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# Datasheet for the decision of 13 April 2010

**Case Number:** T 0559/07 - 3.5.05

**Application Number:** 99109253.7

**Publication Number:** 0961449

**IPC:** H04L 27/26

**Language of the proceedings:** EN

**Title of invention:**
Digital subscriber line communicating system

**Applicant:**
FUJITSU LIMITED

**Headword:**
DSL communication considering cross talk/FUJITSU

**Relevant legal provisions:**
EPC Art. 83
EPC R. 42(1)(e)

**Keyword:**
"Sufficency of disclosure (no)"

**Decisions cited:**
T 0169/83, T 0202/83, T 0206/83, T 0010/86, T 0212/88

**Catchword:**

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

**Case Number:** T 0559/07 - 3.5.05

# D E C I S I O N
**of the Technical Board of Appeal 3.5.05**
**of 13 April 2010**

**Appellant**: FUJITSU LIMITED
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**Decision under appeal:** **Decision of the Examining Division of the European Patent Office posted 20 November 2006 refusing European patent application No. 99109253.7 pursuant to Article 97(1) EPC 1973.**

**Composition of the Board:**

**Chairman:** D. H. Rees
**Members:** M. Höhn
F. Blumer

## Summary of Facts and Submissions

I. This appeal is against the decision of the examining division announced in oral proceedings held on 7 November 2006, with written reasons dispatched on 20 November 2006, refusing European patent application No. 99109253.7 because the invention was not disclosed in a manner sufficiently clear and complete for it to be carried out by a skilled person (Article 83 EPC 1973).

II. The notice of appeal was received on 19 January 2007. It requested that the decision be reversed and a patent be granted. Further, oral proceedings were requested as an auxiliary measure. The appeal fee was paid on the same day. In the statement setting out the grounds of appeal with letter received 27 February 2007 the appellant presented its arguments against the decision.

III. A summons to oral proceedings to be held on 30 April 2010 was issued on 22 January 2010. In an annex accompanying the summons the board expressed the preliminary opinion that the requirements of Article 83 and Rule 42(1)(e) EPC appeared not to be fulfilled. The board gave its reasons for the objections and why the appellant's arguments were not convincing.

IV. With a letter dated and received 25 February 2010 the appellant informed the board that nobody would attend the oral proceedings, withdrew the request for oral proceedings and requested a decision according to the state of the file.

V. The board informed the appellant that the date for oral proceedings was cancelled.

VI. The appellant has not requested any amendment of the text on the basis of which grant of a patent is desired. The valid text is therefore the same as was the basis of the contested decision, i.e.

claim 1 as filed on 16 September 2005 and claim 2 as filed on 8 October 2004;

description pages
1 to 4 and 6 to 26 as originally filed,
5 and 5a as filed on 8 October 2004;

drawing sheets
1/14, 3/14 to 14/14 as filed on 10 June 1999,
2/14 as filed on 8 October 2004.

Independent claim 1 of the sole request reads as follows:

"1. A digital subscriber line communicating method for enabling a data communication by utilizing a telephone line, which can be affected by a cross talk of ISDN transmission, as a high speed data communication line, wherein 69 DMT symbols from [sic] a Super Frame and five Super Frames form one unit whose duration is made to coincide with an integer multiple of 400Hz (2.5 ms) characterized in that:
when the first DMT symbol is synchronized with the beginning of a 400Hz reference clock signal, it is determined whether the n-th symbol belongs to a far end

cross talk (FEXT) duration or a near end cross talk (NEXT) duration as follows:
if a sample number representing the head of an n-th symbol of 2760 samples in one cycle of the 400Hz reference clock signal is smaller than a sample number value representing the head of the symbols completely inside the count value (a) representing a receiving far end cross talk (FEXT) duration or is larger than the sum of the count value (a) representing the receiving far end cross talk (R-FEXT) duration and a count value (b) representing a receiving near end cross talk (R-NEXT) duration, the n-th symbol is defined as belonging to the far end cross talk (FEXT) duration, and
if the sample number representing the head of the n-th symbol of said 2760 samples is not less than the sample number representing the head of the symbols completely inside the count value (a) representing the receiving far end cross talk (R-FEXT) duration and is not more than the sum of the count value (a) representing the receiving far end cross talk (R-FEXT) duration and the count value (b) representing the receiving near end cross talk (R-NEXT) duration, the n-th symbol is defined as belonging to the near end cross talk (NEXT) duration."

