

UNITED STATES
PATENT AND TRADEMARK OFFICE





MEETING SERIES

The patent examination process

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UNITED STATES
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Learning outcomes

At the end of this session, you will be able to:

- Explain the role of the patent examiner in examination of an application.
- Describe the typical bases for rejection.
- Summarize the examination process.



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Role of a patent examiner

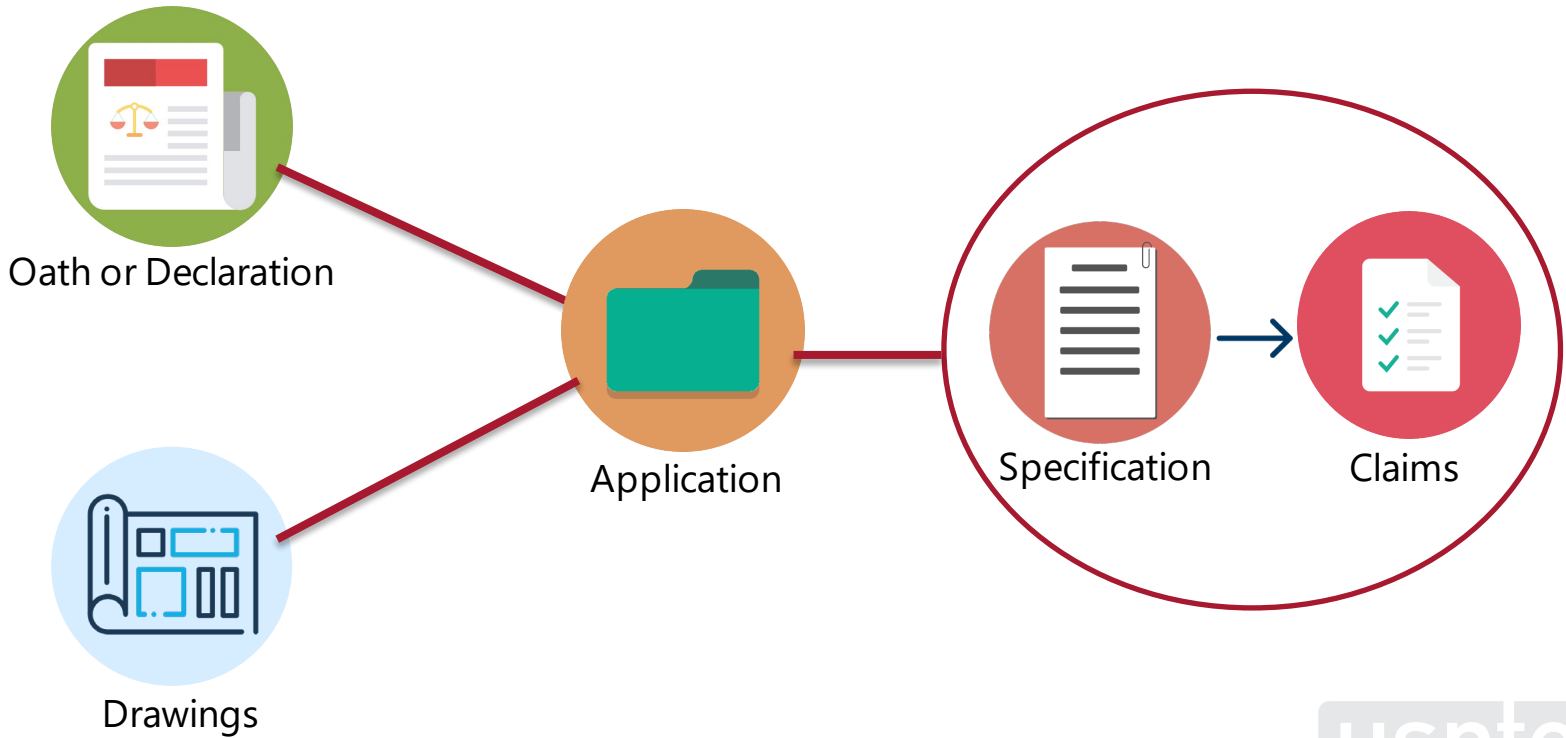
- To serve as advocate and protector of the public interest with respect to intellectual property
- To provide direct service and assistance to customers from inside and outside the USPTO
- To evaluate patentability with respect to invention(s) claimed in a patent application under the conditions for patentability set forth in Title 35 of the United States Code

Terminology

- **Pendency:** the time from a patent application's filing date until the date a patent is issued or the application is abandoned
- **Published patent application:** an application published as part of PGPub (PreGrant Publication) in accordance with 35 U.S.C. 122(b)
- **Allowed:** a patent application which has been indicated by an examiner as meeting all statutory (laws) and regulatory (rules) requirements (other than certain drawing, deposit, and priority document requirements) not patented yet; may or may not have been published
- **Patented:** an allowed patent application which has been issued (published) on the patent (issue) date after payment of the issue fee
- **Abandoned:** an application which is no longer pending and was not patented; abandonment may be expressly requested by applicant or be as a result of failing to respond within a set time period



Anatomy of a typical patent application



Examination – in general

- The claims define the invention
- To reject, the examiner has to provide evidence of unpatentability
- Sometimes this evidence includes “prior art” – evidence that the invention or aspects of it are already known
- Prior art may be anything that is publicly available, or any U.S. patent document that was effectively filed, prior to the effective filing date of the claimed invention
- Prior art can be in any language, and can be in any form (for example: papers, patents, thesis, websites, abstracts, videos, blogs, articles, textbooks, books, manuals)



What does a patent examiner do?

- **Reads and understands** invention
- Determines whether there is an adequate written description of the claimed invention
- Determines the **scope of the claims**
- **Searches** existing technology for claimed invention
- Determines **patentability** of claimed invention
- Writes an opinion – called an **office action** – that notifies applicant of the examiner's patentability determination and compliance with patent laws and rules

