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**Datasheet for the decision  
of 15 September 2023**

**Case Number:** T 0312/21 - 3.5.03

**Application Number:** 04791769.5

**Publication Number:** 1676415

**IPC:** H04L29/06, H04L29/14

**Language of the proceedings:** EN

**Title of invention:**

A method for handling service failures

**Patent Proprietor:**

Nokia Technologies Oy

**Opponent:**

Daimler AG (until 2 June 2021)

**Headword:**

Handling service failures/NOKIA

**Relevant legal provisions:**

EPC Art. 54, 56, 100(a)  
RPBA 2020 Art. 12(4), 12(6)

**Keyword:**

Novelty - main request (no)

Inventive step - auxiliary request 1 (no)

Admittance of amended claims filed on appeal - auxiliary  
request 2 (no): should have been filed in opposition  
proceedings + fresh case + national case law not applicable  
Allowability of auxiliary request 3 - (yes): prohibition of  
*reformatio in peius*

**Decision cited:**

G 4/93

**National decision cited:**

Federal Court of Justice, decision of 21 June 2016, X ZR 41/14,  
Fahrzeugscheibe II



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Case Number: T 0312/21 - 3.5.03

**D E C I S I O N**  
**of Technical Board of Appeal 3.5.03**  
**of 15 September 2023**

**Appellant:** Nokia Technologies Oy  
(Patent Proprietor) Karakaari 7  
02610 Espoo (FI)

**Representative:** Samson & Partner Patentanwälte mbB  
Widenmayerstraße 6  
80538 München (DE)

**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
15 January 2021 concerning maintenance of the  
European Patent No. 1676415 in amended form.**

**Composition of the Board:**

**Chair** K. Bengi-Akyürek  
**Members:** J. Eraso Helguera  
R. Romandini

## Summary of Facts and Submissions

- I. This case concerns the appeal filed by the proprietor (appellant) against the decision of the opposition division to maintain the patent in amended form in accordance with a "second auxiliary request" filed during the opposition proceedings.
- II. The opponent filed an appeal and subsequently withdrew the opposition.
- III. The decision under appeal cited, *inter alia*, the following prior-art document:
- D13:** US 2002/0067704 A1.
- IV. Oral proceedings before the board were held on 15 September 2023.

The appellant requested, as its **main request**, that the decision under appeal be set aside and that the patent be maintained as granted (i.e. that the opposition be rejected) or in amended form on the basis of the claims of one of **five auxiliary requests** filed or re-filed with its statement setting out the grounds of appeal.

- V. Claim 15 as granted (**main request**) reads as follows:

"A user equipment (30) for operation in a communications network further comprising a first network element (35, 39) and a serving network element (36), wherein the user equipment (30) is configured to:

send a first message having a first type, the first type being a re-registration request;  
receive an error message from the first network element (35, 39) in response to the first message, the error message indicating that the first network element has determined that the serving network element (36) for the user equipment (30) is out of service; and  
respond to the error message by sending a further message of a second type different to the first type to the first network element (35, 39), the second type being an initial registration request."

Claim 15 of **auxiliary request 1** reads as follows:

"A user equipment (30) for operation in a communications network further comprising a first network element (35, 39) and a serving network element (36), wherein the user equipment (30) is configured to:

establish a bearer for signalling between the user equipment (30) and the communications network;

send a first message having a first type, the first type being a re-registration request;  
receive an error message from the first network element (35, 39) in response to the first message, the error message indicating that the first network element has determined that the serving network element (36) for the user equipment (30) is out of service; and  
respond to the error message by sending a further message of a second type different to the first type to the first network element (35, 39), the second type being an initial registration request;

respond to the error message by dropping the bearer for signalling between the user equipment (30) and the communications network."

Claim 15 of **auxiliary request 2** is the same as claim 15 of auxiliary request 1, except for the following addition at the very end of the claim:

", but retaining a multimedia packet data protocol context".

