



# What's in the Spec.? Global Perspective

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# Today

- Drafting a global patent application
  - Standard format
  - Drafting in anticipation of translating
- A bit of history – harmonization
- What are the specification and claims?
- Pre-drafting considerations
- OK, let's draft an application

# A bit of history - Harmonization

- Paris Convention
  - Initially in 1883, and most recently revised at Stockholm in 1967
  - Three major elements: priority, independence, and national treatment
- Patent Cooperation Treaty (PCT)
  - In 1970 - WIPO
- European Patent Convention – EPO established
  - In 1973 and EPC2000
- TRIPS Agreement – GATT Uruguay Round - formation of WTO
  - In 1994
- Trilateral and IP5
- Patent Law Treaty in 2000 – formality harmonization
- Tegernsee Group in 2011
  - Denmark, France, Germany, Japan, UK, the USA and the EPO
- Group B+
  - WIPO's Group B, EU member states, the European Commission, EPOrg member states, the EPO, South Korea.

# As a result of harmonization

- A standard style of patent applications and specifications emerged
- In this lecture, we look at such global standards
  
- But they ARE an **Illusion** that we have to look at!
  - Many differences remain and new differences are emerging

# A patent application is made up of:

- Form
  - In the US, Declaration and Assignment + Application Data Sheet
- Specification (description)
- Claims
- Drawings (if any)
- Abstract

# What are the specification and claims?

- A technical document?
- A legal document?
  
- Contract between the applicant and the government?

# What's in the spec and claim?

- The invention is described
- Public notice function
  - Patent gives strong monopoly
  - The scope of the patent has to be clear to the public
  - Monopoly (a patent) in return for disclosure

# Who reads them?

- Enablement requirement
  - “A person skilled in the art”
    - Different for inventive step requirement?
- Inventor/Applicant – your client
- Translators – don’t forget
- Examiner
  - Who is examiner?
  - The technical level of examiners?
- Competitors
- Judges



# Enablement

- The invention has to be enabled for a person skilled in the art
- The person skilled in the art (JP definition)
  - Is generally believed to be a **fictitious person** who has technical common knowledge at the time of filing in the area of technology to which the claimed invention belongs and satisfies the following two requirements that:
    - (i) he/she is **capable of using normal technical means for research and development** (including document analysis, experiment, technical analysis, manufacture, etc.); and
    - (ii) he/she has **ordinary creativity such as choice of materials and design modification** (Examination Guidelines, Part II, Chapter 1, Section 1 on enablement requirement).

# Who is the inventor? - inventorship

- Determine who the inventor is
  - It has to be a person who made inventive contributions to the invention
    - Boss?
    - Assistant?
    - Investor?
  - In the U.S.
    - Conception and reduction to practice
  - Paris Convention?
- Who will be the applicant?
  - In the U.S.?

# Prior art databases

- Search is generally important
  - To understand the invention
  - To help you draft a specification with sufficient information
- But,
  - Some US companies make it a policy not to do any search
- EPO - Espacenet
- USPTO – Public Pair – Global Dossier
- JPO - J-PlatPat
- WIPO - PatentScope

# What's **wrong** with you? – misleading notions

- Only important points of the invention should be mentioned
- If we have too much details, the scope of the patent will be limited
- The breadth of claims and the detailed discussions are unrelated, broad claims can be claimed while saving details out of the spec
- If we can understand from drawings, it is unnecessary to describe in words

# Pre-Drafting Considerations

- Attorneys
  - In-house
  - Private practice
- Inventors
  - Employee inventors
  - Private inventors
  - Academic inventors

# Who is the Client?

- Private inventor
  - Who pays the account
  - Who gives you instructions?
  - Addressee?
- Corporate client
  - Contact for Oral and written communication
  - Who makes decisions?
  - Who pays the account?

# Listen to the Client

- Be a good listener
  - Good bedside manner
  - Encourage but be realistic
- Ask questions
  - The inventor **DOES NOT** know the invention!
  - What is patentable or what should be patented is different from his or her “invention”
- What is the background to the invention?
  - History
  - Problems
  - Strategy
  - What does the inventor know about patents?
  - Has the invention been disclosed? Is it novel?
  - Best modes?

# Teach the Client

- The client may not know about patents – Ascertain knowledge
- If necessary, cover rudiments:-
  - Novelty and Inventive step / obviousness
  - Priority year
  - Examination
  - Opposition
  - Renewal fees
  - Foreign jurisdictions – Paris and PCT routes
  - Costs



# Identify the Invention

- Interview
- What does the client want to achieve?
  - Offensive patent – strong, market, license?
  - Defensive patent – freedom to use?
- Understand the invention
  - Inventor has one embodiment
  - What are the key elements?
- Consider other IP rights including trade secret protection

# Questions to inventor

- Invention
  - What was the problem?
  - What was the solution?
  - Was it the only solution?
- Go through the history of the invention
- Routes to the invention
- Are any improvements in the pipeline?
- Who will manufacture?
- Marketing strategy

