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D E C I S I O N
of 20 January 2006

Case Number: T 1094/03 - 3.5.03

Application Number: 00301034.5

Publication Number: 1028543

IPC: H04B 7/005

Language of the proceedings: EN

Title of invention:
Method for allocating downlink electromagnetic power in wireless networks

Applicant:
LUCENT TECHNOLOGIES INC.

Opponent:
-

Headword:
Allocating downlink power/LUCENT

Relevant legal provisions:
EPC Art. 84

Keyword:
"Clarity and support (no)"

Decisions cited:
G 0010/93

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1094/03 - 3.5.03

D E C I S I O N
of the Technical Board of Appeal 3.5.03
of 20 January 2006

Appellant: LUCENT TECHNOLOGIES INC.
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07974-0636 (US)

Representative: Sarup, David Alexander
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 30 April 2003 refusing European application No. 00301034.5 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: A. S. Clelland
Members: D. H. Rees
R. Moufang

Summary of Facts and Submissions

I. This is an appeal from the decision of the examining division, dispatched on 30 April 2003, to refuse the European patent application number 00 301 034.5, publication number 1 028 543. The reason given for the refusal was that the subject-matter of independent claim 1 lacked novelty with regard to the disclosure of document

D1: EP 0 856 955 A.

The decision also stated that the subject-matter of dependent claims 2 to 4 was not new and that the subject-matter of the other independent claims 14 and 24 did not involve an inventive step, referring to a previous communication.

II. Notice of appeal was filed and the fee paid on 30 June 2003. A statement setting out the grounds of the appeal was filed on 29 August 2003.

III. The board issued, of its own motion, a summons to attend oral proceedings to be held on 20 January 2006. In the accompanying communication the board gave its preliminary opinion that various of the claims failed to satisfy the requirements of Article 84, because they lacked clarity and/or support, and of Articles 52(1), 54 and 56, the subject-matter of the independent claims apparently lacking novelty and/or an inventive step, in view of the disclosure of D1.

IV. In a submission on 20 December 2005 the appellant's representative informed the board that he would not attend the oral proceedings. It was requested that the oral proceedings be cancelled and that the procedure be continued in writing. A new set of claims 1 to 21 ("primary replacement claim set") was submitted as the basis of the appellant's main request, and a further set of claims 1 to 15 ("secondary replacement claim set") as the basis of an auxiliary request. The accompanying letter contained arguments intended to rebut the board's objections under Article 84 EPC, as well as reiterating the arguments put forward in the statement of grounds of the appeal.

V. The independent claims of the main request read as follows:

"1. A method for allocating downlink power in a wireless network (114) comprising the steps of:
measuring (S10, S18) received signal parameters, of electromagnetic transmissions from base stations (102, 104, 106, 108, 501), at measurement locations (112) within defined radio frequency coverage areas (100), the measurement locations being geographical points where mobile stations may obtain wireless service from the wireless network;
determining (S12, S20) propagation factors (117, 504) associated with the electromagnetic transmissions as a function of the measurement locations (112); and
determining (S14, S22) a downlink transmit power (506) for at least one of the base stations (102, 104, 106, 108, 501) based upon the propagation factors (117) and a target performance goal for the coverage areas (100).

14. A system for allocating downlink power in a wireless network (114) including base stations (501), the system comprising:
a test receiver (502) for measuring received signal strengths, of electromagnetic transmissions from the base stations (501), at measurement locations (112) within defined radio frequency coverage areas (100), the measurement locations being geographical points where mobile stations may obtain wireless service from the wireless network; and
a processing system (503) including a determiner (504) for determining propagation factors (117) and a calculator (506) for calculating initial downlink transmit powers for the base stations (501), the propagation factors (117) being associated with the electromagnetic transmissions as a function of the measurement locations (112), the initial downlink transmit powers being within corresponding transmitter power intervals based upon the propagation factors (117) and at least one target performance goal for the coverage areas (100)."

