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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 DAVID GEORGE BUTLER, JOHN CHRISTOPHER O'HARE,
SREEKAR RAMACHANDRA TANUKU, and ARVIND THIAGARAJAN

———

Appeal 2019-006609
Application 14/030,450
Technology Center 3600

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Before MICHAEL J. STRAUSS, MICHAEL M. BARRY, and
DAVID J. CUTITTA II, *Administrative Patent Judges.*

STRAUSS, *Administrative Patent Judge.*

DECISION ON APPEAL[1]

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[2] appeals from the

Examiner's decision to reject claims 1–8, 10–16, and 18–22. *See* Final

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[1] We refer to the Specification, filed September 18, 2013 ("Spec."); Final
Office Action, mailed January 2, 2019 ("Final Act."); Advisory Action,
mailed February 21, 2020 ("Advisory Act."); Appeal Brief, filed April 19,
2019 ("Appeal Br."); Examiner's Answer, mailed July 11, 2019 ("Ans.");
and Reply Brief, filed September 5, 2019 ("Reply Br.").
[2] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R.
§ 1.42. Appellant identifies the real party in interest as Amazon
Technologies, Inc. Appeal Br. 5.

Act. 1. Claims 9 and 17 are canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

The claims are directed to confirming a delivery location using radio fingerprinting. Spec., Title. Claim 1, reproduced below with claim element labels added in brackets and disputed limitations emphasized in *italics*, is illustrative of the claimed subject matter:

> 1. A method *for confirming that a portable computing device is at a desired location*, comprising:
>
> [(i)] receiving, at a first time and from the portable computing device via a network, a first message representing a first wireless signal fingerprint corresponding to a first location of the portable computing device, the portable computing device being configured to detect one or more first wireless signals at the first location and determine the first wireless signal fingerprint based on first information about the one or more first wireless signals, the first information including one or more of a signal identifier, a signal strength, or a signal frequency of the one or more first wireless signals;
>
> [(ii)] identifying second information about one or more second wireless signals detected at a second time at the *desired* location, wherein the second time is previous to the first time;
>
> [(iii)] comparing the first wireless signal fingerprint and a second wireless signal fingerprint, the second wireless signal fingerprint being based at least in part on the second information;
>
> [(iv)] determining, based upon a result of the comparing, a score representing a probability that the first location is the *desired* location;
>
> [(v)] *determining that the score is above a threshold;*
>
> [(vi)] *determining that the first location is the desired location based at least in part on the score being above the threshold; and*
>
> [(vii)] sending a second message to the portable computing device so as to cause the portable computing device

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to perform an action corresponding to the portable computing device being at the *desired* location.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Orwant et al.	US 2005/0227711 A1	Oct. 13, 2005
Mangan et al.	US 2006/0238334 A1	Oct. 26, 2006
Halcrow et al.	US 2007/0167174 Al	July 19, 2007
Lopez Lopez ("Lopez")	US 2013/0090086 A1	Apr. 11, 2013
Jan et al.	US 2013/0143600 A1	June 6, 2013
Valaee et al.	US 2014/0011518 A1	Jan. 9, 2014
Jagannath	US 2014/0018096 A1	Jan. 16, 2014

REJECTIONS[3]

Claims 1, 5, 6, 8, 13, 14, 16, 21, and 22 are rejected under 35 U.S.C. § 103 as being unpatentable over Jagannath and Lopez. Final Act. 12–19.

Claims 2, 7, 11, 15, and 19 are rejected under 35 U.S.C. § 103 as being unpatentable over Jagannath, Lopez, Valaee, and Mangan. Final Act. 19–21.

Claim 3 is rejected under 35 U.S.C. § 103 as being unpatentable over Jagannath, Lopez, Valaee, and Jan. Final Act. 21–22.

Claim 4 is rejected under 35 U.S.C. § 103 as being unpatentable over Jagannath, Lopez, Valaee, Mangan, and Halcrow. Final Act. 22–23.

Claims 10 and 18 are rejected under 35 U.S.C. § 103 as being unpatentable over Jagannath, Lopez, Valaee, and Halcrow. Final Act. 23.

