
PROTECTING INNOVATION INTERNATIONALLY

PATENT STRATEGY IN VIEW OF DIFFERENT LEGAL REGIMES IN EUROPE AND THE USA

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A FEW WORDS ABOUT US

BCF LLP

Business law

Canadian, U.S., European, U.K. Patent Agents/Attorneys

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Software/IT, Telecom, Mechanical

- Over 10 years in-house experience
- Managed patent procurement and enforcement around the world
- Over 4 years private practice experience
 - Bringing business focus into patent protection of inventions
 - Representing both large international corporations and SME/start-ups



PRESENTATION OVERVIEW

CHAPTERS

Overview of international patent systems

**Selecting your international patent strategy –
key considerations**

**Considering key differences between European
and US patent systems when preparing your
patent application**

**Special considerations for patent applications
originating from Russian applicants / inventors**

KEY TAKEAWAYS

- Patent is a **business tool**
- Patent strategy should be closely aligned with the business objectives for the technology
- Claimed subject matter should be revisited periodically throughout the patent application life cycle to ensure alignment with business objectives
- An early investment in a solid International/US/EP patent and protection strategy can pay dividends in the long run

**MANAGE YOUR INTERNATIONAL PATENT ASSETS
WISELY TO SUPPORT YOUR BUSINESS GOALS!**

OVERVIEW OF INTERNATIONAL PATENT SYSTEMS



OVERVIEW OF INTERNATIONAL SYSTEMS

- **Patents, for the most part, are creatures of national laws – they are obtained and enforced in accordance with national laws and regulations.**
- **Even though national laws “sound” the same, the specific requirements for obtaining patents can vary drastically:**
 - Patentable subject matter, interpretation of patentability requirements (especially obviousness), written description and support requirements
- **Several international treaties exist in an attempt to harmonize patent regimes around the world.**

INTERNATIONAL PATENT SYSTEM

PATENTS and DESIGNS

- **Paris Convention**
- **Patent Co-operation Treaty**
- **EPO (European Patent Convention)**
 - London Agreement
 - Unified European Patent / Unified European Court System
NEW!!!
- **EAPO (Eurasian Patent System)**

INTERNATIONAL PATENT SYSTEM (CONT.)

- **ARIPO (African Regional Intellectual Property Organization)**
- **OAPI (Organisation Africaine de la Propriété Intellectuelle)**
- **Trans Tasman Mutual Recognition treaty**
- **Hague Agreement**
 - Geneva Act (WIPO)