# Conducting prior art searches

- General requirement for absolute novelty
- What does the inventor know about the prior art?
- Any publication by others?
- Any search so far?
- Any public disclosure by the inventor or company?
- Public use
- Secret prior use – unpublished patent applications

# Initial Opinions

- Understand the invention
- Work out inventive concept
- Need to be novel, inventive or non-obvious
- Need for technical effect (in most countries)
- Rewards - Be realistic
  - Patents one of a number of IP statutes
  - Trademarks, designs, copyright
  - Trade secret protection
- Then sum up meeting orally
  - Confirm in writing
  - List actions (even if none)
  - Keep open mind
  - Offer services

# Key Points

- When the application has to be filed?
- Avoid premature disclosure
- Breadth of potentially patentable invention
- Level of creativity necessary
- Commercial opportunity
- Developments and timings

OK, let's draft an application

# Specification - structure

- Title
- Field of the Invention
- Background of the Invention
- Summary of the Invention
- Brief Description of the Drawings
- Detailed Description of the Invention
  - Effects, advantages & industrial applicability

# PCT Rule 5

- The **Description**
- 5.1 Manner of the Description - first state the title of the invention as appearing in the request, and shall:
  - (i) specify the **technical field** to which the invention relates;
  - (ii) indicate the **background art** which, as far as known to the applicant, can be regarded as useful for the understanding, searching and examination of the invention, and, preferably, cite the documents reflecting such art;
  - (iii) 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 the **advantageous effects**, if any, of the invention with reference to the background art;
  - (iv) **briefly describe the figures** in the drawings, if any;
  - (v) set forth at least the **best mode** contemplated by the applicant for carrying out the invention claimed; this shall be done in terms of examples, where appropriate, and with reference to the drawings, if any; where the national law of the designated State does not require the description of the best mode but is satisfied with the description of any mode (whether it is the best contemplated or not), failure to describe the best mode contemplated shall have no effect in that State;
  - (vi) indicate explicitly, when it is not obvious from the description or nature of the invention, the way in which the invention **is capable of exploitation in industry and the way in which it can be made and used**, or, if it can only be used, the way in which it can be used; the term "industry" is to be understood in its broadest sense as in the Paris Convention for the Protection of Industrial Property.



# USA - MPEP608.01(a)

## Arrangement of Application [R-07.2015] or 37 CFR 1.77

- (b) The **specification** should include the following sections in order:
- (1) Title of the invention
  - (2) Cross-reference to related applications.
  - (3) Statement regarding federally sponsored research or development.
  - (4) The names of the parties to a joint research agreement.
  - (5) Reference to a “Sequence Listing,” a table, or a computer program listing appendix submitted on a compact disc and an incorporation-by-reference of the material on the compact disc (see § 1.52(e)(5)). The total number of compact discs including duplicates and the files on each compact disc shall be specified.
- (6) Statement regarding prior disclosures by the inventor or a joint inventor.
- (7) Background of the invention.
- (8) Brief summary of the invention.
- (9) Brief description of the several views of the drawing.
- (10) Detailed description of the invention.
- (11) A claim or claims.
- (12) Abstract of the disclosure.

# According to EPO

- How to get a European patent – Guide for Applicants
  - March 2016 version

# Title

- The title should concisely state the technical designation of the invention.
- Should not be so specific as to disclose the invention
  - To avoid premature disclosure of the invention
  - a new compound can possibly be disclosed by its name when the Patent Office publishes bibliographic information early

# Field of the Invention

- Specify the technical field to which the invention relates. You may do this for example by reproducing the first ("prior art") portion of the independent claims in full or in substance or by simply referring to it.
  - Reference to two-part independent claims

# What's important in the field section

- Try to be realistically broad
  - If too broad, the examiner may extend his/her search too much
  - If too narrow, what's in the field section may limit your claimed invention
- Two or three lines, normally, with a lot of exceptions

# Background of the Invention

- Indicate the background art of which you are aware, to the extent that it is useful for understanding the invention, preferably citing source documents reflecting such art. This applies in particular to the background art corresponding to the prior art portion of the independent claims. Source document citations must be sufficiently complete to be verifiable: patent specifications by country and number; books by author, title, publisher, edition, place and year of publication and page numbers; periodicals by title, year, issue and page numbers.

# What's important in the background section

- Do NOT characterize what is not “prior art” under the statutory provisions as prior art
  - Use terms like “conventional art” or “background art”
- Discussions on the prior art should be short and concise
  - Rely on reference such as “as described in JP 2001-123456 A”
- Be objective – Try not to say anything derogatory
  - If prior art is your client's previous technology, product liability may become an issue
  - If your client's product covered by the resulting patent suffers the problem discussed in this section, the patent would not cover such product

# Summary of the Invention

- The disclosure must indicate the technical problem that the invention is designed to solve (even if it does not state it expressly) and describe the solution.
- To elucidate the nature of the solution according to the independent claims you can repeat or refer to the characterising portion of the independent claims (see example) or reproduce the substance of the features of the solution according to the relevant claims.
- At this point in the description you need only give details of embodiments of the invention according to the dependent claims if you do not do so when describing ways of performing the claimed invention or describing what the drawings show.
- You should state any advantageous effects your invention has compared with the prior art, but without making disparaging remarks about any specific previous product or process.



