

Topic 1: Recap

**Recap of the Basic Principles of
Patent Drafting taught during the
October 2017**

National Patent Drafting Course

**Bangkok, Thailand
January 22 to 25, 2019**

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Welcome back!

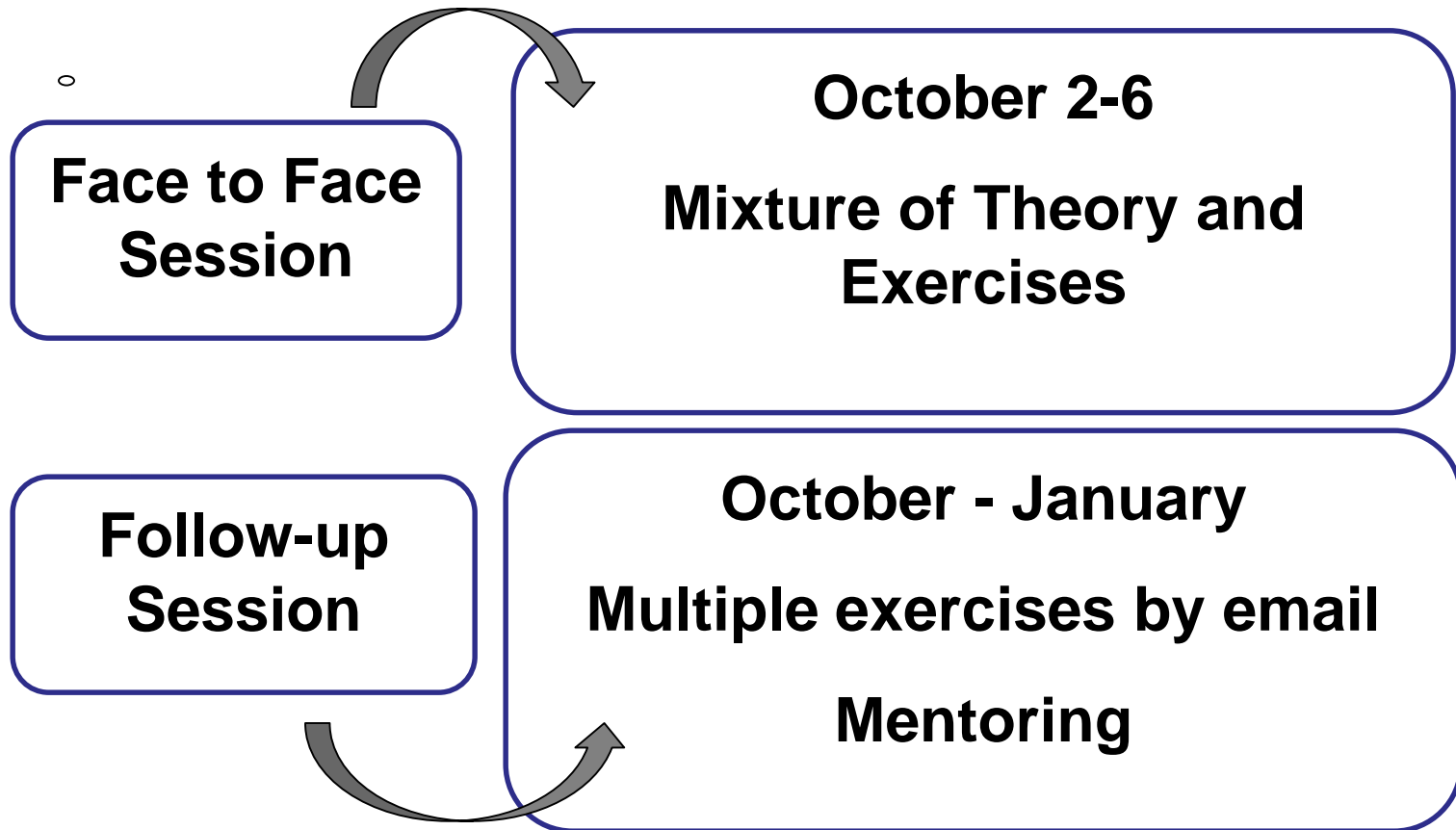
This week, we are going to help you:

- **learn more** on patent drafting principles, and
- help you to **further develop** your patent drafting skills

But first ... a recap of the 2017 course!



