# Successfully Preparing and Prosecuting a Business Method Patent Application

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**By**

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## I. EXECUTIVE SUMMARY

There has recently been a marked increase in public attention to the operations of the United States Patent and Trademark Office (USPTO), and specifically, areas that examine patent applications related to business method inventions. There has been some confusion, however, in the patent community over what constitutes a business method claim. "Business method" is a generic term that has been used by many to describe various types of process claims. The Federal Circuit has not yet defined what it is that specifically characterizes a business method claim and separates it from other process claims. The Court has, however, stated that claims drawn to a method of doing business should not be categorized as a "business method" claim, instead they should be treated like any other process claim. *State Street Bank & Trust Co. v. Signature Financial Group, Inc*. 47 USPQ2d 1596, 1604 (Fed, Cir. 1998).

The one area in particular that receives the bulk of the public attention related to business method-type applications is the workgroup responsible for examining patent applications in automated business data processing technologies, U.S. Class 705.  This area has experienced substantial growth recently in response to rapidly developing technologies related to e-commerce and the Internet. The majority of business method related applications are filed in this area since the methods claimed in these applications are somehow related to financial data processing. However, not all business method claims are classified in Class 705. For example, methods of teaching are classified in Class 434, Education and Demonstration. Methods of playing games are classified in Class 273, Amusement Devices, Games. Methods of improving crop yields are classified in Class 47, Plant Husbandry. These are only a few examples. Other process claims which may be labeled a "business method" are classified and examined according to their technology.

On March 29, 2000, the USPTO announced an Action Plan for business method patents to improve the quality of the examination process in technologies related to electronic commerce and business methods. These initiatives have provided a forum through which

mutual concerns, problems and possible solutions are being discussed, and USPTO operational efforts in this technology area are being shared. Feedback on prior art resources is also being gathered and input on expanding non-patent literature (NPL) information collections and databases is being solicited. There has been active discussion on these initiatives since their inception, and they will not be the focus of this paper.

Instead, this paper defines the specific technologies that are examined in Technology Center 2100, explains the specific business method topics that are examined in Class 705, discusses the definition of Class 705, and gives guidance on successfully preparing and prosecuting a business method application classified in Class 705.

## II. KNOW THE ORGANIZATION

As with any large group or organization, knowing the right contact point is critical to getting questions answered and problems resolved. Table 1 illustrates how Technology Center (TC) 2100 is divided by technology and assigns the individual TC Directors to their areas of responsibility. Table 2 illustrates how workgroup 2160 ("business methods") is divided by technology and assigns the individual Supervisory Patent Examiners (SPEs) to their areas of responsibility.

**Table 1**

| Technology Center 2100<br>Computer Architecture, Software and Electronic Commerce |
| :---: |
| **Peggy Focarino - Director (703) 306-5484** |
| ♦Workgroup 2120 - Miscellaneous Computer Applications |
| ♦Workgroup 2170 - Graphical User Interfaces |
| **John Love - Director (703) 306-5484** |
| ♦Workgroup 2130 - Cryptography, Security |
| ♦Workgroup 2160 - Electronic Commerce |
| **Allen MacDonald - Director (703)305-9700** |
| ♦Workgroup 2150 - Computer Networks |
| ♦Workgroup 2180 - Computer Architecture |

**Table 2**

| Group 2160 - Class 705 |
| :---: |
| ♦AU 2161 - Business Cryptography/Postage Metering |
| SPE - Jim Trammell (703) 305-9768 |
| ♦AU 2162 - Incentive Programs/Coupons |
| SPE - Jim Trammell (703) 305-9768 |
| ♦AU 2163 - Operations Research |
| SPE - Tariq Hafiz (703)305-9643 |
| ♦AU 2164 - Finance & Banking |
| SPE - Vincent Millin (703) 308-1065 |
| ♦AU 2165 - E-shopping |
| SPE - Vincent Millin (703) 308-1065 |
| ♦AU 2166 - Health Care/Insurance |
| SPE - Tariq Hafiz (703)305-9643 |
| ♦AU 2167 - Point of sale/Inventory/Accounting |
| SPE - Robert Olszewski  (703)308-5183 |

## III. CLASS 705 - DEFINITION

The title of Class 705 is "Data processing: financial, business practice, management, or cost/price determination." The definition of Class 705 is "machines and methods for performing data processing or calculation operations in the: 1) practice, administration or management of an enterprise; 2) processing of financial data; or 3) determination of the charge for goods or services."

Thus, only computer-implemented processes related to e-commerce, the Internet and data processing involving finance, business practices, management or cost/price determination are classified in Class 705.  All other applications that may be labeled a "business method-type application" will be classified, assigned and examined according to their technology.

