaction side indication identifying one of two opposing transaction sides, and where a search component is operatively coupled to the memory and adapted to perform a comparison of the stored entries with respect to the fungible item indications and the transaction side indications, and, based on that comparison, the search component selects sets of two or more stored entries as matching entries having the same fungible item indications and together including transaction side indication is indications indentifying the opposing transaction sides, para [0018], [0027], [0029], [0143]); in response to comparing, determining that the new working order and the at least one pending order are contra orders and have a common price (counter, or contra, side transactions are identified, para [0018], [0027], [0029]); matching at least a portion of the first quantity of the pending order (the contra-side orders are matched, para [0018], [0027], [0029]); and reporting a match of the working order and the pending order (the tonsaction is reported, para [0018],

Regarding claim 2, Shaw teaches where matching comprises matching the first quantity of the new working order and at least a portion of the second quantity of the pending order via the computing device (a set of matching entries is realized if the members of the potential set include at least one entry on each side of the transaction, para (0027, [0029]).

Regarding claim 3, Shaw teaches reporting a match of the first quantity of the new working order (a particular transaction is reported, para 101741).

Regarding claims 6 and 17, Shaw teaches submitting a message to the electronic exchange to delete the at least a portion of the second quantity (personalized user page allows users to enter, modify, monitor, and delete indications of transaction interest, para [0082], [0091], [00971, [00971, 0011).

Regarding claim 7, Shaw teaches sending a cancel/replace message to the electronic exchange to cancel and replace the pending order with a new pending order (personalized user page allows users to enter, modify, monitor, and delete indications of transaction interest, para [0022, [0091], [0097], [0011], [0097], [0011].

Regarding claim 8, Shaw teaches where the new pending order comprises a remainder of the second quantity not matched with the new working order (the remainder of shares not within a single transaction are apportioned among several parties, para [0161]).

Regarding claim 9, Shaw teaches where matching comprises matching at least a portion the first quantity of the new working order and the second quantity of the pending order (the proposed buy and sell orders are matched, para [0027], [0029], [0079], [0161], [0190]).

Regarding claim 10. Shaw teaches reporting a match of the second quantity of the pending order (the transaction is reported, para [0174]).

Regarding claim 13, Shaw teaches where the new working order comprises an outright order (buy and sell orders, para [0079], [0190]).

-CONTINUED IN SUPPLEMENTAL BOX-

#### Written Opinion of the ISA -Reasoned Statement

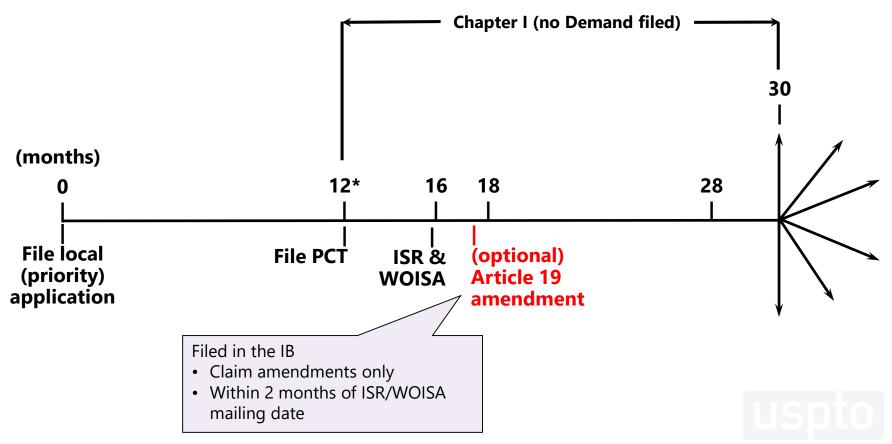
Form PCT/ISA/237 Box No. V

- Citations and explanations on
  - novelty
  - inventive step, and
  - industrial applicability
     of the claimed invention