## **Reasons for the Decision**

### 1. MAIN REQUEST

#### 1.1 *Claim 15 - novelty (Articles 100(a) and 54 EPC)*

Using the wording of claim 15 as granted, document **D13** discloses (outline as used in the decision under appeal):

A user equipment, UE, (Fig. 4: "MN") for operation in a communications network further comprising a first network element (Fig. 4: "FA") and a serving network element (Fig. 4: "HA1"), wherein the UE is configured to:

A send a first message having a first type, the first type being a re-registration request (see Fig. 4: "MIP Re-registration Request (HA1) 455");

D receive an error message from the first network element in response to the first message, the error message indicating that the first network element has determined that the serving network

element for the UE is out of service (see Fig. 4: "MIP Registration Code (Code 88) 465");

E respond to the error message by sending a further message of a second type different to the first type to the first network element, the second type being an initial registration request (see Fig. 4: "MIP Registration Request (HA2) 470").

Thus, the subject-matter of claim 15 is not new (Article 54 EPC) in view of document D13.

1.1.1 The appellant argued as follows:

(a) Firstly, the finding of the opposition division, endorsed by the board, did not take into account the explicit wording of claim 15. According to claim 15, the UE was configured to send messages of a "first and a second type", the types being different. In the appellant's view,

- different situations in which the same message was sent did not change the "type" of a message,
- the addresses included in the registration message were not relevant content suitable for differentiating between different message types,
- the name of the message did not change its type.

The skilled person understood from the wording and technical context of claim 15 alone that it were not the messages as such which differed from each other to any arbitrary extent, but the content had to be different in a way that the different message types enabled the network to properly treat messages of "different types" differently. According to the IMS standard mentioned in the

patent, the registration and re-registration requests had different message types. In contrast to this, in D13, both the "MIP Re-registration Request (HA1) 455" and the "MIP Registration Request (HA2) 470" comprised the same message type "1 Registration Request" in accordance with the IETF standard RFC 2002. The reason why the Foreign Agent (FA) reacted differently to their receipt was because, after receiving the former, the Home Agent HA1 was determined to be down. Otherwise, the FA would have reacted in exactly the same way as after receiving the latter. Finally, the names given in D13 to the respective messages were basically the same. Even if the purposes of the messages of D13 were the same as in claim 15, this did not indicate different message *types* but just different *purposes* for the registration and re-registration requests.

- (b) Secondly, the messages exchanged according to the embodiment described in the opposed patent between the UE and a P-CSCF, i.e. the "registration request" and the "re-registration request", were not content-wise identical. While the registration request was sent unprotected, the re-registration request used the security association established by means of the registration request. This manifested itself in differences of both the structure and the content of the messages, most notably the "integrity-protected flag" set by the UE to "yes" in a re-registration request, but not included in an initial request. Both requests sent by the UE were therefore of different type in terms of structure and content.

1.1.2 These arguments are not convincing, since:



(a) The wording of the claim does not impose any particular limitation with respect to what "different types" should entail. It could arguably be different names, different content, different structure, different purpose or a combination thereof. Such a limitation would not be derivable from the description of the patent either. Even if paragraph [0067] of the opposed patent exemplarily presents the determination of the request type "by examining an element or part of the request message header", these additional features are not present in claim 15. Nor does the claim specifically require the presence of a "message type" field in the header of the request message. In other words, the notion of "message types" does not necessarily relate to the structure or content of the message but could, in accordance with the definition put forward by the appellant at the hearing before the board, well be related to the way of treating that message by the respective units of the underlying communication network.

With respect to the system of D13, the board concludes that the "MIP Re-registration Request (HA1) 455" and the "MIP Registration Request (HA2) 470" of D13 are of different "types" because:

- Their contents are unquestionably different, if only because the former is addressed to HA1 and the latter to HA2 and the "Home Address" field is part of the Mobile IP header according to RFC2002. This fact alone would be sufficient to meet the even more restrictive definition of "different types" given in the examples of the

description.

- The messages serve the same purposes as in the opposed patent and bear the same names as in claim 15: "re-registration request" as to the former message and (initial) "registration request" as to the latter message.
  
