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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* EDUARD LEVIN

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Appeal 2010-004152  
Application 11/355,219  
Technology Center 2600

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Before DENISE M. POTHIER, JOHN A. EVANS, and  
JEREMY J. CURCURI, *Administrative Patent Judges*.

POTHIER, *Administrative Patent Judge*.

DECISION ON APPEAL  
STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 4, 5, 7, 8, 11, 12, and 14. Claims 2, 3, 6, 9, 10, 13, and 15-17 have been canceled. App. Br. 2.<sup>1</sup> We have jurisdiction under 35 U.S.C. § 6(b). While the Examiner states the appeal involves only claims 1, 4, 5, 7, and 11 (Ans. 2), the Examiner continues to reject claims 8, 12, and

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<sup>1</sup> Throughout this opinion, we refer to the Appeal Brief (App. Br.) filed August 26, 2009, the Examiner's Answer (Ans.) mailed September 25, 2009, and (3) the Reply Brief (Reply Br.) filed November 19, 2009.

14 (*see* Ans. 3, 7-10). We consider all rejected claims in this opinion and affirm.

### *Invention*

Appellant's invention relates to a radio frequency identification device (RFID) for recognizing objects within a zone. *See* Abstract; Spec. 1.

Illustrative claim 1 is reproduced below with a footnote added:

1. A method for identification and location of radio frequency identification RFID tags having configurations and locations, comprising:
  - providing a plurality of anten[n]as;
  - selecting a location interrogation zone within a global interrogation zone;
  - defining an initial activation signal;
  - assigning a divided portion of said initial activation signal to each one of said antennas;
  - transmitting said divided portion of said initial activation signal separately from said each one of said antennas, said divided portion of said activation signal from all antennas arriving said local interrogation zone to form a restored activation signal<sup>2</sup>;
  - determining whether said restored activation signal matches said initial activation signal from an RFID tag;
  - activating a transmitter of said RFID tag to transmit tag data therefrom to a reader when matching occurs; [and]
  - processing said tag data by said reader.

### *The Rejections*

The Examiner relies on the following as evidence of unpatentability:

Vercellotti	US 5,317,309	May 31, 1994
Shanks	US 6,784,813 B2	Aug. 31, 2004

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<sup>2</sup> The phrase, "to form a restored activation signal" is missing from Appendix H but is in the Amendment filed February 13, 2009 shown in Appendix C.

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Jusas	US 7,073,712 B2	July 11, 2006 (filed Aug. 6, 2003)
Golicz	US 7,176,799 B1	Feb. 13, 2007 (filed Dec. 6, 2004)

Claims 1, 11, 12, and 14 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Ans. 3.

Claims 1, 4, 5, 7, 8, 11, 12, and 14 are rejected under 35 U.S.C. § 103(a) as unpatentable over Shanks, Jusas, Vercellotti, and Golicz.

Ans. 3-10.

#### THE LACK OF WRITTEN DESCRIPTION REJECTION

Regarding illustrative claim 1, the Examiner finds that the recited phrases, “a global interrogation zone,” “a divided portion of said initial activation signal,” and “a restored activation signal” are not sufficiently described in Appellant’s disclosure. Ans. 3. Without providing any citations to the disclosure, Appellant argues that these terms have support in the Specification. App. Br. 4-5.

#### ISSUES

Under § 112, first paragraph, has the Examiner erred in rejecting claim 1 by finding that the disclosure fails to convey with reasonable clarity to an ordinarily skilled artisan that Appellant had possession of the claimed limitations, “a global interrogation zone,” “a divided portion of said initial activation signal,” and “a restored activation signal” as of the filing date?

## PRINCIPLES OF LAW

To satisfy the written description requirement, the disclosure must convey with reasonable clarity to ordinarily skilled artisans that Appellant had possession of the claimed invention as of the filing date. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010).

## ANALYSIS

Based on the record before us, we find no error in the Examiner's rejection of illustrative claim 1. The Examiner has notified Appellant as to that the claim limitations, "global interrogation zone," "a divided portion of the initial activation signal," and "a restored activation signal," lack written description. *See* Ans. 3. As such, the burden has shifted to Appellant to cite where adequate written description is found. *See Hyatt v. Dudas*, 492 F.3d 1365, 1371 (Fed. Cir. 2007).