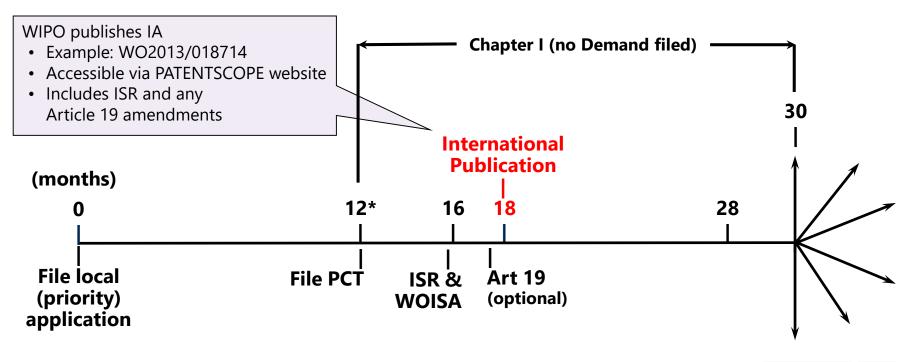
## **PCT System – Chapter I**

**Article 19 Amendment Filed** 



### **PCT System – Chapter I**

#### **International Application Publication**



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

(19) World Intellectual Property Organization

International Bureau

#### (43) International Publication Date 29 October 2015 (29.10.2015)



10) International Publication Number WO 2015/164105 A2

- (51) International Patent Classification: G06F 1/16 (2006.01)
- (21) International Application Number:

PCT/US2015/025497

WIPO PCT

English

English

(22) International Filing Date:

13 April 2015 (13.04.2015)

- (25) Filing Language: (26) Publication Language:
- (26) Publication Language:
- (30) Priority Data: 14/260,137

A2

5/164105

- 14/260,137 23 April 2014 (23,04,2014) U Appllcant: MICROSOFT TECHNOLOGY LICENS
- (71) Applicant: MICROSOFT TECHNOLOGY LICENS-ING, LLC [US/US]; One Microsoft Way, Redmond, Washington 98052-6399 (US).
- (72) Inventors: MCCRACKEN, Ivan Andrew; c/o Microsoft Technology Licensing, LLC, LCA - International Patents (8/1172), One Microsoft Way, Redmond, Washington 98052-6399 (US). WANG, Hua; c/o Microsoft Technology Licensing, LLC, LCA - International Patents (8/1172), One Microsoft Way, Redmond, Washington 98052-6399 (US). AAGAARD, Karsten; c/o Microsoft Technology Licensing, LLC, LCA - International Patents (8/1172), One Microsoft Way, Redmond, Washington 98052-6399 (US). WHITT, David Otto, III; c/o Microsoft Technology Licensing, LLC, LCA - International Patents (8/1172), One Microsoft Way, Redmond, Washington 98052-6399 (US). BINGHAM, Robert James, Jr.; c/o Microsoft Technology Licensing, LLC, LCA - International Patents (8/1172), One Microsoft Way, Redmond, Washington 98052-6399 (US). GROENE, Ralf; c/o Microsoft Technology Licensing, LLC, LCA - International Patents (8/1172), One Microsoft Way, Redmond, Washington 98052-6399 (US).
- (81) Designated States funless otherwise indicated, for every kind of national protection available; AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, E. IS, TI, TL, TL, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, 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))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

#### Published

 without international search report and to be republished upon receipt of that report (Rule 48.2(g))

