



SUGHRUE MION, PLLC | INTELLECTUAL PROPERTY LAW

# Fundamentals of Patent Prosecution in the U.S.

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# Outline

Flow of U.S. Patent Prosecution

Unique Aspects of U.S. Prosecution

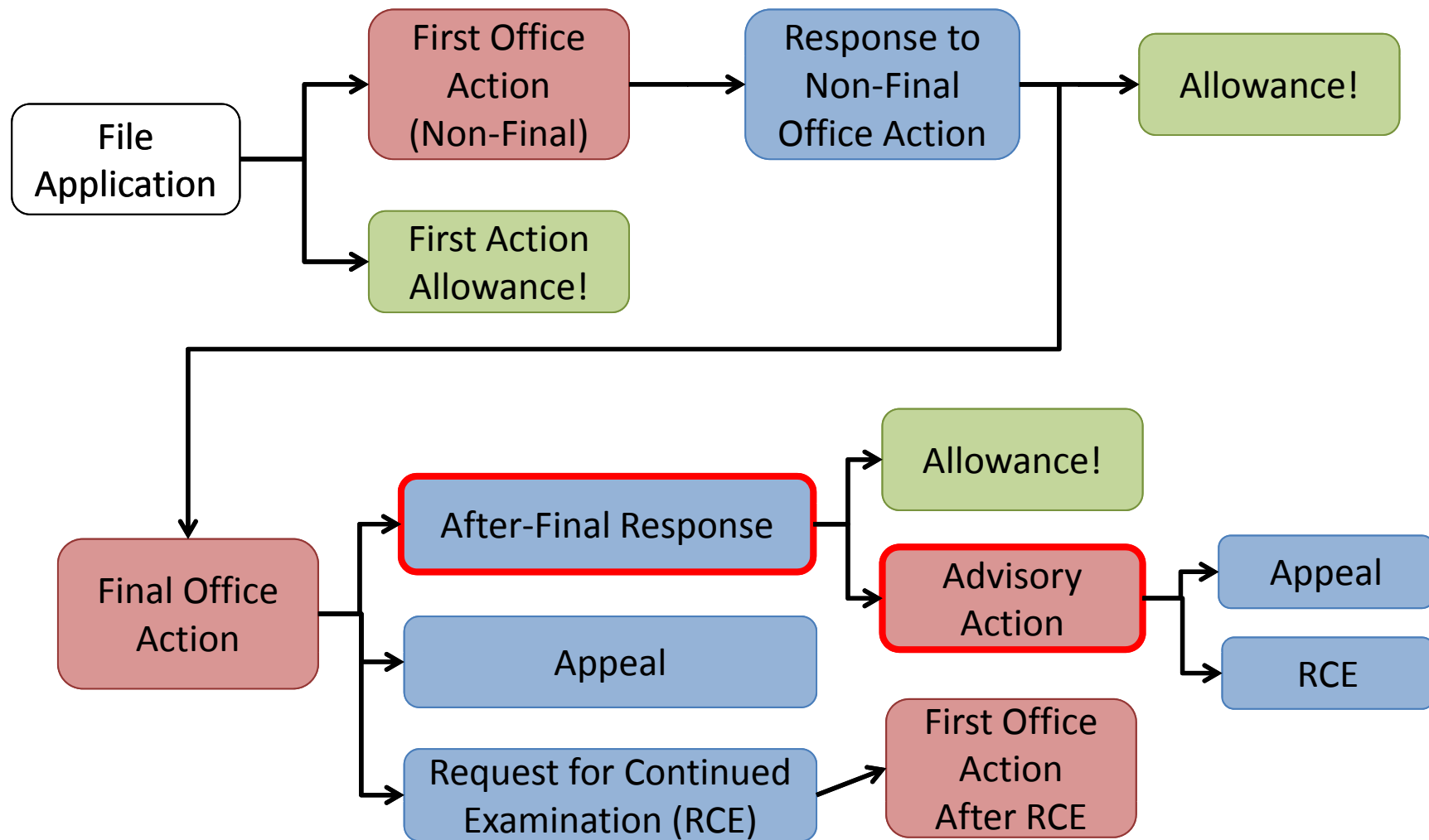
Duty of Disclosure (IDS)

Use of Interviews

Functional Claiming

# U.S. Patent Prosecution Flow

# US Patent Prosecution Flowchart



# Types of Applications

- First filing in the U.S.
  - Provisional Application
  - Non-provisional Application
- Filing based on foreign priority (e.g. JP)
- Filing under the Patent Cooperation Treaty (PCT)

