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**Datasheet for the decision
of 10 January 2008**

Case Number: T 0078/05 - 3.5.05

Application Number: 02250567.1

Publication Number: 1276282

IPC: H04L 12/56

Language of the proceedings: EN

Title of invention:

Method, system and Radio Link Control data block for
delimiting Logical Link Control Protocol Data Units

Applicant:

Lucent Technologies Inc.

Opponent:

-

Headword:

RLC data block/LUCENT

Relevant legal provisions:

EPC Art. 52(1), 54, 56, 84, 113(1), 116(1), 123(2)
RPBA Art. 12(2), 13(1)
EPC R. 111(1)

Relevant legal provisions (EPC 1973):

EPC R. 68(1)

Keyword:

"Claims - clarity (no), support by the description (no)"
"late filed claims - admitted"
"Inventive step - no"
"oral proceedings held in the absence of the appellant -
opportunity to present comments (yes)"

Decisions cited:

T 0495/91

Headnote:

After amendment of the claims leading in essence to a version discussed at a previous stage of the procedure, nothing stands in the way of a decision being taken based on the objections and facts previously discussed, even if the decision is taken in an oral proceedings held in the absence of the appellant and the amendment was filed in response to the summons to said oral proceedings (Reasons 1.2 and 2).

In the present case, an alternative solution for a problem already solved is not in itself inventive (Reasons 4 pages 12 to 14).



Case Number: T 0078/05 - 3.5.05

D E C I S I O N
of the Technical Board of Appeal 3.5.05
of 10 January 2008

Appellant: Lucent Technologies Inc.
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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 12 August 2004
refusing European application No. 02250567.1
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 dispatched 12 August 2004, refusing European patent application No. 02 250 567.1 for the reasons that the subject-matter of claims 1, 4 and 6 and the amended description, page 2 lines 8, 9 and 22 to 24, contained added subject-matter, claim 1 did not meet the requirements of Article 84 EPC and that the subject-matter of claims 1, 4 and 6 after deletion of the added technical feature lacked novelty and inventive step having regard to the disclosure of:

D1: "3rd Generation Partnership Project; Technical Specification Group GSM EDGE Radio Access Network; General Packet Radio Service (GPRS); Mobile Station (MS) -Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol (Release 4)" 3GPP TS 44.060 V4.1.0 (2001 - 04), [Online] April 2001 (2001-04), pages 1-326, Sophia Antipolis, Valbonne, France; Retrieved from the Internet: URL:www.3gpp.org> [retrieved on 2002-06-11],

D2: "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; RLC protocol specification (RELEASE 1999)" 3GPP TS 25.322 V3.6.0 (2001 -03), [Online] March 2001 (2001-03), pages 1-56, Sophia Antipolis, Valbonne, France Retrieved from the Internet: URL:www.3gpp.org> [retrieved on 2002-06-11],

D3: EP 1 180 878 A.

II. Notice of appeal was filed and the appeal fee paid on 8 October 2004. The statement of grounds of appeal was submitted by fax on 8 December 2004 with a letter dated 7 December 2004. The appellant requested that the appealed decision be set aside and that a patent be granted based on the claims on which the decision under appeal was based or, as an auxiliary request, on the claims labelled "auxiliary set" filed with letter of 7 December 2004.

III. The board issued an invitation to oral proceedings accompanied by a communication. In the communication the board expressed the preliminary view that claims 1, 4 and 6 of both requests did not appear to be supported by the description as originally filed. In particular, the feature of a data block including a delimiter as a length indicator and an extension field was objected to for lack of clarity and support by the description, see point 3.1 of the communication. Claim 4 of both requests was objected to under Article 52(2) EPC. Further, claims 1, 4 and 6 and lines 7 to 9 and 21 to 24 of amended page 2 were objected to under Article 123(2) EPC. Finally, the subject-matter of independent claims 1, 4 and 6 of both requests lacked novelty having regard to the disclosure of D2 and

D4: 3GPP TS 25.301: "Radio interface protocol architecture",

which was incorporated by reference in D2 (see D2, page 13, reference to [3]).