2107 Program



Topics covered in 2017

- Overview of the Patent System in Thailand
- Filing a Patent Application: 5W's - Who, What, Where, When and Why
- Legal Requirements for Patentability
- Typical Parts of a Patent Application
- Theory of Patent Claims

Topics covered in 2017 (cont'd)

- Claim Format and Independent Claims
- Dependent Claims
- Specific Types of Claims
- Claim Drafting: Methodologies and Techniques
- Drafting Description
- Common Pitfalls in Patent Drafting
- And many practical examples . . .



Topics Covered

- **Filing a Patent Application: 5W's**
- Legal Requirements for Patentability
- Typical Parts of a Patent Application
- Theory of Patent Claims
- Claim Format and Independent Claims
- Dependent Claims
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Why File?

- Reputation
- Licensing income
- To protect against copying
- To attract investment
- Leverage against 3rd party patents

What Can Be Filed?

Wide variety of things can be patented as long as they are

- New
- Industrially applicable (e.g. useful)
- Inventive

Can be a product, device or apparatus, methods (of making or uses)

In some countries, there are exceptions to patentability:

- Inventions against public interest (e.g. landmines)
- Diagnostic, therapeutic and surgical methods
- Biological process for producing plants and animals
- Discoveries, scientific theories and mathematical methods
- Business methods
- Computer programs

When to File?

- Before any public (written/oral) disclosure
- Some countries have grace periods that protect against prior disclosure
- But most countries do not have grace period
- No need to wait until the product is finalized
- Can file an application on the basis of prototypes

→ If you want to file globally, do not disclose your invention publicly before the day you file your patent application

Who Can File?

Inventor

- Person who contributes to the claims of an invention
- There may be multiple inventors (joint or co-inventors)
- Often complete set of inventors will not be known until the claims are drafted
- Must be natural persons

Applicant

- Most patents are filed by companies, research organizations, etc.
- All natural or legal entities: Individual inventor; Company; University; Research Institution; Government

Where To File?

Where the patented product will be **made, used or sold**.
The following questions help to evaluate where an application should be filed:

- **Product market** – where will the product be sold/method used?
- **Production site** – where the product be produced/method used?
- **Competitor's location** – where are the main competitors production sites/markets?
- **Enforcement** – which courts will handle infringement actions?

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Legal Requirements for Patentability

1. Patent Eligible Subject Matter
2. Novelty
3. Non-obviousness
4. Enablement
5. Written Description
6. Definiteness / Clarity
7. No double patenting
8. Proper Inventorship

EPO refers to these
as “sufficiency of disclosure”

Legal Requirements for Patentability

- Patent Eligible Subject Matter or Industrial Applicability
 - Can the invention be made or used in any kind of industry?



Legal Requirements for Patentability

■ Patentable subject matter

■ Exclusions in some jurisdictions

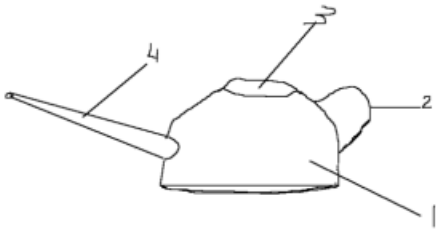
- Scientific theories, mathematical methods
- Business methods, mental acts
- Plant and animal varieties, essentially biological processes for producing them
- Methods of treatment of humans by surgery or therapy
- Diagnostic methods practices on the human body
- (Animals also - e.g. in Thailand)?

Legal Requirements for Patentability

■ Novelty

- Not part of (anticipated by) the prior art
 - = everything disclosed to the public
 - = anywhere in the world
 - = in any form (written, oral, used)
-
- Grace periods in some jurisdictions
 - Thailand ??
 - = by applicant or by abuse of applicant's rights
 - Be careful as not accepted everywhere!

Novelty - quiz



A device for watering plants having:
a water-containing portion (1), a handle (2), an
opening with a lid (3) and a spout (4).



