

EXHIBIT N

Manual of PATENT EXAMINING PROCEDURE

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U.S. DEPARTMENT OF COMMERCE
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MANUAL OF PATENT EXAMINING PROCEDURE
Sixth Edition

Instructions Regarding Revision No. 3

This revision consists of replacement pages for the **Title Page, the Forward, and the Introduction** in the front of the Manual; **entire Chapters 100 through 1000, 1200 through 1400, 1600 through 1900, 2100, 2200, 2400 and 2500, Appendices I - Partial List of Trademarks, II- List of Decisions Cited, L- Patent Laws, and R - Patent Rules, and entire Index.**

Pages which have been printed in this revision are labeled as "**Rev. 3**" on the bottom. Sections of the Manual which have been changed by this revision are indicated by "**[R-3]**" after the section title.

Additions to the text of the Manual are indicated by arrows (><) inserted in the text. Deletions are indicated by a single asterisk (*) where a single word was deleted and by two asterisks (**) where more than one word was deleted. The use of three or five asterisks in the body of the laws and rules indicates a portion of the law or rule which was not reproduced.

Magdalen Y. C. Greenlief, Editor
Manual of Patent Examining Procedure

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In order to determine whether the claim is limited to a practical application of an abstract idea, Office personnel must analyze the claim as a whole, in light of the specification, to understand what subject matter is being manipulated and how it is being manipulated. During this procedure, Office personnel must evaluate any statements of intended use or field of use, any data gathering step and any post-manipulation activity. See section IV.B.2(d) above for how to treat various types of claim language. Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101. Further, when such a rejection is made, Office personnel must expressly state how the language of the claims has been interpreted to support the rejection.

V. Evaluate Application for Compliance with 35 U.S.C. 112

Office personnel should begin their evaluation of an application's compliance with 35 U.S.C. 112 by considering the requirements of 35 U.S.C. 112, second paragraph. The second paragraph contains two separate and distinct requirements: (1) that the claim(s) set forth the subject matter applicants regard as the invention, and (2) that the claim(s) particularly point out and distinctly claim the invention. An application will be deficient under 35 U.S.C. 112, second paragraph when (1) evidence including admissions, other than in the application as filed, shows applicant has stated that he or she regards the invention to be different from what is claimed, or when (2) the scope of the claims is unclear.

After evaluation of the application for compliance with 35 U.S.C. 112, second paragraph, Office personnel should then evaluate the application for compliance with the requirements of 35 U.S.C. 112, first paragraph. The first paragraph contains three separate and distinct requirements: (1) adequate written description, (2) enablement, and (3) best mode. An application will be deficient under 35 U.S.C. 112, first paragraph when the written description is not adequate to identify what the applicant has invented, or when the disclosure does not enable one skilled in the art to make and use the invention as claimed without undue experimentation. Deficiencies related to disclosure of the best mode for carrying out the claimed invention are not usually encountered during examination of an application because evidence to support such a deficiency is seldom in the record.

If deficiencies are discovered with respect to 35 U.S.C. 112, Office personnel must be careful to apply the appropriate paragraph of 35 U.S.C. 112.

A. Determine Whether the Claimed Invention Complies with 35 U.S.C. 112, Second Paragraph Requirements

1. Claims Setting Forth the Subject Matter Applicant Regards as Invention

Applicant's specification must conclude with claim(s) that set forth the subject matter which the applicant regards as the invention. The invention set forth in the claims is presumed to be that which applicant regards as the invention, unless applicant considers the invention to be something different from what has been claimed as shown by evidence, including admissions, outside the application as filed. An applicant may change what he or she regards as the invention during the prosecution of the application.

