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**Datasheet for the decision
of 15 November 2013**

Case Number: T 2463/12 - 3.5.05

Application Number: 09800381.7

Publication Number: 2288060

IPC: H04L1/00, H04L27/26, H04B1/10

Language of the proceedings: EN

Title of invention:
RECEPTION METHOD AND RECEPTION DEVICE

Applicant:
Nippon Telegraph And Telephone Corporation

Headword:
Interference suppression in a multicarrier system/NTT

Relevant legal provisions:
EPC Art. 123(2)

Keyword:
Amendments - added subject-matter (no)
Remittal to the department of first instance - (yes)

Decisions cited:

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

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Case Number: T 2463/12 - 3.5.05

**D E C I S I O N
of Technical Board of Appeal 3.5.05
of 15 November 2013**

Appellant: Nippon Telegraph And Telephone Corporation
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 23 August 2012
refusing European patent application No.
09800381.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairwoman: A. Ritzka
Members: P. Cretaine
G. Weiss

Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division, posted on 23 August 2012, refusing European patent application No. 09800381.7 on the grounds that the amendments to dependent claims 2, 6, 16 and 21 [sic] according to a main and an auxiliary request did not meet the requirements of Article 123(2) EPC.

- II. Notice of appeal was received on 22 October 2012 and the appeal fee was paid on the same day. The statement setting out the grounds of appeal was received on 30 October 2012. The appellant requested that the decision of the examining division be set aside and that a patent be granted based on, in order of preference, claims 1 to 28 of a new main request or claims 1 to 28 of a new auxiliary request, both filed with the statement setting out the grounds of appeal. The appellant further requested that the appeal fee be reimbursed under Rule 103(1)(a) and (2) EPC. As a precaution, the appellant also requested oral proceedings.

- III. A summons to oral proceedings scheduled for 18 October 2013 was issued on 26 June 2013. In an annex to this summons, the board expressed its preliminary opinion on the appeal pursuant to Article 15(1) RBPA. Objections under Article 123(2) EPC were raised against dependent claims 2 and 16 according to the main and auxiliary requests. Moreover the board expressed the opinion that no substantial procedural violation had occurred and that, for this reason, the appeal fee should not be reimbursed under Rule 103(1)(a) EPC. The appellant was also informed that, should the objections under Article 123(2) EPC be overcome and the request for oral proceedings not be maintained, the board intended to

- remit the case to the department of first instance for further prosecution.
- IV. By a letter of reply dated 18 September 2013, the appellant filed a new set of claims 1 to 28 as new main request. The appellant also announced that it was withdrawing its request for oral proceedings, provided the board considered the objections under Article 123(2) EPC raised in the summons to have been overcome by the proposed set of claims.
- V. With a communication dated 30 September 2013, the appellant was informed that the oral proceedings appointed for 18 October 2013 had been cancelled.
- VI. By a letter dated 15 November 2013, the appellant refiled claims 1 to 28 of the main request, with corrections in dependent claims 6 and 20, and withdrew the auxiliary request.
- VII. The decision under appeal dealt exclusively with dependent claims 2, 6, 16 and 21 [*sic*].

Dependent claim 2 of the sole request reads as follows:

"2. The reception method according to claim 1, wherein the interference band detection process (S1, Sa2, Sb2) detects a frequency band of a specific sub-carrier susceptible to an interference wave among the plurality of sub-carriers of received wireless signals, thus outputting interference band information; the weight coefficient generation process (S2, Sa3, Sb3) generates weight coefficients based on the interference band information, by which reliability is reduced in an interference band and not in a frequency

band of a specific sub-carrier insusceptible to the interference wave;
the weighted calculation process (S3, Sa4, Sb4) performs weighted calculation using weight coefficients on demodulated values of sub-carriers of received wireless signal;
said reception method further including:
a permutation process (Sa5, Sb5) which selects demodulated values of sub-carriers of received wireless signals already subjected to the weighted calculation such that, for a specific sub-carrier causing an interference wave, the demodulated value of the specific sub-carrier assigned to the interference band is replaced, except for the first time, with the previously decoded value with respect to said sub-carrier wherein
the decoding process (S4) performs the decoding process for correcting errors on selected sub-carriers of received wireless signals."

