

UNITED STATES  
PATENT AND TRADEMARK OFFICE



# **Intermediate/Advanced US Patent Practice for the SBIR- STTR Stakeholders**

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# Who is an Inventor?

1. A person who alone or in combination with others makes a contribution to the conception of an invention (conceived the idea).  
Conception: the formulation of a definite and permanent idea of the complete and operative invention.
2. A person(s) who during the reduction of the conceived idea to practice identifies failure along the way, which require deviation(s) from the original conception, may be inventor(s), either alone or jointly with those responsible for the original conception.

## Non-Inventor:

Person(s) who implements the ideas of others

Person(s) who have obtained the entire idea of an invention from another

Person(s) who suggest concepts without contributing to the means for carrying out the suggestion (“Wouldn’t it be nice if...”)



# Reduction to Practice

- **Reduction to practice** may be an actual reduction or a constructive reduction to practice.
  - **Actual reduction to practice:** requires that the claimed invention work for its intended purpose.
  - **Constructive reduction to practice:** occurs upon the filing of a patent application on the claimed invention.

# What is New, Useful, and Non-obvious

Novel: not previously known or used by others

Useful: having a useful purpose or producing a useful result

Non-obvious: whether the invention is obvious to a person having ordinary skill in the art

# What is Patentable

Any new and useful:

process (method),  
machine,  
manufacture, or  
composition of matter, or

any new and useful improvement thereof.

Process (method): a new way to make a car

Machine: a car that flies

Manufacture: a hammer used to make a car

Composition of matter: a compound used in the making of car's frame

# What is not Patent Eligible

- Laws of nature (gravity,  $E=MC^2$ )
- Natural phenomena (sand, water, wind, gravity, electricity)
- Abstract ideas (mathematical formulas, algorithms, a philosophy)
- Products of Nature (titanium ore, purified titanium ore )
- Anything not useful (perpetual motion machine)

<http://www.uspto.gov/sites/default/files/documents/ieg-july-2015-update.pdf>

[http://www.uspto.gov/sites/default/files/patents/law/exam/101\\_training\\_aug2012.pdf](http://www.uspto.gov/sites/default/files/patents/law/exam/101_training_aug2012.pdf)

[http://www.uspto.gov/patents/law/exam/myriad-mayo\\_slides\\_20140319.pdf](http://www.uspto.gov/patents/law/exam/myriad-mayo_slides_20140319.pdf)

# Laws of Nature and Natural Phenomena

- “Laws of Nature” and “Natural Phenomena” include natural principles, natural occurring relations or correlations, etc.
- Examples:
  - The law of gravity
  - The disinfectant qualities of ultraviolet light
  - The heat of the sun
  - The relationship between blood glucose level and diabetes