IV. With its letter submitted 4 December 2007, in response to the communication, the appellant filed a new set of seven claims labelled "Replacement Main Claim Set", replacing the set of claims on which the main request had been based, and withdrew the auxiliary request. The new set of claims did not include any claim corresponding to former claim 4. The appeal was to proceed based on the description pages 1 to 11 as originally filed, pages 1A and 1B filed with letter of 21 July 2003, figures 1 to 2C and 5B to 7 as originally filed and figures 3A, 3B, 4 and 5A filed with the letter of 4 December 2007. The appellant explicitly withdrew the amendments to page 2 filed with its letter of 29 November 2003.

V. The appellant announced that it would not attend the oral proceedings set for 10 January 2008 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 10 January 2008.

VI. Oral proceedings took place as scheduled on 10 January 2008. Neither the appellant nor its representative attended the hearing. After deliberation on the basis of the submissions and requests of 7 December 2004 and of 4 December 2007 the chairman announced the board's decision.

VII. Claim 1 reads as follows:

" A telecommunications network device (10a) having a radio interface and a layered protocol architecture (10c) for allowing transfer of upper layer Protocol

Data Units using a shared medium between a communications unit (10b) and the telecommunications network device, wherein said layered protocol architecture is operative for coding and transferring Protocol Data Units as a multiple of Radio Link Control data blocks that each carry at least one Logical Link Control Protocol Data Unit (LLC PDU) and a data block header that includes a delimiter as a length indicator (LI) characterized by:

when any last Logical Link Control Protocol Data Unit of a Radio Link Control data block has no delimiter and when a last Logical Link Control Protocol Data Unit fills the balance of the Radio Link Control data block, the length indicator is zero having no data for a first length indicator in any next in sequence Radio Link Control data block, and

wherein said data block header includes a Final Block Indicator (FBI) field to indicate whether the Radio Link Control data block is the last data block of a Temporary Block Flow."

Claim 3 reads as follows:

" A method of delimiting Logical Link Control Protocol Data Units carried within Radio Link Control data blocks characterized by:

the steps of
providing no delimiter within any last Logical Link Control Protocol Data Unit;

providing a zero value for the length indicator in any next sequence Radio Link Control data block when a last Logical Link Control Protocol Data Unit fills the balance of the Radio Link Control data block; and

including a Final Block Indicator (FBI) field in a header of the Radio Link Control data block to indicate whether the Radio Link Control data block is the last data block of a Temporary Block Flow."

Reasons for the Decision

1. Procedural matters

1.1 Oral proceedings

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 the 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 111(1) EPC).

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.

The appellant 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.

1.2 Right to be heard

The appellant presented a new set of claims corresponding in essence to claims as originally filed. It had to be aware that the objections raised against these claims earlier in the procedure would again be discussed. It had the opportunity to present its concluding comments at the hearing which it deliberately chose not to attend. Holding the oral proceedings gave the appellant the right to be heard, Article 113(1) EPC.

2. Amendments of the claims

2.1 Admissibility of the amendments

With its letter of 4 December 2007 the appellant filed a new set of claims replacing the set of claims of the main request and withdrew the auxiliary request. The original "system" claims had been amended to be directed to a "network device". Otherwise, except for minor linguistic amendments such as replacing "plurality" by "multiple" and "wherein" by "characterized by: when", present claim 1 corresponds to claim 3 as originally filed including the features of then claim 1, to which claim 3 referred back. Independent claim 3 is a method claim corresponding to claim 1.

The decision under appeal was based on objections under Article 123(2) EPC. Further, the examining division pointed out in point 2f of the decision that "the deletion of the technical feature" objected to under Article 123(2) EPC "would result in a claim which would not meet the requirements of Article 52(1) EPC with respect to novelty and inventive step in view of the cited prior art (see documents D1 to D3)." In fact, after deletion of the feature objected to the claims as originally filed would in essence be obtained.

The appellant originally based its appeal on the claims on which the decision under appeal was based and did not explicitly discuss the objections under Articles 54 and 56 EPC which had been raised with respect to the claims as originally filed. However, filing the appeal based on amended claims without further comment on these objections means that arguments rebutting them are not part of the appellant's case.

According to Article 12(2) RPBA the statement of grounds of appeal shall contain a party's complete case. Any amendment to a party's case after it has filed its grounds of appeal may be admitted and considered at the board's discretion, Article 13(1) RPBA. Thus, the amendments presented with letter of 4 December 2007 might be seen as being late filed. However, as the amendments were intended to overcome the objections raised in the board's communication of 6 September 2007, the board decided to admit them. Moreover, the present claims were essentially the same as discussed at an earlier stage of the proceedings at the first instance, so that the board could proceed with the request on the basis of the objections raised by the department of

first instance without delaying the normal course of the proceedings, since the appellant had already given or had the possibility to give its comments on these objections.