2. Claims Particularly Pointing Out and Distinctly Claiming the Invention

Office personnel shall determine whether the claims set out and circumscribe the invention with a reasonable degree of precision and particularity. In this regard, the definiteness of the language must be analyzed, not in a vacuum, but always in light of the teachings of the disclosure as it would be interpreted by one of ordinary skill in the art. Applicant's claims, interpreted in light of the disclosure, must reasonably apprise a person of ordinary skill in the art of the invention. However, the applicant need not explicitly recite in the claims every feature of the invention. For example, if an applicant indicates that the invention is a particular computer, the claims do not have to recite every element or feature of the computer. In fact, it is preferable for claims to be drafted in a form that emphasizes what the applicant has invented (i.e., what is new rather than old).

A means plus function limitation is distinctly claimed if the description makes it clear that the means corresponds to well-defined structure of a computer or computer component implemented in either hardware or software and its associated hardware platform. Such means may be defined as:

- a programmed computer with a particular functionality implemented in hardware or hardware and software;

- a logic circuit or other component of a programmed computer that performs a series of specifically identified operations dictated by a computer program; or
- a computer memory encoded with executable instructions representing a computer program that can cause a computer to function in a particular fashion.

The scope of a "means" limitation is defined as the corresponding structure or material (e.g., a specific logic circuit) set forth in the written description and equivalents. See MPEP § 2181 through § 2186. Thus, a claim using means plus function limitations without corresponding disclosure of specific structures or materials that are not well-known fails to particularly point out and distinctly claim the invention. For example, if the applicant discloses only the functions to be performed and provides no express, implied or inherent disclosure of hardware or a combination of hardware and software that performs the functions, the application has not disclosed any "structure" which corresponds to the claimed means. Office personnel should reject such claims under 35 U.S.C. 112, second paragraph. The rejection shifts the burden to the applicant to describe at least one specific structure or material that corresponds to the claimed means in question, and to identify the precise location or locations in the specification where a description of at least one embodiment of that claimed means can be found. In contrast, if the corresponding structure is disclosed to be a memory or logic circuit that has been configured in some manner to perform that function (e.g., using a defined computer program), the application has disclosed "structure" which corresponds to the claimed means.

When a claim or part of a claim is defined in computer program code, whether in source or object code format, a person of skill in the art must be able to ascertain the metes and bounds of the claimed invention. In certain circumstances, as where self-documenting programming code is employed, use of programming language in a claim would be permissible because such program source code presents "sufficiently high-level language and descriptive identifiers" to make it universally understood to others in the art without the programmer having to insert any comments. See Computer Dictionary 353 (Microsoft Press, 2ed. 1994) for a definition of "self-documenting code." Applicants should be encouraged to functionally define the steps the computer

will perform rather than simply reciting source or object code instructions.

B. Determine Whether the Claimed Invention Complies with 35 U.S.C. 112, First Paragraph Requirements

1. Adequate Written Description

The satisfaction of the enablement requirement does not satisfy the written description requirement. See *In re Barker*, 559 F.2d 588, 591, 194 USPQ 470, 472 (CCPA 1977), *cert. denied*, *Barker v. Parker*, 434 U.S. 1064 (1978) (a specification may be sufficient to enable one skilled in the art to make and use the invention, but still fail to comply with the written description requirement). See also *In re DiLeone*, 436 F.2d 1404, 1405, 168 USPQ 592, 593 (CCPA 1971). For the written description requirement, an applicant's specification must reasonably convey to those skilled in the art that the applicant was in possession of the claimed invention as of the date of invention. The claimed invention subject matter need not be described literally, i.e., using the same terms, in order for the disclosure to satisfy the description requirement.

2. Enabling Disclosure

An applicant's specification must enable a person skilled in the art to make and use the claimed invention without undue experimentation. The fact that experimentation is complex, however, will not make it undue if a person of skill in the art typically engages in such complex experimentation. For a computer-related invention, the disclosure must enable a skilled artisan to configure the computer to possess the requisite functionality, and, where applicable, interrelate the computer with other elements to yield the claimed invention, without the exercise of undue experimentation. The specification should disclose how to configure a computer to possess the requisite functionality or how to integrate the programmed computer with other elements of the invention, unless a skilled artisan would know how to do so without such disclosure. See, e.g., *Northern Telecom v. Datapoint Corp.*, 908 F.2d 931, 941-43, 15 USPQ2d 1321, 1328-30 (Fed. Cir.), *cert. denied*, *Datapoint Corp. v. Northern Telecom*, 498 U.S. 920 (1990) (judgment of invalidity reversed for clear error where expert testimony on both sides showed that a programmer of reasonable skill could write a satisfactory program with ordinary effort based on the disclosure); *DeGeorge v. Bernier*,

