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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* ANURAG GOEL and  
SUNIT SAXENA

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Appeal 2019-003698  
Application 14/795,739  
Technology Center 2400

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Before ALLEN R. MacDONALD, CAROLYN D. THOMAS, and  
MICHAEL J. STRAUSS, *Administrative Patent Judges*.

STRAUSS, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

Appellant<sup>2</sup> appeals under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1–12. Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

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<sup>1</sup> We refer to the Specification, filed July 9, 2015 (“Spec.”); Final Office Action, mailed November 3, 2017 (“Final Act.”); Appeal Brief, filed December 3, 2018 (“Appeal Br.”); Examiner’s Answer, mailed February 7, 2019 (“Ans.”); and the Reply Brief, filed April 8, 2019 (“Reply Br.”).

<sup>2</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Altierre Corporation. Appeal Br. 3.

### CLAIMED SUBJECT MATTER

According to Appellant “[t]he disclosure relates generally to range configurable beacons and in particular to a system that uses range configurable beacons to choose whether to broadcast information and what information to broadcast in their vicinity.” Spec. 1, ll. 9–11. Independent claim 1, reproduced below with a disputed limitation emphasized in *italics*, is representative of the claimed subject matter:

1. An apparatus, comprising:
  - a plurality of beacons situated in an area, wherein each beacon is situated in a region within the area;  
*a beacon manager, coupled to each of the plurality of beacons, that programmatically determines a configuration for each of the plurality of beacons based on the region in which the plurality of beacons are situated,* wherein the configuration for each beacon includes a range of the beacon selected from a first range and a second range; and
  - each beacon receives the configuration from the beacon manager for the beacon so that each beacon has a range configured for the region within the area in which the beacon is situated.

### REFERENCES

The Examiner cites the following prior art:

Name	Reference	Date
Schuster	US 2007/0198222 A1	Aug. 23, 2007
DelMain	US 2008/0255636 A1	Oct. 16, 2008
Fernandez	US 2013/0226704 A1	Aug. 29, 2013
Koskela	US 2014/0016478 A1	Jan. 16, 2014

### REJECTION

Claims 1, 4, 5, and 7 stand rejected under 35 U.S.C. § 102(a)(2) as being anticipated by Fernandez. Final Act. 3–7.

Claims 8 and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Fernandez and Schuster. Final Act. 7–11.

Claims 2 and 3 stand rejected under 35 U.S.C. § 103 as being unpatentable over Fernandez and DelMain. Final Act. 12–14.

Claims 9 and 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Fernandez, Schuster, and DelMain. Final Act. 15–17.

Claim 6 stands rejected under 35 U.S.C. § 103 as being unpatentable over Fernandez and Koskela. Final Act. 18.

Claim 12 stands rejected under 35 U.S.C. § 103 as being unpatentable over Fernandez, Schuster, and Koskela. Final Act. 18–19.

#### OPINION

We review the appealed rejections for error based upon the issues identified by Appellant, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential).

We select claim 1 as the representative claim for the rejection. Appellant does not argue separate patentability for claims 2–12. Except for our ultimate decision, we do not address the rejections of claims 2–12 further herein.

Having reviewed Appellant’s arguments regarding the 35 U.S.C. § 102(a)(2) rejection, we are not persuaded the Examiner erred. We agree with and adopt the Examiner’s findings and reasoning in the Final Office Action and the Answer as our own and add any additional findings of fact appearing below for emphasis.

### EXAMINER'S FINDINGS

The Examiner finds Fernandez's proximity event system including zone sensors distributed throughout sections of an establishment, the sensors having configurable beacons transmitting radio signals to nearby user devices, discloses the plurality of beacons recited by claim 1. Final Act. 3 (citing Fernandez Fig. 1, 2; ¶ 53). The Examiner further finds Fernandez's server including a beacon manager, sensor management module, and action management module discloses the recited beacon manger. *Id.* at 3–4 (citing Fernandez Fig. 6; ¶¶ 71, 78). According to the Examiner, Fernandez's description of user selection of beacon coverage shape and range discloses determining a configuration of the beacons based on the region in which the beacon situated, the configuration including selection of a range as recited by claim 1. *Id.* at 4 (citing Fernandez Fig. 17; ¶ 75). The Examiner finds Fernandez's description of a server process setting beacon transmission range discloses that the configuration is determined programmatically. *Id.* (citing Fernandez Fig. 6; ¶¶ 71, 78). Finally, the Examiner finds Fernandez's action management module's configuring of sensors wherein each establishment may have multiple sensors place so as to define multiple zones discloses the final clause of claim 1 reciting that each beacon receives the configuration from the beacon manager. *Id.* at 5.

