Washington State Patent Law Association

Considerations And Strategies On Drafting Patent Applications For Both US And European Jurisdictions

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Agenda

- Introduction
- Relevant Legal Requirements in US and Europe
- Drafting Considerations
- Summary
- Panel Discussion and Q&A

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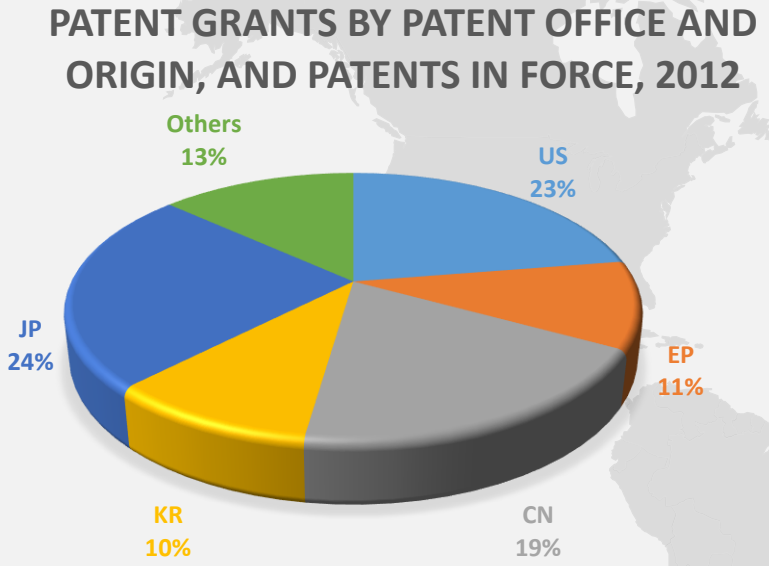
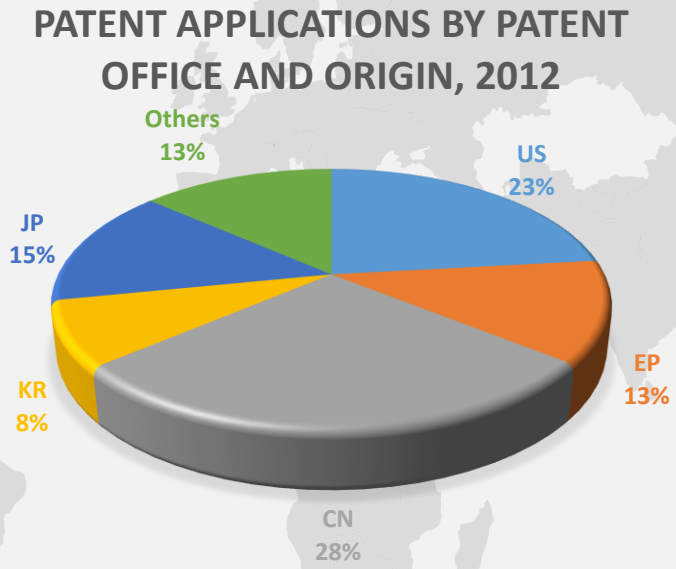
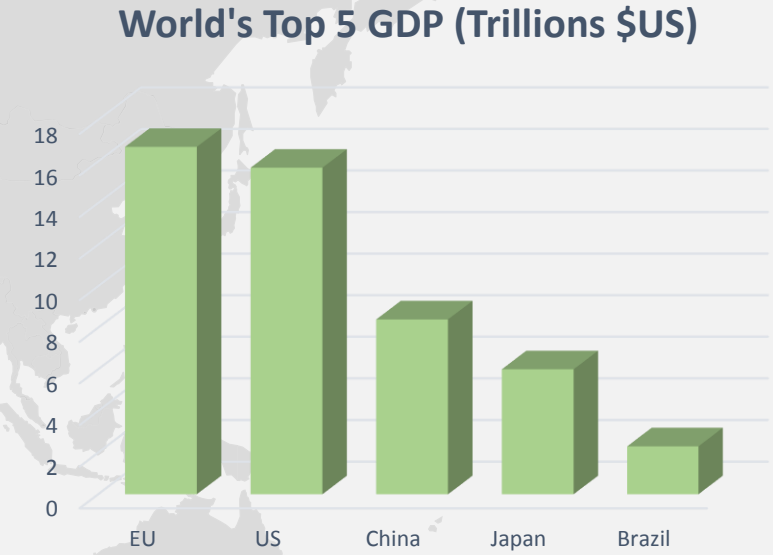
Statistics







