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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE INC.,
Petitioner,

v.

UNWIRED PLANET, LLC,
Patent Owner.

Case IPR2014-00036
Patent 7,024,205 B1

Before MICHAEL W. KIM, JENNIFER S. BISK, and BARBARA A. PARVIS, *Administrative Patent Judges.*

PARVIS, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

On October 8, 2013, Google Inc. ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting an *inter partes* review of claims 1–6 ("the challenged claims") of U.S. Patent No. 7,024,205 B1 (Ex. 1001, "the '205 Patent"). On April 8, 2014, we instituted trial for all the challenged claims of the '205

Patent on certain of the grounds of unpatentability, under 35 U.S.C. § 103, that were alleged in the Petition. Paper 12 ("Decision to Institute" or "Inst. Dec.").

After institution of trial, Patent Owner, Unwired Planet, LLC ("Patent Owner") filed a Patent Owner Response (Paper 23, "PO Resp."). Petitioner filed a Reply to the Patent Owner Response (Paper 25, "Pet. Reply").

A consolidated oral hearing for CBM2014-00004, CBM2014-00005, CBM2014-00006, IPR2014-00027, IPR2014-00036, and IPR2014-00037, each involving the same Petitioner and the same Patent Owner, was held on January 13, 2015. The transcript of the consolidated hearing has been entered into the record. Paper 31 ("Tr.").

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 328(a) and 37 C.F.R. § 42.73.

Petitioner has shown by a preponderance of the evidence that claims 1–6 of the '205 Patent are unpatentable.

A. The '205 Patent

The '205 Patent relates to subscriber delivered, location-based services. Ex. 1001, 1:14. The '205 Patent states that location-based service systems have been implemented or proposed for wireless networks. *Id*. at 1:28–30. According to the '205 Patent, these systems generally involve determining location information for a wireless transceiver and processing the location information to provide an output desired for a particular application. *Id*. at 1:30–33. The '205 Patent indicates that location-based services can be expanded by receiving a service request from subscriber equipment and delivering to the subscriber equipment information based, at least in part, on a location of the subscriber equipment. *Id*. at 1:59–67. The

'205 Patent provides exemplary requests for services: *TRAFFIC, *HOTEL, *TOW, *PIZZA, and *ATM. *Id*. at 2:32–35. The '205 Patent also states that location-based services can be enhanced by personalizing the services provided by processing a request based, at least in part, on stored information regarding a subscriber. *Id*. at 2:9–14. Subscriber information may include account numbers, credit card numbers, other financial information, lodging preferences, price limitations, and discount programs. *Id*. at 2:14–19.

B. Related Matters

Petitioner states that the '205 Patent has been asserted against Petitioner in the following district court case: *Unwired Planet, LLC v. Google, Inc.*, No. 3:12-cv-504 (D. Nev.). Pet. 1, 59. Additionally, Petitioner filed another petition in CBM2014-00005, which seeks covered business method patent review of the '205 Patent. A Final Written Decision in CBM2014-00005 is entered concurrently with this decision.

Furthermore, U.S. Patent No. 7,203,752 ("the '752 patent") and U.S. Patent No. 7,463,151 ("the '151 patent") are involved in the same district court proceeding identified above, and also concern location-based mobile service technology. The '752 patent and the '151 patent are not, however, in the same patent family as the '205 Patent. Petitioner has requested Office review of the '752 patent (Case Nos. CBM2014-00006 and IPR2014-00037) and the '151 patent (Case Nos. CBM2014-00004 and IPR2014-00027).

C. Illustrative Claim

Of the challenged claims, only claim 1 is independent. Claims 2–6 each depend directly from claim 1. Claim 1 is reproduced below:

> 1. A method for providing location based services in a wireless network comprising the steps of:
>
> receiving, on a network platform in communication with a subscriber using a mobile unit via an air interface, a service request requesting service provider information regarding said location based services, said service request including service type information identifying a type of service for which said service provider information is requested;
>
> obtaining, on said network platform, location information regarding a location of said mobile unit determined using a network assisted location finding technology, said technology being operative to provide location information regarding said mobile unit based at least in part on a position of the mobile unit in relation to a known location of a stationary ground based network structure;
>
> identifying, on said network platform, first and second service providers and associated first and second service provider information based upon said service type information and said determined location of said mobile unit wherein said first service provider is farther from said mobile unit than said second service provider;
>
> accessing stored subscriber independent prioritization information, separate from said service type information, relating to a prioritization for presenting service provider information to a subscriber, said stored prioritization information establishing a basis independent of proximity and independent of any subscriber preferences for prioritizing said first and second service provider information;
>
> based upon said stored prioritization information, prioritizing said first and second service provider information, wherein said first location information is assigned a higher priority than said second location information; and
>
> outputting both said first and second service information on said mobile unit based upon said step of prioritizing.

D. The Prior Art Relied Supporting Alleged Unpatentability

Google relies on the following references:

Reference	Patent No.	Publication Date/ Issued Date	Exhibit No.
Remy	EP 0647076	Publication Date: Apr. 5, 1995	Ex. 1005[1]
Hopkins	WO 97/22066	Publication Date: June 19, 1997	Ex. 1006
Brohoff	US 6,108,533	Issued Date: Aug. 22, 2000	Ex. 1013

Wilbert O. Galitz, *The Essential Guide to User Interface Design-An Introduction to GUI Design Principles and Techniques*, 120–21, John Wiley & Sons, Inc. (1997) ("Galitz," Ex. 1007).

Laura Rich, *IQ News: New Search Engine Allows Sites To Pay Their Way To Top*, http://www.adweek.com (Feb. 23, 1998) ("Rich," Ex. 1008).