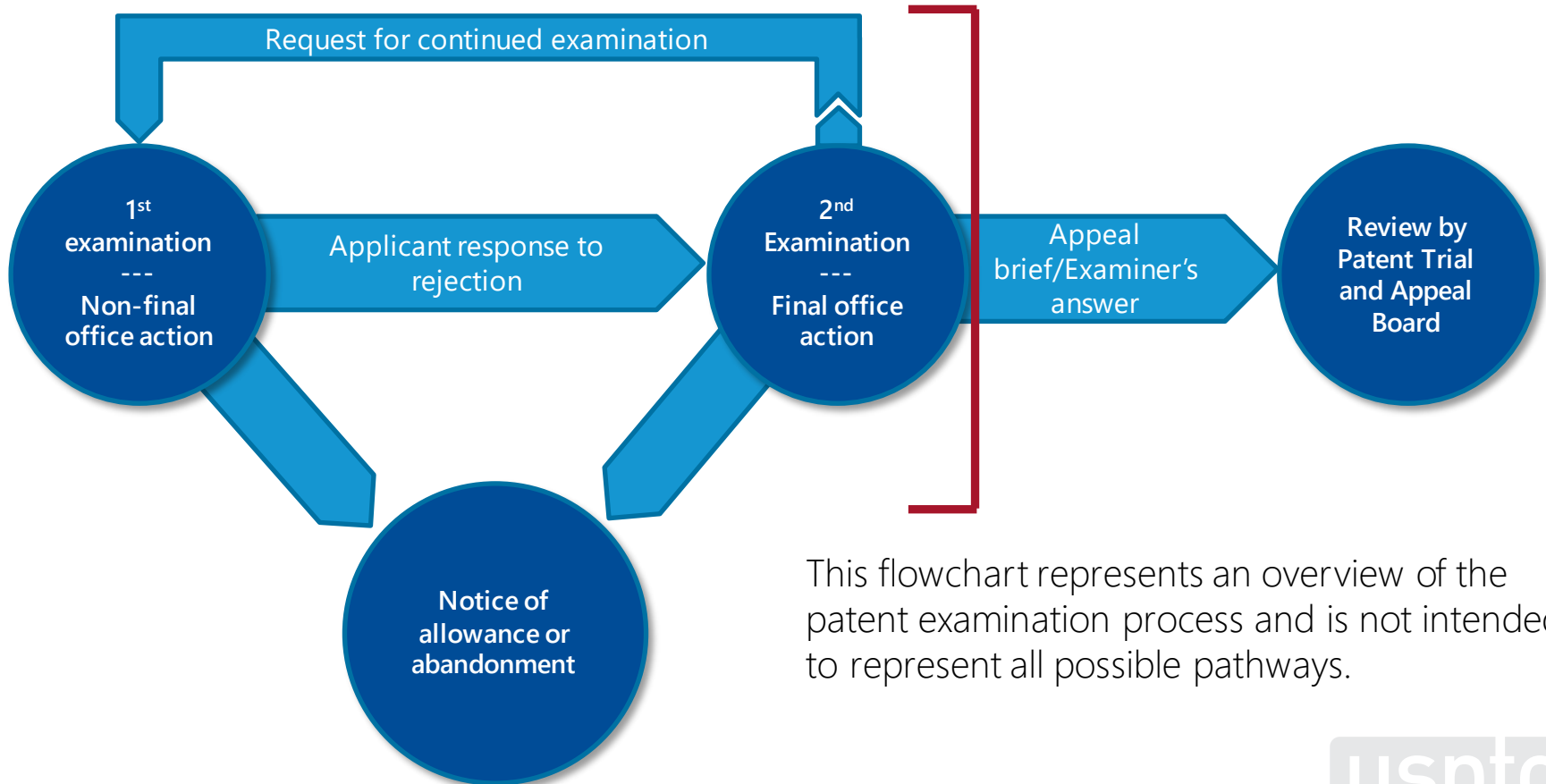
Patent examiner responsibilities

| Pre-search activities | Search | Patentability determination |
|--|--|--|
| <ul style="list-style-type: none">• Reads and understands the invention set forth in the specification• Checks the application for completeness and ensuring compliance with all formal requirement• Ensures proper classification• Determines whether the application is adequate to define the metes and bounds of the claimed invention• Determines the scope of the claim(s) | <ul style="list-style-type: none">• Searches existing technology for claimed invention• Selects relevant prior art references | <ul style="list-style-type: none">• Writes office actions identifying and analyzing all issues pertinent to statutory compliance of the claimed invention• Responds completely to applicant's reply• Issues notice of allowance or notice of abandonment |

Which of these three highlighted responsibilities do you think take the longest for an examiner to complete?



Overview of patent examination process



This flowchart represents an overview of the patent examination process and is not intended to represent all possible pathways.

Office action (legal record)

- Sets forth the legal basis for any objections, rejections, and indications of allowable subject matter
- Available to the public via Patent Center on the USPTO website, www.uspto.gov (for published applications)
- Can be relied upon in any court proceedings for a resulting patent
- Aids the public and the courts with the underlying rationale behind the prosecution history
- Must be consistent with the policies of the USPTO, including:
 - Manual of Patent Examining Procedures (MPEP)
 - Guidelines (Interim or Final) published between MPEP revisions



Statutes

Title 35, United States Code (U.S.C.)

- Enacted by Congress, signed by the President.
- The USPTO does not have the authority to waive or interpret laws inconsistent with binding case law
- Basis for a **rejection of claim(s)**
- If twice rejected, applicant may **appeal** to the Patent Trial and Appeal Board (PTAB)
- If PTAB affirms the examiner's rejection, judicial review may be sought in court



Rules

Title 37, Code of Federal Regulations (CFR)

- The USPTO has authority to write rules in certain instances, subject to approval of the Office of Management and Budget (OMB).
- The USPTO has the authority to waive or interpret the rules
- Rules are the basis for an **objection** to any part of an application, including the claims
- Applicant may **petition** the examiner's holding
- Petition is decided by appropriate USPTO official - see the *Manual of Patent Examining Procedure (MPEP) Chapter 1000*
- If both rejection and objection are present, related matters that are part of the rejection and the objection may be decided by the PTAB



Bases for rejection

Bases for rejection

35 U.S.C. 101

Inventions patentable

35 U.S.C. 112

Specification

35 U.S.C. 102

Conditions for patentability: novelty

35 U.S.C. 103

Conditions for patentability: non-obvious subject matter

Claim interpretation

“The name of the game is the claim.”

In re Hiniker Co., 150 F.3d 1362, 1369

- Claim analysis by identifying and evaluating each claim limitation
- For processes, the claim limitations will define steps or acts to be performed
- For products, the claim limitations will define discrete physical structures or materials
- During examination, claims are given their broadest reasonable interpretation (BRI) consistent with the specification to a person of ordinary skill



See MPEP 2103(I), 2111

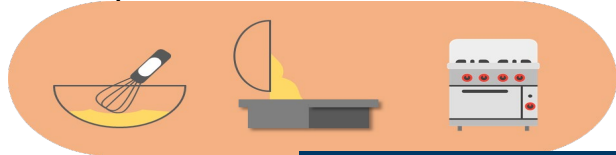
Claim interpretation (cont.)

A method of mixing cake ingredients, comprising:

mixing, with a whisk, flour, butter, sugar, eggs, salt, milk, and baking powder in a bowl;

pouring the mixture into a baking pan;
and

heating the baking pan and mixture in an oven which has been heated to 350 degrees Fahrenheit for 35 minutes.



A whisk for mixing cake ingredients, comprising:

a metal handle;

at least two wire loops extending from the metal handle;

wherein the metal handle is coated with silicone.



Which of these claims is the process?
The product?



Claim interpretation (cont.)

- Patent claims delineate, by way of a single sentence in the English language, that which the inventor regards as his or her invention.
- Claim language defines the metes and bounds of intellectual property protection desired (or the property boundaries).
- Patent claims provide notice to the public regarding the technology which is fenced off or protected from trespass. (i.e. infringement).

Patent holder



Potential infringer



35 U.S.C. 101

1. Double patenting
2. Inventorship (proper inventor(s) named)
3. Eligibility
 - a) Falls within one of the four categories of patent-eligible (statutory) subject matter - process, machine, article of manufacture, or composition of matter (or improvements thereof)
 - b) Not directed to a judicial exception without additional limitations amounting to significantly more
4. Specific, substantial, and credible utility



35 U.S.C. 112

- **Specification requirements**
 - Written description
 - Enablement
 - Best mode
- **Claim requirements**
 - Content
 - Particularly point out (not vague); distinctly claim (not indefinite)
 - Format
 - Independent, dependent, multiple dependent

35 U.S.C. 102 and 103

Rejections made under 35 U.S.C. 102 or 103 are commonly referred to as “prior art rejections.”