## IV. STEPS TO CONSIDER PRIOR TO FILING THE APPLICATION

If pendancy is an issue, an applicant may consider filing a Petition to Make Special under 37 CFR 1.102. See MPEP 708.02. While new applications are not ordinarily taken up for examination out of the order of their effective United States filing dates, certain exceptions can be made by way of petition under 37 CFR 1.102, which may be applicable to applications classified in Class 705. For example, if infringement is an issue or accelerated examination is desired, applicant may petition the Office to grant special status for advancement of the application under 37 CFR 1.102. See MPEP 708.02 for examples of other instances in which an application may qualify for special status.

Applicant is encouraged to conduct a preliminary search and file an Information Disclosure Statement to comply with their duty of disclosure and advance prosecution of patent applications not only in Class 705, but in all other Classes at the USPTO as well. In doing so, avoid submitting irrelevant documents and only marginally pertinent information. Also, avoid lengthy submissions if possible, but if they are necessary, highlight the most pertinent information. Additionally, don't assume that the examiner of a particular application is aware of other applications belonging to the same applicant or assignee. It would be helpful to identify such applications to the examiner to streamline the examination process. Applicant can avoid further time delays by ensuring that prior art or other pertinent information in one application is cited to the examiner in other related applications. See MPEP Chapter 2000 for more information on applicant's duty to disclose.

When submitting a foreign origin specification, it is recommended that applicant file a preliminary amendment that complies with USPTO examination practice. Quite often, literal translations of foreign applications are filed that do not comply with U.S. patent examination practice and procedure. This can lead to many problems concerning the adequacy of the disclosure and the written description requirement. Additionally, poorly drafted original claims can limit applicant to only one opportunity to amend by right during prosecution in the event that the second Office Action on the merits is made final.

# V. APPLICATION CONTENTS - THE SPECIFICATION
Identify the Practical Application

The claimed invention as a whole must accomplish a practical application. It must produce a "useful, concrete and tangible result." See *State Street Bank & Trust v. Signature Financial Group Inc.,* 149 F.3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998). The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a staring point for future investigation or research. See MPEP 2106. The mere presence of a mathematical algorithm in a claim is not grounds for a rejection under 35 U.S.C. 101. Instead, an examiner must review the claims to determine if the claimed invention produces a "useful, concrete and tangible result." If the answer is yes, then the claimed invention has a practical application and satisfies the utility requirement of 35 U.S.C. 101. Thus, it is vitally important that the specification is complete and clearly identifies any practical application for the claimed invention.

The applicant is in the best position to explain why an invention is believed useful. Applicant should in the specification:

1. include a <u>clear</u> description of the invention;
2. describe the problem being solved;
3. identify the best mode of the invention;
4. clearly identify any practical application asserted for the invention by identifying how the claimed invention produces a "useful, concrete and tangible result" (*See State Street);*
5. as noted earlier, discuss the best known prior art that is related to the invention.

<u>Note</u>: Items 1 and 3 are requirements of 35 U.S.C. 112. These are tips for avoiding unnecessary delays in examination.

Written Description Requirement

Applicant must be able to convey with reasonable clarity to one skilled in the art that applicant had possession of the claimed invention at the time the application was filed. Possession may be evidenced by actual reduction to practice, by clear depiction in detailed drawings, or through written description describing sufficient relevant identifying characteristics. Note here that what is conventional or well known to one skilled in the art need not be disclosed in detail. This is another example of how to avoid unnecessary examination delays in both Class 705 and throughout the Office.

Computer-Related Inventions

Patent applicants can assist the Office by preparing applications that clearly set forth the following aspects of a computer-related invention:

- clearly identify what the programmed computer does when it performs the processes dictated by the software, i.e. identify the functionality of the programmed computer.
- identify how the computer is to be configured to provide that functionality, i.e. identify what elements constitute the programmed computer and identify how those elements are configured and interrelate to provide the specified functionality.
- if applicable, identify the relationship of the programmed computer to other subject matter outside the computer that constitutes the invention i.e. explain how the computer is to be integrated with other elements that are a part of the invention such as machines, devices and materials; or explain how the computer is to be used in a claimed process.
- Where software constitutes a part of the best mode of carrying out the invention, a description of such best mode is satisfied by a disclosure of the functions of the software. However charts or source code listings are not a requirement for adequately disclosing the functions of the software. (*Fonar Corp. v. General Electric Co.,* 107 F. 3d 1543, 1549, 41 USPQ 2d 1801, 1805 (Fed Cir. 1997)).