E. The Pending Grounds of Unpatentability

The following chart summarizes Petitioner's pending patentability challenges.

Reference	Basis	Claims Challenged
Brohoff and Galitz	§ 103	1–3, 5, and 6
Brohoff, Galitz, and Rich	§ 103	4
Remy and Hopkins	§ 103	1–6

[1] Remy is a French language publication. Petitioner submitted both the French language publication, as well as an English language translation of Remy, as a single exhibit, Exhibit 1005. All citations herein are to the English language translation.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. *In re Cuozzo Speed Techs.*, No. 2014-1301, 2015 WL 448667, at *6–*8 (Fed. Cir. Feb. 4, 2015) ("Congress implicitly adopted the broadest reasonable interpretation standard in enacting the AIA," and "the standard was properly adopted by PTO regulation."); 37 C.F.R. § 42.100(b). Under the broadest reasonable construction 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). We must be careful not to read a particular embodiment appearing in the written description into the claim if the claim language is broader than the embodiment. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). We construe the terms below in accordance with these principles.

1. Decision to Institute

In the Decision to Institute, we determined the broadest reasonable interpretation of "network platform" and "prioritization," which are summarized below. Inst. Dec. 6–10.

Claim Term	Construction
"network platform"	"[A] computer included on a network." *Id*. at 9.
"prioritization"	"[O]rdering." *Id*. at 10.

Additionally, we determined that no express construction of either "independent" or "network administrator" was necessary at that point in the proceeding. *Id*. We discern no reason, based on the complete record now before us, to change our determinations thereof.

2. The Parties' Contentions

Patent Owner also contends that "wherein said first location information is assigned a higher priority than said second location information," as recited in claim 1, refers to location information associated with a service provider. PO Resp. 5. We evaluate Patent Owner's contention below.

Furthermore, Patent Owner contends that a teaching of frequency of use is not subscriber independent. PO Resp. 17. The contention pertains to the following recitation in claim 1: "prioritization information establishing a basis independent of proximity and *independent of any subscriber preferences* for prioritizing said first and second service provider information" (emphases added). Neither party provides a construction for any portion of this limitation, except for the contentions provided for the term "independent," noted above. Neither party disputed our determination regarding the broadest reasonable interpretation of "prioritization" (Inst. Dec. 10), mentioned above. To evaluate Patent Owner's contention regarding frequency of use, we determine the broadest reasonable interpretation of "any subscriber preferences."

3. "wherein said first location information is assigned a higher priority than said second location information"

The relevant excerpt of claim 1 is: "prioritizing said first and second service provider information, wherein said first location information is

assigned a higher priority than said second location information." We agree with Patent Owner (PO Resp. 5) that one of ordinary skill would understand that the first and second location information refers to the first and second service providers recited in the immediately preceding limitation.

Accordingly, we determine that "wherein said first location information is assigned a higher priority than said second location information" means "wherein said first service provider information is assigned a higher priority than said second service provider information."

4. "any subscriber preferences"

The phrase "any subscriber preferences" is recited, for example, in claim 1: "prioritization information establishing a basis independent of proximity and independent of any subscriber preferences for prioritizing." Neither party provides a proposed construction for the term "any subscriber preferences." We, however, construe this term to evaluate the parties' dispute as to whether Galitz's teaching of frequency of use is independent of any subscriber preferences, as asserted by Patent Owner (PO Resp. 14–15).

One exemplary use of the term "preferences" found in the '205 Patent Specification states that a menu may be ordered based on any of various criteria, "such as preferences expressed in the subscriber profile." Ex. 1001, 8:32–36. The '205 Patent Specification also refers to a "smoking preference" of an individual subscriber (*id*. at 2:16–17) and "service preference information such as hotel room requirements" of an individual subscriber (*id*. at 5:19–20). In other words, every usage of subscriber preferences in the '205 Patent Specification indicates that "subscriber preferences" pertain to an individual subscriber.

Regarding the term "any" in the context of "subscriber preferences," the '205 Patent Specification states, "[t]he profile information may include any of various recorded personal data for the user." Ex. 1001, 4:1–2. The use of "may include" suggests that the profile information in certain cases includes some, but not all recorded personal data for the user. The '205 Patent Specification provides additional description of information regarding individual subscribers as follows:

> The subscriber profile information 114 includes information regarding individual subscribers that is useful in personalizing the location-based services and in processing individual service requests. Some examples of such information include: 1) financial information for use in executing a location-based service transaction such as credit card numbers and expiration dates, bank account numbers, or corporate account information; 2) service preference information such as hotel room requirements, information regarding discount programs or club memberships, and preferred chains or other service providers; 3) information regarding the subscriber's service usage profile such as typical travel times and roads, types of services most often requested by the subscriber and demographic information; and 4) the subscriber's willingness or desire to receive complementary service information and advertisements. Such profile information may be entered by a carrier or other location-based service administrator upon signing up for the service and may be periodically revised or automatically revised based on adaptive logic.

Id. at 5:13–32.

In light of the '205 Patent Specification, therefore, we determine that "*any* subscriber preferences" (emphasis added) pertains to any of the individual's credit card numbers, bank account numbers, hotel room requirements, club service memberships and other preferences of the individual subscriber, noted above. *Id*. As described in the '205 Patent

Specification, the preferences are "recorded personal data for the user." Ex. 1001, 4:1–2. We determine additionally that these subscriber preferences include, but are not limited to preferences stored in the subscriber profile. *Id*. ("The profile information *may include* any of various recorded personal data" (emphasis added).)

