

CENTER FOR THE PROTECTION
OF INTELLECTUAL PROPERTY



Session 25: International Patent Prosecution

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OBLON

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- (1) Introduction & context**
- (2) The PCT, EPC, USPTO**
- (3) U.S. application timeline**
- (4) Some U.S.-specific issues**
- (5) Drafting & claiming (USPTO vs. EPO)**
- (6) Prosecution (USPTO vs. EPO)**

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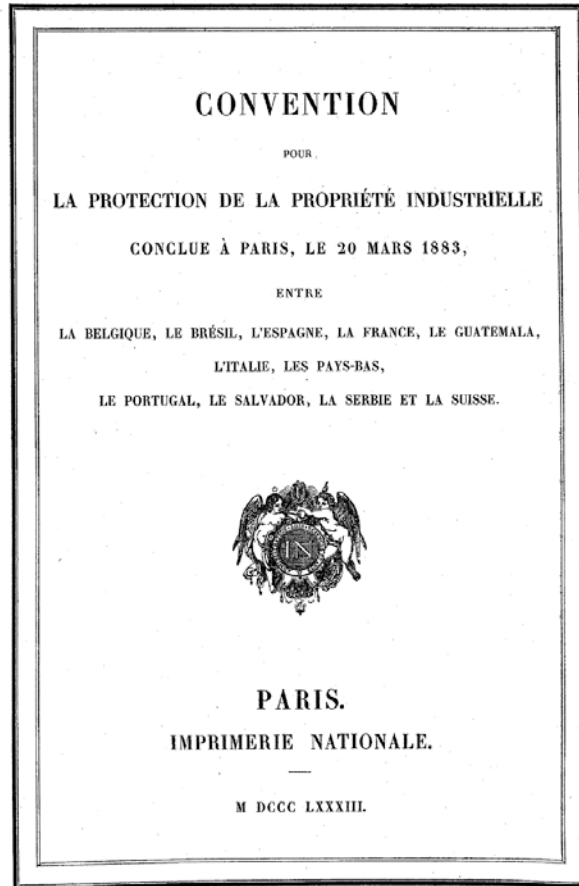
Introduction & context – what to think about

- Despite efforts to harmonize patent laws, there is still no such thing as a “global” or “worldwide” patent.
 - Country/region/territory laws and regulations differ.
 - Standards for patentability vary.
 - Laws regarding enforceability vary.
- Many things to consider regarding where to file.
 - Where will you manufacture and/or sell?
 - Where is your competition?
 - What does the crystal ball tell you will happen in +5 years?

Introduction & context – where to file?



Introduction & context – right of priority



- Paris Convention for the Protection of Industrial Property of March 20, 1883:
 - revised in 1900, 1911, 1925, 1934, 1958, 1967, and amended 1979.
 - It is a multilateral treaty in which the “right of priority” originated, and is now adopted in U.S. statute.
 - Requires each adhering country to accord the right of priority to the nationals of the other countries.
- In the U.S., manifested as providing:
 - the right to claim foreign priority (35 U.S.C. §119(a)-(d)); and/or
 - the right of priority to a PCT application (35 U.S.C. §365).

https://www.wipo.int/treaties/en/text.jsp?file_id=288514
See M.P.E.P. §213.01

Introduction & context – how much money?

- Costly to obtain/maintain patents.
 - A U.S. patent alone could cost over \$20K (USPTO + attorney) just to obtain.
 - Attorney fees for drafting and filing, USPTO fees for filing, attorney fees for prosecution, USPTO fees for issuance/publication.
 - USPTO maintenance fees could add another \$12.6K (large entity: \$1.6K at 3.5yrs; \$3.6K at 7.5yrs; \$7.4K at 11.5yrs).

<https://www.ipwatchdog.com/2015/04/04/the-cost-of-obtaining-a-patent-in-the-us/id=56485/>
<https://www.uspto.gov/learning-and-resources/fees-and-payment/uspto-fee-schedule>

Introduction & context – how much money?

- Costly to obtain/maintain patents.
 - Foreign patents in 9 countries could cost \$227K to \$469K in 2019 dollars to obtain & maintain (\$160K to \$330K in 2002).
 - Based on a 2003 GAO study for small entity filing in 6 European countries (France, Germany, Italy, Ireland, Sweden, U.K.), Canada, Japan, and South Korea, assuming simple prosecution and annuities.
 - But PCT + designation of many countries for national stage filings may be less expensive in terms of deferring filing fees, translation fees, and attorney fees....

<https://www.gao.gov/new.items/d03910.pdf>
<http://www.in2013dollars.com/us/inflation/2002>

Practitioner Tips

- Taking all of this into consideration, develop your strategy before filing.
 - Know your industry, market, competitors, and where they are.
 - Is the invention patent-eligible in your filing locations? (e.g., methods of treatment/diagnosis not eligible in Europe; financial/business methods difficult in U.S.; software/AI/IoT require particular claiming strategy in the U.S. and different from Europe.)
 - Plan ahead for costs – multiple jurisdictions (official fees & attorney fees); translation costs; and ancillary fees (e.g., extra claims, etc.)
 - Accelerate prosecution where possible
 - e.g., Global/IP5 Patent Prosecution Highway (PPH) program;
 - e.g., PCT Collaborative Search & Examination Pilot program (streamlines examination/search procedures for examiners in multiple countries).

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Patent Cooperation Treaty (PCT)

- The PCT enables the applicant to file one “international” application in a standardized format in one of several “receiving” offices, and have that application acknowledged as a regular national/region filing in several “designated” offices that the applicant selects.
- “[T]he PCT enables foreign applicants to file a PCT international application, designating the [U.S.], in their home language in their home patent office and have the application acknowledged as a regular U.S. national filing.”

M.P.E.P. §1801(I)

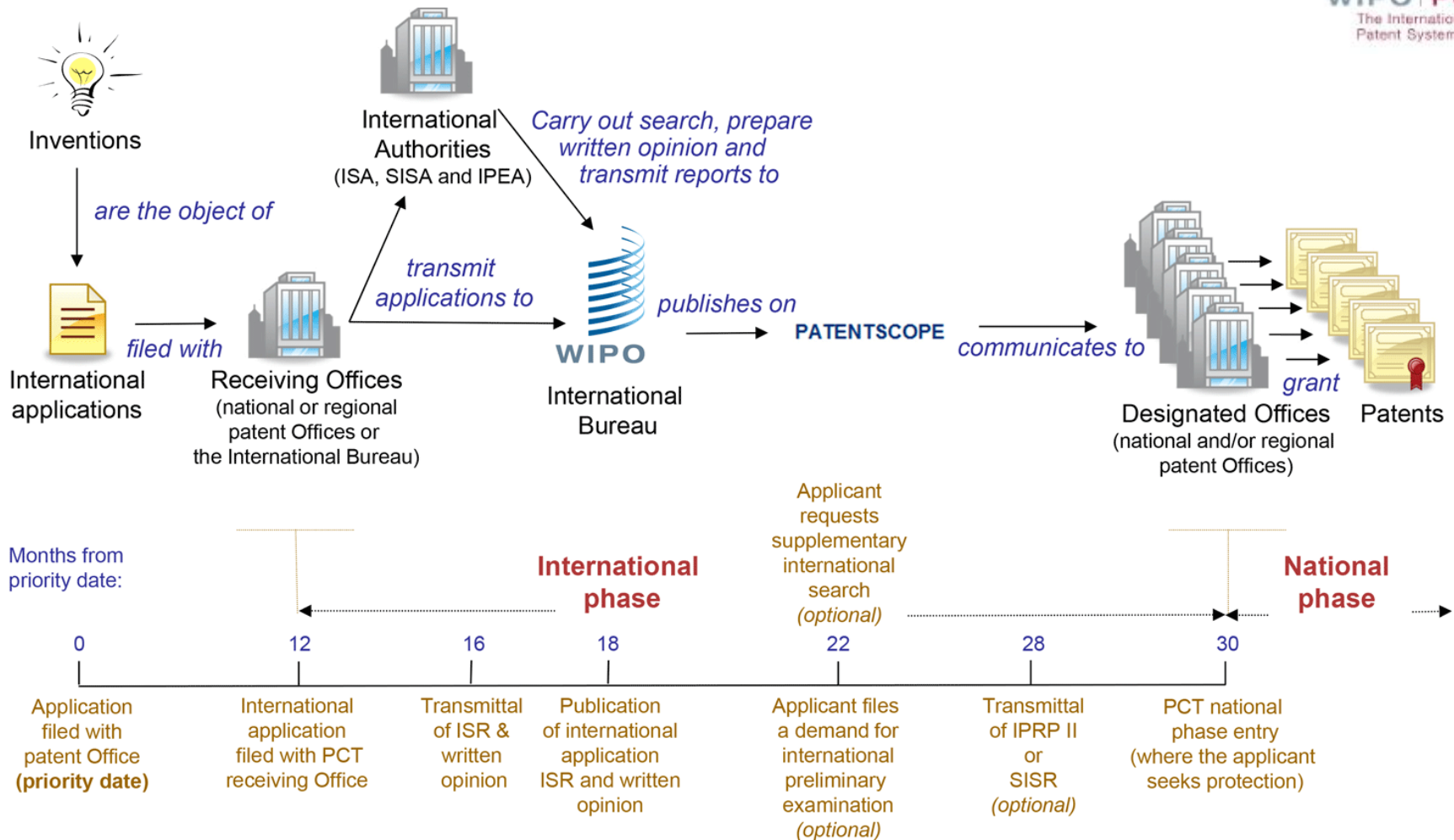
Patent Cooperation Treaty (PCT)



- “...usually 30 months after the filing of any priority application ... or the international filing date if no priority is claimed, the application will be subjected to national procedures ... in each of the designated countries.”
- “The PCT offers an alternative route to filing patent applications directly in the patent offices of” PCT member states.
- “It does not preclude taking advantage of the priority rights and other advantages provided under the Paris Convention...”

M.P.E.P. §1801(I)

The PCT system – what does it look like?



<https://www.wipo.int/pct/en/faqs/faqs.html>



The PCT system – typical scenario (1)

- Typical scenario for U.S.-originated invention/application:
 - First, a regular U.S. application is filed with the USPTO.
 - Then a PCT international application for the same subject matter will be filed within a year, claiming priority to the U.S. application under the Paris Convention.
 - Thereafter, within 30 months of the priority date, national stage/phase applications will be filed in any number of designated countries.

M.P.E.P. §1801(I)

The PCT system – typical scenario (2)



- Typical scenario for EP-originated invention/application:
 - First, a regular application is filed with the EPO.
 - Then a PCT international application for the same subject matter will be filed within a year, claiming priority to the EP application under the Paris Convention.
 - Thereafter, within 30 months of the priority date, national stage/phase applications will be filed in any number of designated countries, for example, the U.S.

The PCT *seems to be everywhere!*



The PCT now has 152 Contracting States



https://www.wipo.int/pct/en/pct_contracting_states.html

Practitioner tips

➤ But the PCT is *not* everywhere!

