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**Datasheet for the decision
of 20 July 2007**

Case Number: T 1158/05 - 3.5.03

Application Number: 02253061.2

Publication Number: 1306985

IPC: H04B 7/26

Language of the proceedings: EN

Title of invention:

A hybrid transmission method for wireless communications

Patentee:

LUCENT TECHNOLOGIES INC.

Opponent:

-

Headword:

Hybrid transmission/LUCENT

Relevant legal provisions:

EPC Art. 56, 113(1), 116(1),
EPC R. 68(1)

Keyword:

"Inventive step - (no)"

Decisions cited:

T 1059/04

Catchword:

-



Case Number: T 1158/05 - 3.5.03

D E C I S I O N
of the Technical Board of Appeal 3.5.03
of 20 July 2007

Appellant: LUCENT TECHNOLOGIES INC.
600 Mountain Avenue
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Representative: Sarup, David Alexander
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 18 May 2005
refusing European application No. 02253061.2
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: D. H. Rees
Members: A. Ritzka
M.-B. Tardo-Dino

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division dated 18 May 2005, refusing European patent application No. 02 253 061.2 for the reasons that the subject-matter of claim 1 of the main request and the auxiliary requests lacked novelty having regard to the disclosure of:

D9: EP 0 680 168 A,

that claim 1 lacked clarity and claim 13 did not comply with the provisions of Article 123(2) EPC.

II. Notice of appeal was filed and the appeal fee paid on 11 July 2005. The statement of grounds of appeal was filed on 20 August 2005 with a letter dated 15 August 2005. The appellant requested that the appealed decision be set aside and that a patent be granted based on the first or second auxiliary claim set filed with letter of 14 March 2005 on which the decision under appeal was based. The main set of claims on which the decision under appeal was based was withdrawn from further consideration in the letter dated 15 August 2005.

The board issued an invitation to oral proceedings accompanied by a communication. In the communication the board expressed the preliminary view that claims 1 and 13 of both sets of claims were not clear and that the subject-matter of independent claim 1 of both requests did not involve an inventive step having regard to the disclosure of either of

D6: EP 0 841 763 A
D9: EP 0 680 168 A.

- III. In its letter submitted 18 June 2007, in response to the communication, the appellant stated that it had no further arguments to present other than the ones last submitted in its letter dated 15 August 2005.
- IV. In its letter dated 15 July 2007 the appellant announced that it would not attend the oral proceedings set for 20 July 2007 and requested that the oral proceedings be cancelled and the procedure continued in writing. The board informed the appellant that the oral proceedings would take place as scheduled on 20 July 2007.
- V. Oral proceedings took place as scheduled on 20 July 2007. Neither the appellant nor its representative attended the hearing. After deliberation on the basis of the submissions and requests of 20 August 2005 and of 18 June 2007 the chairman announced the board's decision.
- VI. Claim 1 according to the first auxiliary claim set reads as follows:

"A method for transmitting information in a communication channel (100) of a wireless communication system, the method comprising:

dividing the communication channel (100) into a plurality of time slots (111-118) 5 [sic] of equal duration; and

sub-dividing, on other than a time division basis, each of the plurality of time slots (111-118) into at least two sub-slots (120-121), CHARACTERIZED IN THAT

for a transmission within the communication channel (100) that extends to more than one contiguous time slot (111-118),

varying a number of contiguous sub-slots that are allocated to at least one of the time slots within a transmission from a number of sub-slots that are allocated to at least one other time slot within the transmission."

Claim 1 according to the second auxiliary claim set differs from claim 1 according to the first auxiliary claim set in replacing

"varying a number of contiguous sub-slots that are allocated to at least one of the time slots within a transmission from a number of sub-slots that are allocated to at least one other time slot within the transmission."

by

"allocating one or more contiguous sub-slots to each time slot such that the number of contiguous sub-slots allocated to at least one of the time slots within a transmission is different from the number of sub-slots allocated to one other time slot within the transmission."

Reasons for the Decision

1. *Oral proceedings*
 - 1.1 As pointed out by this board in a different composition in decision T 1059/04 (unpublished), 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 (cf. G 10/93, OJ EPO 1995 172, in particular point 4).
 - 1.2 According to Article 116(1) EPC, oral proceedings shall take place either at the instance of the European Patent Office if it considers this to be expedient or at request of any party to the proceedings. Oral proceedings are considered as an effective way to discuss cases mature for decision, because the appellant is given the opportunity to present its concluding comments on the outstanding issues (Article 113(1) EPC). A decision can be made at the end of oral proceedings based on the requests discussed during oral proceedings (Rule 68(1) EPC).
 - 1.3 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. The appellant stated that it had no further arguments than those presented in writing (see point III. above). Moreover, it 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 request to cancel oral proceedings and to continue in writing was therefore refused.

2. *Request based on first auxiliary claim set*

2.1 Claim interpretation

Claim 1 of the first auxiliary claim set refers to varying a number of contiguous sub-slots that are allocated to at least one of the time slots within a transmission from a number of sub-slots that are allocated to at least one other time slot within the transmission. "Sub-slots" are divisions of a time slot and hence cannot literally be "allocated" to a time slot. Rather they are allocated to a user or a user's transmission. The board therefore interprets this feature as allocating one or more contiguous sub-slots within each time slot such that the number of contiguous sub-slots allocated within at least one of the time slots to a transmission is different from the number of sub-slots allocated within one other time slot to the transmission.