## Reasons for the Decision

1. The appeal is admissible.

2. The appealed decision is based on Article 83 EPC. The examining division *inter alia* argued that the labels "FEXT DURATION AT RT" in figures 2 and 3 were a contradiction, since the labels did not refer to the

same entity. Consequently, it was not possible to derive the values of a and b (see claim 1 and formula on p. 18, l. 31-33 of the original description), since it was not possible to determine "a", "b" and "c" taking a round trip delay generated by a propagation delay in the TCM ISDN transmission. In fact only value "c" included the propagation delay.

3. Article 83 EPC stipulates that the application must disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. It has been consistent case law of the boards of appeal that sufficiency of disclosure within the meaning of Article 83 EPC must be assessed on the basis of the application as a whole - including the description, drawings and claims - (see e.g. T 169/83, OJ 1985, 193) and not of the claims alone (see e.g. T 202/83).

4. The board is not convinced by the appellant's argument that the labels "FEXT DURATION AT RT" in figures 2 and 3 are not a contradiction, but have to be interpreted as indicating the R-FEXT duration at the receiving terminal in terms of an integer number of symbols "A" (figure 2) as well as in terms of the symbol counter values periods "a" and "c" (figure 3).

5. However apart from the problem with the expression "FEXT DURATION AT RT" being the length of a number of DMT symbols in figure 2 and value "a" (and "c") in figure 3, the label in itself is considered misleading since the marked duration in figure 3 is apparently not the same as the length of FEXT in line (3) of figure 2 when measured against the clock.

6. Considering the examining division's argument that the label "FEXT DURATION AT RT" in figure 3 for period "c" is incorrect, the board notes that on p. 18, l. 31-33 of the original description a formula is given from which it is clear that the period after "a+b" is considered to be part of the R-FEXT duration. However, the label "FEXT DURATION AT RT" attached to the period/length "c" is misleading, since it is clear from figure 2 and the description that this is not a period of "Far End Cross-Talk". In fact it is a quiet period, when neither end is sending. The appellant, according to the statement setting out the grounds of appeal, apparently considered that it was not worth distinguishing a "quiet period" from a "good reception" period. The board, however considers the label "FEXT DURATION AT RT" to be misleading and therefore unclear, increasing the general difficulty the skilled person would have in understanding the application.

7. It is further not clear to the board what the "sliding window" is or does, in particular why it is called sliding. In figure 8 and the accompanying text (description p. 23, l.9-27) it is disclosed that data is only transmitted during the sliding window, and that the sliding window is related to the C-NEXT period. However, the sliding window is not the same as the period of the set of symbols "A" in figure 2, or value "a" in figure 3, since the window (and period when symbols are sent) is clearly partly outside "NEXT", and the complementary period has at least one symbol time which is completely within the "NEXT" period.

8. In the light of the appellant’s explanation submitted with the grounds of appeal it appears that the period labelled "FEXT DURATION AT RT" in figure 2, sent in line (4) and received in line (5), is the sliding window, a period whose edges are determined by the edges of the DSL symbol clock and which is chosen so that all the symbols sent during this period are guaranteed to be received during the R-FEXT period, i.e. a period of guaranteed "good reception". There is, however, no basis in the application as originally filed for such an interpretation.

9. In the original description there is a reference to a "sequence switching symbol" (see p. 19, l. 1-3). In the statement setting out the grounds of appeal the appellant identifies this with symbols "A" and "B" (see p.8, penultimate paragraph). The board has not found a passage in the application which makes this identification, nor is there any other reason for the board to suppose that the skilled person would interpret the expression "sequence switching symbol" in this way.

10. The consequence of these problems of clarity is that the original application documents do not disclose what the periods in figures 2 and 3 were intended to denote in a manner sufficiently clear and complete for it to be understood by a person skilled in the art.