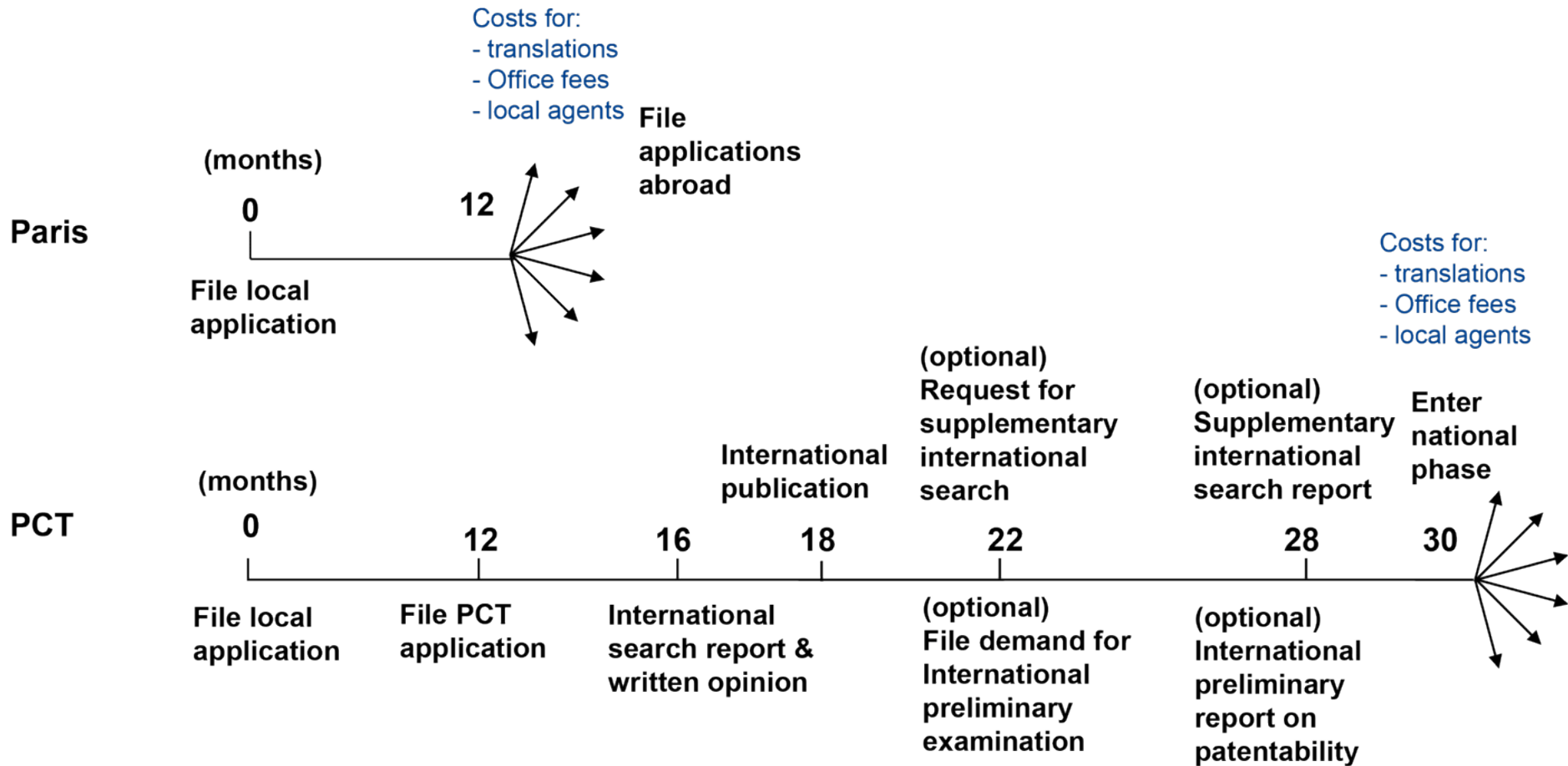
➤ Consider Taiwan:

- Not a PCT member country, so cannot enter Taiwan via PCT, and a PCT application cannot claim the right of priority to a Taiwan application.
- But it is a WTO member country, so priority can be claimed from a Taiwan application filed within 12 months of an application filed in a WTO member state, and in other countries that have a reciprocity agreement with Taiwan.
- Complications with China re: enforceability and priority.



<https://www.epo.org/searching-for-patents/helpful-resources/asian/chinese-taipei/faq.html#faq-547>
<https://www.iam-media.com/special-notes-taiwan-patent-prosecution>

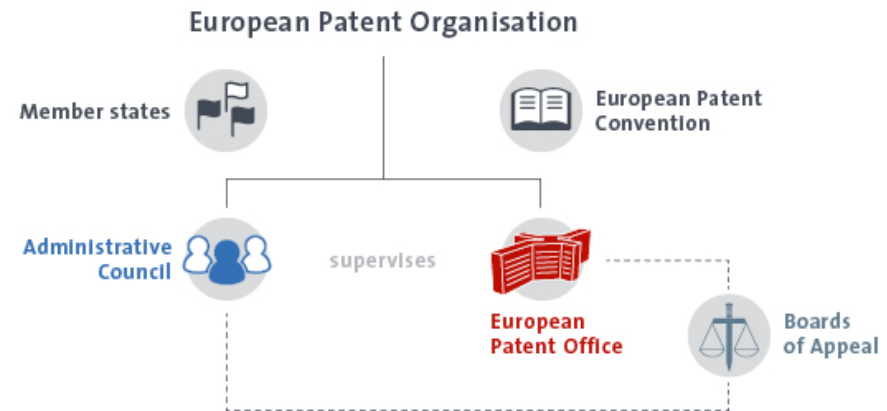
Comparison of Paris Convention & PCT routes



<https://www.wipo.int/pct/en/faqs/faqs.html>

The European Patent Convention (EPC)

- Signed in 1973; created the European Patent Organization in 1977.
- The European Patent Office (EPO) is considered the “executive arm” of the European Patent Organization, and “offers inventors a uniform application procedure which enables them to seek patent protection in up to 44 countries.”
- The Administrative Council is “made up of representatives of the contracting states, exercises legislative powers on behalf of the Organisation, is responsible for policy issues relating to the Organisation and supervises the Office’s activities.”



<https://www.epo.org/about-us/governance.html>
<https://www.epo.org/about-us/foundation.html>

The European Patent Office (EPO)

- “The EPO carries out searches and substantive examinations on ... European patent applications and international applications filed under the Patent Cooperation Treaty.”
- “[U]niform procedure for grant of European patents ... is linked ... with the national patent law of the member states ... and at a number of stages it ‘interfaces’ with the national legal systems....”
- “In each of the contracting states for which it is granted, the European patent has the effect of and is subject to the same conditions as a national patent granted by that state, unless otherwise provided in the EPC....”



<https://www.epo.org/about-us/services-and-activities/services.html>

<https://www.epo.org/law-practice/legal-texts/html/natlaw/en/a/index.htm>

Map showing the geographic coverage of European patents as of 1 March 2019

■ Member states (38)

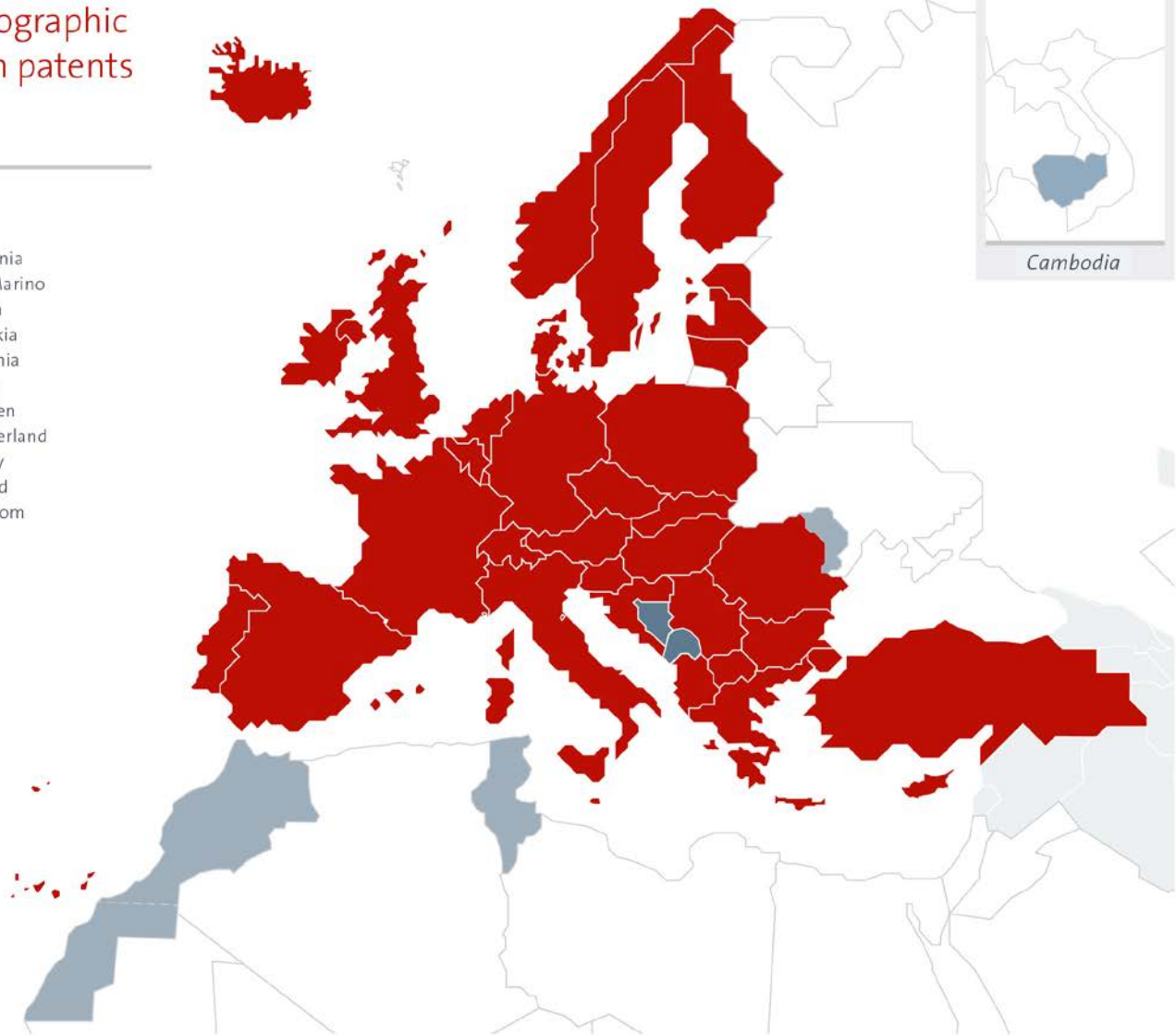
- Albania
- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Iceland
- Ireland
- Italy
- Latvia
- Liechtenstein
- Lithuania
- Luxembourg
- Malta
- Monaco
- Netherlands
- North Macedonia
- Norway
- Poland
- Portugal
- Romania
- San Marino
- Serbia
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland
- Turkey
- United Kingdom

■ Extension states (2)

- Bosnia and Herzegovina
- Montenegro

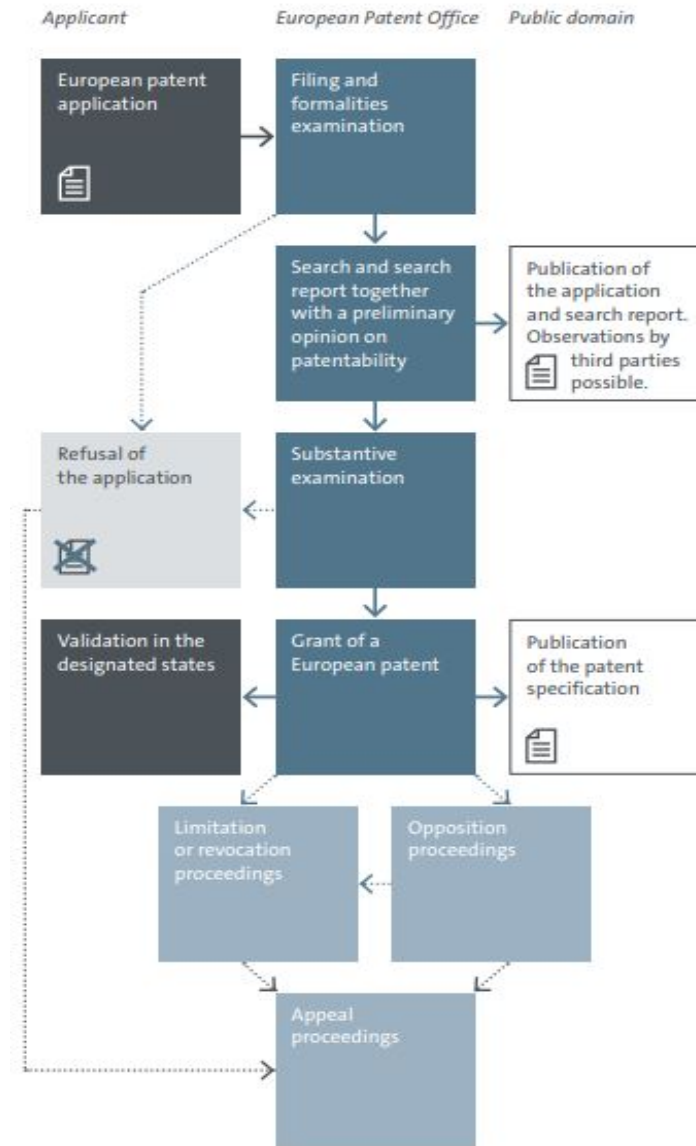
■ Validation states (4)

- Cambodia
- Republic of Moldova
- Morocco
- Tunisia



<https://www.epo.org/about-us/foundation/member-states.html>

The EPO procedure – what does it look like?



