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Datasheet for the decision
of 14 February 2017

Case Number: T 2564/12 - 3.5.03
Application Number: 99307526.6
Publication Number: 0996246
IPC: H04J3/16
Language of the proceedings: EN

Title of invention:
Communication system

Patent Proprietor:
Ericsson AB

Opponent:
Nägerl, Joel

Headword:
Communication system/ERICSSON

Relevant legal provisions:
EPC Art. 108, 100(a), 56
RPBA Art. 13
**Keyword:**
Admissibility of appeal (yes) - name of appellant correctable
Inventive step (no) - main, 1st and 3rd auxiliary requests
Admissibility of 2nd auxiliary request (no) - prima facie not allowable

**Decisions cited:**
G 0001/12, G 0003/14

**Catchword:**
DECISION
of Technical Board of Appeal 3.5.03
of 14 February 2017

Appellant: Nägerl, Joel
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted on
17 October 2012 concerning maintenance of the

Composition of the Board:
Chairman F. van der Voort
Members: T. Snell
F. Guntz
Summary of Facts and Submissions

I. This appeal concerns the interlocutory decision of the opposition division that European patent No. EP 0 996 246 as amended in accordance with a second auxiliary request met the requirements of the EPC.

II. The appellant, whose identity was at issue during the initial part of these appeal proceedings (see below), is Dr. Joel Nägerl, the opponent in the first instance opposition proceedings.

III. The patent proprietor is respondent in these appeal proceedings.

IV. The following documents cited in the impugned decision are relevant to the present decision:


E4: US 5 461 622 A.

V. The notice of opposition was filed by patent agency Zimmermann & Partner and in the name of Dr. Joel Nägerl, Georg-Deschler-Platz 1, 81245 Munich, Germany. The letter heading of the notice of opposition also mentions Dr. Joel Nägerl as one of its European patent attorneys and further includes as subject reference "Opposition against EP 0 996 246 B1" and as the agency's own case reference number "15002E-EP".

In the notice of opposition, the opponent raised the grounds for opposition pursuant to Article 100(a), (b)
and (c) EPC, of which only Article 100(a) EPC is relevant to the board's present decision. With respect to Article 100(a) EPC, the opposition division concluded, inter alia, that the subject-matter of claim 1 of the second auxiliary request (the only request of relevance to the present decision) was new with respect to E3, and involved an inventive step in the light of E3 combined with E4, or E4 alone.

VI. In the course of the opposition proceedings, the opponent informed the opposition division with a letter dated 25 September 2012 that the opponent, i.e. Dr. Joel Nägerl, was acting "in his own name but to the exclusive interest of ADVA AG Optical Networking" (cf. the decision under appeal, facts and submissions, point 9).

VII. A notice of appeal was filed by the same patent agency Zimmermann & Partner, but in the name of ADVA AG Optical Networking SE, Fraunhoferstrasse 9a, 82152 Martinsried, Germany (henceforth, ADVA), i.e. not the same party as had filed the notice of opposition. The letter heading of the notice of appeal mentions Dr. Joel Nägerl as one of its European patent attorneys and further includes as subject reference "Opposition./.EP 9 962 46 (99307526.6)" and as the agency's own case reference number "15002E-EP".

VIII. In the subsequently filed statement of grounds of appeal, it was requested that the decision under appeal be set aside and that the patent be revoked in its entirety.

IX. In the reply to the statement of grounds of appeal, the respondent requested that the appeal be held inadmissible as being from a party not entitled to
appeal. It was requested that this matter be settled before being required to submit comments on the substantive issues.

X. In a response from the opponent Dr. Nägerl (cf. the letter dated 22 October 2013), it was requested that the name and address of the appellant be corrected from those of ADVA to those of the opponent. Supplementary sworn statements (affidavits) were later filed in support of the request, inter alia by Dr. Nägerl himself (cf. the letter dated 3 July 2015), which includes the statement "I declare that I never intended the notice of appeal to be filed in anyone's name but mine." and concludes with the statement "I am informed that willfully false statements can be punishable under the law of the member states. I declare that all statements made herein of my own knowledge are true and that the statements made on information and belief are believed to be true."

