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**Datasheet for the decision  
of 4 July 2012**

**Case Number:** T 0892/10 - 3.5.03

**Application Number:** 01983628.7

**Publication Number:** 1340391

**IPC:** H04Q 7/22

**Language of the proceedings:** EN

**Title of invention:**

Transmitting messages in telecommunication system comprising a packet radio network

**Patentee:**

Nokia Corporation

**Opponent:**

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**Headword:**

Message transmission/NOKIA

**Relevant legal provisions:**

EPC Art. 56

**Relevant legal provisions (EPC 1973):**

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**Keyword:**

"Inventive step - no (all requests)"

**Decisions cited:**

-

**Catchword:**

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Case Number: T 0892/10 - 3.5.03

**D E C I S I O N**  
of the Technical Board of Appeal 3.5.03  
of 4 July 2012

**Appellant:** Nokia Corporation  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 9 February 2010  
revoking European patent No. 1340391 pursuant  
to Article 101(3)(b) EPC.

**Composition of the Board:**

**Chairman:** A. S. Clelland  
**Members:** T. Snell  
R. Moufang

## Summary of Facts and Submissions

- I. This appeal was lodged by the proprietor against the decision of the opposition division revoking European patent No. 1340391.

Although the opposition had been withdrawn by the single opponent (who is hence no longer party to these proceedings), the opposition division continued the proceedings of its own motion and eventually revoked the patent on the ground that the subject-matter of claim 1 as amended during the opposition proceedings did not meet the requirement of inventive step pursuant to Article 52(1) in combination with Article 56 EPC. The opposition division referred to the following documents in its decision:

D1: ETSI EN 301 344 V7.3.1 (2000-07)

Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Service description; Stage 2 (GSM 03.60 version 7.3.1 Release 1998)

D2: ETSI TS 100 901 V7.4.0 (1999-12)

Digital cellular telecommunications system (Phase 2+); Technical realization of the Short Message Service (SMS); (GSM 03.40 version 7.4.0 Release 1998)

- II. The proprietor/appellant filed a notice of appeal against the above decision. Claims of a new main request and an auxiliary request were subsequently filed together with a statement of grounds of appeal.

In the statement of grounds, the appellant requested that the decision under appeal be set aside and a patent maintained in amended form on the basis of the claims of the main request, or in the alternative, the auxiliary request.

Oral proceedings were conditionally requested.

- III. In a communication accompanying a summons to oral proceedings the board gave its preliminary opinion that it saw no reason to diverge from the view of the opposition division that the subject-matter of claim 1 of both the main and the auxiliary request lacked an inventive step (Article 52(1) in combination with Article 56 EPC). The board also raised the issue of compliance with Article 123(2) EPC with regard to claim 1 of the auxiliary request.
- IV. With a response to the board's communication, the appellant filed claims of a main request and first to third auxiliary requests.
- V. In a further submission, the appellant submitted an extract of a book ("Mouly et al: "The GSM system for Mobile Communications", France 1992).
- VI. Oral proceedings were held on 04 July 2012. The appellant requested that the decision under appeal be set aside and the patent maintained in amended form on the basis of claims 1 to 12 of the main request, or of claims 1 to 12 of one of auxiliary requests 1 to 3, all requests as filed with the letter dated 22 May 2012.

At the end of the oral proceedings the board announced its decision.

VII. Claim 1 of the **main request** reads as follows:

"A method of transmitting messages from a mobile station to a telecommunication system comprising a first network offering circuit-switched services and a second network offering packet-switched services, comprising:

checking (301), by the mobile station, in response to the need to transmit at least one message, if the mobile station is attached to the second network,

transmitting (303), by the mobile station, said at least one message to the second network in response to the mobile station being attached to the second network, and

in response to failure to transmit the message via the second network if an error message is received from the second network, transmitting (307), by the mobile station, said at least one message to the first network."

VIII. Claim 1 of the **first auxiliary request** is the same as claim 1 of the main request except that in the last clause, the wording

"in response to an interface between the second network and the first network for message transmission via the first network not being supported"

is inserted following the term "error message".

IX. Claim 1 of the **second auxiliary request** is the same as claim 1 of the first auxiliary request except that the above-quoted wording is replaced by:

"in response to a predetermined interface not being supported".