For the reasons given, we determine, in light of the '205 Patent Specification, that the broadest reasonable interpretation of "any subscriber preferences" is recorded preferences of the individual subscriber using the mobile unit. The preferences of the individual subscriber include recorded personal data such as the individual's credit card numbers, bank account numbers, hotel room requirements, and club service memberships.

B. Alleged Obviousness of Claims 1–3, 5, and 6 over Brohoff and Galitz

For the reasons given below, after consideration of the Petition, the arguments in the Patent Owner Response, and the evidence cited therein, we conclude that Petitioner has shown, by a preponderance of the evidence, that each of claims 1–3, 5, and 6 would have been obvious over the combination of Brohoff and Galitz.

1. Brohoff

Brohoff describes a geographical database for providing information to subscribers of cellular radio systems. Ex. 1013, 1:8–10. In particular, Brohoff states that a mobile subscriber would be interested in obtaining information, such as a closest restaurant, coffee shop, or specialty store in their geographic area. *Id*. at 1:46–51. A user may enter a search word, such as "food" or "hamburgers." *Id*. at 6:11–21. The search word may be sent from a mobile station requesting information to a geographic database. *Id*. at 4:39–41.

The request to the geographic database typically includes two components: (1) a geographic area from which the inquiry originates, i.e., a geographic location of a mobile station accessing the database; and (2) a possible search word that designates information a user of the mobile station desires. Ex. 1013, 4:12–17. Mobile station geographic information may be produced by a triangulation technique using three base stations from three different cell sites. *Id*. at 4:31–34.

In one example, entry of the search word "food" provides four hits: "Burger Queen," Pizza Castle," Pizza House," and "McDonalds." Ex. 1013, 6:11–14. Additionally, specific information may be provided, such as special offers currently being extended by each establishment identified by the database. *Id*. at 6:17–19.

2. Galitz

Galitz describes a computer reducing density in screen design. Ex. 1007, 120. In particular, Galitz describes ordering of items, such as by sequence of use, frequency of use, function, importance, and general to specific. *Id*. at 120–21.

3. Claim 1

We have reviewed Petitioner's obviousness contentions, supporting evidence, including the Declaration of Dr. Donald Cox (Ex. 1002 ¶¶ 41–43), and the detailed claim charts, which read all elements of claim 1 of the '205 Patent onto the combined teachings of Brohoff and Galitz. Pet. 37–43 (citing Ex. 1013, 1:7–10, 1:46–58, 2:39–42, 4:12–17, 4:30–38, 4:45–49, 6:11–27, 7:66–8:2, Figs. 1, 3, 5; Ex. 1007, 121). For instance, regarding the first three elements of claim 1, which require receiving a service request from the mobile unit, obtaining the mobile unit's location, and identifying

first and second service providers based upon the received information, Petitioner notes (*id*.) that Brohoff teaches using the geographic area (Ex. 1013, 4:13–15, 4:30–38) and search key (*id*. at 4:15–17, 4:40–41) furnished by the wireless mobile (*id*. at 1:46, Fig. 1) to search a database of service of service providers (*id*. at 2:39–42, 4:12–17).

Regarding the remaining requirements in claim 1 that result in outputting the first and second service locations on the mobile unit based on the step of prioritizing, Petitioner asserts that these requirements are taught by the combination of Brohoff and Galitz. For example, in the portions of Brohoff cited by Petitioner above, Brohoff teaches searching on the word "Food," which results in identification of four eating establishments (Ex. 1013, 6:11–27). Brohoff teaches further details regarding the output: "[t]he specific information provided by the geographic database may include geographic information on how to get to each of the locations [and] special offers currently being extended by each of the establishments." Ex. 1013, 6:14–19. Also, in the cited portions, Brohoff teaches that the identified service providers are grouped by their respective locations within a zone (Ex. 1013, 6:45–49, Fig. 5). Additionally, in the portions of Galitz cited by Petitioner, Galitz teaches prioritization of service providers on bases that are independent of proximity and independent of subscriber preferences (Ex. 1007, 120, 121); *see also* Reply 9 (citing Ex. 1007, 256) ("Alphabetic ordering is also recommended for [large lists and] small lists where no frequency or sequence pattern is obvious.")

Furthermore, Petitioner has set forth a showing of articulated reasoning with rational underpinning to combine Brohoff and Galitz. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). For instance,

Petitioner, relying on Dr. Cox, states "[a] skilled artisan would be motivated to incorporate the prioritization information of Galitz into the geographic database of Brohoff." Pet. 39 (citing Ex. 1002 ¶¶ 41–43). As explained above, Brohoff teaches an example of searching for the word "Food," which results in identification of four eating establishments, as well as specific information about these establishments, such as geographic information on how to get to each of the locations and special offers currently being extended by each of the establishments. Ex. 1013, 6:11–27. Dr. Cox characterizes Galitz as "a treatise on user interface design," which "describes numerous different types of prioritization information[, which are] independent of proximity and independent of any subscriber preferences." *Id*. Dr. Cox states that "[a] skilled artisan would be motivated to incorporate the information of Galitz into the geographic database of Brohoff to 'provide an ordering of elements that is logical and sequential.'" *Id*. ¶ 43 (Ex. 1007, 120).