11. The original application does not give a detailed explanation how the values "a" and "b" are actually determined. It is only stated in the original description that:

"The counter value "a" represents the FEXT duration at the remote terminal; the counter value "b" represents the NEXT duration at the remote terminal; and the counter value "c" represents the remaining period obtained by subtracting (a + b) from one cycle period of the reference clock signal. *These values are determined by taking a round trip delay generated by a propagation delay in the TCM ISDN transmission*, (2) in Fig. 3 shows the case when all of the received DMT symbols are included in the R-FEXT duration at the remote terminal; and (3) in Fig. 3 shows the case when a part of the received DMT symbols are included in the R-NEXT duration at the remote terminal." (see p. 18, l. 7 onwards - emphasis added).

There is no other disclosure to clarify how the skilled person would know how to determine values "a" and "b" in a training phase, which it is necessary to do in order to carry out the method claimed in claim 1 ("a" and "b" are explicitly referenced in the claim).

12. The board notes that in the grounds of appeal a very detailed technical background was provided, without however actually referring to the original disclosure. Regarding the crucial point how values "a" and "b" are actually determined, the appellant only argued that values "a" and "b" were clearly disclosed as representing the duration of R-FEXT and R-NEXT, i.e. ISDN events well known in the art, and that the skilled man was aware of concrete circuit realisations for obtaining these time durations "a" and "b". However the appellant did not provide the board with any information supporting this assertion. There is no concrete disclosure in the original application nor has

the appellant pointed to a reference in the prior art demonstrating that the skilled person actually knew as a matter of common general knowledge before the priority date how to determine values "a" and "b". The appellant also argued that particulars of the determination of the parameters "a" and "b" as such were "not of importance with regard to the inventive concept" and could be defined otherwise to reflect R-FEXT and R-NEXT at the remote terminal (see p. 8, second paragraph of the grounds of appeal). The board does not agree with this point of view, since it is the purpose of the training phase underlying the subject-matter of claim 1 to determine the FEXT and NEXT durations at the remote terminal. Values "a" and "b" are required in order to carry out the method according to independent claim 1 and to determine according to the formula given in the description (see p. 18, l. 30-36 of the original documents), whether a symbol to be transmitted is fully within the R-FEXT duration (periods "a" and "c" with the comments in section 6 above) at the remote terminal so that the appropriate coding scheme can be correctly applied.

The board judges that the skilled person would not find an enabling disclosure of how to determine values "a" and "b" in the sole statement that this is done by taking a round trip delay generated by a propagation delay in the TCM ISDN transmission.

13. In section III.3.3 of the grounds of appeal (p. 10), the appellant argued that it is not only value "c" which reflects the round trip time delay, but all the counter values "a", "b" and "c". This is evidently not correct for "b". Value "a" comprises the propagation

delay of R-FEXT, i.e. the delay between the C-NEXT sent from the central office until it is completely received by the receiver. In contrast, value "b" at the receiver does not have a propagation delay and, hence, does not comprise any delay contributing to the round trip delay. Value "c" which is the difference between the complete period of the 400Hz ISDN signal and "a+b", consequently comprises the propagation delay until the R-NEXT is completely received at the central office as an C-FEXT which usually is shorter than value "c". Therefore, only values "a" and "c" reflect the round trip delay.

14. Rule 42(1)(e) EPC (corresponding to 27(1)(e) EPC 1973) requires that the description shall describe in detail at least one way of carrying out the invention claimed. This is not the case for the present application as far as the determination of values "a" and "b" is concerned.

15. It must be possible to reproduce a claimed step using the original application documents without any inventive effort over and above the ordinary skills of a practitioner (see e.g. T 10/86). The skilled person may use his common general knowledge to supplement the information contained in the application (T 206/83, OJ 1987, 5 and T 212/88, OJ 1992, 28).

In absence of any evidence that it was within the common general knowledge of the skilled person before the priority date to determine values "a" and "b", the board judges that the present application does not disclose the invention according to claim 1 in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. Therefore the

requirements of Article 83 EPC and Rule 42(1)(e) EPC are not fulfilled.

## Order

## For these reasons it is decided that:

The appeal is dismissed.

The Registrar The Chairman

K. Götz D. H. Rees