<https://www.epo.org/applying/basics.html>

<https://www.epo.org/applying/european/Guide-for-applicants.html>

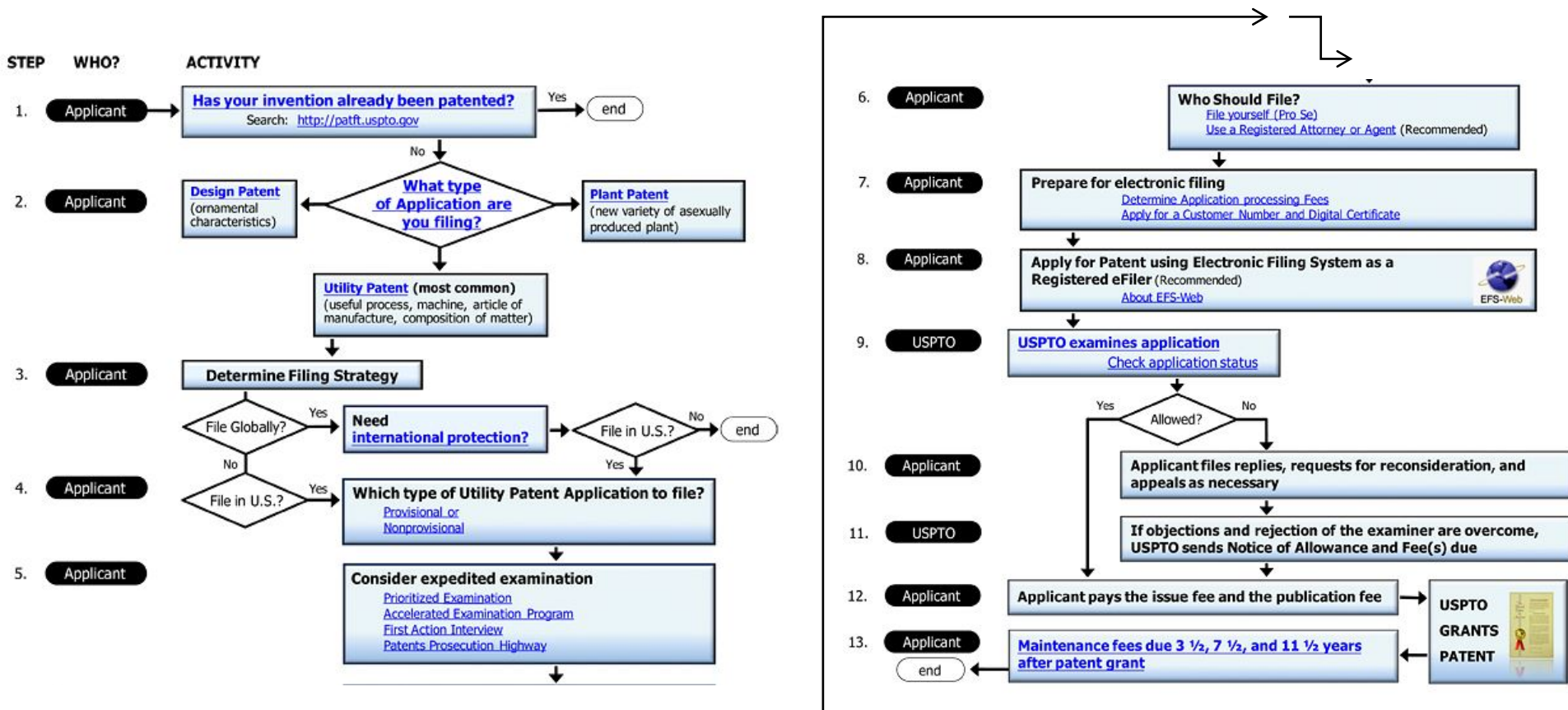
The U.S. Patent and Trademark Office (USPTO)

- The USPTO is “an agency of the U.S. Department of Commerce. The role of the USPTO is to grant patents for the protection of inventions and to register trademarks. It serves the interests of inventors and businesses with respect to their inventions and corporate products, and service identifications.”
- The USPTO “examines applications and grants patents on inventions when applicants are entitled to them; it publishes and disseminates patent information, records assignments of patents, maintains search files of U.S. and foreign patents, and maintains a search room for public use in examining issued patents and records.”



<https://www.uspto.gov/patents-getting-started/general-information-concerning-patents#heading-1>

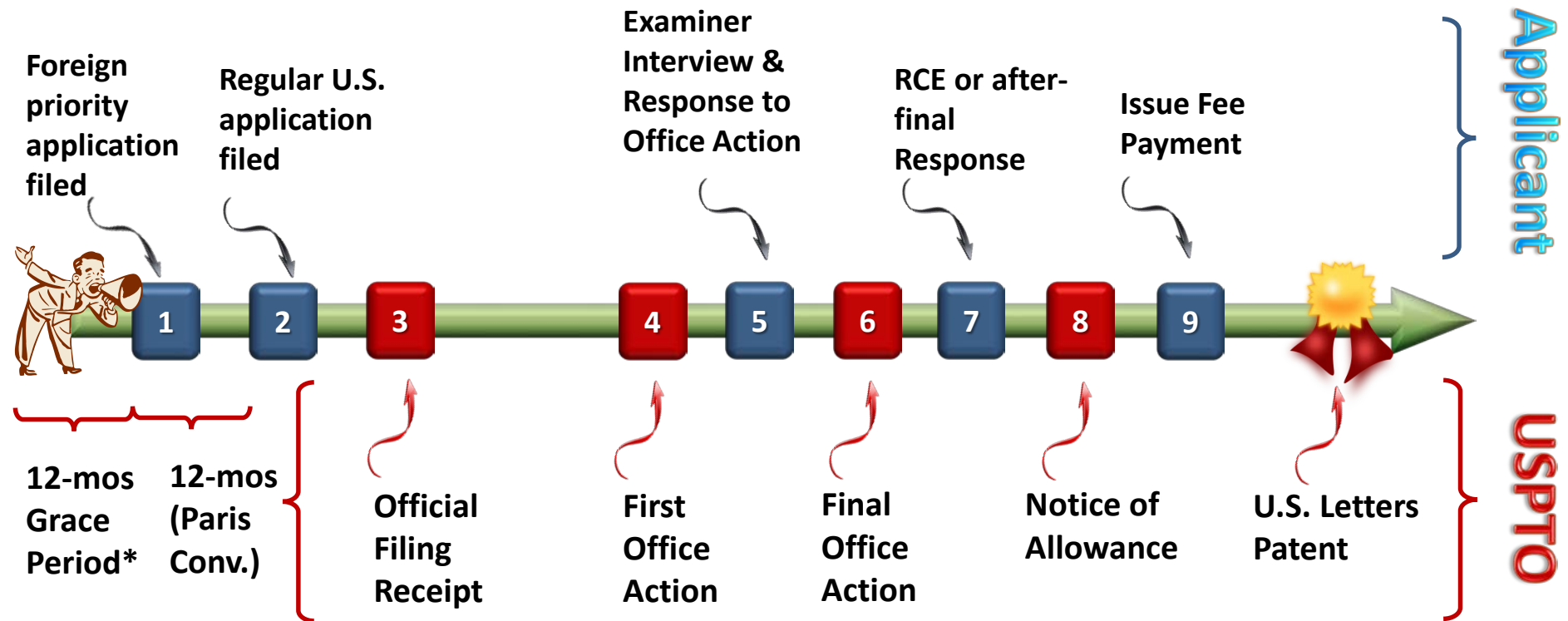
The USPTO procedure – what does it look like?



<https://www.uspto.gov/patents-getting-started/patent-basics/types-patent-applications/utility-patent/process-obtaining>

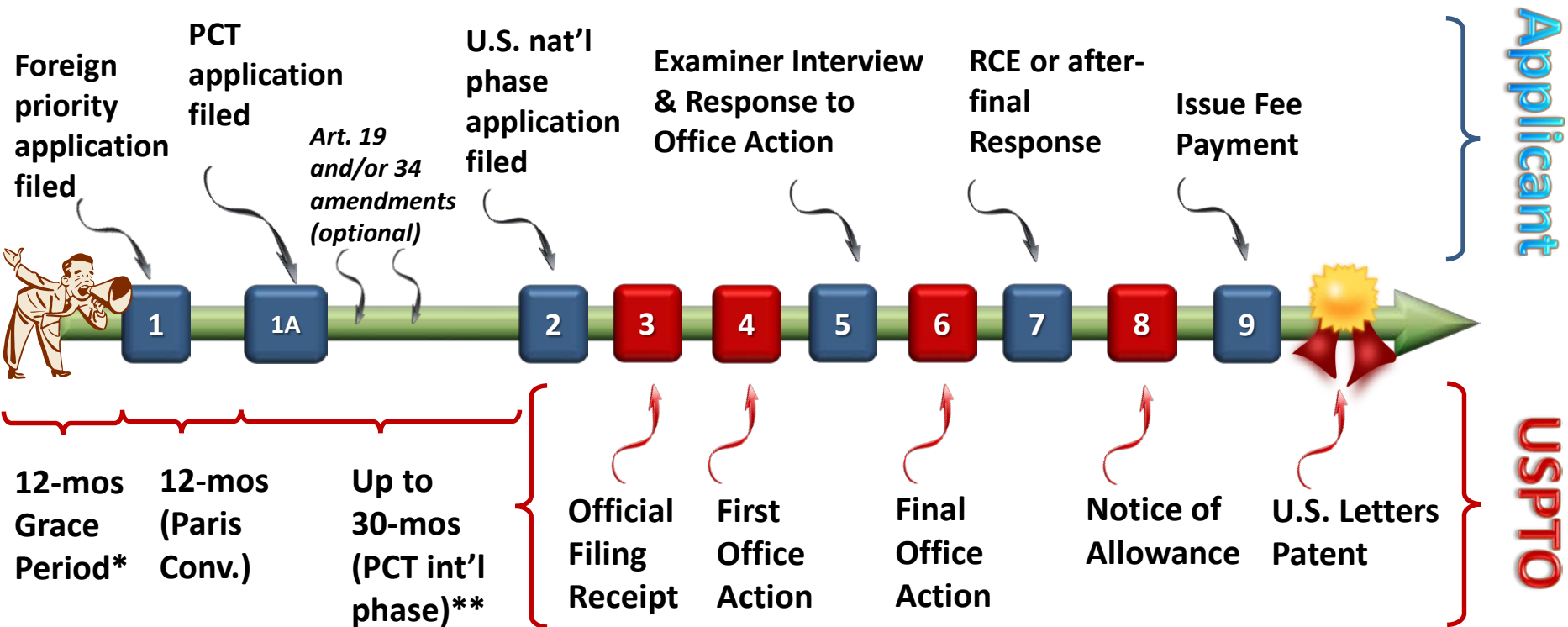
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USPTO filing/prosecution – timeline (Paris Convention route to U.S.)