Patent Data from WIPO's World Intellectual Property Indicators 2013

GDP Data from World Bank 2012 Report

Introduction

Focus on US and Europe

- Two biggest centers of innovation
- KR patent law similar to US patent law
- JP and CN patent law similar to European patent law
- European patent harmonization between countries has led to a formalistic approach to ensure uniform application in each country

Goal

- Focus on utility (or invention) patents
- Concentrate on substance of the application
- Discussion on drafting a priority patent application that maximizes protection in both US and European jurisdictions

Relevant Legal Requirements for U.S. and Europe

Patent Eligibility – What is patentable?

US	EPC
35 USC 101, Inventions Patentable: Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.	EPC Article 52, Patentable inventions: (1) European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.

Patent Eligibility – What is NOT patentable?

US	EPC
• Abstract ideas ❖ Math Algorithm • Law of nature • Physical phenomena	• Discoveries, scientific theories and mathematical methods • Aesthetic creations • Schemes, rules and methods for performing mental acts, playing games or doing business and programs for computers • Presentations of information *to the extent to which a European patent application or European patent relates to such subject-matter or activities as such*

Unity of Invention

US	EPC
35 U.S.C. 121 – Two or more independent and distinct inventions cannot be claimed in a single application 37 C.F.R. 1.141 – More than one species of an invention may be claimed in different claims of a single application 37 C.F.R. 1.142 – Restriction requirement issued if more than one independent and distinct invention MPEP § 802.01 – Independent and Distinct "Independent" – no relationship between two or more claimed inventions "Distinct" – inventions as claimed are unrelated in one of design, operation, or effect, and one is patentable over the other.	Article 82 – Unity of Invention • The European patent application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept. Rule 43(2) – Form and content of claims • One claim per category • Product, process, apparatus or use Rule 44 (1) – Unity of Invention • Involving a shared "special technical features" • A contribution which each of the claimed inventions considered as a whole makes over the prior art.

Drafting Considerations

Audience

Who is the Audience?

- Draft for all levels of audience
  - PhD in the field
  - General engineers
  - English majors
  - High school graduates
- Include different levels of complexity and technicality
  - High level summary for non-technical audience
  - Both easy-to-understand and technical figures
  - Concise and technical terms
  - Detail embodiments and example implementations
  - High level scientific basis for the invention
  - Studies and experimental results
  - Avoid typical patent profanity

Problem-Solution Approach
Inventive Step Analysis

Problem-Solution

Typical practice in the US

- Don’t talk about the problem to be solved
  - Provide limited background information to mitigate risk of admitting prior art
  - Hindsight reconstruction, obvious
- Don’t talk about objectives or advantages of the invention
  - Infringer can practice invention for other objectives; may not be held to infringe

EPO Formulation

- Problem-Solution approach to assessing inventive step
  - Determine closest prior art
  - Establish objective problem to be solved (must be technical)
  - Using closest prior art and objective problem to be solved, determine if skilled person would have derived the claimed invention
  - Divide elements into technical and non-technical; evaluate only technical elements. Non-technical features cannot provide a contribution to the prior art

Problem-Solution

- Don’t make explicit in specification, but make it easy to find
  - Don’t state the problem, but disclose some advantages that imply the problem
  - State “advantages” but be careful
    - Use broad language
    - Limit to individual elements if possible
    - Clearly state that the cited advantages are not the only advantages
    - Can avoid “advantage” using “useful,” “good,” or other synonyms.
- Not required in claims
- Attorney can communicate “subjective” problem to be solved to examiner, but examiner is free to disregard when determining “objective” problem
  - But it is often useful to communicate applicant’s version of the problem
  - Can help to frame the solution provided by elements in claims

Problem-Solution (example)

[0065] With reference now to step 730, an appropriate geographic map is selected for the content. In some embodiments, this process involves using the geographic tags for the content to select maps appropriate for that content. In some embodiments, one or more appropriate maps may be retrieved from a storage device. In some embodiments, one or more maps may be freshly generated. In some embodiments, a combination of these approaches is utilized. In other embodiments, other methods of accessing or generating a map may be utilized.