- 35 U.S.C. 102
 - Novelty (new)
 - Anticipation (no difference)
 - Defines “prior” art
- 35 U.S.C. 103
 - Non-obvious (legal determination)
 - Concept of “one of ordinary skill in the pertinent art”

35 U.S.C. 102 – anticipation

- Anticipation: When a single prior art reference describes, either expressly or inherently, each and every limitation of a claim:
 - A single prior art reference anticipates the claimed invention by describing every limitation in the claim.
 - The limitations may either be set forth expressly or be inherently present in the prior art reference.

Example claims

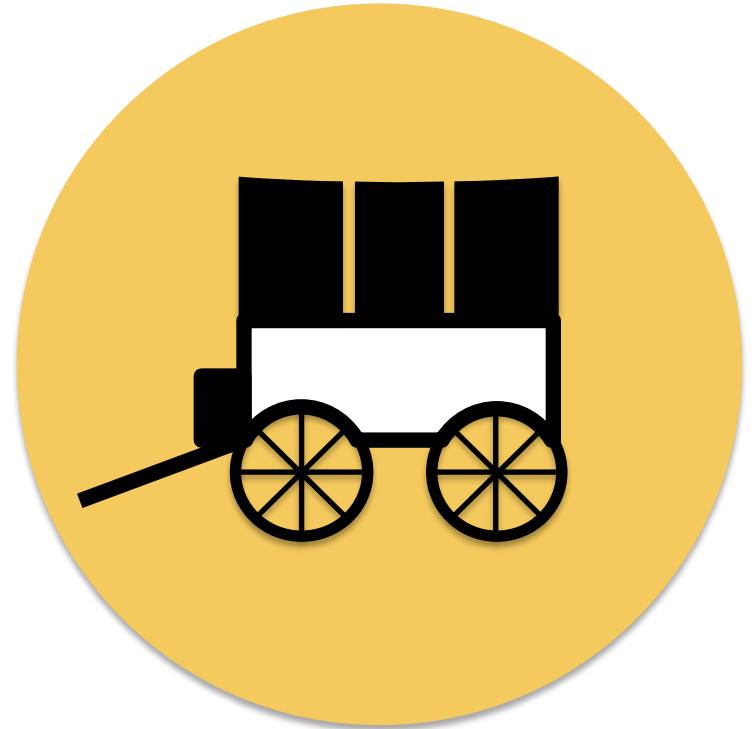
What is claimed:

1. A vehicle comprising:
 - four wheels;
 - a top made of fabric; and
 - a seat.
2. The vehicle of claim 1 further comprising:
 - a heated steering wheel.



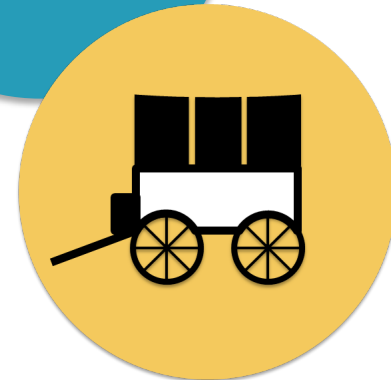
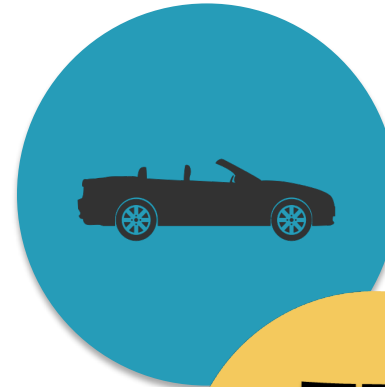
Anticipation example: prior art

- The prior art the examiner found is a Conestoga wagon. The wagon includes the following features:
 - a seat;
 - four wheels; and
 - a cloth top
- Does the wagon look like the picture of the invention?
 - No, but the determination of applicable prior art is based on the broadest reasonable interpretation of the claim consistent with the specification as understood by one of ordinary skill in the art.



Anticipation example: Does the prior art anticipate the claims?

- Regarding claim 1:
 - Is it a vehicle?
 - Yes. The definition of a vehicle is: “a thing used for transporting people or goods, especially on land, such as a car, truck, or cart”
 - Does it have four wheels?
 - Yes
 - Is the top made of fabric?
 - Yes
 - Does it have a seat?
 - Yes
- Regarding claim 2:
 - Is there a heated steering wheel?
 - No



35 U.S.C. 103 – obviousness

- A rejection based on 35 U.S.C. 103 is used when the claimed invention is not anticipated by a single reference according to the standard established by 35 U.S.C. 102 so the reference teachings must somehow be modified in order to meet the claims.
- The differences between the claimed invention as a whole and the reference teachings must have been obvious:
 - before the effective filing date of the claimed invention; and
 - to a person having ordinary skill in the art

See MPEP 2141

35 U.S.C. 103 – obviousness (cont.)

- To reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical “person of ordinary skill in the art” when the invention was unknown and just before the effective filing date of the claimed invention.
- A single reference does not need to teach all aspects of the claimed invention; a 103 rejection may be based on a combination of references.

35 U.S.C. 103 – obviousness (cont.)

- In view of all the factual information, the examiner must then make a determination whether the claimed invention “as a whole” would have been obvious at that time to that person.
- This determination requires an examiner to resolve the following inquiries:
 1. What is the scope and content of the prior art?
 2. What are the differences between the prior art and the claims at issue?
 3. What is the relevant level of ordinary skill in the pertinent art?
 4. Does any objective evidence of non-obviousness exist?

See MPEP 2141



35 U.S.C. 103 – obviousness (cont.)

- The decision on patentability is based on “a preponderance of evidence” (>50% likelihood)
 - The evidence supporting patentability must be more convincing than the evidence against it
- If the examiner determines that there is factual support for making an obviousness rejection, then the examiner must consider all evidence supporting the patentability of the claimed invention
 - This includes evidence in the specification and any other evidence submitted by the applicant
- Obviousness requires a reasonable expectation of success



35 U.S.C. §103 – obviousness (cont.)

- A prima facie case of obviousness cannot be established if:
 - A proposed modification of a prior art invention would render the invention being modified inoperable or unsatisfactory for its intended purpose (because there is no reason to make the modification), or
 - A proposed modification of a prior art invention would change the principle of operation of the prior art invention

See MPEP 2143.01



Example claim 2

What is claimed:

1. A vehicle comprising:
 - four wheels;
 - a top made of fabric; and
 - a seat.

2. The vehicle of claim 1 further comprising:
 - a heated steering wheel.



Obviousness example: prior art

In the same field of endeavor (vehicles) as the claimed invention, examiner found a publication for an SUV. Beyond what can be seen in the figure to the right, the publication that discloses the SUV includes:

- four wheels;
- a hard top;
- a seat; and
- a heated steering wheel for keeping the drivers hands warm in cold weather.



Obviousness example: claim 2

Looking to the factual inquiries:

1. What is the scope and content of the prior art?

The Conestoga wagon anticipates the vehicle as set forth in claim 1.

2. What are the differences between the prior art and the claims at issue?

The wagon lacks a heated steering wheel as set forth in claim 2. Further, a wagon, like a cart or a trailer, does not have a steering wheel or electrical power to support a heating element.