Legal Requirements for Patentability

■ Inventive Step

- The inventive step over the prior art would not be considered obvious to a person skilled in the art
- Consider if prior art documents can be combined

■ Considerations for Meeting Inventive Step

- Solving a technical problem? Long felt need?
- Goes against expectations or prejudices

Inventive Step - quiz

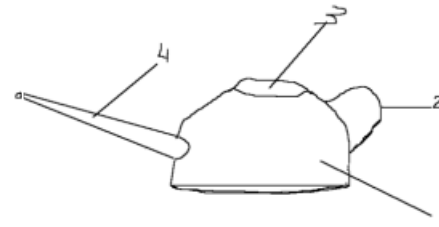
Claim 1. A device for watering plants having: a water-containing portion (1), a handle (2), an opening with a lid (3) and a spout (4).



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??

or just -



??

Topics Covered

- Filing a Patent Application: 5W's
- Legal Requirements for Patentability
- **Typical Parts of a Patent Application**
- Theory of Patent Claims
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Typical Parts of a Patent Application

- Specification (description)

- ?

- ?

- ?

- ?

- ?

- ?

- ?

- Claims

- Drawings (if any)

- Abstract

Typical Parts of a Patent Application

- Specification (description)
 - **Title**
 - **Field of the Invention**
 - **Background**
 - **Summary of the Invention**
 - **Description of the Drawings (if any)**
 - **Detailed Description**
 - **Examples**
- Claims
- Drawings (if any)
- Abstract

Topics Covered

- Filing a Patent Application: 5W's
- Legal Requirements for Patentability
- Typical Parts of a Patent Application
- **Theory of Patent Claims**
- Claim Format and Independent Claims
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Theory of Inventions, Claims, Embodiments

■ Three Legal Constructs

- “Invention” = mental construct inside the mind of the inventor, with no physical substance
- An “embodiment” of the invention is a physical form of the invention
- The “claims” protect at least one embodiment, **but the best claims protect the invention** (i.e., the inventor’s embodiment and all possible other embodiments of the invention)

Theory of Inventions, Claims, Embodiments

■ Three Legal Constructs

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Let’s Illustrate



Theory of a Patent Claim

- The Claims --
 - Represent the heart of any patent application
 - Define the scope of protection given to an invention

Theory of a Patent Claim

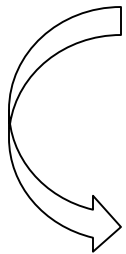
Patent Claims Have Multiple Functions:

- Define the patent's scope of protection
- Represent the written approximation of the abstract inventive concept created by the inventor
- Set the boundaries of the invention
- Tell the world what has been invented

All in a Single Sentence!!

Patent Claims Define the Scope of Protection

Claims are like fence post around a property



Claim Scope

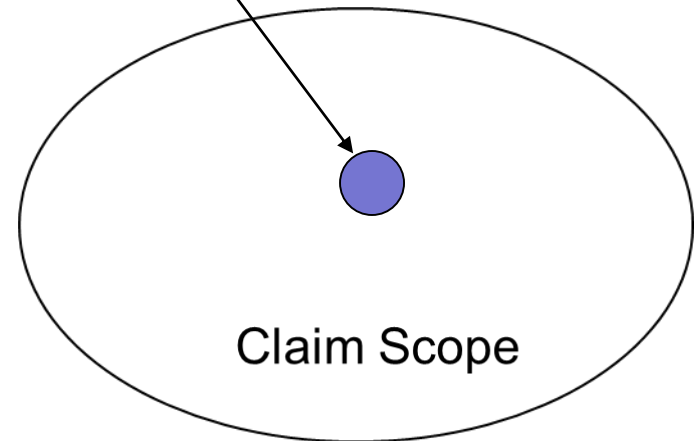


Claim Objective to Protect Entire Invention (Not Only a Single Embodiment)