TRADEMARKS AND COPYRIGHT

- **Madrid Protocol / Madrid Agreement**
- **Berne Convention**

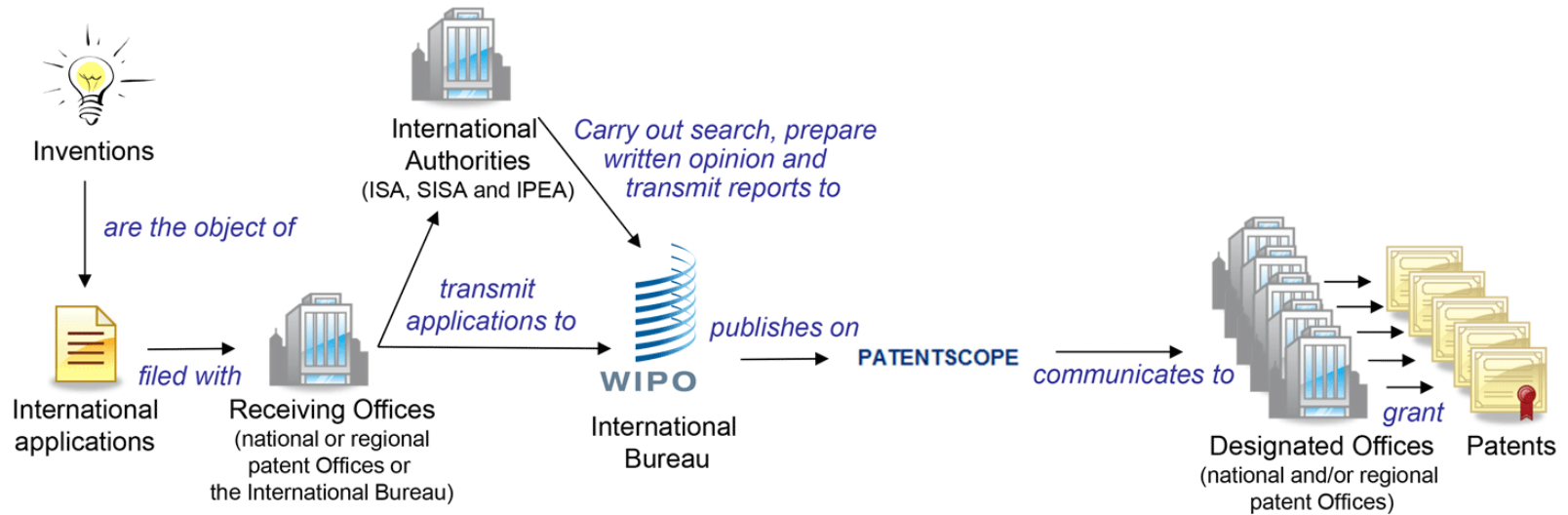
PATENT CO-OPERATION TREATY (PCT)

- The Patent Co-operation Treaty, called PCT for short, is an international patent examination system that first came into existence in 1978.
- Administered by the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations, headquartered in Geneva, Switzerland.
- Currently includes 152 contracting states (newest member- Jordan) and 4 regional patent organizations.
- Some key jurisdictions are not part of PCT:
 - Taiwan (not part of the Paris convention either), Argentina, Venezuela, Uruguay

PATENT CO-OPERATION TREATY (PCT)

- **The PCT system is available for filing patents and utility models, not for designs (Hague) or trademarks (Madrid).**
- **The PCT system is a patent filing system, not a “granting” system: it provides an international patent searching and/or examination.**
- **Individual countries still need to individually grant the final patent.**

PCT APPLICATION PROSECUTION



PATENT CO-OPERATION TREATY (PCT)

Benefits of the PCT filing:

- **One application in one language can be filed to secure a filing date internationally.**
- **Control of early prosecution is held in fewer hands.**
- **Fee may be reduced at national phase entry from PCT in some jurisdictions (compared to direct filing in each jurisdiction).**
- **Decisions on foreign filings can be postponed up to 30 months from first (local) filing.**
 - This may also be advantageous to give time for the technology to mature before investing in each jurisdiction.

PCT APPLICATION PROSECUTION

Amendments to the PCT Application available during prosecution (at least twice):

▪ Article 19

- Must be made by the 16th month after the original filing, or two months after the International Search Report is issued (whichever is later).
- Amendments can only be made to the claims.
- These amendments must be filed with the International Bureau (not with the Receiving Office).

▪ Article 34

- Amendments can only be made if requesting Examination under Chapter II (which is optional and incurs additional costs).
- Amendments must be made by the 22nd month after original filing.
- Amendments can be made to any of the claims, description, and figures.
- Depending on the timing, several rounds of prosecution may be possible.

SELECTING INTERNATIONAL PATENT STRATEGY – KEY CONSIDERATIONS



FOREIGN FILING STRATEGY

There can be several different approaches to foreign filing strategies, including:

- Filing in a limited number of selected jurisdictions directly.
- Filing a local or provisional application, then (within 12 months) filing in selected jurisdictions directly.
- Filing a local or provisional application, then (within 12 months) filing a PCT application, then (within 30 months of original filing) filing national entries.