XI. First oral proceedings were held on 13 November 2015 solely in order to consider the admissibility of the appeal. At the end of the oral proceedings, the chairman announced that the board considered that the appeal was admissible and that the proceedings would be continued in writing.

XII. In response to a subsequent communication by the board, the respondent filed a substantive response to the statement of grounds of appeal. An amended set of claims was filed as a "main request". As a [first] auxiliary request, the respondent requested that the appeal be dismissed, i.e. that the patent be maintained in the version the opposition division had held to meet the requirements of the EPC.
XIII. In a communication accompanying a summons to attend second oral proceedings, the board gave preliminary comments, inter alia, on the relevance of documents E3 and E4 to inventive step.

XIV. In a response to the board's communication, the appellant informed the board that it would not be represented at the oral proceedings. It also submitted further comments, in particular in respect of inventive step starting out from document E4.

XV. Oral proceedings took place on 14 February 2017 in the presence of the respondent alone.

The respondent (patent proprietor) indicated that it no longer pursued the request that the appeal be held inadmissible.

In response to the discussion of the substantive issues, the respondent submitted new claim sets of second and third auxiliary requests, respectively.

On the basis of the written submissions, the appellant (opponent) requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested, by way of a main request, that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of claims 1 and 7 as filed with the letter dated 13 June 2016 and claims 2 to 6 as filed with the letter dated 24 August 2012 or, in the alternative, by way of a first auxiliary request, that the appeal be dismissed, or that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of claim 1 of either a second or a third
auxiliary request, both as filed during the oral proceedings before the board.

XVI. At the conclusion of the oral proceedings, after due deliberation, the chairman announced the board's decision.

XVII. Claim 1 of the main request reads as follows (numbers 1 to 8 and 8.1 to 8.3 added by the board):

"1. A communication system having an SDH path between two nodes (21, 22) in which the path has virtual containers of a predetermined bandwidth, includes

2. at one node (21) means (40) arranged to receive input data including packet based data having a bandwidth greater than said predetermined bandwidth and

3. means (42, 43, 44, 45) for inverse multiplexing said data in a byte format regardless of packet boundaries onto a plurality of virtual containers for transmission to said other node;

4. means (50, 51, 52) at the other node (22) for receiving and reassembling said data; and

5. means (52) for compensating for delays caused by different path lengths of individual virtual containers,

6. wherein said plurality of virtual containers are phase related, and means are provided at said one node (21) for inserting overhead bytes into each virtual container which are indicative of the phase relationship,
7. wherein the plurality of virtual containers which carry data derived from a given input broadband data signal includes overhead bytes to so identify such containers to facilitate reassembly of said data signal, and

8. wherein means are provided for utilising a three level sequence numbering system to track the byte sequence,

8.1 one level utilising a TU or AU pointer to identify a reference byte,

8.2 a second level using a link sequence identifier, LSI, number to identify the repeating sequence of virtual containers, and

8.3 a third using a Frame Number Indicator, FNUM, for identification of differing path delays”.

XVIII. Claim 1 of the first auxiliary request is the same as claim 1 of the main request except that the term "link sequence identifier" reads "link sequence indicator".

XIX. Claim 1 of the second auxiliary request is the same as claim 1 of the main request except that the numbers 1 to 8 and 8.1 to 8.3 have been inserted, as shown above in point XVII, and that the following feature has been added to the end of the claim:

"8.4 wherein the overhead bytes comprise the LSI and FNUM."

XX. Claim 1 of the third auxiliary request is the same as claim 1 of the second auxiliary request except that the last feature reads as follows:
"8.4 wherein the means at the other node for receiving and reassembling said data are configured to use the TU or AU pointer to locate the start of a VC-IM-n frame, and subsequently to access the VC-IM-n overhead bytes to extract the LSI number and FNUM."

**Reasons for the Decision**

1. **Request for correction of the appellant's name and address in the notice of appeal - admissibility of the appeal**

1.1 Notwithstanding the fact that the respondent no longer pursued its request that the appeal be held inadmissible (see point XV above, 2nd paragraph), the board is in any case required to examine the admissibility of the appeal ex officio (cf. Article 110 EPC and Rule 101 EPC).