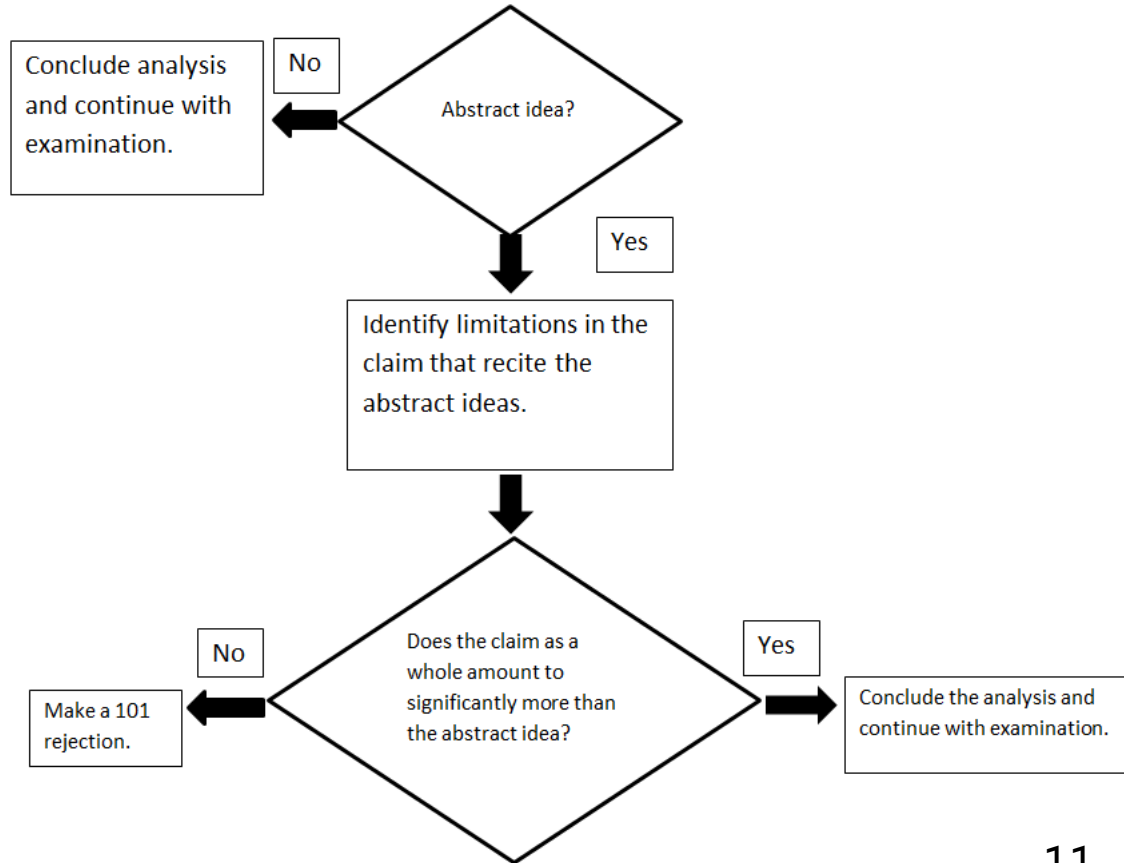
# Natural Products

- “Natural Products” that are excluded for patenting (patent-ineligible) include:
  - naturally occurring products; and
  - non-naturally occurring products that are not markedly different from naturally occurring products.
- Examples:
  - Titanium ore = patent-ineligible
  - Purified titanium ore = patent-ineligible (though not found in nature, not markedly different from what is found in nature)
  - A golf club made of purified titanium = patent eligible

# Abstract Idea

- Fundamental Economic Practices
  - Concepts such as agreements between people in the form of contracts, legal obligations, and business relations.
- An Idea "Of Itself"
  - An idea that can be performed in the human mind, or by a person using a pen and paper.
- Certain Methods of Organizing Human Activity
  - Concepts such as relationships, social activities, human behavior and mental activity.
- Mathematical Relationships/Formulas
  - Concepts such as mathematical algorithms, relationships, formulas, and calculations.

# How examiners approach Alice



# File Provisional Patent Application?

- Provides date of first filing
  - First inventor to file gets the patent rights.
- Starts Inventor clock ticking for the filing of a U.S. non-provisional patent application or a foreign filed application.
- Protects against public disclosure as long as a non-provisional patent application is filed within a year.

# Requirements for Filing a Provisional Patent Application?

- Coversheet
- Written Description meeting 35 USC 112(a)
  - Describe the invention so that someone having ordinary skill in the same technology as the invention can make and use the invention.
- Drawings (as necessary)
- Fee, within prescribed time limits

# Provisionals: Why are they important?

- Establish a U.S. filing date.
- Use as a tool for:
  - Experimentation
  - Research
  - Monetary backers
  - Sales

# Disclosure and Dates of Provisional

- Situation: Disclosure prior to abandonment of provisional application



- Disclosure as a bar to obtaining patent rights
  - In Foreign Countries – 1 year from filing provisional
  - In US - 1 year from disclosure

# Dates of Provisional

- Situation: Disclosure prior to filing a provisional application



- Disclosure as a bar to obtaining patent rights
  - In Foreign Countries– May have lost rights
  - In US –greater than 1 year from filing of provisional application



# **A provisional application can help with the following:**

- A. Establish a priority date for the filing of a non-provisional application
- B. Allow for inventor to publically disclose the invention without the disclosure becoming a bar against applicant's own invention, so long as the non-provisional application is timely filed
- C. All of the above
- D. None of the above

# Provisional patent applications . . .

- A. Are examined by a patent examiner
- B. Provide patent protection
- C. Provide a date of first filing
- D. All of the above
- E. None of the above

# Provisional patent applications can . . .

- A. Establish priority date for a foreign application
- B. Be refiled for the same invention when the initial provisional application is abandoned after one year, but the initial filing date will be lost.
- C. Allow an inventor to disclose the invention for testing and experimentation without that information acting as a bar to obtaining a patent
- D. A, B and C
- E. A and B
- F. B and C

**If the inventor publicly discloses his or her invention less than one year prior to filing a provisional application, what may be the result?**

- A. US rights protected by the one (1) year grace period
- B. Foreign rights may be lost
- C. US rights are lost
- D. A, B and C
- E. A and B
- F. B and C