Conception of Invention 

Embodiment

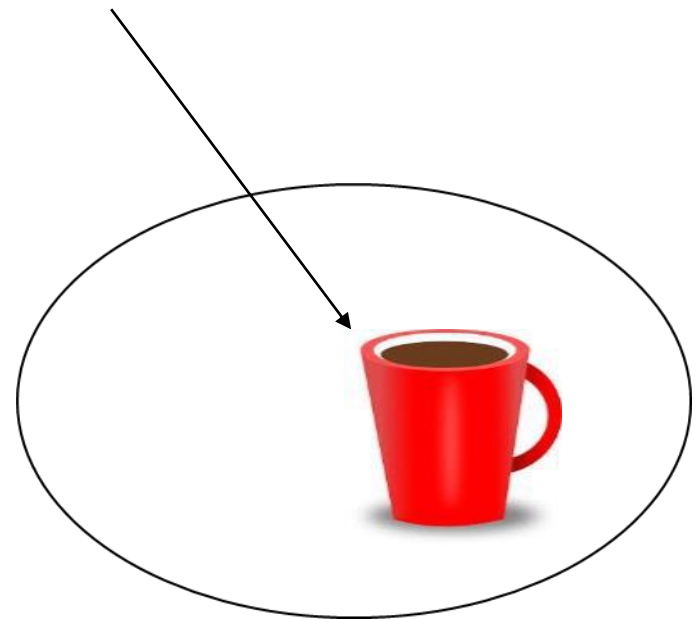


Claim Objective to Protect Entire Invention (Not Only a Single Embodiment)