1.2 The board notes (cf. point VI above) that it was made known during the opposition proceedings that the opponent, i.e. Dr. Joel Näägerl, was acting "in his own name but to the exclusive interest of ADVA AG Optical Networking". In other words, in the course of the opposition proceedings, it was made clear that Dr. Näägerl was a so-called "straw man" acting on behalf of the principal ADVA. The notice of appeal was however filed in the name of ADVA, who was not a party to the opposition proceedings. A request to correct the name and address of the appellant to those of the opponent was filed subsequently (cf. point X above), but only after the end of the time limit set under Article 108 EPC had elapsed. The question thus arises whether the notice of appeal is correctable in this case.
1.3 In accordance with the case law of the boards of appeal, the name and address of the appellant in a notice of appeal is correctable provided that the appellant was identifiable at the end of the period for filing the notice of appeal and that it can be established with sufficient confidence on the basis of the information in the appeal or otherwise on file that the corrected version represents the true intention of the appellant and is not the result of a change of mind (cf. G 1/12, reasons 21 to 23 and 26 to 28, OJ EPO 2014, 112). The party requesting the correction has the burden of convincing the board that an error and not a change of mind has occurred (G 1/12, reasons 28 and 29).

1.4 The board takes the view, given the known relationship between Dr. Nägerl and ADVA (cf. points V to VII above), that the true appellant was identifiable from the file, even if not correctly identified in the notice of appeal.

1.5 Further, the board notes that, at the oral proceedings held on 13 November 2015 before the board, Dr. Nägerl submitted an account as to how the error had come about. According to that account, Dr. Nägerl instructed a paralegal of the agency, who then composed the letter giving notice of appeal erroneously in the name of ADVA. As Dr. Nägerl was absent, the letter was signed instead by his colleague, Dr. Leidescher, who did not notice the mistake. No evidence was however offered from the paralegal to support this account.

1.6 Even though no written evidence was offered from the paralegal to support this account, in view of these submissions made by Dr. Nägerl, taking into account the fact that the notice of opposition and the notice of
appeal, both filed by the same firm of patent agents, included corresponding subject references and identical own case reference numbers (cf. points V and VII above), and in view of the statements of Dr. Nägerl in his affidavit (cf. point X above), given the assumed integrity of the professional representative, the board accepts that sufficient evidence is provided by the requester that the opponent, i.e. Dr. Joel Nägerl, truly intended to file the appeal in his own name.

1.7 It further remains to be said that there is no evidence at all which would render plausible the alternative scenario of the correction reflecting a change of mind after the filing of the notice of appeal.

1.8 Consequently, the request for correction of the name and address in the notice of appeal is allowed (Rule 139 EPC).

1.9 The appeal complying with Articles 106 to 108 EPC and Rule 99 EPC, it follows that the appeal is admissible (Rule 101(1) EPC).

2. Claim 1 - main request - inventive step

2.1 The patent in suit concerns an SDH ("Synchronous Digital Hierarchy") communication system. In SDH, data are transported in so-called "virtual containers". In the SDH standard, different sizes of container (VC-n) are defined, inter alia VC-4 and VC-12. A virtual container contains a number of overhead bytes and payload data.

2.2 The patent further concerns the use, in an SDH system, of the technique of "inverse multiplexing" (IM), by which a single high-bandwidth input data stream is
split in order to be transmitted over a plurality of lower bandwidth channels, the data stream being reassembled in the receiver. As inverse multiplexing is used, the patent refers to virtual containers by the term "VC-IM-n".

2.3 The closest prior art document is considered to be E4, which relates to inverse multiplexing in a SONET (Synchronous Optical Network) system. SONET is a multiplexing standard widely used in the USA and is largely equivalent to the SDH standard widely used in Europe. Instead of "virtual container", SONET uses the term "synchronous payload envelope" (SPE) for the equivalent data structure transporting payload data. With respect to the present discussion, the board considers that it makes no difference whether the system is SDH or SONET, or whether VCs or SPEs are used. This was not contested by the respondent.

