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**Datasheet for the decision  
of 22 November 2011**

**Case Number:** T 1342/09 - 3.4.01

**Application Number:** 02010598.7

**Publication Number:** 1239535

**IPC:** H01Q 3/32, H01P 1/18

**Language of the proceedings:** EN

**Title of invention:**

Cellular base station telecommunication system with an antenna control arrangement and antenna control arrangement

**Patent Proprietor:**

Andrew Corporation

**Opponent:**

RADIACIÓN Y MICROONDAS, S.A.

**Headword:**

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**Relevant legal provisions:**

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**Relevant legal provisions (EPC 1973):**

EPC Art. 100(c), 76(1)

**Keyword:**

"Added subject-matter (yes)"

**Decisions cited:**

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**Catchword:**

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Case Number: T 1342/09 - 3.4.01

**D E C I S I O N**  
of the Technical Board of Appeal 3.4.01  
of 22 November 2011

**Appellant:**  
(Patent Proprietor)

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**Respondent I:**  
(Opponent 1)

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**Representative:**

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**Decision under appeal:**

Decision of the Opposition Division of the  
European Patent Office posted 2 April 2009  
revoking European patent No. 1239535 pursuant  
to Article 101(3)(b) EPC.

**Composition of the Board:**

**Chairman:** F. Neumann  
**Members:** H. Wolfrum  
E. Dufrasne

## Summary of Facts and Submissions

- I. The contested European patent No. 1 239 535 arises from European patent application EP 02 010 598.7, which is a divisional application from the earlier application EP 95 933 674.4, published as international application WO-A-96/14670 (referred to in the following as the 'parent application').
- II. The opposition of three opponents (OI : RADIACIÓN Y MICROONDAS, SA; OII : POWERWAVE TECHNOLOGIES SWEDEN AB; and OIII : RACAL ANTENNAS, LTD.) was based on the grounds of Articles 100(a) EPC 1973 for lack of novelty and inventive step as well as on Article 100(c) EPC 1973.
- In the course of the opposition proceedings, opponents OII and OIII withdrew their oppositions.
- By decision dispatched on 2 April 2009 the opposition division revoked the patent for the reason of added subject-matter (Article 100(c) EPC 1973 in combination with Article 76(1) EPC 1973 and/or Article 123(2) EPC 1973) in the requests then on file.
- III. The appellant (patent proprietor, ANDREW CORPORATION) lodged an appeal against this decision. The notice of appeal was received on 2 June 2009 and the prescribed fee was paid on the same day. On 12 August 2009 a statement of grounds of appeal was filed. The appellant requested that the contested decision be set aside and filed a new set of amended claims 1 to 10.
- IV. The respondent, opponent OI, did not file any observations in the appeal proceedings.

- V. Making use of the discretion conferred by Article 116(1) EPC, the Board summoned the parties on 8 July 2011 to oral proceedings. In an annex to the summons pursuant to Article 15(1) RPBA, the Board drew the parties' attention *inter alia* to a number of problems having regard to added subject-matter.
- VI. Oral proceedings were held on 22 November 2011 in the absence of the respondent. The sole point of debate was the question of added subject-matter (Article 100(c) EPC 1973 in combination with Article 76(1) EPC 1973).
- VII. The appellant requested that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of the request filed on 12 August 2009 with the statement setting out the grounds of appeal.
- VIII. Claim 1 of the appellant's request reads as follows:

*"1. A method of adjusting the tilt of a beam produced by a panel antenna in a cellular base station telecommunication system from a first known tilt to a second known tilt, the method comprising:*

*providing a differential electromechanical phase shifter (2) having an input on a moveable first portion and a second portion having first and second output transmission line portions adapted to be operatively coupled to first and second spaced radiating elements of a panel antenna,*

*using an electrical actuator (41) to move said moveable first portion of the phase shifter relative to said first and second output transmission line portions to differentially advance signal phase in one of said first*

*and second output transmission line portions while commensurately retarding signal phase in the other of said first and second output transmission line portions, the method being characterized by driving the electrical actuator with a local controller (80) communicating directly with actuator, and controlling the local controller with a central controller (89) located remote from said local controller and said antenna."*

Claims 2 to 5 are dependent claims, and claims 6 to 10 are directed to a system for adjusting the tilt of a beam produced by a panel antenna useful in cellular base station telecommunication.