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[3] The rejections of claims 1–8, 10–16, and 18–22 under 35 U.S.C. § 101 in the Final Rejection have been withdrawn by the Examiner. Advisory Act. 1–2.

Claims 12 and 20 are rejected under 35 U.S.C. § 103 as being unpatentable over Jagannath, Lopez, Valaee, Mangan, and Orwant. Final Act. 23–25.

STANDARD OF REVIEW

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).

OPINION

The Rejection of Claims 1, 5, 13, 21, and 22 under 35 U.S.C. § 103

The Examiner finds the combination of Jagannath and Lopez teaches the subject matter of claim 1. The Examiner relies on Jagannath for claim elements (i) and (iii), and much of claim elements (ii), (iv), and (vii). Final Act. 13. Acknowledging Jagannath discloses known mapped locations rather than the recited desired location (e.g., a destination) of claim elements (ii), (iv), and (vii), the Examiner applies Lopez's method for confirming that a portable computing device is at a desired location for curing the noted deficiency. *See id*. at 13–14. The Examiner also relies on Lopez for describing the purpose of the claimed method, as recited in the preamble and claim elements (v) and (vi). *Id*. In particular, the Examiner finds Lopez's disclosure of "validating user-provided location for set-up of emergency calls or, in general, of emergency services" teaches or suggests "confirming that a portable computing device is at a desired location" as recited in the preamble. *Id*. at 13 (citing Lopez ¶ 20). The Examiner explains "the location is desired because it is desired to perform the service at the location." *Id*. at 14. Further, the Examiner finds Lopez's disclosure that

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"[i]f the probability that the user equipment is connected to the access point from the location provided to the network is higher than a given threshold, then the user-provided location is positively validated" teaches or suggests the disputed limitations of claim elements (v) and (vi), i.e., "determining that the score is above a threshold" and "determining that the first location is the desired location based at least in part on the score being above the threshold." *Id*. (citing Lopez ¶ 28).

Appellant contends the claims are distinguishable over the prior art, arguing the invention focuses on "confirming that a device is at a desired location by determining whether wireless signal information acquired at two different times exceed a threshold degree of similarity." Appeal Br. 19. In contrast, according to Appellant, "Jagannath teaches estimating the current location of a device by evaluating a wireless fingerprint the device acquires against entries in a previously-acquired wireless fingerprint map for a region." *Id*. (citing Jagannath ¶ 29). In particular, Appellant identifies Jagannath's deficiencies, arguing that "[t]he Jagannath system does not make a determination that the device is, in fact, at a desired location. It follows that the Jagannath system also fails to associate that initial wireless fingerprint in any way with the desired location." *Id*.

Appellant contends Lopez does not remedy Jagannath's deficiencies, because it discloses "validating the accuracy of location data, e.g., coordinates, provided by a mobile device connected to a particular access point, such as when the mobile device makes an emergency 911 phone call." *Id*. at 20. Appellant argues Lopez's validation method determines whether "the caller in question is sufficiently likely to be connected to the particular

access point when at the specified location" rather than confirming a portable computing device is at the desired location. *Id.*

Appellant further contends there would have been no motivation to combine Jagannath and Lopez, because "neither the technical feature of [Lopez's] system nor the threshold or probability of the type Lopez describes would have any apparent applicability in the context of the Jagannath system." *Id.* In specific, Appellant argues "there is no access point to which Jagannath's mobile device connects (particularly for location determining purposes) and thus no reason [to determine] whether a particular connection between the mobile device and an access point is likely to have occurred [based on Lopez]." *Id.* at 21 (emphasis omitted)

Appellant finally contends, even if appropriate motivation to combine the references did exist, Jagannath modified by Lopez would produce "the modified system [that] would simply have compared the *coordinates* determined by the Jagannath system with the *coordinates* provided by the mobile device," which is significantly different from Appellant's claim. *Id.* at 21.

The Examiner responds:

Lopez is used to modify Jagannath such that previous wireless signal measurements like in Jagannath are used, not simply to determine which location is most likely from an overall fingerprint map of a region, but rather to determine if the probability that the measuring device is at a particular location is high enough to make a confirmation that the measuring device is indeed at that location.

