

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ERIC TURCOTTE and RICHARD BRUNNER

Appeal No. 2000-1556
Application No. 08/771,426¹

ON BRIEF

Before BARRETT, BLANKENSHIP and SAADAT, Administrative Patent Judges.

SAADAT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 38-42 and 47-50. Claims 43-46 and 51-54 are allowed.

We reverse.

BACKGROUND

Appellants' invention is directed generally to a multiple hyperband cellular communications system and in particular, to a

¹ Application for patent filed December 20, 1996, which is a continuation of Application 08/423,942, filed April 19, 1995, now abandoned.

Appeal No. 2000-1556
Application No. 08/771,426

mobile station capable of operating in multiple hyperbands. As the mobile station moves through a plurality of cells operating either in a first hyperband or a second hyperband, the mobile station may change the base station as well as the hyperband over which the communication is performed (specification, page 13). The mobile station is programmed with hyperband and/or frequency band selection criteria which is transmitted to a base station or system server (specification, page 18). The system server receives the mobile station's programmed selection criteria and identifies a list of neighboring cells across each of the hyperbands for hand-off (specification, page 26). The list is processed in view of the received mobile station selection criteria to select one of the cells in a hyperband and frequency band for hand-off according to the received criteria (id.).

Representative independent claim 38 is reproduced as follows:

38. A multiple hyperband cellular communications system, comprising:

a plurality of cells operating in a first hyperband;

a plurality of cells operating in a second hyperband;

a mobile station moving through the cells of the first and second hyperbands and programmed with hyperband selection criteria and operating to transmit its programmed hyperband selection criteria;

Appeal No. 2000-1556
Application No. 08/771,426

base station for selecting between macrocell and microcell operation (brief, page 7). Appellants further assert that Leung does not disclose or suggest operation on different hyperbands and instead, is concerned with macrocell or microcell assignment based on mobility determination for the mobile station (brief, pages 7 & 8 and reply brief page 4). Although Appellants recognize the discussion of different hyperbands in the admitted prior art, Appellants assert that the admitted prior art merely discusses the existence of different hyperbands and does not address the deficiencies of Leung (brief, page 8). Additionally, Appellants point out that neither programming the mobile station with hyperband criteria nor operation on different hyperbands is addressed in the admitted prior art (id.). In particular, Appellants assert that the desire to provide additional services does not suggest modifying Leung's method of allocating mobile stations to macrocells or microcells by operating the microcells and macrocells on different hyperbands (brief, pages 9 & 10 and reply brief, page 3).

In response to Appellants' arguments, the Examiner asserts that although Leung fails to disclose different hyperbands, the admitted prior art discloses the use of multiple hyperbands for operating the mobile station. The Examiner relies on the

Appeal No. 2000-1556
Application No. 08/771,426

overlapping property of the cells (answer, page 7) and specifically points out that:

[T]he admitted prior art does disclose or suggest on page 5 line 13 to page 6 line 1 of the present specification that **overlapping** or adjacent cells operate in different hyperbands. Since the microcells and macrocells in Leung are also **overlapping cells** (see column 8 lines 31-42), it is clear that the above teaching of the admitted prior art should be used in Leung as suggested by the admitted prior art.

The Examiner also argues that the microcell-macrocell selection criteria in Leung's mobile station reads on the claimed mobile station "programmed with hyperband selection criteria" because the mobile station must be programmed to generate the statistics information (Id.).

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). The conclusion that the claimed subject matter is obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Appeal No. 2000-1556
Application No. 08/771,426

Furthermore, the Examiner must also produce factual basis supported by teaching in a prior art reference or shown to be common knowledge of unquestionable demonstration, consistent with the holding in Graham v. John Deere Co., 383 U.S. 1 (1966). Our reviewing court requires this evidence in order to establish a prima facie case. In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984); In re Cofer, 354 F.2d 664, 668, 148 USPQ 268, 271-72 (CCPA 1966). However, "the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." In re Lee, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

As the Examiner and Appellants concede, Leung teaches a communications system, as depicted in Figure 1, in which the base station prioritizes call handling and handoff of a mobile unit to either a macrocell or a microcell as the mobile unit moves across the covered cell grid (col. 2, lines 31-36 and col. 8, lines 31-31-58). The mobile unit monitors, accumulates and processes a number of mobility and teletraffic statistics for that unit to generate a mobility index which is used for assigning the mobile unit and handoff to a macrocell or microcell (col. 9, line 19-27

Appeal No. 2000-1556
Application No. 08/771,426

and col. 11, line 44-57). Therefore, Leung is merely concerned with efficient allocation of system resources based on the processed statistics that determine a cell-level hierarchy and how the calls should be distributed among the base stations by selection between macrocell or microcell operation. However, Leung discloses nothing related to hyperband selection criteria programmed into the mobile unit and the operation of the communications system on either a first hyperband or a second hyperband in view of the hyperband selection criteria.