FOREIGN FILING STRATEGY



0 / 6 months

Direct filing in select jurisdictions

Benefits:

- **Ability to get the patent grant ASAP**
- **Cost “savings” for international route avoidance**

Applicability:

- **Russia – first filed jurisdiction (wait 6 months for foreign filing license or petition for early secrecy examination)**
- **Important technology**
- **Crowded market space with many copy cats**
- **Technologies with short life cycles**

FOREIGN FILING STRATEGY



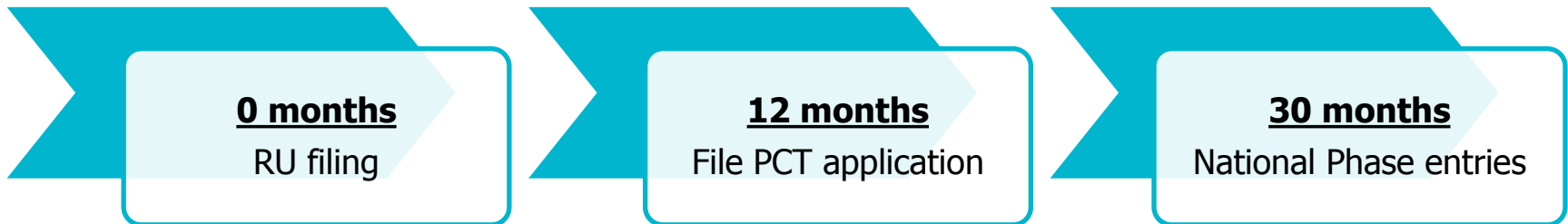
Benefits:

- **Ability to incorporate new embodiments within the priority year**
- **Ability to “draw the line in the sand”**
- **Ability to get most broad coverage / claim construction**

Applicability:

- **Forward looking technologies**
- **Ground-breaking innovation**
- **Technologies with iterative development process**

FOREIGN FILING STRATEGY



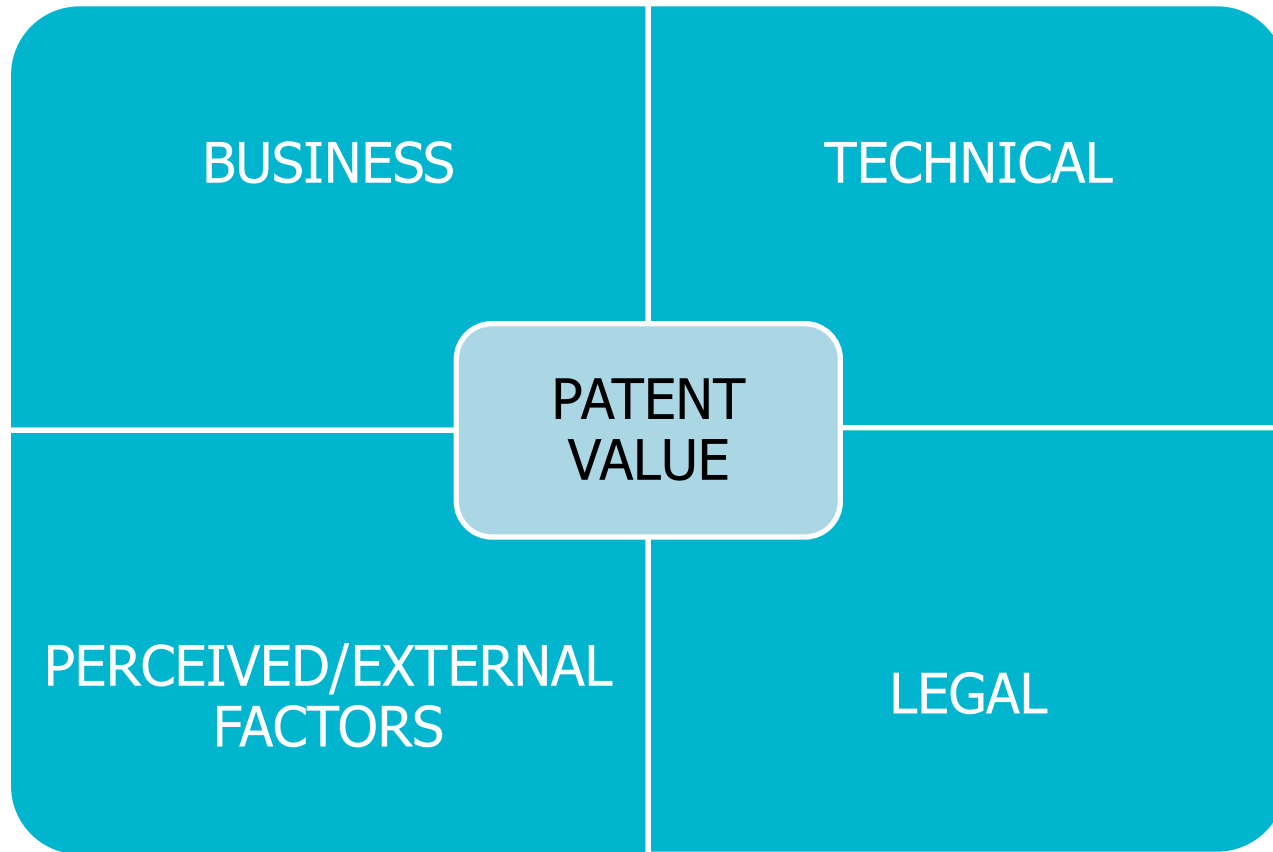
Benefits:

- **Ability to defer major costs towards later stage of patent life cycle**
- **Ability to “buy” more decision-making time**
- **Ability to amend claims at a single point through PCT**
- **Ability to use PCT-based PPH system to expedite examination**

Applicability:

- **Potentially important innovation**
- **Innovation, which business importance may not be clear from day one**

FOREIGN STRATEGY – KEY CONSIDERATIONS



FOREIGN STRATEGY – KEY CONSIDERATIONS

- **Budget / Value of the patent**
- **Product life cycle**
- **Geographical footprint of the invention**
- **Marketing roadmap**
- **Competitive conditions**
- **Who is the potential infringer (claims in the country)**
- **National laws and enforcement practices**

FOREIGN STRATEGY – KEY CONSIDERATIONS

- **Foreign patent protection is expensive:**
 - Higher government fees
 - Translation costs (especially if translated into multiple languages)
 - Foreign attorneys' fees

FOREIGN STRATEGY – FEE COMPARISON: EP –US

	Europe	United States
Filing Fees	~\$2400 (USD)	\$1600 (USD)
Discounts	None	Small Entity (-50%) Micro Entity (-75%)
Excess Claim Fees	Yes >15 claims (expensive)	Yes > 20 claims (relatively inexpensive)
Multiple Dependencies	Allowed, very commonly used	Not generally used due to large fees incurred (no multiple on multiple)
Request Examination	Yes, ~\$2000 (USD)	No
Application Maintenance Fees	Annually from 2 nd year - start at ~\$570 (USD)	No
Patent Maintenance Fees	(1) Payable to national patent office for each validated patent, OR (2) UP renewal fee	Due at 3½, 7½, and 11½ years (\$1600, \$3600, \$7400 USD)

FOREIGN STRATEGY – STRATEGY TRADE-OFFS

- **Idea of coverage trade-offs**

- Cheap vs. expensive jurisdictions (for example, Japanese application filed through associate vs. Canadian application filed in-house).
- Focused claim set vs. extensive part-subsystem-system claim set (evaluate value of the case, where possible).
- Focused international filing vs. extensive number of filings in selected jurisdictions.

