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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte LUCIAN CRISTACHE

Appeal 2018-007246
Application 13/921,976
Technology Center 2600

Before JOSEPH L. DIXON, JAMES W. DEJMEK, and STEPHEN E. BELISLE, *Administrative Patent Judges*.

DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant[1] appeals under 35 U.S.C. § 134(a) from a rejection of claims 1–5 and 7–10. Claims 6 and 11–13 are canceled and claims 14–21 are withdrawn from consideration due to the constructive election by original presentation. (*See* Final Act. 2.) We have jurisdiction under 35 U.S.C. § 6(b.)

We reverse.

The claims are directed to systems and methods for object localization and path identification based on RFID tag sensing. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A radio frequency identification (RFID) system for localizing an RFID tag, the system comprising:
>
> a plurality of radio frequency identification (RFID) tag readers;
>
> a computer system communicatively coupled with the plurality of RFID tag readers over a network;
>
> a memory associated with the computer system, the memory storing a network semantic model having a plurality of endpoints and oriented links between the endpoints, wherein the endpoints are associated with physical locations in space, each of the endpoints having associated with it one or more radio frequency identification (RFID) tag readers, the network semantic model further comprising at least one semantic attribute associated with at least one of the oriented links;
>
> at least one sensor;

[1] We use the word "Appellant" to refer to "Applicant" as defined in 37 C.F.R. § 1.42(a) (2017). Appellant identifies that Lucomm Technologies, Inc. is the real party in interest. (Appeal Br. 1.)

the computer system being configured to localize the RFID tag based on data received from the RFID tag readers;

the computer system further being configured to associate an RFID tag rating with the RFID tag;

the computer system further being configured to adjust the network semantic model as a function of a measured parameter from the sensor;

the computer system further being configured to determine that the RFID tag has traversed the oriented link and further to adjust the RFID tag rating associated with the RFID tag based on the determination that the RFID tag has traversed the oriented link, the adjusted RFID tag rating further being a function of the semantic attribute associated with the oriented link.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Hines et al.	US 2001/0040512 A1	Nov. 15, 2001
Krishna et al.	US 2006/0022800 A1	Feb. 2, 2006
Kantrowitz et al.	US 2007/0236339 A1	Oct. 11, 2007
Kuhl	US 2008/0231428 A1	Sept. 25, 2008
Warner et al.	US 8,344,853 B1	Jan. 1, 2013

REJECTIONS[2]

The Examiner made the following rejections:

Claims 1, 2, 4, 5, and 8 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Krishna and Hines in view of Warner.

[2] The Examiner should consider to consider whether, in light of the recent Office Guidance, the claims pass muster under § 101 or are instead directed to tracking RFID tags along an oriented link between two endpoints, i.e., a mental process (e.g., an observation or evaluation) and, therefore, an abstract idea?

Claims 3 and 10 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Krishna and Hines in view of Warner and further in view of Kantrowitz.

Claims 7 and 9 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Krishna and Hines in view of Warner and further in view of Kuhl.

ANALYSIS

Appellant argues that the Examiner improperly and confusingly interprets the "network semantic model" to invoke § 112, sixth paragraph. (Appeal Br. 15.) Appellant contends that the written description makes it clear that semantics are language components, structures, or constructs that have particular meanings, and a network semantic model is a computer model of a physical space, in which semantics are associated with the network model of the physical space. (Appeal Br. 15.) Appellant further contends that "it is a model of endpoints and oriented links associated with physical locations, and in which 'semantic attributes' are associated with the oriented links." (Appeal Br. 15.)

The Federal Circuit has established that use of the term "means" is central to the analysis of whether a claim limitation should be interpreted in accordance with 35 U.S.C. § 112, sixth paragraph: use of the word "means" creates a rebuttable presumption that the inventor intended to invoke § 112, sixth paragraph, whereas failure to use the word "means" creates a rebuttable presumption that the inventor did not intend the claims to be governed by § 112, sixth paragraph. *Personalized Media Commc'ns., LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 703–04 (Fed. Cir. 1998). However, the presumption that a limitation lacking the word "means" is not subject to

§ 112, sixth paragraph, may be rebutted if the claim fails to recite sufficient structure. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). As the *Williamson* Court explained:

> The standard is 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. When a claim term lacks the word "means," the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to "recite sufficiently definite structure" or else recites "function without reciting sufficient structure for performing that function."