These disputed phrases, "global interrogation zone," "a divided portion of the initial activation signal," and "a restored activation signal," do not appear in Appellant's disclosure. While the disclosure need not use these exact terms, the Specification must convey with reasonable clarity to an artisan that Appellant had possession of the claimed terms as of the filing date. Yet, Appellant has not provided sufficient evidence that these terms are understood by ordinarily skilled artisan, such that, while the disclosure may not explicitly use these terms, the disclosure conveys with reasonable clarity that Appellant had possession of the recited limitations.

Specifically, regarding the recited phrase, "global interrogation zone," Appellant contends that this phrase is the totality of a selected number of local interrogation zones *or* the described "total interrogation zone." App.

Br. 4. Appellant failed to assist us in this matter, providing no citations from the disclosure to support this statement. App. Br. 4; *see generally* Reply Br. Even so, we performed an independent search and agree that the phrase, “total interrogation zone,” has support in the disclosure. Spec. 5:17; 6:13; 7:7-8; 19:1-2, 7; 20:4, 6-7, 15, 20; 21:12; 24:5; Fig. 7. To the extent Appellant intended “global” to mean a “total” interrogation zone, we find that the disclosure supports such a phrase. On the other hand, a similar search of “a totality” of selected local, large, or general interrogation zone did not yield any results. *See generally* Spec. The disclosure discusses local interrogation zones (Spec. 5:19) but does not address *selected general* interrogation zones (App. Br. 4). We therefore do not find that the disclosure reasonably conveys with reasonable clarity to an artisan that Appellant had possession of a global interrogation zone that is a *selected general* interrogation zones.

Regarding the phrase, “a divided portion of said initial activation signal,” we agree with the Examiner that the Specification does not provide written description support for this phrase. Appellant asserts that “various embodiments of the present invention” describe that the initial activation signal comprises divided portions, each defining a local interrogation zone. App. Br. 5. Yet, Appellant has provided no citations to the disclosure to support this position. *Id.*; *see also generally* Reply Br. Appellant also maps three signals 14, 15, and 33 in Figures 4-6 to the divided portions. App. Br. 3 (citing Spec. 11:13–12:12). However, this cited portion only discusses signals transmitted from antennas and sending pulses from antennas. Spec. 11:13–12:12; Fig. 5. There is no discussion of dividing an activation signal. Also, an independent search of the phrase, “divided portion of said

initial activation signal” in the disclosure, did not produce any results. *See generally* Spec.

Lastly, concerning the recitation, “a restored activation signal,” we agree with the Examiner that the phrase does not have written description support. Once again, Appellant has not produced any citation in the disclosure demonstrating the Specification conveys with reasonable clarity to ordinarily skilled artisans that Appellant had possession of the “restored activation signal” as of the filing date. *See* App. Br. 5; *see also* Reply Br. Additionally, Appellant admits this recitation is a “rather indefinite term.” App. Br. 5. While we agree that the phrase, “control signal,” which Appellant asserts is the restored activation signal (*see id.*), is found in the disclosure (Spec. 6:4-5), Appellant has established insufficient evidence that this control signal is formed from the divided portion of the activation signal from all antennas arriving at the location interrogation zone as recited in claim 1.

For the foregoing reasons, Appellant has not persuaded us of error in the rejection of illustrative independent claim 1 and claims 11, 12, and 14 not separately argued with particularity.

THE OBVIOUSNESS REJECTION OVER SHANKS,  
JUSAS, VERCELLOTTI, AND GOLICZ

Appellant argues that Shanks does not teach the divided portion of the initial activation signal is assigned to separate reader antennas so that the particular tags are activated in response to the activation signal in selected local interrogation zone without causing other tags to become activated. App. Br. 5-6. Appellant also contends: (1) Vercellotti is not concerned with activation of particular tag located in a large interrogation zone and is not

suitable for interrogating tags in a number of interrogation zones (App. Br. 6); (2) neither Shanks's nor Appellant's invention is concerned with Golicz's method tag assembly method (App. Br. 6-7); (3) Jusas is not concerned with tag location (App. Br. 7); and (4) Vercellotti, Golicz, and Jusas do not relate to a method of interrogating and reading identification of a particular RFID tag from a number of tags located in a large interrogation zone.