# Non-provisional Patent Application

- Utility application
  - Covers machines, articles of manufacture, processes, compositions of matter and improvements thereof
  - Can rely on provisional date
- Higher fees than provisional application
  - Filing/search/examination due at filing
  - Issue fee due within three months of Notice of Allowance
  - Maintenance fees are due at 3.5, 7.5 and 11.5 years after issue

# Non-provisional Patent application

- Wait time for examination
  - Pendency of applications varies
  - Depends on technology
  - Depends on the number of non-provisional applications already pending examination
- The term of a patent begins the date the patent issues and ends on the date that is 20 years from the earliest effective filing date of the application for the patent claims.

**Non-provisional utility patent applications cover machine, articles of manufacture, processes and compositions of matter and improvements on these.**

- A. True
- B. False

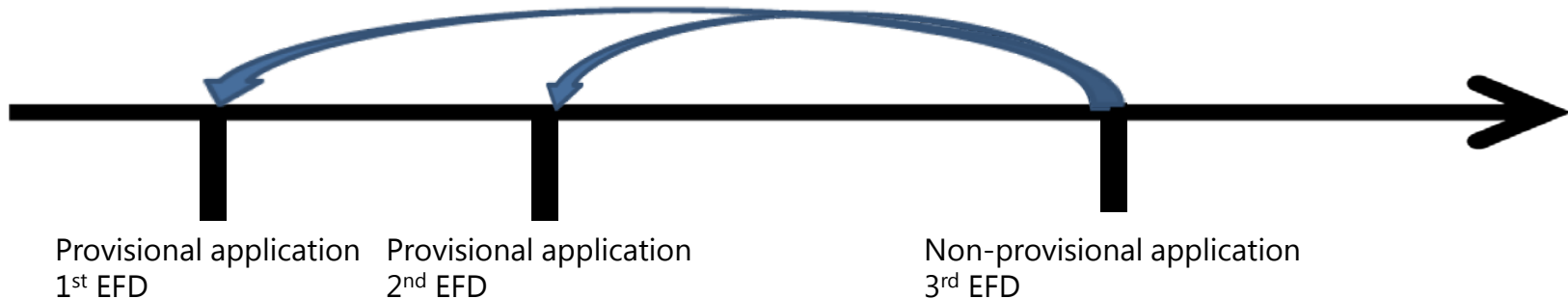
**Utility Patents require maintenance fees, which are due 3.5, 7.5, and 11.5 years after issuance of the utility patent.**

- A. True
- B. False



# Effective Filing Date (EFD) under the AIA

- Determining the effective filing date of the claimed invention is a claim-by-claim analysis.
- Different claims in the same application may have different effective filing dates.



# EFD based on foreign priority under the AIA

The filing date of a foreign application is the EFD of claimed invention in the US non-provisional application IF

- the foreign application describes the same invention as the US non-provisional application (35 USC 112 (a)), AND
- the applicant has perfected the right of priority by providing
  - a certified copy of the foreign application, and
  - a translation of the foreign application (if not in English).



Foreign application filing date is the EFD of the US non-provisional Application.

Non-provisional US application

# Application Prosecution

- Pro se
  - Prosecuting your own application
  - Must meet the same standards for filing an application as a registered patent practitioner
- Patent professionals are:
  - Registered Attorneys or Agents
  - Regulated by USPTO
  - Trained in US patent laws, rules and practice

# Examination

- Read specification
- Interpret drawings
- Diagram claims
- Search the prior art
- Make legal/technical determination
- Write opinion (Office Action)
  - First
  - Final

# Parts of an Office Action

- Objections
  - Provides formal requirements
  - Drawings, oath etc. deficiencies
- Rejections
  - Based on statutes
  - Utility, clarity, novelty and non-obviousness
- Conclusion
  - Information provided by examiner

# Claims and Amendments

- Scope of patent protection
- Allowable claims define over prior art
  - May be simple word changes
  - May be combination of claims
- Broadness of claim
  - Broader claims offer greater protection
  - Narrow claims also needed

# Patent Claims

- Patent claims define the patent rights to an invention
  - Protection provided from claims
  - If not in claims, no protection
- Description and drawings do not provide patent rights
  - Description and drawing provide information to others about the invention

# **A person that prepares, files and prosecutes his/her own patent application is . . .**

- A. A pro se patent applicant
- B. A patent attorney
- C. A patent agent
- D. All of the above



**A patent attorney or agent does not need to be registered with the USPTO to represent you in matters before the USPTO.**

