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**Datasheet for the decision
of 23 October 2018**

Case Number: T 1631/12 - 3.5.05

Application Number: 06118723.3

Publication Number: 1715611

IPC: H04L1/00, H04L5/14

Language of the proceedings: EN

Title of invention:

Method of identifying an improved configuration for a communication system using coding gain and an apparatus therefor

Applicant:

NXP USA, Inc.

Headword:

Selection of error correction scheme/NXP

Relevant legal provisions:

EPC Art. 84, 113(1), 123(2)

Keyword:

Amendments - extension beyond the content of the application as filed (yes)
Claims - clarity (no)
Right to be heard - violation (no)

Decisions cited:

Catchword:



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Case Number: T 1631/12 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 23 October 2018

Appellant: NXP USA, Inc.
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Representative: Miles, John Richard
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 6 February 2012
refusing European patent application No.
06118723.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair A. Ritzka
Members: P. Cretaine
F. Blumer

Summary of Facts and Submissions

- I. This appeal is against the decision of the examining division, posted on 6 February 2012, refusing European patent application No. 06118723.3 on the grounds of lack of clarity (Article 84 EPC) and non-compliance with the requirements of Article 123(2) EPC.
- II. Notice of appeal was received on 16 April 2012 and the appeal fee was paid on the same day. The statement setting out the grounds of appeal was received on 18 June 2012. The appellant requested that the decision under appeal be set aside and that a patent be granted based on the claims on which the decision is based. Oral proceedings were requested as a further auxiliary measure. The appellant further objected that a substantial procedural violation had occurred in the examination proceedings since its right to be heard under Article 113(1) EPC had not been respected.
- III. A summons to oral proceedings was issued on 1 August 2018. In an annex to this summons, the board gave its preliminary opinion that it agreed with the appellant that independent claim 1 met the requirements of Article 84 and 123(2) EPC. However, the board raised objections under Articles 84 and 123(2) EPC against dependent claims 2 to 5. The board also indicated that it was inclined to remit the case to the department of first instance for further prosecution, in particular on the issues of novelty and inventive step, provided the objections raised against dependent claims 2 to 5 were overcome by amendments. Further, the board expressed the view that Article 113(1) EPC had not been infringed in the examination proceedings.

- IV. By letter of reply dated 1 October 2018, the appellant informed the board that it would not attend the oral proceedings scheduled.
- V. Oral proceedings were held on 23 October 2018 in the absence of the appellant. The appellant requested in writing that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the sole request on which the decision under appeal is based (claims 1 to 8 as filed with letter dated 30 December 2011). After due deliberation on the basis of the written submissions, the board announced its decision at the end of the oral proceedings.
- VI. Independent claim 1 according to the sole request reads as follows:

"A method for transmitting at a bit error rate not to exceed a predetermined bit error rate on a digital communication channel in a multicarrier communication system, the method comprising:
activating (210) the digital communication channel;
wherein the method is characterized by:
performing (214) a channel analysis on the digital communication channel to produce a signal to noise ratio of the communication channel,
performing (216, 304, 306) calculations to determine a plurality of error correction methods that satisfy the predetermined bit error rate for the digital communication channel and to determine channel payloads associated with the plurality of error correction methods, wherein the calculation uses the signal to noise ratio and coding gains associated with the plurality of error correction methods;

selecting (216, 310) the error correction method from among the plurality of error correction methods that provides the greatest payload; and transmitting (228) using the selected error correction method to a transceiver."

The request contains a further independent claim (claim 6) directed to a corresponding digital transceiver.

Reasons for the Decision

1. Admissibility of the appeal

The appeal complies with Articles 106 to 108 EPC (see point II above) and is therefore admissible.

2. Non-attendance at the oral proceedings

The appellant decided not to attend the oral proceedings scheduled. Pursuant to Article 15(3) RPBA, the board is not obliged to delay any step in the appeal proceedings, including its decision, by reason only of the absence at the oral proceedings of any party duly summoned who may then be treated as relying only on its written case.

Hence, the board was in a position to announce a decision at the end of the oral proceedings.

3. Article 123(2) EPC

3.1 Independent claim 1

The board agrees with the appellant that independent claim 1 meets the requirements of Article 123(2) EPC.

3.2 Dependent claims 2 to 5

These dependent claims were not present as such in the originally filed set of claims. The appellant indicated that Figures 4 to 7 and the corresponding passages of the description provided support for these claims.

Figure 4 and the corresponding paragraphs [0023] to [0026] relate to channel payload determination where no error correction scheme is used.