2.4 Using the wording of claim 1, E4 discloses:

1. A communication system having an SDH[-equivalent] path ("SONET") between two nodes in which the path has virtual containers ("SPEs") of a predetermined bandwidth (cf. col. 2, lines 8-22), includes

2. at one node (Fig. 2) means (205-211) arranged to receive input data ("super-rate signal") having a bandwidth greater than said predetermined bandwidth and

3. means (213) for inverse multiplexing said data in a byte format onto a plurality of virtual containers for transmission to said other node over three STS-1 signals (cf. col. 4, lines 6-9, col. 5, lines 35-42 and col. 6, lines 2-5, and Fig. 2 ("outputs 202, 203 and 204"));
4. means (Fig. 5) at the other node for receiving and reassembling said data; and

5. means (506-1,2,3 to 508-1,2,3) for compensating for delays caused by different path lengths of individual virtual containers (cf. col. 6, line 6 ff.),

6. wherein said plurality of virtual containers are phase related (cf. col. 5, line 65, to col. 6, line 2), and means are provided at said one node for inserting overhead bytes (J1) into each virtual container which are indicative of the phase relationship (col. 5, line 45 ff.),

7. wherein the plurality of virtual containers which carry data derived from a given input broadband data signal includes overhead bytes (J1) to so identify such containers to facilitate reassembly of said data signal (cf. col. 3, lines 32-36 and col. 8, lines 34-36), and

8. wherein means are provided for utilising a multi-level sequence numbering system to track the byte sequence,

8.1 one level utilising a TU or AU pointer (H1, H2) to identify a reference byte (J1) (col. 2, lines 23-27, and col. 6, lines 40-45), and

8.3 a level using a Frame Number Indicator (J1) for identification of differing path delays (N.B.: claim 1 does not exclude that the same reference byte (here, J1), which is used for frame alignment (first level), provides an indication of frame number (in E4: a changing pattern every frame over a cycle of 64 frames (cf. E4, col. 3, lines 32-36,
and col. 6, lines 45-48)), which is used to determine slippage of a whole frame or more (second level)).

2.5 The subject-matter of claim 1 differs from the system of E4 in the following respects:

(i) the input data includes packet data;

(ii) inverse multiplexing is performed in a byte format regardless of packet boundaries; and

(iii) the sequence numbering system is a three level numbering system (rather than the two disclosed in E4), the additional level using a link sequence identifier, LSI, number to identify the repeating sequence of virtual containers.

2.6 Re (i) and (ii): Although E4 does not mention packets, it suggests that the input data may be "asynchronous in the general case" (cf. col. 4, lines 15-17). At the priority date the skilled person was aware that SONET or SDH systems were commonly used to transmit ATM ("asynchronous transfer mode") data (cf. e.g. E3, the title), whereby ATM cells are analogous to packets. Since the inverse multiplexing is performed byte-for-byte in E4, it follows that no regard is paid to cell or packet boundaries. Consequently, these distinguishing features do not contribute to inventive step, and nor did the respondent argue otherwise.

2.7 Re (iii):

2.7.1 The respondent interpreted the LSI number as being a number indicating the round-robin link sequence used in inverse multiplexing. This is indeed in agreement with
the description of the patent in col. 4, lines 52-56. For the sake of argument, the board adopts the same interpretation.

2.7.2 The respondent also interpreted claim 1 in the light of the description such that features 6 and 8 were to be read in combination as meaning that the LSI number was included in the overhead bytes of each of the virtual containers, as was allegedly supported by the description.

2.7.3 However, notwithstanding that the board does not agree that this interpretation is supported by the description (see below in connection with the second auxiliary request), the board notes that claim 1 is not limited at all to using an LSI number comprised in any overhead bytes. Rather, in accordance with claim 1, the LSI number could be provided in any manner. In this respect, the claim language is merely broad rather than ambiguous and, consequently, there is no need to refer to the description to interpret the claim.

2.7.4 As regards the inventive contribution of feature (iii), the respondent did not dispute that in E4 the transmitter and the receiver had to use the same round-robin link sequence in order that the receiver can reassemble the bit stream, even though E4 makes no mention of this aspect. The problem to be solved starting out from E4 is therefore how to ensure that the transmitter and the receiver use the same round-robin sequence for the three STS-1 signals.