2.2 Article 123(2) EPC

Independent claim 1 of the request of 4 December 2007 essentially corresponds to claim 3 as originally filed, see point 2.1 above.

Present claim 3 is a method claim corresponding to claim 1. It is based on claim 6 as originally filed and paragraph [0031] of the description as published.

Claim 4 corresponds to claim 7 as originally filed being amended to depend on claim 1.

Claims 2, 5, 6 and 7 correspond to claims 2, 8, 9 and 10 as originally filed.

Thus, the amendments of the claims comply with the provisions of Article 123(2) EPC.

3. Clarity

Claim 1 comprises the feature of a data block header that includes a delimiter as a length indicator. This feature is not clear, as already objected in point 3.1 of the board's communication of 6 September 2007. According to paragraphs [0032] and [0035] of the description as published, a data block header includes a length indicator indicating the length of a protocol data unit. Thus, the length indicator represents a

delimiter for the length of the protocol data unit. Claim 1 does not reflect this.

In the appellant's letter of 4 December 2007 the objections raised in sections 3.1 and 3.2 of the communication of 6 September 2007 were said to be overcome, see page 2, first paragraph of the section with the title "ARTICLE 84 EPC". However, present claim 1 includes the feature of a data block header that includes a delimiter as a length indicator, which differs from the objected feature of a data block including a delimiter as a length indicator and an extension field only by deleting "and an extension field". Clearly, deleting "and an extension field" does not overcome the objection as it was put to the appellant in the communication.

Thus, claim 1 does not comply with the provisions of Article 84 EPC and for this reason alone the appeal must be dismissed.

4. Novelty and inventive step

Although claim 1 is not clear, which is sufficient reason to dismiss the appeal, the board makes the following comments on novelty and inventive step. For the assessment of novelty and inventive step the board interprets "a delimiter as a length indicator" as "a length indicator representing a delimiter" (see point 3).

Referring to point 2.1 above, the board notes that the examining division raised objections of lack of novelty and inventive step having regard to the disclosure of

documents D1 and D2 (see the examining division's communication of 12.08.2003 point 7). The amendments of 4 December 2007 necessitate that the board considers this objection.

The board notes that the appellant's late filed amendments necessitate that D1, which was already discussed in the examining procedure, be introduced into the appeal procedure. The board is aware that it did not introduce the document D1 into the appeal proceedings so far. However, as D1 was discussed in the proceedings before the department of first instance with respect to the objections concerning then claim 3 and its relevance was therefore known to the appellant and oral proceedings were to be held giving the appellant the right to be heard, the board comes to the conclusion that it is in a position to introduce D1 into the procedure at this late stage and make a decision without issuing a further communication, since the requirements of Article 113(1) EPC have been met.

The board considers D2 to be the most relevant prior art document.

D2 is a 3GPP standardization document and deals with the RLC protocol specification. Figure 4.1 at page 9 discloses several layers (MAC, RLC, higher layer) of the radio interface between a mobile station and UTRAN with a transmitting side and a receiving side. This implies a telecommunications network device having a radio interface and a layered protocol architecture. With reference to figures 4.2 and 4.3 transfer and segmentation of upper layer protocol data units and the use of a plurality of channels are disclosed, see D2,

pages 10 and 11. That the system defined by 3GPP, UMTS, uses a shared medium is common knowledge in the field of radio telecommunications.

D2 discloses in point 5 at page 13 the functions supported by RLC making reference for a detailed description to reference document [3] 3GPP TS 25.301: "Radio interface protocol architecture", which was introduced into the proceedings as D4. D4 discloses encoding/ decoding of transport channels as a function of the physical layer, see D4, point 5.2.2 at pages 12 and 13. D4 is mentioned in point 2 at page 7 of D2 as a document which contains provisions that are incorporated by reference. Further, D2 discloses in point 5 inter alia segmentation, concatenation, transfer of user data and flow control being functions of the RLC protocol, see page 13. Thus, D2 discloses transferring protocol data units as a multiple of data blocks.

