

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 10 May 2017**

Case Number: T 1449/14 - 3.5.05

Application Number: 08747123.1

Publication Number: 2143225

IPC: H04L1/00

Language of the proceedings: EN

Title of invention:

Feedback signaling error detection and checking in MIMO
wireless communication systems

Applicant:

InterDigital Technology Corporation

Headword:

Error checking and correction/INTERDIGITAL

Relevant legal provisions:

EPC Art. 123(2), 111(1)

Keyword:

Added subject-matter - (no, after amendment)

Remittal to the first instance for further prosecution - (yes)



Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 1449/14 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 10 May 2017

Appellant: InterDigital Technology Corporation
(Applicant) 200 Bellevue Parkway
Suite 300
Wilmington, DE 19809 (US)

Representative: Awapatent AB
Östra Storgatan 7
553 21 Jönköping (SE)

Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 30 October 2013
refusing European patent application
No. 08747123.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair A. Ritzka
Members: K. Bengi-Akyuerek
F. Blumer

Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division to refuse the present European patent application on the sole ground of added subject-matter (Article 123(2) EPC) with respect to the claims of a main request and an auxiliary request.

By way of an *obiter dictum* (under the heading "Additional remark" in section 2.1.2), the decision under appeal also indicated that the subject-matter of the main request lacked inventive step.

- II. With the statement setting out the grounds of appeal, the appellant filed new sets of claims according to a main request (corresponding to the former auxiliary request) and an auxiliary request (named "Alternative Formulation of Main Request"). It requested that the decision of the examining division be set aside and that a patent be granted on the basis of either of those claim requests.
- III. In a communication under Rule 100(2) EPC, the board gave its preliminary opinion on the appeal. In particular, it confirmed the finding of the decision under appeal that neither of the two claim requests complied with Article 123(2) EPC and indicated that the case could be remitted to the department of first instance under Article 111(1) EPC if the objections were overcome.
- IV. With a letter of reply, the appellant submitted claims of an amended main request and an amended auxiliary request with the aim of overcoming the objections raised in the board's communication.

- V. In an annex to the summons to oral proceedings pursuant to Article 15(1) RPBA, the board indicated that the amended claims still did not comply with Article 123(2) EPC and gave its reasons.
- VI. With a letter of reply, the appellant re-submitted the claims of the main request and withdrew its auxiliary request ("Alternative Formulation of Main Request").
- VII. Oral proceedings were held on 10 May 2017, during which the appellant filed a new main request replacing all the former claim requests on file. The new main request was admitted and discussed.

The appellant's final request was that the decision under appeal be set aside and that the case be remitted to the examining division for further prosecution on the basis of the main request as filed during the oral proceedings before the board.

At the end of the oral proceedings, the board's decision was announced.

- VIII. Claim 1 of the **main request** (sole claim request) reads as follows:

"A method of feedback in a wireless transmit receive unit, WTRU, (110) the method characterized by:
providing a feedback signal, the feedback signal comprising at least one of a precoding matrix index, PMI, or a channel quality index, CQI;
selecting an error checking, detection, and correction method to apply to the feedback signal based on the number of bits to be encoded, wherein selecting the error checking, detection, and correction method comprises selecting a number of error check, EC, bits

to apply and selecting a channel coding scheme to apply to the feedback signal and the selected number of EC bits;

applying the selected error checking, detection, and correction method, wherein applying the selected checking, detection, and correction method comprises attaching the selected number of EC bits to the feedback signal and applying the selected channel coding scheme to the feedback signal and to the selected number of EC bits; and

transmitting the feedback signal and selected number of EC bits, to which the channel coding scheme has been applied."

The further independent claim 8 of the main request is directed to a corresponding apparatus.

Reasons for the Decision

1. MAIN REQUEST

This claim request was filed during the oral proceedings before the board with the aim of overcoming the objections raised by the board under Article 123(2) EPC. It differs from the main request underlying the appealed decision essentially in that independent claims 1 and 8 as amended no longer include the feature of "determining a number of bits of the feedback signal" and now specify that (emphasis added by the board)

A) an error checking, detection, and correction method is selected based on the number of bits to be encoded;

- B) the selected error checking, detection, and correction method comprises selecting and applying a number of EC bits to the feedback signal and selecting and applying a channel coding scheme to both the feedback signal and the EC bits;
- C) the feedback signal and the selected number of EC bits, to which the channel coding scheme has been applied, are transmitted.

1.1 *Basis for the amendments (Article 123(2) EPC)*

1.1.1 The amendments relating to feature A), namely the dependence of the overall error checking, detection, and correction method to be selected on the number of bits to be encoded (i.e. the bits of the feedback signal for error checking/detection purposes or the bits of the feedback signal *and* the EC bits for error correction purposes), is supported by paragraph [0061], first sentence, in conjunction with paragraph [0054], third sentence, paragraph [0068], seventh sentence and paragraph [0076], fifth sentence, of the application as originally filed.

1.1.2 The amendments relating to feature B) find their basis e.g. in paragraphs [0040] and [0050], first sentence, paragraph [0042], first sentence and paragraph [0053], sixth sentence in conjunction with Figures 3 to 8 of the original application. Moreover, the board holds that the skilled person could indeed derive from the present application as filed that the selection of the overall error checking, detection, and correction method as claimed inevitably requires - besides the selection of the respective error *checking/detection* scheme - the selection of an error *correction* scheme and thus of a channel coding scheme from a number of

channel coding schemes available.

- 1.1.3 Lastly, the amendment relating to feature C) is based e.g. on paragraph [0042], first two sentences, of the application as filed.
- 1.2 As a result of those substantial amendments made, the board is satisfied that the objections raised in the decision under appeal (see Reasons, 2.1.1 and 2.2.1) and by the board (see e.g. the board's communication under Article 15(1) RPBA, point 2.1) have been overcome and that the present independent claims 1 and 8 now comply with the provisions of Article 123(2) EPC.
2. *Remittal of the case for further prosecution*
 - 2.1 Given that the sole ground for refusal, i.e. added subject-matter under Article 123(2) EPC, no longer applies, the decision under appeal has to be set aside.
 - 2.2 However, the compliance of the present application with the requirements of Article 52 EPC, in particular novelty and inventive step, was neither discussed nor decided in the decision under appeal. Section 2.1.2 of the impugned decision (see point I above) included only the following cursory and hypothetical statement in that regard:

"It is also apparent that independent claim 1 would not meet the criterion of inventive step, due to its broad scope (Article 56 EPC)."
 - 2.3 In view of the above, the board does not consider itself in a position to assess the correctness of any detailed assessment by the examining division as regards novelty and inventive step, nor to pass final

judgment on that issue for the very first time in these appeal proceedings. Rather, the board has decided, in the exercise of its discretion under Article 111(1) EPC and in accordance with the appellant's request, to remit the case to the examination division for further prosecution on the basis of the claims of the new main request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division for further prosecution on the basis of the main request (claims 1 to 13) as filed during the oral proceedings before the board.

The Registrar:

The Chair:



K. Götz-Wein

A. Ritzka

Decision electronically authenticated