# First Filing in the U.S.

## 1. Provisional Application

- Not counted in the 20-year term
- Simple and cost effective
- Few formal requirements (but, disclosure must support later-filed non-provisional application)
- No claim needed (but, better to have at least one claim)
- Any language

## 2. Non-provisional Application (i.e., Utility Application)

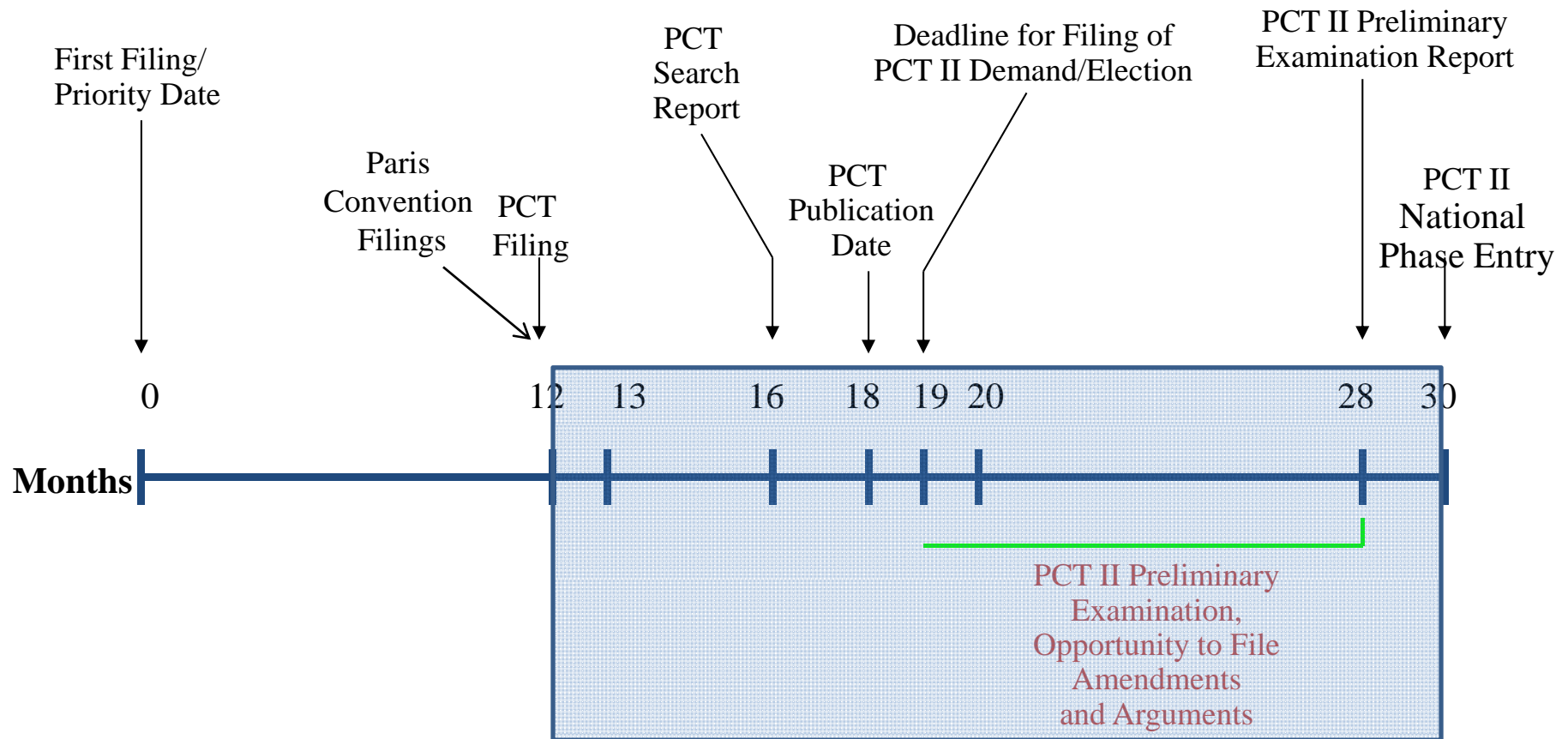
# Filing Based on Foreign Priority

- **Paris Convention**
- Currently 170+ member States (WTO; must afford similar protections)
- National Treatment - same protection for both foreign and national applicants
- **Right of Priority** (within 12 months of 1<sup>st</sup> disclosure)
- Common Procedural Rules