composition, applicant presented claims to a >reaction product of a< composition comprising the subcombination A+B+C, whereas the original claims and description of the invention were directed to a composition comprising the combination A+B+C+D+E. The court found no significant support for the argument that ingredients D+E were not essential to the claimed >reaction product< and concluded that claims directed to the >reaction product of a< subcombination A+B+C were not described (35 U.S.C. 112, first paragraph) in the application as filed.

2181 Identifying a 35 U.S.C. 112, Sixth Paragraph Limitation [R-3]

The purpose of this section is to set forth guidelines for the examination of 35 U.S.C. 112, sixth paragraph "means or step plus function" limitations in a claim. The Court of Appeals for the Federal Circuit, in its *en banc* decision *In re Donaldson Co.*, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994), decided that a "means-or-step-plus-function" limitation should be interpreted in a manner different than patent examining practice had previously dictated. The *Donaldson* decision affects only the manner in which the scope of a "means or step plus function" limitation in accordance with 35 U.S.C. 112, sixth paragraph, is interpreted during examination. *Donaldson* does not directly affect the manner in which any other section of the patent statutes is interpreted or applied.

When making a determination of patentability under 35 U.S.C. 102 or 103, past practice was to interpret a "means or step plus function" limitation by giving it the "broadest reasonable interpretation." Under the PTO's long-standing practice this meant interpreting such a limitation as reading on any prior art means or step which performed the function specified in the claim without regard for whether the prior art means or step was equivalent to the corresponding structure, material or acts described in the specification. However, in *Donaldson* the Federal Circuit stated that:

Per our holding, the "broadest reasonable interpretation" that an examiner may give means-plus-function language is that statutorily mandated in paragraph six. Accordingly, the PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination. 29 USPQ2d at 1850.

Thus, examiners must interpret a 35 U.S.C. 112, sixth paragraph "means or step plus function" limitation in a

claim as limited to the corresponding structure, materials or acts described in the specification and equivalents thereof in accordance with the following guidelines.

LANGUAGE FALLING WITHIN 35 U.S.C. 112, SIXTH PARAGRAPH

**>In determining whether to apply the statutory procedures of 35 U.S.C. 112, sixth paragraph, the examiner must determine whether the applicant intends to invoke the statutory mandates for means-plus function clauses. Although the use of the term "means," particularly "means for," generally invokes 35 U.S.C. 112, sixth paragraph, and the use of a different formulation generally does not, there is no particular language that must appear in a claim in order for it to fall within the scope of 35 U.S.C. 112, sixth paragraph. *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1584, 39 USPQ2d 1783, 1786-87 (Fed. Cir. 1996). However, it must be clear that the element in the claim is set forth, at least in part, by the function it performs as opposed to the specific structure, material, or acts that perform the function. *York Products Inc. v. Central Tractor Farm & Family Center*, 99 F.3d 1568, 1574, 40 USPQ2d 1619, 1624 (Fed. Cir. 1996) ("Without an identified function, the term 'means' in this claim cannot invoke 35 U.S.C. § 112, paragraph 6."). See also *Caterpillar Inc. v. Detroit Diesel Corp.*, 41 USPQ2d 1876, 1882 (N.D. Ind. 1996) (35 U.S.C. 112, sixth paragraph "applies to functional method claims where the element at issue sets forth a step for reaching a particular result, but not the specific technique or procedure used to achieve the result."). However, "the fact that a particular mechanism . . . is defined in functional terms is not sufficient to convert a claim element containing that term into a 'means for performing a specified function' within the meaning of section 112(6)." *Greenberg*, 91 F.3d at 1583, 39 USPQ2d at 1786 ("detent mechanism" defined in functional terms was not intended to invoke 35 U.S.C. 112, sixth paragraph). Although use of the term "means" in a clause reciting predominantly structure does not evoke 35 U.S.C. 112, sixth paragraph, *York Products*, 99 F.3d at 1574, 40 USPQ2d at 1623, "[t]he recitation of some structure in a means plus function element does not preclude applicability of section 112(6)." *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1536, 19 USPQ2d 1367, 1369 (Fed. Cir. 1991). It is necessary to decide on an element by element basis whether 35 U.S.C. 112, sixth paragraph applies. *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531, 41