Ans. 3–4.

The Examiner provides a comprehensive mapping of findings to the claimed limitations. *Id.* at 4–12. In particular, in response to Appellant's arguments, the Examiner suggests that claim 1's preamble "might not have

patentable weight." *Id.* at 7 (e.g., preamble is mere recitation of an intended use[4]). Furthermore, according to the Examiner, in the absence of Appellant attributing a special meaning to otherwise subjective criteria, "the word 'desired' does not add much narrowing weight in 'desired location.'" *Id.* at 9–10. Nonetheless, the Examiner explains "[t]he location being validated in Lopez may be considered to be a 'desired location' because it is desired to perform the respective service of Lopez at that location." *Id.* at 9. The Examiner also explains, "a fingerprint map location that is determined to be the location of the user device in Jagannath could [also] be considered to be a 'desired location' because it is the location that was desired to be found that identifies the location of the user device." *Id.* at 10.

The Examiner describes the motivation for the combination as "for validating a user's location for providing a service." *Id.* at 12. In response to Appellant's argument that there is no motivation to combine the references because Lopez's teachings have no apparent applicability in the context of the Jagannath system (Appeal Br. 20), the Examiner responds "[a]n important point here is that the 103 rejections are ***not*** attempting to combine ***every*** detail from Lopez into Jagannath, nor must they." *Id.* at 14. "Thus, it is fair to combine the higher-level idea of confirming a location based on comparing a probability score to a threshold, from Lopez into Jagannath." *Id.*

The Examiner also finds unpersuasive Appellant's argument that Jagannath modified by Lopez "compare[s] the *coordinates* determined by

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[4] *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999) (statement of intended use not limiting where body of claim fully sets forth all limitations of the claimed invention rather than a distinct definition of the claimed limitations).

the Jagannath system with the *coordinates* provided by the mobile device"
rather than comparing wireless fingerprints. Appeal Br. 21. Addressing the
argument, the Examiner replies that Jagannath's paragraph 29 describes
"comparison between the received wireless signal information and the
mapped signal information" (Ans. 13), and "[t]here would be no need to
change the type of data used in the fingerprints being compared (from
Jagannath)" after the modification based on Lopez. *Id*. at 14.

Appellant replies, even if the combination of Jagannath and Lopez
does not produce the comparison of coordinates of two locations, motivation
is lacking to have modified Jagannath to yield the claimed invention of
comparing wireless fingerprints:

> The Answer . . . does not explain why a **POSITA** would have
> had any reason to validate the accuracy of a user-provided
> location *by evaluating the similarity between wireless signal*
> *fingerprints* given that Jagannath already uses those same
> fingerprints to determine the *actual location* of the mobile
> device.

Reply Br. 4.

Appellant's arguments are unpersuasive of reversible Examiner error.
We agree with the Examiner that the disputed limitations are taught by the
combination of Jagannath and Lopez:

> Lopez is used to modify Jagannath such that previous wireless
> signal measurements like in Jagannath are used, not simply to
> determine which location is most likely from an overall
> fingerprint map of a region, but rather to determine if the
> probability that the measuring device is at a particular location is
> high enough to make a confirmation that the measuring device is
> indeed at that location.

Ans. 3–4. "Non-obviousness cannot be established by attacking references
individually where the rejection is based upon the teachings of a

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combination of references." *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (citing *In re Keller*, 642 F.2d 413, 425 (CCPA 1981)).

We agree with the Examiner in finding "[t]he location being validated in Lopez may be considered to be a 'desired location' because it is desired to perform the respective service of Lopez at that location." Ans. 9. 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). However, a particular embodiment appearing in the written description must not be read into the claim if the claim language is broader than the embodiment. *See In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993) ("[L]imitations are not to be read into the claims from the specification."). 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. *Acad. of Sci. Tech Ctr.*, 367 F.3d at 1364; *see also In re Skvorecz*, 580 F.3d 1262, 1267–68 (Fed. Cir. 2009) ("Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified." (quoting Manual of Patent Examining Procedure § 2111)).