[0066] For example, with reference to Figure 6, map generator 630 uses the geographic tags read by geographic categorizer 620 in order to generate an appropriate map for that content.

- Freshly generating maps solves technical problems of reduced computational resources and improved usability.
- During oral proceedings, a claim amendment to this feature was made but the examining division did not believe the technical effect was actually achieved because it is not explicitly mentioned in the description.

Technical Character Requirement

Technical Character

European patents shall be granted for any inventions, in ***all fields of technology***, provided that they are new, involve an inventive step and are susceptible of industrial application.

- EPC Article 52(1)

Having ***technical character*** is an implicit requirement to be met to be an invention within the meaning of Art. 52(1) EPC.

- T 931/95, Pension benefit scheme/ PBS Partnership

Technical Character

Technical character or technical effect are assessed without reference to prior art.

- T 1173/97, Computer program product/IBM

Invention must be considered as a whole when considering technical effect.

- T 26/86, X-ray apparatus/Koch & Sterzel

Technical Character

What is “technical?”

No definition in EPC (Euro Patent Convention)

Derived from decisions of Boards of Appeal

Technical Character

Technical	Not
Processing physical data	Selling, trading, insurance
Processing that affects the way a computer operates	Order placement/management
May be implied by physical features of an invention	Choosing among candidates for a job

Technical Character

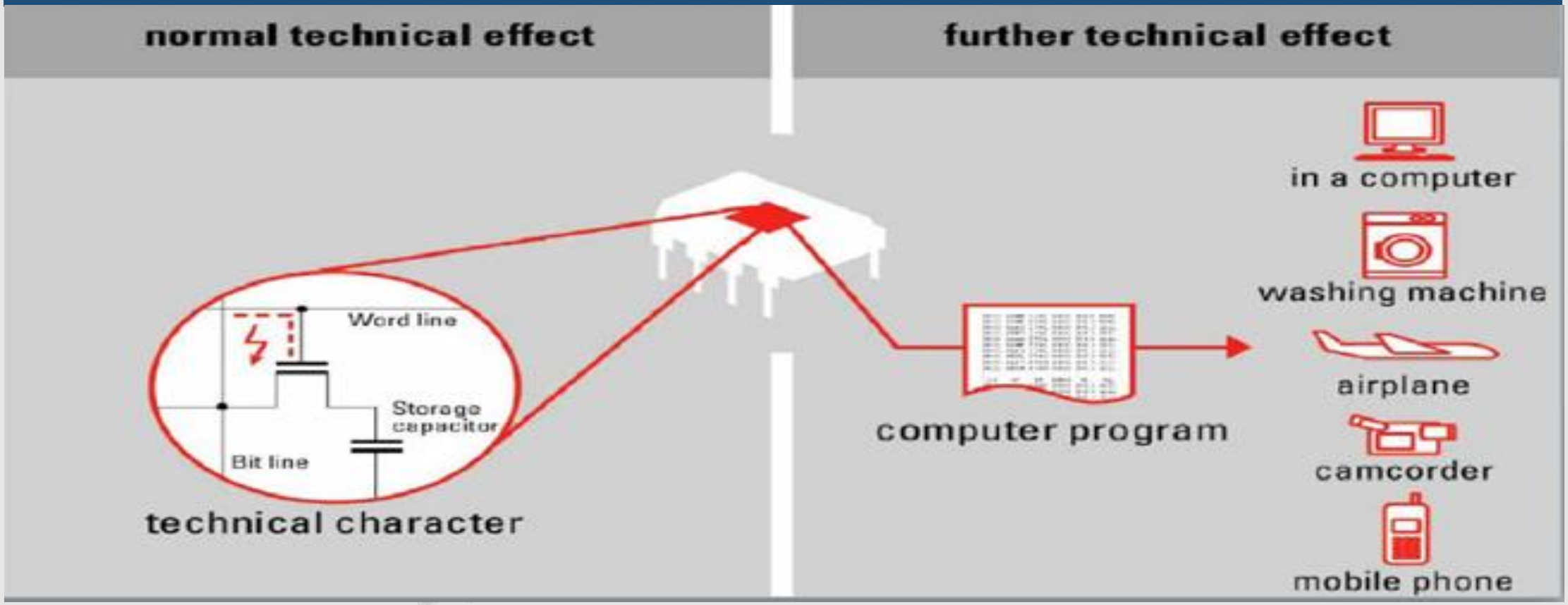
For computer programs and computer program products…