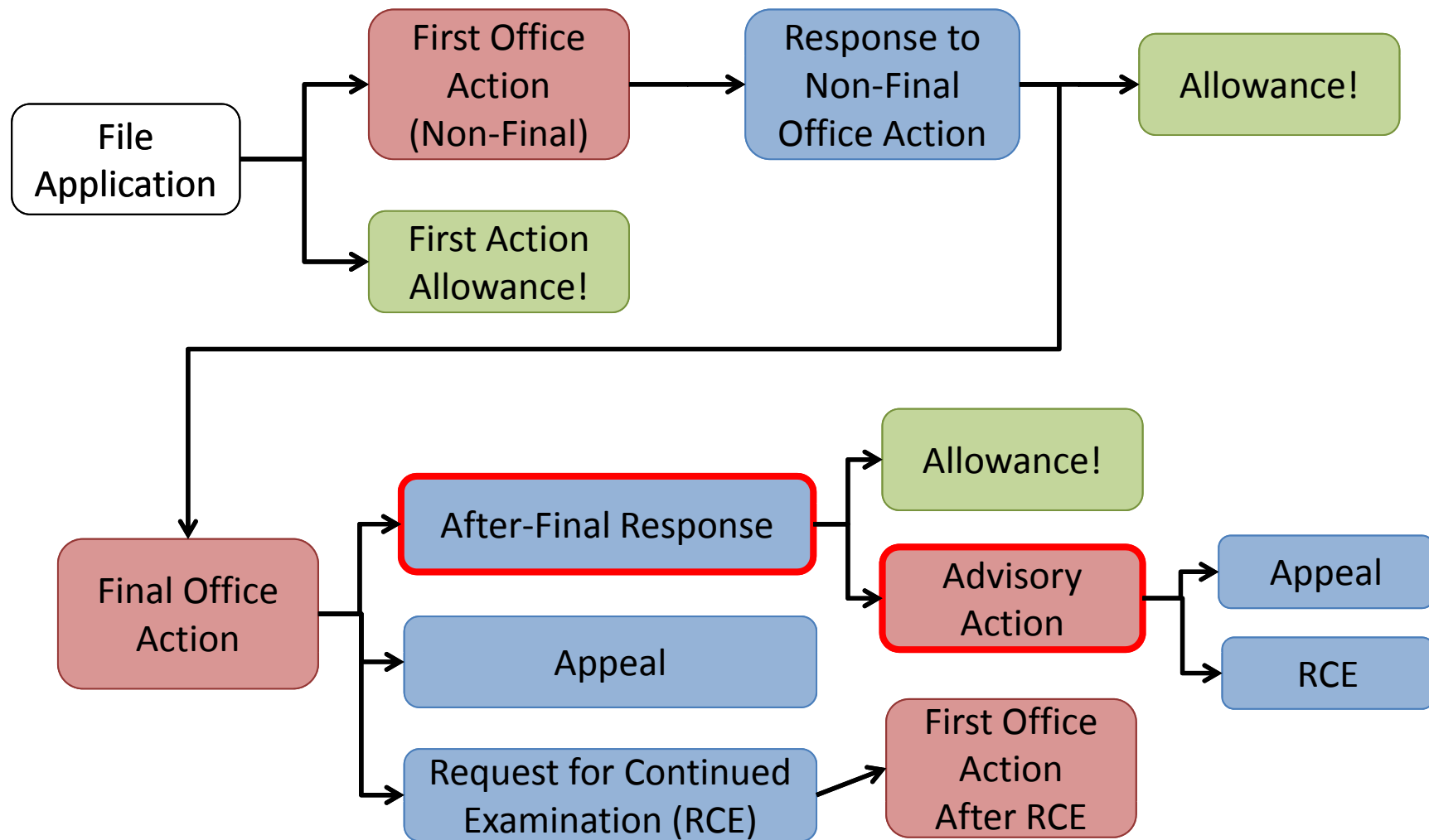
# Filing Based on PCT

- Enacted in 1970 Under Article 19 of the Paris Convention; Administered by WIPO
- Currently 148 member States
- If any applicant or inventor is a citizen or resident of a PCT member state, then a PCT application can be filed with that state or the International Bureau.
- File one common **International Application**, and then elect member States in which to enter the “national stage” with a **National Stage Application**.
- Receive **International Search Report (ISR)**

# Patent Cooperation Treaty (PCT) Timeline



# US Patent Prosecution Flowchart



# Non-Final Office Action (OA)

- Examiner's written opinion on patentability
- Form of the Application (Formalities)
  - The Examiner reviews the Application to ensure compliance with USPTO rules and regulations
- Substantive matters
  - Patent Eligibly Subject Matter ( § 101)
  - Written Description ( § 112)
  - Enablement ( § 112)
  - Novelty ( § 102)
  - Obviousness ( § 103)
- Patent prosecution is a **negotiation process**, and the Office Action helps guide the negotiation toward allowance.