We agree with the Examiner in finding the "desired location" is further confirmed by Lopez's validation method. Final Act. 13–14; Ans. 7–9. The Examiner's finding is consistent with Appellant's stated position that "Lopez discloses validating the accuracy of location data . . . provided by a mobile device . . . ." Appeal Br. 20. The location data are confirmed, if one is sufficiently confident that the mobile device is at the provided location.

See Lopez ¶ 1 ("[T]he invention relates to a method for validating a user equipment location in a telecommunication network . . .").

In an attempt to distinguish Lopez's validation method from location confirmation, Appellant argues Lopez's validation method instead determines whether "the caller['s mobile device] in question is sufficiently likely to be connected to the particular access point when at the specified location." Appeal Br. 20. The argument is unpersuasive. By determining the likelihood that the mobile device is connected to a proximate access point from a user provided location, Lopez confirms the user provided location, thereby teaching the disputed location confirmation.

Appellant's argument that the differences in the two references render them incompatible (Appeal Br. 20–21) is also unpersuasive. Instead, we agree with the Examiner that the "103 rejections are not attempting to combine every detail from Lopez into Jagannath, nor must they." Ans. 14 (emphasis omitted). That is, Appellant's argument improperly relies on bodily incorporation of Lopez's teachings rather than what the combination of Lopez and Jagannath fairly suggests.

> The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.

Keller, 642 F.2d at 425 (citations omitted). The artisan is not compelled to mechanically follow the teaching of one prior art reference over the other without the exercise of independent judgment. *See Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 889 (Fed. Cir. 1984). Instead, the skilled

artisan would "be able to fit the teachings of multiple patents together like pieces of a puzzle" because the skilled artisan is "a person of ordinary creativity, not an automaton." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 420–21 (2007). Here, Appellant has not demonstrated that the Examiner's proffered combination in support of the conclusion of obviousness would have been "uniquely challenging or difficult for one of ordinary skill in the art." *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR*, 550 U.S. at 419–20). Therefore, we are unpersuaded by Appellant's argument that because "there is no access point to which Jagannath's mobile device connects," there is "no reason [to determine] whether a particular connection between the mobile device and an access point is likely to have occurred [as taught by Lopez]." Appeal Br. 21 (emphasis omitted).

We agree with the Examiner in finding that the combination of Lopez and Jagannath teaches or at least fairly suggests confirming a mobile device's location, manually as provided by a user or automatically as provided by a user device. *See* Ans. 12–13; Lopez ¶ 53. In particular, the disputed limitations of claim 1 are taught or suggested by the combination of (i) Jagannath's probability[5] estimate based on a comparison of a wireless fingerprint detected with the wireless fingerprint stored for the mobile device's location on a map substituted for (ii) the estimated probability used in Lopez's validation method. *See* Ans. 12; Final Act. 13. The substitution would have been reasonable, because the estimated probabilities in Lopez

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[5] Final Act. 13 ("[T]he fingerprint scores[, mapped to weights associated with wireless signal fingerprints,] may be viewed as probabilities because, the higher they are, the more likely they are considered to be the location for the request").

and Jagannath have a common purpose: the estimated probability is indicative of a confidence level in the validity of the location data. Lopez ¶ 28; Jagannath ¶ 29; *see* Final Act. 13–14.

In view of how the Examiner combines Jagannath and Lopez, we disagree with Appellant that Jagannath modified by Lopez "compare[s] the *coordinates* determined by the Jagannath system with the *coordinates* provided by the mobile device." Appeal Br. 21. Instead, the coordinates of a mobile device provided by the mobile system or provided by a user are validated according to Lopez's validation method to compare how well wireless fingerprints match. *See* Ans. 12–13; Lopez ¶ 53. As found by the Examiner, "[t]here would be no need to change the type of data used in the fingerprints being compared (from Jagannath)" after the modification based on Lopez. Ans. 14.

