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**D E C I S I O N**  
of 6 April 1995

**Case Number:** T 1024/92 - 3.5.1

**Application Number:** 83902481.7

**Publication Number:** 0116577

**IPC:** H04B 1/00

**Language of the proceedings:** EN

**Title of invention:**  
Data Signalling System

**Patentee:**  
MOTOROLA, Inc.

**Opponent:**  
Philips Patentverwaltung GmbH  
Alcatel SEL Aktiengesellschaft  
Nokia Cellular Systems Oy  
Siemens AG

**Headword:**  
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**Relevant legal provisions:**  
EPC Art. 56

**Keyword:**  
"Inventive step (no)"

**Decisions cited:**  
-

**Catchword:**  
-



Case Number: T 1024/92 - 3.5.1

**D E C I S I O N**  
**of the Technical Board of Appeal 3.5.1**  
**of 6 April 1995**

**Appellant:**  
(Opponent 02)

Alcatel SEL Aktiengesellschaft  
Lorenzstrasse 10  
D-70435 Stuttgart (DE)

**Representative:**

Graf, Georg Hugo, Dipl.-Ing.  
Alcatel SEL AG  
Patent- und Lizenzwesen  
Postfach 30 09 29  
D-70449 Stuttgart (DE)

**Appellant:**  
(Opponent 03)

Nokia Cellular Systems Oy  
P.O. Box 44  
SF-02601 Espoo (FI)

**Representative:**

Ritter und Edler von Fischern, Bernhard  
Dipl.-Ing.  
Hoffmann, Eitle & Partner  
Patentanwälte  
Postfach 81 04 20  
D-81904 München (DE)

**Appellant:**  
(Opponent 04)

Siemens AG  
Postfach 22 16 34  
D-80506 München (DE)

**Representative:**

-

(Opponent 01)

Philips Patentverwaltung GmbH  
Wendenstrasse 35  
Postfach 105149  
D-20035 Hamburg (DE)

**Representative:**

Peuckert, Hermann, Dipl.-Ing.  
Philips Patentverwaltung GmbH  
Wendenstrasse 35c  
D-20097 Hamburg (DE)

**Respondent:** MOTOROLA, INC.  
(Proprietor of the patent) 1303 East Algonquin Road  
Schaumburg IL 60196 (US)

**Representative:** Hudson, Peter David  
Motorola  
European Intellectual Property  
Midpoint  
Alencon Link  
Basingstoke  
Hampshire RG21 1PL (GB)

**Decision under appeal:** Interlocutory decision of the Opposition Division  
of the European Patent Office dated 12 October  
1992 concerning maintenance of European patent  
No. 0 116 577 in amended form.

**Composition of the Board:**

**Chairman:** P. K. van den Berg  
**Members:** R. Randes  
G. Davies

## Summary of Facts and Submissions

- I. European patent No. 0 116 577 was granted on the basis of European patent application 83 902 481.7, filed on 24 June 1983.
- II. Opponents I, II, III and IV filed oppositions to the patent. All oppositions were based on the grounds that the subject-matter of the patent was not new or did not involve an inventive step (Article 100(a) EPC).
- Opponent III referred inter alia to the prior art document
- D7:** "Nordic Mobile Telephone", System Description, NMT doc.1.1980, by the Nordic Mobile Telephone Group, February 1980.
- III. Opponent I withdrew its opposition on 26 February 1992.
- IV. The Opposition Division decided on 12 October 1992 that the patent could be maintained in amended form.

Claim 1 as filed in the oral proceedings held on that day reads (leaving out the reference signs):

"A wireless communications system tolerant to corruption by channel disturbances on radio channels and comprising at least one primary station and a plurality of remote stations, at least one station having a predetermined station address addressable by a command packet having an address field for containing said station's address and being adapted at least to receive communications including a command packet characterised in that said at least one station is operationally flexible in response to command packets including:

an operation code field for containing a code at least partly specifying an operation to be performed by said addressed station; and  
an argument field for containing an argument used to further and fully specify, together with the operation code in the same command packet, said operation when said operation code only partly specifies said operation and is capable of conveying data or status information when said operation code fully specifies said operation, whereby said operation may be determined by said operation code in conjunction with said argument when said argument is used to further specify said operation."