- The receipt, at the Foreign Agent (FA), of "MIP Re-Registration Request 455" directed to "Home Agent 1" palpably causes a different reaction, i.e. subsequent message processing, by the FA (Fig. 4: request 460 sent to HA1), than the receipt of "MIP Registration Request 470" directed to "Home Agent 2" (Fig. 4: request 475 sent to HA2). Thus, the FA of D13 is in fact enabled, contrary to the appellant's allegation, to treat the respective messages differently.

Hence, the board holds that the above "request messages" used in D13 are indeed of different types and thus fall within the broad terms of claim 15. The appellant's argument that, in the system of D13, the reaction of the FA depends on the availability of the HA addressed by the MN fails to sway the board. Claim 15 does not indicate that "sending a first message having a first type" should be the only condition triggering the subsequent "receipt of an error message from the first network" by the UE. Actually, the opposed patent shows the same behaviour as D13 in this respect. It is apparent that the error message received by the UE is not issued by the first network element only in response to the UE sending a "first message having a first type". Rather, the error message also takes account of the fact that

the serving network element for the UE is out of service.

(b) The appellant addressed an embodiment of the opposed patent featuring *inter alia* an "integrity-protected flag" in the "re-registration request". Yet, the claimed subject-matter does not, implicitly or explicitly, comprise this additional limitation.

1.2 It follows that the ground for opposition under Articles 100(a) and 54 EPC prejudices the maintenance of the patent as granted.

## 2. AUXILIARY REQUEST 1

Claim 15 of **auxiliary request 1** comprises all the limiting features of claim 15 as granted and the following additions (outline as used in the decision under appeal; board's emphasis):

A' establish a bearer for signalling between the UE and the communications network;

E' respond to the error message by dropping the bearer for signalling between the UE and the communications network.

The "bearer for signalling" is understood to refer to a communication connection for exchanging signalling information of any type.

### 2.1 *Claim 15 - inventive step (Article 56 EPC)*

2.1.1 Document **D13** further discloses, at least implicitly, the establishment of a control channel (i.e. a "bearer

for signalling") between the UE and the communications network (see e.g. Fig. 4: "MIP Registration Request (HA1) 420" + "MIP Registration Reply + Secondary HA Extension (HA2) 445"; see also claim 1, last feature: "HA2 establishing a connection with the MN").

2.1.2 Thus, the subject-matter of claim 15 differs from D13 only in **feature E'**.

2.1.3 The board, however, holds that simply dropping such a "bearer for signalling" as regards the "communications network" as a whole (rather than a specific component of that network such as e.g. the "P-CSCF") according to feature E' cannot result in a meaningful technical effect, since in such a case no signalling would be possible at all in the underlying "communications network" after the "dropping" step. However, in the appellant's favour, the board assumes that the objective technical problem could be framed as "how to avoid wasting resources (bandwidth) in the signalling process of D13".

2.1.4 The solution proposed in claim 15 of auxiliary request 1 cannot be considered to involve an inventive step (Articles 52(1) and 56 EPC) for the following reasons:

In the system of D13, the MN performs a *second* registration with HA2 after having established the *first* registration with HA1. Under these circumstances, the skilled person would only have had two options: either *keeping* the first registration, i.e. the first "signalling bearer", or *dropping* it. The first option would have resulted in keeping a minimum amount of resources occupied at the MN without any specific need

for it. Consequently, the skilled person seeking to optimise the use of resources would have rather dropped the signalling bearer without resorting to any inventive activity.