# Response to Non-Final OA

- Two options – Applicant has the right to:
  - Amend the claim(s)
  - Argue against the Examiner’s position
- Time period for response – Set by the Examiner - typically the Response is due within **3 months from the mailing date** of the Non-Final OA.
  - Can extend the due date by paying government-imposed extension fees
  - However, the **maximum** is 6 months total from mailing date of the OA – set by statute.

# Response to Non-Final OA

- Novelty (§ 102)
  - Examiner asserts that a single prior art reference discloses each and every limitation of the claim.
    - Smith reference *“anticipates”* claim 1.
    - Claim 1 *“reads on”* the Smith reference.
  - To respond: Review the reference and the claim
    - Amend the claim to narrow the scope of the claim to distinguish over the reference.
    - Argue that one or more limitations are not disclosed by the reference

# Response to Non-Final OA

- Obviousness (§ 103)
  - Although a single prior art reference does not disclose all the limitations of the claim, the Examiner asserts that the limitations of the claim would be obvious to one of ordinary skill in the art from the teachings of one or more prior art references.
    - Claim 1 ***“is obvious over”*** Smith in view of Jones.

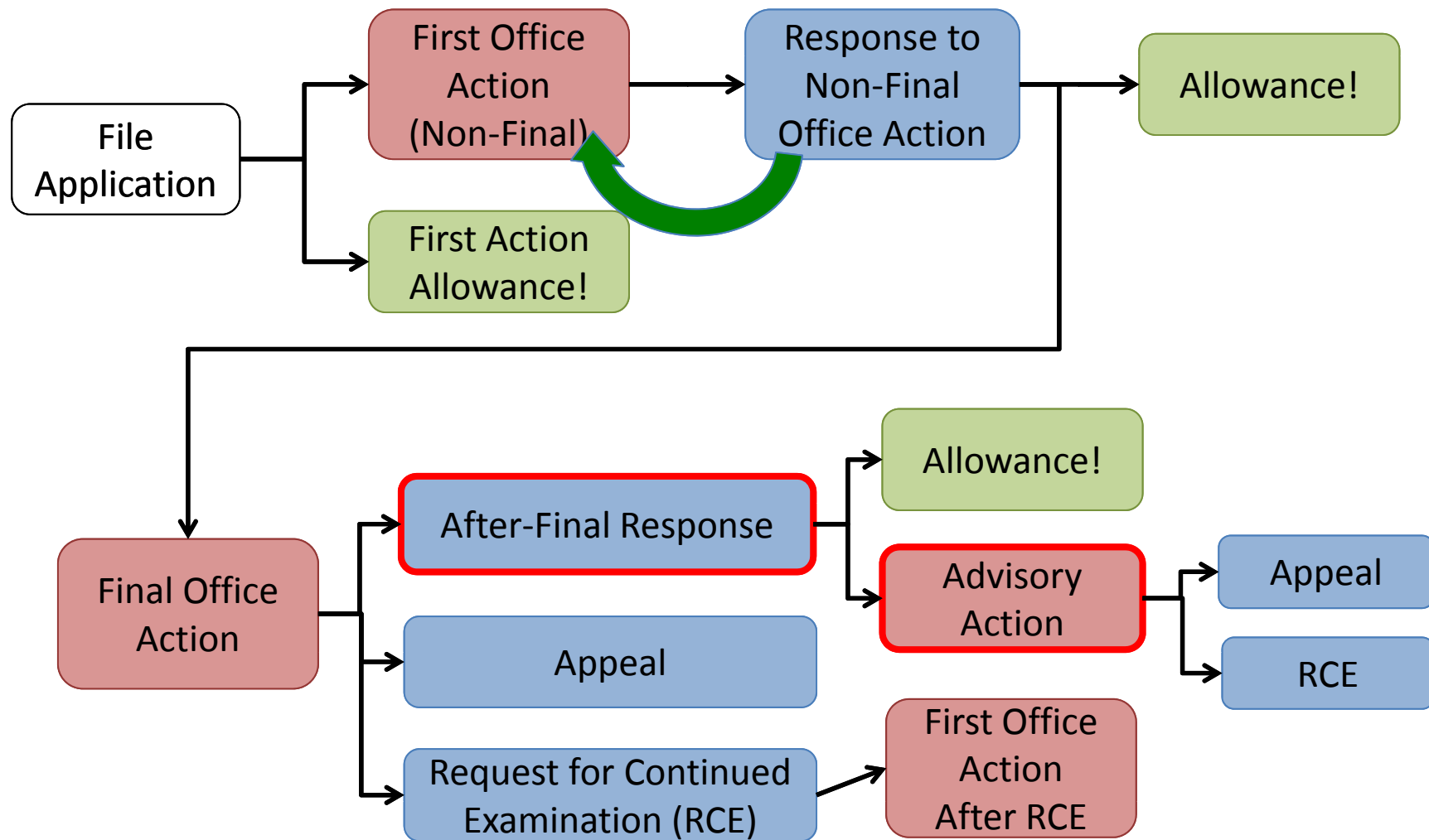
# Response to Non-Final OA

- Obviousness (§ 103)
  - To respond: Review the reference(s)
    - Amend the claim to narrow the scope of the claim to distinguish over the reference(s).
    - Argue that one or more limitations is not taught by the reference(s) **and** would not be obvious to one of ordinary skill in the art *for some specific reason*.
    - Argue that the prior art references are not combinable for *technical* reasons.
      - The references **“teach away”** from combination, or from the claimed invention.

# Final OA

- Written opinion similar to Non-Final OA.
  - Usually includes a “Response to Arguments” section setting forth the Examiner’s response to any arguments Applicant made in the Response
- **Closes prosecution** – Applicant no longer has the right to amend the claims.
- Final OA is proper when:
  - Examiner can repeat the same grounds of rejection as in the Non-Final OA; **OR**