***BE CAREFUL!** - only if disclosure "by or obtained from" a named inventor

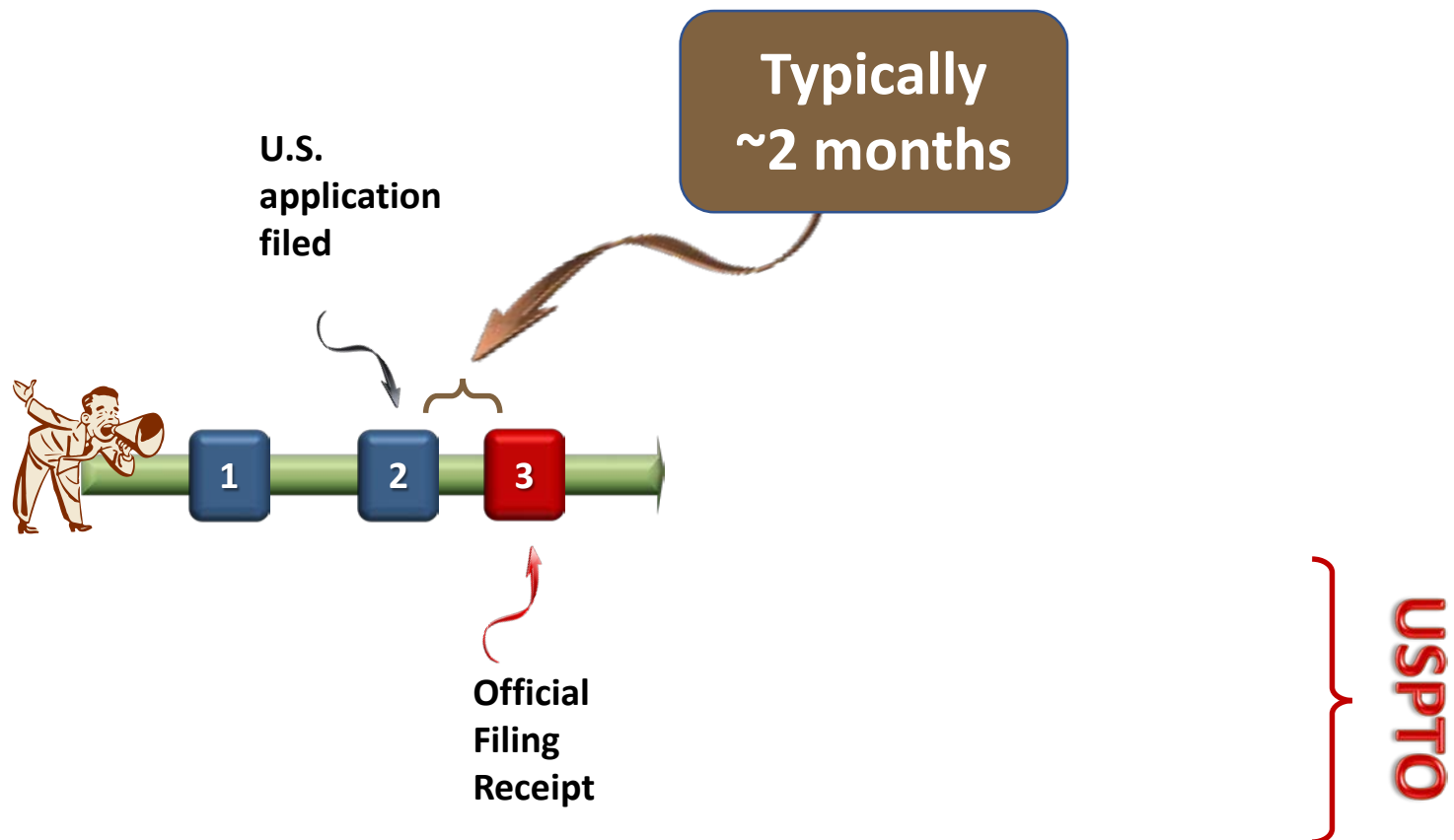
USPTO filing/prosecution – timeline (Paris Convention + PCT route to U.S.)



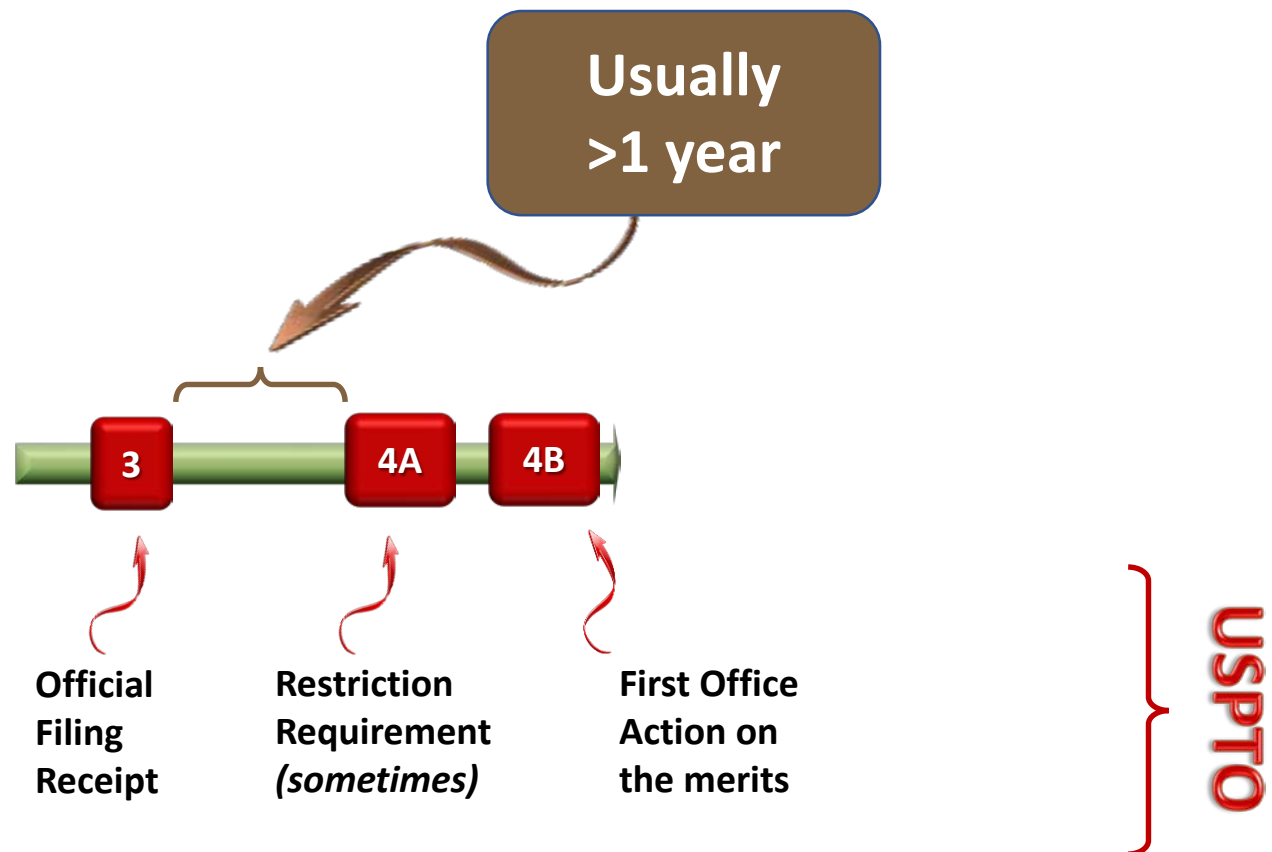
***BE CAREFUL!** - only if disclosure "by or obtained from" a named inventor.

****Note some other countries allow up to 31-mos.** See https://www.wipo.int/pct/en/texts/time_limits.html

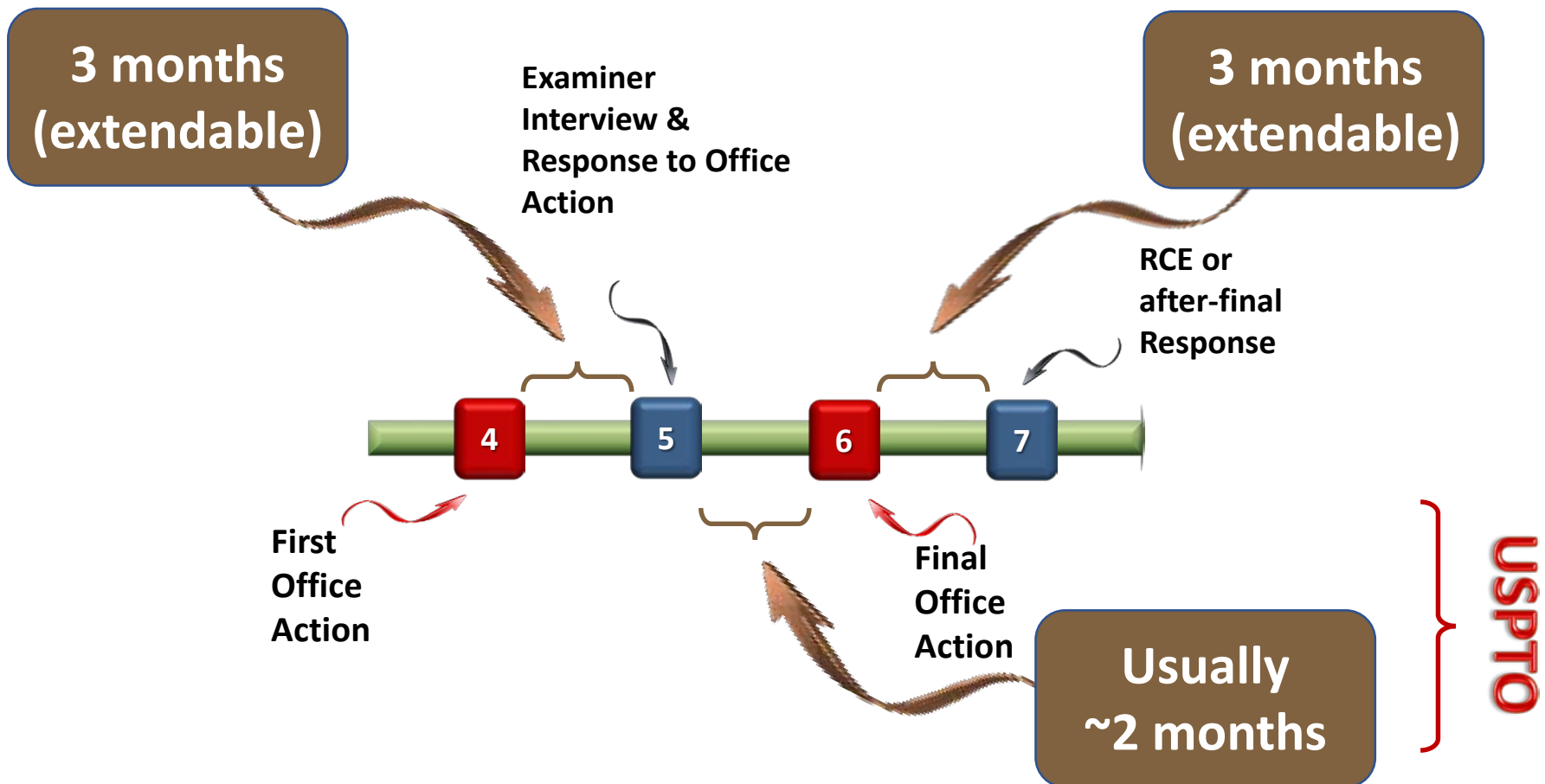
USPTO filing/prosecution – typical items