Embodiment - red clay cup with a handle

Conceived of First Coffee
Cup with a Handle

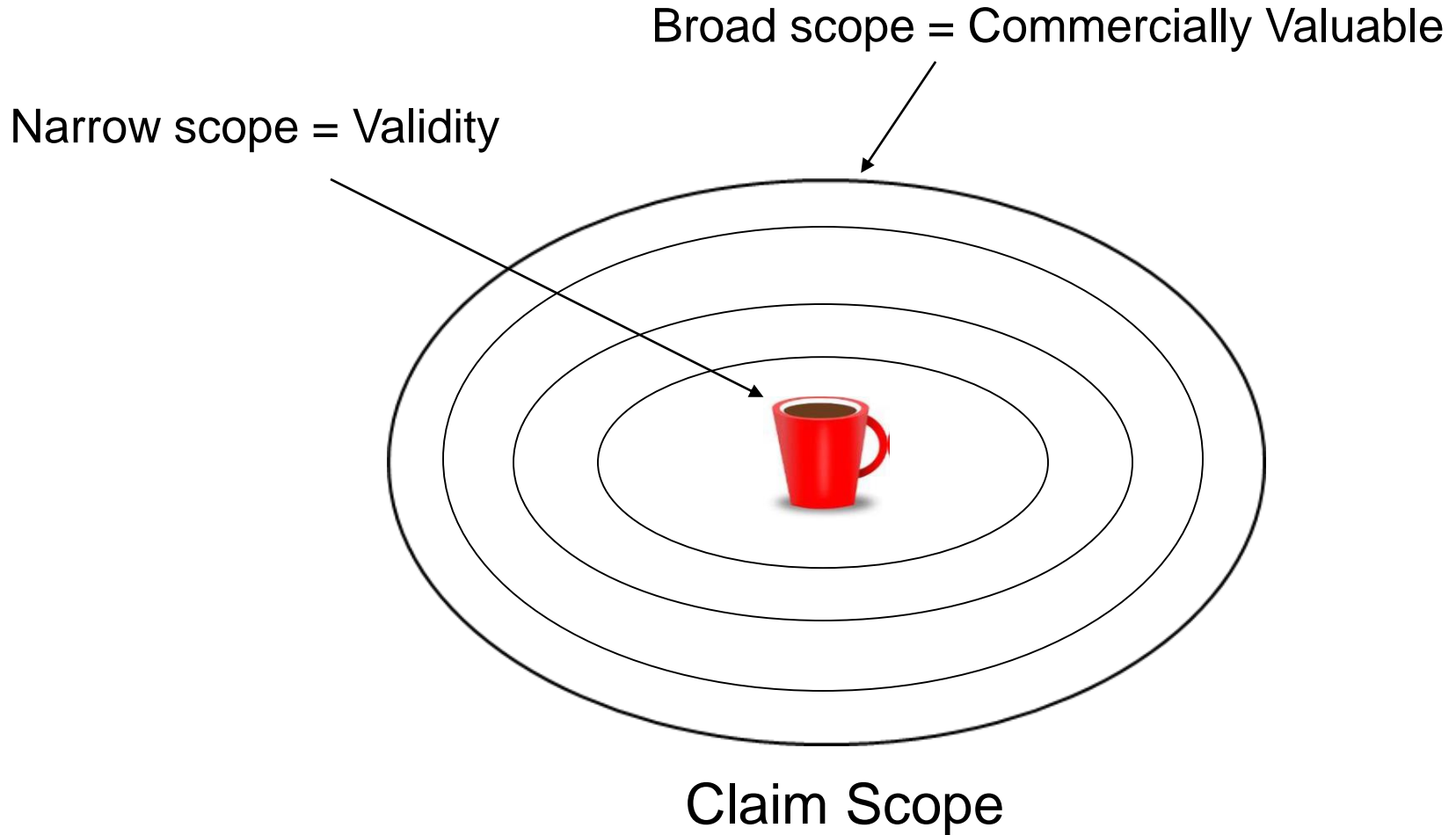


Need to Protect All Embodiments



Claim 1. A cup comprising a handle

Broad vs. Narrow Coverage



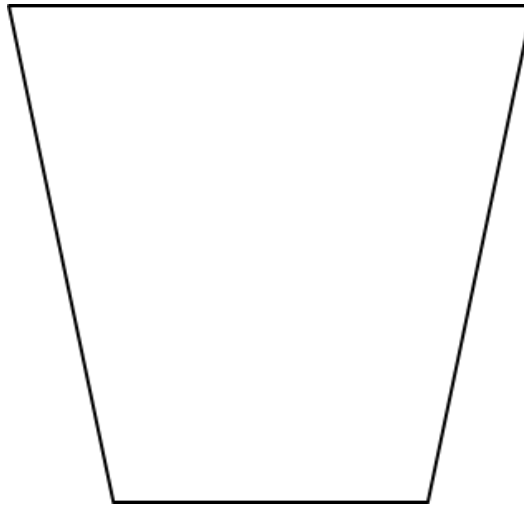
Scope of Claim Set Should Look Like an Inverse Pyramid



First Claim



Last Claim



Broad



Narrow

Claim Scope – previous examples

Patent Claims – the Objective?

- In a single sentence:

1. Define the scope of protection
2. Represent an advantage or solution to a problem
3. Avoid the “prior art”

- ...in a way that is clear, concise and self-contained

Patent Claim - Balance

Narrowest scope
scope (Validity)
Valuable)

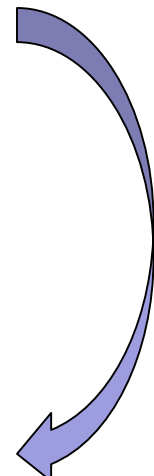
Broadest
(Commercially



Topics Covered

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Types of Patent Claims

- Product – physical entity
 - Such as a device, article, system, chemical compound...
 - Method - activity
 - Method of manufacture a chemical compound...
 - Method of Use - activity with a product
 - Method of treating a disease using a chemical compound...
 - *Hybrid type of Claims – Product by Process (not recommended)*
 - A chemical compound made using the following process steps...
- 

Some Key Requirements for Patent Claims

- Scope of protection must be clear and concise
- The specification must support the claims
- Consistent terminology must be used throughout
- Claims may be amended during prosecution with some limitations. Amendments must also be supported

Patent Claim Format

■ A patent claim has 3 parts:

1. Preamble
2. Transitional phrase
3. Body

■ **A claim is written as a single sentence.**

Patent Claim Format

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Preamble, transitional phrase: body



Identifies Category of Claim

Patent Claim Format

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Preamble, transitional phrase: body

Open – Comprising ..., Including...

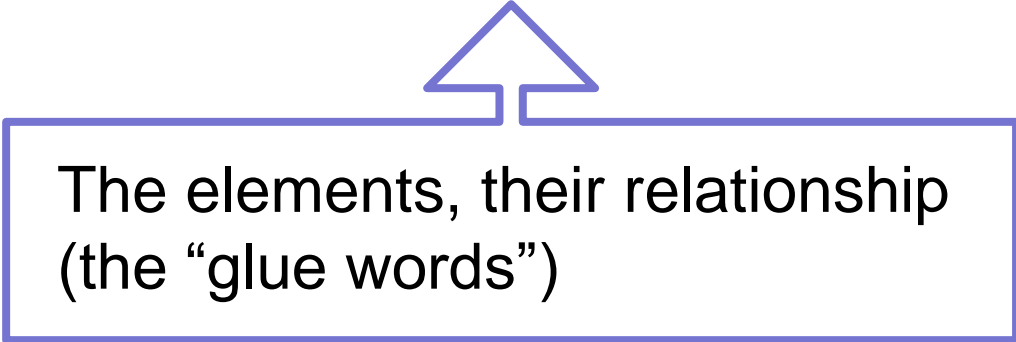
Intermediate – Consisting essentially of ...