2.1.5 The appellant submitted the following arguments in support of the presence of an inventive step:

- (a) The subject-matter of claim 15 differed from D13 not only in **feature E'**, as acknowledged by the opposition division, but also in **feature A'**. The communication between the MN and the HA via the FA disclosed in paragraph [0060] of D13 did not create a "communication session", but merely a "care-of-address" for the MN in the event that it was not in its home network. Determining a care-of-address at layer 3 of the OSI reference model was inherently connectionless and the Mobile-IP messages were sent using UDP. There was no signalling connection between the MN and the HA in the system of D13. The communication between the MN and the HA or between the MN and the FA was therefore not interpreted to be an "established signalling bearer" within the meaning of claim 15.
- (b) The technical effect of the distinguishing features A' and E' was an "improved control management". The objective technical problem to be solved starting from D13 could thus be formulated as *how to provide an efficient control management when receiving an error message*.
- (c) Document D13 was not concerned with a signalling bearer or communication sessions for control management at all. Mobile IP was located at the network layer of the OSI reference model and was

therefore inherently connectionless. Control messages such as the registration messages of D13 were sent without establishing a signalling bearer or a control communication session. Hence, in the absence of any technical benefits or requirements, the skilled person would not have considered introducing "signalling bearers" into the system of D13. Moreover, even if one considered the storage of identities of the HAs in D13 to correspond to a "signalling bearer" in the sense of claim 15, there was no incentive to delete the address of HA1 by the MN. HA1 was the native and primary HA for the MN. In a situation in which HA1 temporarily failed, the skilled person would have favoured to keep the address of HA1 in the memory of the MN because HA1 might become available again at any time. Deleting the address of HA1 would have caused an additional exchange of control information because the address of HA1 would again have to be advertised to the MN by the FA. Thus, network resources would be unnecessarily wasted. In addition, the address of the HA1 was a tiny piece of information and deleting this from the memory of the MN had virtually no technical benefit at all. Hence, the skilled person would not have decided to delete the address of HA1 in the event of a presumably temporary failure of HA1.

2.1.6 These arguments fail to convince the board.

- (a) The claimed "bearer" need not be a *physical* bearer or even a *communication session*, as the appellant seems to imply. The FA first forwards a registration request (420, 470) from the MN to the HA indicated by the MN in the message itself. Then, the FA forwards back to the MN the registration

reply (445, 485) received from the corresponding HA. This handshake allows the establishment of an end-to-end relationship between a MN and a specific HA. In other words, it amounts to the establishment of a "bearer for signalling between the UE and the communications network" in the claimed sense, irrespective of the fact that the IP-in-IP tunnels are run between FA and HA. In summary, the board finds that **feature E'** is the only distinguishing feature vis-à-vis the disclosure of D13.

- (b) As to the alleged lack of incentive to release or drop the established signalling session "because HA1 might become available again at any time", the board considers that the advantages and drawbacks of maintaining such an established signalling bearer pertaining to the registration with HA1 were well-known to the skilled person at the patent's priority date. In accordance with the specific circumstances, e.g. when an alternative HA was readily available, the skilled person would have indeed favoured the deletion of the respective control session belonging to the outdated registration over its maintenance, without the exercise of any inventive skills.

2.2 In view of the above, claim 15 of auxiliary request 1 lacks an inventive step (Article 56 EPC).

### 3. AUXILIARY REQUEST 2

Claim 15 of **auxiliary request 2** comprises all the limiting features of claim 15 of auxiliary request 1 and amended feature E':

E'' respond to the error message by dropping the bearer for signalling between the UE and the communications network, but retaining a multimedia PDP context.

3.1 *Admittance into the appeal proceedings (Article 12(4) and (6), second sentence, RPBA 2020)*

3.1.1 The appealed decision was based on different claim requests. The present request was submitted only with the appellant's statement setting out the grounds of appeal. Thus, it constitutes an "amendment" which may be admitted only at the discretion of the board, which shall exercise its discretion in view of, *inter alia*, the complexity of the amendment, the suitability of the amendment to address the issues which led to the appealed decision, and the need for procedural economy.