Williamson, 792 F.3d at 1349 (internal citations omitted).

As an initial matter, we note the claims (e.g., claim 1) do not recite a "means for" or a "step for" performing a function. Thus, there is a presumption that Appellant did not intend the claims to be governed by §112, sixth paragraph. *See Personalized Media*, 161 F.3d at 703–04. In addition, the Examiner has not explained that the term "network semantic model" would not be understood by the ordinarily skilled artisan to have a sufficiently definite meaning for structure. (*See* Final Act. 7–8; *see also Williamson*, 792 F.3d at 1349) Moreover, the Examiner does not confine the interpretation of a "network semantic model" to a corresponding structure in the Specification, but rather applies a "plain meaning" to the term. (Final Act. 8.)

We agree with Appellant that, in light of the Specification, one of ordinary skill in the art would understand the "network semantic model" to be "a computer model of a physical space, in which semantics are associated with the network model of the physical space." (*See* Appeal Br. 15.)

.)The Examiner further interprets the claimed "endpoint" as "physical location" based upon paragraph 32 of the Specification. (Appeal Br. 16.)

Appellant contends the Examiner provides an erroneous interpretation of the claim term "endpoint" where the Specification discloses that the endpoint is not itself a physical location, but rather is an endpoint in a computer network model of the physical space. (Appeal Br. 16 (citing ¶ 32) ("Each network model includes one or more endpoints. Each endpoint has an associated physical location or area in space and is represented in the network model as a graph node.").)

Appellant further contends that the Examiner's interpretation of the claim term "oriented link" as a "direction of travel" is unreasonably broad and is not consistent with the term as used in the description. (Appeal Br. 17.)

Appellant clarifies that an oriented link must "link" two endpoints, and must do so in an "oriented" way, with a sequence of travel between them, and the oriented link must be part of the network semantic model. (Appeal Br. 17.) We agree with Appellant.

With this proper claim interpretation, we evaluate the Examiner's obviousness rejection.

Appellant argues that the prior art does not teach the network semantic model with endpoints and oriented links as claimed. (Appeal Br. 17.)

The Examiner disagrees with Appellant and maintains that paragraphs 116 and 416 of the Krishna reference evidence the use of tag information and movement to determine direction of movement of tagged items or individuals. (Ans. 6.) Additionally, the Examiner relies upon the Hines reference for determining the location of a body/user as well as a path of travel. (Ans. 6 (citing Hines ¶ 12).) The Examiner concludes that it would have been obvious to modify the invention of the Krishna reference

and validate the data only if the tag has traveled the predetermined path based on the lay of the premises; therefore, making the overall system more accurate by rejecting invalid communication reads from the tag. (Ans. 6–7.)

Appellant argues that the prior art does not teach the network semantic model with semantic attributes as claimed. (Appeal Br. 18.)

With respect to "semantic attributes" in the "network semantic model," the Examiner maintains that the Krishna reference teaches determining a direction of travel, i.e. claimed oriented links, for each tag associated with a related interrogation response, i.e. claimed at least one semantic attribute, using a power profiling technique, and in determining the direction of movement of the tags within a site. (Ans. 7 (citing Krishna ¶¶ 280–281).) The Examiner further maintains that the Hines reference receives data and the collection of such data forms a historical record for the body unit and its wearer, and provides a record of the proximity of the individual to RFID tags and thus a finite history of the travel of the body unit and its wearer throughout the monitored premises (Ans. 8 (citing Hines ¶ 24).) The Examiner concludes that it would have been obvious to the skilled artisan at the time of invention "to modify the invention of Krishna and validate the dat[a] only if the tag has travel[ed] the predetermined path based on the lay of the premises; therefore, making the overall system more accurate by rejecting invalid communication reads from the tag." (Ans. 8.)

Appellant contends that "[t]hroughout the specification, the description consistently refers to the semantic attributes as being associated with the oriented links and a part of the network semantic model." (Appeal Br. 19 (citing ¶¶ 32, 36, 71, 72, 132–134).) Appellant further contends that "given the structure of the claim itself and the supporting description, it is

important to understand that the semantic attribute is a part of the network semantic model." (Appeal Br. 19.)