  - New rejection (***grounds of rejection***) is necessitated by applicant’s claim amendments.
  - The Examiner ***“makes the action”*** Final.

# US Patent Prosecution Flowchart



# Response to Final OA

- Several options:
  - Submit an After-Final Response
    - Amend the claims
    - Argue against the Examiner’s position (request for reconsideration)
  - File a Request for Continued Examination (RCE)
  - Request consideration by a panel of Examiners (Pre-Appeal Brief Request for Review)
  - File an Appeal to the Patent Trials and Appeal Board (PTAB)
  - Abandon the Application
- Time period for response – usually same as a Non-Final OA – 3 months from mailing date of the Final OA.
- However, since prosecution is closed, Applicant’s After-Final Response does not stop the time period for response.
  - The “***clock does not stop***” by filing an After-Final Response.

# After-Final Response

- Argue against the Examiner's position.
- Amend the claims – but entry of the amendments is at the discretion of the Examiner.
- Situations where amendment may be entered:
  - To comply with Examiner's suggestions
  - To reduce issues on appeal, i.e., cancel claims
  - To present claims in better form for consideration on appeal
- If amendments raise new issues of patentability, the Examiner will likely refuse to enter them.

## Option: After Final Consideration Program (AFCP)

- Pilot program to provide the Examiner additional time to consider amendments made after final.
- Requirements:
  - A Request for Reconsideration under the AFCP program
  - An amendment to at least one independent claim that does not broaden the scope of the claim; and
  - A statement agreeing to an Examiner interview
- **Practice Tip:** AFCP is most useful when the amendment has been vetted by the Examiner in advance.

# Advisory Action

- If the After-Final Response fails to place the Application in condition for allowance, the Examiner will mail an Advisory Action.
  - Short form indicating status of claims.
  - Usually the Examiner will include a page with a short discussion of why Applicant's argument was found non-persuasive, or why the Examiner will not enter amendments.