The independent claims 1 and 11 of the auxiliary request differ from claims 1 and 14 of the main request respectively only in that they further specify "each of the propagation factors characterizing a propagation path between one of a plurality of base stations and each of the measurement locations," inserted after "as a function of the measurement locations (112)".

VI. The appellant implicitly requests that the decision under appeal be set aside and that a patent be granted on the basis of

claims 1 to 21 of the "primary replacement claim set"

or in the alternative on the basis of

claims 1 to 15 of the "secondary replacement claim set",

both sets of claims submitted on 20 December 2005.

VII. Oral proceedings took place as scheduled on 20 January 2006, the board having informed the appellant that the request to cancel oral proceedings could not be granted. The appellant was not represented at the oral proceedings, during which the board deliberated and the chairman announced the decision taken.

Reasons for the Decision

1. The function of a board of appeal is to reach a decision on the issues presented to it, not to act as an alternative examining division (G 10/93 OJ 1995, 172, in particular point 4). The need for procedural economy dictates that the board should reach its decision as quickly as possible while giving the appellant a fair chance to argue its case. In the present appeal the holding of oral proceedings was considered by the board to meet both of these requirements. A summons was therefore issued. The appellant gave no reasons to support the request to cancel the oral proceedings scheduled by the board and to continue the procedure in writing. The board considered that, despite the appellant's announced intention not to attend, the twin requirements of fairness and procedural economy were still best served by holding the oral proceedings as

scheduled. The mere choice by the appellant not to attend was not sufficient reason to delay the board's decision. As made clear in the Rules of Procedure of the Boards of Appeal, Article 11(3), a party duly summoned to oral proceedings and not attending may be treated as relying only on its written case. The board considered that Article 113(1) EPC had been satisfied. The requests that the oral proceedings be cancelled and that the procedure be continued in writing were therefore refused.

2. The appellant has not explicitly specified the further text of the application on the basis of which grant of a patent is requested, despite the observation at point 2 of the communication accompanying the summons to oral proceedings that the absence of a defined text in the statement of grounds of the appeal resulted in the requirements of Article 10a(2) of the Rules of Procedure of the Boards of Appeal not being satisfied. The board presumes that description and drawings are intended to be as refused, with the exception of page 52, a new version of which was submitted on 20 December 2005.

3. *Clarity of and support for the claims of the main request*

Among the objections under Article 84 EPC, i.e. a lack of clarity of various claims and of support in the description for claimed subject-matter, raised by the board in its communication, there are several where the appellant's response is not convincing.

3.1 "Propagation factors": This expression, used without definition or restriction, is not a term which would have a well-defined meaning to the person skilled in the art. It is vague, and could have a variety of interpretations. "Factor" can mean anything having an influence on something else, so that for example a "propagation factor" could be atmospheric density. In this sense the "factor" may also represent a numerical variable, having an influence on propagation according to some algebraic function. Since the nature of the "propagation factor" is not further qualified in the claimed subject-matter, it encompasses many alternatives not envisaged in the description (e.g. atmospheric density, as mentioned) and the claimed subject-matter is not clear and/or lacks support.

In response to this argument, the appellant points to a passage in the description (paragraph 0013), which specifies what a "propagation factor" is for the purposes of the method described. However, the mere fact that the "propagation factor" discussed in the description is restricted to a specific measured numerical value used as a simple multiplier of the broadcast downlink power does not mean that the claimed subject-matter is intended to be so restricted. Indeed the application makes clear throughout that terms used are meant to be broadly interpreted. The board therefore concludes that the matter for which protection is sought is unclear, in that the breadth of the term "propagation factor" is undefined, and that it is moreover not supported by the description, in that this expression would be understood by the person skilled in the art to cover alternatives not envisaged

and discussed in the description. Thus the independent claims do not satisfy Article 84 EPC.