Petitioner, in reliance on Dr. Cox, provides additional reasoning supporting its proposed combination: "Galitz suggests using its prioritization information in conjunction with, or instead of, the proximity organization in Brohoff." Pet. 39; *see also* Ex. 1002 ¶ 42 (citing Ex. 1007, 121). Petitioner supports its contention with evidence. In particular, in the portions noted by Petitioner, Galitz states: "Screen layout normally reflects a combination of [different] techniques. Information may be organized functionally but, within each function, individual items may be arranged by sequence or importance." Ex. 1007, 121. Petitioner also provides an illustrative explanation, "[f]or example, Galitz recognized that information may be ordered by category—such as Brohoff's geographic zones—and, within each

category, information may be ordered by other prioritization information, such as Galitz's sequence or importance information." Pet. 39; *see also* Reply 9 (citing Ex. 1007, 256) ("Galitz provides a catch-all that further applies to its combination: 'Alphabetic ordering is also recommended for [large lists and] small lists where no frequency or sequence pattern is obvious.'").

Patent Owner contends that: (1) the combination of Brohoff and Galitz fails to teach all the elements of claim 1 (PO Resp. 11–12, 15); and (2) Petitioner has not shown sufficiently that "one skilled in the art would [] be motivated or able to combine Brohoff and Galitz to achieve the inventions recited in [claim 1]" (*id.*).

a. Whether the Combination of Brohoff and Galitz Teaches Farther-Over-Nearer Ordering

Patent Owner contends that the combination of Brohoff and Galitz fails to teach the portion of claim 1 reproduced below.

> identifying, on said network platform, first and second service providers . . . *wherein said first service provider is farther from said mobile unit than said second service provider*;
>
> accessing *stored subscriber independent prioritization information* . . .
>
> based upon said stored prioritization information, prioritizing said first and second service provider information, wherein *said first location information is assigned a higher priority than said second location information*

(emphases added).

Patent Owner characterizes this portion of the claim as requiring "farther-first ordering." PO Resp. 8. Claim 1, however, recites "comprising," which may result in the "first service provider information" not being the first information in a list displayed to a user. *See Genentech,*

Inc. v. Chiron Corp., 112 F.3d 495, 501 (Fed. Cir. 1997). We, therefore, refer to this portion of the claim as "farther-over-nearer ordering."

Turning to Patent Owner's contentions regarding farther-over-nearer ordering, Patent Owner contends that Brohoff teaches nearer-first ordering of information. PO Resp. 8–10. Patent Owner also contends that Galitz relates to Graphical User Interface (GUI) designs and "does not disclose or suggest ordering results of a request for information on service providers in connection with any location based service." PO Resp. 10.

Patent Owner's arguments are misplaced, as they are based on attacks on individual references, and one cannot show non-obviousness by attacking references individually where the rejections are based on a combination of references. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) ("[T]he test is whether the references, taken as a whole, would have suggested appellant's invention to one of ordinary skill in the art."); *see also In re Keller*, 642 F.2d 413, 426 (CCPA 1981) ("[O]ne cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references.")

Regarding Patent Owner's contention that Galitz "does not disclose or suggest ordering results of a request for information on service providers in connection with any location based service" (PO Resp. 10), Petitioner contends that Brohoff teaches location-based services such as searching a database of service of service providers. *See, e.g.*, Pet. 40–41 (citing Ex. 1013, 2:39–42, 4:12–17). As Petitioner correctly notes, Brohoff describes an example of sending to a mobile station search results identifying four eating establishments, as well as special offers being extended by each of

these establishments. Pet. 41 (citing Ex. 1013, 6:11–27). Patent Owner does not dispute these teachings persuasively.

Regarding Patent Owner's contention that Brohoff teaches nearer-first ordering of information (PO Resp. 8–10), Petitioner contends that Galitz is "a treatise on user interface design" and provides "numerous types of prioritization information." *See* Pet. 42 (citing Ex. 1007, 120–21); *see also* Reply 9 (citing Ex. 1007, 256). As Petitioner correctly notes (*id*.), Galitz teaches: (1) "an ordering of elements that is logical and sequential" (Ex. 1007, 120), (2) "[c]ommon ordering schemes are . . . Sequence of Use[,] . . . Frequency of Use[,] . . . Function[,] . . . Importance[,] . . . [and] General to Specific" (*id*. at 120–121), and (3) "alphabetic ordering is desirable" for "a large number of options" and "small lists" (*id*. at 256). As is evident from the teaching in Galitz of prioritizing search results, such as those taught by Brohoff, the combination of Brohoff and Galitz at least suggests farther-over-nearer ordering of service provider information, as recited in claim 1.

Patent Owner further contends that Galitz's teachings "make little sense in the context of [location based service] technologies." PO Resp. 12–13. Patent Owner's contention is based on a conclusory statement by its expert, Dr. Christopher H. Kingdon, that Galitz's teachings are not applicable or customary for location-based services. PO Resp. 13–14 (citing Ex. 2001 ¶ 35). Specifically, Dr. Kingdon states, "[c]onventional ordering for [location based service] information, in 1998, would involve a nearer-first ordering." Ex. 2001 ¶ 35; *see also id*. ¶ 44 ("in order to be consistent with the real world, a person of ordinary skill would intuitively order closer objects over farther away objects.") Dr. Kingdon's testimony, however, does not disclose the underlying facts or data on which his opinion is based.

See 37 C.F.R. § 42.65(a). Additionally, Dr. Kingdon states what conventional ordering "would involve" (Ex. 2001 ¶ 35), which is different than stating what would have been excluded from conventional ordering schemes for location based services.