(54) Title: ARTICULATED SCREEN COVER FOR ACCOMMODATING OBJECTS

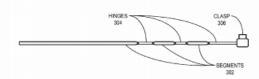


FIG. 3

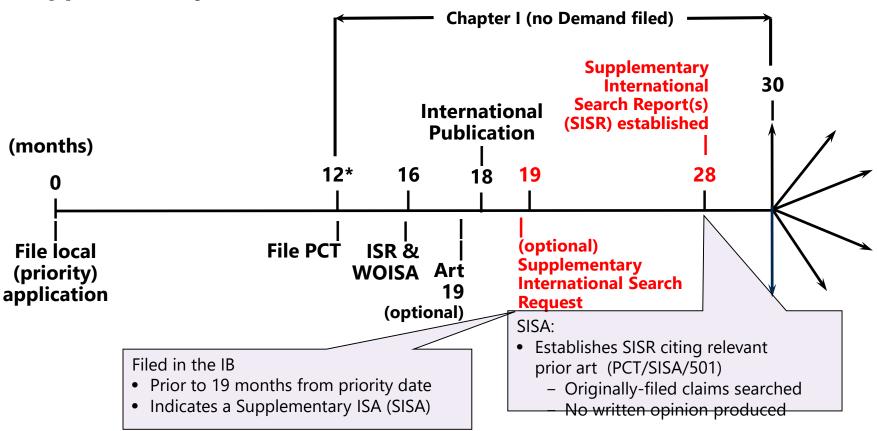
(57) Abstruct: A cover for a mobile computing device is described. The cover comprises two or more hinges so constructed that the hinges are substantially rigid when in-plane and flexible when out-of-plane. The cover includes segments made of a rigid material disposed between the hinges. The cover, when swiveled to the back side of the computing device, forms a contour around an object such as a stylus to secure the object to the back side of the computing device when the object is present. The cover becomes substantially flat and parallel to the back side of the computing device when the object is present.

# International Application Published under the PCT

Front/Bibliographic Page

### **PCT System – Chapter I**

**Supplementary International Search** 



Email questions to: inventorinfochat@uspto.gov

#### PATENT COOPERATION TREATY

#### **PCT**

#### SUPPLEMENTARY INTERNATIONAL SEARCH REPORT

(PCT Rule 45bis)

(*************************************				
Applicant's or agent's file reference	International application No.			
11506-CB	PCT/US2009/065691			
International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)			
24-11-2009	25-11-2008			
Applicant				
The Procter & Gamble Company et a	1			
This supplementary international search report has been prepared by this Authority specified for supplementary search and it is transmitted to the applicant in accordance with Rule 45bis.8(a). A copy is being transmitted to the International Bureau.  This report is a corrected version of a previously issued supplementary international search report  This supplementary international search report consists of a total of 4/2 sheets.  It is also accompanied by a copy of each prior art document cited in this report.  Basis of the report  a. With regard to the language, the supplementary international search was carried out on the basis of:  the international application in the language in which it was filed  a translation of the international application into  which is the language of a translation furnished for the purposes of:  the international search (Rules 12.3(a) and 23.1(b)).  the international publication (Rule 12.4)				
mistake notified to this Authority under Rule 91 (Rule 91)  c. With regard to any nucleotide and/or amino acid state.  d. This supplementary international search report has be	ocen established taking into account the rectification of an obvious ules 43.6bis(a) and 45bis7(c)).  equence disclosed in the international application, see Box No. I. been established taking due account of the international search no international search report will be established, and the written			
Certain claims were found unsearchable (see Box     Unity of invention is lacking (see Box No. III).	: No. II).			
Form PCT/SISA/501/ (first sheet) (January 2009)				

### Supplementary International Search Report

Form PCT/SISA/501 (first sheet)

1

#### SUPPLEMENTARY INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2009/065691

#### A. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic database consulted during the supplementary international search (name of database and, where practicable, search terms used)

#### EPO-INTERNAL, WPI DATA, PAJ, MEDLINE, EMBASE, CADATA

#### B. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
х	STN International, File CAPLUS, CAPLUS accession number 1988:101076, document number 108:101076, Feng L.: "Amorphous silicone dioxide and transparent toothpaste", & Riyong Huaxue Gongye, 1987, 3, 133-6, Indexed for CAS reg.no. 60676-86-0	1-15
X,P	US 20090130030 A1 (RIBI H.O.), 21 May 2009 (21.05.2009), paragraph (0022) Fused silicates listed as polishing agents	1-15
	<del></del>	
A	US 2268589 A (HEANY J.A.), 6 January 1942 (06.01.1942), page 2, column 1, line 25, claim 1, Vitreous, non-porous silica as tooth paste ingredient	1-15

X	Further documents are listed on the continuation of second sheet B.	
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X See patent family Annex.

See Scope Annex for details of the scope of the supplementary international search.