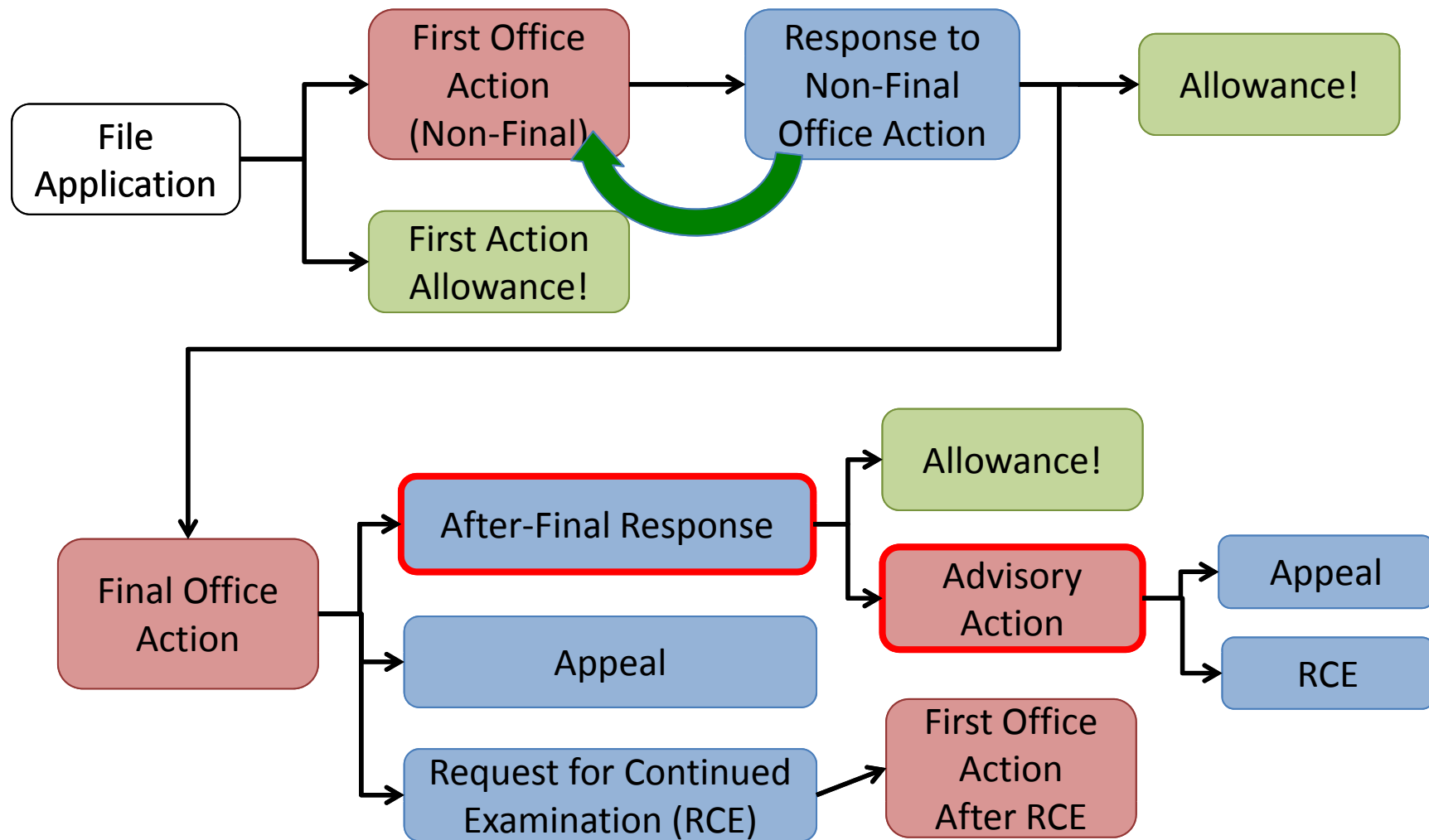
# RCE

- Pay a fee and re-open prosecution of the application.
- However, if only argument or minor amendment is presented, the Examiner can make the first Office Action after the RCE final.
- To avoid this:
  - Amend at least one claim in order to force a new ground of rejection
  - Add claims directed to previously unclaimed subject matter to force a new ground of rejection.

# Appeal Options

- Pre-Appeal Brief Request for Review
  - Filed with Notice of Appeal
  - Request for Review limited to 5 pages pointing out *clear error* made by Examiner
  - Review of the Final Rejection by a panel of three Examiners
  - Decision is one of 1) allowance, 2) re-open prosecution, 3) indication to proceed to full Appeal.
- Full Appeal
  - File a Notice of Appeal
  - Appeal Brief is due 2 months later, and due date may be extended by payment of fees.