- A. True
- B. False

# Response to Office Action

- Preliminary Amendments
  - Amendments are made before an Office action
- Amendments
  - Made in response to an Office action
  - Must respond to all objections and rejections
  - Clarification of claim language
  - No new matter added
- Interviews
  - Phone or in person
- Options after a final rejection
  - Amendments placing application in a condition for allowance
  - File an appeal
  - Request for continued examination
  - Abandonment

# Appeals

- Pre-appeal conference
  - Single issue
  - 5 page maximum
- Appeal conference
  - After filing of Appeal Brief
- Examiners answer
  - Formal answer to issues in Appeal Brief

**If you forgot to include some important disclosure in your application you can add the new information to your filed application.**

- A. True
- B. False

**Interviews can help the applicant and examiner communicate and understand each other's positions better so that issues can be more effectively and quickly resolved.**

- A. True
- B. False

**The fees due at filing an application include the basic filing fee, the search fee, the examination fee, and the publication fee.**

- A. True
- B. False

**After an Appeal Brief has been filed it is subject to review prior to the examiner writing an Examiner's Answer.**

- A. True
- B. False

**For a patent to issue, the application must clearly claim useful, novel, non-obvious, patent eligible subject matter that is supported by an enabling disclosure of how to make and use the claimed invention.**

- A. True
- B. False



# Disclosure (Prior Art)

- Possible example:
  - A journal publication, newspaper article/blogs
  - An oral presentation at a scientific meeting
  - A demonstration at a trade show
  - A lecture or speech
  - A statement made on a radio talk show
  - A YouTube video, Web site, or other on-line material (this type of disclosure may also qualify as a printed publication under AIA and pre-AIA law)

# Duty of Disclosure

- The USPTO requires a duty to disclose information material to patentability, candor and good faith when dealing with the Office
- Lack of any of these principles could cause patent rights to be voided

# Person Having Ordinary Skill in the Art (PHOSITA)

## Who is PHOSITA?

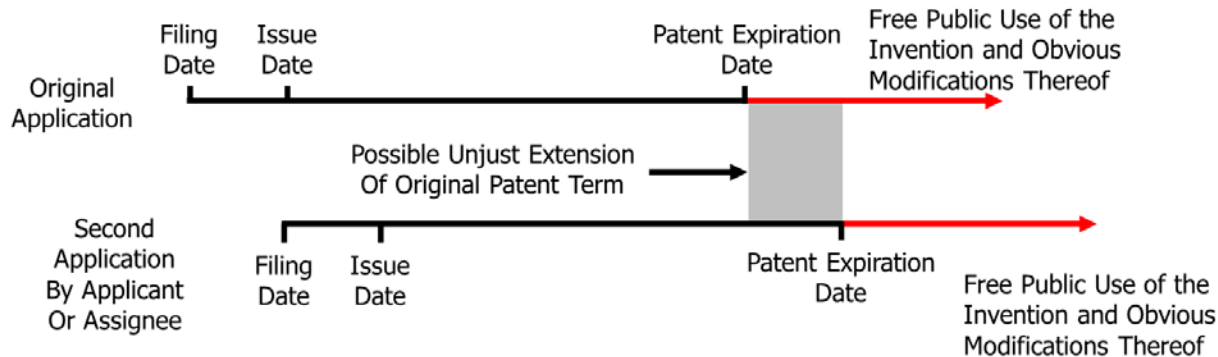
- Hypothetical person having ordinary skill in the art
- The level of ordinary skill in the art depends upon the technical field of the invention
- Skill level of PHOSITA may not be the same as the inventor's skill level

# Determine the level of PHOSITA

- Types of problems encountered in the art
- Prior art solutions
- Rapidity of innovation
- Sophistication of the technology
- Educational level of active workers in the field
- All factors not necessary for every case

# Double Patenting

- Prevents unjustified extension of exclusive rights
- After expiration, public should be able to:
  - Freely use the claimed invention
  - Freely use obvious modifications of the claimed invention



# Types of Double Patenting Rejections

- Statutory (35 U.S.C. 101) Double Patenting
  - Claims are identical
- Non-Statutory Double Patenting
  - Rejection based on obviousness analysis
  - Rejection based on anticipation analysis
  - Non-Statutory Double Patenting based solely on improper timewise extension of patent rights

# How to Overcome a Proper Statutory Double Patenting Rejection

- Amend the claim(s)
- Cancel the claim(s)
- A terminal disclaimer is **NOT** sufficient to overcome such a rejection
- Declarations under 37 CFR 1.131 are **NOT** sufficient to overcome such a rejection