Special categories of cited documents:

international search

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other

Date of the actual completion of the supplementary

- "P" document published prior to the international filing date but later than the priority date claimed
- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- (" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

#### Date of mailing of the supplementary international search report 2 8 -10- 2010

#### 25 October 2010 Name and mailing address of the SISA/ Swedish Patent Office

Email questions to: inventorinfochat@uspto.gov

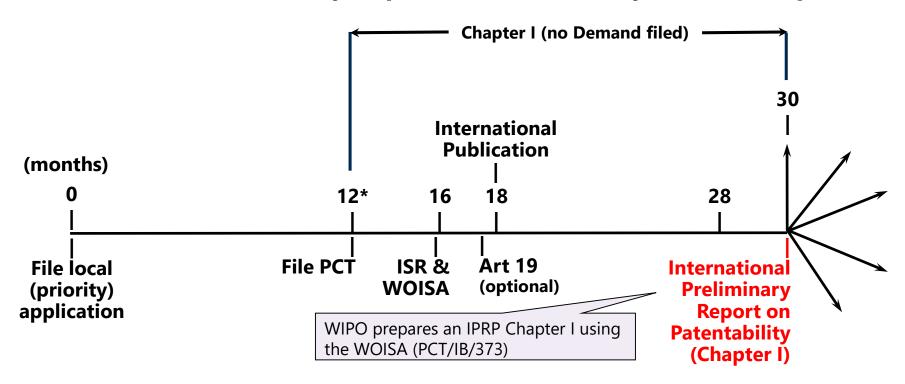
### Supplementary International Search Report

Form PCT/SISA/501 (second sheet)

Documents Considered to be Relevant

### **PCT System – Chapter I**

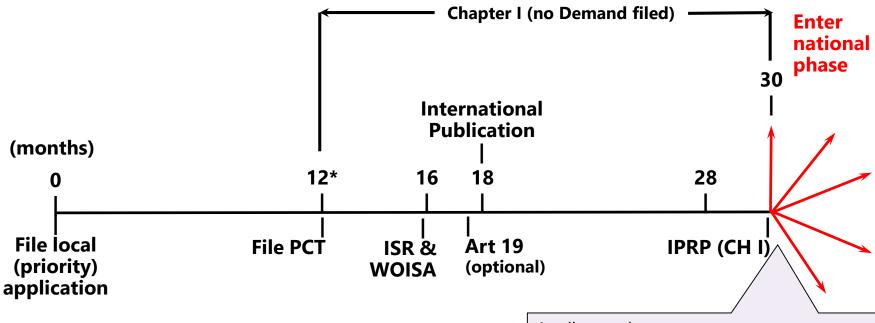
International Preliminary Report on Patentability (IPRP) (Chapter I)





### **PCT System – Chapter I**

**National Phase Entry from Chapter I** 



Applicant takes steps to pursue patent protection in various States

- Express intention to enter national phase
- Pay fees
- Provide translation

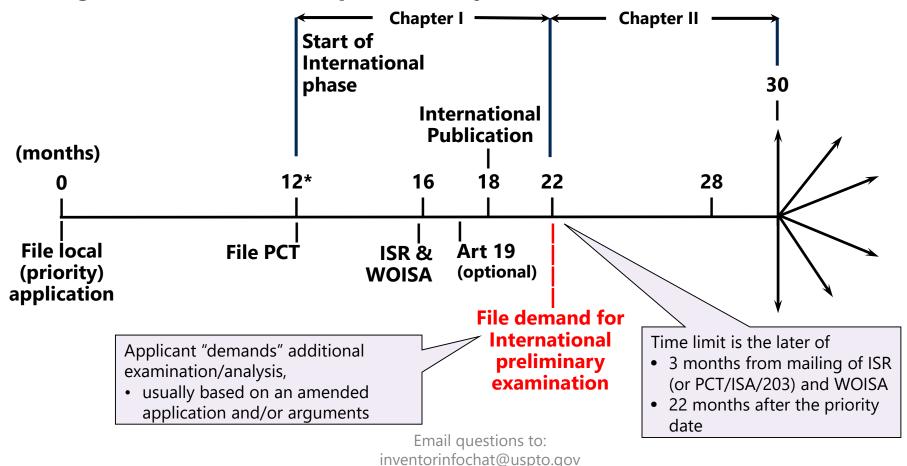
Email questions to: inventorinfochat@uspto.gov