## **Reasons for the Decision**

1. In the light of the entry into force of the EPC 2000, reference is made to Article 7(1), 2nd sentence of the Revision Act of 29 November 2000 ("Act revising the Convention on the Grant of European Patents (European Patent Convention) of 5 October 1973, last revised on 17 December 1991") and the transitional provisions for the amended and new provisions of the EPC (Decision of the Administrative Council of 28 June 2001), from which it may be derived which Articles of the EPC 1973 are still applicable and which Articles of the EPC 2000 shall apply.
2. The appeal complies with the requirements of Articles 106 to 108 EPC and Rule 99 EPC and is, therefore, admissible.

3. Although having been duly summoned, the respondent did not attend the oral proceedings. In accordance with Rule 115(2) EPC and Article 15(3) RPBA, the proceedings were continued without that party.
4. Added subject-matter vis-à-vis the parent application (Article 100(c) EPC 1973 in combination with Article 76 EPC 1973)
  - 4.1 Having regard to the question of added subject-matter, the opposition division held in its decision *inter alia* that the parent application did not pertain to a "method of adjusting the tilt of a beam produced by a panel antenna in a cellular base station telecommunication system" (emphasis added).

In its communication annexed to the summons, the Board, apart from addressing a number of further concerns as to added subject-matter, indicated that it tended to share this finding of the opposition division.

- 4.2 According to the appellant, there was an appropriate basis for the term "*cellular base station telecommunication system*" in the parent application.

On page 22 of the parent application it was stated that the invention would find particular application in antenna systems such as those used in cellular communication systems. Such a cellular system was clearly adapted to communicate over a distance, as there was reference to it using antennas. It was therefore a telecommunication system.

Reference to the term "*cellular base station*" was made on page 18, lines 10 to 19, of the parent application. From that the skilled person would realise without prompting that such a base station could naturally form part of the cellular telecommunication system referred to on page 22 as he was aware of the fact that cells within a cellular telecommunication system were typically defined by the signal coverage of base stations. On page 6, lines 18 to 32, of the parent application the control of a plurality of antenna systems, each comprising one or more antennas, was set in the context of a control strategy for a number of cellular base stations. This "number of cellular base stations" was nothing else than a cellular base station telecommunication system.

Moreover, claims 14 to 20 of the parent application as published related to an antenna system and claim 21 recited a communication system comprising a plurality of the antenna systems of claims 14 to 20 located at a plurality of sites. Such a communication system, having the antenna systems located at various sites, was evidently a cellular base station telecommunication system.

Therefore, the skilled person, having read the parent application, would have immediately understood that the parent application related to cellular base station telecommunication systems and would not be surprised by the use of the term in the divisional patent under consideration. Using his common general knowledge, the skilled person would have realised that a patent application relating to communication systems could include a cellular base station telecommunication system. Because of the fact that the description referred to

cellular base stations, the skilled person did not find any additional teaching in the term in question in the claims presently on file. In summary, the concept of a "cellular base station telecommunication system" was immediately and clearly derivable by the skilled person from the parent application without additional assistance or information and thus was contained within the disclosure of the parent application.

- 4.3 The documents of the parent application as filed and published do not mention the term "*cellular base station telecommunication system*".

Thus, in the absence of an explicit disclosure of a cellular base station telecommunication system it remains to be examined whether a method of adjusting the tilt of a beam produced by a panel antenna in such a system is to be considered to be necessarily implied by the content of the parent application. In this context, the decisive question is not whether it would be obvious for the skilled reader of the parent application that the panel antenna and phase shifter drive mechanism could be expanded into or incorporated in a telecommunication system comprising cellular base stations, but whether the parent application discloses in a direct and unambiguous manner a method of adjusting the tilt of an antenna beam in a cellular base station telecommunication system. To this end it must be established whether the panel antenna of the parent application is disclosed as forming part of a cellular base station telecommunication system.