# How to Overcome a Proper Non-Statutory Double Patenting Rejection

- Amend the claim(s)
- Cancel the claim(s)
- File a proper terminal disclaimer
- Declarations under 37 CFR 1.131 are **NOT** sufficient to overcome such a rejection



# Continuation, Divisional, and Continuation-In-Part Application

- Must be filed before abandonment or payment of the issue fee in the parent application
- Continuation: claims the same invention, claimed in the parent application
  - Discloses the exact same subject matter disclosed in the parent application specification
  - Used to get a broader, narrower, and/or slightly different claim scope of the same invention
- Divisional: the invention claimed is distinct from that claimed in the parent application (e.g. parent claims product; divisional claims process for making the product)
  - Result of a restriction requirement (distinct inventions in a single application)
  - Discloses the exact same subject matter disclosed in the parent application specification
- Continuation-In-Part: discloses a portion or all of that disclosed in the parent application and adds new subject matter

# Patent Ombudsman

- Designed to assist applicants with issues that arise during patent application prosecution
  - Any issues that cannot be resolved by the Examiner or Supervisory Patent Examiners
  - 571-272-5555 or 855-559-8589
  - <http://www.uspto.gov/patent/ombudsman-program>

# Freedom to Operate (FTO)

- FTO is used to determine whether commercializing a product can be done without infringing intellectual property (IP) rights of others
  - FTO analysis should be performed in each country or region where you wish to make and sell your product
  - In the event of infringement U.S. Courts tend to reduce the amount of damages if FTO has been performed
  - Identify all relevant technologies and other players in the market
  - Search for all IP (patents, trademarks, and copyrights) that is the same or similar to your future product
  - Analyze found IP
    - Analyze claims of patents to determine if the claimed scope overlaps with your future product
    - Make sure the patent is valid
      - maintenance fees have been paid,
      - maybe you know of prior art that can invalidate the claims
    - Design around
    - Negotiate for a license with IP owner

# Where to apply for a Patent?

- Patent protection is an important part of overall business strategy in a global marketplace
  - Identify your target market countries
- Patent rights are territorial
  - Patent is valid only within the country or region in which patent was granted
- NO world-wide patent
  - Must apply for a patent in each country or region of interest

# The Costs

- Patent Office Fees
  - The US Patent and Trademark Office operates on fees for services
  - Applicants are required to pay these fees
- Filing fees
  - Basic filing fee
  - Examination fee
  - Search fee
- Issue fees
  - Must be paid for patent to issue
- Maintenance fees
  - Three separate fees at 3.5, 7.5 and 11.5 years after issue of patent

# How much does it cost?

## Fees

- USPTO Utility application
  - Filing fee
  - Search fee
  - Examination fee
  - Discount for small entities
  - Issue Fee
  - Maintenance Fees  
due at 3 ½, 7 ½ & 11 ½  
years
- Attorney fees
  - Hourly fees
  - Flat Rates
- Design Patents
  - No maintenance fees
  - ~2,000-\$3,000

Cost varies based on amount of prosecution.

~\$5,000-\$25,000



# Patent Rights

- Right to exclude others from making, using, selling, offering for sale or importing for sale or importing your invention into the US
  - You must assert your patent rights to prevent infringement
- No affirmative right to practice the patent invention
  - A dominate patent may keep you from practicing your invention
  - Patent no guarantee of success

# Patent Infringement in the U.S.

- Occurs when –
- Without authorization of patent owner:
  - Making or using the invention
  - Offer to sell or sells within the U.S.
  - Import the invention into the U.S.
  - Actively induce infringement by another



# Enforcement Considerations

- Enforceability of patents
  - Effectiveness of enforcement laws and procedures in the country/region of interest
    - Some countries allow recordation of patent with customs
- Enforcement requires patent owner action
- Competitor products should be monitored
  - In stores
  - At trade shows

**US patents offer protection in the US and its territories and possessions. To get foreign patent rights you can obtain a world patent to cover all countries.**

- A. True
- B. False

# The patent holder must enforce their rights.

- A. True
- B. False

**A patent gives the patentee the right to make, use, sell or import the invention.**

- A. True
- B. False

**A continuation-in-part is a new filing before the Office that contains all the information of the prior filed application, is filed while the earlier application is still before the Patent Office and contains new information that was not included in the earlier filed application.**

- A. True
- B. False

# **The USPTO receives some of its operating budget from tax revenues.**

- A. True
- B. False

# QUESTIONS?

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