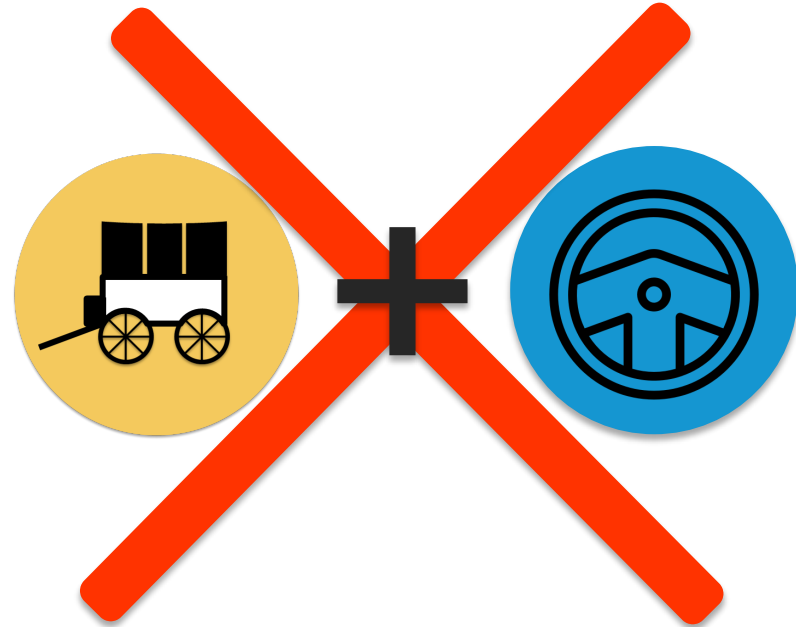
3. What is the relevant level of ordinary skill in the pertinent art?

Most likely a vehicle technician

4. Does any objective evidence of non-obviousness exist?

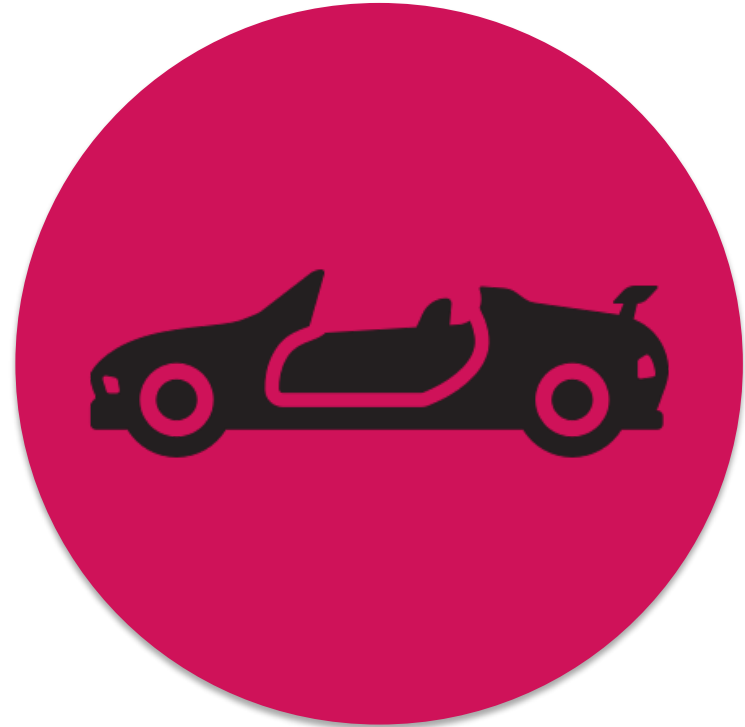
No, there is no objective evidence of non-obviousness.

Based on the inquiries above, one of ordinary skill would **not** be motivated to modify the wagon to include a heated steering wheel. One of ordinary skill in the art would recognize that the Conestoga wagon does not have a steering wheel nor the electrical connections necessary for a heating element. Therefore, modifying the Conestoga wagon to include a heated steering wheel would be nonobvious.



Obviousness example: Convertible

- What if, instead of the wagon, the prior art reference found was a publication discussing a cloth top 1957 convertible sports car?
 - The convertible anticipates claim 1
 - The convertible is still missing the heated steering wheel as set forth in claim 2.



Obviousness example: convertible, claim 2

Looking to the factual inquiries:

1. What is the scope and content of the prior art?

The convertible publication anticipates the vehicle as set forth in claim 1.

2. What are the differences between the prior art and the claims at issue?

The convertible has a standard wheel that is not heated whereas claim 2 requires a heated steering wheel.

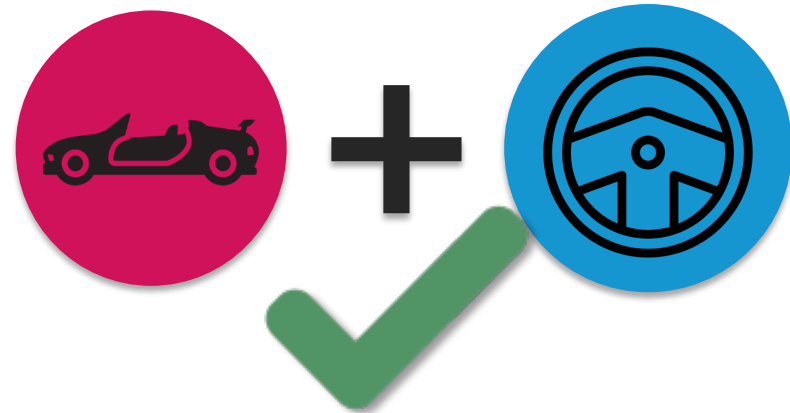
3. What is the relevant level of ordinary skill in the pertinent art?

Most likely a vehicle technician.

4. Does any objective evidence of non-obviousness exist?

No, there is no objective evidence of non-obviousness.

Based the inquiries above, one of ordinary skill would be motivated to modify the convertible with the SUV to retrofit the convertible with a more modern heated steering wheel to keep the drivers hands warm in cold weather, as suggested by the SUV publication.

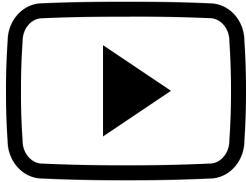


Types of prior art and mechanisms for entering prior art into the application file

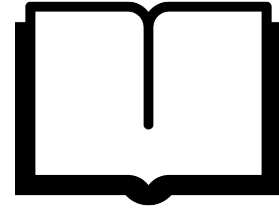
Types of prior art

- The most common type of prior art is a reference document, such as:
 - Patents (foreign and domestic)
 - Patent application publications (international, foreign, and domestic)
 - Non-patent literature (NPL), e.g., books, journal articles, web-based publications, etc.
- Another type of prior art is applicant admitted prior art
- 37 CFR sets forth various rules that dictate how prior art gets made of record in a U.S. patent application

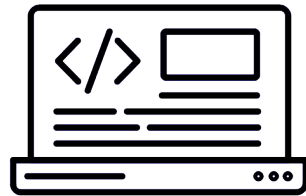
Types of prior art (cont.)



