
Marcus Simon
Dorsey & Whitney LLP

March 23, 2014
at
Reinhold Cohn & Partners
Topics for Discussion

• Why claim an apparatus functionally?
• How to claim an apparatus functionally?
• Some relevant and confusing case law
• Risks of functional claim language
• Breadth of terms in the courts and at the USPTO
• Practice suggestions

Ask questions as we go....

Disclaimer: I’m not a biotech patent attorney so this presentation is oriented toward the mechanical, materials, electrical, and software art areas
Why claim an apparatus functionally?

- Apparatus can be claimed generically to cover all disclosed embodiments in specification.
- Claims potentially cover infringing apparatuses that are implemented differently, but function in the same manner.
How to claim an apparatus functionally?

- “Configured to,” “programmed to,” “operable to,” “adapted to” claim limitations
Case Law is Muddled

- **Claim language at issue:**
  - “**Configured to** support an earthen ramp at a level even with the drive over surface”
  - “frame member [] **configured to** support an end of an earthen ramp constructed against the frame member”

- **Rader, concurring:** “[A] system claim generally covers what the system is, not what the system does. (citations omitted). Thus it is usually improper to construe non-functional claim terms in system claims in a way that makes infringement or validity turn on their function.” *Superior Industries, Inc. v. Masaba, Inc.*, No. 2013-1302 (Fed. Cir. Jan. 16, 2014)(nonprecedential opinion).
Case Law Continued

- Functional claim language at the precise point of novelty may render a patent invalid as indefinite. See *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1, 12-13 (1946).
  - “means associated with said pressure responsive device for tuning said receiving means to the frequency of echoes…” were the limitations at issue
  - means-plus-function, § 112, ¶6 enacted in response to this decision
Case Law Continued

- “[D]efin[ing] something . . . by what it does rather than what it is . . . . In our view, there is nothing intrinsically wrong with the use of such a technique in drafting patent claims.” In re Swinehart, 439 F.2d 210, 212 (CCPA 1971).

- “Claims using relative terms such as . . . ‘adapted to’ are insolubly ambiguous only if they provide no guidance to those skilled in the art as to the scope of that requirement.” Power-one, Inc., v. Artesyn Technologies, Inc., 599 F.3d 1343, 1348 (Fed. Cir. 2010) (citing Datamize LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347 (Fed. Cir. 2005).
Case Law Continued

• “A patent applicant is free to recite features of an apparatus either structurally or functionally. (citation omitted). Yet choosing to define an element functionally, i.e., by what it does carries with it a risk.”

_In re Schreiber_, 128 F.3d 1473, 1478 (Fed. Cir. 1997)

  – Claim: A dispensing top for passing only several kernels of a popped popcorn at a time from an open-ended container filled with popped popcorn, having a generally conical shape and an opening at each end, the opening at the reduced end allows several kernels of popped popcorn to pass through at the same time ….
Risks of Functional Claim Language in Apparatus Claims

1. Indefiniteness
2. Lack of Enablement/Insufficient Written Description
3. Functional limitations may be construed as means-plus-function clause
4. Increase body of prior art that can be used against claims
1. **Indefiniteness**: “[T]he language used is not precise and definite enough to provide a clear-cut indication of the scope of the subject matter embraced by the claim.” *Swinehart*, 439 F.2d at 213.
2. **Lack of Enablement/Insufficient Written Description:**

   - “[T]he language is so broad that it causes the claim to have a potential scope of protection beyond that which is justified by the specification disclosure.” *Swinehart*, 439 F.2d at 213.

   - “The specification provides only a single way of creating a seamless DWT, which is by maintaining updated sums of DWT coefficients. There is no evidence that the specification contemplates a more generic way of creating a seamless array of DWT coefficients.” *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1344 (Fed. Cir. 2005).

   - Old *Halliburton* Rule is not dead: “a sheet feeding area operable to feed . . .” violate the rule set forth in *Halliburton*, because the claims are not limited by the application of 35 U.S.C. § 112, sixth paragraph, and they do not contain any additional recitation of structure. As such, these claims are unpatentable under 35 U.S.C. § 112, first paragraph, for lack of an enabling disclosure commensurate with the scope of the claims. *Ex Parte Miyazaki*, 89 USPQ2d 1207 (BPAI 2008).
3. Functional limitations may be construed as means-plus-function clause

4. Increase body of prior art that can be used against claims - *In re Schreiber* – popcorn/oil can case
Unintended Means-Plus-Function Clauses

• “Module for,” “component for,” “mechanism for,” and “apparatus for” alone will probably be construed by as means-plus-function clauses
  – Problem: specification may not clearly tie structure to function so it may be invalid as indefinite if construed as a means-plus-function claim under 112, ¶6