Closed – Consisting of ...

Patent Claim Format

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Preamble, transitional phrase: body



The elements, their relationship
(the “glue words”)

Patent Claim Format

Preamble? Transitional Phrase? Body?

1. An apparatus, comprising:
a pencil;
an eraser attached to one end of the pencil;
and
a light attached to the center of the pencil.
- antecedent basis
- 

Patent Claim Format - The transition

- The specific terms will define the scope of invention by the Use of “Open” or “Closed” terms.
- “**Open**” – opens the claims to anything in addition to what is recited.
- “**Closed**” – limits the claims to only what’s recited.
- “**Intermediate**” – opens the claim to only those elements that do not change the novel aspects of the claims.

Patent Claim Format - The transition

Transition Examples:

(Open) A cup **comprising** a handle ...

The cup can include anything else, e.g., a lid



(Intermediate) A cup **consisting essentially of** a handle..

The cup can include anything that does not change the novel characteristics on the invention – probably a lid.

(Closed) A cup **consisting of** a handle ...

The cup cannot include anything else but a handle

This is very limiting – try to avoid its use



Claim Sets

- Patent application must contain at least one independent claim
 - Multiple independent claims are ok
- Dependent claims include all the features of the claim from which they depend and something further
 - Narrower in scope than the claim they depend from
- Limit on numbers of claims is almost always for cost reasons

Multiple Dependent Claims

- Dependent on more than one claim in the alternative
 - Preamble refers to more than one claim
 - More common in European practice than in US practice – but acceptable in both.

Multiple-dependent claim example:

4. A device as recited in **claim 1 or 2**, further comprising an eraser attached at an end of the pencil.

Independent vs. Dependent Claims

| INDEPENDENT CLAIMS | DEPENDENT CLAIMS |
|---|--|
| Capable of standing alone | Refers to an earlier claim (independent or dependent) |
| Starting claim for its group | Follows (depends from) another claim |
| Broadest claim of its group | “Fall-back” protection |
| Specifies all essential features of the invention | Not necessary as this is done in the independent claim |

Claim Types

- Think about including different claim types to give full protection
 - Product (including kit of parts)
 - Composition
 - Methods
 - Methods of making, doing, treating, ...
 - Product-by-process
 - Method of using (and use claims)
- Think about infringement
 - “This claim I am drafting will be infringed when ...”
...

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Claim Drafting Methodologies

- Problem solution approach
- Table of features
- Start with a picture claim

Claim Drafting Methodologies

1) Problem-Solution approach

- What is the problem being solved by the inventor's idea?
- What features of the idea solve this problem?



Claim Drafting Methodologies (Cont'd)

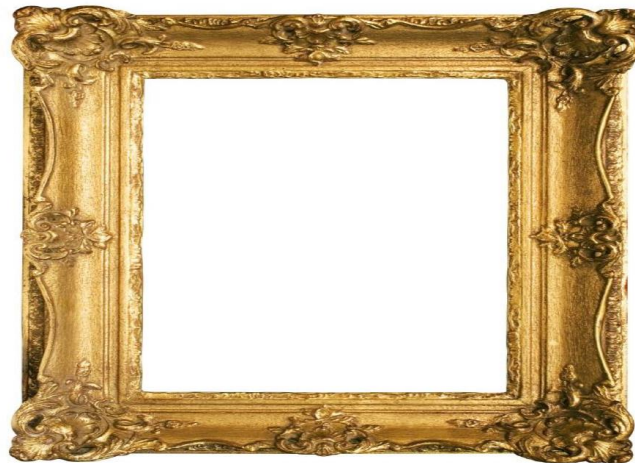
2) Table of features

| Invention | Prior Art 1 | Prior Art 2 | Prior Art 3 | Prior Art 4 |
|-----------|-------------|-------------|-------------|-------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Claim Drafting Methodologies (Cont'd)