Online Video



Library Book



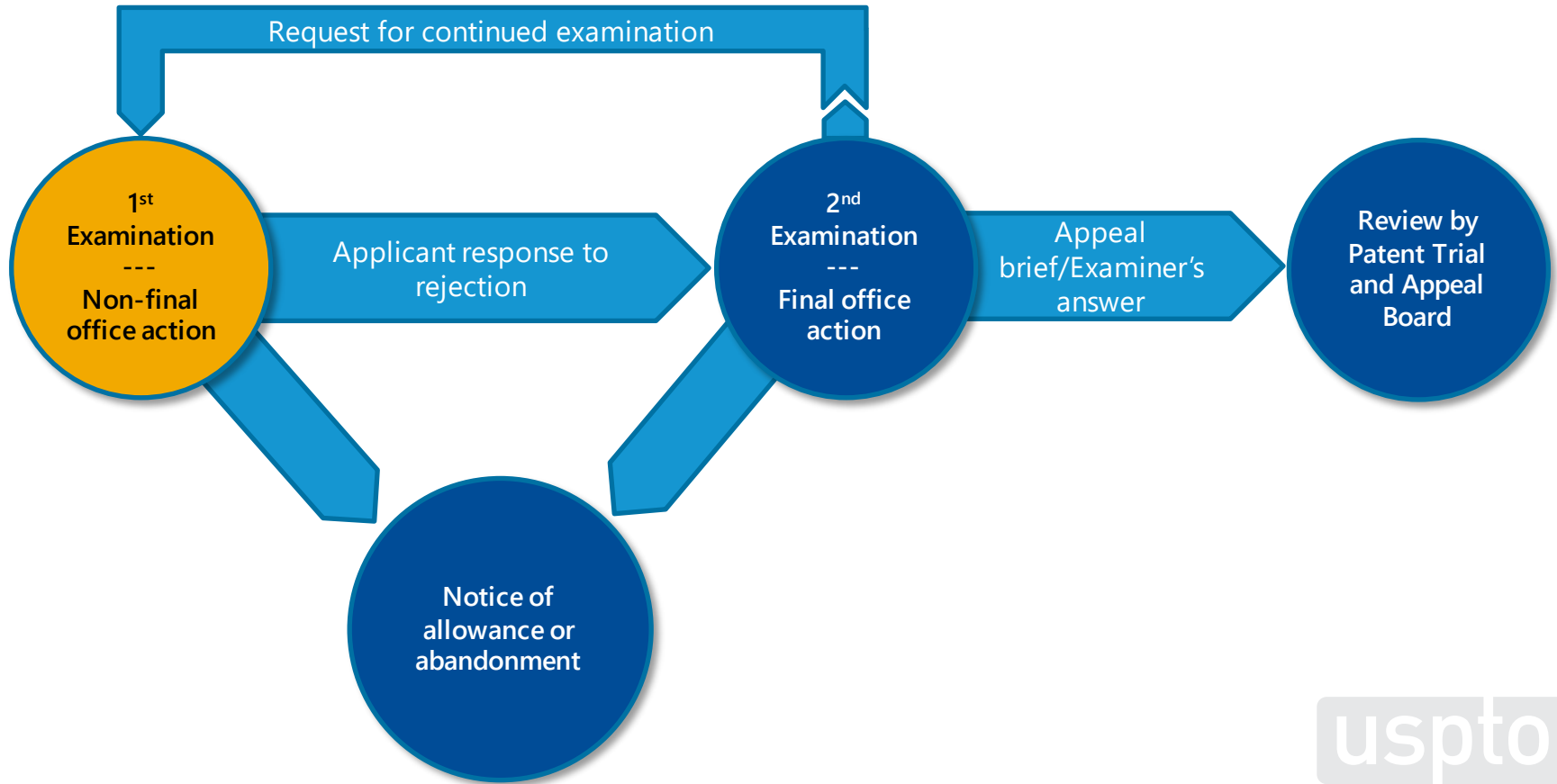
Computer Code



Chemical Sequence
in Biotechnology Database

Examination Flow

Office action



Office action

- Office action summary sheet
 - Includes listing of attachments that are included with the office action.

- Detailed reasons and support for why applicant is not entitled to a patent at this time will accompany the office action summary sheet.

| Application No. | Applicant(s) |
|-----------------|--------------|
| ██████████ | ██████████ |
| Examiner | Art Unit |
| ██████████ | ██████████ |

Office Action Summary

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.

- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may entitle any elected patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 03 March 2011.

2a) This action is FINAL. 2b) This action is non-final.

3) An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5) Claim(s) 1-5 is/are pending in the application.

5a) Of the above claim(s) ____ is/are withdrawn from consideration.

6) Claim(s) ____ is/are allowed.

7) Claim(s) 1-5 is/are rejected.

8) Claim(s) ____ is/are objected to.

9) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

10) The specification is objected to by the Examiner.

11) The drawing(s) filed on 03 March 2011 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

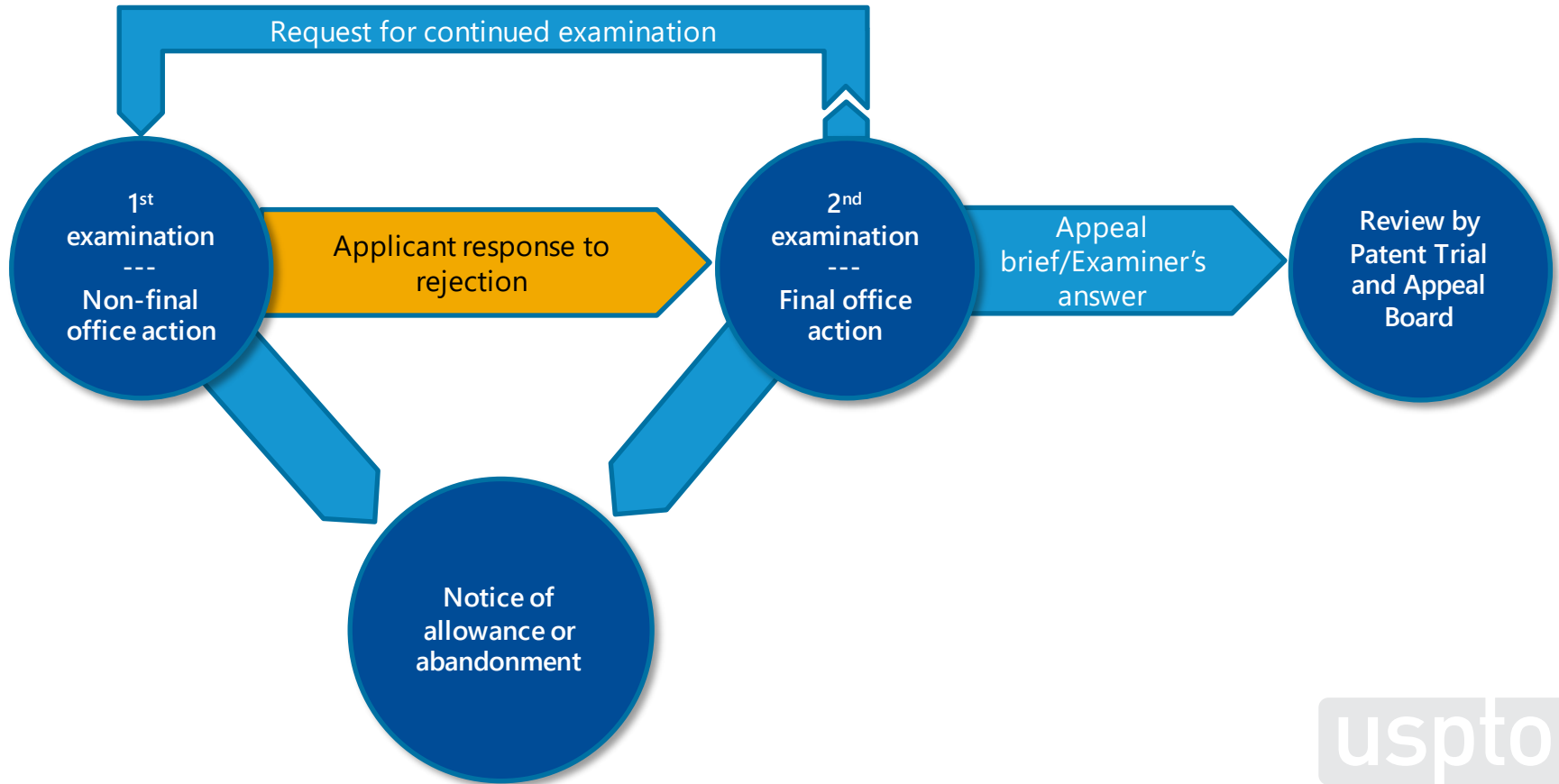
- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. ____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Paper No(s)/Mail Date ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 6) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/11/2011</u> | 6) <input type="checkbox"/> Other: ____ |