The protocol data unit may comprise a plurality of octets including a header and data, the header consisting of the first octet and all the octets that contain length indicators, see point 9.2.1.3 at page 19. "The length indicator is used to indicate, each time, the end of an SDU occurs in the PDU" and "points out the number of octets between the end of the length indicator field and up to and including the octet at the end of an SDU segment", see point 9.2.2.8 at page 23. "In the case where the end of the last segment of an SDU exactly ends at the end of a PDU there is no LI that indicates the end of the SDU, the next length indicator shall be placed as the first length indicator

in the following PDU and have the value LI=0", see point 9.2.2.8 at page 24, lines 1 to 3.

In D2 the term "SDU" is used for the upper layer protocol data unit and the term "PDU" for the data block, in the language of the claim. Thus, D2 discloses that the data blocks by means of which the upper layer protocol data units are transferred carry at least one protocol data unit and a data block header that includes a delimiter as a length indicator. Moreover, when any last protocol data unit of a data block has no delimiter and when a last protocol data unit fills the balance of the radio link control data block, LI=0, i.e. the length indicator is zero having no data for a first length indicator in any next in sequence data block.

The subject-matter of claim 1 differs from D2 by the feature that the data block header includes a Final Block Indicator field to indicate whether the Radio Link Control data block is the last data block of a Temporary Block Flow.

The board understands that the problem underlying claim 1 is how to facilitate the evaluation of the radio link control data blocks at the reassembly of the upper layer protocol data unit. The problem is solved by providing the Final Block Indicator field to indicate whether the Radio Link Control data block is the last data block of a Temporary Block Flow.

D2 discloses adding a status PDU which includes a no more data super-field. The skilled person would understand that adding this status PDU solves the

problem underlying claim 1 and, thus, has the same effect as the Final Block Indicator field in the header.

The appellant has not put forward any arguments that the features claimed provide any technical advantage over D2. The board concludes therefore that the objective technical problem which is solved is simply to provide an alternative to the solution disclosed in D2.

According to the case law of the Boards of Appeal a claimed invention is not excluded from patentability merely because the underlying problem has already been solved. However, this same case law relies on the new solution not being obvious, see T 0495/91, points 4.5 and 5. In the board's view, at least in this case, seeking an alternative solution for the problem already solved in D2 is not in itself inventive, in other words the skilled person would attempt to find such an alternative as part of his or her normal activities.

The board notes that D1 discloses a final block indicator as claimed. D1 is a standardisation document specifying the procedures used at the radio interface for GPRS Medium Access Control/ Radio Link Control (MAC/RLC) layer, see page 13, and thus belongs to the same field as D2. In section 9 radio link control procedures in packet transfer mode are disclosed. Logical link control protocol data units are segmented into radio link control data blocks, i.e. transferred as a multiple of radio link control data blocks, see page 91, section 9. The RLC data block consists of an RLC header, an RLC data unit and spare bits, section 10.2, page 117. The header includes a final block

indicator bit indicating that the RLC data block is the last block of the temporary block flow, see page 126 section 10.4.8.

The board understands that the first feature of claim 1 following "characterized by", namely providing a first length indicator being zero in any next in sequence data block when a last protocol data unit fills the balance of the radio link control data block of the previous data block, is directed to the objective of how to use the capacity of the data block efficiently, whereas the second such feature of claim 1, namely providing a Final Block Indicator field to indicate whether the Radio Link Control data block is the last data block of a Temporary Block Flow, is directed to the objective of how to facilitate the reassembly of the upper layer protocol data unit. As these objectives are independent from and not interfering with each other, the skilled person would aggregate features directed to these objectives from different documents in the field.

The board notes that providing a final block indicator field included in the header and using a status PDU which includes a no more data super-field are alternatives having a similar effect and that it would be an obvious choice to replace the status PDU which includes a no more data super-field disclosed in D2 by the final block indicator field in the header as disclosed in D1.

Thus, the subject-matter of claim 1 does not involve an inventive step.

Turning to the appellant's argument that D2 did not disclose using a final block indicator and included a different solution, namely adding a status PDU which included a no more data super-field which were to be seen as an inventively different solution, see page 3 paragraph "Novelty and Inventive Step" of the letter of 4 December 2007, the board is not convinced. This argument took no account of the disclosure of any other documents in the case, in particular that of D1 (a document whose relevance had been pointed out in examination in the communication of 12 August 2003, see above).

Similar arguments apply *mutatis mutandis* to claim 3, which is directed to a method corresponding to the device of claim 1.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

C. Vodz

D. H. Rees