### APPELLANT'S CONTENTIONS AND EXAMINER'S RESPONSE

In contending claim 1 is distinguishable over Fernandez's proximity event system, Appellant emphasizes the claim requirement that beacon configuration be determined programmatically. Directing attention to the language of claim 1, Appellant argues “[the] claim recites ‘a beacon manager, coupled to each of the plurality of beacons, that programmatically

determines a configuration for each of the plurality of beacons based on the region in which the plurality of beacons are situated . . . ’.” Appeal Br. 6.

Appellant argues

[I]n Fernandez . . . the ranges in the configuration are predetermined and are not a “configuration for each of the plurality of beacons based on the region in which the plurality of beacons are situated, wherein the configuration for each beacon includes a range of the beacon selected from a first range and a second range” and the configuration is not programmatically determined.

*Id.* at 6–7.

The Examiner responds, finding “that the configuration of ranges in the configuration of the beacons/sensors can be programmatically determined” is disclosed by Fernandez’s (i) sensor configuration parameters that are defined and/or updated by the server during sensor operations, (ii) server control of transmitter ranges and spread of signal transmitted by a beacon, (iii) dynamic sensor range control, and (iv) sensor management module control and management of sensors. Ans. 21 (citing Fernandez Fig. 6; ¶¶ 62, 65, 66, 78, 137). According to the Examiner, the argued programmatic configuration of beacon range neither requires “a dynamic process that is performed automatically whenever the beacon is relocated to a different region” nor excludes initial beacon configuring upon installation.

*Id.* at 22. In particular, the Examiner concludes:

The claims do not distinguish between the configuration of a beacon range at initial set up (i.e. predetermined) or dynamically updating the configuration range when a beacon location/region changes. In both situations, the configuration range is programmatically determined as the beacon manager receives input (location information), either manually or via software input (e.g. a received signal) and determines the configuration

range, but may also be predetermined if the locations of the beacons are fixed and manual intervention is required to update the beacon manager each time a beacon is relocated.

*Id.* at 22–23. Furthermore, according to the Examiner,

Fig. 4 and paragraphs [0066], [0069], and [0071] [of Fernandez] disclose[] [a] configuration for each of the plurality of beacons based on the region in which the plurality of beacons are situated, wherein the configuration for each beacon includes a range of the beacon selected from a first range and a second range. The argument posed here is that these ranges for the configuration of the beacons/sensors are predetermined. As argued above, the claims could be interpreted to mean that the ranges of beacons in the configuration are predetermined ranges when the entire process is not automatic and not dynamic.

*Id.* at 23 (bracketed paragraph numbers in original).

In reply, Appellant argues the cited portions of Fernandez fail to disclose the subject matter of claim 1 either expressly or inherently arranged as required by the claim:

The examiner cites to paragraphs 0062, 0065, 0066, 0078 and 0137 of Fernandez that disclose[] that the transmission range of the beacon signal may be configured by manipulating server data associated with the sensor or programming the internal memory of the sensor. [Ans. 20–21.] However, these portions of Fernandez still fail[] to disclose that any element that “**determines a configuration** for each of the plurality of beacons **based on the region in which the plurality of beacons are situated**” and “a range of the beacon selected from a first range and a second range” since Fernandez merely discloses the configuration of beacons and the range of the beacons.

Reply Br. 4.

## ANALYSIS

Determining whether claims are anticipated involves a two-step analysis. *In re Montgomery*, 677 F.3d 1375, 1379 (Fed. Cir. 2012). The first step involves construction of the claims at issue. *Id.* The second step of an anticipation analysis involves comparing the claims to prior art. *Id.* A prior art reference anticipates a claim under 35 U.S.C. § 102(b) if it discloses every claim limitation. *Id.* Furthermore, during examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Under the broadest reasonable interpretation standard, claim terms are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). During patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed. *See In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989). Construing claims broadly during prosecution is not unfair to the applicant, because the applicant has the opportunity to amend the claims to obtain more precise claim coverage. *Am. Acad. of Sci. Tech Ctr.*, 367 F.3d at 1364.

First, we construe the term “programmatically” of claim 1. Appellant broadly directs attention to Figure 3 and page 8, lines 5–24 of the Specification as providing a concise explanation of the subject matter defined in claim 1. Appeal Br. 4. Reviewing the indicated and other portions of the Specification, we do not find the term “programmatically” much less its definition. Therefore, we turn to THE MICROSOFT PRESS

COMPUTER DICTIONARY (Microsoft Press 1991), which, although not including a definition of “programmatic” defines “program” as “[a] sequence of instructions that can be executed by a computer.” *Id.* at 424. Therefore, we find “programmatically” refers to tasks performed in an automated manner (e.g., using a computer program), as opposed to tasks performed manually (e.g., by a person). Thus, a reasonable interpretation of the disputed limitation of claim 1 requires the beacon manager determine the recited configurations in an automated manner, e.g., using a computer.