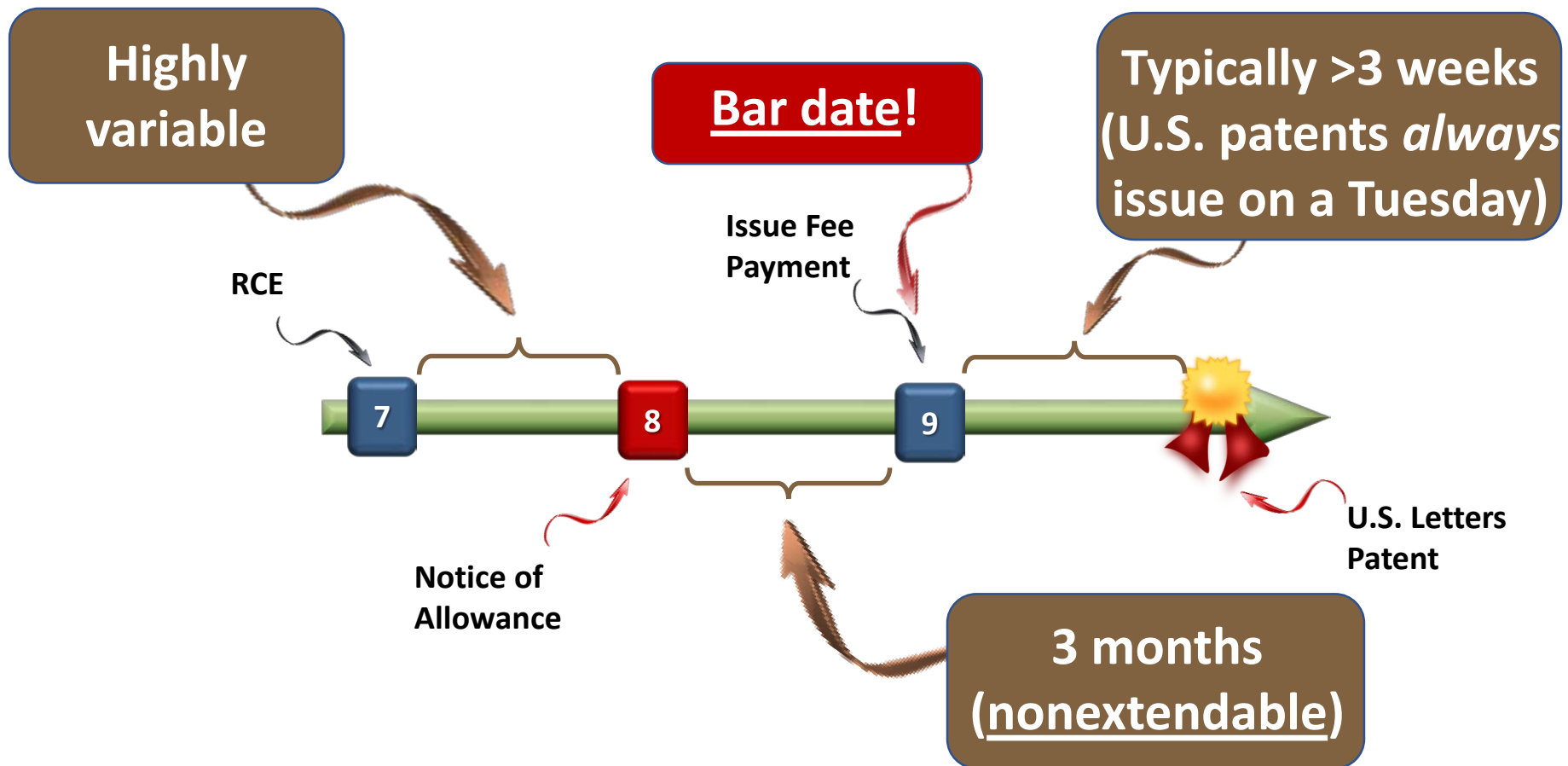
USPTO filing/prosecution – cont'd



USPTO filing/prosecution – cont'd



USPTO filing/prosecution – cont'd



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Some U.S.-specific issues – Declaration

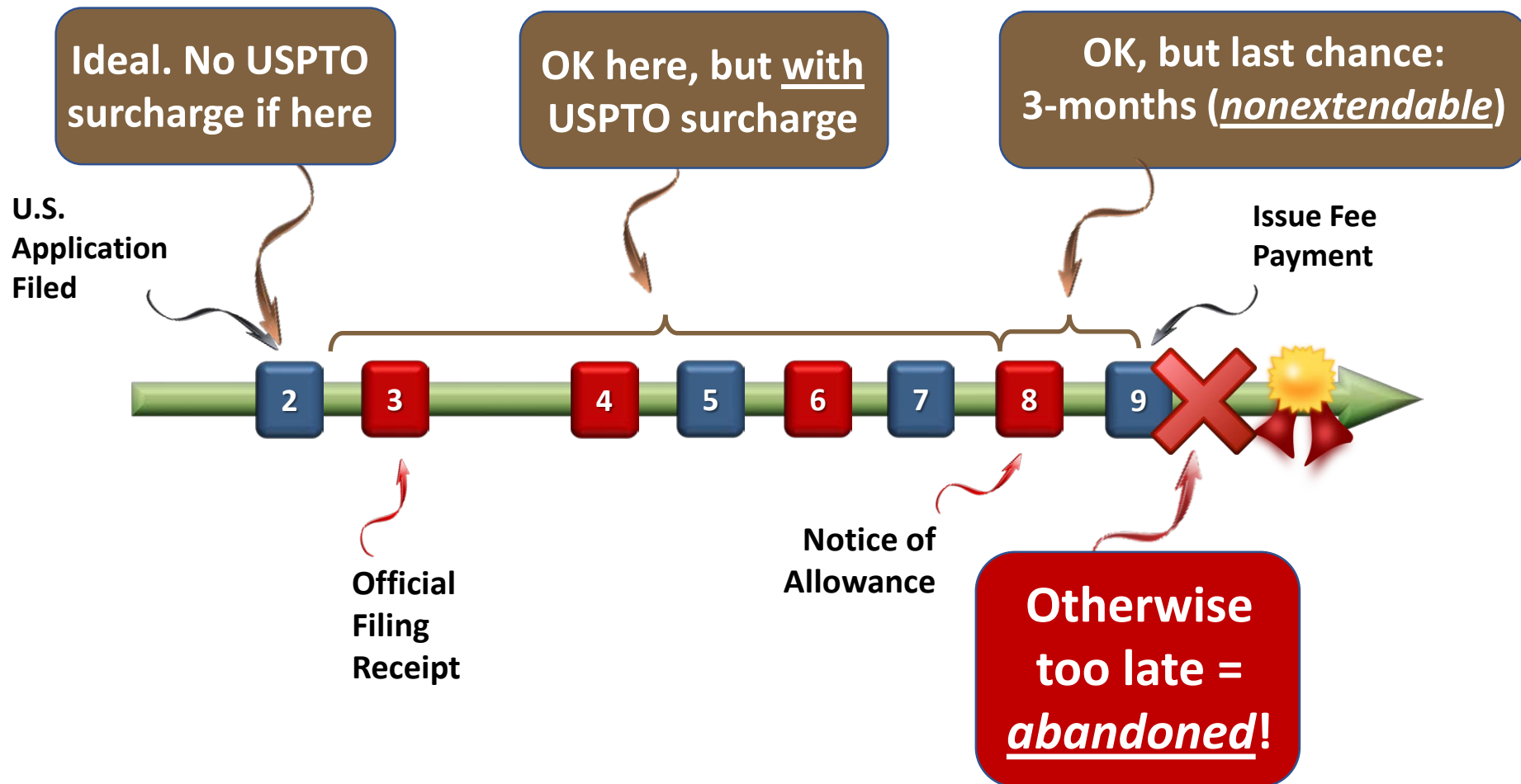
- A Declaration from each inventor is required in each U.S. application.
- Filing of the signed Declaration may be delayed until the application is in condition for allowance, if:
 - an application data sheet (ADS) has been filed; and
 - the application is an original (non-reissue) application.
- USPTO adds \$160 surcharge if “late filed.”*
 - The USPTO will not send a “Notice to File Missing Parts” if you pay the surcharge and do not file the Declaration with the application.
 - The USPTO will send a “Notice to File Missing Parts,” requiring an ADS or Declaration where *neither* has been filed.

**meaning any time after the filing of the application.*

Declaration – tweaked by the AIA

- Under the America Invents Act (AIA), the “Applicant” is no longer synonymous with the person who must *sign* the Declaration. The Applicant may be a person/entity:
 - to whom the inventor has assigned;
 - to whom the inventor is under an obligation to assign; or
 - who otherwise shows sufficient proprietary interest.
- The Applicant may name the inventor either by:
 - a signed application data sheet (ADS) if filed before or with an inventor’s Declaration; or
 - a signed inventor’s Declaration if filed before a signed ADS identifying the inventorship.

Declaration – when to file it?



Practitioner Tips

File the Declaration with the application if you can! *Why?**



- * It may become *more difficult* to obtain an inventor's signature later.
- * Human nature – it is easy to forget about it, especially if USPTO does not send a Notice to File Missing Parts.
- * Once the application is allowed, you have only 3 months to file the signed Declaration, otherwise the application will become *abandoned*.
- * Avoid the surcharge!

Declaration – what happens *if...*

- ...you can't find the inventor, or the inventor is unwilling to cooperate?
 - The Applicant can file a “Substitute Statement” in lieu of a Declaration for such an inventor.
 - But this may leave unresolved an issue over *ownership* of a patent issuing from the application. (The Substitute Statement is not a substitute for an Assignment.)
 - Try to resolve/negotiate any issues with such an inventor early in the process.

Practitioner Tips

- If the inventor cannot be located or refuses to cooperate:
 - Maintain evidence of your attempts to reach the inventor and/or obtain his or her cooperation. The evidence does not have to be provided unless the USPTO specifically requests it.
 - Have an authorized representative of the Applicant as “obligated assignee” file a “Substitute Statement” in lieu of the required Declaration.
 - Record evidence of the inventor’s obligation to assign with the USPTO.
 - E.g., excerpts of an employment agreement or other documentary evidence.
 - Redact confidential portions, because recorded Assignment is a public record.
 - Note, though, that even this *might* still leave open a question of ownership.
 - *Last straw* – file a Rule 53(b) continuing application if necessary in order to maintain pendency and avoid loss of rights for the Applicant.

A note about the “Assignment”

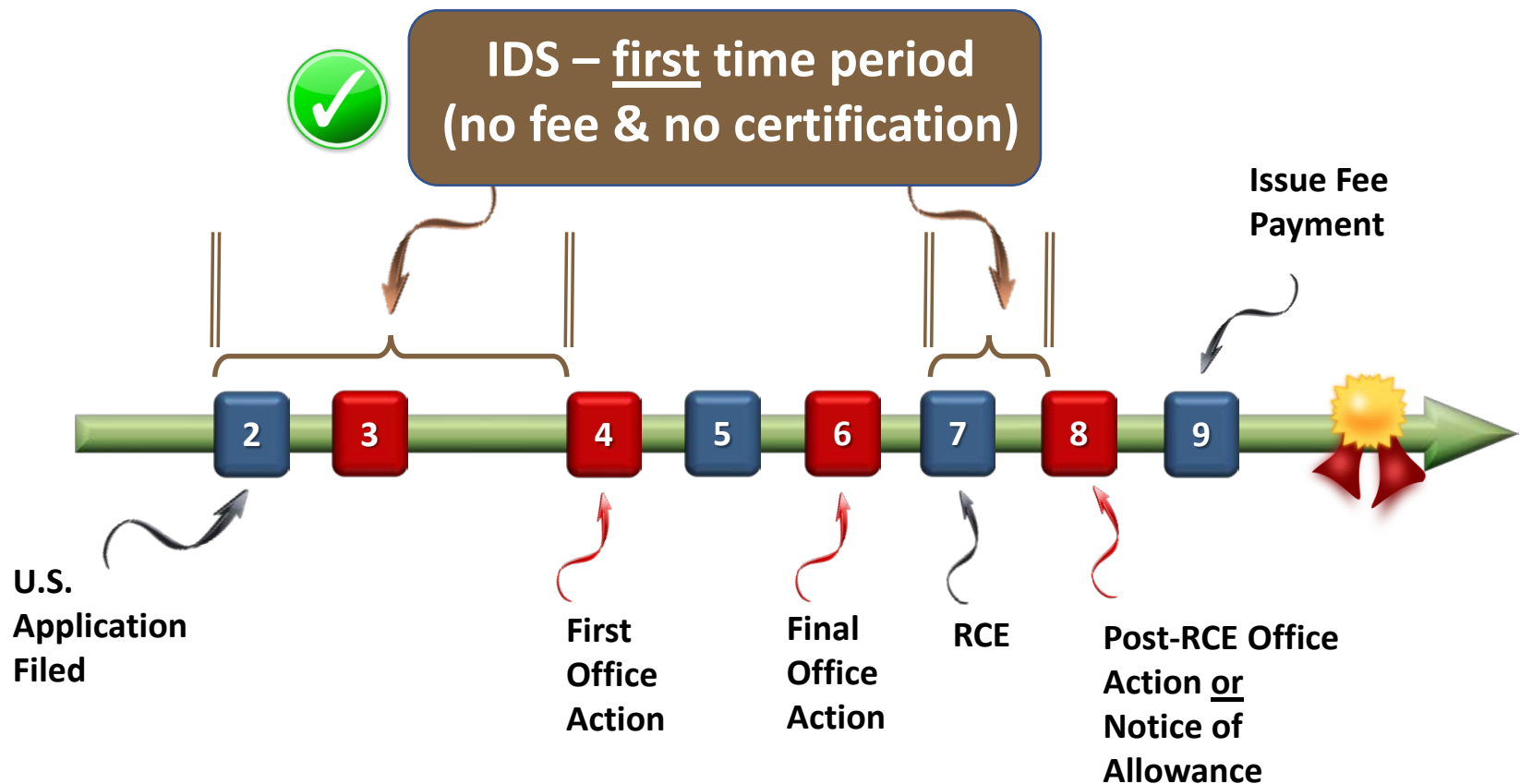


- “Assignment” is a transfer by a party of all or part of its entire right, title, and interest in a patent or patent application.
 - One or more assignees conduct prosecution of a patent application as the “Applicant” —to the exclusion of the inventor or previous applicant.
- The recording of an Assignment document by the USPTO is not indicative of a determination of the validity of the document.
 - But be *careful* if you have co-assignees (e.g., joint research agreement).
 - If two or more purported assignees attempt to establish ownership, *the USPTO will determine* which, if any, will be permitted to control prosecution of the application.

