

**COMMENTS TO THE USPTO  
ON ENHANCEMENT OF QUALITY OF SOFTWARE RELATED  
PATENTS**

**Submitted by: The National Association of Patent Practitioners**

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**RE: Docket No. PTO-P-2012**

DESCRIPTION OF COMMENTING PARTY

The National Association of Patent Practitioners (NAPP) is a nonprofit trade association for patent agents and patent attorneys. NAPP has approximately 400 members in the US and various foreign countries. The practices of the practitioner members are focused primarily on patent prosecution namely practice before the USPTO. As part of NAPP's mission, we aim to create a collective nationwide voice to address issues relating to patent-prosecution practice. Additional information about NAPP can be found at [www.napp.org](http://www.napp.org).

The following comments are submitted in an effort to assist the United States Patent & Trademark Office (USPTO) in response to request for comments, "Enhancement of Quality of Software-Related Patents," published in the Federal Register at 78 Fed. Reg. 16474 (March 15, 2013).

NAPP welcomes this opportunity to assist and hopes that the USPTO will seriously consider the comments of NAPP. NAPP is available to answer

questions, comment further (formally or informally), or assist any other way considered useful. Please contact NAPP care of its government affairs chair, Priya Sinha Cloutier, [CloutierPS@LanePowell.com](mailto:CloutierPS@LanePowell.com).

## INTRODUCTION

Because of the inherent nature of computer-type inventions, it may be especially difficult to describe the computer or its program structurally without detailing the specific program. Today, with cloud computing coexisting with mobile computing, various hardware, software, and media rarely reside in a single 'black box.'

Data may be retrieved from multiple sources, have error correction applied, have redundancy added, be broken up into packets, be encrypted, be transmitted through an optical fiber, go through multiple repeaters, go through a VPN, go through a firewall, be reassembled, be unencrypted, be queued on a local Internet server, send an acknowledgement through a mail server, trigger a message through a telephone network to a smartphone, be transmitted through an Ethernet cable, be broadcast wirelessly through the air as well as through hardware equipment, interact with a human user, get partially processed locally, be distributed among different cores on a microprocessor on one chip, have caches shared among cores, be flushed from a pipeline or refreshed, be passed to a graphics processor on a separate chip, and so forth. Computers can perform tasks concurrently, sequentially, repeatedly, or conditionally. The boundaries between hardware and software are increasingly becoming blurred. Consequently, it is difficult to predict acceptable claim format or specification description.

## NAPP COMMENTS

**General Comment:** To improve software patent application quality, we suggest that the USPTO publish guidelines for standard claims (or specification style and content) that are generally acceptable to the USPTO. The USPTO should make clear to its examiners and to applicants in published guidelines that applicants can vary from the standards, such as by establishing specific definitions in their specifications to support other acceptable claim language.

There is precedent for this type of guidance on the Trademark side of the USPTO; the USPTO recently published acceptable Internet webpages as specimens of use for displays associated with the goods. See Exam Guide 1-13 (Webpage Specimens as Displays Associated with the Goods) (December 2012) [Word]. There is also precedent for this type of guidance in the United States Federal Courts. See Civil Form 18. (Complaint for Patent Infringement: <http://www.uscourts.gov/RulesAndPolicies/FederalRulemaking/RulesAndForms/IllustrativeCivilRulesForms.aspx>).

**The following paragraphs repeat the USPTO's requests. NAPP responsive comments are in italics.**

Regarding 35 USC 112(2) (or 112(b) after the AIA) and the “definiteness” requirement established thereby, the USPTO has asked for comment on the following questions regarding use of “functional” language in software-related and computer-related claims.

1. When means-plus-function style claiming under 35 U.S.C. 112(f) is used in software-related claims, indefinite claims can be divided into two distinct groups: claims where the specification discloses no corresponding structure; and claims where the specification discloses structure but that structure is inadequate. In order to specify adequate structure and comply with 35 U.S.C. 112(b), an algorithm must be expressed in sufficient detail to provide means to accomplish the claimed function.

In general, are the requirements of 35 U.S.C. 112(b) for providing corresponding structure to perform the claimed function typically being complied with by applicants and are such requirements being applied properly during examination?

*NAPP comment: Whether the requirements of 112(b) are or are not “typically being complied with” is not answerable by applicants, nor by companies accused of infringement – USPTO would be in a much better position to judge. USPTO should establish a study (constructed to keep Office judgments about specific patents secret) to determine this question. Moreover, without clear guidelines from the USPTO on what would be acceptable disclosure of structure, it is not possible for anyone to judge whether the requirements are typically complied with.*

In particular:

(a) Do supporting disclosures adequately define any structure corresponding to the claimed function?

*NAPP comment:* Again, “adequacy” can only be compared to clear published standards or guidelines and varies from application to application.

(b) If some structure is provided, what should constitute sufficient ‘structural’ support?

*NAPP comment:* As above, “sufficiency” should be judged by comparing to clear standards or guidelines. At minimum, there should be objective guidelines (with examples) published by the USPTO.

(c) What level of detail of algorithm should be required to meet the sufficient structure requirement?

*NAPP comment:* The CAFC has spoken on this. In general, the Office should follow the court’s conclusion that the specification can express an algorithm “in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure.”