## **Chapter II**



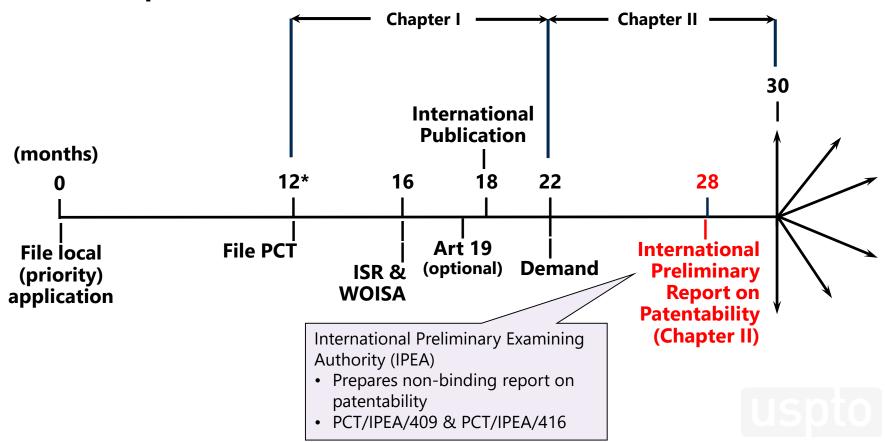
### **PCT System – Chapter II**

**Filing of Demand for Chapter II Entry** 



### **PCT System – Chapter II**

**IPRP (Chapter II)** 



#### PATENT COOPERATION TREATY **PCT**

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)						
	(PCT Article 30	and Kule 70)				
applicant's or agent of forence			Sec Form PC 1/IPEA/416			
00.029 nternational application No.	International filing date (a	lau/mänth/saarl	Priority date (day/month/year)			
CT/US12/54468	10 September 2012 (10.09		10 September 2011 (10.09.2011)			
nternational Patent Classification (IPC)			10 September 2011 (10:05:2011)			
PC: A63B 21/02( 2006.01) ISPC: 482/92,121,122			-			
pplicant PIRAFLEX, INC.						
This report is the internation     Authority under Article 35 and     This REPORT consists of a tell	d transmitted to the applicar	at according to Article 3	y this International Preliminary Examining 6.			
<ol><li>This report is also accompanies</li></ol>	, .	-				
a. (sent to the applicant	t and to the International Bu	reau) a total of 14she	ets, as follows:			
sheets of the description, claims and/or drawings which have been amended and/or sheets containing rectifications authorized by this Authority, unless those sheets were superseded or cancelled, and any accompanying letters (see Rules 46.5, 66.8, 70.16, 91.2, and Section 607 of the Administrative Instructions).						
sheets containing rectifications, where the decision was made by this Authority not to take them into account because they were not authorized by or notified to this Authority at the time when this Authority began to draw up this report, and any accompanying letters (lettes 66.4bis, 70.2(c), 70.16 and 91.2).						
superseded sheets and any accompanying letters, where this Authority either considers that the superseding sheets contain an amendment that goes beyond the disclosure in the international application as filed, or the superseding sheets were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in item 4 of Box No.I and the Supplemental Box (see Rule 70.16(b)).						
b. (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s))  containing a sequence listing, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see paragraph 3bis of Annex C of the Administrative Instructions).						
4. This report contains indication	ns relating to the following i	tems:				
Box No. I Bi	asis of the report					
Box No. II Pr	riority					
Box No. III No.	on-establishment of opinion	with regard to novelty,	inventive step and industrial applicability			
Box No. IV La	Box No. IV Lack of unity of invention					
	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement					
Box No. VI C	ertain documents cited					
Box No. VII C	ertain defects in the internation	onal application				
Box No. VIII Co	ertain observations on the int	ernational application				
ate of submission of the demand		Date of completion of	this report			
1 February 2013 (01.02.2013)		12 June 2013 (12.06.2	9013)			
ame and mailing address of the IPEA/ US		Authorized officer				
Mail Stop PCT, Attn: IPEA/US Commissioner for Patents						
P.O. Box 1450		/LoAn H. Thanh/				
Alexandria, Virginia 22313-1450		Telephone No. 571-2	70-1702			
acsimile No. (571) 273-3201 Telephone No. 371-270-1702 rm PCT/IPEA/409 (cover sheet) (July 2011)						