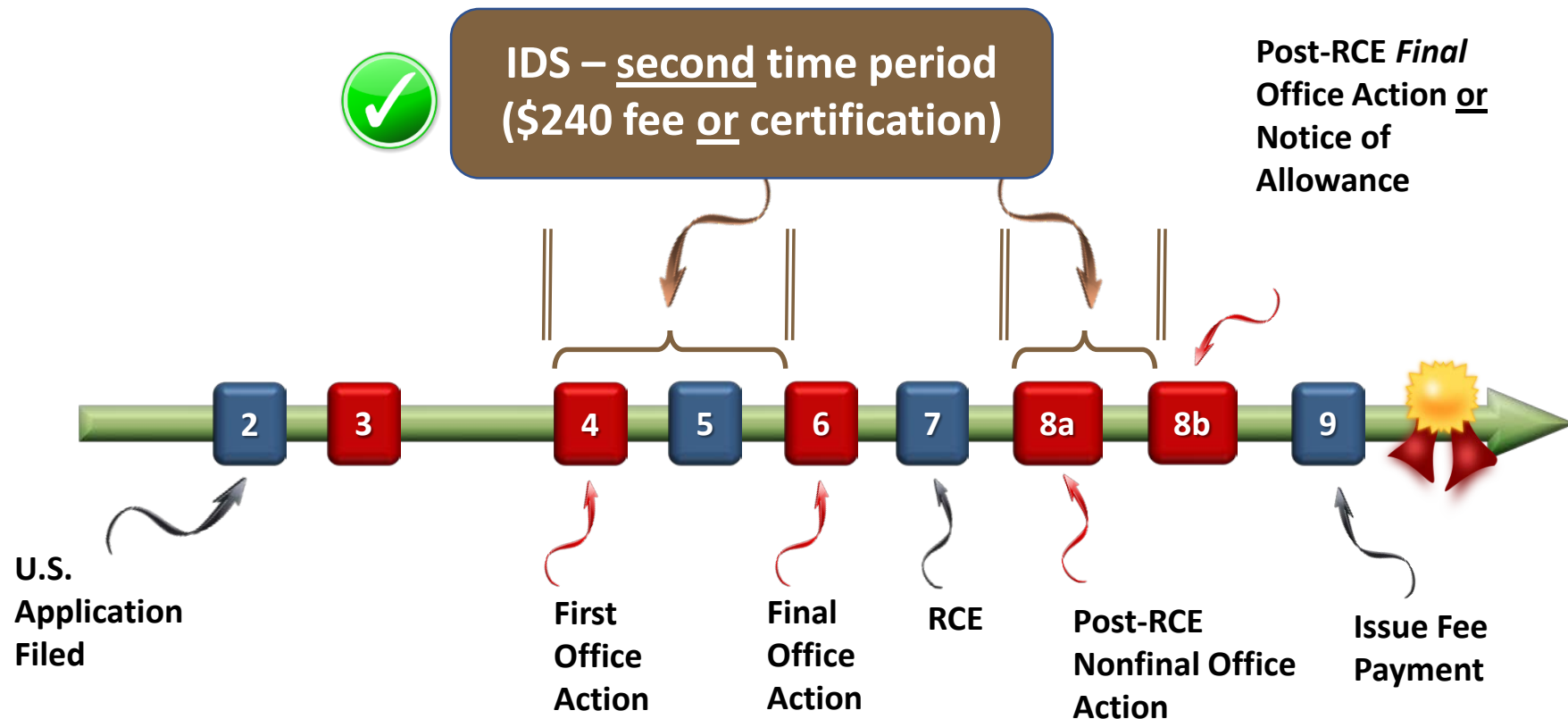
Some U.S.-specific issues – Information Disclosure Statement (IDS)

- Why is this important? Because each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the USPTO.
 - This includes a duty to disclose to the USPTO all information known to that individual to be material to patentability.
 - This extends to all individuals associated with filing or prosecution.
 - This may not be appreciated by foreign inventors / foreign counsel.
- Failure to meet the good faith obligation can result in issued patents being held unenforceable due to inequitable conduct.

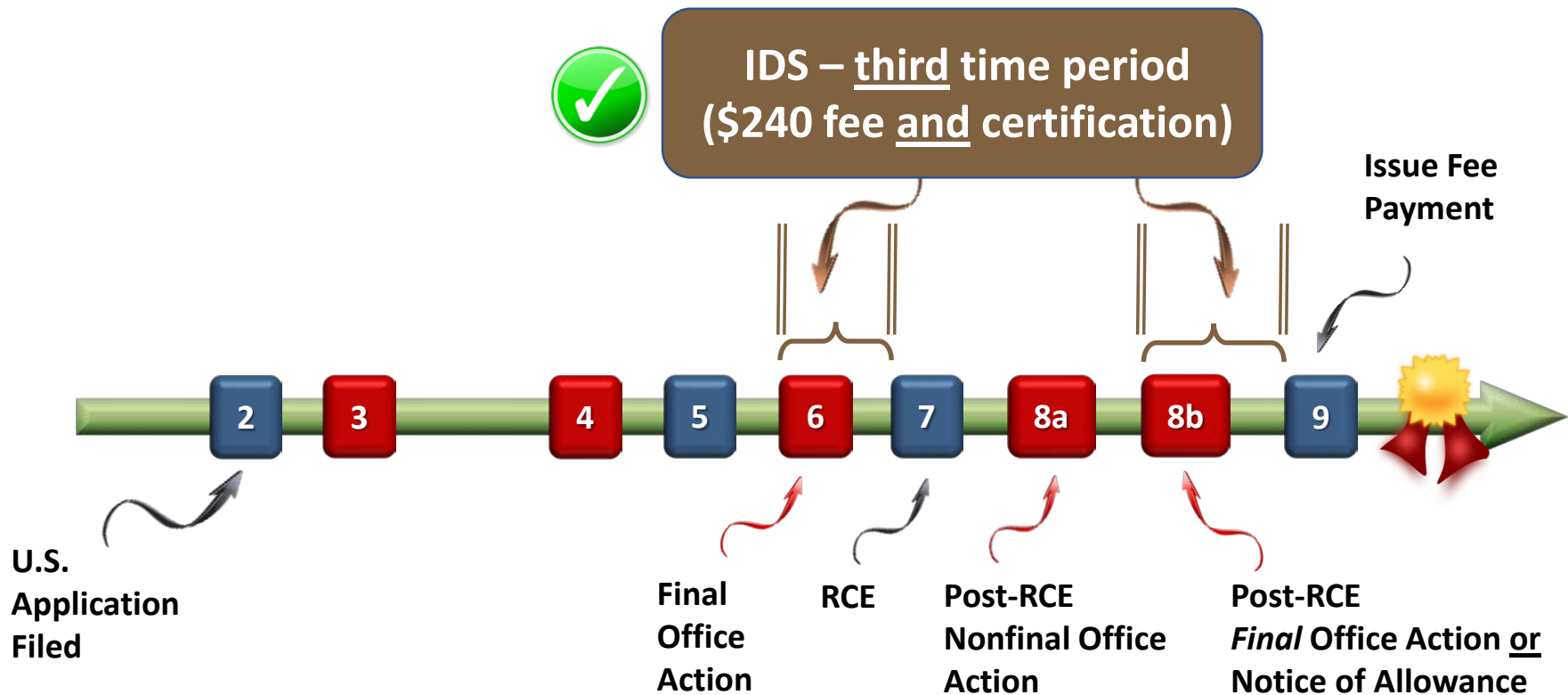
IDS – timing requirements



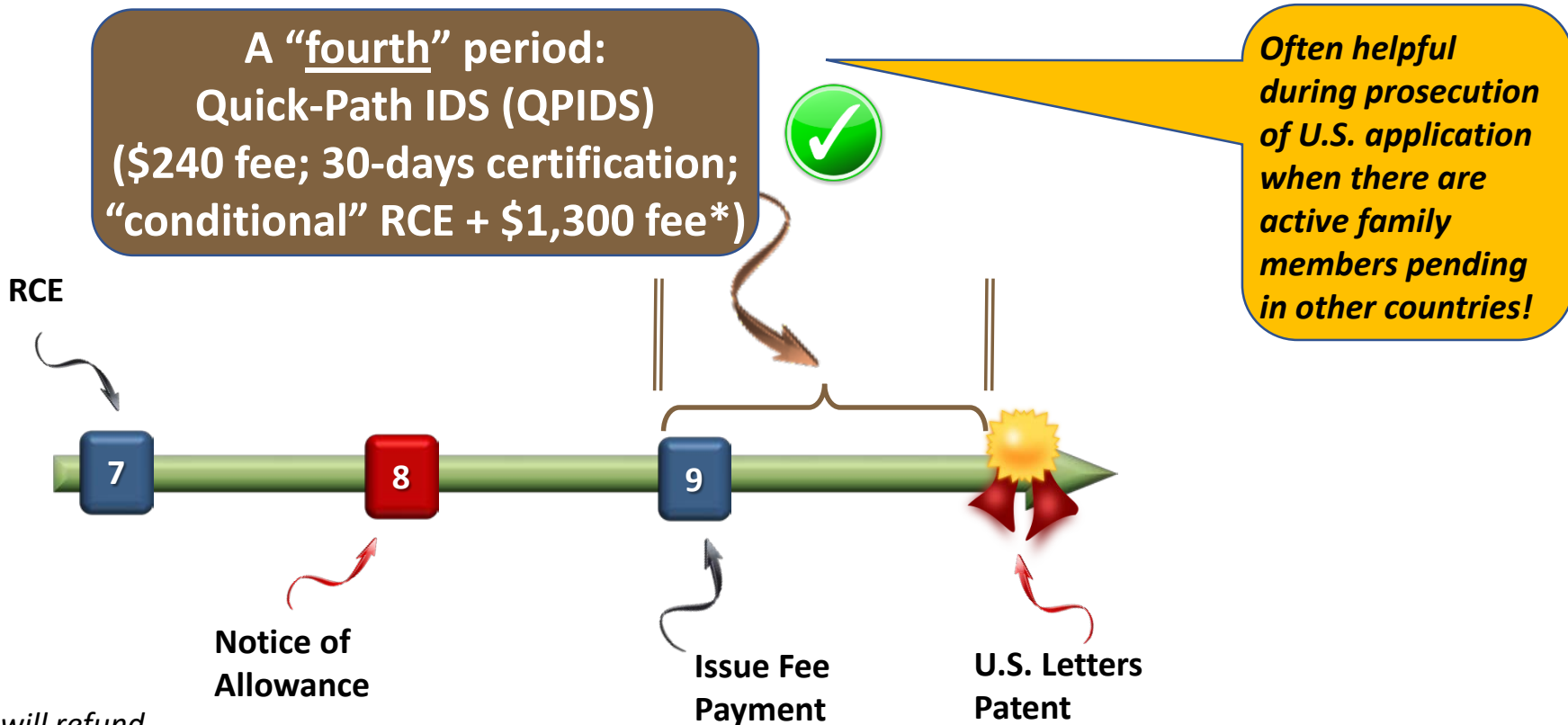
IDS – timing requirements



IDS – timing requirements



IDS – timing requirements



**USPTO will refund if prosecution is not reopened.*

<https://www.uspto.gov/patent/initiatives/quick-path-information-disclosure-statement-qpids>

Practitioner Tips

- Make sure to remind foreign counsel and inventor(s) of the “duty of disclosure” requirement in the U.S.
 - Other countries may not have a disclosure requirement.
 - Foreign counsel/inventors may not think the U.S. requirement applies to them.
 - Note that the duty is ongoing and extends up to the time of patent issuance.
- Disclose only “material information” of which you are aware.
 - Information is considered material if there is a substantial likelihood that a U.S. Examiner would consider it important in deciding on the patentability of the claim(s) in this application.
 - This may include, e.g., prior art cited during the prosecution of counterpart foreign application(s). But it does not have to be just “*prior*” art.
 - Note that the duty of disclosure is not a “duty to search” the prior art.