FOREIGN FILING STRATEGY– PATENT PROSECUTION HIGHWAY

Patent Prosecution Highway (PPH) – Fast Track Examination

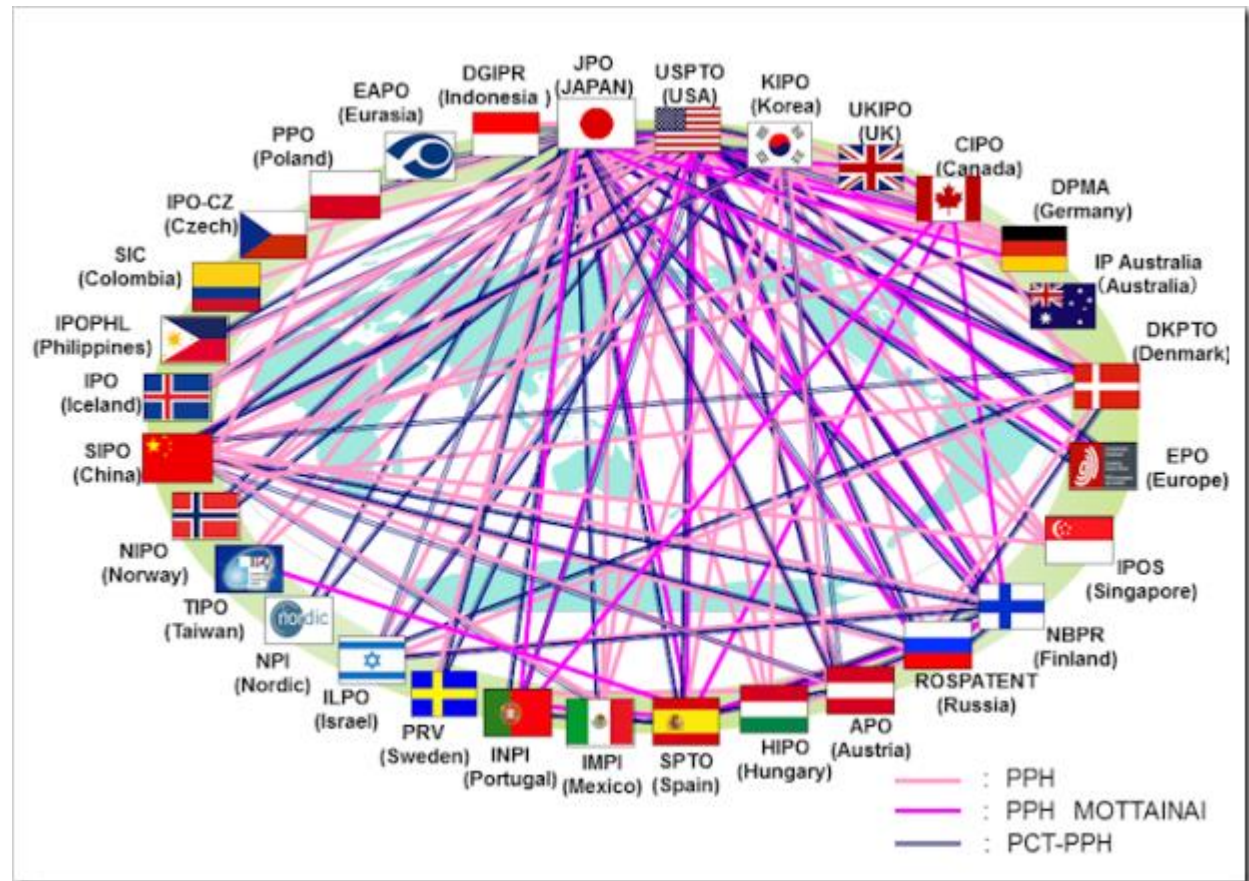
- Participating offices agree to fast-track examination for applications that have received a positive patentability report from another participating office.
- Applying for fast-track examination based on a PPH request provides accelerated examination without a fee.
- Positive **Written Opinions** and **Preliminary Reports on Patentability** from PCT prosecution often satisfy the positive patentability report requirement for requesting PPH.