Figure 5 and the corresponding paragraphs [0027] and [0028] relate to channel payload determination in the case where Trellis encoding is used as error correction scheme.

Figure 6 and the corresponding paragraphs [0029] to [0032] relate to channel payload determination in the case where Reed-Solomon encoding is used as error correction scheme.

Figure 7 and the corresponding paragraphs [0033] to [0034] relate to channel payload determination in the case where a concatenated Trellis and Reed-Solomon encoding is used as error correction scheme.

The description does not mention any other example of an error correction scheme and of corresponding channel payload calculations.

Each of claims 2 to 5 is dependent on claim 1 only. It implies that the payload calculations defined in each of these claims should be performed for each of the plurality of error correction methods mentioned in claim 1. This is however not supported by the description, drawings and claims as originally filed,

which only describe how a specific payload calculation is performed for each of the four types of error correction methods, as detailed above in respect of Figures 4 to 7.

Further, claim 2 states that the channel payload is determined by using a channel capacity calculated using reference signal-to-noise ratio values and measured signal-to-noise ratio values. Although these features are present in Figures 4 to 7 and the above-mentioned corresponding paragraphs, the payload determinations for the four described examples of error correction schemes involve other necessary features (see in particular step 408 in Figure 4, steps 510 and 512 in Figure 5, steps 612 to 618 in Figure 6 and steps 710 to 722 in Figure 7). Claim 2 thus represents an intermediate generalisation of the four channel payload determination processes specified in the description and Figures 4 to 7.

Claim 3 comprises the step of calculating a redundancy value. This step is, however, only present in the description and drawings as originally filed with respect to the payload calculations performed for a Reed-Solomon coding scheme and not for the payload calculations involved when using the other described error correction schemes.

Similarly, a gross coding gain as used in claim 5 is not mentioned in the originally filed documents with respect to the case where no error correction scheme is used.

The board notes that the appellant did not provide any argument in response to the above-mentioned

Article 123(2) EPC objections raised by the board in the annex to the summons to oral proceedings.

The board thus judges that dependent claims 2 to 5 do not meet the requirements of Article 123(2) EPC.

4. Article 84 EPC

4.1 Claim 1

The board agrees with the appellant that claim 1 meets the requirements of Article 84 EPC in respect of clarity.

4.2 Dependent claims 2 to 5:

Claims 2 to 5 each define a payload calculation for one specific error correction method out of the four error correction methods detailed in section 3.2 above:

- no error correction scheme,
- Trellis coding,
- Reed-Solomon coding, and
- concatenated Trellis and Reed-Solomon coding.

It is thus unclear how a selection of an error correction method from among the plurality of error correction schemes based on the comparison of the channel payloads, as specified by claim 1 on which claims 2 to 5 are dependent, can be made if only one type of payload calculation adapted to a specific error correction method, as defined in each of claims 2 to 5, is performed.

The board notes that the appellant did not provide any argument in response to the above-mentioned

Article 84 EPC objections raised by the board in the annex to the summons to oral proceedings.

Thus, the board judges that dependent claims 2 to 5 do not meet the requirements of Article 84 EPC.

5. Article 113(1) EPC

The appellant alleged that a substantial procedural violation had occurred in examination since the decision in Reasons 2.1 and 2.2 did not set out a "considered view of the submissions made by the Applicant".

It is first to be noted that, the appellant having decided not to attend the oral proceedings before the examining division, it could only rely on its written submissions in examination proceedings.

In that respect, the board however observes that the objection under Article 123(2) EPC set out in point 2.2 of the reasons for the decision had already been raised by the examining division in point 2.1 of the communication accompanying the summons to oral proceedings dated 10 August 2011. Further, it is clear from the decision that it is based on the last set of claims submitted by the applicant on 30 December 2011 (see the Summary of facts and submission, point 11, and Reasons 2.2: "As claim 1 stands now").

Further, Reasons 2.3 also confirm that the applicant's last submission was taken into account ("after Applicant's last submission wherein dependent claims were split").

The board is thus satisfied that no procedural violation has occurred for the reason that at least one objection forming the basis of the refusal, namely the objection set out in Reasons 2.2, was already raised in the summons to oral proceedings and takes into account the last submissions of the appellant in examination.

6. Conclusion

The appellant's sole request is not allowable for non-compliance of dependent claims 2 to 5 with the requirements of Articles 123(2) and 84 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



K. Götz-Wein

A. Ritzka

Decision electronically authenticated