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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte OLIVER BLUME and ANTON AMBROSY

Appeal 2010-009766
Application 11/445,264
Technology Center 2600

Before DEBRA K. STEPHENS, LYNNE E. PETTIGREW and
MIRIAM L. QUINN, *Administrative Patent Judges*.

QUINN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) (2002) from a final rejection of claims 1-16. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

STATEMENT OF THE CASE

Appellants' Invention

According to Appellants, the invention relates to a method by which a wireless communication system provides a service for a mobile terminal, which moves from place to place. (Spec. 1, ll. 5-7.) More particularly, the invention relates to the provision of a service by means of a push and store approach. (*Id.*)

Representative Claims

Independent claims 1 and 10 are illustrative and read as follows:

1. A method by which a wireless communication system having a plurality of access points provides a service to a mobile terminal while the mobile terminal is moving along a travel route from a starting point to a destination point, the method comprising:

receiving, from the mobile terminal, a geographical position of the mobile terminal corresponding to the starting point;

predicting an access point among the plurality of access points having a coverage area to be reached by the terminal based on the received geographical position; and

providing the service at the predicted access point prior to the mobile terminal reaching the coverage area of the predicted access point;

wherein if the mobile terminal reaches the coverage area of the predicted access point, the service is provided to the mobile terminal by the predicted access point according to a push and store approach.

10. A computer program product, having a program embodied on a computer-readable medium,

which when executed by a computer, causes the computer to execute a method by which a mobile terminal is provided a service by a wireless communication system having a plurality of access points while the mobile terminal is moving along a travel route, the method comprising:

transmitting geographical positions corresponding to a starting point of the mobile terminal and a destination point of the travel route of the mobile terminal to the wireless communication system; and

receiving the travel route from the communication system, wherein the travel route is determined by the wireless communications system based on the received geographical positions,

wherein the service is provided to the mobile terminal by the wireless communication system according to a push and store approach.

References

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

Boyle	US 6,138,158	Oct. 24, 2000
Kirshenbaum	US 2003/0100993 A1	May 29, 2003
Gabara	US 2004/0203779 A1	Oct. 14, 2004

Rejections

Claims 1, 5, 6, 8, 9, 10, and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gabara in view of Boyle.
(Ans. 3-4.)

Claims 2-4, 7, 11-12, and 14-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gabara in view of Boyle and in further view of Kirshenbaum. (Ans. 4-6.)

ISSUES

Based on Appellants' arguments, the dispositive issues on appeal are:

(1) Whether the Examiner erred in rejecting claims 1, 5, 6, 8, 9, 10, 13, and 16 under 35 U.S.C. § 103(a) over Gabara and Boyle, because the combination fails to disclose the claimed "service" and "service data" (App. Br. 17-19, 26-27);

(2) Whether the Examiner erred in determining that the combination of Gabara and Boyle discloses the "push and store approach," as claimed (App. Br. 19-22);

(3) Whether the Examiner erred in determining that Gabara in view of Boyle discloses providing "discontinued service coverage along the travel route," as recited in claim 16 (App. Br. 28-29); and

(4) Whether the Examiner erred in determining that Gabara discloses the limitations of: (a) "transmitting . . . a starting point of the mobile terminal and a destination point," and (b) "the travel route is determined by the wireless communications system based on the received geographical positions," as recited in claims 10 and 13 (App. Br. 23-26).

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' contentions that the Examiner has erred. Further, we have reviewed the Examiner's response to Appellants' arguments.

The "Service" and "Service Data" Issue – Claims 1, 8, 9, 10, 13, and 14

Appellants contend that the combination of Gabara and Boyle does not disclose the claimed "service" (as recited in claims 1, 8, and 9) and "service data" (as recited in claim 14). (App. Br. 17-19, 26-27.) We note that the term "service" is also recited in claims 10 and 13; and therefore, Appellants' contentions regarding this claim term are also applicable to those claims.

The Examiner determines that the term "service" is broadly defined as "an act or a variety of work done for others." (Ans. 9 (omitting citations).) Based on that interpretation, the Examiner finds the claimed "service" includes many actions in wireless communications, such as registering a mobile terminal to an access point, allocating bandwidth to a mobile terminal by an access point, providing a connection for the mobile terminal, handing off a connection from one access point to another, and deregistering the mobile terminal after the terminal leaves an access point. (Ans. 9.)

Appellants do not provide an alternative definition for the term, but instead argue that claim language uses the term "service" such that Gabara's disclosure of "reservation of data" and Boyle's "provisioning of data" are not the same "service" (Reply 6-7.) In particular, Appellants contend that the Examiner ignores the plain meaning of the claim language by disregarding that claim 1 requires "both 'providing the service at the

predicted access point prior to the mobile terminal reaching the coverage area of the predicted access point’ and ‘*the service is provided to the mobile terminal* by the predicted access point’” (Reply 7.)