We further agree the Examiner provides sufficient motivation for combining Jagannath and Lopez: to "validat[e] a user's location for providing a service." Final Act. 14. Appellant's argument to the contrary is unpersuasive. Appellant argues there is no requisite motivation to combine Jagannath and Lopez to "validate the accuracy of a user-provided location *by evaluating the similarity between wireless signal fingerprints*, [because] Jagannath already uses those same fingerprints to determine the *actual location* of the mobile device." Reply Br. 4. The argued incompatibility does not exist because the Examiner's combination of Jagannath and Lopez does not require the teaching of determining the actual location of the mobile device. *See* Ans. 11–12 ("[T]he result [based on the combination of Jagannath and Lopez] would be having a particular location to be confirmed, instead of open-ended location determination as previously in Jagannath").

Thus, the combination modifies Jagannath's "open-ended location determination" to include instead Lopez's location confirmation.

For the reasons discussed above, Appellant's arguments are unpersuasive of reversible Examiner error. Accordingly, we sustain the rejection of claim 1 under 35 U.S.C. § 103. For the same reasons, we also sustain the rejections of independent claims 5, 13, 21, and 22 that are argued together with claim 1. Appeal Br. 19 ("[E]ach of [independent claims 1, 5, 13, 21, and 22] is focused, in essence, on one implementation of confirming that a device is at a desired location by determining whether wireless signal information acquired at two different times exceed a threshold degree of similarity").

The Rejection of Claims 6 and 14 under 35 U.S.C. § 103

Claim 6 recites:

> The method of claim 5, wherein the information corresponding to the first location is further based on one or more of a wireless signal strength, a wireless signal frequency, an identifier of a wireless signal transmitter, or content of a pilot signal of a wireless signal.

Claim 14, which depends from independent claim 13, recites a similar limitation. The Examiner finds Jagannath's disclosure of "[a] location fingerprint may correspond to, for example, a wireless signal identifier and *signal strength*" teaches or suggests the disputed limitation "wherein the information corresponding to the first location is further based on . . . a *wireless signal strength . . .* " of claims 6 and 14. Ans. 15–16 (citing Jagannath ¶ 19) (emphasis added).

Appellant contends that "[i]n the proposed combination, the types of information recited in claims 6 and 14 . . . would have been used solely to

determine coordinates of a mobile device, and not to confirm that the device is a desired location, as claimed." Appeal Br. 22.

The Examiner replies it is not apparent "how Appellant's argument here interferes with the modification/combination involving Jagannath and Lopez, as explained . . . by [the] Examiner." Ans. 15.

Appellant's argument is unpersuasive of reversible Examiner error for the reasons discussed above. As explained in connection with claim 1, we disagree the combination of Jagannath and Lopez would result in a system that compares location coordinates rather than location fingerprints (i.e., a detected wireless fingerprint to a stored wireless fingerprint of a desired location) to confirm that a portable computing device is at a desired location. Thus, by teaching also using signal strength in determining a location fingerprint, Jagannath teaches the additional limitation of claims 6 and 14.

The Rejection of Claim 2 under 35 U.S.C. § 103

Claim 2 depends from claim 1 and specifies that "wherein the delivery location confirmation is performed in response to a delivery event, wherein the delivery event comprises processing an inventory identifier of an item prior to delivery, and wherein the method further comprises receiving the inventory identifier and the first message from the portable computing device at the first location."

Appellant argues "Mangan teaches that location determination, e.g., by scanning a location code or via GPS, is performed before package IDs are scanned to 'scan out' or 'scan in' packages to the system. . . There is thus no teaching or suggestion in the applied art that location determination could or should be performed 'in response to' scanning a package ID." Appeal Br. 23 (citing Mangan ¶¶ 27–28) (emphasis omitted). Appellant also

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generally alleges none of the Examiner's cited references teaches "receiving the inventory identifier and the first message [representing the first wireless signal fingerprint] from the portable computing device at the first location." *Id*. (brackets in original).

The Examiner responds that "in Mangan, the delivery event (that ultimately includes the scan-out) has begun before the location confirmation, even if the scan-out itself does not occur before the location confirmation." Ans. 17 (emphasis omitted). Alternatively, according to the Examiner "[t]he 'processing [an inventory identifier]' of claim 2 . . . may be interpreted to be not the scan-out of the package at the delivery destination but rather the planning using the package ID that occurs before even arriving at the delivery destination[, where the location confirmation is performed]." *Id*. at 17–18 (citing Mangan ¶¶ 20, 24, 27–28).