- V. The reasons for the Opposition Division's decision were the following. Among the documents D1 to D9 cited in the decision, D7 was considered to disclose the closest prior art. The wireless communications system according to the patent as amended differed from this prior art in two respects: firstly that a command packet fully specified the operation to be performed by the addressed station, and secondly that the argument was used to convey data or status information when not used for extending the operation code. The first difference was not disclosed in D7 since according to this document a single operation code (referred to as a "prefix"), in particular the prefix P(12), could initiate any one of a plurality of different operations. Unambiguous determination of the operation was consequently only possible if the operation was interpreted in combination with the **state** of the station. As to the second difference, the Opposition Division noted that the opponents had alleged that another prefix, P(7), was used as an operation code together with an argument which conveyed data (and thus was not a code extension); however, according to the Opposition Division, the prefix P(7) could not be regarded as an operation code

since, according to page 27 of D7, P(6) (sic) was defined as "spare". Consequently, these data were not sent in a command packet, as demanded by Claim 1, but in a data communication packet.

Although other documents, concerned with computer technique, disclosed the concept of operation code extensions as such, a skilled man would not seek the solution to a radio communication problem in them. Thus the claimed subject-matter involved an inventive step.

- VI. Opponents II, III and IV lodged admissible appeals against this decision and requested that it be set aside and the patent be revoked.

In the Grounds of appeal filed by Opponent III it was **inter alia** argued that D7 came closer to the invention than admitted by the Opposition Division. The command packets containing the prefix P(12) had different meanings depending on the value of the argument, in correspondence with the opposed patent. There was thus no need in D7 to use state information. Furthermore, the prefix P(7) had in fact the meaning "digit signal" when employed in the direction towards the primary station (inbound). It fully specified the command and was used together with an argument conveying data. Even if the prefix P(7) in the opposite direction (outbound) was indicated as "spare", it would have been obvious for the skilled man to use it in the meaning of "digit signal" in that direction as well.

Thus D7 rendered the system claimed in Claim 1 obvious.

- VII. Opponent IV withdrew its opposition on 3 February 1994.

- VIII. The Respondent has filed no observations on the grounds of appeal.

### Reasons for the Decision

1. The main issue to be decided is whether the subject-matter of Claim 1 of the patent as amended involves an inventive step, in particular with respect to D7.
2. The Opposition Division was of the opinion that all features of Claim 1 except two were known from D7 (cf. point V above). This finding has not been challenged by the Respondent, and the Board sees no reason for questioning it. Therefore, as far as D7 is concerned, it need only be examined whether the arguments on file in respect of the two remaining features are such as to invalidate the reasons given by the Opposition Division in favour of an inventive step.
3. The invention regards a wireless communications system comprising a primary station and a plurality of remote stations. Commands from one station to another can be transmitted by means of command packets consisting of a predetermined number of data bits. Five bits make up an "operation code" which may completely specify a certain operation to be performed. Eight further bits make up an "argument". The argument has two different functions: it may either serve as an extension to the operation code, in which case the operation to be performed is determined by the combination of the operation code proper and the argument, or it may serve as a pure data field, largely independent of the operation code.
4. D7, which the Board - in agreement with the Opposition Division - finds to be the closest prior art, describes a mobile telephone system which uses (digital) data packets to send communications from a primary station towards one or more of a plurality of remote stations (the outbound link) and from a remote station towards

the primary station (the inbound link). Four bits, representing "prefixes" P(0) to P(15), are associated with different meanings according to the table on page 27. There is furthermore an "information" field consisting of three digits in outbound packets and five digits in inbound packets.

5. The first of the two features of Claim 1 found by the Opposition Division not to be derivable from D7 demands that, in case the operation code only partly specifies the operation to be performed by the addressed station, the operation code together with the argument should fully specify said operation. (The Opposition Division's alternative formulation "that the operation is fully specified in the same command packet" is less suitable since it deviates from the actual wording of the claim.)

5.1 The Opposition Division was of the opinion that D7 does not disclose a full specification of a command because a single prefix (operation code) can initiate any one of a plurality of different operations.