Next, we construe “region” and the requirement that beacon configurations are determined “based on a region.” We do not find an explicit definition in Appellant’s Specification of the term “region.” One use of the term in the Specification is in connection with Figure 2 describing “regions of coverage” of beacons in an enclosed space (Spec. 5, ll. 17–19) and in connection with a device 208 (e.g., a smartphone entering a region with overlapping beacon ranges) (Spec. 6, l. 6). In describing beacon manager operations, the Specification refers to Figure 1 (reproduced below), as follows:

In some embodiments, the layout of the area, such as shown in Figure 1, may be known and the beacon manager 300 may configure each of the beacons 102 in the area (including the range of the beacon) based on the layout of the area. Thus, the beacon manager 300 may receive the layout of the area including a location of each beacon in the area and *a region in the area being managed by each beacon*. The beacon manager 300 may then generate a configuration for each beacon in the area (including a range configuration) based on the layout of the area and communicate the configuration to each beacon in the area. Alternatively, if a layout of the deployment site is not known, the beacons 102 may be preconfigured and labeled at the factory to be “CallOut”, “Informational” or “LocationMarking” and the deployment personnel may then

deploy the suitable pre-configured beacon at the suitable location at the deployment site.

Spec. 9, ll. 8–18 (emphasis added).

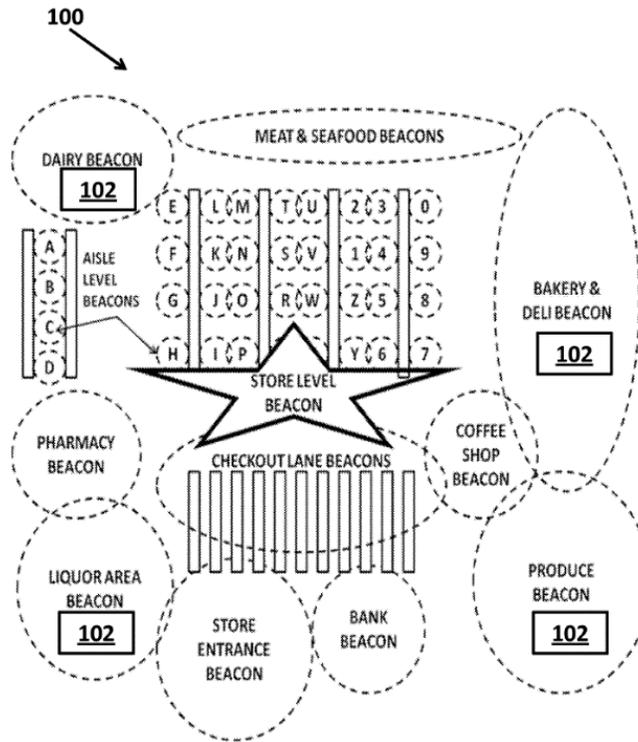


FIGURE 1

*Figure 1 illustrating an example of a structure, such as a retail store, that may utilize range configurable beacons*

Thus, because each beacon manages a region, a reasonable interpretation of a region includes at least those areas depicted within the unlabeled closed dashed lines of Figure 1 that include a beacon 102 (i.e., “a region in the area being managed by each beacon”).

In contrast to what might be considered to correspond to regions as depicted in Figure 1, claim 1 recites a single region, i.e., “each beacon is situated in a region within the area” and a configuration is determined based on “the region in which the plurality of beacons are situated.” In spite of

these seeming contradiction, for purposes of this appeal, we interpret claim 1 to require that each of the plurality of beacons is situated in *a respective* region within the area and that the beacon manager determines a configuration for each of the plurality of beacons based *on a respective one of the* regions in which *each of* the plurality of the plurality of beacons *is* situated.