FOREIGN FILING STRATEGY – FAST TRACK EXAMINATION WITH PPH

Examples of PPH agreements as of 2015

(PPH Mottainai is PPH 2.0- improved agreements)

Illustration produced by the Japanese Patent Office (JPO)



FOREIGN FILING STRATEGY– TYPES OF PROTECTION

- **Utility patent**

- Basic patent – “standard” patent

- **Utility model**

- Also sometimes called *innovation patent*
- Usually less stringent requirements (in many countries, formalities and/or novelty examination only)
- Usually has a shorter term of protection
- Some versions available in many jurisdictions, including:
 - *China*
 - *Taiwan*
 - *Germany*
 - *Japan*

FOREIGN FILING STRATEGY– TYPES OF PROTECTION

- **Dual strategy**

- *China, TW*
- Applying for both utility model and utility patent
- Covers different (or even the same) aspect of the technology
- Has different stringency of examination
- But also different terms of protection (10 vs 20 years China)

- **Typical use**

- File same spec as utility model and utility patent
- Utility model is typically granted fast – early protection against infringers
- When the utility patent is allowed, the applicant can abandon the granted utility model in favor of the utility patent

KEY DIFFERENCES BETWEEN EUROPEAN AND US PATENT SYSTEMS



OVERVIEW OF THE U.S. PATENT SYSTEM

Common law-based

- Role of precedent: binding court decisions
- As a result, US patent practice is “reactive”

Geared towards litigation

- Person of ordinary skill in the art (POSITA) vs. Judge vs. Jury
- Post-AIA office-based challenges to patents

“Administered” by lawyers and not necessarily “technical” persons

- Not all lawyers/judges/jurors involved in patent disputes have a technical training

OVERVIEW OF THE EUROPEAN PATENT SYSTEM

Civil law-based

- Limited binding power of precedents (e.g. G decisions)
- Relatively slow changing system / grounded in EPO convention

Enforcement is national

- EPO based opposition (some inconsistencies between boards)
- Enforcement in national states harmonized law, applications may vary)*

“Administered” by patent attorneys and “technical” persons (judges, examiners)

- Brings “final” evaluation of patentability more upfront (Patent Office rather than Court)
- Technical Judges

PATENTABLE SUBJECT MATTER

In a constant state of development in the US, well settled in Europe

USA	EPO
<ul style="list-style-type: none">➤ Article 35 U.S.C. §101 of the United States Patent Law defines four categories of patentable inventions: process, machine, manufacture and composition of matter.➤ This list is exhaustive.➤ Statutory law of the United States does not define any exclusions from patentability: abstract ideas, natural phenomena and laws of nature.	<ul style="list-style-type: none">➤ Article 52 (2) of the European Patent Convention lists subject matter that, considered as such, is <u>not</u> patent-eligible.➤ The list of exclusions recites:<ul style="list-style-type: none">▪ Discoveries, scientific theories and mathematical methods;▪ Aesthetic creations;▪ Schemes, rules and methods for performing mental acts, playing games or doing business, and computer programs (per se);▪ Presentations of information.

PATENTABLE SUBJECT MATTER

RECENT U.S. SUPREME COURT DECISIONS: FOCUS ON SUBJECT MATTER & OBVIOUSNESS

BUSINESS METHODS/IT PATENTS after

- *Alice Corp. v. CLS Bank*, 134 S.Ct. 2347 (2014)

DNA after

- *Int'l Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S.Ct. 2107 (2013)

DIAGNOSTIC METHODS after

- *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 32 S.Ct. 1289 (2012)

PATENTABLE SUBJECT MATTER

Software - USA

The USPTO guidelines provide examples of the limitations that were held to be insufficient to qualify as "significantly more", when recited in a claim that included a judicial exception:

- Performing repetitive calculations
- Receiving, processing and storing data
- Scanning or electronically retrieving data from a physical document
- Electronic recordkeeping
- Automating mental tasks
- Receiving and transmitting data through a network

PATENTABLE SUBJECT MATTER

Software - EPO

Concept of “technical character” / further technical effect:

- **Computer programs *as such* are not patentable.**
- **For software-implemented inventions, reciting a computer generally provides technical character.**
- **Need for (further) technical effect:**
 - Compare a program that performs calculations to control an industrial process or an autopilot of a car vs. a program that organizes images on a screen of a computer to make them easier to be appreciated by the user.