Furthermore, Petitioner has submitted evidence that demonstrates the applicability of Galitz's teachings to location-based services. For example, Galitz's teaches prioritizing address information (Pet. 27 (citing Ex. 1007, 120)), which is the type of information that is displayed by location based services. Also, in contrast to Dr. Kingdon's testimony, Dr. Cox's testifies as to customary and conventional use of sequential or alphabetical ordering for location-based services, for example, in the form of the "Yellow Pages." Pet. 2; *see also* Ex. 1002 ¶ 27 ("[A] particular Yellow Pages volume may provide a listing of businesses in a specific geographic area (e.g., Alexandria, Virginia)[,] and may segregate the businesses into similar types (e.g., hotels or gas stations)[,]" and "then alphabetically within each category.")

b. Whether Frequency of Use is Subscriber Independent

Patent Owner also contends that one of Galitz's prioritization teachings, i.e., "Frequency of Use" (Ex. 1007, 120), is not subscriber independent. PO Resp. 15. This limitation is shown in the portion of claim 1 reproduced below:

> accessing stored subscriber independent prioritization information, separate from said service type information, relating to a prioritization for presenting service provider information to a subscriber, said stored *prioritization information establishing a basis independent of proximity and independent of any subscriber preferences for prioritizing said first and second service provider information*

Ex. 1001, 10:43–50 (emphasis added).

In particular, Patent Owner contends that frequency of use "presumably would depend on *subscribers'* usage patterns." PO Resp. 15 (emphasis added). For the reasons discussed above with respect to claim construction, we determine that the broadest reasonable interpretation of "any subscriber preferences" is recorded preferences of the individual subscriber using the mobile unit. Patent Owner's contention pertains to general popularity or usage patterns of a majority of subscribers. Accordingly, Patent Owner's contention is not commensurate with the scope of claim 1.

c. Whether Petitioner has set forth a Sufficient Showing of Articulated Reasoning with Rational Underpinning to Combine Brohoff and Galitz

Patent Owner contends that "Petitioner's [a]sserted [m]otivation to combine the references is deficient." PO Resp. 19. In particular, Patent Owner contends that "[a]s already taught by the text of Brohoff, Brohoff orders its service provides '**in a sequential and orderly fashion**.'" PO Resp. 20 (citing Ex. 1013, 5:34–43). Patent Owner continues, "[o]ne of ordinary skill in the art would not look to modify Brohoff's teachings of a 'sequential and orderly fashion,' to produce what Brohoff **already teaches**." PO Resp. 20.

Patent Owner's contention is that Galitz does not teach anything not in Brohoff. For the reasons discussed above with respect to farther-over-nearer ordering, we are not persuaded.

Patent Owner additionally contends that "[o]ne of ordinary skill in the art of Location-Based Services would not look to a reference discussing Graphical User Interfaces." PO Resp. 21. In particular, Patent Owner

contends "Galitz does not direct its solutions specifically towards the organization of information for service providers in a [location-based service] environment." PO Resp. 22.

Regarding whether one of ordinary skill would have looked to Galitz, we are persuaded that Petitioner has set forth a sufficient showing of articulated reasoning with rational underpinning to combine Brohoff and Galitz. Petitioner relies on Dr. Cox, who provides a well formulated explanation, which we discussed in detail above. Pet. 39 (citing Ex. 1002 ¶¶ 41–43). It is within our discretion to assign the appropriate weight to the expert testimony offered by the parties. *See, e.g., Yorkey v. Diab*, 601 F.3d 1279, 1284 (Fed. Cir. 2010) (holding the Board has discretion to give more weight to one item of evidence over another "unless no reasonable trier of fact could have done so"); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004); ("[T]he Board is entitled to weigh the declarations and conclude that the lack of factual corroboration warrants discounting the opinions expressed in the declarations.") We give Dr. Cox's testimony substantial weight because his testimony is consistent with the teachings of Brohoff and Galitz, as discussed above.

Patent Owner further contends "Galitz directs its teachings to particular styles and types of graphical user interfaces that are distinct from the interfaces used by mobile phones . . . , [which] at that time were mostly primitive devices." PO Resp. 23. Galitz, however, describes applicable prioritization information. Pet. Reply 9 (citing Ex. 1007, 256 (recommending "alphabetic ordering" for "small lists.")

d. Secondary Considerations

Patent Owner also asserts that "farther-first ordering of the '205 Patent would have been unconventional and unexpected to one of ordinary skill in the art in 1998." PO Resp. 8 (citing Ex. 2001 ¶ 27). Patent Owner relies on Dr. Kingdon, who provides a conclusory statement that "the farther-first ordering aspect of the '205 Patent would have been unconventional and an unexpected result of a LBS deployment in about 1998." Ex. 2001 ¶ 27. Patent Owner, however, does not point to persuasive evidence showing that "farther-first ordering" is unexpected or provides unexpectedly favorable results.

Whether Patent Owner has established unexpected results is a question of fact that turns on weighing the evidence of record. *In re Inland Steel Co.*, 265 F.3d 1354, 1366 (Fed. Cir. 2001). We conclude that Patent Owner has not provided persuasive evidence of unexpected results.

e. Conclusion

For the reasons given, we conclude that Petitioner has shown by a preponderance of the evidence that claim 1 of the '205 Patent would have been obvious over Brohoff and Galitz.

4. Claims 2–3, 5, and 6

We have reviewed Petitioner's obviousness contentions and supporting evidence, including the detailed claim charts, which read persuasively all additional elements of each of dependent claims 2–3, 5, and 6 of the '205 Patent onto the combined teachings of Brohoff and Galitz. Pet. 43–44. Patent Owner does not provide persuasive further contentions regarding these claims. Accordingly, we conclude that Petitioner has shown

by a preponderance of the evidence that each of claims 2–3, 5, and 6 of the ’205 Patent would have been obvious over Brohoff and Galitz.