First, we decide the meaning of the term “service.” We note that, in the Specification, Appellants do not define the term, and instead use the term generally, e.g., referring to “video streaming,” as an example of a service (Spec., Abstract),¹ and mentioning delivery of “multimedia services” (Spec. [0006]) and offering “broadband services” (Spec. [0008], [00020]).

Thus, since Appellants have not presented sufficient evidence or argument to persuade us the Examiner’s interpretation is in error, and the Examiner’s interpretation is broad, but reasonable in light of the Specification, we agree with that interpretation.

In light of this interpretation, the Examiner finds that Gabara teaches a “service” of reserving bandwidth for the mobile terminal’s connection *before* the terminal arrives at that base station. (Ans. 9 (citing Gabara, Abstract, [0036]).) The passages in Gabara relied on by the Examiner further describe that once the system identifies the base stations along the route that have sufficient capacity, the identity of those base stations is communicated to the mobile terminal for handoff. (Gabara, Abstract, [0036].) These disclosures are consistent with both (1) providing *a service* at the access point *prior* to the mobile terminal’s arrival, and (2) providing *a service* to the mobile terminal by the predicted access point according to a push and store approach. That is, in those passages, Gabara teaches the function of providing the bandwidth reservation to the base stations (nodes)

¹ Citations to the Specification are to the published application, No. US 2006/0286988, dated Dec. 21, 2006.

prior to the mobile terminal's arrival. And it teaches the function of pushing to the mobile terminal (another node) the handoff sequence by any base station along the route (current or predicted).

Appellants' argument – that Gabara's reservation of bandwidth cannot be the claimed "service" because "capacity" is neither pushed to nor stored at a mobile terminal – is not persuasive. (App. Br. 19.) First, as stated above, Gabara teaches pushing to the mobile terminal a handoff sequence, which enables the wireless connection between the mobile terminal and base stations along the route. As such, we conclude that Gabara discloses "providing a service . . . according to a push and store approach," because providing the handoff sequence to the mobile terminal is a function provided by one node to another in the network in accordance with the scope of the term "service."

Further, Appellants admit that the "reservation of bandwidth allocated to the mobile terminal is for the use of subsequent data transfer between the base station and mobile terminal." (App. Br. 19.) And that function of subsequent data transfer, using the reserved bandwidth, to the mobile terminal is also a "service." Therefore, we do not agree with Appellants' conclusion that Gabara and Boyle fail to disclose the claimed "service."

As to the term "service data" recited in claim 14, Appellants contend that Gabara fails to teach or suggest that "*data* of any type is provided to the base stations before the terminal enters a coverage area of the base stations . . ." (App. Br. 28.) We do not agree with Appellants' conclusion. As described above with respect to the term "service," Gabara teaches providing the bandwidth reservation – this would include data including instructions to reserve capacity – to the base stations prior to the mobile terminal's arrival.

That bandwidth reservation, a service, is a function provided by one node to another in the network. We are, therefore, not persuaded by Appellants' arguments that no *service* data is provided to a base station before the mobile terminal arrives at the base station. Furthermore, as to Appellants' argument that there is "no teaching or suggestion that either Gabara or Boyle *predict data* to be sent to a mobile terminal" – we find that argument unpersuasive. (App. Br. 28 (emphasis added).) We note that claim 14 does not recite *predicting data*. Therefore, we decline to consider this argument as it is not commensurate with the scope of the claim.

"Push and Store Approach" Issue - Claims 1, 8, 9, 10, and 13

Appellants contend that the combination of Gabara and Boyle does not disclose the claimed "push and store approach," as that term is recited in claims 1, 8, and 9. (App. Br. 20-22.) We note that the term "push and store approach" is also recited in claims 10 and 13; and therefore, Appellants' contentions regarding this claim term are also applicable to those claims.

To support the determination that a person of ordinary skill in the art at the time of the invention would use a push and store approach in Gabara's system, the Examiner relies on the fact that a push and store approach is well known in the art. (Ans. 9.) The rejection cites to Boyle as evidence of that fact. (Ans. 9.) Appellants do not contend the Examiner's finding of common knowledge is in error; and we note that stating otherwise would be contrary to the Appellants' Specification, where Appellants admit that the push and store approach was known. (*See Spec.* [0007] (stating in the Background of the Invention that "[i]t has been suggested to solve this problem of an incomplete geographical access to broadband systems by

means of a push & store approach”; *see also* App. Br. 9 (pointing to the cited portion of the Background of the Invention section as disclosing the claimed subject matter).) Notwithstanding that admission, Appellants take issue with the Examiner’s combination of Gabara and Boyle because “[m]ere reservation of capacity and provision of data upon the mobile terminal’s arrival is insufficient to render obvious . . .” the claimed subject matter. (App. Br. 22.)