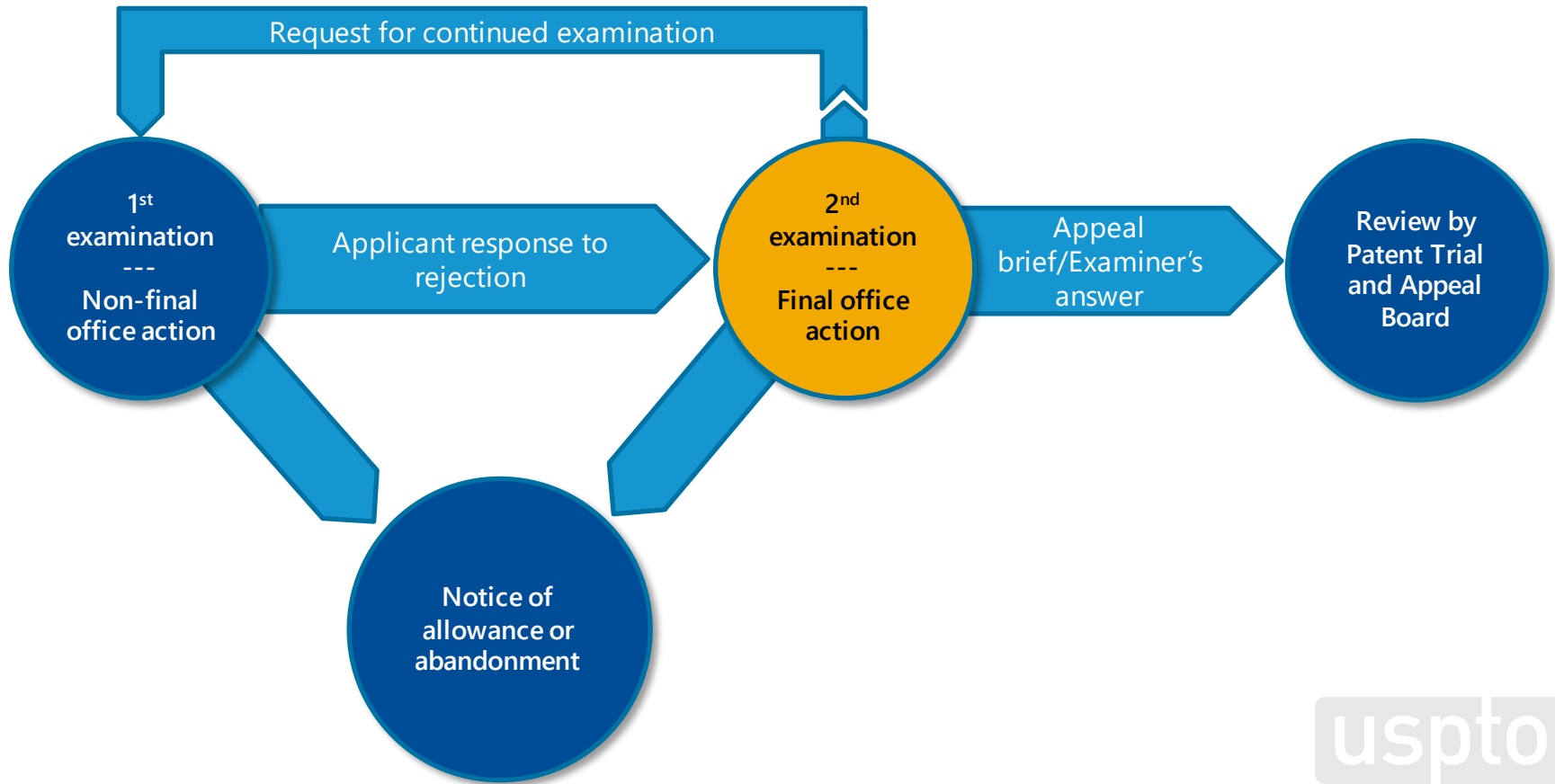
Applicant's response



Applicant's response

- Must answer all formal objections and rejections
- Contain amendments and/or arguments (generally both)
 - Amendments must be filed timely in accordance with the shortened statutory period (SSP) and 37 CFR 1.136
 - 37 CFR 1.121 governs manner of making amendments

Final office action



Final office action

- May occur on second (or later) examination of the application if there are claims that are not allowable.
- The examiner's final office action notifies applicant of the examiner's final patentability determination.
 - The final office action may include objections, rejections, and/or indication of allowable subject matter.
 - Prosecution is closed.
- Further amendment (after final) is restricted (37 CFR § 1.113 & § 1.116).