C. Obviousness of Claim 4 over Brohoff, Galitz, and Rich

Petitioner contends that claim 4 of the ’205 Patent is unpatentable, under 35 U.S.C. § 103, as obvious over a combination of Brohoff, Galitz, and Rich. Pet. 44–45. In support of its contention, Petitioner provides detailed explanations on how each claim limitation is disclosed in Brohoff, Galitz, and Rich, and also relies on the Declaration of Dr. Cox (Ex. 1002 ¶¶ 44). Pet. 44–45.

1. Rich

Rich describes a GoTo.com (“GoTo”) search engine that allows sites to bid on a cost per click-through they will pay to direct a user to a particular site when a user clicks on a particular search word. Ex. 1008, 1. GoTo will also rank paid and unpaid sites according to user and editor input. *Id*.

2. Claim 4

After fully considering the Petition and Patent Owner’s assertions to the contrary, we find persuasive Petitioner’s analysis of how the claim elements of claim 4 are taught in Brohoff, Galitz, and Rich, taken together. For example, claim 4 requires obtaining information established by a network administrator. Rich teaches ranking paid and unpaid sites according to user and editor input. Ex. 1008, 1.

Furthermore, we are persuaded, after considering all arguments and evidence, that Petitioner has set forth a sufficient showing of articulated reasoning with rational underpinning to combine Brohoff, Galitz, and Rich. Dr. Cox points to Rich’s teaching that “sites may bid on the cost per click-through they will pay for a keyword” (Ex. 1008, 1:6–7) and “GoTo will also

rank paid and unpaid sites according to user and editor input" (*id*. at 1:18). Ex. 1002 ¶ 44. Dr. Cox further states that "Rich suggests that this input from network administrators indicates importance or relevance stating 'that advertisers who can afford to pay for such spots and ads are more relevant to the consumer's quest.'" *Id*. (citing Ex. 1008, 1:13–14). Dr. Cox concludes that, in light of these teachings, a skilled artisan would be motivated to obtain information established by a network administrator, as disclosed in Rich, to prioritize and present the address information in Brohoff and Galitz. Ex. 1002 ¶ 44.

Patent Owner contends that Rich does not establish subscriber independent prioritization information because "Rich explains no mechanism to prioritize or display any location-related information." PO Resp. 26. Patent Owner's contentions are misplaced, however, as Petitioner relies on the combination of Brohoff and Galitz for this limitation.

Patent Owner also contends that the approach used by location-based services and the approach of Rich "are inconsistent with each other" and "Petitioner offers no evidence of how these different approaches would properly be reconciled with each other, or why one of ordinary skill in the art would prioritize using *information established from a network administrator* for the purposes of reordering an otherwise conventional nearer-first list." PO Resp. 27. We disagree for the reasons discussed above that the combination of Brohoff and Galitz teaches only a conventional nearer-first list. Additionally, Petitioner points to Rich for disclosing reasons to prioritize on bases other than nearer-first. *See, e.g.*, Ex. 1002 ¶ 44 (citing Ex. 1008, 1:13, 14) ("Rich suggests that this input from network administrators indicates importance or relevance stating 'that advertisers

who can afford to pay for such spots and ads are more relevant to the consumer's quest.'").

We conclude that Petitioner has shown by a preponderance of the evidence that claim 4 of the '205 Patent would have been obvious over Brohoff, Galitz, and Rich.

D. Obviousness of Claims 1–6 in view of Remy and Hopkins

For the reasons given below, after consideration of the Petition, the arguments in the Patent Owner Response, and the evidence cited therein, we conclude that Petitioner has shown, by a preponderance of the evidence, that each of claims 1–6 would have been obvious over the combination of Remy and Hopkins.

Remy is a French language publication. As noted above, Petitioner submitted both the French language publication, as well as an English language translation of Remy, as a single exhibit, Exhibit 1005. Patent Owner submitted an independent translation of the Remy French language publication as Exhibit 2003. Patent Owner contends that its translation, submitted as Exhibit 2003, "corrects some grammatical errors and inconsistent technical descriptions in the English language translation offered by Petitioner in Exhibit 1005." Patent Owner does not contend that any of these differences are substantive or that they should alter our analysis of this ground. We reviewed the portions of Patent Owner's translation corresponding to the portions of Remy cited by Petitioner and determine that these portions of Patent Owner's translation do not differ substantively from the corresponding cited portions of Petitioner's translation. We conclude that, to the extent that Patent Owner's translation (Exhibit 2003) differs from Petitioner's translation (Exhibit 1005), these differences are insignificant and

do not alter our determination that Petitioner has shown by a preponderance of the evidence that the challenged claims would have been obvious over the combination of Remy and Hopkins. Notwithstanding our analysis of both translations, for ease of reference we do not use parallel citations and, instead, refer to Petitioner's translation (Exhibit 1005), as this is the basis for our determination.

1. Remy

Remy describes a cellular radio communication system within a network of geographical cells traversed by mobile stations. Ex. 1005, Abs. The cellular radio communication system supplies a mobile station with at least one personalized service on the basis of a geographical location of a mobile device. *Id.* An example of a geographically personalized service is to supply the mobile station with an address of a nearest hotel. Ex. 1005, 1:17–19. The cellular radio communication system comprises server 11 for supplying information concerning the personalized service (Ex. 1005, 9:36–37), which sends the information to the mobile station via mobile service switching centers and an intermediary network (Ex. 1005, 8:21–24).