PATENT PROSECUTION

USPTO and EPO

USA	EPO
<ul style="list-style-type: none">▪ 1-year grace period▪ Multiple ways to enter the USPTO (NPE, CON, US as first filed)▪ Internal priority is available▪ Provisional patent applications are available	<ul style="list-style-type: none">▪ 6-month grace period in very limited circumstances▪ Direct file at the EPO, RPE entry into EPO, NPE entry in certain EP individual states has been closed▪ Internal priority is available▪ Provisional patent applications are not available

PATENT PROSECUTION

USPTO and EPO

USA	EPO
<ul style="list-style-type: none">▪ Enablement requirement▪ Written description requirement▪ Multiple embodiments – support for claim amendments and broad claim construction▪ Claims are construed with an eye to the description, hence description is as important as claims	<ul style="list-style-type: none">▪ Sufficiency▪ Clarity<ul style="list-style-type: none">– Claim language should be clear “on its face” with no recourse to the description▪ Multiple embodiments, but all specific desired combination must be described<ul style="list-style-type: none">– No cherry picking

PATENT PROSECUTION

USPTO and EPO

USA	EPO
<ul style="list-style-type: none">▪ Support for amendments can be derived from the description and figures as filed▪ As long as multiple embodiments are described in the application as filed, support can be found for virtually any amendment that is reasonably supported by the embodiments described	<ul style="list-style-type: none">▪ Very strict rules for amendment support, close to literal support is required▪ “Unambiguously Derivable” test for determining if support for amendments exists is applied▪ Extremely strict rules against “cherry picking” amongst various embodiments provided▪ Can not combine claims unless such combination is expressly disclosed▪ “Inescapable trap”

CLAIMS

USPTO and EPO

USA	EPO
<ul style="list-style-type: none">▪ Fence-style claiming▪ Single-part claim format▪ Cascading depending claim, each introducing a single narrowing feature▪ No multiple dependent claims▪ Multiple IND claims are permitted (but likely to be divided out)▪ 20 claims (with 3 IND) are “included” in the filing fee▪ Single entity claims for distributed methods!!!	<ul style="list-style-type: none">▪ A mix of fence-style and point-style claiming▪ 2-part claim format (preferred by the EPO, but not mandatory)▪ Multiple-dependent claims▪ Claims that include multiple alternatives within a single claim▪ Single IND claim in each category<ul style="list-style-type: none">▪ With the exception of server/client device▪ 15 claims are “included” in the filing fees, excess claim fees for claims exceeding 15

PATENT CHALLENGES

USPTO and EPO

USA	EPO
<ul style="list-style-type: none">▪ Post-AIA USPTO based challenge procedures (PGR and IPR)▪ The patent office invalidation rate of patents in these procedures is very high	<ul style="list-style-type: none">▪ 9-month post-grant EPO challenge (“opposition”)▪ Regular practice for European companies to oppose applications published for grant

PATENT ENFORCEMENT

Claim Construction / claim scope / inequitable conduct

USA	EPO
<ul style="list-style-type: none">▪ Doctrine of “unclean hands” / inequitable conduct / unenforceability of patents<ul style="list-style-type: none">– Statements made in prosecution both in the US and abroad– Requirement to submit prior art (Information Disclosure Statement)▪ Somewhat narrow application of Doctrine of Equivalents (DOE), which is strictly narrowed by a Prosecution History Estoppel	<ul style="list-style-type: none">▪ No doctrine of inequitable conduct<ul style="list-style-type: none">▪ No requirements to submit prior art to the EPO▪ Applicants can take more creative approach to prosecution, for example, applying the “problem-solution” statement▪ Depending on the jurisdiction of the Court, DOE is very liberally applied (for example, Germany vs England)▪ Depending on the jurisdiction of the Court, no Prosecution History Estoppel (with some deference to statements made in Opposition)