Dependent claim 6 of the sole request reads as follows:

"6. The reception method according to claim 2, wherein the permutation process (Sa5, Sb5) permutes the weight coefficients."

Dependent claims 16 and 20 of the sole request correspond to dependent claims 2 and 6, respectively, in terms of system claims.

Reasons for the Decision

1. Admissibility of the appeal

The appeal complies with the provisions of Article 106 to 108 EPC (cf. point II above) and is therefore admissible.

2. Article 123(2) EPC

2.1 Dependent claims 2 and 16

Dependent claims 2 and 16 of the main request on which the decision is based have been amended by replacing in the definitions of the permutation process and unit, respectively, the wording "the demodulated value of the specific sub-carrier assigned to the interference band is replaced with the demodulated value of another sub-carrier among the plurality of sub-carriers", which was the feature underlying the Article 123(2) EPC objection raised by the examining division.

The replacement wording reads "for a specific sub-carrier causing an interference wave, the demodulated value of the specific sub-carrier assigned to the interference band is replaced, except for the first time, with the previously decoded value with respect to said sub-carrier".

The board is satisfied that this feature finds support in the application documents as originally filed, in particular in paragraph [0095] and Figure 10 of the published application. In that respect, the board notes that paragraph [0095] recites that "with respect to

sub-carriers causing interferences, the output of the soft decision decoder 120 except for its first time is selected instead of a string of data generated based on reception signals". Moreover, Figure 10 shows a feedback arrow from the soft decision decoder 120, which outputs the decoded values, to the permutation unit 110, which receives the demodulated values, with the underlying mention "permutation with **previous** decoded value in interference band alone".

Therefore, the board judges that the amendments to dependent claims 2 and 16 do not infringe Article 123(2) EPC.

2.2 Dependent claims 6 and 20

Although the decision under appeal indicates in point 1.8, following the finding with respect to claim 6, that "similar reasoning applies to claim 21", the board concurs with the appellant that point 1.8 should refer to claim 20, as only claim 20 corresponds to claim 6.

Dependent claims 6 and 20 of the main request on which the decision is based have been amended by replacing the wording "the permutation process selects the weight coefficients" which was the feature underlying the Article 123(2) EPC objection raised by the examining division.

The replacement wording reads "the permutation process permutes the weight coefficients".

The board is satisfied that this feature is fully supported by the application documents as originally filed (see paragraph [0134] and claims 7 and 22 of the published application).

Therefore, the board judges that the amendments to dependent claims 6 and 20 do not infringe Article 123(2) EPC.

3. The issues of novelty (Article 54 EPC) and inventive step (Article 56 EPC) had been addressed by the examining division in the written opinion dated 19 May 2011 and by the appellant in the letters dated 17 November 2011 and 10 May 2012. However, the decision under appeal was based solely on the grounds of Article 123(2) EPC and did not consider novelty and inventive step with respect to the claims on file.

Since the objections under Article 123(2) EPC underlying the decision under appeal have been overcome, the board has to remit the application to the department of first instance for further prosecution on the basis of the sole request, in particular with respect to the issues of novelty and inventive step, as announced by the board in the annex accompanying the summons to oral proceedings.

In accordance with the appellant's response of 18 September 2013, the request for oral proceedings is considered as withdrawn.

4. Reimbursement of the appeal fee - Rule 103 EPC

As the decision was not rectified under Article 109(1) EPC, it is not necessary to deal with the reimbursement of the appeal fee under Rule 103(2) EPC requested by the appellant.

According to Rule 103(1) (a) EPC, the appeal fee is reimbursed where the board of appeal deems the appeal

to be allowable, if such reimbursement is equitable by reason of a substantial procedural violation. In the present case, the appellant has not pointed out any procedural error and, in the board's judgement, no procedural violation has occurred. Therefore, as announced by the board in the annex accompanying the summons to oral proceedings, the request for reimbursement of the appeal fee under Rule 103(1) (a) EPC is not allowed.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance for further prosecution on the basis of the main request filed by letter of 15 November 2013.
3. The request for reimbursement of the appeal fee is refused.

The Registrar:

The Chairwoman:



K. Götz

A. Ritzka

Decision electronically authenticated