Note: Disclosure of a software program is not necessary to satisfy the best mode

requirement where the functions of the software program were readily apparent from the specification and one skilled in the art could generate the necessary software program to implement the disclosed functions.

<u>Functional Language</u>

When rendering a patentability determination, the USPTO may not disregard structure disclosed in the specification that corresponds to means (or step) plus function language. *In re Donaldson Co.*,16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994). Thus, if means (or step) plus function limitations are recited in the claims, applicant must clearly identify in the specification the corresponding structure, material, or acts for performing the function. A means (or step) plus function limitation should be interpreted in a manner consistent with the specification disclosure. If the specification defines what is meant by the limitation for the purposes of the claimed invention, the examiner should interpret the limitation as having that meaning and its equivalent. If no definition is provided, judgment will be exercised in determining the scope of the limitation. See, e.g. *B. Braun Medical, Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424, 43 USPQ2d 1896, 1900 (Fed. Cir. 1997). Thus, applicant is encouraged to include or exclude from the means (or step) plus function language what is desired. Again, phrases and terms used in the claims should be clearly supported by the specification, and with computer-related inventions, conventional programming need not be supplied - use flow diagrams.

## VI. COMPLYING WITH 35 U.S.C. 101

35 U.S.C. 101 reads*:"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."* The Supreme Court has stated that Congress intended statutory subject matter to "include anything under the sun that is made by man." *See Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980). The Supreme Court has also specifically noted exceptions to this and identified three categories of unpatentable subject matter. They are: "laws of nature,

natural phenomena, and abstract ideas." *See Diamond v. Diehr*, 450 U.S. 175, 185 (1981).

Further, the Supreme Court has held that mathematical algorithms *per se* are not patentable subject matter to the extent that they are merely abstract ideas. *See Diamond v. Diehr.* In *Diehr*, the Court explained further that certain types of mathematical subject matter, standing alone, represent nothing more than abstract ideas until reduced to some type of practical application, i.e., "a useful, concrete and tangible result." *See State Street,* 149 F.3d at 1373, 47 USPQ2d at 1601-02.

Thus, practical application is achieved when the claimed subject matter produces a useful, concrete and tangible result. This is the test for identifying statutory subject matter not only in computer-related inventions classified in Class 705, but throughout the Office. However, once identified to be statutory, inventions are still subject to the patentability requirements of 35 U.S.C 102, 103 and 112.

Note that an applicant may assert more than one practical application, but only one is necessary to satisfy the utility requirement under 35 U.S.C. 101.

Claims define non-statutory processes if they:
- Consist solely of mathematical operations without some claimed practical application;
- Simply manipulate abstract ideas without some claimed practical application e.g. the court held that a method of conducting a real estate bidding process was a mere manipulation of an abstract idea *In re Schrader*, 22 F.3d 290, 293-94, 30 USPQ2d 1455, 1458-59 (Fed. Cir. 1994). The Court also held that a method for controlling the motion of objects and machines is simply a manipulation of abstract ideas; and the steps of "locating" a medial axis and "creating" a bubble hierarchy describes nothing more than the manipulation of basic mathematical constructs. *In re Warmerdam*, 33 F.3d 1354, 1361-62, 31 USPQ2d 1754, 1760 (Fed. Cir.).

## VII. APPLICATION CONTENTS - THE CLAIMS

Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claims are not read into the claim. So be specific. Each claim limitation must be expressly, implicitly, or inherently supported in the originally filed disclosure, and each claim must include all elements which applicant has described as essential or critical.

Claim Drafting Suggestions

- Use "Jepson-type" claim construction when appropriate i.e., "the improvement comprising…"
- Limit claims to a reasonable number, drawn to a single invention
- Make sure claims have proper antecedence in the specification
- Start with broad claims and then narrow them
  (Festo considerations)
- Range within a range normally raises 112, 2$^{nd}$ paragraph issues
- If it is desired that patentability be based on specific ranges, must have a showing of criticality
- Be aware of 101 issues:
    - data streams *per se* (not patentable *per se*)
    - non functional data (not patentable *per se*)
- Ask a colleague to review claims without reading the specification


Be careful with:
- statements of intended use
- "able" or "adapted for" clauses
- "whereby" and "wherein" clauses

These phrases may raise a question as to the limiting effect of the language in the claim i.e., the scope of the claim may be unclear. See MPEP 2173.

Treatment of Means or Step Plus Function

There are three requirements for a claim limitation to invoke 35 U.S.C. 112, ¶ 6:

    (1) Claim limitation must use the phrase "means for" or "step for;"

    (2) The "means for" or "step for" must be modified by functional language; and

    (3) The phrase "means for" or "step for" must not be modified by sufficient structure, material, or acts for achieving the specified function.