# US Patent Prosecution Flowchart



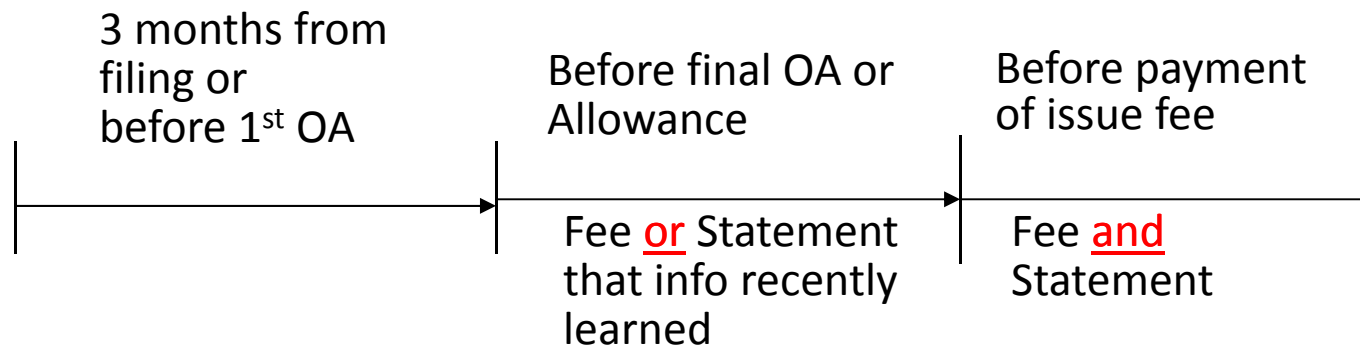
# Duty to Disclose

# Duty to Disclose

- In non-provisional applications, individuals substantively involved with the preparation and/or prosecution of the Application have a **duty to disclose** to the USPTO information which is **material to patentability**.
  - 37 C.F.R. § 1.56
- Includes inventors, attorneys, agents, and other individuals
- Policy is that the Applicant is in the best position to know and understand what information is most relevant to examination of the Application.

# Duty to Disclose

- **Information Disclosure Statement (IDS)**
  - IDS Form listing the patents, published patent Applications, and non-patent literature (NPL)
  - Copy of any document that is not a patent or published patent application.
  - Either translation into English if the document is in foreign language; or concise explanation of the relevance of the document.
- **Timing:**



# Interviews

# Written Record

- In U.S. prosecution, the written record (i.e., OA and Response) is publicly available.
- The public record shows the negotiation between Examiner and Applicant, and how the Examiner and Applicant viewed the issues.
- The written record forms part of the “**intrinsic evidence**” relied upon by the courts for determining the meaning of the claims.
- Therefore, statements in an OA Response may be used by the Courts to limit the claims.
- **Care must be taken in what is said on the record and how it is said!**

# Examiner Interview

- By telephone, video-conference, or in-person
- To discuss any issues related to patentability.
- To show model of the invention; competitor's product
- Can include inventor(s) or Applicant representative.
- Examiner usually requires an Interview Agenda before the interview in order to prepare for the interview.
  
- Typically useful to:
  - Provide detailed discussion of the invention and the key aspects for the Applicant
  - Discuss amendments to claim language.

# Interview Benefits

- An interview permits a candid discussion of the invention and allows for candid feedback from the Examiner about the patentability issues raised during prosecution.
  - Explain what the “invention is” to the Examiner.
  - Explain the meaning of various claim terms to the Examiner.
  - Discuss the cited prior art and how the prior art relates to the claims.
- An interview often permits more effective use of visual aids.
  - Refer to patent drawings and cited prior art drawings
  - Present practitioner or applicant sketches
- A well-conducted interview can provide a way for the practitioner to vet changes to the claims in order to avoid multiple rounds of OA-Response, and the costs associated therewith.

# Interview Tips

- The interview is a tool that is not used often enough.
- Interviews work best when the attorney understands the goals of the Interview and the Application, and when the agent/client has specific information that is desired and presents specific question(s) to ask the Examiner.

# Functional Claiming

# Basic Statutory Requirements

An element in a claim for a combination may be expressed as:

- (1) a means or step
- (2) for performing a specified function
- (3) without the recital of structure, material or acts in support thereof, and
- (4) such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112(f) (also referred to as § 112, 6<sup>th</sup> paragraph)

# Basic Statutory Requirements

## In other words:

"means" + [function] =

special statutory claim  
interpretation

(limited to what is  
described in the  
specification)

# Examples

- means for fastening the members
- means for storing a coefficient
- means for calculating a trajectory of the ball
- means for controlling an angular displacement

# Why use means-plus-function limitations under § 112(f)?

- Shortcut drafting mechanism which allows Applicant to claim apparatus without specifying structure
- The structure can instead be claimed based on its function

# Pros

- Scope of a means-plus-function (MPF) limitation can be broad if many examples are described in specification
- Ease of claiming
- Some Inventions Might Be Best Described Using Functional Language (i.e., computer-related inventions)
- Narrower scope means less vulnerable to validity challenges in view of post-grant proceedings