2. Hopkins

Hopkins describes a computer implemented method for presenting vendor advertising information to a user. Ex. 1006, Abs. The advertising information is searchable by any of several indices, including alphabetically by name, by address, and by business/commerce categories. *Id*. at 2:16–18. The advertising information also is searchable by geographical area, such as by town or by sections of a city. *Id*. at 6:23–26.

Additionally, Hopkins describes exemplary screen displays. Ex. 1006, 9:5–6. For example, Hopkins provides for a variety of advertising

placements on a screen display, including preferred placement, standard placement, and textual listing. *Id*. at 9:10–18.

3. Claim 1

We have reviewed Petitioner's obviousness contentions and supporting evidence, including the Declaration of Dr. Cox (Ex. 1002 ¶¶ 46–55), and the detailed claim charts, which read all elements of claims 1–6 of the '205 Patent onto the combined teachings of Remy and Hopkins. Pet. 46–55 (citing Ex. 1005, Abstract, 1:12–19, 3:5–13, 8:21–24, 8:38–51, 9:36–37, Figs. 1, 2; Ex. 1006, 2:16–18, 2:23–26, 6:15–16, 6:23–26, 7:27–28, 8:23–24, 9:10–18, 19:11–21, Fig. 5). We start by considering the first three elements of claim 1, which require receiving a service request from the mobile, obtaining the mobile's location, and identifying first and second service providers based upon the received information. Petitioner notes (*id*.) that Remy teaches "when the mobile station calls the means for supplying a service" location information is found and "is transmitted to the means for supplying service which use[s] it as an interrogation parameter." Ex. 1005, 3:5–13; *see also id*. at Abstract ("The invention relates to a cellular radio communication system employed within a network of geographic cells traversed by mobile stations, the said system comprising means (11) for supplying a mobile station with at least one personalized service on the basis of information on the geographical location of the [ ] mobile station.").

Likewise, regarding the remaining requirements in claim 1 that result in outputting the first and second service locations on the mobile unit based on the step of prioritizing, Petitioner asserts that these requirements are taught by the combination of Remy and Hopkins. For example, Petitioner cites Remy for teaching the providing of the following exemplary output: "a

geographically personalized service suppl[ies] the mobile station with the address of the hotel nearest to it." Ex. 1005, 1:17–19. Additionally, Petitioner also cites Hopkins for teaching a textual listing of multiple vendors displayed in an alphabetical list for a particular selected area or category of commerce. Ex. 1006, 9:16–18; Fig. 5.

Furthermore, Petitioner has set forth an articulated reasoning with rational underpinning to combine Remy and Hopkins. Specifically, Dr. Cox states that a skilled artisan would be motivated by the revenue from potential advertising resulting from the combination of Remy and Hopkins, and that the modification of Remy's location-based service with Hopkins's directory features is no more than a combination of familiar elements according to known methods to yield predictable results. Ex. 1002 ¶ 55.

a. *Whether the Combination of Remy and Hopkins Teaches a Service Request Including Service Type Information*

Patent Owner argues that the combination of Remy and Hopkins does not disclose a service request that includes service type information. PO Resp. 32. We disagree. Petitioner contends that "Remy discloses that the service request can identify and request a particular type of service" and "Hopkins discloses an 'online directory service' in detail." Pet. 47–48 (citing Ex. 1005, 1:17–19, 9:36–37; Ex. 1006, 2:23–26, 17:3, 6:24–26, Fig. 5); *see also id*. at 50–51(citing Ex. 1005, 1:12–19, 8:21–24, 9:36–37, Fig. 1; Ex. 1006, 6:23–26) (stating that the cited portions of Remy and Hopkins teach that "[t]he personalized service can be a request for service provider information and the service request can include service type information identifying a type of service for which said service provider information is requested."). For instance, as Petitioner correctly notes (*id*.), Remy teaches

"[g]enerally speaking, the invention can apply in all cases where *the server . . . called on by a mobile station* uses location information on this mobile station to provide one or more geographically personalized services to it." Ex. 1005, 1:12–16 (emphasis added); *see also id.* at 9:36–37 ("When the number called is the number of server 11 supplying the personalized service linked to the location . . . ."). As additionally taught in the cited portions identified by Petitioner, Hopkins teaches "[i]n addition to indexing the advertising information based upon the vendors' names, addresses, and phone numbers, *the advertising information is searchable* by geographic areas (such as by town or by sections of a city) and *by category of commerce*." Ex. 1006, 6:24–26 (emphasis added).

Patent Owner further contends that the Petition "incorrectly assumes that the service type information can be simply inserted into the messages or signals of Remy," but "Remy's 'useful signal 21' is a voice signal and thus not readily combined with Hopkins." PO Resp. 34–35 (citing Ex. 2001 ¶¶ 59, 68). Specifically, Patent Owner cites Dr. Kingdon for stating that "[u]seful signal 21 is disclosed as 'a speech signal' . . . [and] [o]ne of ordinary skill in the art would understand that this 'speech signal' consists of audio from the mobile device and not any service type information." Ex. 2001 ¶ 59 (citing Ex. 2003, 9:49). As discussed above and further below, we determine that Petitioner has set forth a sufficient articulated reasoning with rational underpinning to combine Remy and Hopkins, which together suggest the claim limitation at issue.

