

Drafting & Prosecuting Patent Applications for Computer related Inventions

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Can you preempt attacks on your claims while drafting the spec.?

Under US law claims can be challenged on the following grounds:

Invalidity based on prior art 35 USC 102 & 103

Narrow Claim Construction

- Use of specification to narrow claims
- Use of prosecution history to narrow claims

Invalidity under 35 USC 112

- a. Written description
- b. Enablement
- c. Best Mode

Inequitable Conduct

Prior Art

- Can you preempt possible attacks on your claims based on prior art while drafting and prosecuting patent applications?

Narrow Claim Construction

- Can you read into the claims limitations based on written description provided in the specification?

Yes, If you do not recite alternatives properly.

- In *O.I Corporation v. Tekmar Company* (Fed. Cir. 1997) the invention was concerning a
 - *device for removing water vapor from a stream of gas, contaminant and water that flows through a temperature controlled “passage”. The written description covered only non-smooth geometries for the passage.*
- The Court was called upon to construct the scope of “passage”. Even though the claims did not refer to any geometry of passage, the Court held that “passage” means “non-smooth passage”.
- This is a typical case of reading limitation into claims by constructing the claim language based on written description.

Claim Limitations

Location based notifications

“1. A communication system comprising:
a remote communications device configured to communicate through a telecommunication network;
a base station in communication with the remote communications device, the base station having a notification system interfacing with the remote communications device, wherein the base station is configured to provide location based notifications to the remote communication device using the notification system.”

Using Prosecution History to limit claims

- Question is this – can you regain something which you stopped from claiming during prosecution?
- If you amend your claim during prosecution you would presumptively create an estoppel – as there is a rebuttable presumption that the amendment relates to patentability, the patentee is estopped from recapturing the subject matter relinquished.
- Tampering with your claims in insubstantial details to avoid infringement is what is prevented by doctrine of equivalents. You read the claims element by element. Each element contained in a patent claim is material to defining the scope of the claim.
- File wrapper estoppels limit you from applying equivalents in constructing claims and from recapturing what you relinquished.

Invalidity Under 35 USC 112

- Full Clear and Concise Written Description
- Enablement – must enable person ordinarily skilled in the art to work the invention
- Best Mode – the description must disclose the best mode of working the invention

Step 1

- Determination of what the inventor/applicant is seeking to patent
- Not by looking at the claims to see whether an algorithm is recited
- Review the complete specification and examine whether the invention achieves a “*useful, concrete and tangible result*” [State Street Bank & Trust v. Signature Financial Corp. Inc [Fed. Cir.1998]]

Step-2

- Identify and understand the practical application of the invention.

How do you do this:-

- Determine what the programmed computer does when it performs the processes dictated by the software. *[Functionality of the programmed computer]*
- *It is of course true that a modern digital computer manipulates data, usually in binary form, by performing mathematical operations, such as addition, subtraction, multiplication, division or bit shifting, on that data. But this is only how the computer does what it does. Of importance is the significance of the data and their manipulation in the real world, i.e., what the computer is doing. [Arrhythmia, 22USPQ 2d]*
- Determine how the computer is to be configured to provide that functionality. *[What elements constitute the programmed computer and how those elements are configured to provide the specific functionality]*
- If applicable determine the relationship of the programmed computer to other subject matter outside the computer that constitutes the invention *[machines, devices, materials external to the programmed computer or even processes other than those performed by the programmed computer]*

Step 3

- Thus if your invention is having a 'useful, concrete and tangible result' proceed to draft the written description.
- You could do the following. This is my way of looking at it:
 - Draw out two drawing figures. Figure 1 illustrating all interfacing components of the invention
 - Figure 2 is the core component illustrating all elements of the core component
 - Using figure numerals draft out a written description describing the functional interface between all elements of the system. This is the base for the principal method claim
- You could then
 - draw out a series of flow charts or drawing figures illustrating the invention,
 - augment the specification with written disclosures on all aspect of the invention
 - provide antecedence for claims in the specification
 - recite alternatives &
 - ensure that the claims find adequate support

Step 4

- Review the claims to ensure that the examining attorney will not raise substantive objections.
- What an examining attorney will do in analyzing a computer software claim:
- Identify and evaluate each claim limitation
 - ‘a mobile telephone device configured to communicate through a wireless network’ – you limit your claim language by excluding subject matters other than a mobile telephone device or a wire-less network’
- The examining attorney will read each claim limitation based on the written description. [(The Markman rule) Markman v. Westview Instruments 31USPQ2d.]
- In interpreting a specific term the examining attorney will look for explanations provided in the text description. What is the limiting effect of the language in a claim – intended use – adapted to use – wherein – whereby –
- As for example:
 - ‘a remote communications device comprising a network selector adapted to choose network wherein the network selector is further configured to receive location network based location notifications’

Step 4 contd

- If means plus function language is used – the examining attorney will look for the structures or materials disclosed in the specification.

As for example

“A system for data indexing comprising:
a data storage means for storing predefined data;
an indexer means for indexing the data;
a data-shuffler means for rearranging data
a data repository means for storing the re-arranged data
wherein the system further configured to periodically transmit data through a
telecommunication network.....”

- Examining attorney will construct the scope of the claims as per 35 USC 112 [para.6] Meaning thereby the alternatives/structures/materials disclosed in the text description will be used to construct ‘means plus function language’. In Re Donaldson. Fed. Cir.1994
- Question is this, if you have a means for doing something – does that means all and every known means that could do that ‘something’ or the one means disclosed. In In re Alappat the Federal circuit said no. So these days we do not use means.
- Instead simply we could couple the function with a hardware and recite the claim –
As I said an “indexer configured to index predefined data” instead of saying an indexing means for indexing predefined data”.....

Step 5

- By now, you know what is the scope of your invention. So you could conduct a second round patent prior art search.
- How do you conduct patent prior art search for computer related inventions. Difficult. One way is to go to the relevant class.
- ccl/705/1 may give you prior art on 'business methods' – or “the automated financial or management data processing methods”

Step 6

- Classifying the invention under the statutory category is one thing the examining attorney will do in the beginning. Look you will state under “the filed of the invention” the technical filed to which your invention relates.
- “This invention in general relates to communication technologies. More particularly the present invention relates to the use of a system for receiving location based notifications in mobile telephony.....” some thing of this sort.

Step 7

What is statutory subject matter in the context of computer related inventions

- General Exceptions from the scope of patentability – natural phenomenon – abstract ideas – laws of nature which constitute descriptive materials.
- Descriptive materials can be functional and non-functional.
- Functional descriptive materials are computer programs and data structures. [Data structure means physical or logical relationship among data elements, designed to support specific data manipulation functions.]
- Non functional descriptive materials include mere compilation of data.
- When a functional descriptive material is recorded on some computer readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases. In re Lowry 32 USPQ2d1031 data structure that increases computers functional efficiency held statutory. In Warmerdam 31 USPQ2d at 1760 claim to computer having specific memory held statutory.

The best ways

- do a neat prior art search
- draft a neat spec
- claim statutory subject matter
- avoid infringement

THANK YOU