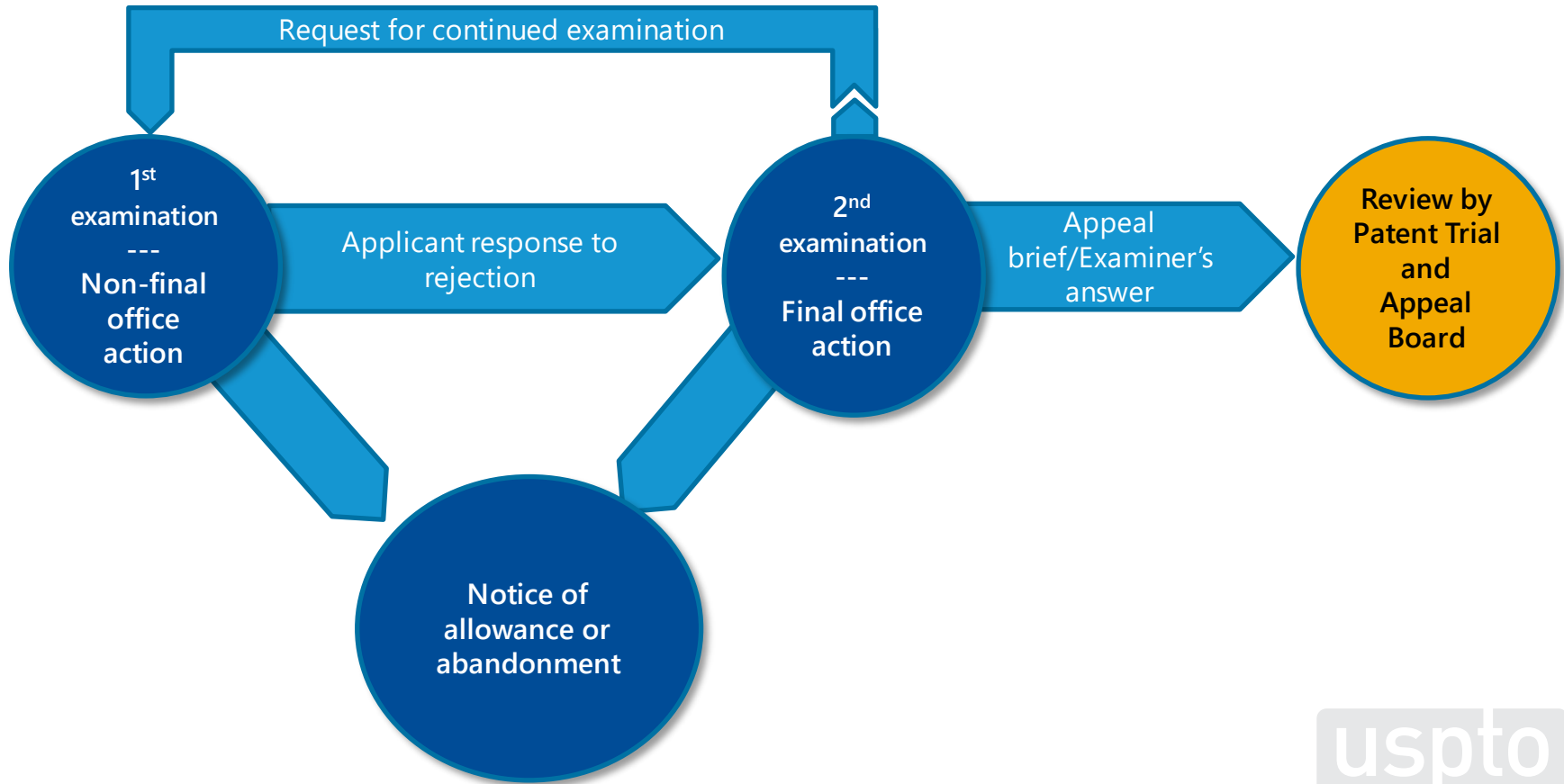
After final rejection

- To avoid abandonment, an applicant has the following options:
 - Filing a reply after final action (1.116)
 - Appealing any rejections (41.31); or
 - Any of the claims must have been twice rejected (MPEP 1204(II))
 - Filing a request for continued examination (RCE) (1.114).

See MPEP 714.13(II)



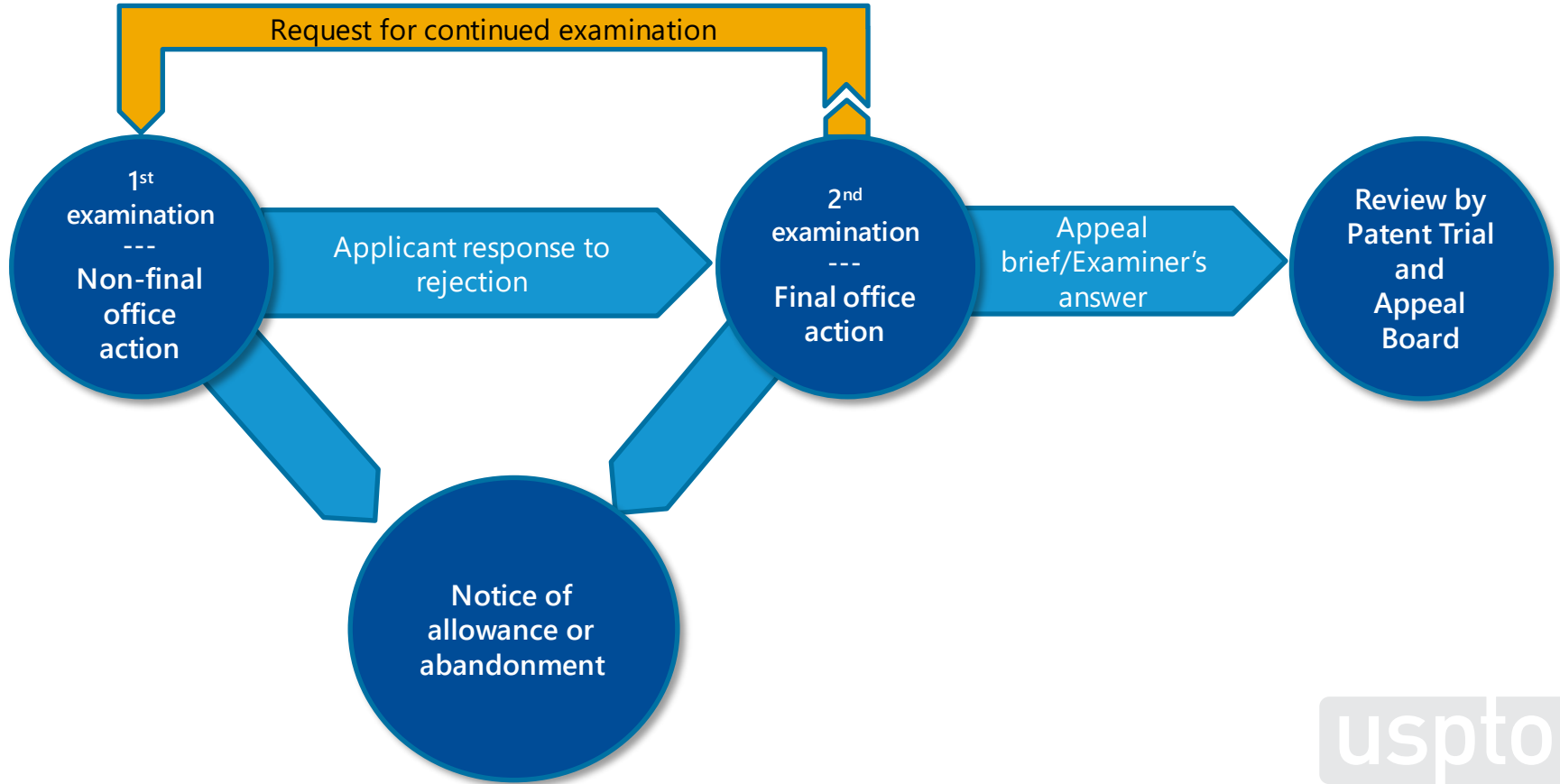
Appeal



Appeal

- A notice of appeal may be filed after any of the claims has been twice rejected, regardless of whether the claim(s) has/have been finally rejected.
- A panel of three administrative patent judges review the record and issues a decision either affirming or reversing the final rejection.