X. Claim 1 of the **third auxiliary request** is the same as claim 1 of the second auxiliary request except that the wording "a predetermined interface" is replaced by "an interface Gd".

## Reasons for the Decision

### *Inventive step*

1. The present invention is concerned with SMS ("short message service") transmission via either a circuit-switched mobile network, eg GSM, or a packet-switched mobile network, eg GPRS, which is a special GSM application. The most relevant prior art documents D1 and D2 are both ETSI standard documents for the GSM system concerned with respectively SMS and GPRS. The skilled person working in this field would have a good knowledge of both these documents and be in a position to combine elements as appropriate.
2. Document D1, Fig. 2, depicts an overview of the GSM/GPRS network architecture together with the network nodes concerned with SMS transfer, namely SMS-GMSC and SMS-IWMSC, which communicate with an SMS service centre SC. As is well-known, an SM ("short message") is conventionally transmitted to ("mobile-terminated") or

from ("mobile-originated") a mobile station via the GSM network, in particular via an MSC/VLR. It follows however from document D1 that short messages shall also be transmittable via a GPRS network; cf. D1, page 93, section 16.1, which states:

"It shall be possible for a GPRS-attached MS to send and receive short messages over GPRS channels. An MS that is GPRS-attached and not IMSI [GSM] attached shall transfer SMSs over GPRS channels. MSs that are both GPRS-attached and IMSI-attached shall transfer SMSs over GPRS channels or over non-GPRS control channels".

With respect to Fig. 2 of D1, a mobile-originated short message routed via GPRS is transmitted to the SGSN and on to the Gd interface which connects the SGSN with the SMS-GMSC and SMS-IW MSC.

3. The general problem to be solved by the present invention is set out in the description of the patent (cf. paragraph [0004] of the published patent):

"... the problem is that the interface Gd is not obligatory in GPRS networks, and so the GPRS network does not have to support the transmission of short messages. If an interface Gs exists between the SGSN and a mobile switching centre (MSC/VLR), a mobile-terminated short message can be relayed from the MSC/VLR to the SGSN and further to the MS. The GPRS standard defines that a GPRS-attached but non-IMSI attached mobile station has to transmit short messages via GPRS channels. This causes problems since the MS does

not know if the GPRS network supports the transmission of mobile-originated short messages via the GPRS network. If no Gd interface exists or the interfaces of the SMS-IW MSC are not updated to support a short message from the GPRS network, the transmission of short messages fails from the MS via the GPRS network."

4. In essence, this problem is solved in accordance with the present invention by, in response to an error message received at the mobile station from the GPRS network due to the Gd interface not being supported, routing the short message via the GSM network.
5. The board considers it expedient to consider inventive step with respect to claim 1 of the third auxiliary request, which is limited to the case of "an interface Gd not being supported". Claim 1 of the higher ranking requests is in each case more general in that the non-supported interface is not limited to the Gd interface. Since these requests are more general, the board's comments with respect to inventive step apply, *mutatis mutandis*, to these higher ranking requests.
6. It was not in dispute that D1 discloses, using the wording of claim 1 of the third auxiliary request, a method of transmitting messages from a mobile station to a telecommunication system comprising a first network offering circuit-switched services (GSM) and a second network offering packet-switched services (GPRS), comprising:  
transmitting, by the mobile station, said at least one message to the second network in response to the mobile station being attached to the second network.



7. Claim 1 of the third auxiliary request further requires the steps of:

(i) checking [before the transmitting step], by the mobile station, in response to the need to transmit at least one message, if the mobile station is attached to the second network, and

(ii) in response to failure to transmit the message via the second network if an error message in response to an interface Gd not being supported is received from the second network, transmitting, by the mobile station, said at least one message to the first network.

8. Re (i):

A short message can self-evidently only be successfully routed via GPRS if the mobile station is attached to a GPRS network. In the board's view, there logically has to be a check as to whether the mobile station is attached to avoid pointless attempts to transmit the message via a non-existent GPRS channel. Hence, the skilled person would regard it as obvious that the mobile station check first whether the mobile station is attached to the GPRS network. This step accordingly does not contribute to an inventive step.

