United States Court of Appeals for the Federal Circuit

DYFAN, LLC,
Plaintiff-Appellant

v.

TARGET CORPORATION,
Defendant-Appellee

2021-1725

Appeal from the United States District Court for the Western District of Texas in No. 6:19-cv-00179-ADA, Judge Alan D. Albright.

Decided: March 24, 2022

DEREK DAHLGREN, Devlin Law Firm LLC, Wilmington, DE, argued for plaintiff-appellant. Also represented by TIMOTHY DEVLIN, NADIIA LOIZIDES.

CHRISTOPHER JOSEPH TYSON, Duane Morris LLP, Washington, DC, argued for defendant-appellee. Also represented by MATTHEW YUNGWIRTH, Atlanta, GA.

Before LOURIE, DYK, and STOLL, *Circuit Judges*.

STOLL, *Circuit Judge*.

Dyfan, LLC appeals from the United States District Court for the Western District of Texas's final judgment of invalidity of the asserted patent claims. The district court held the claims 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 § 112 ¶ 6 and that the specification does not disclose sufficient structure corresponding to the recited functions. Because we conclude that the disputed claim limitations are not drafted in means-plus-function format, we reverse the district court's judgment of invalidity and remand for further proceedings.

BACKGROUND

I

U.S. Patent Nos. 9,973,899 and 10,194,292 (the "patents-in-suit")[1] are titled "System for Location Based Triggers for Mobile Devices." The patents-in-suit describe improved systems for delivering messages to users based on their locations. For example, the shared specification discloses a communications system that provides users with information tailored to their particular interests or needs based on their presence within a specified location, such as a shopping center that has different retail stores within it. '292 patent col. 5 l. 40–col. 6 l. 11. Exemplary systems include "a building" having "broadcast short-range communications unit[s]" at fixed locations that broadcast messages to mobile devices within communications range of the respective units. *Id.* at col. 39 l. 61–col. 42 l. 18. The mobile devices execute "applications" or "code" to receive

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[1]   The '292 patent is a continuation of the '899 patent and the two share a common specification, so we generally cite only the '292 patent.

and process the broadcast messages. *Id.*; *see also* '899 patent col. 29 l. 9–col. 30 l. 63. A server communicates with the mobile devices via the internet to provide location-relevant information. '292 patent col. 39 l. 61–col. 42 l. 18.

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 . . .

at least one server that is configured to communicate with the at least one mobile device via the Internet . . .

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).

II

On February 28, 2019, Dyfan sued Target Corp. for infringement of various claims of the patents-in-suit. During claim construction proceedings, Target argued that each of the asserted claims included limitations that should be construed as means-plus-function limitations. Moreover, according to Target, the specification failed to disclose structure corresponding to these means-plus-function limitations and thus the claims were invalid as indefinite.

On December 19, 2019, the district court held a claim construction hearing. On November 24, 2020, the district court issued a claim construction order in which it concluded that the disputed (1) "code"/"application" limitations and (2) "system" limitations were invalid as indefinite.[2] *Dyfan, LLC v. Target Corp.*, No. W-19-CV-

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[2]   The district court addressed the 11 disputed limitations containing "code" or "application," ("the 'code'/'application' limitations") and 14 disputed limitations containing "system," ("the 'system' limitations") by analyzing a representative "code" limitation and a representative "system" limitation because the parties made "the same arguments" for each of the limitations in the respective groups. *Claim Construction Order*, 2020 WL 8617821, at *7–9. As the parties have not challenged this approach

00179-ADA, 2020 WL 8617821 (W.D. Tex. Nov. 24, 2020) (*Claim Construction Order*).

The district court held that § 112 ¶ 6 applied to the "code"/"application" limitations and assigned a "special-purpose computer function" as the corresponding structure. *Id.* at *6. Finding no "algorithm for the claimed special-purpose computer-implemented function" in the specification, the district court concluded that the relevant claims were "indefinite for failing to disclose corresponding structure." *Id.* at *7. The district court likewise held that the "system" limitations were subject to § 112 ¶ 6 because they recited "purely functional language without sufficient structure," and proclaimed it was "unclear which of the recited components perform the specified function." *Id.* at *7. The district court concluded that those relevant claims were "indefinite for lack of corresponding structure" as well. *Id.* at *8.

Based on the district court's claim construction order, the parties stipulated to final judgment that the asserted claims are invalid as indefinite under § 112 ¶ 2. The district court entered judgment accordingly.