Additionally, contrary to Dr. Kingdon's assertion, the network of Remy is not limited to providing audio services. As Dr. Kingdon acknowledges (Ex. 2001 ¶ 66), Remy teaches at least two messages,

including "signaling message 22" with call processing data (Ex. 1005, 9:7–20). Also, as Petitioner correctly notes (Pet. 47 (citing Ex. 1005, 9:36–37, 1:17–19)), Remy teaches processing a request for a service provider received from a mobile station and, in response, outputting to that mobile station service provider information, for example, "the address of the hotel nearest to it." Ex. 1005, 1:17–19.

b. Whether the Combination of Remy and Hopkins Teaches Wherein the First (Farther) Service Provider is Assigned a Higher Priority than the Second (Nearer) Service Provider

Patent Owner further argues that each of Remy and Hopkins fails to teach or suggest the claimed farther-first prioritization of service providers. PO Resp. 35–38. For example, Patent Owner argues that Remy "does not teach or suggest providing multiple service providers," so Remy is incapable of prioritizing information about the service providers. PO Resp. 36. However, Hopkins, not Remy, is cited for describing a textual listing of multiple vendors displayed in an alphabetical list for a particular selected area or category of commerce. Ex. 1006, 9:16–18; Fig. 5.

Additionally, Patent Owner argues that "Hopkins does not describe usage of its system with mobile phones, or how its advertising information might be delivered to a mobile phone." PO Resp. 36. However, Remy, not Hopkins, is cited for describing identifying service providers based "on location of [the] mobile station," such as "supplying the mobile station with the address of the hotel nearest to it." Ex. 1005, 1:12–19. Patent Owner's arguments are misplaced, as they are based on attacks on individual references, and one cannot show non-obviousness by attacking references individually where the rejections are based on a combination of references.

See In re Merck & Co., Inc., 800 F.2d at 1097.

c. Whether Petitioner has set forth a Sufficient Showing of Articulated Reasoning with Rational Underpinning to Combine Remy and Hopkins

Patent Owner contends that the proposed combination is not established according to known techniques and does not yield predictable results. PO Resp. 40 (citing Ex. 2001 ¶ 68). Dr. Kingdon states, "[t]he modifications needed to integrate Remy and Hopkins would require extensive modification and re-engineering of a telephone system, not simple substitution of elements or software programming." Ex. 2001 ¶ 68.

Patent Owner's argument is not persuasive. Neither Patent Owner nor Dr. Kingdon provide persuasive evidence of an extensive modification or described what type of re-engineering of the telephone system would be needed. Additionally, the test for obviousness is not whether the features of a secondary reference may be incorporated bodily into the structure of the primary reference. *In re Keller*, 642 F.2d at 425.

We are persuaded by Petitioner's evidence. Dr. Cox states, "by requesting an address of the nearest hotel, Remy discloses that the service request can identify and request a particular type of service." Ex. 1002 ¶ 48. Dr. Cox's statement is consistent with Remy, which teaches, for example, responding to a request by outputting to a mobile station, for example, "the address of the hotel nearest to it." Ex. 1005, 1:17–19. Dr. Cox additionally states "Hopkins [] discloses prioritizing presentation based on an alphabetical index," which is independent of proximity and independent of any subscriber preferences. Ex. 1002 ¶ 54. Dr. Cox's additional statement is consistent with Hopkins, which teaches "an alphabetical list for a particular selected area or category of commerce." Ex. 1006, 9:17–18, Fig.

5. Dr. Cox states that modifying Remy's location-based service to incorporate Hopkins's directory features would have required no more than known software programming techniques. Ex. 1002 ¶ 55. Petitioner's proposal to modify Remy to output two service providers, alphabetically (Pet. 52), is supported by the evidence of record, as illustrated above.

Patent Owner additionally contends that "modifications to the Remy messages . . . would render them nonstandard." PO Resp. 34 (citing Ex. 2001 ¶ 68). Patent Owner's argument is not commensurate with the scope of the challenged claims. Claim 1, for example, recites "a service request requesting service provider information regarding said location based service, said service request including service type information identifying a type of service for which said service provider information is requested." None of the challenged claims require that the service request comply with a particular standard.

Patent Owner also contends that "farther-first ordering is not conventional in the art and would be an unexpected departure from the conventional nearest to farthest order." PO Resp. 37 (citing Ex. 2001 ¶ 70). Dr. Kingdon again states his conclusion without persuasive evidentiary support. Ex. 2001 ¶ 71. Furthermore, Patent Owner does not point to persuasive evidence showing that "farther-first ordering" is unexpected or provides unexpectedly favorable results.

d. Conclusion

For the reasons given, we conclude that Petitioner has shown by a preponderance of the evidence that claim 1 of the '205 Patent would have been obvious over Remy and Hopkins.

4. Claims 2–6

We have reviewed Petitioner's obviousness contentions and supporting evidence, including the detailed claim charts, which read all additional elements of dependent claims 2–6 of the '205 Patent onto the combined teachings of Remy and Hopkins. Pet. 54–55. Patent Owner does not provide persuasive further contentions regarding these claims. PO Resp. 32. We determine that Petitioner's contentions are reasoned adequately and supported by evidence. Accordingly, we conclude that Petitioner has shown by a preponderance of the evidence that each of claims 2–6 would have been obvious over Remy and Hopkins.

III. CONCLUSION

We conclude that Petitioner has demonstrated by a preponderance of the evidence that (1) claims 1–3, 5, and 6 of the '205 Patent would have been obvious over the combined teachings of Brohoff and Galitz, (2) claim 4 of the '205 Patent would have been obvious over the combined teachings of Brohoff, Galitz, and Rich, and (3) claims 1–6 of the '205 Patent would have been obvious over the combined teachings of Remy and Hopkins. This is a Final Written Decision of the Board under 35 U.S.C. § 318(a).

IV. ORDER

For the foregoing reasons, it is

ORDERED that claims 1–6 of U.S. Patent No. 7,024,205 are determined by a preponderance of the evidence to be *unpatentable*; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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