9. Re (ii):

9.1 The problem to be solved is regarded by the board as how to ensure successful transmission of a mobile-originated short message where transmission via the

GPRS network has failed due to an unsupported Gd interface.

9.2 In the statement of grounds, the appellant argued that this was a hitherto unrecognised problem, and that the discovery of an unrecognised problem supported the presence of an inventive step. However, the board finds it implausible that the problem would go unnoticed in practice, since once it became apparent that short message transmissions were failing (the appellant admitted that customers would report this to the network), the skilled person would investigate and, in the board's view, would have no difficulty in identifying the cause. Therefore, the posing of the problem makes no contribution to inventive step.

9.3 The first part of the solution requires an error message to be transmitted to the mobile station as a result of the unsupported Gd interface. In the board's view, this feature is obvious in the light of document D2, page 21, section 3.4.1, which is a sub-paragraph of section 3.4 headed "Unsuccessful short message TPDU transfer MS -> SC" and which states: "errors [occurring during transfer of TPDU to SC] are generally due to barring or unsupported service in the PLMN [Public Land Mobile Network]. An error indication is returned to the MS from the MSC or the SGSN". The appellant apparently argues in the letter dated 22 May 2012 ("The general teaching of delivery reports, failure reports, error indicators fail[s] to disclose the claimed error message in the Auxiliary requests 2 or 3") that this was a general disclosure which did not refer to the interface Gd. However, this is merely an argument relevant to novelty and not to inventive step.

9.4 The skilled person is then faced with the problem of how to respond to the receipt of the error message at the mobile station in order to ensure successful transmission of the short message. In the board's view it would be obvious that the mobile station would be adapted to seek an alternative route, since re-routing is a routine measure well-known to the person skilled in the art of communications systems. In the present case, an alternative route of transmission is readily at hand, namely the classical GSM route. The board notes further that document D1 even explicitly suggests this approach, albeit for a mobile terminated message rather than a mobile originated message (cf. D1, page 94, section 16.1.1.1).

9.5 The appellant argued at the oral proceedings that mobile terminated and mobile originated short message transmissions involved completely separate procedures. Therefore, it would not be obvious to seek a solution for the case of a mobile originated message from the mobile terminated procedure. The board however disagrees, since although the procedures are not identical, they are technically closely related, as is clear from document D2, see eg page 13, lines 1 to 8. The board therefore does not doubt that the skilled person seeking a solution to the problem of a failed mobile originated short message would draw on his knowledge of the procedure for the mobile terminated case.

9.6 The appellant also argued that if, for the sake of argument, the skilled person were to recognise the problem, he would attempt to provide a solution at the

network level rather than in the mobile station. Either he would comply with the D1 standard by implementing a functioning Gd interface, or would re-route the message via the network interface Gs between the SGSN and the MSC/VLR without involving the mobile station.

However, in the board's view the network-based solutions referred to by the appellant would be of no help if the mobile station roamed to a network owned by a different operator to the home network. In such a case, the skilled person has to provide a solution using elements under his own control, ie the mobile station.

- 9.7 The appellant argued in the statement of grounds that the error message ("delivery report") mentioned in D1 was conveyed between the SMS-GMSC and the SGSN using the Gd interface. Thus if the Gd interface were not supported, there would be no such delivery report.

However, the board notes that in accordance with D2, the SGSN is itself capable of generating an error message due to a failure at the SGSN, which would logically be the case where there were no Gd interface (cf. D2, page 89, Fig. 03.40/18b).

Therefore, the board finds the appellant's arguments unconvincing.

10. The board therefore concludes that the subject-matter of claim 1 of the third auxiliary request, and by implication claim 1 of each of the main, first and second auxiliary requests (cf. point 5 above), does not involve an inventive step (Articles 52(1) and 56 EPC).

*Admissibility of the late-filed document*

The late-filed document submitted by the appellant (cf. point V of the "Summary of Facts and Submissions") was not filed in connection with the issue of inventive step, but Article 123(2) EPC. This document therefore can have no bearing on the board's reasoning and is therefore disregarded (Article 114(2) EPC).

*Conclusion*

As there is no allowable request, it follows that the appeal must be dismissed.

**Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:

G. Rauh

A. S. Clelland