#### **IPRP Chapter II Cover Sheet**

Form PCT/IPEA/409

Contents of the IPRP (CH II)

# IPRP (Chapter II) Basis of the Report

	International application No.			
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY	PCT/US12/54468			
Box No. I Basis of the report				
With regard to the language, this report is based on:				
the international application in the language in which it was filed.				
a translation of the international application into English which is the lan	guage of a translation furnished for the purposes of:			
international search (Rules 12.3(a) and 23.1(b)).				
publication of the international application (Rule 12.4(a)).				
international preliminary examination (Rules 55.2(a) and/or 55.3(a)	) and (b)).			
<ol> <li>With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):</li> </ol>				
the international application as originally filed/furnished				
the description:				
pages 1-17 as originally filed/furnished pages NONE received by this Authority on				
pages* NONE received by this Authority on				
the claims:				
pages NONE as originally filed/furnished				
pages* NONE as amended (together with any statement) under Article 19 pages* 18-22, 22-1, 22-2 received by this Authority on 01 February 2013 (01.02.2013)				
pages* NONE received by this Authority on	5 (01.02.2013)			
the drawings:				
pages 1/13 - 13/13 as originally filed/furnished				
pages* NONE received by this Authority on	·			
•	-			
Form PCT/IPEA/409 (Box No. 1) (July 2011)				

Form PCT/IPEA/409 Box No. I

- Basis of the report
  - Application as amended

# IPRP (Chapter II) Reasoned Statement

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No. PCT/US12/54468

2. Citations and Explanations (Rule 70.7)

1) Claims 1-6 lack an inventive step under PCT Article 33(3) as being obvious over Hsieh et al. (US Pat. No. 7,828,704 B1, Nov. 9, 2010) (herein "Hsieh") in view of Truini (US Pat. No. 5,720,701, Feb. 24, 1998).

Claims NONE

With respect to claim 1, Hsieh teaches a personal exercise device 10 comprising a first arm and a second arm (such as left and right rods 11) pivotally coupled to the first arm at a pivot point. (See Hsieh, Abstract, col. 2, line 48 - col. 3, line 9, and Fig. 1). Hsieh also teaches a first handle 12 and a second handle 12 removably coupled to the first art land second arm 11, respectively away from the pivot point. (See Hsieh, Fig. 2, which shows the two halves 121 of the handles 12 being mutually assembled together, as described in col. 3, lines 10-16, with projections (not numbered) that are commonly used to connect two components together via screws, thereby making the handles removable).

Hsieh further teaches a resistance member (i.e., first torsional spring 20) operably connected to both the first arm (left rod 11) and the second arm (right rod 11) and configured to resist the relative rotational motion of the first arm (left rod 11) with toward the second arm (right rod 11). (See Hsieh, Fig. 2 in which the spring 20 is connected to left and right rods 11 via first and second main bodies 101,102.) The torsional spring 20 provides resistance against both outward and inward forces applied to the arms (i.e., rods 11) in at least two substantially opposing directions. See also col. 2, line 48 - col. 3, line 9). Thus, he resistance member (i.e., spring 20) is engaged to provide resistance against the first and second arms pivoting towards each other when an adduction force is applied against the first and second handles 12 (i.e., by moving rods 11 pivotally towards each other via handles 12, the spring 20 provides the resistance in the opposite direction from pivoting the arms 11 together).

Hsieh is silent in explicitly teaching that the exercise devices includes a first tension member operably connected between the first handle and the second arm, and a second tension member operably connected between the second handle and the first arm. Hsieh is also silent in explicitly teaching that the resistance member provides resistance when an abduction force is applied against the first and second handles by the first and second tension members upon extending the first and second handles from the first and second arms.