The computer program, when executed, has to provide a “further technical effect.”

The normal technical effects, like flow of electrical current, is not sufficient.

- T 1173/97; T 0935/97

Computer Programs
Further Technical Effect



TECHNICAL CHARACTER

Further Technical Effect	Not Technical
Reduced processor load	Aesthetic effects of music or a video
Faster communication between mobile phones	Auction rules
Secure data transmission (Encryption of data)	Selling/booking cruise packages
Operating system resource allocation	Calculation of a pension
Less memory space required	
Increased processor speed	
Energy savings	
Reduced hardware requirements	

TECHNICAL CHARACTER - GUI

GUI: Further Technical Effect	Example
Improved User Efficiency	(1) Improved text display improves efficiency for user/reader; (2) GUI decreases mental/physical effort
User Interaction Performance	Arrangement of images that results in more efficient user interaction
Reduced Error Rate	Reduces likelihood of data entry/typing errors
Representation of Machine State	Color change informs user of internal state of machine
Miniaturization: Less space required for GUI functionality	Allocation of display area & icons to resolve conflicting technical requirements (zoom)

Clarity Issues

Clarity Issues

Claims must be clear, concise, and exact. 35 USC 112; EPC Art. 83-84

Claim terms are given meaning and scope which they normally have in the relevant art

Special meaning can be given by explicit definition in the description (EPC Art. 69). But lately, because of the “Raising the Bar” initiative, Examiners are requiring amendments so that the meaning is clear from the wording of the claims alone.

Only the claims, not the description, of EP patents are published in all official languages.

Commonly used to call into question meaning to bring in more prior art

Clarity Issues

Problems:

- Use of different terms in claims and description
- Inconsistent terms in claims
- Colloquial/specialist terms
- Claims with references to unclaimed components

Lack of clarity results in loss of scope through repair with narrow terms from embodiments

Tips:

- Define terms
- Use consistent terms throughout claims and spec
- Avoid overly restrictive modifiers: must, essential, required, critical
- Avoid absolute terms: only, all, none
- Avoid non-technical materials in the description that are unnecessary

Claim Support in Specification

Claim Support in Specification

EPO requires much more detail in the description than USPTO

Lack of details causes lack of arguments for Problem Solution Approach

When claim language has no match/link to language/explanations used in embodiments, problems with support occur when trying to solve clarity objections with text portions from the description

Focus as much on the “how” as the “what”

Claim Support in Specification

Typical US Practice: Two concepts described for an embodiment. First is high level general principle (usually claimed in US). Second is narrow description of implementation.

Consider adding a medium level, from where claims amendments can be drawn without unduly narrowing claim to specific embodiment.

"The computing device may be portable, for example a mobile phone or a laptop"
If "A handheld computing device" is claimed, it is not supported in spec.