See M.P.E.P. §609 et seq.; §2001 et seq.; 37 C.F.R. § 1.56(b)

Practitioner Tips

- Failure to disclose known material information can affect the validity of the issued patent.
 - Requires misrepresentation/omission plus an intent to deceive the USPTO.
 - But inadvertent omission of known prior art is not always fatal.
- However, there is an element of subjectivity.
 - On the one hand, “[w]hen in doubt, it is desirable and safest to submit information. Even though the attorney, agent, or applicant doesn’t consider it necessarily material, someone else may see it differently and embarrassing questions can be avoided.” (M.P.E.P. §2004 - Aids to Compliance With Duty of Disclosure)
 - On the other hand, “[i]t is desirable to avoid the submission of long lists of documents if it can be avoided. Eliminate clearly irrelevant and marginally pertinent cumulative information.” (*Id.*)

See M.P.E.P. §609 et seq.; §2004

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Drafting the Specification & Claims

- Only selected topics for discussion – *not* exhaustive.
- Some differences between EPO and USPTO.
 - Specification
 - Claims / claim interpretation

USPTO – Specification drafting:

Background section

- Not required, but sometimes telling a story in your application starting with the background can be very helpful during U.S. prosecution (and EPO prosecution).
- Need to balance benefits with potential problems.
 - “Applicant-Admitted Prior Art”: Prior art described in Background section *might* be used against the Applicant in an obviousness rejection.
 - Focus more on problem that is solved by the invention (i.e., what the prior art *does not* teach).
 - Only a broad characterization of the problem in the Background.
 - Save the details of problem and advantages for the Detailed Description.

EPO – Specification drafting: Background Art section

- Rule 42 EPC: the description shall indicate the background art which, as far as is known to the applicant, can be regarded as useful to understand the invention ... and, preferably, cite the documents reflecting such art....
- There is no “admitted art” in the EPO, unless prior publication can be proven. (This differs from the U.S.!)
 - Everything in Background Art section is not part of the invention, by definition. This means content from Background Art section cannot normally be used to support amendments.
 - Avoid discussions of background art using terms of the invention defined later.
 - Keep it short and simple, e.g., one starting point to show drawbacks of prior art is sufficient.

USPTO – Specification drafting: Summary of the Invention section

- Unless the description in the Summary section is qualified as “an embodiment” (as opposed to “the invention”), there may be a risk that the claims could be limited to the feature(s) described in this section.
- Generally limit this section to a paragraph-form recitation of the independent claim(s).
- Avoid referring to “the invention” when describing an embodiment.

USPTO – Specification drafting: Detailed Description section

- 35 U.S.C. § 112(a): “The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains ... to make and use the same, and shall set forth the best mode contemplated by the inventor ... of carrying out the invention.”
- Two requirements: enablement and best mode.

USPTO – Specification drafting: Detailed Description section

➤ Enablement:

M.P.E.P. § 2164

- purpose is to ensure that the invention is communicated to the interested public in a meaningful way.
- But does not have to rise to the level of a commercially viable embodiment.

➤ Best mode:

M.P.E.P. § 2165

- is a safeguard against the desire on the part of some people to obtain patent protection without making a full disclosure as required by the statute.
- does not permit inventors to disclose only what they know to be their second-best embodiment, while retaining the best for themselves.

Practitioner Tips

- In the Detailed Description section, provide as many examples of embodiments as possible in the Specification for every claim term. This applies equally for claim terms that are recited in terms of their function and those that are recited in terms of their structure.
- In the Detailed Description section, such examples can provide support for claim features and also for possible later claim amendments.

Practitioner Tips

- A detailed description in the Background section of the Specification of the disadvantages of the prior art and the need for the improvement achieved by the invention, could sometimes be used by the U.S. Examiner as a “roadmap” to asserting that the claimed invention would have been obvious.
- However, if the Detailed Description section includes an explanation of the advantages/improvements/benefits over the prior art (particularly for computer-implemented inventions), it may be helpful during prosecution to overcoming a §101 rejection (patent-eligible subject matter), in terms of arguing that an abstract idea recited in a claim is integrated with a “practical application.”

EPO – Specification drafting: Detailed Description section

- Rule 42 EPC: the description shall
 - disclose the invention, as claimed, in such terms that the technical problem, even if not expressly stated as such, and its solution can be understood, and state any advantageous effects of the invention with reference to the background art....
 - describe in detail at least one way of carrying out the invention claimed, using examples where appropriate and referring to the drawings, if any....

EPO – Specification drafting: Detailed Description section

- Summary of invention section is not required, but if it is present it should match the independent claims.
- Describe advantages or effects of the invention (at least one) and of preferred features.
- There is no “best mode” requirement in EPO. (This differs from the U.S.!)
- The purpose of describing "examples" is primarily to complete an otherwise incomplete teaching.

Practitioner Tips

- In the EPO, it may be helpful to include in the Specification a description of features/structures and their respective functions so you can choose from amendments between structural and/or functional features.
- In the EPO, it may be helpful to provide support justifying breadth of the claims (make generalizations plausible).
- Provide several lines of fallback positions and combinations of features, but include support for any fallback position by disclosure: examples, embodiments, advantages.

USPTO – Claim drafting

- 35 U.S.C. § 112(a): The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter regarded as the invention.
- 35 U.S.C. § 112(e): multiple dependent claims OK if they refer back to more than one claim in the alternative only and further limit it.
- 35 U.S.C. § 112(f): Means-plus-function (or step-plus-function) OK, but claim will be construed to cover the cover the corresponding structure, material, or acts described in the Specification.
- 37 C.F.R. § 1.75 (d)(1): Claim terms and phrases must find clear support or antecedent basis in the description so that their meaning may be ascertainable by reference to the description.

USPTO – Claim drafting

- Claim terms may later be interpreted in a way that was *not intended at the time of drafting*.
- Choose words carefully. Omissions or other short-cuts due to familiarity with a particular technical field may later *cause problems* during prosecution.

USPTO – Claim drafting

- USPTO applies the “broadest reasonable interpretation” (BRI).
 - During examination, claim terms are given the broadest reasonable interpretation that is consistent with their plain meaning in light of the specification as understood by one of ordinary skill in the art.
 - The Specification is used to guide the interpretation.
 - But, examiners will not import limitations from the Specification into the claims if those limitations are not specifically recited in the claims.
 - However, if a claim term is given an explicit definition in the Specification, that definition controls the interpretation.

EPO – Claim drafting

- Rule 43 EPC: The claims shall define the matter for which protection is sought in terms of the technical features of the invention. Wherever appropriate, claims shall contain:
 - (a) a statement indicating the designation of the subject matter of the invention and technical features necessary for its definition but which, in combination, form part of the prior art; and
 - (b) a characterizing portion, specifying the technical features for which, in combination with the features in (a), protection is sought.
- The EPO likes to see the “two-part form” in a claim.
- The “admission” of prior art in the generic part of the claim could be a problem in the U.S.
- “Characterized in that” portion could also be a problem in the U.S.

Practitioner Tips – ordinary words matter!

Claim: A process for making pizza, comprising heating dough to a temperature of 400°F to 800°F.

- If the dough is heated this way, it would burn!
- Instead, “heating dough at a temperature...”
- In litigation, a court will not re-draft the claims.

Claim: A process for making pizza, comprising mixing at least one of A, B, C, and D.

- Here, grammar may dictate inclusion of one item from each of A, B, C, and D.

Practitioner Tips

- Watch out for patent profanity!
- Highlighting the importance of a non-claimed feature might result in claim narrowing, e.g.,
 - “Critical”
 - “Essential”
 - “Key”
 - “Very Important”
 - “Necessary”
 - “Required”

USPTO & EPO – Claim drafting summary

	EPO	USPTO
Specification		
Support for functional language	Detailed and multiple alternatives	Detailed and multiple alternatives
Discussion of Prior Art	Minimize	Minimize
Summary of Invention	Brief	Brief
Claims		
functional claim term interpretation	Generally broad	Essentially limited to disclosure in Specification
several independent claims	Generally no, but could be defined exemptions	Yes (3 included)
multiple dependent claims	Yes - important	Expensive/not recommended
“characterized in that”	With caution	No
Fees	Significant fees for claims from 16 th (€235/claim) and from 51 st (€585/claim)	3 independent / 20 total included (\$460/extra independent claim; \$100/extra dependent claim)

- (1) Introduction & context
- (2) The PCT, EPC, USPTO
- (3) U.S. application timeline
- (4) Some U.S.-specific issues
- (5) Drafting & claiming (USPTO vs. EPO)
- (6) Prosecution (USPTO vs. EPO)**

Prosecution considerations:

U.S. “obviousness” vs. EPO “problem-solution”

- Hypothetical: Consider a prior art rejection over a reference “A” in combination with a reference “B.”
- You may consider providing the same instructions to your U.S. counsel and to your EP counsel.
 - But, some arguments will not have the same effectiveness before the USPTO as they would before the EPO, and vice versa.
 - Why are some arguments not persuasive to overcome an obviousness rejection in the USPTO, yet they are persuasive to overcome an inventive step rejection in the EPO?

Unstructured vs. structured approaches

- **Flexible approach (USPTO):** the USPTO follows evolving case law, and does not create its own obviousness framework. It looks to factors such as “predictability” and “creativity.”
- **Problem-solution approach (EPO):** This approach is highly structured analysis created by EPO itself. Three main stages:
 - 1. determining the “**closest prior art**”;
 - 2. establishing the “**objective technical problem**” to be solved; and
 - 3. considering whether or not the claimed invention, starting from the closest prior art and the objective technical problem, **would have been obvious** to the skilled person.



U.S.

Europe

***Result:** Less “structure” in U.S. obviousness analysis than in the problem-solution approach.*

U.S. obviousness – a flexible approach

- *KSR v. Teleflex* (2007) adopted a “*expansive and flexible approach*” to obviousness.
 - Acceptable to rely on common sense to find obviousness.
 - Examiners do not have to look only to the problem the inventor was trying to solve.
 - Acceptable to find that a combination was ‘obvious to try’.
 - But, the reason for combining references or supplying a missing element must be made explicit with articulated reasoning.

U.S. obviousness – a flexible approach

- “The obviousness inquiry entails consideration of whether a person of ordinary skill in the art would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and ... would have had a reasonable expectation of success in doing so.”
 - *Insite Vision Inc. v. Sandoz, Inc.*, 783 F.3d 853, 859 (Fed. Cir. 2015) (internal quotation marks and citation omitted).
- Motivation to modify/combine the references and reasonable expectation of success “are two different legal concepts,” both of which must be present in order to sustain an obviousness rejection.
 - *See Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016).

The “person of ordinary skill in the art”

➤ Flexible Approach (USPTO)

- Person of ordinary skill has access to knowledge generally available in the art, knowledge of “same” problems in other fields, common sense, and some imagination.
- Not an automaton.
- “[C]an take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*.