DRAFTING WITH A GLOBAL OUTLOOK

Software - recommendations

Considerations when drafting the priority case:

- **Provide detailed description of the algorithm**
 - Not sufficient to describe **WHAT** the software does, it is critical to describe **HOW** the software does it
- **Outline non-limiting examples of technical effects achieved by the software**
 - Software should solve a computer-centric problem
 - If possible, outline an additional technical effect (not essential in computer being essentially fast at performing calculations) – focus should be on the computer benefits and not user benefits, where possible

DRAFTING WITH A GLOBAL OUTLOOK

Software - recommendations

- **Provide detailed block-diagram of the algorithm with detailed step-by-step description thereof**
- **Provide multiple alternative embodiments for the US**
- **Provide ample literal support for amendments in Europe and fall-back positions in prosecution**
- **Remove (at least in alternative) dependence on operator / user decision**
- **Describe multiple claims with multiple cascading dependent claims**
 - Consider budget and the excess claim fees in Europe / US
 - Draft as many claims as the budget will allow!

DRAFTING WITH A GLOBAL OUTLOOK

Pharma / Life Sciences

- **Very difficult to get life science claim without any experimental data at filing**
- **Determination is fact specific; no general rule**
- **Human clinical data generally not required (but the link to human needs to be established)**
- **If invention is based on improved efficacy, need strong data to support such efficacy**
- **If advantage is reduced side effects, may need clinical data comparing/showing same**
- **Novel compound claims generally easier than used claims**

A balance between sufficiency of experimental data and need to establish early filing date in view of third parties' disclosures!

DRAFTING WITH A GLOBAL OUTLOOK

Pharma / Life Sciences

- **Need support in the application as filed – ideally the first-filed (priority) application**
- **Need both “literal” support and data**
- **Description must support the entire breadth of the claims**
- **Example:**
 - *“The reaction is run at 60°C.” vs.*
 - *“The reaction can be run at a temperature in the range of about 50-about 70oC, for example at about 50, about 55, about 60, about 65, or at about 70°C.”*
- **Need many different embodiments in description to support broad claims**
- **Best to include many different claims of varying scope**
- **Post-filing data may be helpful**

SPECIAL CONSIDERATIONS FOR PATENT APPLICATIONS ORIGINATING FROM RUSSIAN APPLICANTS / INVENTORS



RECOMMENDATIONS

FOR RUSSIAN-ORIGINATING APPLICATIONS



- **Russian patent law and practice are very different from US / EPO patent law and practice.**
- **Russian and English languages are very different from one another.**
- **Unless you are looking just for a US / EPO filing for a reason other than to obtain a broad, quality-drafted patent, a simple translation of the Russian original patent application will not suffice.**

RECOMMENDATIONS

FOR RUSSIAN-ORIGINATING APPLICATIONS



- **Do NOT wait until the end of the 12-month priority period to start working on the US / EPO patent application.**
 - **Start Early!**
- **Unless your English is fluent, work with a fully bilingual patent attorney.**
 - They will be able to read the original Russian draft and speak with you in Russian (no translations are necessary).
 - They will be able to prepare the US / EPO patent application in English.

RECOMMENDATIONS

FOR RUSSIAN-ORIGINATING APPLICATIONS



- **Be prepared to provide the US / EPO patent attorney with a lot of information regarding the technology.**
- **The US / EPO patent application will require many more details and many more examples than the Russian application did.**
 - This is generally true in US / EPO patent law.
 - It is especially true right now in US software / pharma patent applications given the uncertainty of how the law will develop.

THANK YOU!

СПАСИБО!

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Skolkovo Patent School – September 2017

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