

**Keywords:** means-plus-function, 35 U.S.C. § 112 ¶ 6, sufficient structure, indefinite

**General:** The overall means-plus-function analysis is a two-step process (1) determine whether a claim limitation is drafted in means-plus-function format (2) determine what structure if any disclosed in the specification corresponds to claim function.

*Dyfan, LLC, v. Target Corporation*

United States Court of Appeals, Federal Circuit

No. 2021-1725

Decided March 24, 2022

**I. Facts**

The Appellant, Dyfan LLC, appealed findings from a US District Court that passed judgment of invalidity of the asserted patent claims of the U.S. Patent Nos. 9,973,899 (the ‘899 patent) and 10,194,292 (the ‘292 patent). The ‘292 patent is a continuation of the ‘899 patent that shares a common specification. The patents-in-suit are titled “Location Based Triggers for Mobile Devices”, and describe improved systems for delivering messages to users mobile devices based on user location. The specification discloses a system that provides users with information tailored to particular user interests based on a user mobile device location.

The US District court held the claims of the ‘899 patent and the ‘292 patent invalid as indefinite under 35 U.S.C. § 112 ¶ 2 based on its view that certain claim limitations are in means-plus-function format under 35 U.S.C. § 112 ¶ 6, and that the specification does not disclose sufficient structure corresponding to the recited functions. On February 28<sup>th</sup>, 2019, Dyfan sued Target Corp. for infringement of multiple claims of the patents-in-suit. During claim construction proceedings, Target argued that each of the asserted claims include limitations that should be construed as means-plus-function limitations, and that the specification failed to disclose structure corresponding to the means-plus-function limitations, and thus the ‘899 patent and the ‘292 patent claims were invalid as being indefinite.

On December 19, 2019 the district court held a claim construction hearing for the patents-in-suit (the ‘899 patent and the ‘292 patent). Specifically, the district court addressed disputed claim limitations containing “code” or “application” and claim limitations containing “system.” The court analyzed a representative “code” limitation and a representative “system” limitation because the parties made the same arguments for each of the limitations. On November, 24, 2020 the district court issued a claim construction order in which it concluded that the disputed “code”/“application” limitations and the “system” limitations were invalid as indefinite.

The district court held that § 112 ¶ 6 applied to the “code”/“application” limitations based on assigning “a special purpose computer function” as the structure. The district court found no “algorithm for the claimed special-purpose computer implemented function” in the specification, so the district court concluded that the relevant claims were “indefinite for failing to disclose corresponding structure.” Additionally, the district court held that the “system” limitations were subject to § 112 ¶ 6 because they recited functional language without sufficient structure and it was unclear what components performed the specified function. Therefore, the district court concluded the relevant claims were indefinite for lack of corresponding structure. Based on the district court’s claim construction order, the parties stipulated to final judgement that asserted the patents-in-suit claims are invalid as indefinite under 35 U.S.C. § 112 ¶ 2. Dyfan appealed to the Federal Circuit.

## **II. Issue**

1. Did the district court err in finding the patent claim language invokes 35 U.S.C. § 112 ¶ 6 based on evidence intrinsic to the patent as well as its ultimate interpretations of the patent claims?

## **III. Discussion**

1. Yes. The court examined the claims using Section 112 ¶ 6 which offers patent applicants two options: (1) recite, in the claim, a function without reciting structure for performing the function and limit the claims to the structure materials, or acts, disclosed in the specification ... in which case § 112 ¶ 6 applies, or (2) recite both a function and the structure for performing that function in the claim in which case § 112 ¶ 6 is inapplicable. *See Williamson*, 792 F.3d at 1347-48. The court stated that the means-plus-function analysis is a two-step process that includes a first step of determining if a claim limitation is drafted in means-plus-function format. The means-plus-function-format requires construing the claim limitation to determine if it connotes definite structure to a person of ordinary skill in the art. If the limitation is determined to have definite structure, 112 ¶ 6 does not apply. If the claim limitation is in means-plus-function format, a second step of determining if any structure is disclosed in the specification that corresponds to the claimed function is performed.

The court stated that it is presumed that when the claim language includes the term “means” it is subject to § 112 ¶ 6, and in the absence of the term “means” it is presumed that the claim limitation is not in a means-plus-function format. The presumption is rebuttable, and can be overcome if the challenger demonstrates that the claim term fails to recite definite structures. The court has emphasized that “the essential inquiry is not merely the presence or absence of the word ‘means’, but whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *See Zeroclick, LLC vs. Apple Inc.*, 891 F.3d 1003, 1007 (Fed. Cir. 2018). Furthermore, the court noted that “Intrinsic evidence, such as the claims themselves and the prosecution history, can be informative in determining whether the disputed claim language recites sufficient definite structure to invoke § 112 ¶ 6.” *See Apple Inc. v. Motorola, Inc.* 757 F. 3d 1286, 1299 (Fed. Cir. 2014). The court also stated that in cases where it is clear that a claim term itself connotes structure to a person of ordinary skill in the art, “the presumption that § 112 ¶ 6 does not apply is determinative” in the absence of “more compelling evidence of the understanding of one of ordinary skill in the art.” *See Apex Inc. v. Raritan Comput., Inc.*, 325 F. 3d 1364, 1373 (Fed. Cir. 2003).