Regarding claim 4, Appellant argues the cited references do not teach the local interrogation zone has approximate dimensions of the RFID tags. App. Br. 7.

## ISSUES

(1) Under § 103, has the Examiner erred in rejecting claim 1 by finding that Shanks, Vercellotti, Golicz, and Jusas collectively would have taught or suggested its recited limitations?

(2) Under § 103, has the Examiner erred in rejecting claim 4 by finding that Shanks, Vercellotti, Golicz, and Jusas collectively would have taught or suggested the local interrogation zone has approximate dimensions of the RFID tags?

## ANALYSIS

### *Claims 1, 8, 11, 12, and 14*

Based on the record before us, we find no error in the Examiner's rejection of illustrative claim 1. Regarding Shanks, Appellant argues many features of the invention which are not found in claim 1. For example, Appellant asserts that the claimed invention requires the divided portions of

the initial activation signal are assigned to separate reader antennas to transmit to a particular local interrogation zone such that only a particular tag is activated without causing other tags in the whole reader interrogation zone to become activated. App. Br. 5. However, claim 1 does not specify a *type* of antenna (e.g., reader as opposed to tag antenna) or that a *particular* tag is activated *without causing other tags* in the *whole reader* interrogation zone *to become activated*. Additionally, claim 1 does not recite that the activation is repeated by transmitted a differently divided portion of the initial activation signal for different local interrogation zone until the particular tag is located and activated (*see generally* claim 1), as argued by Appellant (App. Br. 6). These arguments are not commensurate in scope with claim 1 and are not persuasive.

We also disagree with Appellant that Shanks sends an activation signal from one antenna to all the tags. *See* App. Br. 5. Shanks discloses multiple antennas (e.g., 210a-d, 211a-d) that are part of a remote access sensor module (RASM) used to communicate with tags. Shanks, col. 8, ll. 31-38; Fig. 2. Also, as discussed above, the phrase, “a divided portion of said initial activation signal,” lacks written description support. Given our understanding of this phrase, signals transmitted by these antennas can reasonably be considered a divided portion of the initial activation signal as broadly as recited.

Concerning whether this activation signal is sent to the entire interrogation zone or a local interrogation zone (*see* App. Br. 6), the Examiner admits Shanks does not teach selecting a local interrogation zone (*see* Ans. 4) and relies on the collective teachings of Shanks, Vercellotti, and Golicz to teach this and related features in claim 1 (*see* Ans. 4-6). As such,

attacking Shanks individually for failing to teach a local interrogation zone does not show nonobviousness where the rejection, as is here, is based on the collective references. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Additionally, Appellant fails to show nonobviousness by attacking Vercellotti, Jusas, and Golicz individually rather than what the references collectively teach. App. Br. 5-7. Specifically, Appellant contends that Vercellotti is not concerned with activating a particular tag located in a large interrogation zone. App. Br. 5. The Examiner, on the other hand, found that Shanks teaches the feature of activating the transmitter of a RFID tag as recited (*see* Ans. 4) and relies upon Vercellotti and Golicz to teach that one skilled in the art would have recognized locating RFID tags within a local interrogation zone (*see* Ans. 4-6). For example, Vercellotti's directional antennas scan a given area or local interrogation zone to obtain desired tag information before rotating in another direction or to another local interrogation zone. Col. 3, ll. 46-61; *see also* Ans. 10. Thus, when this teaching is combined with Shanks, the combination teaches selecting a local interrogation zone. And since Vercellotti teaches selecting a local interrogation zone when combined with Shanks, the Examiner's reliance on Golicz is considered cumulative.