Dyfan appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

I

"Regarding questions of claim construction, including whether claim language invokes 35 U.S.C. § 112 [¶] 6, the district court's determinations based on evidence intrinsic to the patent as well as its ultimate interpretations of the patent claims are legal questions that we review de novo."

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on appeal, we will do the same here. We note that our analysis with respect to the "code" limitations applies reciprocally to the "application" limitations.

Williamson v. Citrix Online, LLC, 792 F.3d 1339, 1346 (Fed. Cir. 2015). If the district court, "in construing the claims, makes underlying findings of fact based on extrinsic evidence, we review such findings of fact for clear error." *Id.*

II

Section 112 governs the specification of a patent. Section 112 ¶ 6 provides:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Section 112 ¶ 6 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 (or their equivalents), 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. *Williamson*, 792 F.3d at 1347–48 (en banc in relevant part). Limitations that invoke § 112 ¶ 6 are generally known as "means-plus-function" or "step-plus-function" limitations.

The overall means-plus-function analysis is a two-step process. *See id.* at 1349–51. The first step is to determine whether a claim limitation is drafted in means-plus-function format, which requires us to construe the limitation to determine whether it connotes sufficiently definite structure to a person of ordinary skill in the art. *Id.* at 1349. If the limitation connotes sufficiently definite structure, it is not drafted in means-plus-function format, and § 112 ¶ 6 does not apply. If, however, we conclude that the limitation

is in means-plus-function format, we perform the second step of determining "what structure, if any, disclosed in the specification corresponds to the claimed function." *Id.* at 1351.

Because invoking § 112 ¶ 6 is typically a choice left to the claim drafter, we presume at the first step of the analysis that a claim limitation is subject to § 112 ¶ 6 when the claim language includes the term "means." *Id.* at 1348 (noting that this court has "long recognized the importance of the presence or absence of the word 'means'"). The inverse is also true—we presume that a claim limitation is not drafted in means-plus-function format in the absence of the term "means" *Id.* We have made clear, however, that this presumption is rebuttable. The presumption can be overcome if a challenger demonstrates that the claim term "fails to 'recite sufficiently definite structure.'" *Id.* at 1349. We have also held that "nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word 'means,'" and can invoke § 112 ¶ 6. *Id.* at 1350. We have 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." *Id.* at 1348; *accord Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1007 (Fed. Cir. 2018). "What is important is . . . that the term, as the name for structure, has a reasonably well understood meaning in the art." *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996).

Intrinsic evidence, such as the claims themselves and the prosecution history, can be informative in determining whether the disputed claim language recites sufficiently definite structure or was intended to invoke § 112 ¶ 6. *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1299 (Fed. Cir. 2014); *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (en banc) (The prosecution history "often

inform[s] the meaning of the claim language by demonstrating how the inventor understood the invention."). In addition, because this inquiry turns on the understanding of a person of ordinary skill in the art, we often look to extrinsic evidence when determining whether a disputed limitation would have connoted structure to a person of ordinary skill. *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1320 (Fed. Cir. 2004) (noting expert witness testimony and technical dictionaries "help determine whether a claim term" would have had an "understood meaning in the art") (quoting *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002)).

Claim terms "need not connote a single, specific structure," and may instead "describe a class of structures" and still recite "sufficiently definite structure" to not invoke § 112 ¶ 6. *Apple*, 757 F.3d at 1300. In *Apple*, we explained that structure can be recited in various ways, including through the use of "a claim term with a structural definition that is either provided in the specification or generally known in the art," or a description of the claim limitation's operation and "how the function is achieved in the context of the invention." *Id.* at 1299.

In cases where it is clear that a claim term itself connotes some 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." *Apex Inc. v. Raritan Comput., Inc.*, 325 F.3d 1364, 1373 (Fed. Cir. 2003). For example, in *Apex*, the disputed claim limitations included a set of "circuit" limitations. *Id.* at 1369. Raritan relied on district court decisions addressing the definition of "circuit means"; expert testimony that the term "circuit" would have been "understood by one of ordinary skill in the art as a very broad term"; and the description of preferred embodiments in the specification to establish that "circuit" did not connote sufficiently definite structure to a person of ordinary skill. *Id.* at 1373–74. We disagreed, however, and

found that "this evidence [was] not sufficient to rebut the § 112, ¶ 6 presumption" because it "fail[ed] to show by a preponderance of the evidence that one of ordinary skill in the art believes the term does not recite sufficiently definite structure." *Id.* at 1373. Relying on a dictionary definition that defined "circuit" as a "combination of a number of electrical devices and conductors that, when interconnected to form a conducting path, fulfill some desired function," we determined that "'circuit,' by itself connotes some structure." *Id.* (quotation omitted).