Appellant's argument is unpersuasive of reversible Examiner error, because it is not commensurate in scope with claim 2. In particular, claim 2 does not require receiving the first message (representing a first wireless signal fingerprint corresponding to a first location of the portable computing device) in response to processing an inventory identifier but, instead, in response to a delivery event which includes processing an inventory identifier. As explained by the Examiner, under a broad but reasonable interpretation: the "delivery event" may further include an earlier triggering event. *See* Ans. 17. Such an interpretation is consistent with the language of claim 2 reciting that the delivery event *comprises* processing an inventory identifier of an item prior to delivery, the use of the open-ended comprising transition language allowing for other triggering events. This claim construction is reasonable because, during examination of a patent application, pending claims are given their broadest reasonable construction

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consistent with the specification. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d at 1364.

As explained by the Examiner, Mangan teaches examples of earlier triggering events that may be included in the delivery event. *See* Ans. 17–18 (citing ¶¶ 20, 24, 27–28). In particular, we agree with the Examiner "Mangan . . . describes how a courier receives a schedule of service stops to be made." *Id.* at 17 (citing ¶ 20). "Upon arrival [at a service stop for delivery,]" Mangan discloses "the driver verifies whether he has arrived at the correct location by scanning a location code." *Id.* at 17–18 (citing Mangan ¶ 24). Thus, location confirmation upon arrival at a service stop for delivery occurs *in response to* having received the schedule, because the courier arrives at the service stop in accordance to the received schedule for the stop. *See* Mangan FIG. 3.

We further agree with the Examiner's alternative mapping for "processing an inventory identifier of an item" to be an earlier triggering event. In this case, the earlier triggering event is mapped to Mangan's "planning using the package ID that occurs before even arriving at the delivery destination." Ans. 17–18 (citing Mangan ¶¶ 20, 24, 27–28). Later, i.e., upon arriving at the delivery destination, the courier confirms whether the location is correct. *Id.* The location confirmation is performed in response to the planning, because the courier arrives at a confirmed destination for the planned delivery.

We are also unpersuaded the combination of Jagannath and Mangan fails to teach or suggest "receiving the inventory identifier and the first message from the portable computing device at the first location." Mangan discloses scanning-out packages after verifying arrival at the correct location (i.e., scanning the inventory identifier) (Mangan ¶ 27) and uploading

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package IDs to the server (Mangan ¶¶ 7, 28). Verifying location as taught by Jagannath includes receiving the first message as explained in connection with claim 1. Therefore, the combination of Jagannath and Mangan teaches or suggests that disputed limitation.

For the reasons discussed above, Appellant's arguments are unpersuasive of reversible Examiner error. Accordingly, we sustain the rejection of claim 2 under 35 U.S.C. § 103.

The Rejection of Claims 7 and 15 under 35 U.S.C. § 103

Claim 7 depends from claim 5 and specifies that "wherein the second message causes the portable computing device to output an indication that the first location is the desired delivery location." Claim 15, which depends from independent claim 13, includes a similar limitation.

Appellant contends a system based on Jagannath and Lopez does not teach or suggest the recited limitation. Appeal Br. 24. Appellant's contention is unpersuasive because, as the Examiner responds, and we agree, Appellant fails to address that the rejection relies on the combination of Jagannath, Valee, and Mangan for teaching the claim limitation. Ans. 19–20; *see also* Final Act. 20.

The Rejection of Claim 4 under 35 U.S.C. § 103

Claim 4 depends from claim 1 and specifies "determining that an item was delivered correctly to the first location; associating the first wireless signal fingerprint with the desired location; and storing the first wireless signal fingerprint for use in confirming a delivery location for a future delivery attempt." The Examiner determines claim 4 is obvious in view of

the combined teachings of Jagannath, Lopez, Valaee, Mangan, and Halcrow. Final Act. 22–23.