In the recent Ergo<sup>1</sup> case, Ergo argued that the corresponding structure for a “control means” was the recitation of “control device” throughout the specification. Ergo contended that general disclosure of a “control device” was sufficient because a control device is a generic structure known to those skilled in the art. Such a control device, according to Ergo, is synonymous with a general-purpose computer, even though a computer was not recited in the specification. Ergo argued that disclosing an algorithm was not required because a general-purpose computer can perform the function. Ergo contended that the specification described additional structure of the control device, in particular that it had processing capabilities, could generate control commands, and had memory. Ergo also contended that the specification’s teaching that the control device had a “programming means” constituted “the structure with which control and monitoring functions can be performed.”

The CAFC disagreed: “None of these disclosures, however, are structure for the function of ‘controlling the adjusting means.’ The recitation of ‘control device’ provides no more structure than the term ‘control means’ itself, rather it merely

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<sup>1</sup> Ergo Licensing, LLC v. Carefusion 303, Inc., 673 F.3d 1361 (Fed. Cir. 2012).

replaces the word 'means' with the generic term 'device'. The specification discloses that the control device has memory, but memory is not structure capable of performing the function of 'controlling the adjusting means'. While in some circumstances generic structural disclosures may be sufficient, that is not the case here."

This was expanded upon in the Noah Systems<sup>2</sup> case. "In cases such as this one, involving a special purpose computer-implemented means-plus-function limitation, this court has consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor." *Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008).<sup>3</sup> We require that the specification "disclose an algorithm for performing the claimed function." *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1367 (Fed. Cir. 2008); *Aristocrat*, 521 F.3d at 1333 ("Thus, in a means-plus-function claim 'in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.' " (quoting *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999))). **The specification can express the algorithm "in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure."** *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008) (internal citation omitted). Simply disclosing "software", however, "without providing some detail about the means to accomplish the function[,] is not enough." *Id.* at 1340–41 (citation omitted).

Ultimately, on the basis of the special master's recommendation, the district court concluded that Noah Systems' patent specification did not disclose an algorithm for performing the function associated with the "access means" limitation. This determination rendered all of the asserted claims indefinite, as lacking the required corresponding structure. Accordingly, the court entered summary judgment of invalidity in favor of Intuit.

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<sup>2</sup> *Noah Systems v. Intuit Inc.*, 675 F.3d 1302 (Fed. Cir. 2012).

<sup>3</sup> Because the *Noah Systems* patent requires a special-purpose computer specifically programmed to carry out the recited functions associated with the "access means" limitation, this case is controlled by *Aristocrat* and its progeny and not *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303 (Fed. Cir. 2011), which is applicable only in situations involving functions that can be accomplished by "any general purpose computer without special programming." *In re Katz*, 639 F.3d at 1316.

2. In software-related claims that do not invoke 35 U.S.C. 112(f) but do recite functional language, what would constitute sufficient definiteness under 35 U.S.C. 112(b) in order for the claim boundaries to be clear? In particular:

(a) Is it necessary for the claim element to also recite structure sufficiently specific for performing the function?

*NAPP comment: See comment to Question 3.*

(b) If not, what structural disclosure is necessary in the specification to clearly link that structure to the recited function and to ensure that the bounds of the invention are sufficiently demarcated?

*NAPP comment: See comment to Question 3.*

3. Should claims that recite a computer for performing certain functions or configured to perform certain functions be treated as invoking 35 U.S.C. 112(f) although the elements are not set forth in conventional means-plus-function format?

*NAPP comment: Absolutely not, in most cases. A “computer” programmed in a novel way is not a “function”; it is a device, and it ought to be possible to claim it as a device and not with functional language. The mere use of the word “computer” does not signal that the applicant wishes to invoke Section 112(f).*

*There is some case law holding that Section 112(f) can be invoked without using words “means for” or similar. That case law has caused a great deal of litigation and uncertainty in patent scope. The USPTO can help the situation immensely by:*

*(a) establishing guidelines for applicants as to how to invoke 112(f) and how to avoid it; and*

*(b) instructing examiners to make objections, inquiries, or even rejections to force applicants to clarify whether they intend to use 112(f) style if it is in doubt.*

*To help examiners and the public, the USPTO should give clear guidelines, in the MPEP or other published document, with examples and analysis as appropriate. The USPTO could, for example, allow applicants to use the phrase “a*

*computer for <doing X>” if they wish to invoke 112(f) and some other reference to a computer if they do not, such as “a computer structured and programmed to <do X>” if they do not.*

*To increase clarity, the USPTO guidelines should specify alternatives, one or more for cases where 112(f) is intended and one or more for cases where it is not. When the public and the courts see a claim, they ought to be able to know, for sure and without multi-million-dollar-litigation, whether 112(f) was intended.*

*It should be entirely up to applicants to control whether 112(f) is being invoked. In cases where there is doubt as to an applicant’s intent, the USPTO should make it clear whether a patent claim limitation reciting a computer to perform certain recited functions is or is not being treated as a means-plus-function limitation, preferably by the examiner in the “Reasons for Allowance”, or in a decision by the board of appeals, with an explanation of why, perhaps using form paragraphs.*