2.8 In order to solve this problem, the skilled person would note that in Fig. 2, the three STS-1 signals are labelled as #1, #2 and #3, implicitly defining the round-robin sequence. The same labelling scheme is
shown in Fig. 5 for received signals STS-1 (cf. col. 6, lines 16-19). It would therefore have been obvious to the person skilled in the art, if not even implicit, that both transmitter and receiver associate each received signal with a respective sequence number \#n, thereby defining the round-robin sequence. This information corresponds to the "link sequence identifier" defined in claim 1. Consequently, in the board's view, this feature does not contribute to inventive step either.

2.9 The board therefore concludes that the subject-matter of claim 1 of the main request does not involve an inventive step (Articles 52(1) and 56 EPC).

3. First auxiliary request - claim 1 - inventive step

3.1 The only difference between claim 1 of the main request and the first auxiliary request is that in the former the LSI is called a "link sequence identifier", and in the latter a "link sequence indicator". However, this difference makes no difference to inventive step, which was not disputed by the respondent.

3.2 It follows that the subject-matter of claim 1 of the first auxiliary request does not involve an inventive step either (Articles 52(1) and 56 EPC).

4. Second auxiliary request - admissibility

4.1 This request was filed during the oral proceedings. The admitting of this request is at the discretion of the board (cf. Article 13(1) of the Rules of Procedure of the Boards of Appeal (RPBA)). In accordance with the case law of the boards of appeal, one criterion for
exercising discretion is whether the request is prima facie allowable.

4.2 As regards claim 1 of the second auxiliary request, the board, prima facie, considers that the amendments give rise to objections under Article 84 EPC (clarity) and Article 123(2) EPC (added subject-matter).

4.2.1 With respect to Article 84 EPC (which is to be examined where claims are amended, cf. G 3/14, OJ EPO 2015, 102), the feature "8.4 wherein the overhead bytes comprise the LSI and FNUM" is unclear because the term "the overhead bytes" has an antecedent basis in two separate features, 6 and 7, whereby it is not clear to which one of these earlier features feature 8.4 refers.

4.2.2 With respect to Article 123(2) EPC, claim 1 now embraces an embodiment in which each virtual container comprises the LSI (cf. feature 6 combined with feature 8.4). However, the application as filed provides no basis for an LSI included in each virtual container. In accordance with Figs. 5, 6 and 8 and the description in paragraphs [0019] to [0023], the LSI is included in field OHB2 (cf. Fig. 6) once every fourth multiframe (VC-IM-12; cf. Fig. 5), or once every fourth frame (VC-IM-4; cf. Fig. 8).

4.3 As claim 1 is prima facie not allowable, the board holds the request to be inadmissible (Article 13(1) RPBA).

5. Third auxiliary request - claim 1 - inventive step

5.1 The essential issue as regards feature 8.4 in respect of inventive step is whether the sub-feature that the means at the other node for receiving and reassembling
said data are configured to access the VC-IM-n overhead bytes to extract the LSI number (which means, implicitly, that the LSI number is transmitted in the overhead bytes) is obvious. The remaining sub-features of feature 8.4, namely using the TU or AU pointer to locate the start of a VC-IM-n frame (cf. col. 6, lines 40-45) and extracting the FNUM (cf. col. 6, lines 45-48), are derivable from E4, which was not contested.

5.1.1 In the board's view, the skilled person would firstly regard it as obvious that the link sequence information required by the receiver discussed above in connection with the main request could be provided by the transmitter, as at the priority date it was common in communications systems for the transmitter to send signalling or control information to the receiver that was required for decoding a signal.

5.1.2 The respondent argued that this data could be transmitted from the network management system, or that it could be predefined to use the same sequence in transmitter and receiver.

In the board's view, however, even if these alternatives might also have occurred to the skilled person, an inventive step does not result from making a selection from a limited number of obvious possibilities, as would be the case here.