The admitted prior art, on the other hand, teaches that cellular communications on different hyperbands may exist for mobile stations that are capable of operating in multiple hyperbands. Additionally, the admitted prior art points to the need for controlling overlapping or adjacent cells in different hyperbands by stating in page 6, lines 1-10, that:

It would be beneficial if the cellular communications system were configured from both the system and terminal point of view to allow multiple hyperband capable mobile stations to operate seamlessly between the available hyperbands. At the same time, however, some control over which hyperband and frequency band therein that are accessed by the mobile station must be maintained in order to avoid subscriber surcharges and enable service providers to derive revenue from use of their own bands.

Appeal No. 2000-1556
Application No. 08/771,426

Thus, the admitted prior art merely points to the existence of overlapping or adjacent cells in different hyperbands, but clearly states the need for configuring the communications system such that the mobile station may operate between different hyperbands.

Based on our findings above, we disagree with the Examiner's arguments that Leung's mobility index, which is generated by the mobile unit based on the operation of the mobile unit, is the same as the claimed hyperband selection criteria programmed into the mobile station. The programming of Leung's mobile unit to monitor and process the collected statistics for generating a mobility index, as pointed out by Appellants (reply brief, pages 4 & 5), determines the handoff to either a macrocell or a microcell base station and is unrelated to programming a mobile station with hyperband selection criteria. The claimed hyperband selection criteria is further used to process "a neighbor list identifying cells in both the first and second hyperbands" and "an operation in either the first or second hyperbands." We also agree with Appellants that Leung includes no indication that the disclosed macrocell and microcell systems operate on different hyperbands or whether the mobile unit is capable of operating on different hyperbands (brief, pages 7 & 8). Additionally, the

Appeal No. 2000-1556
Application No. 08/771,426

admitted prior art generally discusses the availability of different hyperbands that merely "presents an opportunity for cellular telephone switches to control overlapping or adjacent cells in different hyperbands" (specification, pages 5 & 6). Therefore, the admitted prior art provides no teaching related to programming the mobile station with hyperband selection criteria or operating Leung's microcell and macrocell systems on different hyperbands for the mobile station to move between cells and between different hyperbands.

As the Federal Circuit states, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In re Fritch, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), citing In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). The court further reasons in Karsten Mfg. Corp. v. Cleveland Gulf Co., 242 F.3d 1376, 1385, 58 USPQ2d 1286, 1293 (Fed. Cir. 2001) that for an invention to be obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in the way that would produce the claimed invention.

Appeal No. 2000-1556
Application No. 08/771,426

Based on these well-settled principals, we disagree with the Examiner that, because the overlapping capability of cells operating on different hyperbands means that any overlapping cells should operate on different hyperbands, one of ordinary skill in the art would have found it obvious to combine the admitted prior art with Leung. The admitted prior art, in fact, merely points to the existence of overlapping or adjacent cells in different hyperbands and it is the claimed invention that provides the details of how to configure the communications system and the mobile station to move between cells and between different hyperbands. Furthermore, we agree with Appellants that the desire to provide more services would not have taught or motivated one of ordinary skill in the art to operate Leung's macrocell and microcell systems on different hyperbands. In that regard, while the existence of multiple hyperbands for mobile communications is taught by the admitted prior art, we find no suggestion in the prior art for implementing operation in multiple hyperbands of admitted prior art in the macrocells and microcells system of Leung.

In view of our analysis above, we find that the Examiner has failed to set forth a prima facie case of obviousness because the necessary teachings and suggestions for combining Leung with the

Appeal No. 2000-1556
Application No. 08/771,426

admitted prior art, as suggested by the Examiner, are not shown. We note that independent claim 47 recites the steps of programming mobile stations with "hyperband selection criteria" and "an operation in a selected one of the multiple hyperbands," which are neither taught nor suggested by the prior art, as discussed above with respect to claim 38. Accordingly, we do not sustain the 35 U.S.C. § 103 rejection of independent claims 38 and 47, as well as claims 39-42 and 48-50 dependent thereupon, over Leung and the admitted prior art.

Appeal No. 2000-1556
Application No. 08/771,426

CONCLUSION

In view of the foregoing, the decision of the Examiner rejecting claims 38-42 and 47-50 under 35 U.S.C. § 103 is reversed.

REVERSED

LEE E. BARRETT)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
HOWARD B. BLANKENSHIP)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
)	
MAHSHID D. SAADAT)	
Administrative Patent Judge)	

MDS/ki

Appeal No. 2000-1556
Application No. 08/771,426

Sandra Beauchesne
Ericsson Canada, Inc.
LCM/UP IPR Section
8400 Decarie Blvd.
Town of Mount Royal, QC
H4P 2N2
CANADA