  • “configuration generator configured to generate” and “system builder configured to build” are purely functional recitations involving no known structures, and the claims were unpatentable on two different grounds: (1) failure to disclose corresponding structure in the specification, assuming that the claims were interpreted as means-plus-format clauses; and (2) following Miyazaki, purely “functional” claiming without any recitation of specific structure. Ex Parte Rodriguez, 92 USPQ2d 1395 (BPAI 2009)

  • Note: Not much structure is needed to avoid 112, ¶6, such as “circuit for monitoring.” Circuit connotes sufficient structure. Linear Tech. Corp. v. Impala Linear Corp., 379 F.3d 1311 (Fed. Cir. 2004)
Breadth of Term in the Courts

- “[T]he phrase ‘adapted to’ is frequently used to mean ‘made to,’ ‘designed to,’ or ‘configured to,’ but it can also be used in a broader sense to mean ‘capable of’ or ‘suitable for.’” Aspex Eyewear, Inc. v. Marchon Eyewear, Inc., 672 F.3d 1335, 1349.
  - Intrinsic evidence (i.e., the specification, file history, or other claims) may provide the context for determining the interpretation of “adapted to.” See id.
  - The court noted that in light of a specified structural description of the adaptation after the phrase “adapted to,” “the phrase ‘adapted to’ is most naturally understood to mean . . . designed or configured to accomplish the specified objective, not simply that they can be made to serve that purpose.” Id.
Breadth of Term at the USPTO

• Following rejection of a claim reciting “adapted to,” at the PTAB, because a prior art reference was allegedly “capable of” performing the same function, the Federal Circuit extended the meaning of “adapted to” from Aspex Eyewear, Inc. v. Marchon Eyewear, Inc. to matters before the USPTO. See In re Giannelli, No. 2013-1167, (Fed. Cir. Jan. 13, 2014) (precedential).

• The Federal Circuit reiterated that “[a]lthough the phrase can also mean ‘capable of’ or ‘suitable for,’” the written description may narrow the meaning of “adapted to” to require that “the claimed machine is designed or constructed to be used” as a particular machine in particular way. Id. at *7.
Practice Suggestions

• Avoid the *Halliburton* prohibition on purely functional claiming
  – No “configuration generator configured to generate” or “system builder configured to build” – these recite no structure
  – Instead of reciting “a blowing system configured to blow air” how about “a fan assembly configured to blow air” or “a fan assembly including a blade assembly configured to blow air”

• Consider if structure being functionally claimed is well known or point of novelty
  – If point of novelty, consider claiming apparatus more structurally at least in some claims

• If broadly claiming certain features functionally, consider whether full scope of claim is enabled and described – *Is just a single embodiment disclosed?*
Practice Suggestions Continued

- If you broadly claim a feature functionally, then include dependent claims that recite specific exemplary structures for performing the function.
- Don’t use “made up” terms before “configured to” or “adapted to” such as “colorant selection mechanism” that can possibly invoke 112, ¶6
  - Rather, use a more well-known structural term such as “fuel injector,” “bearing assembly,” “circuit,” etc. or a functional term that has a well-known structural connotation such as “detector,” “detent element,” “connector assembly,” etc.
- “Configured to” has a more narrow, predictable usage than “adapted to” which may be broader and sweep in more prior art than desired.
Practice Suggestions Continued

• Have fall back positions built into specification if USPTO broadly interprets “configured to,” “adapted to,” or “operable to” as “capable of”
  – Ability to claim apparatus actively
  – example: claim controller as being “programmed to” or “including memory with instructions…”

• Consider adding a means-plus-function claim as a safe harbor – difficult to construe and difficult for potential infringers to figure out how a court will interpret
Functional Limitations at the USPTO

• A recent article details over 1000 PTAB cases having “configured to” claim language, explaining that in 376 of those cases, a claim with “configured to” was specifically at issue.
  – In over 90 percent of the cases surveyed, the functional claim terms following “configured to” were given their full weight.
  – In 5 percent of the cases the terms following “configured to” were given reduced weight (noting prior art must merely be “capable of” the same function).
  – The PTAB gave the terms after “configured to” little or no patentable weight in only about 4 percent of the cases.

• Surprising-mostly in the electrical/computer art units
Thanks for your attention! Questions?

Marcus S. Simon  
Partner, U.S. Patent Attorney  
Patent Group Head – SLC Office  
Dorsey & Whitney LLP  
136 South Main Street, Suite 1000  
Salt Lake City, Utah 84101  

Phone: (801) 933-7360  

simon.marcus@dorsey.com