In response to Appellants’ arguments, the Examiner reasons that in light of the well-known push and store approach, it is common to have mobile terminals download information from a base station, and store and output that information on the mobile terminal. (Ans. 9.) We find that the prior art confirms the Examiner’s reasoning. For example, as we noted earlier, Gabara teaches pushing to the mobile terminal the handoff sequence, for use in subsequent communication with the base stations along the travel route. (Gabara, Abstract, [0036].)

Furthermore, we conclude that Appellants’ arguments focus on whether the Boyle embodiment of pushing a notification to a mobile device can be combined with Gabara’s reservation of bandwidth at the base station. (*See* App. Br. 21, Reply 6-7.) “The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.” *In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (citations omitted).

We have considered all of Appellants’ arguments, and they do not persuade us that the Examiner erred in determining that a person of ordinary

skill in the art would use the well-known push and store approach to provide a service to a mobile terminal as disclosed in Gabara.

“Discontinued Service Coverage” Issue – Claim 16

Appellants contend that because Figure 1 of Gabara illustrates that base stations cover *all areas* to be potentially travelled by the mobile terminal, the limitation of “discontinued service coverage” is not met. (App. Br. 29.) The Examiner finds that Gabara’s method of reserving bandwidth at predicted base stations ensures a continuation of service during handoff. (Ans. 13.) But Gabara also discloses this method in light of the known problem in wireless communication systems that large file transfers to mobile terminals may be impaired because of insufficient bandwidth. (*Id.*) We have considered Appellants’ arguments, and we find them unpersuasive. In particular, we note that the claim language involves providing “discontinued *service* coverage.” Thus, our conclusions concerning the term “service” are also applicable with respect to this term. In light of those conclusions, we do not agree with Appellants that the disclosure in Gabara of illustrated adjacent cell structures negates the commonly known fact that wireless communication systems have gaps in signal coverage. This signal coverage is not necessarily coextensive with the claimed “*service* coverage,” because, as the Examiner reasoned, a wireless communication system may have insufficient bandwidth capacity to provide a “service” to the mobile terminal (Ans. 13). And we note this gap in “service” may occur even though signal coverage may be present. Therefore, we are unpersuaded by Appellants’ arguments that the Examiner has erred with respect to this claim limitation.

“Starting Point” and “Destination Point” Issues – Claims 10 and 13

Appellants contend there is no teaching or suggestion that the mobile terminal transmits both its starting position and an end destination position to the system in Gabara. (App. Br. 24.) Appellants further contend that because there is no such transmission, Gabara does not calculate a route based on positions transmitted by the mobile terminal. (*Id.*) We do not agree with Appellants’ conclusions.

First, the Examiner finds that Gabara discloses two ways of establishing the mobile terminal’s travel route: (1) the mobile terminal explicitly transmits the route information to the network; and (2) the system tracks the direction of movement of the mobile terminal. (Ans. 12 (citing Gabara, Abstract, [0009]).) That is, Gabara’s route information includes the starting point and destination point (positions A and B as shown in Figure 1).

This teaching is further detailed in paragraph 30 of Gabara which states that “mobile unit 102 . . . knows, a priori, its destination point B and communicates this destination point B to network management system 104. Given points A and B and the capacity requirement of the connection of mobile unit 102, network management system . . . determines a subset [of base stations] BS . . . that provide coverage between points A and B and have sufficient capacity for the connection of mobile unit 102.” (Gabara, [0030].) We find that this passage of Gabara further supports the Examiner’s rejection.

Therefore, we maintain that the Examiner did not err in finding that the limitation-at-issue is met by Gabara.

CONCLUSIONS

On the record before us, we conclude that the Examiner did not err in rejecting independent claims 1, 8, 9, 10, and 13 under 35 U.S.C. § 103(a) over Gabara in view of Boyle. We further conclude that the Examiner did not err in rejecting claims 14 and 16, which depend from claim 1, under 35 U.S.C. § 103(a) as being unpatentable over Gabara in view of Boyle and further in view of Kirshenbaum.

As for the remaining claims not argued separately, claims 2-4, 7, and 15 depend from claim 1 and are argued as being patentable based on the patentability of claim 1. (*See App. Br. 26.*) Further, claims 11-12 depend from claim 10 and are argued as being patentable based on the patentability of claim 10. (*See id.*) As such, the rejections of these dependent claims are also sustained for the reasons set forth above with respect to claims 1 and 10.

DECISION

We affirm the rejection of claims 1, 5, 6, 8, 9, 10, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Gabara in view of Boyle.

We also affirm the rejection of claims 2-4, 7, 11-12, and 14-16 under 35 U.S.C. § 103(a) as being unpatentable over Gabara in view of Boyle and further in view of Kirshenbaum.

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

Appeal 2010-009766
Application 11/445,264

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