3) Picture Claim

- Write a claim that lists all the features of the invention and glues them together
- Go back through the claim and remove any features that are too narrow



Claim Drafting Methodologies (Cont'd)

Steps in Drafting

- Start with a first draft of your claim
- Then read back through the claim and try to sketch it
- What does your sketch look like?
- Do you have parts floating? (no glue words)

Claim Drafting Methodologies (Cont'd)

While Drafting ...

- Think about variations or modifications to the invention
- Imagine yourself as a competitor who wants to get around the claims
- Think about alternatives that can perform the same function
- Be careful with relative terms, e.g., “hard”, “soft”, “top”, “bottom,” “thin”, “thick”, etc.

Claim Drafting Methodologies (Cont'd)

While Drafting ...

- Positive recitation of features
- Very rare to require the absence of a feature
- Limit explanations
- Claims by result are possible, but better to avoid
- Do not state advantages in the claims (these belong in the description)
- Try to take time to walk away and come back
- Or ask a colleague to review

Claim Drafting Methodologies (Cont'd)

Remember...

- A patent claim must meet a few needs
 - Protect the invention
 - Give useful protection to the applicant (be capable of being infringed by a third party you would want to stop or make pay)
 - Be valid and Enforceable

Claim Drafting Methodologies (Cont'd)

Test the Claims

- Does it cover the inventor's product?
- Does it avoid the prior art?
- Does it have any unnecessary limitations?
- Do the elements relate to each other?
- Is the claim sufficiently clear and concise?

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Goal in Specification Drafting to Obtain Broad Claim Construction

Keys:

- Understand the technology and prior art
- Develop persuasive “story of the invention”
- Understand PTO practice and legal requirements
- Draft claims first, use as outline for the specification
- Detailed written description and enabling disclosure
 - Examples, examples, examples.....
- Avoid limiting disclosures, inconsistent language, “patent profanity”

Drafting the Full Specification

Provide a full and complete disclosure
MORE IS BETTER!

- Explore alternatives for each element of the invention
- Address functional aspects
- Disclose all known and possible embodiments

Patent Profanity – Non-limiting Examples

- **“Very important”** - Inpro II Licensing, S.A.R.L. v. T-Mobile USA, Inc.,
- **“Critical”, “Special”, “Peculiar”, “Superior”** - Bayer AG v. Elan Pharmaceuticals Research Corp.,
- **“Critical”, “Essential”, “Key”** - Pharmacia & Upjohn Co. v. Mylan Pharmaceuticals, Inc.,
- **“Necessarily”** - Biovail Corp. Int’l v. Andrx Pharmaceuticals, Inc.,
- Preferable (?)

Examples of How to Provide Enabling Disclosure

- Examples
 - drawings and charts
 - **cascading disclosure** from generic description down to preferred embodiment
 - provide verbatim support for full range of claims
 - actual and hypothetical examples

Drafting the Full Specification

Focus on objective of literal infringement

- Specification acts as a glossary for the claim terminology
 - If broad meaning for a term intended, provide a broad definition
 - Consider definitions to address concerns about related prior art
 - Use disclosure to eliminate uncertainty
 - when there is an equal choice between a broad and a narrow meaning of a claim, the public notice function is better served by interpreting the claim more narrowly
- Build literal infringement by use of functional discussions, in addition to structural embodiments

DISCLOSURE WILL BE USED TO CONSTRUE CLAIMS

- Numerical ranges
 - Don't use as the main statement of your invention
 - Define functionally (by objective purpose)
 - Broad Range: anything the inventor believes will work
 - Middle Range: products that could be financially competitive with the invention; and
 - Narrow Range: products that would be commercially very competitive with the invention

Tips

- Be vigilant against leaving information out of the specification
- Be diligent about trying to draft the patent so that the claim terms will be construed as broadly as possible
- While claims are construed in light of the specification, and are not limited to a designated “preferred embodiment,” this is not true where **that embodiment is in fact the entire invention presented.**

Q&A?

Thank You for your attention!

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