# What's important in the summary section

- The object statement should be **VERY** broad
  - DO NOT put anything specific in this section
- Advantages should be discussed in connection with examples – not here
  - Advantages may limit your claimed invention
  - Discussions on advantages are important, but not here
- Copies of claims should be included
- Some clues for possible amendments should be given
  - If the claims are very generic, some species or narrower ranges should be mentioned

# Brief Description of the Drawings

- Briefly describe what is illustrated in any drawings, making sure you give their numbers.
  - Examples:
    - Fig. 1 is a perspective view of a conventional machine.
    - Fig. 1 is a plan view of an example according to the present invention.
    - Fig. 1 is a diagram showing the principle of operating the example.
    - Fig. 1 is a flow chart for the process according to the present invention.

# Detailed Description of the Invention

- Describe in detail at least one way of carrying out the claimed invention, typically using examples and referring to any drawings and the reference signs used in them.

# What's important in detailed description

- Mechanical/Electrical
  - Describe everything you see in the drawings using words
  - Discuss functionally equivalent alternatives
  - Expand, expand and expand!
- Chemical/Biotech
  - Examples, examples, examples!
    - One example is **never** enough
    - Wet lab examples required in EP, JP,...
    - Prophetic examples are accepted only in the U.S.
  - Numbers and numerical ranges
  - How to make is essential

# Industrial applicability

- Indicate how the invention is susceptible of industrial application within the meaning of Article 57.

# In general

- Be careful about **relative terms**
  - Right, left, front, back, lower, higher...
  - Include definitions of what you mean
  - Describe reference
  - You will not be able to fix them later!
- Try not to use **extreme words**
  - Most, best, highest, etc.
- Use **present tense** unless you are describing experiments
- Use terms **consistently**

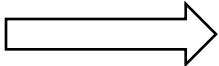
# Abstract

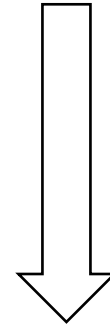
- Used only for searches
- Not used for claim interpretation
- Be aware of the limit on the number of words in the abstract
- No need to say “the present invention relates” etc.

Practically, how we go about drafting?



# Drafting Order

- Personal habit?
- Claims
- Prior art + problems  advantages
- Descriptions
- Drawings



# Claims already drafted

- Prior Art
  - State the document number or reference
  - Do not cite something for which you do not have numbers or references
  - Be general - Do not detail problems
  - If citing your own earlier application, beware of product liability
- Object Statements
  - No necessary in many jurisdictions
  - Be extremely general

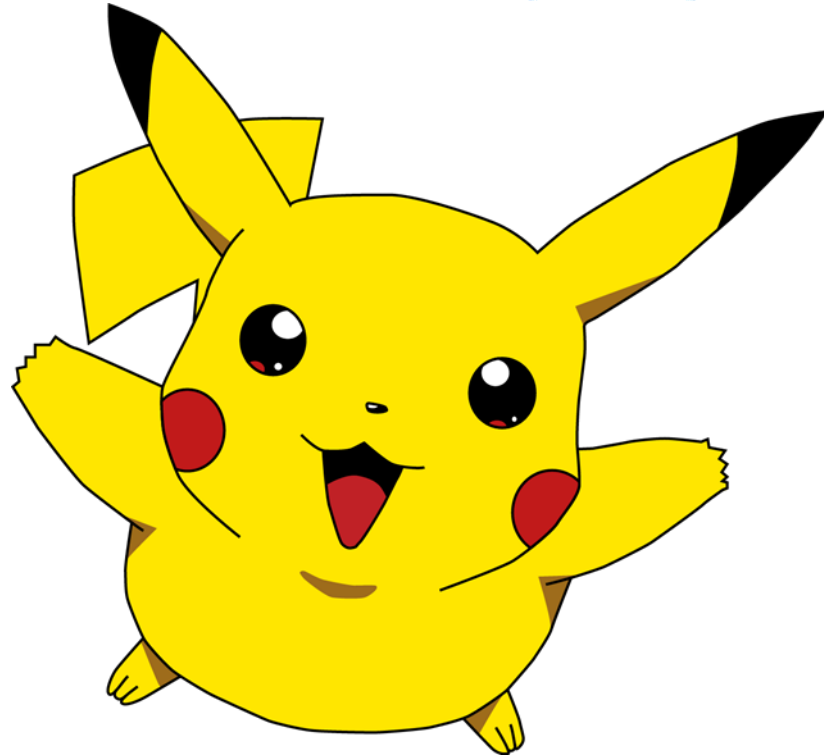
# In general

- The invention is illustrated with reference to the following examples and drawings
- Expand, expand, expand – with more examples, variants ...
- Find logic while you draft and express it
- Tense

# Patent Law Requirements on Disclosure

- Enablement
- Support or written description requirements
  - Different requirements
- Clarity
- Conciseness

Thank you



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