Truini, however, in an analogous art teaches an exercising device with pivoting arms and handles. (See Truini, Abstract, and Fig. 1). Truini teaches a first tension member (i.e., resilient member 36a) operably connected between a first handle 26 and a second arm 12. Truini also teaches a second tension member 36b operably connected between a second handle 15 and a first arm 22. (As seen Fig. 1 of

Form PCT/IPEA/409 (Box No. V) (July 2011)

Form PCT/IPEA/409 Box No. V

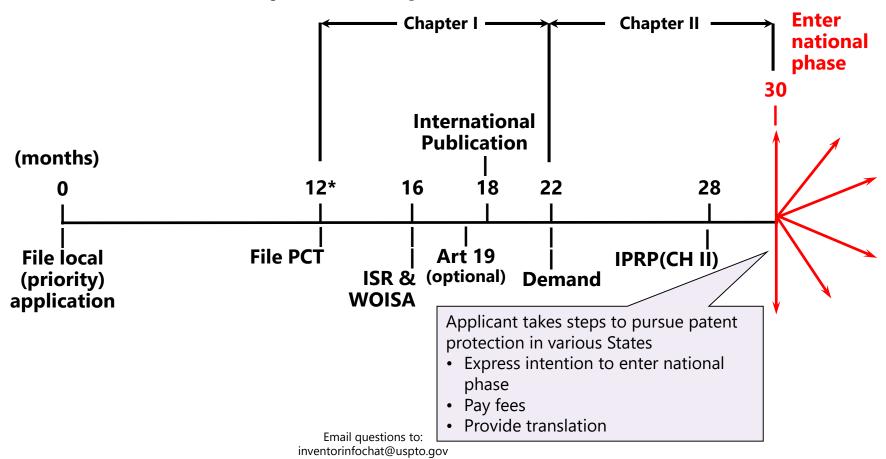
Citations and explanations on

- Novelty,
- Inventive step, and
- Industrial applicability of the claimed invention

Email questions to: inventorinfochat@uspto.gov

### **PCT System – Chapter II**

**National Phase Entry from Chapter II** 



## **The National Stage**



### **National Stage Requirements**

- PCT Articles 22 & 39 require furnishing of the following for national/regional stage entry
  - A copy of the international application (unless already provided by the International Bureau)
  - A translation of the international application (where appropriate)
  - The national fee
- National/Regional Offices may have additional requirements
  - PCT Applicant's Guide provides details
    - http://www.wipo.int/pct/en/appguide/



### **PCT Route Filing Strategies**

- Some options for foreign filing using the PCT\*
  - Option 1: Nonprovisional followed by PCT
  - Option 2: Provisional followed by PCT
  - Option 3: Provisional followed by Nonprovisional and PCT
  - Option 4: PCT filed first

\* List is not exhaustive



### **Avoiding Common Mistakes**

- Confidentiality
  - Avoid making the invention public prior to filing a patent application
  - Many countries have an absolute novelty requirement
- Be familiar with key dates and deadlines
  - Under U.S., foreign, and international laws
    - *E.g.*, one year deadline from first filing in U.S. to file directly in foreign countries to preserve priority
- Recommend securing services of a registered patent attorney or agent
  - If unfamiliar with the complexities in obtaining foreign patent rights
  - To avoid potentially losing patent rights



#### **PCT Resources**

- <a href="http://www.uspto.gov/patents-getting-started/international-protection/international-patent-legal-administration-formerly">http://www.uspto.gov/patents-getting-started/international-protection/international-patent-legal-administration-formerly</a>
  - International Patent Legal Administration web page on USPTO Internet site
    - Forms, fees, rules, etc.
- http://www.wipo.int
  - World Intellectual Property Organization
    - PCT Newsletter, PCT Applicant's Guide, Hague Guide for Users
    - ePCT, PATENTSCOPE, etc.



### **Upcoming OID Events**

- August 16, 2018

   Inventor Info Chat: Global Dossier
- August 17-18, 2018 Invention Con-Alexandria, VA
  - "Concept to Commercialization"
- For more information or to register for any of the above events contact us at <a href="mailto:oidevents@uspto.gov">oidevents@uspto.gov</a>

https://www.uspto.gov/patents-application-process/inventor-info-chat



## Questions?



Foreign Filing 56

