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Functional Language in Patent Claiming: Configured to, and Operable to

Article By:

Christopher M. Hall

Functional language is often employed in claims in order to obtain a broader claim than one that recites purely structural limitations. The premise for this is that there is more than one way to perform a function. So, an apparatus or system claim could claim a first element, and a second element coupled to the first element, with the second element performing a function, configured to perform a function, operable or operative to perform a function, etc. Means plus function claims could be employed, but have fallen out of favor lately. A structural claim with functional language thus claims a structure, with the function being part of the structure. However, there are risks to using functional language in claiming. Functional language is sometimes found indefinite. Here are a couple of cases, which set relevant precedent, that have been brought to our attention.

According to an article, “Means plus function claims revisited by the Board of patent appeals and interferences” (January 22, 2010, in cooperation with Association of Corporate Counsel), “in Ex Parte Rodriguez (October 1, 2009, Appeal No. 2008-000693), the Board of Patent Appeals and Interferences (BPAI) ruled that a claim in means-plus-function format was invalid under 35 U.S.C. § 112, second paragraph, as being indefinite because structure other than a computer, i.e., an algorithm, was not provided in the specification for performing claimed functions.” Also, “The BPAI further determined that non-means-plus-function claims are invalid under § 112, first paragraph, as not being enabled if they do not particularly identify structure, i.e., an algorithm, for performing the claimed functions.”

The Rodriguez opinion discusses claim 1, an apparatus claim with several elements each “configured to” perform such functions as generate, build, and verify. Also discussed in the opinion are claim 10, an apparatus claim with several “means for” elements reciting functions such as generating, verifying, and providing, claim 11, a method claim reciting steps including functions of generating, verifying, and adjusting, and claim 18, a computer readable medium claim reciting a medium configured to perform steps of claim 11. The take away message from this case is that functional language in claims is enabled if the specification describes how to perform the claimed function(s). Particularly, an applicable algorithm should be described.

An All Things Pros article, “Ex Parte Rodriguez (precedential): 112 is the new 101” (December 14, 2009), comments on this case: “Whenever a general purpose computer is disclosed as the means for implementing a function, an algorithm to implement that function must also be disclosed. This rule

– essentially saying that an algorithm serves as the "structure" – was recently set out by the Federal Circuit in Aristocrat, although Aristocrat followed precedent set way back in 1999 by WMS Gaming."

The casual observer might be tempted to conclude, from Ex Parte Rodriguez, that claims using "configured to", means plus function, or method steps with functions such as generating, verifying or adjusting should be avoided. Such an overly cautious approach would unduly hamper claims drafting by removing valid tools from the toolkit of the patent practitioner. The more relevant conclusion to draw is that the specification must always support the claims. Ex parte Rodriguez particularly emphasizes, and reminds us, that functions (no matter how referenced in claims) should be adequately described in the specification, so that the person of skill in the art can make and use the claimed invention. A specification that fails to discuss how a function could be implemented risks a finding that claims are indefinite. This does not mean that computer code (e.g., a software listing) is required in the specification. Indeed, computer code is rarely seen in specifications. But, some discussion of an algorithm or mechanism to serve as structure should be present.

An article in the BPAI Watchdog, "Processor 'Operable' to Perform a Function Render a System Claim Indefinite" discusses Ex Parte Craig Prouse (March 19, 2009), decided by the Board of Patent Appeals and Interferences. Claim 1, which recited in part "a processing unit operable to determine a scaling value for one or more LED signal values in the plurality of LED signal values, wherein the scaling value scales the one or more LED signal values based upon a percentage of a particular LED brightness", was found by the Board to be indefinite under the second paragraph of 35 USC §112. The article quotes the Board as stating that the processing unit "is merely capable of performing the recited or desired function of determining a scaling value. In other words, there is no present tense, positively recited determination of a scaling value in claim 1. Thus, since the scaling values are not actually determined, they cannot be used to scale the LED values as recited in the claim." Based on this finding, the Board declared the entire subject matter of claim 1 and dependent claims 5-8 indefinite.

The casual observer might be tempted to conclude, from Ex Parte Craig Prouse, that claims using "operable to" should be avoided. This raises the question of whether a similar interpretation of wherein clauses relative to other types of functional language could lead to the same result, namely findings of indefiniteness in claims. It further raises the question of whether the Board misinterprets or misapplies the very nature of a wherein clause. The Board declines to specify how the claim could have been written in order to be definite, and indeed, this is not the job of the Board to do. Perhaps the danger lies in mixing wherein clauses and functional language reciting the infinitive "to". Might the claim have been found definite if it followed the pattern of reciting a processing unit operable to [perform a function], [the function] including [one or more actions], without mention of the word "wherein"? A casual search through issued patents shows a very large number of patents with the phrase "operable to" and the word "wherein" together in the same claim. So, does Ex Parte Craig Prouse indict the use of "operable to" in claims? Or the use of "operable to" combined with "wherein" in claims? Would the use of the phrase "operative to" in a claim meet the same fate? This is a puzzling ruling.

Functional language has always been useful in claiming. Often, when a claim reciting purely structure is rejected as being shown in the structure in a cited reference, it is useful to amend the claim to recite some function that the claimed structure performs and which is not shown in the cited reference. We continue to write claims applying functional language, where applicable. But, it is well to be aware of the pitfalls. This is all part of the art of patenting.

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