Claim Support in Specification

- Each embodiment is considered a discrete disclosure
- Parts of embodiments can only mixed if there is clear basis for doing so:-
  - Embodiment #1 – “A single touch mobile phone having a wifi connection.”
  - Embodiment #2 – “A multi touch mobile phone having a 4G connection”
  - No basis for “A single touch mobile phone having a 4G connection”
- Boilerplate text helps, but tailored disclosure noting explicitly foreseen combinations of features from different embodiments is preferable

Claim Support in Specification

- Ensure all the terms in the claims are defined in the description
  - Beware of modifiers
  - Write a separate EP claim set if possible and include the set in priority application
  - Helpful to draft EP claims first, then abstract up for US claims
- Cover all aspects of the invention
  - Cover most important products and processes
  - Cover different fields of use
  - Consider what can be made and sold separately
  - Direct at a single infringer
  - Include all combinations, embodiments, equivalents
- Recite all combinations
  - Only combinations specifically recited in spec are allowed in claims
- Consider a “Claims Summary Section” – reproduce claims verbatim
- Dependent claims should be described in specification

Functional Claiming

Functional Claiming

Functional claiming is permissible, and widely used, at EPO

But claims cannot be directed to a "result to be achieved"

"A canister for a pump, … wherein the canister is configured to mate with part X of the pump.

This probably would be found to claim the result.

Better to draft the claim to recite the means by which the mating is made possible:
"wherein the canister has two clips for engagement with notches on the pump."

Claims must be limited to the scope of the disclosure.

Added Matter

Added Matter: Prosecution

US	EPC
Cannot add new matter after initial filing In prosecution, new claims and combinations can be added as long as they are supported by the specification • May trigger a new search Written description inquiry: Does the description clearly show that the inventor was in possession of the invention?	Only subject matter that is "directly and unambiguously" derivable from the application can be used as basis for amendments Added matter rules apply equally to amendments to the description and figures Added matter includes: Adding extra features Intermediate generalization Deletion

Added Matter: Post-grant

US	EPC
Can seek a broadening reissue after grant • Allow applicant to broaden the claims within 2 years A patent is rarely invalidated due to a lack of written description Presumption of validity Narrow claim construction is a more common remedy	Example: EP Opposition - Email security invention • Term – "certified sender user" • Not defined in the description • Term of art –user with a certificate issued by a CA • Intended meaning: a user included in a white list of the recipient • Only way to save the claim is to delete "certified" • Patent invalidated by the panel Inescapable Trap! • Post-grant amendments cannot broaden the claim • If a bad term can only be fixed by broadening the claim, then the patent cannot be saved

Summary

Specification

Draft a complete application

- Include relevant technical details for a technical audience
- Ensure that key terms are properly and thoroughly defined
  - Shoot for Breath, avoid Ambiguity
- Describe all embodiments, combinations, alternatives, equivalents, fields of use

Prepare application for EPO examination

- Provide information for problem/solution type examination
  - Use statements of advantages
- Avoid non-technical language
- Include sufficient technical details in the description
- Describe additional intermediate embodiments

Claims

Draft supported and useful claims

- Check and double check to ensure that all terms of the independent and dependent claims have literal support in the description
  - If a set of specific EPO claims will be used, make sure that the claims have literal support
- Use dependent claims for systematic fallback
  - Each dependent claim should provide a patentably distinct feature

Write claims with unity of invention

- One independent claim per category
- Consider having function and use claims for European jurisdictions
- “Special Technical Features” in all claim set

Claims

Use ordinary meaning of terms

- If possible, claims should stand on their own without requiring the description for interpretation
- Describe characteristics of elements in a straightforward manner

Write patent eligible claims

- Emphasize the technical aspects of the technical solution
- Include hardware implementation, if possible
- Avoid business terms (e.g. financial, auction, advertising) in the claim
- Avoid non-technical language

Panel Discussion
Q & A

THANK YOU!

Terima Kasih Dank u Wel ありがとうございます Mulţumesc 감사합니다 Köszönöm Dziękuję Tack дякую Tak

Kiitos תודה спасибо 多謝晒 ขอบคุณครับ Děkuji Gracias 谢谢 Cám ơn شكريه Obrigado Grazie

شكراً Salamat Po Ďakujem Teşekkürler ευχαριστώ Danke நன்றி благодаря धन्यवाद Hvala مسكيرم

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