FLETCHER YODER

Keywords:	**software, functional language, means plus function, indefinite**
General:	**In a precedential decision, the B.P.A.I. interprets various software-related recitations, including "system configuration generator" and "system builder", as means-plus-function limitations and rejects the claims as indefinite for failing to provide sufficient corresponding structure—in this case, algorithms—for implementing the recited functions.**

Ex parte Rodriguez
92 U.S.P.Q.2d 1395 (B.P.A.I. 2009) (precedential)
Decided October 1, 2009

I.   Facts

Appellants, Rodriguez et al., filed a patent application relating to software for structurally variable and complex systems, and particularly claimed a first apparatus using functional language, a second apparatus in means plus function form, a method, and a computer readable medium.

For example, independent claim 1 recites "a system configuration generator configured to generate a random system configuration file," "a system builder configured to (i) build a system level netlist and (ii) generate system parameters," and "a simulation verification environment configured to verify said structurally variable and complex system." Independent claim 10 recites "means for generating a random system configuration file," "means for (i) building a system level netlist and (ii) generating system parameters," "means for verifying said structurally variable and complex system," and "means for providing automatic random verification." Independent claim 11 is a method claim reciting similar language, and independent claim 18 is a computer readable medium claim reciting similar language.

In a Final Office Action, the Examiner rejected the claims as indefinite and anticipated. Appellants subsequently appealed the Examiner's final rejection to the Board of Patent Appeals and Interferences (hereinafter "the Board"). The Board formulated new grounds of rejection based on indefiniteness and lack of enablement, and reversed the Examiner's anticipation rejection due to claim indefiniteness.

II.   Issues

A.   Are functional claims lacking structure properly construed as means plus function claims under 35 U.S.C. § 112, sixth paragraph?

B.   Are means plus function claims indefinite for lack of sufficient structure in the specification?

C.   Are software-related apparatus, method, and computer readable medium claims enabled without sufficient structure (e.g., algorithms) in the specification?

III.   Discussion

A.   Yes. The Board found that functional claims lacking structure are properly construed as means plus function claims under 35 U.S.C. § 112, sixth paragraph.

Independent claim 1 recites "a system configuration generator," "a system builder," and "a simulation verification environment" followed by "configured to" and corresponding functional language. The Board noted that the absence of "means" triggers a rebuttable presumption that § 112, sixth paragraph, does not apply. Citing *Lightning World*, *Greenberg*, and subsequent cases, the Board stated that each disputed claim term must be

analyzed to determine whether it is merely a substitute for the term "means for" and whether it has achieved recognition as a noun denoting structure. The Board reviewed general and subject matter specific dictionaries, and found no evidence that the disputed terms are recognized as nouns denoting structure. The Board also reviewed the specification, and did not find any description sufficient to define the disputed terms. As a result, the Board found that the disputed terms are simply a substitute for the term "means for," and thus are properly construed under 35 U.S.C. § 112, sixth paragraph.

B.   Yes. The Board found that means plus function claims are indefinite for lack of sufficient structure in the specification.

Section 112, sixth paragraph, indicates that a means plus function claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. As noted above, the Board found that independent claim 1 is properly construed under § 112, sixth paragraph, in addition to independent claim 10, which recites "means for" language.

Citing *Aristocrat*, the Board noted that a particular algorithm may be the structure under § 112, sixth paragraph, for a programmed computer. However, a general purpose computer alone, i.e., without particular programming, is insufficient structure to support means plus function language. The Board reviewed Appellants' Appeal Brief and application, but did not find adequate disclosure of structure, material, or acts corresponding to the functions of "generating," "building and generating," "verifying," and "providing" as recited by independent claims 1 and 10. In particular, the Board noted the absence of any particular algorithm to carry out the recited functions. The Board also noted that Appellants merely indicated that appropriate software coding can be readily prepared by skilled programmers. As a result, the Board found that Appellants failed to disclose any particular algorithm, and thus failed to disclose sufficient structure, to support the "means for" elements (i.e., claim 10) and equivalents (i.e., claim 1) as recited in the independent claims 1 and 10.

C.   No. The Board found that software-related apparatus, method, and computer readable medium claims are not enabled without sufficient structure (e.g., algorithm) in the specification.

Section 112, first paragraph, requires that the specification enable any person skilled in the art to make and use the invention. Citing *Koito* and *Wands*, the Board further noted that for a disclosure to be enabling, it cannot require undue experimentation. As set forth in *Wands*, the question of "undue experimentation" is a factual analysis, which may involve consideration of the following factors: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. Citing *In re Boller*, the Board further noted that functional claim language is permissible only if its scope is commensurate in scope with an enabling disclosure.

The Board reiterated that the terms "system configuration generator," "system builder," and the like are not terms having a recognized meaning as a noun denoting structure. Instead, the Board described these terms as mere "black boxes", which are merely circularly defined by their desired functions. The Board also reiterated that the specification lacks any particular algorithm to support the claimed functions. Considering the *Wands* factors, the Board explained that (1) the requisite experimentation would be high, (2) Appellants' guidance is minimal, (3) the specification does not

provide any working examples, (4) the nature of the invention is highly complex, (5) the state of the prior art is well developed, (6) Appellants contend that the relative skill by those in the art is high, (7) Appellants contend that the predictability of the art is above average, and (8) the breadth of the claims is very broad. The Board adopted views of factors (5), (6), and (7) most favorable to Appellants, and focused particularly on factors (3), (4), and (8). As a result, the Board found that the specification does not enable those skilled in the art to make and use the claimed invention without undue experimentation.

IV.   Conclusion

Draft claims with recognizable nouns denoting structure to avoid interpretation as pure functional language, and thus means plus function language under 35 U.S.C. § 112, sixth paragraph. Disclose sufficient structure in the specification to support any means plus function language under 35 U.S.C. § 112, sixth paragraph, and also to satisfy the enablement requirement. In software-related applications, disclose sufficient algorithms or flow charts to support apparatus, method, and computer readable medium claims.