5.1.3 The skilled person then would have to consider how to transmit the information to the receiver. In data communications, it was commonly known to send signalling data from transmitter to receiver in special control channels which were overhead to the main data transmission channels. As is mentioned in E4 (cf. col. 2, lines 13-15), a SONET transmission signal includes
overhead bytes for "transport management purposes", i.e. for transmitting signalling messages to the receiver. Further, it was well-known that some of these bytes were spare bytes for future use, see below.

5.1.4 Further, the skilled person would take into account document E3, which aims to solve the same general problem as E4 and the present patent, namely synchronising reassembly of inverse multiplexed channels in SDH or SONET systems. The most relevant section in E3 is on page 1161, section 2, entitled "Inverse multiplexing schemes". This section lacks any fully-detailed description of inverse multiplexing schemes in SDH, but mentions in two separate passages that sequence information may be transmitted in the path overhead of a virtual container POH. The first passage (cf. page 1161, right-hand col., 4th paragraph) reads: "The sequence information can then even be included in the Path Overhead (POH)". The second passage (cf. page 1162, left-hand col., 2nd paragraph) reads: "Since framing and error checking capabilities are already included in the path overhead ..., only some additional sequence information is required. One or more of the spare POH bytes (Z1,Z2,Z3) may be used for this purpose".

5.1.5 The skilled person would, in the board's view, extract from these passages of E3 the general teaching that sequence information not already included in the overhead as part of the SDH standard can be sent in unused bytes of the path overhead POH. The skilled person, by applying this general teaching, would thus arrive in an obvious manner at the claimed solution.

5.1.6 The respondent argued that the combination of E4 and E3 had not been raised by the appellant.
The board however observes that the third auxiliary request was submitted for the first time during the oral proceedings. If a party wishes such a late-filed request to be admitted, it has to be prepared to deal with fresh objections raised by a party or the board based on the available prior art documents, insofar as sufficient time is available to respond to the objections (cf. Article 113(1) EPC). In any case, the respondent did not ask for more time. Furthermore, the board's argument essentially builds on the existing objection based on E4 as closest prior art, embellished by passages of E3 well-known to the respondent, who was therefore in a position to respond.

5.1.7 The respondent also argued that the sequence information referred to in E3 was not round-robin link sequence information (i.e. not a LSI number). Consequently, the combination of E4 and E3 did not lead to the invention.

The board's argument however does not rely on E3 as disclosing the transmission of an LSI number, but as a general teaching that additional sequence information necessary for reassembling the bit stream may be transmitted in spare bytes of the POH. The board judges that the skilled person would be able to apply this general teaching to the system of E4 in order to inform the receiver of the link sequence, thereby arriving at a system in which the link sequence information is accessed from the received overhead bytes, as claimed.

5.1.8 The respondent argued that the LSI number transmitted in the container overhead had the technical effect that the system would recover faster ("hit-less fashion") from any loss of data. Consequently, the problem to be
solved was how to make the system respond more quickly [to a loss of synchronisation].

The board however observes that the patent makes no mention whatsoever of this technical effect. The board is also not convinced of any technical improvement, since, assuming that the round-robin sequence remains fixed throughout the duration of the connection, which is embraced by claim 1, no improvement in system recovery would occur compared with, say, a system with a predetermined round-robin sequence. This is because the link sequence, being fixed, is the one item of information which would be reliably known following a loss of synchronisation.

5.1.9 The respondent further argued that the LSI number transmitted in the container overhead made it possible to dynamically change the number of links.

The board however observes that in accordance with the description, dynamically adding or removing a link is controlled by a separate 32-byte messaging signal (cf. paragraph [0026] of the patent), and not by the LSI. In any case, claim 1 is not limited to dynamic control of the number of links.

The board is therefore not convinced by the respondent's arguments.

5.2 The board concludes that the subject-matter of claim 1 of the third auxiliary request does not involve an inventive step (Articles 52(1) and 56 EPC).
6. **Conclusion**

As there is no allowable request, it follows that the patent must be revoked.

**Order**

**For these reasons it is decided that:**

The decision under appeal is set aside.

The patent is revoked.

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The Registrar:  

The Chairman:

N. Schneider  

F. van der Voort

Decision electronically authenticated