Appellant also argues that the Examiner "does not identify any teaching in the prior art for a defined 'network semantic model' stored in the memory, in which the stored network semantic model includes semantic attributes associated with oriented links as claimed." (Appeal Br. 19.) Appellant argues that neither the Krishna reference nor the Hines reference teaches semantic attributes associated with oriented links within a network model as claimed. (Appeal Br. 20–21.)

Finally, Appellant argues that the cited references do not refer to "tag ratings," as incorporated into the system as claimed, and the references do not "adjust the network semantic model as a function of a measured parameter from the sensor." (Appeal Br. 21–23.)

With respect to the claimed "RFID tag rating," the Examiner identifies paragraphs 11, 12, and 37 of the Hines reference and relies upon the storage of tag information and rejecting RFID tags which would not logically correspond to a path of travel which is in fact rating stray RFID tags. (Ans. 8–10.)

We disagree with the Examiner and find that because the system of the Hines reference is opposite to the data acquisition and monitoring in the claimed invention, the proffered rejection of the RFID tag is not similar to the claimed RFID tag rating because the RFID tag in the claimed invention is the system that is moving and the RFID tag in the Hines reference is not moving.

With respect to the claimed "adjusting," the Examiner identifies paragraphs 99 and 281 of the Krishna reference and column 5 of the Warner

reference for teaching storage of tag locations and direction of movement and updating of the stored data. (Ans. 10–11.)

The allocation of burdens requires that the USPTO produce the factual basis for its rejection of an application under 35 U.S.C. §§ 102 and 103. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016 (CCPA 1967)). The one who bears the initial burden of presenting a prima facie case of unpatentability is the Examiner. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). A prima facie case is established when the party with the burden of proof points to evidence that is sufficient, if uncontroverted, to entitle it to prevail as a matter of law. *See Saab Cars USA, Inc. v. U. S.*, 434 F.3d 1359, 1369 (Fed. Cir. 2006). In particular, regarding the Patent Examiner's burden of production:

> [A]ll that is required of the office to meet its prima facie burden of production is to set forth the statutory basis of the rejection and the reference or references relied upon in a sufficiently articulate and informative manner as to meet the notice requirement of [35 U.S.C.] § 132. As the statute itself instructs, the examiner must "notify the applicant," "stating the reasons for such rejection," "together with such information and references as may be useful in judging the propriety of continuing prosecution of his application." 35 U.S.C. § 132.

In re Jung, 637 F.3d 1356, 1363 (Fed. Cir. 2011).

The Examiner's obviousness rejection is not well supported by the express disclosure of the Krishna and Hines references. Accordingly, we agree with Appellant that the Examiner's determination that the claimed invention is obvious is not supported by a preponderance of the evidence. *See In re Caveney*, 761 F.2d 671, 674 (Fed. Cir. 1985) (Examiner's burden of proving non-patentability is by a preponderance of the evidence); *see also In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967) ("The Patent Office has

the initial duty of supplying the factual basis for its rejection. It may not, because it may doubt that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis.") We will not resort to such speculation or assumptions to cure the deficiencies in the factual basis in order to support the Examiner's obviousness rejection.

Although the Examiner provides citations and argument, we find the Examiner's reliance upon the Krishna and Hines references does not teach the use of a "network semantic model" and "semantic attributes," but merely the recordation of data. As a result, we find the Examiner's evidence lacking to support the Examiner's ultimate conclusion of obviousness. Additionally, the Examiner relies upon the Warner reference for adjusting the rating, and the Examiner does not identify how the Warner reference teaches the "network semantic model" and "semantic attributes" found lacking in the prior art combination above.

Consequently, we cannot sustain the obviousness rejection of independent claim 1 and dependent claims 2, 4, 5, and 8 based on obviousness over the combination of Krishna, Hines, and Warner. Moreover, the Examiner does not identify how the additional prior art references remedy the deficiencies noted above. Therefore, we cannot sustain the obviousness rejections of claims 3, 7, 9, and 10 for the same reasons.

CONCLUSION

The Examiner erred in rejecting claims 1–5 and 7–10 based upon obviousness.

DECISION

For the above reasons, we reverse the Examiner's obviousness rejections of claims 1–5 and 7–10.

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1, 2, 4, 5, 8	103	Krishna, Hines, Warner		1, 2, 4, 5, 8
3, 10	103	Krishna, Hines, Warner, Kantrowitz		3, 10
7, 9	103	Krishna, Hines, Warner, Kuhl		7, 9
Overall Outcome				1–5, 7–10

REVERSED