With this in mind, the court turned to the claim limitations at issue. The court first examined the “code”/ “application” limitations. The court found that the district court correctly “start[ed] with the presumption that § 112, ¶ 6 does not apply” because “means” does not appear in the limitation. *See Claim Construction Order*, 2020 WL 8617821, at \*6. To overcome this presumption, Target had to show, by a preponderance of evidence that persons of ordinary skill in the art would not have understood the “code”/ “application” limitations to connote structure in light of the claim as a whole. *See Apex*, 325 F. 3d at 1372-73. The court stated that the district court erred by ignoring key evidence in the form of unrebutted deposition testimony from Target’s own expert, Dr. Goldberg. Dr. Goldberg testified that in the claim term “application” is a “term of art” and that a person of ordinary skill in the art would have understood “application” to mean “a computer program intended to provide some service to the user.” *See e.g.*, J.A. 884-886 (Goldberg Dep 58:4-6, and 53:21-58:21). Additionally, Dr. Goldberg testified that persons of ordinary skill would have understood the word “code,” when coupled with language describing its operations, here to connote structure.” *See e.g.*, J.A. 882-883 (Goldberg Dep. 44:16-48.16). The court found that none of the testimony was rebutted, and that Dr. Goldberg’s unrebutted testimony demonstrates that the “code”/“application” limitations are not written in means-plus-function format because they connote sufficiently definite structure to persons of ordinary skill in the art.

Additionally, the court found the district court erred by not following the courts recent decisions in *Zeroclick*. There, the court reversed a district court decision, based on the court “not giving effect to the unrebutted presumption against the application of 112 ¶ 6.” *See Zeroclick*, 891 F.3d at 1006-07. The court ruled that the disputed limitations were references to conventional structures known to persons of ordinary skill in the pertinent art, and stated the district court failed to properly apply the presumption. The same rationale was applied in the current case, particularly in view of Dr. Goldberg’s unrebutted testimony that “code” and “application” would have connoted structure to a person of ordinary skill. The court also ruled that unlike in the mechanical arts, the specific structure of software code and applications is partly defined by its function. *See Apple*, 757 F.3d at 1298-99. For these reasons the court determined that the claim in question requires code configured to be implemented on a mobile device along with other limitations. For these reasons the court concluded that the “code”/“application” limitations are not written in means-plus-function format because they would have connoted sufficiently definite structure to persons of ordinary skill in the art.

The court then turned to the “system” limitation of claim 15 of the ‘292 patent. The court stated that they presume 112 ¶ 6 does not apply here because the disputed limitation does not recite “means.” *See Williamson*, 792 F.3d at 1348. The court stated the district court did not properly apply this presumption for the “system” limitations. As discussed above, in the absence of the word “means”, Target bore the burden of demonstrating by a preponderance of evidence that the “system” limitation clause fails to recite sufficiently definite structure. *See Apex*, 325 F.3d at 1273. The court concluded that Target did not satisfy this burden. The court stated that the claim language itself defines the “system” to include sufficient structure. The “system” limitation in the wherein clause of claim 15 of the ‘292 patent derives antecedent basis from the “system” recited in the preamble of the claim, which the claim states comprises a “building” having a “first broadcast short-range communications unit,” “a second broadcast short-range communications unit,” “code” executed by at least one “mobile device,” and “at least one server.” ‘292 patent col. 39 1. 61-col. 42 1. 18. The court then concluded that the “system” limitations are not written in means-plus-

function format because they connote sufficiently definite structure to persons of ordinary skill in the art.

#### **IV. Conclusion**

The court disagreed with the district court’s claim constructions and reversed the district court’s judgement of invalidity and remand for further proceedings. The court recognized that the asserted claims in this case are not models of clarity, by that poor claim drafting does not allow courts to bypass the presumption that a claim does not invoke § 112, ¶ 6 in the absence of the word “means” nor does it relieve the courts of their duty to evaluate whether that presumption has been overcome.

## V. Appendix

Claim 15 of the '292 patent is representative of the claims on appeal:

15. A system, comprising:

a building . . . including:

a first broadcast short-range communications unit . . .

a second broadcast short-range communications unit . . .

code configured to be executed by at least one of the plurality of mobile devices, the code, when executed, configured to:

cause display, via a display of the at least one mobile device, of an option for causing first visual information and second visual information to be output via the at least one mobile device . . .

receive an indication of a receipt, from the first broadcast short-range communications unit and via the first wireless communications protocol, of the one or more first broadcast messages including the at least one first value,

in response to the indication of the receipt, from the first broadcast short-range communications unit and via the first wireless communication protocol, of the one or more first broadcast messages including the at least one first value: cause to be sent, from the at least one mobile device and via a second wireless communications protocol and an Internet Protocol over the Internet at least in part, at least one first message . . .

*said code, when executed, further configured to:*

receive, from the at least one server and via the second wireless communications protocol, the first response message including the first location-relevant information,

in response to the receipt, from the at least one server and via the second wireless communications protocol and the Internet Protocol over the Internet at least in part, of the first response message including the first location-relevant information: cause to be output, via the at least one mobile device, the first visual information based on the first location-relevant information,

receive, from the at least one server and via the second wireless communications protocol, the second response message including the second location-relevant information,

*after the first visual information is caused to be output based on the first location-relevant information; after the at least one mobile device is moved in the building; and in response to the receipt, from the at least one server and via the second wireless communications protocol, of the second response message including the second location-relevant information: cause to be output, via the at least one mobile device, the second visual information based on the second location-relevant information;*

*wherein the system is configured such that the first visual information is automatically caused to be output without requiring communication of the at least one first message with the first broadcast short-range communications unit after the receipt*

*of the indication of the receipt of the one or more first broadcast messages, and the second visual information is automatically caused to be output without requiring communication of the at least one second message with the second broadcast short-range communications unit after the receipt of the indication of the receipt of the one or more second broadcast messages.*

*Id.* at col. 39 l. 61–col. 42 l. 18 (emphases added to representative disputed limitations).