2.2 Novelty and inventive step

2.2.1 The board's comments on novelty and inventive step are based on the interpretation of the claims discussed at point 2.1 above.

2.2.2 The board considers D9 as the most relevant prior art document.

2.2.3 D9 discloses a method for maximizing usage of a communications transmission medium, which may be used in wireless communications systems (see column 1, lines 14 to 25). It was common general knowledge at the priority date that in wireless communications systems the transmission medium is shared among a plurality of users using distinct communication channels (see e.g. Figure 2 of D9). Thus, D9 discloses a method for transmitting information in a communication channel of a wireless communication system.

2.2.4 As shown in the drawings, e.g. Figure 6 of D9, the communication channel is divided into a plurality of time slots of equal duration (see S0 to S6 in Figure 6) and each of the plurality of time slots is further subdivided, on a frequency division basis, i.e. other than time division basis, into at least two sub-slots (see F0 to F7 in Figure 6).

2.2.5 A single user may occupy contiguous allocations which can be realized as a continuous time allocation (see reference sign 44 in Figure 6 and column 5, lines 23 to 28), i.e. a communication channel that extends to more than one contiguous time slot is used for transmission. If more than one time slot is allocated to a user, the number of frequency sub-slots allocated to the same user is constant in the embodiments disclosed in Figures 5 and 6, see e.g. user A, B, C, L.

2.2.6 If the term "transmission" in claim 1 is understood as "user" as suggested by the appellant in the statement of grounds of appeal in its letter dated 15 August 2005 in the second to fourth paragraph of page 2, the

subject-matter of claim 1 differs from D9 in that for a transmission that extends to more than one contiguous time slot the number of contiguous sub-slots allocated within at least one of the time slots is different from the number of sub-slots allocated within one other time slot to the transmission. Thus, using this narrow interpretation of the term "transmission", the subject-matter of claim 1 is novel.

2.2.7 Starting from D9, the board understands that the problem underlying claim 1 is to provide for a method for efficiently handling variable size packet transmissions (see published application, page 2, lines 54 to 58).

2.2.8 D9 itself suggests the solution to this problem. It states at column 5, lines 13 to 17 that one unit consisting of one frequency band allocation, i.e. frequency sub-slot, for one time slot allocation was the minimum amount of communications resource which would be available to a user. Moreover, D9 states at column 5, lines 32 to 38 that different users could modulate their signals into one or more of the available frequency bands, i.e. frequency sub-slots, on a time slot-by-slot basis in order to effect optimum scheduling of the users within the medium to efficiently make use of the available time-frequency medium. The skilled person would understand that modulation on a time slot-by-slot basis implies the possible use of a different number of frequency sub-slots for each time-slot allocated to a user, whereby the time-slots allocated to the user are recommended to be contiguous (see column 5, lines 23-28).

2.2.9 Further, in the embodiment disclosed with reference to figure 6 adjacent time slots S0 and S1 are allocated to the users E and F, both of them being medium-speed users, i.e. having equal quality requirements of the radio channel. Two frequency sub-slots F1 and F2 within the time slot S0 are allocated to the user E and three frequency sub-slots F1, F2, and F3 are allocated to the user F within time slot S1. In the light of the above teaching (point 2.2.8) it would be apparent to the skilled person that if, in this embodiment, user E were identical to user F, user E would be allocated to time slots S0 and S1, which, according to column 5, lines 23 to 28, are realised as contiguous time slots, and would be allocated within time slot S0 to frequency sub-slots F1 and F2 and within time slot S1 to frequency sub-slots F1, F2, and F3. Thus, it would be obvious for the skilled person to allocate one or more contiguous sub-slots within each time slot such that the number of contiguous sub-slots allocated within at least one of the time slots to a transmission is different from the number of sub-slots allocated within one other time slot to the transmission.

2.2.10 Turning to the appellant's arguments presented in point 2 of the statement of grounds of appeal in its letter dated 15 August 2005, the board notes that these arguments only concern novelty and do not apply to the question whether there is an inventive step discussed in the board's communication (see point III. of facts and submissions). However, as set out in point 2.2.6 above, the subject-matter of claim 1 is considered to be novel, but, for the reasons presented in points 2.2.7, 2.2.8 and 2.2.9, obvious.

2.2.11 Thus, the subject-matter of claim 1 and of dependent claims 2 to 15 does not involve an inventive step and the request based on the first auxiliary claim set is not allowable.

3. Request based on the second auxiliary claim set

Applying the interpretation of "sub-slots" given in point 2.1 analogously to the second auxiliary claim set, claims 1 to 15 of the second auxiliary claim set are substantively identical to claims 1 to 15 of the first auxiliary claim set within the interpretation of claim 1 of the first auxiliary claim set given in point 2.1 above.

Thus, the discussion on inventive step presented in point 2.2 applies and the request based on the second auxiliary claim set is not allowable.

4. There being no other requests, it follows that the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

D. Magliano

D. H. Rees