We have also explained, however, that even in the absence of terms such as "means," claims are nevertheless subject to § 112 ¶ 6 when the limitation in question has "no commonly understood meaning and is not generally viewed by one skilled in the art to connote a particular structure." *Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015). For example, in *Rain Computing, Inc. v. Samsung Electronics America, Inc.*, we determined that the claim limitation "user identification module" did not "provide any indication of structure" and that the surrounding claim language failed to provide "any structure for performing the claimed function," thus invoking § 112 ¶ 6 without reciting "means." 989 F.3d 1002, 1006 (Fed. Cir. 2021).

III

With these legal principles in mind, we turn to the claim limitations at issue. The district court concluded that the disputed limitations are subject to § 112 ¶ 6 and indefinite under § 112 ¶ 2 for lack of corresponding structure in the specification. We disagree with this conclusion.

The means-plus-function analysis asks two questions. First: Is the disputed claim limitation drafted in means-plus-function format? *Williamson*, 792 F.3d at 1349. Second, if and only if the answer to the first question is "yes": What, if any, is the structure corresponding to the claimed function? *Id.* at 1351. As we explain below, only the first

question of the means-plus-function analysis is relevant in this case.[3]

<div align="center">A</div>

We begin with the "code"/"application" limitations. The representative limitation analyzed by the parties and the district court is:

> said code, when executed, further configured to . . . 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 . . . .

'292 patent col. 41 l. 47–col. 42 l. 6.

The district court correctly "start[ed] with the presumption that § 112, ¶ 6 does not apply" because "means" does not appear in the limitation. *Claim Construction Order*, 2020 WL 8617821, at *6. To overcome this presumption, Target had to show, by a preponderance of the evidence, that persons of ordinary skill in the art would not have understood the "code"/"application" limitations to

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[3]   We note that under the second step of the means-plus-function analysis, the district court looked to the specifications of the '292 and '899 patents and did not find sufficient structure corresponding to the recited functions of the disputed limitations to avoid the application of § 112 ¶ 6. Because we end the analysis at the first step, we need not reach or address errors with respect to the second step.

connote structure in light of the claim as a whole. *Apex,* 325 F.3d at 1372–73 ("From a procedural standpoint, this presumption imposes on [the party challenging the presumption] the burden of going forward with evidence to rebut . . . the presumption" by showing that a person of ordinary skill in the art "believes the term does not recite sufficiently definite structure.") (quotation omitted); *Linear Tech.*, 379 F.3d at 1319–20. The district court concluded that it did. But the district court erred by ignoring key evidence—unrebutted deposition testimony from Target's own expert, Dr. Goldberg—regarding how a person of ordinary skill would have understood the "code"/"application" limitations. *Claim Construction Order*, 2020 WL 8617821, at *8.

Dr. Goldberg testified that here, "application" is "a term of art" that a person of ordinary skill in the art would have understood as a particular structure. *See, e.g.*, J.A. 886 (Goldberg Dep. 58:4–6). More specifically, Dr. Goldberg testified that the term "application" would have been commonly understood to mean a "computer program intended to provide some service to a user," and that developers could have, at the relevant time, selected existing "off-the-shelf software" to perform specific services and functions. J.A. 884–86 (Goldberg Dep. 53:21–58:21); J.A. 924 (Goldberg Dep. 211:1–212:1).

Additionally, Dr. Goldberg testified that persons of ordinary skill would have understood that the word "code," when coupled with language describing its operation, here connotes structure. *See, e.g.*, J.A. 882–83 (Goldberg Dep. 44:16–48:16); J.A. 884–85 (Goldberg Dep. 52:25–54:18); J.A. 886 (Goldberg Dep. 59:25–62:14). Dr. Goldberg explained that a person of ordinary skill would understand that "code" is "a bunch of software instructions." J.A. 909 (Goldberg Dep. 152:10–25). Dr. Goldberg also testified that a person of ordinary skill would have known that the claimed function of displaying information could be

implemented using "off-the-shelf" code or applications. J.A. 884–85 (Goldberg Dep. 53:21–54:18).