3.1.2 According to the appellant, auxiliary request 2 should be admitted into the proceedings because it was an appropriate reaction to the developments in the first-instance hearing and the surprising change of the opposition division's opinion compared to the preliminary opinion. During that hearing, the appellant was confronted with the changed opinion of the opposition division that claim 15 and claim 18 had to be regarded differently from claim 1. This was based on the unfounded and factually incorrect arguments of the opponent that the "integrity-protected flag" was inserted later. The appellant was not prompted to prepare the amendments of auxiliary request 2 already before the hearing within the "Rule 116 EPC deadline". The time to analyse this new and unanticipated development in detail during the hearing itself and to prepare auxiliary request 2 was insufficient. Hence, auxiliary request 2 was to be admitted into the



proceedings to ensure the proprietor's right to be heard. Moreover, such practice would be in line with the principles set out in the German decision *X ZR 41/14 of 21 June 2016, Fahrzeugscheibe II, of the Federal Court of Justice*.

3.1.3 The board makes the following observations in that regard:

- (a) Firstly, the notice of opposition already contained a novelty objection against the subject-matter of claim 15 as granted in view of D13 (cf. points E.III.1 and E.III.2 of the notice of opposition, pages 28 to 34).
- (b) Secondly, after the "surprising change of the opinion of the opposition division" with respect to claim 15 during the oral proceedings, the appellant did have the opportunity to file two additional auxiliary requests (cf. points 6.9 to 6.11 of the minutes, page 9). Furthermore, the minutes do not record any objection with respect to the time allotted to the appellant for the preparation of these requests.
- (c) Finally, references to national decisions on procedural matters are relevant only if the appellant has argued that there is a gap in the procedural framework of the EPC and that the decision is evidence of the existence of a general principle of procedural law recognised in the Contracting States which could be applied to fill that gap (cf. Article 125 EPC). No argument in that regard was advanced by the appellant. There was therefore no need for the board to examine in

detail the reference to German case law made at the hearing.

3.1.4 It follows that the present auxiliary request should indeed have been submitted already in the opposition proceedings (cf. Article 12(6), second sentence, RPBA 2020), either in response to the notice of opposition or during the oral proceedings before the opposition division at the latest. Moreover, the new set of claims constitutes a "fresh case" (i.e. using or retaining a "multimedia PDP context" being taken exclusively from the underlying description) whose admittance would necessitate an entirely new assessment, by the board, of its compliance with at least Articles 84, 123(2) and 52(1) EPC or even a remittal to the opposition division for further prosecution which would in turn be clearly detrimental to procedural economy. In particular, it is *prima facie* apparent to the board that the alleged basis for feature E' (i.e. page 18, lines 22-24 of the underlying application as filed: "... the user equipment only drops the signalling information related to the signalling PDP context but retains the multimedia PDP contexts ...") is much more specific and thus limited than the wording of feature E'', thereby throwing severe doubts as to its compliance with Article 123(2) EPC.

3.1.5 However, the purpose of appeal proceedings is not the examination of subject-matter that is substantially different from that considered by the department of first instance. Rather, the primary object of appeal proceedings is to *review* in a judicial manner the correctness of the appealed decision (cf. Article 12(2) RPBA 2020).

- 3.2 Consequently, the board did not admit auxiliary request 2 into the appeal proceedings (Article 12(4) and (6), second sentence, RPBA 2020).
4. AUXILIARY REQUESTS 3, 4 AND 5
  - 4.1 In its interlocutory decision, the opposition division found that, taking into consideration the amendments made in the then second auxiliary request, which corresponds to present **auxiliary request 3**, the patent and the invention to which it relates met the requirements of the EPC.
  - 4.2 In the proceedings before the Boards of Appeal, the principle of the prohibition of *reformatio in peius* applies. Accordingly, in cases such as the present, where the sole opposition has been withdrawn and the patent proprietor is the sole appellant against an interlocutory decision maintaining a patent in amended form, the board may not challenge the maintenance of the patent as amended in accordance with the interlocutory decision (cf. G 4/93, headnote I). Nor should the board examine lower-ranking auxiliary requests in such a case.
5. Since none of the present claim requests is allowable, the appeal must be dismissed.

**Order**

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

The appeal is dismissed.

The Registrar:

The Chair:



B. Brückner

K. Bengi-Akyürek

Decision electronically authenticated