To the extent Appellant is asserting that Vercellotti, Golicz, and Jusas are non-analogous and not combinable with Shanks (*see* App. Br. 6-7), we disagree. "The analogous-art test requires that the Board show that a reference is either in the field of the applicant's endeavor or is reasonably pertinent to the problem with which the inventor was concerned in order to rely on that reference as a basis for rejection." *In re Kahn*, 441 F.3d 977,

986-87 (Fed. Cir. 2006) (citation omitted). Appellant's field of endeavor is RFID technology. *See* Spec. 1:4-10. All the cited references relate to the RFID technology. Shanks, Vercellotti, and Golicz also use this RFID technology for obtaining identification information about the tags. *See* Abstracts of Shanks, Vercellotti, and Jusas. Shanks further suggests that such information includes location of the tags. *See* col. 1, ll. 26-28.

While Vercellotti and Jusas do not teach using the tag information to obtain a location, these references are reasonably pertinent to problems Appellant was concerned with (e.g., defining an initial activation signal and selecting a local interrogation zone). As explained above, Vercellotti teaches how to select a local interrogation zone (e.g., area within the directional antenna's range) for obtaining tag information. Additionally, Jusas is relied upon for the limited purpose of teaching that is known in the field of RFID technology to define and initiate an activation signal. Ans. 4 (citing col. 4, ll. 28-43).

For the foregoing reasons, Appellant has not persuaded us of error in the rejection of illustrative independent claim 1 and claims 8, 11, 12, and 14 not separately argued with particularity (App. Br. 8).

#### *Claims 4, 5, and 7*

Based on the record before us, we also find no error in the Examiner's rejection of illustrative claim 4. Appellant asserts that the claimed invention of defining the local interrogation zone to have the approximate dimensions of the RFID tags as recited in claim 4 is distinguishable over the cited references. App. Br. 7. However, Appellant provides no supporting evidence. *See id.* Mere arguments unsupported by factual evidence are

entitled to little probative value. *Cf. In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997). Appellant also argues the cited references do not suggest a method that uses a local interrogation zone size such that a particular tag may be located with high accuracy and memory content of the tag may also be read with minimum possibility of error. App. Br. 7. Yet, such features are not commensurate in scope with claim 4.

To better understand claim 4, we look to the disclosure. Appellant states that support in the disclosure for this phrase is found at page 13, lines 4-19. *See* App. Br. 3 (citing Spec. 13:4-19). Appellant states “the dimensions of local interrogation zone[s] are dependent on the pulse duration and it is determined by the range definition  $\Delta X$  and  $\Delta Y$ [, w]herein  $\Delta X = \Delta Y \approx T_p \times C$ .” Spec. 13:4-7. The term,  $T_p$ , is the pulse duration (*see id.*), while  $C$  is a signal propagation velocity (Spec. 9:19-20). We do not see how the pulse duration and velocity, as described in the disclosure, relate to the dimensions of the RFID tags and thus how the zone has the dimensions of the RFID tags as recited.

Even so, Appellant has not adequately demonstrated that Shanks and Vercellotti collectively fail to teach or suggest the recited zone has approximate dimensions of the RFID tags as recited. Notably and in contrast to Appellant’s arguments addressing “a particular tag” (*see* App. Br. 7), claim 4 does not limit the dimensions to a single RFID tag (App. Br. 7) but rather an undefined number of RFID *tags*. Thus, the dimensions of the local interrogation zone can be greater than a single RFID. As discussed above and given that Vercellotti teaches directional antennas that rotates through several interrogation zones, we find that Vercellotti when combined

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with Shanks at least suggest a local interrogation zone that can have the approximate dimensions of a number of RFID tags as broadly as recited.

For the foregoing reasons, Appellant has not persuaded us of error in the rejection of illustrative claim 4 and dependent claims 5 and 7 not separately argued with particularity (App. Br. 8).

#### CONCLUSION

The Examiner did not err in rejecting claims 1, 11, 12, and 14 under § 112, first paragraph, and claims 1, 4, 5, 7, 8, 11, 12, and 14 under § 103.

#### DECISION

The Examiner's decision rejecting claims 1, 4, 5, 7, 8, 11, 12, and 14 is affirmed.

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

AFFIRMED

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