3.2 "As a function of": In response to doubt raised in the board's communication, the appellant argued that the phrase "as a function of" "simply implies a correlation between two parameters (e.g. expressed as an equation or expression)," (appellant's letter of 20 December 2005, page 4). The board takes this to mean that the appellant intends there to be some kind of algebraic relationship between the "propagation factors" and the measurement locations, this relationship to be determined by an analysis of the measured values, using some unspecified method, e.g. fitting a linear equation using least squared errors. However the description does not disclose such a relationship between these variables or such an analysis step. The propagation factors discussed in the description are simply the measured fractional loss in the tested signal parameter, and there is no indication that there is any equation or expression relating this loss to the measurement location in general. Mathematically a function is merely a many-to-one mapping from one set to another. In other words according to a strict mathematical interpretation the phrase "as a function of" only defines that there is a propagation factor associated with each measurement location. This corresponds to what the board understands from the description. However, it is apparent, including from the appellant's arguments, that the skilled person might also understand the expression to imply some kind of algebraic relationship, which does not in fact correspond to what is described. Thus this phrase too leads to a lack of clarity in the independent claims.

3.3 The board's communication further raised an objection that the expression "initial downlink transmit powers", which is still used in present independent claim 14, is misleading, i.e. unclear and/or lacking support in the description. The expression implies that the signals are actually transmitted at this power, whereas the phrase is used in the description only with respect to a specific stage in the calculation of the actual transmit powers, and does not correspond to any actual power values of transmissions. In response the appellant points to Fig. 1 of the application and argues that "viewed in context with the entirety of the Specification", the expression would be understood by the person skilled in the art. However, a contradiction between the normal meaning of a phrase and the way it is used in the description of an application is rather evidence of a lack of clarity in the claim than the contrary. Claimed subject-matter must be, to the extent possible, clear in itself.

3.4 Hence the independent claims of the main request do not satisfy the requirements of Article 84 EPC and the request is therefore not allowable.

4. *Clarity of and support for the claims of the auxiliary request*

4.1 Claims 1 and 11 of the "secondary replacement claim set" specify each of the "propagation factors" to be "characterizing a propagation path between one of a plurality of base stations and each of the measurement locations." This corresponds, at least approximately, to statements in the description at paragraphs 0013 and

0014. The appellant has put forward no specific arguments that this makes the claims clear. It is merely stated that, "In view of the Appellant's compliant Amendment, Appellant respectfully requests that the Appeal Board withdraw this objection," (letter of 20 December 2005, page 10). However the board does not find that this addition significantly clarifies the feature. The arguments given in point 3.1 above apply equally to the new formulation, and the term "characterizing" in this context appears actually to add to the lack of clarity.

4.2 The further objections under Article 84 EPC against claims 1 and 14 of the main request made in points 3.2 and 3.3 above apply *mutatis mutandis* to claims 1 and 11 of the secondary replacement claim set.

4.3 Hence the auxiliary request also does not satisfy the requirements of Article 84 EPC and is not allowable.

5. It follows that there is no allowable request and the appeal must be dismissed. The board is therefore not required to come to any conclusions with respect to the objections of lack of novelty and inventive step which were also raised in the board's communication. However, it is noted that on a *prima facie* assessment, the feature added to both independent claims of both requests that, "the measurement locations [are] geographical points where mobile stations may obtain wireless service from the wireless network," does not overcome these objections. The "propagation factors" of D1, "Loss_km", are "detected by a measurement process" (D1, column 26, line 20), and while the "Loss_km" relate to "sub-areas or small equal-size squares" (D1,

column 26, line 11), measurement of the signal parameter would evidently nonetheless take place at "geographical points". Indeed the board doubts whether the subject-matter of claim 1 of either request is distinguishable from the prior art described in the introduction of the application itself, since "determining a downlink transmit power" could include a process carried out by an operator based on practical experience.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

D. Magliano A. S. Clelland