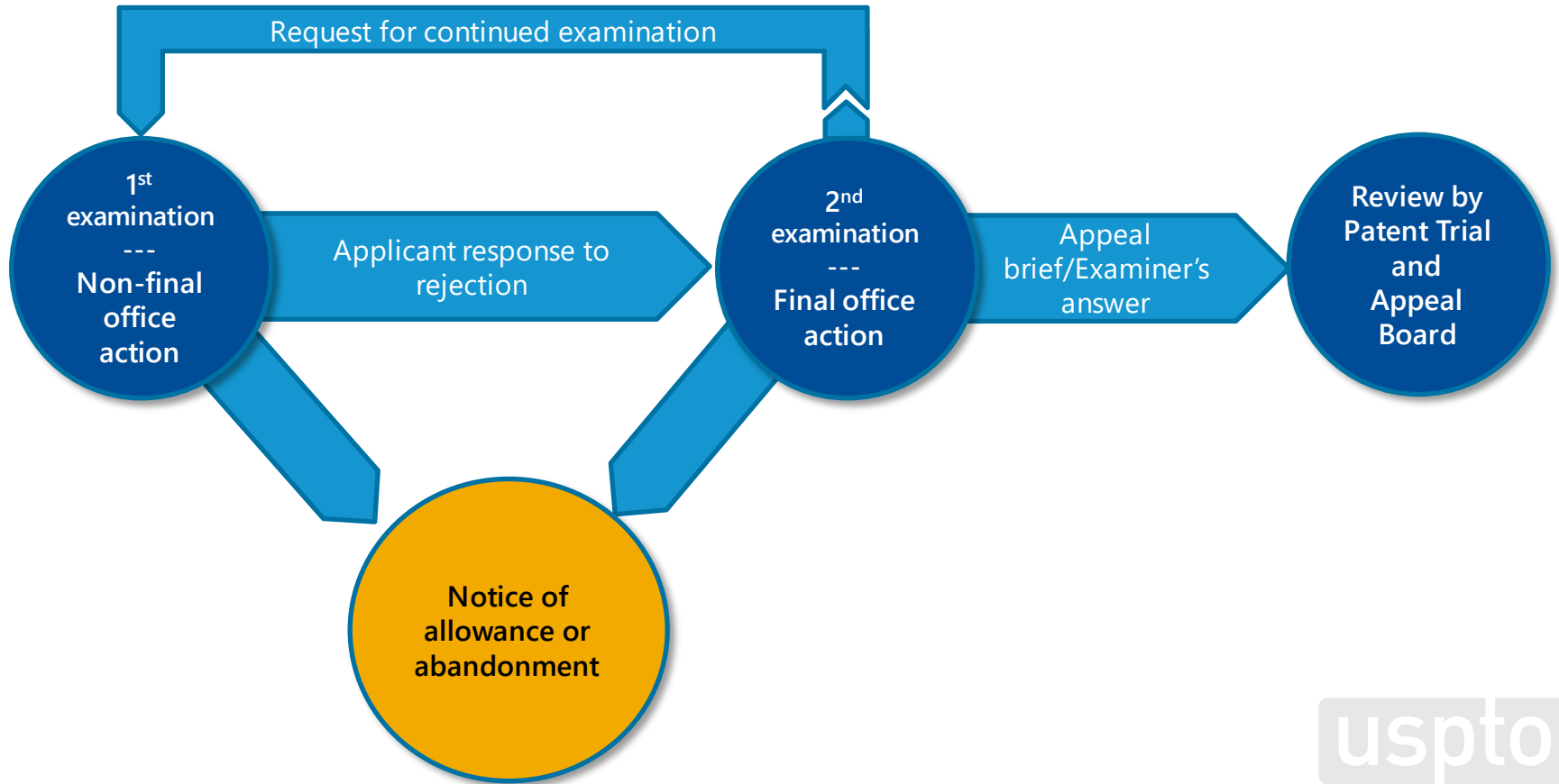
Request for continued examination (RCE)



Request for continued examination (RCE)

- 37 CFR 1.114: If applicant timely files a submission and fee in an application in which prosecution is closed, the office will withdraw the finality of any office action and the submission will be entered and considered.
- An RCE is not the filing of a new application.

Allowance



Allowance

- A Notice of Allowability form PTOL-37 is used whenever an application has been placed in condition for allowance.
- A Notice of Allowance and Issue Fee Due (PTOL-85) will normally accompany a Notice of Allowability.

| Notice of Allowability | Application No. | Applicant(s) |
|--|-----------------|---|
| | Examiner | Art Unit |
| | | Art Unit (First Invention to File) Status No |
| <p align="center">-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address-- <small>All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-35) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.</small></p> | | |
| <p>1. <input type="checkbox"/> This communication is responsive to _____ <input type="checkbox"/> A declaration(s)/affidavit(s) under 37 CFR 1.130(b) was/were filed on _____.</p> <p>2. <input type="checkbox"/> An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.</p> <p>3. <input type="checkbox"/> The allowed claim(s) is/are _____. As a result of the allowed claim(s), you may be eligible to benefit from the Patent Prosecution Highway program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/psph/index.isq or send an inquiry to PPH-feedback@uspto.gov.</p> <p>4. <input type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). Certified copies: a) <input type="checkbox"/> All b) <input type="checkbox"/> Some *c) <input type="checkbox"/> None of the: 1. <input type="checkbox"/> Certified copies of the priority documents have been received. 2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____. 3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)). * Certified copies not received: _____</p> <p><small>Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.</small></p> <p>5. <input type="checkbox"/> CORRECTED DRAWINGS (as "replacement sheets") must be submitted. <input type="checkbox"/> including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____. <small>Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).</small></p> <p>6. <input type="checkbox"/> DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.</p> | | |
| <p>Attachment(s) 1. <input type="checkbox"/> Notice of References Cited (PTO-892) Paper No./Mail Date _____</p> <p>2. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____</p> <p>3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material Paper No./Mail Date _____</p> <p>4. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____</p> <p>5. <input type="checkbox"/> Examiner's Amendment/Comment Paper No./Mail Date _____</p> <p>6. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance Paper No./Mail Date _____</p> <p>7. <input type="checkbox"/> Other _____</p> | | |
| <p><small>U.S. Patent and Trademark Office PTOL-37 (Rev. 08-13)</small></p> | | |
| Notice of Allowability | | Part of Paper No./Mail Date |

Allowance, issue, and after patent grant

Allowance

- “Allowance” refers to the decision-making aspect of the process

Issue

- “Issue” refers to the administrative and procedural aspects of the process
- An application is ISSUED after a decision to ALLOW the application has been made by the examiner

After patent grant

- Maintenance fees for utility patents due 3.5, 7.5, and 11.5 years after patent issue date
- Correction by way of Certificate of Correction or Reissue

Third party pre-issuance
submissions under 35
U.S.C. 122(e) and 37 C.F.R.
1.290

35 U.S.C. 122(e)

- Statute permits any third party to submit for consideration and inclusion in the record of a patent application:
 - Any patent, published patent application, or other printed publication of potential relevance to the examination
- Submission must be timely made in writing and include:
 - Concise description of relevance of each document submitted;
 - Fee prescribed by the Director; and
 - Statement of compliance with 35 U.S.C. 122(e)



35 U.S.C. 1.290: timeliness

- Time periods for making a third-party submission are statutory
- Submission must be made before the earlier of:
 - ✓ Date a notice of allowance is given or mailed;
 - OR
 - ✓ Later of:
 - (i) 6 months after the date on which the application is first published by the Office; or
 - (ii) Date of first rejection of any claim by the examiner.



Questions



Thank you!

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