- 4.3.1 According to page 1, lines 3 to 8, of the parent application "*the present invention relates to an antenna control system for varying the beam tilt of one or more*



*antenna. More particularly, although not exclusively, the present invention relates to a drive system for use in an antenna which incorporates one or more phase shifter."*

This passage does not even suggest that a telecommunication system is in any way involved with or may form part of the invention. The Board emphasises that the originally-filed parent application concentrates on the drive means of the antenna control system and only mentions an envisaged use in passing.

Indeed, original claims 1 to 13 of the parent application are directed to a *"drive means for adjusting the relative phase shifts produced by a plurality of phase shifters connected to an array of radiating elements"*. The other claims that were originally filed relate to an *"antenna system comprising one or more antenna"* (claims 14 to 20) and a *"communication system comprising a plurality of antenna systems as claimed in any one of claims 14 to 20 located at a plurality of sites"* (claim 21). Contrary to the appellant's assertion, the term "site" used in claim 21 is by no means synonymous with a "cellular base station" of a telecommunication system nor does an arrangement of a plurality of antenna systems (each of which may consist of a single antenna) at a plurality of sites (in the sense of "locations") necessarily amount to a cellular base station telecommunication system.

- 4.3.2 The occasional references in the description of the parent application to communication systems and a cellular base station or stations do not directly and unambiguously disclose that the panel antenna forms part of a cellular base station telecommunication system, either.

In the Board's view, the information given on page 22 of the parent application, according to which "*the present invention may find particular application in antenna systems, such as those used in cellular communication systems*", rather confirms that the invention as taught and disclosed in the parent application does not relate to a cellular communication system (let alone a method of adjusting the beam tilt of an antenna in a cellular base station telecommunication system) but instead concerns items, such as drive means or antenna systems, which are of potential use in such cellular communication systems. When considering the question of added subject-matter, a distinction must be made between what has been originally disclosed and what is rendered obvious by the disclosure. The mere circumstance that a disclosed item may form part of a larger system does not amount to a valid disclosure of the latter.

The description on page 18 of the parent application, to which the appellant has made reference, provides some information as to the control strategy for a number of antennas of a single cellular base station and already for this reason cannot constitute a basis of disclosure for a cellular base station telecommunication system and its operation as a whole.

Finally, a "*number of cellular base stations*" is mentioned on page 6, lines 28 to 32, of the parent application in the context of a reference to an antenna system comprising one or more antenna. However, it is the antenna system which is presented in this context as "a further aspect of the invention" (page 6, lines 18 to 27, of the parent application). Moreover, it is not clear from this passage whether the antennas referred to

therein comprise a panel antenna the tilt of which is adjusted as is specified for the method according to present claim 1. There is no suggestion in this passage that the antennas and the electromechanical means for varying the downtilt of an antenna are the same as those discussed elsewhere in the application. In view of the generality of this passage and the absence of any further explanation, and in particular in view of the fact that the passage does not describe the nature of the antennas or the electromechanical means referred to therein, the reference on page 6 to cellular base stations constitutes an isolated piece of information which merely alludes in passing to more complex systems in which panel antennas and antenna systems with downtilt control could find application. Therefore, it cannot be considered to provide a direct and unambiguous disclosure of a method of adjusting the tilt of an antenna beam in a cellular base station telecommunication system as set out in claim 1 under consideration.

4.3.3 For the sake of completeness it is added that the drawings of the parent application do not illustrate a telecommunication system, let alone a method of adjusting the beam tilt in a cellular base station telecommunication system.

5. In conclusion, the Board has found that claim 1 of the appellant's sole request contains subject-matter which extends beyond the content of the parent application as filed, contrary to the requirements of Article 76(1) EPC 1973.

The appellant's request is therefore not allowable.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar

The Chairman

R. Schumacher

F. Neumann