Note that the use of the phrase "step for" in a method claim raises a presumption that 35 U.S.C. 112, ¶ 6 applies, whereas, use of the word "step" by itself or the phrase "step of" does not invoke a presumption that 35 U.S.C. 112, ¶ 6 applies.

Examining Procedure under 35 U.S./C. 112, 6th Paragraph

The Federal Circuit recognized that it is important to retain the principle that claim language should be given its broadest reasonable interpretation . *In re Donaldson,* 16 F.3d 1189, 29 USPQ 2d 1845 (Fed. Cir. 1994). Thus, the application of a prior art reference to a means or step plus function limitation requires that the prior art element perform the identical function specified in the claim. However, if a prior art reference teaches identity of function to that specified in the claim, then under *Donaldson* an examiner carries the initial burden of proof for showing that the prior art structure or step is the same as or equivalent to the structure, material, or acts described in the specification which have been identified as corresponding to the claimed means or step plus function. See MPEP 2182. Additionally, means (or step) plus function limitations will be interpreted in a manner consistent with the specification. So it is important that consistency is maintained between the claims and the specification disclosure.

Making a *Prima facie* Case

If the examiner finds that a prior art element (1) performs the function specified in the claim, (2) is not excluded by any explicit definition provided in the specification for an equivalent, and (3) is an equivalent of the means-(or step-) plus-function limitation, the examiner should provide an explanation and rationale in the Office action as to why the

prior art element is an equivalent. Factors that will support a conclusion that the prior art element is an equivalent are:

(1) the prior art element performs the identical function specified in the claim in substantially the same way, and produces substantially the same results as the corresponding element disclosed in the specification (Kemco Sales, Inc. v. Control Papers Co., 54 USPQ2d 1308, 1315 (Fed. Cir. 2000); Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1267, 51 USPQ2d 1225, 1229-30 (Fed. Cir. 1999)).

(2) a person of ordinary skill in the art would have recognized the interchangeability of the element shown in the prior art for the corresponding element disclosed in the specification (Al-Site Corp. v. VSI Int'l, Inc., 174 F.3d 1308, 1316, 50 USPQ2d 1161, 1165 (Fed. Cir. 1999); Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1309, 46 USPQ2d 1752, 1757 (Fed. Cir. 1998); Lockheed Aircraft Corp. v. United States, 553 F.2d 69, 83, 193 USPQ 449, 461 (Ct. Cl. 1977)).

(3) there are insubstantial differences between the prior art element and the corresponding element disclosed in the specification (IMS Technology, Inc. v. Haas Automation, Inc., 206 F.3d 1422, 1436, 54 USPQ2d 1129, 1138 (Fed. Cir. 2000); Valmont Indus. v. Reinke Mfg. Co., 983 F.2d 1039, 1043, 25 USPQ2d 1451, 1455 (Fed. Cir. 1993)).

(4) the prior art element is a structural equivalent of the corresponding element disclosed in the specification (In re Bond, 910 F.2d 831, 833, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990)).

A showing of at least one of the above-noted factors by the examiner should be sufficient to support a conclusion that the prior art element is an equivalent. The examiner should then conclude that the claimed limitation is met by the prior art element. In addition to the conclusion that the prior art element is an equivalent, examiners should also demonstrate, where appropriate, why it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute applicant's described structure,

material, or acts for that described in the prior art reference.  See In re Brown, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).   The burden then shifts to applicant to show that the prior art element is not an equivalent of the structure, material, or acts disclosed in the application.  See In re Mulder, 716 F.2d 1542, 1549, 219 USPQ 189, 196 (Fed. Cir. 1983).

 Related Issues under 35 U.S.C. 112, First and Second Paragraphs

Invocation of 35 U.S.C. 112, sixth paragraph does not exempt applicant from compliance with 35 U.S.C. 112, first and second paragraphs. While 35 U,S.C. 112 sixth paragraph does permit a certain form of claim limitation, it does not create an exception to the description, enablement or best mode requirements of the first paragraph or the definiteness requirement of the second paragraph of 35 U.S.C. 112. *In re Knowlton*, 481 F.2d 1357, 1366, 178 USPQ 486, 493 (CCPA 1973).

## VIII. TIPS TO STREAMLINE THE PROCESS

It is important that the lines of communication between the USPTO and the applicant are open and productive. Thus, don't hesitate to contact the examiner for an interview at any time after first action. Also, with CPAs and RCEs, an interview before first action may be helpful. Contact the SPE with questions or problems. Additionally, don't hesitate to call the Technology Center Director of a particular area if questions or problems are not being resolved.