# Cons

- Narrower scope than non-MPF claim
- Infringement may be hard to prove if claim interpreted narrowly
- Must disclose specific structure that corresponds to the claimed MPF limitation
- More ambiguous claim construction
- More complex litigation (higher cost)

## MPF claim scope different in U.S. compared to other jurisdictions

- In U.S., MPF claim limitations are typically interpreted **narrowly**
  - Limited to embodiments described in the Specification
- In other countries, "means for" type claim limitations are typically interpreted **broadly**
  - Virtually any embodiment

## Examples

- claim recites "means for fastening"
  - Specification describes only one embodiment of "means for fastening" = "a screw"
- In U.S., under MPF, "means for fastening" is limited to being "a screw" (and equivalents)
- In other countries "means for fastening" might be interpreted as being "a screw," "a nail," "a nut and bolt mechanism," "Velcro," "adhesive," etc.

# Basic Analysis Under § 112(f)

- Examiners will apply [35 U.S.C. 112\(f\)](#) or [pre-AIA 35 U.S.C. 112, 6<sup>th</sup> ¶](#) to a claim limitation if it meets the following 3-prong analysis:
  - 1) the claim limitation uses the term “means” or “step” or a term used as a substitute for “means” that is a generic placeholder (also called a nonce term or a non-structural term having no specific structural meaning) for performing the claimed function;
  - 2) the term “means” or “step” or the generic placeholder is modified by functional language, typically, but not always linked by the transition word “for” (e.g., “means for”) or another linking word or phrase, such as “configured to” or “so that”; and
  - 3) the term “means” or “step” or the generic placeholder is not modified by sufficient structure, material, or acts for performing the claimed function.

# USPTO Guidelines

- "The following is a list of non-structural terms that **may** invoke MPF:

“mechanism for”

“module for”

“device for”

“unit for”

“component for”

“element for”

“member for”

“apparatus for”

“machine for”

“system for”

# USPTO Guidelines

- The following are examples of structural terms that have been found **not** to invoke MPF:

“circuit for”

“detent mechanism”

“digital detector for”

“reciprocating member”

“connector assembly”

“perforation”

“sealingly connected joints”

“eyeglass hanger member”

## Example of MPF Limitation – Mechanical Case

- Claim recites "**means for fastening**"
- Specification discloses a "**screw**" as the "means for fastening"
- So "means for fastening" is interpreted to cover the corresponding "screw" and equivalents thereof.
- EASIER TO DETERMINE CORRESPONDING STRUCTURE IN MECHANICAL CASE

## Example of MPF Limitation – Electrical/Computer Case

- Claim recites "**means for processing**"
- Specification discloses a "**CPU**" as the "means for processing"
- So "means for processing" is interpreted to cover the corresponding "CPU" and equivalents thereof?  
– **NOT NECESSARILY!**

# Example of MPF Limitation – Electrical/Computer Case (Contd)

- For computer-implemented MPF limitation, corresponding structure is special purpose computer programmed to perform **algorithm** disclosed in specification
- So need to ensure that an **algorithm** for processing is disclosed in specification.
  - For example, a two-step algorithm of scanning the image and extracting certain features from the image.

# *Triton Tech v. Nintendo*

- Subject Matter is Wii Remote™ control
- MPF limitation: "**integrator means** associated with said input device for integrating said acceleration signals over time to produce velocity signals for linear translation along each of ... first, second and third axes"
- Specification disclosed CPU performing numerical integration



# *Triton Tech v. Nintendo*

- District Court held claim **invalid as indefinite** because no algorithm for performing function
- Federal Circuit affirmed: disclosure of "numerical integration" is not algorithm but it entire class of different possible algorithms



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Mr. Kunzendorf has been prosecuting patents, rendering legal opinions and counseling clients on early stage litigation matters for over 10 years. He earned his BS degree in Electrical Engineering and Applied Physics, and has worked in software programming for IBM and on communications hardware for Harris RF Communications.

Prior to becoming a U.S. Patent Attorney, Mr. Kunzendorf worked for several years as a Senior RF Engineer for Motorola Inc. where he designed, tested, and optimized radio receiver front ends for products sold in Asian markets. He has extensive experience in radio communication systems and analog and digital protocols. He has prosecuted hundreds of applications in the electrical and mechanical arts. He also serves as independent patent evaluator for the HDMI Standard.

In graduate school, Mr. Kunzendorf taught writing composition to English as a Second Language (ESL) students from many countries in Asia.