5.2 The Board is not able to share this view. The example given by the Opposition Division concerns the prefix P(12), described on page 20 of D7 in connection with outbound transmissions. A packet containing this prefix can have different functions: it may indicate a call to a certain station, or allocate a certain traffic channel to be used for speech communication, or convey queuing information with priority. However, as can be seen from page 20, for each of these cases the "information" field is different: it is "idle" (consisting of zeroes), contains a traffic channel number or a fictitious channel number. Thus, due to the information bits, the functions are distinguishable. In the Board's view, this corresponds to the feature in Claim 1 mentioned above.

5.3 Another question in this context is whether the packets containing the prefix P(12) are command packets in the meaning of Claim 1, i.e. whether the prefixes specify operations to be performed by the addressed station. The Opposition Division held that they do since there is no other way for commanding the remote stations (decision, point 1.5). This is not an unreasonable view, and in the absence of counter-arguments the Board is prepared to accept it.

5.4 The argument that according to D7 commands are interpreted as a function of the state of the station appears to the Board to be less relevant once it has been established that the command packets triggering different operations are in fact not identical, and state information, even if actually used, would be redundant. Furthermore, it is not apparent to the Board why it would be inventive simply not to use such state information.

6. The second feature of Claim 1 found by the Opposition Division not to be derivable from D7 demands that the argument be capable of conveying data or status information when the operation code fully specifies the operation to be performed.

6.1 In respect of this feature, the Opposition Division referred to the prefix P(7), described on page 22 of D7. According to the table on page 27, the meaning of P(7) for inbound packets is, as pointed out by Opponent III, "digit signal". The packet conveys in the information area the digits of a telephone number to be dialled.

The Opposition Division denied that in this case the prefix acts as an operation code since it is defined as "spare". However, this applies to the outbound link; P(7) is thus defined only for the inbound link. In the

Board's view, this prefix can be seen as an operation code since it instructs the main station to interpret the bits in the information field as digits making up a telephone number. The Board agrees with the Opposition Division that the digits may be seen as representing mere data.

The Board notes in this connection that Claim 1 refers not just to data, but to "data or status information". The argument's capacity for conveying status information is however not regarded as an additional feature but as an optional one, since it is clear from the wording of dependent Claims 4 and 5 that "data" should be taken as encompassing "status information". Therefore, "data or status information" in Claim 1 must be understood as "data, in particular status information".

6.2 The system described in D7 is thus such that the prefix P(12) in the outbound link may be regarded as an operation code which is further specified by the argument in the information field. Furthermore, the prefix P(7) in the inbound link may be seen as an operation code which fully specifies an operation while the information field conveys pure data.

6.3 The described system thus corresponds to the one in Claim 1 with one possible exception, namely that according to D7 the operation code fully specifying the operation to be performed and the one partly specifying the operation are not used in the same link (either inbound or outbound). Claim 1, in contrast, is concerned with commands to be performed by "at least one station". This suggests that only the link towards that station is considered. If the addressed station is a remote station, this is the outbound link.

- 6.4 However, in the Board's view this possible difference does not influence the assessment of the inventive step. Opponent III has argued that it was obvious to use the prefix P(7) together with data in the outbound link as well as in the inbound link, and the Board shares this opinion. According to D7, the data format is practically identical in the inbound and outbound links; in particular, packets in both directions always contain a prefix and an information field. This implies that, as far as these items are concerned, it does not matter whether a packet is inbound or outbound. A skilled person, noting this, would be led to employ the same kind of prefixes and arguments in both directions.
7. The Board finally notes that the Opponents have used, in addition to the prior art described in D7 or as an alternative to it, the teachings of other prior art documents or combinations of documents to prove that the subject-matter of Claim 1 does not involve an inventive step. The reason why the Board does not comment on these documents is not that they are not regarded as pertinent; it is simply that, in the Board's opinion, the prior art referred to in the contested decision is in itself sufficient to establish obviousness.
8. It follows that the subject-matter of Claim 1 does not involve an inventive step.

**Order**

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

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

M. Kiehl

P. K. J. van den Berg