➤ Problem-Solution Approach (EPO)

- Ordinarily skilled artisan has access to all knowledge in field, is capable of routine work, and has little imagination.
- Almost an automaton.

The “closest prior art”

➤ Flexible Approach (USPTO)

- Examiner can choose from among many base references to serve as starting point for rejections.
- Examiner need not determine closest art, or rely only on closest art as a starting point.

➤ Problem-Solution Approach (EPO)

- Determine closest prior art; the most promising starting point.
- Base reference should be:
 - (1) directed to a similar purpose or effect as the invention, or
 - (2) belong to the same or a closely related technical field.

The “closest prior art”

Invention:



Fig. 1.

Flexible Approach (USPTO):

- Start with D1 or D3

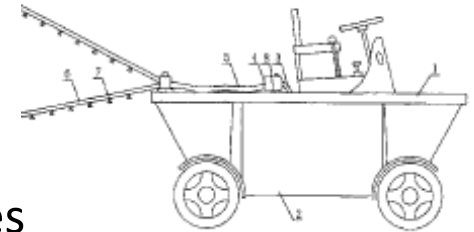
Problem-Solution (EPO):

- Start with D1

- **Document D1:**
A teapot with one spout.



- **Document D2:**
High efficiency distributor for fertilizer. Each rod has several nozzles for spraying liquid.



- **Document D3:**
A filter handle with two spouts to be used with a coffee-maker.



The “objective technical problem”

➤ Flexible Approach (USPTO)

- Examiner does not need to establish an objective technical problem to be solved.
- Examiner does not need to consider the technical problem solved by the invention in making a comparison to the prior art.

➤ Problem-Solution Approach (EPO)

- Establish the "objective technical problem" to be solved by a feature of the invention *missing* in base reference.
Re-formulate with new rejections.
- In most cases, it provides the technical effects that the claimed invention achieves over the closest prior art.

The “objective technical problem”

➤ Flexible Approach (USPTO)

- Examiner may consider any reason why a person of ordinary skill would have been motivated to combine missing feature with the base reference.
- Arguing with Examiner over which problem is to be solved is usually not effective.

➤ Problem-Solution Approach (EPO)

- The objective technical problem must be solved by the application.
- Arguing over which technical problem should be solved may be important.

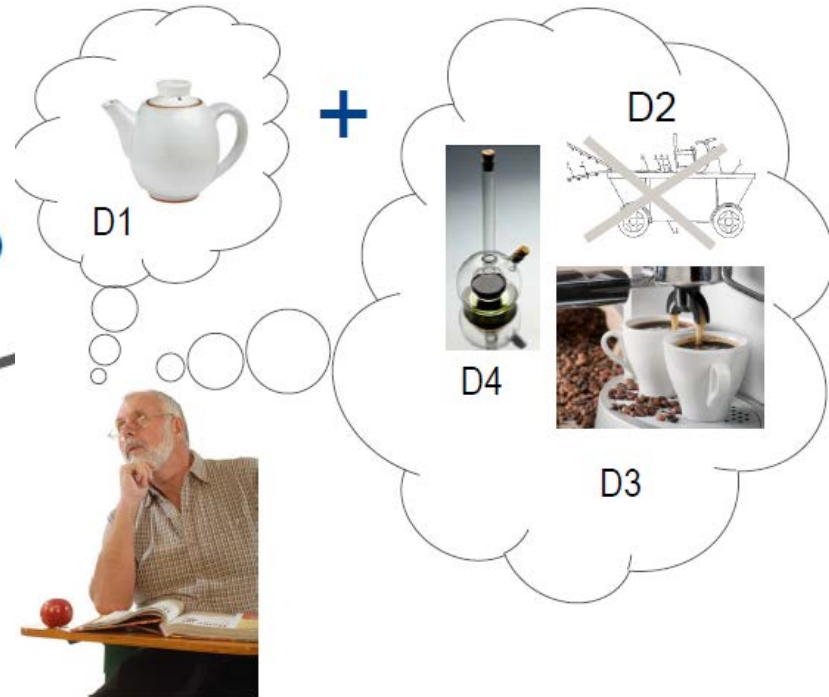
The “objective technical problem”

➤ Flexible Approach (USPTO)

- No objective problem: Is there any reason that would motivate a person of skill in art to add second claimed spout?



Fig. 1.



➤ Problem-Solution Approach (EPO)

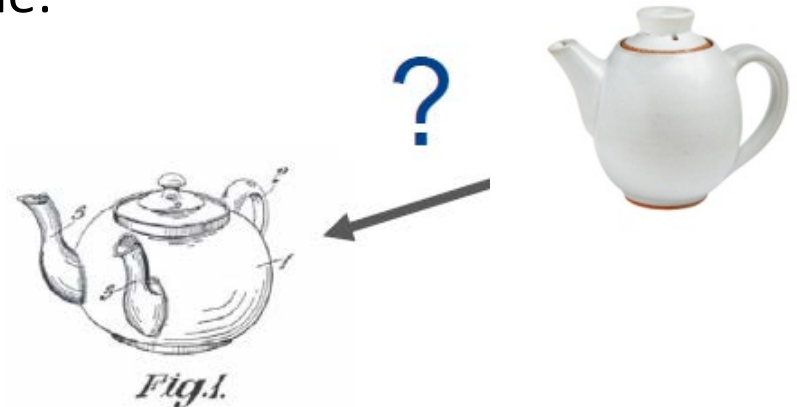
- Objective problem: How to modify the teapot of D1 in order to reduce the time needed to fill multiple cups?



The “objective technical problem”

➤ Flexible Approach (USPTO)

- Motivation to combine could include:
 - reduce time needed to fill cups?
 - easier to pour identical amounts?
 - other reasons?
- Secondary reference might not be necessary at all (common sense to increase number of elements?)



➤ Problem-Solution Approach (EPO)

- Objective problem: How to modify the teapot of D1 in order to reduce the time needed to fill multiple cups?



The “technical effect”

➤ Flexible Approach (USPTO)

- Patentable benefits of invention can be present in the Specification or can be presented later.
- Some technical effects in Europe would not support non-obviousness in US.

➤ Problem-Solution Approach (EPO)

- Technical effect required to distinguish over prior art.
- Technical effect must be **derivable** from the application.
- Wide range of acceptable technical effects.
- It can be helpful to explain effects, preferably the superiority of the invention, in the application as filed.

The “technical effect” – e.g., cost savings due to the invention?

➤ Flexible Approach (USPTO)

- Cost savings due to invention is likely not a basis for supporting patentability.
- KSR implies that cost savings may provide a reason a particular feature would have been “obvious to try,” or “common sense,” or supports “market demand” and thus would have been obvious.

➤ Problem-Solution Approach (EPO)

- Cost savings due to an invention can be a technical effect of the invention and support patentability.

“Motivation to combine” vs. “Could-would approach”

- **Motivation to combine (USPTO):** Whether a person of ordinary skill “*would*” have been “*motivated to combine*” references.
 - Motivation may come from the references themselves or from the knowledge generally available in the art—not just from the “closest” prior art.
- **Could-would approach (EPO):** Is there any teaching in the prior art as a whole that would (not simply could, but *would*) have prompted the skilled person, faced with the objective technical problem, to modify the closest prior art to arrive at the invention?
 - The point is not whether the skilled person could have arrived at the invention by adapting/modifying the closest prior art, but whether he or she would have done so because the prior art incited him or her to do so in the hope of solving the objective technical problem or in expectation of some improvement or advantage. (EPO Guidelines G-VII, 5.3)

Other considerations: “Analogous Art”

➤ Flexible Approach (USPTO)

- Prior art can be can be analogous if it is:
 - (1) in the same field of endeavor as the invention, regardless of the problem addressed, or
 - (2) “reasonably pertinent” to the problem with which the inventor is concerned.
- Can be difficult to persuade examiners that prior art is not analogous.

➤ Problem-Solution Approach (EPO)

- Prior art should be directed to a similar purpose or effect as the invention or at least belong to the same or a closely related technical field as the invention.

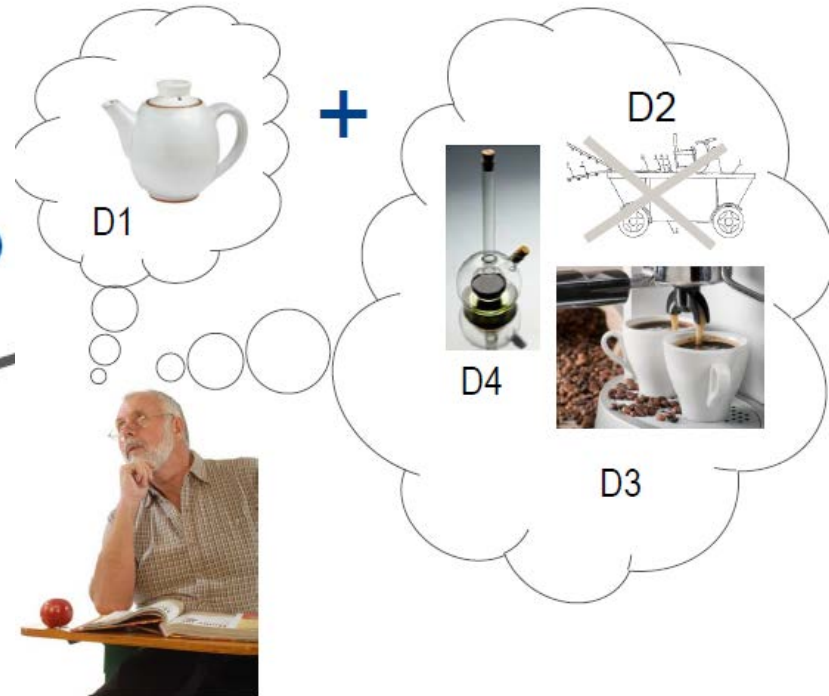
Other considerations : “Analogous Art”

➤ Flexible Approach (USPTO)

- D2 fertilizer dispenser ***might*** be combinable with D1, or at least some Examiners might assert this.



?



➤ Problem-Solution Approach (EPO)

- D2 fertilizer dispenser would not be combined with D1 teapot.

What if there are non-preferred alternatives available in the Prior Art?



➤ Flexible Approach (USPTO)

- Given alternative solutions in the secondary reference, the Examiner can pick *either solution* and combine it with the base reference, even if selected solution is less favored, so long as there is *some* reason to select the less-favored solution.

➤ Problem-Solution Approach (EPO)

- If a prior art reference provides two alternative solutions to a problem, one of which is not preferred, it is not obvious to choose the non-preferred option to modify the primary reference unless there is a clear reason to choose one over the other.

Combining multiple prior art references

➤ Flexible Approach (USPTO)

- No limit on the number of references to be combined, as long as there is a reasonable motivation in the prior art for adding each feature.
- Combining 4 or more references can be OK.

➤ Problem-Solution Approach (EPO)

- Combining more than 2 references in a rejection rarely occurs.
- Combining more than 3 references almost never occurs.

USPTO & EPO – prosecution considerations

	EPO	USPTO
Could-would test?	Applies. Consider whether something in prior art that “would” have prompted...	Does not always apply. Consider whether there would have been a motivation to combine.
Two alternative approaches in the prior art?	Preferred approach selected.	Often even less-favored approach can be selected.
Reasonable expectation of success required?	Yes.	Yes.
Cost benefit of invention supports patentability?	Yes – Technical Effect.	Generally no – may support obviousness.
Combine > 2 references? > 3 references?	> 2 = rare. > 3 = Almost Never.	Common.

Practitioner Tips

- For foreign-originated applications, revise claims if possible before filing U.S. application, or file a Preliminary Amendment.
- File a Preliminary Amendment to align claims with U.S. practice for U.S. national stage application.
- Work closely with your attorney and let him or her work closely with foreign counsel to sort out the effectiveness of various arguments and/or amendments during prosecution.
- Conduct Examiner interviews early in prosecution – many things may be difficult to read between the lines in an Office Action.

Thank you!

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↓ USPTO Complex ↓

**United States District Court
(Eastern District of Virginia) ↓**

The Oblon Firm ↓