None of this testimony is rebutted. Dr. Goldberg's testimony thus demonstrates that, contrary to the district court's unsupported assertion, the claim limitations do not recite "purely functional language." *Claim Construction Order*, 2020 WL 8617821, at *6. Instead, Dr. Goldberg's unrebutted testimony demonstrates that the "code"/"application" limitations here connote a class of structures to a person of ordinary skill. *Id.*

The district court also erred by not following our court's recent decision in *Zeroclick*. There, the district court determined that the claim limitations "program" and "user interface code" invoked § 112 ¶ 6. *Zeroclick*, 891 F.3d at 1006–07. We reversed, explaining that the district court erred by "not giving effect to the unrebutted presumption against the application of § 112, ¶ 6." *Id.* at 1008. We further explained that a person of ordinary skill in the art would have been able to "reasonably discern from the claim language" that the disputed limitations "program" and "user interface code" were references to conventional programs or code "existing in [the] prior art at the time of the invention[]" and were not used as "generic terms or black box recitations of structure or abstractions." *Id.* Because the disputed limitations were references to conventional structures known to persons of ordinary skill in the pertinent art, and because the district court failed to properly apply the presumption and "made no pertinent finding that compel[led] the conclusion" that the limitations "user interface program" or "code" were used "in common parlance as substitute for 'means,'" we rejected the district court's determination that the claims were subject to § 112 ¶ 6 and vacated judgment of invalidity. *Id.* at 1009. That same rationale applies here, particularly in view of Dr. Goldberg's unrebutted testimony that "code" and "application" would have connoted structure to a person of ordinary skill

and given the availability of off-the-shelf code to perform the recited claim functions.

Unlike in the mechanical arts, the specific structure of software code and applications is partly defined by its function. *Apple*, 757 F.3d at 1298–99. In determining whether software limitations like those at issue here recite sufficient structure, we can look beyond the initial "code" or "application" term to the functional language to see if a person of ordinary skill would have understood the claim limitation as a whole to connote sufficiently definite structure. *Zeroclick*, 891 F.3d at 1008 (concluding that the disputed terms are used "not as generic terms or black box recitations of structure or abstractions, but rather as specific references to conventional . . . code, existing in prior art at the time of the inventions."); *Linear Tech.*, 379 F.3d at 1320 ("[W]hen the structure-connoting term . . . is coupled with a description of the [term's] operations, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art, and § 112 ¶ 6 presumptively will not apply."); *Apple*, 757 F.3d at 1298–99. Dr. Goldberg explained that here, "code" and "application" (which themselves connote structure) in combination with the recitation of the code or application's operation would have connoted structure to persons of ordinary skill.

Reviewing the alleged means-plus-function limitation in full, the claim requires code configured to be implemented on a mobile device to display information via a display of the mobile device, receive information (including location-relevant information) via a wireless communications protocol, and display visual information based on the received location-relevant information after certain conditions are met. *See* J.A. 906 (Goldberg Dep. 140:23–141:13). Dr. Goldberg testified that persons of ordinary skill in the art would have known of off-the-shelf code and applications for displaying any desired information. He explained: "[I]f the developer knows what he wants to display, then there are software modules he can use to generate the display of

the content that he wants to display. . . . [I]f the developer knows exactly how they want to take information that's been received and generate a message from that, then the developer would know how to do that using a software library." J.A. 924 (Goldberg Dep. 213:4–213:25). As Dr. Goldberg further explained, wireless communication "protocol[s]" were terms of art well-understood by persons of ordinary skill, J.A. 876 (Goldberg Dep. 18:17–21:10), and conventional off-the-shelf "code" on a mobile device "would implement the [communication] protocols," J.A. 882 (Goldberg Dep. 43:10–45:9). Accordingly, because the recited functions can be performed by conventional off-the-shelf software, a person of ordinary skill in the art would have understood the alleged means-plus-function "code" limitations in the asserted claims to connote structure. *See Zeroclick*, 891 F.3d at 1008.

For all these reasons, we conclude 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.

B

We turn next to the disputed "system" limitations. Although "system" in representative claim 15 of the '292 patent also appears in the preamble, the disputed "system" limitation appears in the "wherein" clause:

15. A system, comprising:

a building . . .

a first broadcast short-range communications unit . . .

a second broadcast short-range communications unit . . .

code . . .

said code, when executed, further configured to . . .