USPQ2d 1001, 1006 (Fed. Cir. 1996) (term “perforation means . . . for tearing” did not invoke 35 U.S.C. 112, sixth paragraph because it recited a definite structure which performed the described tearing function, as well as the location and extent of the structure).< Limitations that fall within the scope of 35 U.S.C. 112, sixth paragraph include:

- (1) a jet driving device so constructed and located on the rotor as to drive the rotor . . . [“means” unnecessary]. The term “device” coupled with a function is a proper definition of structure in accordance with the last paragraph of 35 U.S.C. 112. The addition of the words “jet driving” to the term “device” merely renders the latter more definite and specific. *Ex parte Stanley*, 121 USPQ 621 (Bd. App. 1958);
- (2) “printing means” and “means for printing” which would have the same connotations. *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967). However, the terms “plate” and “wing,” as modifiers for the structureless term “means,” specify no function to be performed, and do not fall under the last paragraph of 35 U.S.C. 112;
- (3) force generating means adapted to provide *De Graffenreid v. U.S.*, 20 Ct. Cl. 458, 16 USPQ2d 1321 (Ct. Cl. 1990);
- (4) call cost register means, including a digital display for providing a substantially instantaneous display for *Intellicall Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 21 USPQ2d 1383 (Fed. Cir. 1992);
- (5) reducing the coefficient of friction of the resulting film [step plus function; “step” unnecessary], *In re Roberts*, 470 F.2d 1399, 176 USPQ 313 (CCPA 1973); and
- (6) raising the pH of the resultant pulp to about 5.0 to precipitate *Ex parte Zimmerley*, 153 USPQ 367 (Bd. App. 1966).

In the event that it is unclear whether the claim limitation falls within the scope of 35 U.S.C. 112, sixth paragraph, a rejection under 35 U.S.C. 112, second paragraph may be appropriate.

SINGLE MEANS CLAIMS

Donaldson does not affect the holding of *In re Hyatt*, 708 F.2d 712, 218 USPQ 195 (Fed. Cir. 1983) to the effect

that a single means claim does not comply with the enablement requirement of 35 U.S.C. 112, first paragraph. As *Donaldson* applies only to an interpretation of a limitation drafted to correspond to 35 U.S.C. 112, sixth paragraph, which by its terms is limited to “an element in a claim to a combination,” it does not affect a limitation in a claim which is not directed to a combination.

2182 Scope of the Search and Identification of the Prior Art [R-1]

>As noted in MPEP § 2181, in *In re Donaldson Co.*, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994) the Federal Circuit recognized that it is important to retain the principle that claim language should be given its broadest reasonable interpretation. This principle is important because it helps insure that the statutory presumption of validity attributed to each claim of an issued patent is warranted by the search and examination conducted by the examiner. It is also important from the standpoint that the scope of protection afforded by patents issued prior to *Donaldson* are not unnecessarily limited by the latest interpretation of this statutory provision. Finally, it is important from the standpoint of avoiding the necessity for a patent specification to become a catalogue of existing technology. A patent specification need not teach, and preferably omits, what is well known in the art. *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986).

The *Donaldson* decision thus does not substantially alter examining practice and procedure relative to the scope of the search. Both before and after *Donaldson*, 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 a 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 has been identified as corresponding to the claimed means or step plus function.

The “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