Appellant contends "[t]he 'Hotspot ID and parameters' collected and stored by the Halcrow system . . . do not meet the 'first wireless signal fingerprint.'" Appeal Br. 25. Unlike the wireless signal fingerprint, Appellant argues "the 'hotspot' information acquired by the Halcrow system is used exclusively to identify locations from which suitable Wi-Fi internet connections can be established," and the hotspot information cannot be "compared with a second wireless signal fingerprint to confirm presence at a particular location, as claimed." *Id*. (emphasis omitted).

The Examiner replies "an identifier of a detected WiFi network (such as Halcrow's hotspot ID) is of the type of wireless signal information that may constitute a fingerprint in the fingerprint map of Appellant's application." Ans. 21–22 (citing Spec. ¶¶ 14, 32). Although Halcrow teaches a wireless fingerprint, the Examiner relies on "other references[, including Jagannath and Valaee,] used in combination for the feature of using a fingerprint map to confirm a delivery location. What Halcrow was needed for was the concept of creating the fingerprint map by measuring fingerprints at a plurality of known locations." *Id*. at 22–23.

Appellant's argument based on alleged deficiencies of Halcrow fails to address the combined teachings of Jagannath, Lopez, Valaee, Mangan, and Halcrow applied by the Examiner. Thus, Appellant's argument is an improper attack on Halcrow individually when the rejection is based on a combination of references. *In re Merck & Co.*, 800 F.2d at 1097.

The Rejection of Claims 10 and 18 under 35 U.S.C. § 103

Claim 10 depends from claim 5 and specifies "providing data corresponding to an interface to a user computing device to record the information at a potential desired location; receiving the information from the user computing device; associating the information received from the user computing device with data identifying the potential desired location; and storing the information and the data." Claim 18 includes similar limitations, and depends from claim 13.

The Examiner finds and we agree that "Appellant's 103 arguments with respect to claims 10 and 18 are very similar to the ones with respect to claim 4, which were already addressed by Examiner above." Ans. 23. We sustain the rejections of claims 10 and 18 for similar reasons as for claim 4.

The Rejection of Claims 12 and 20 under 35 U.S.C. § 103

Claim 12 depends from claim 5, and specifies "receiving a plurality of instances of the information from the portable computing device via the network; and sending the second message to the portable computing device in response to at least one of the plurality of the instances of the information having greater than a threshold similarity to the previously stored radio frequency fingerprint associated with the desired location." Claim 20 includes similar limitations, and depends from claim 13.

Appellant contends "[t]he latitude and longitude data of Orwant . . . cannot correspond to 'the information' recited in claims 5 and 12 or 13 and 20, as the claimed 'information' is not merely a set of coordinates and is instead *information that can be compared with a stored radio frequency fingerprint* to confirm presence at a particular location." Appeal Br. 27.

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The Examiner responds "Orwant does not need to disclose the wireless fingerprints and the particular fingerprint locating method, because [Jagannath and Valaee] in the combination are used for those features." Ans. 25.

Appellant's argument based on alleged deficiencies of Orwant fails to address the combined teachings of Jagannath, Lopez, Valaee, Mangan, and Orwant applied by the Examiner. Thus, Appellant's argument is an improper attack on Orwant individually when the rejection is based on a combination of references. *In re Merck & Co.*, 800 F.2d at 1097.

The Rejection of Claims 3, 8, 11, 16, and 19 under 35 U.S.C. § 103

We sustain the rejections of dependent claims 3, 8, 11, 16, and 19, because they are not argued separately with particularity.

CONCLUSION

We affirm the rejections of claims 1–8, 10–16, and 18–22 under 35 U.S.C. § 103.

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 5, 6, 8, 13, 14, 16, 21, 22	103	Jagannath, Lopez,	1, 5, 6, 8, 13, 14, 16, 21, 22	
2, 7, 11, 15, 19	103	Jagannath, Lopez, Valaee, Mangan	2, 7, 11, 15, 19	
3	103	Jagannath, Lopez, Valaee, Jan	3	
4	103	Jagannath, Lopez, Valaee, Mangan, Halcrow	4	

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
10, 18	103	Jagannath, Lopez, Valaee, Halcrow	10, 18	
12, 20	103	Jagannath, Lopez, Valaee, Mangan, Orwant	12, 20	
Overall Outcome:			1–8, 10–16, 18–22	

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).

AFFIRMED