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> . . . cause to be output, via the at least one mo-
> bile device, the first visual information based on
> the first location-relevant information. . .
>
> . . . cause to be output, via the at least one mo-
> bile device, the second visual information based on
> the second location-relevant information. . .
>
> at least one server . . .
>
> 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 in-*
> *formation 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.*

'292 patent col. 39 l. 61–col. 42 l. 18 (emphasis added to
disputed limitation).

At the outset, we presume that § 112 ¶ 6 does not apply
here because the disputed limitation does not recite
"means." *Williamson*, 792 F.3d at 1348. The district court
did not properly apply this presumption for the "system"
limitations. In the absence of the word "means," Target
bore the burden of demonstrating by a preponderance of
the evidence that the "system" limitation in the wherein
clause fails to recite sufficiently definite structure. *See*
Apex, 325 F.3d at 1373; *Linear Tech.*, 379 F.3d at 1319–20.

We conclude that Target did not satisfy this burden.
Both Target and the district court suggest that "'system'
may be a nonce word" used as a substitute for the word
"means." The district court noted that it had, in other

cases, found that "system" functioned as a "verbal construct that is not recognized as the name of structure." *Claim Construction Order*, 2020 WL 8617821, at *8 (citing *Joao Control & Monitoring Sys., LLC v. Protect Am., Inc.*, No. 1-14-cv-134-LY, 2015 WL 4937464, at *5 (W.D. Tex. Aug. 18, 2015)). We agree that, in a vacuum, the term "system" may well be a nonce term. But in this case, the claim language itself defines the "system" to include specified structure. The "system" limitation in the wherein clause derives antecedent basis from the "system" recited in the preamble, 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 l. 61–col. 42 l. 18. Each of these limitations recited in the claims are structural components of the "system."[4]

Target and the district court further assert that, even if "system" connotes some structure in the context of this claim, "the claims do not specify which of the components in the system perform [the recited] function" in the wherein clause. *Claim Construction Order*, 2020 WL 8617821, at *7. According to the district court, it is possible that "an unspecified black box component in lieu of the recited components performs the specified function." *Id.* We disagree.

As noted above, the claim states that the "system" includes "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 l. 61–col. 42 l. 6. The wherein clause at issue further

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[4]   Dr. Goldberg admitted that "system," as recited in the wherein clause, "is referring to, in total, all the components of the system already laid out" previously in the claim. J.A. 917 (Goldberg Dep. 184:14–185:21).

specifies that "the system is configured such that the first visual information is automatically caused to be output . . . and the second visual information is automatically caused to be output . . . ." *Id.* at col. 42 ll. 7–18.

The claim limitations preceding the wherein clause make clear that the "code" causes the output (or display) of visual information based on "location-relevant information." *Id.* at col. 39 l. 61–col. 42 l. 6. In particular, the claim limitations specify that "said code, when executed . . . cause[s] to be output, via the at least one mobile device, the first visual information based on the first location-relevant information" and "cause[s] to be output, via the at least one mobile device, the second visual information based on the second location-relevant information." *Id.* The message is transmitted via a wireless communications protocol different from the protocol over which the broadcast message was received. *Id.* In response to receiving the message, the server retrieves and transmits "location-relevant information" to the mobile device. *Id.* Building on the earlier limitations, the wherein clause of representative claim 15 establishes that the previously recited function—outputting visual information—performed by the "code" component of the "system" is performed automatically without the reinvolvement of the short-range communication units. *Id.* at col. 42 ll. 7–18. Although the wherein clause does not expressly refer to the previously recited "code," it references specific functions that are defined or introduced in the code limitations and thus demonstrates that it is the code that performs the function recited in the wherein clause. Furthermore, as we explained above in Section III.A, here, "code," both alone and in the context of the recited claim limitation, connotes sufficiently definite structure to a person of ordinary skill in the art.

For the reasons above, we conclude 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.

* * *

We recognize that the asserted claims are not models
of clarity, but 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
courts of their duty to evaluate whether that presumption
has been overcome.

CONCLUSION

We have considered the parties' remaining arguments
and find them unpersuasive. For the foregoing reasons, we
disagree with the district court's claim constructions and
therefore reverse the district court's judgment of invalidity
and remand for further proceedings.

REVERSED AND REMANDED

COSTS

No costs.