Having concluded a region is the area managed by a respective beacon, we interpret what is meant by programmatically determining a configuration of each of the beacons *based on* the region in which each of the plurality of beacons is situated. Configuring a beacon includes setting a range of the beacon. Claim 1; *see also* Spec. 1, ll. 9–11 (“The disclosure relates generally to range configurable beacons . . . .”); Spec. 2, ll. 18–19 (“Beacons may be programmatically configured to have as short a range as called for by the application.”). However, the Specification fails to disclose the basis of the range setting other than, as depicted in Figure 1, the range corresponds to an intended use of the beacon, e.g., an “Informational,” “Callout,” or “LocationMarking” beacon. In the absence a description of how a beacon’s region affects its configuration, under a broad but reasonable interpretation, configuring a beacon based on a region includes setting a range of a beacon that is situated within a particular region. The requirement for programmatically determining a configuration (e.g., range) further requires that the range be set automatically, e.g., under computer control. However, in the absence of a description of what processing is performed programmatically, determining a configuration does not exclude other steps including, for example, manual input selecting a range. Thus, the disputed limitation of “programmatically determin[ing] a configuration for

each of the plurality of beacons based on the region in which the plurality of beacons are situated,” under a broad but reasonable interpretation, includes merely using a computer to set the ranges of beacons in respective locations.

Appellant’s argument that Fernandez’s ranges are predetermined (Appeal Br. 6) and, therefore, are not programmatically configured, is unpersuasive. As explained above, the recited determining step is broadly construed to include using a computer to set the range of a beacon. As found by the Examiner (Ans. 21), Fernandez’s server configures and controls beacons of sensors including run-time range adjustment to provide a dynamic range. Thus, contrary to Appellant’s argument, Fernandez is not limited to preconfigured sensor having beacon ranges that are predetermined, but also discloses dynamic beacon configuration of beacon range. Accordingly, under a broad but reasonable interpretation consistent with Appellant’s Specification, Fernandez discloses the argued limitation of programmatically determining a configuration for each of the plurality of beacons based on the region in which the plurality of beacons are situated.

For the first time in the Reply Brief Appellant specifically calls out claim language reciting “a range of the beacon [is] selected from a first range and a second range” in arguing Fernandez fails to anticipate the subject matter of claim 1. Reply Br. 4. However, Appellant fails to show good cause for this new argument, and as such, Appellant’s belated argument is deemed waived as untimely. 37 C.F.R. § 41.41(b)(2) (2016). *See In re Hyatt*, 211 F.3d 1367, 1373 (Fed. Cir. 2000) (noting that an argument not first raised in the brief to the Board is waived on appeal); *Ex parte Nakashima*, 93 USPQ2d 1834, 1837 (BPAI 2010) (explaining that arguments and evidence not timely presented in the principal Brief, will not

be considered when filed in a Reply Brief, absent a showing of good cause explaining why the argument could not have been presented in the Principal Brief); *Ex parte Borden*, 93 USPQ2d 1473, 1477 (BPAI 2010) (informative) (“Properly interpreted, the Rules do not require the Board to take up a belated argument that has not been addressed by the Examiner, absent a showing of good cause.”).

Furthermore, Appellant’s newly presented argument does not address the Examiner’s findings. Final Act. 4; Ans. 23. Such argument constitutes little more than a general denial that fails to address the Examiner’s findings and is, therefore, insufficient. *See* 37 C.F.R. § 41.37(c)(1)(iv) (“A statement [that] merely points out what a claim recites will not be considered an argument for separate patentability of the claim.”); *In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (“[W]e hold that the Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.”).

Nonetheless, Fernandez discloses selection of sensor ranges including “a maximum range allowed by the sensor” and a power-saving “limited range” (Fernandez ¶ 71) thereby disclosing a configuration for each beacon includes a range of the beacons selected from a first range (e.g., a maximum range for the sensor) and a second range (e.g., a power-saving limited range). *See also* Fernandez ¶ 74 (“various ranges . . . may be used”). Accordingly, even if timely presented, Appellant’s argument is unpersuasive of reversible Examiner error.

For the reasons discussed above, we sustain the rejection of claim 1 under 35 U.S.C. § 102(a)(2) together with the rejection of dependent claims

4, 5, and 7 that are not argued separately with particularity. For the same reasons, we sustain the rejections of dependent claims 2, 3, and 6 under 35 U.S.C. § 103 that are not argued separately with particularity. Appellant's arguments presented in connection with independent claim 8 repeat those made in connection with claim 1 that are unpersuasive for the reasons discussed above. Therefore, we likewise sustain the rejection of claim 8 under 35 U.S.C. § 103 together with the rejections of dependent claims 9–12 that are not argued separately with particularity.

#### DECISION SUMMARY

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 4, 5, 7	102(a)(2)	Fernandez	1, 4, 5, 7	
8, 11	103	Fernandez, Schuster	8, 11	
2, 3	103	Fernandez, DelMain	2, 3	
9, 10	103	Fernandez, Schuster, DelMain	9, 10	
6	103	Fernandez, Koskela	6	
12	103	Fernandez, Schuster, Koskela	12	
<b>Overall Outcome</b>			1–12	

#### TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

Appeal 2019-003698  
Application 14/795,739

AFFIRMED