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

**Case Number:** T 0248/22 - 3.5.05

**Application Number:** 08796413.6

**Publication Number:** 2205473

**IPC:** B61L27/00, H04L29/08, H04L12/24

**Language of the proceedings:** EN

**Title of invention:**  
METHOD AND APPARATUS FOR REMOTELY MONITORING RAILROAD EQUIPMENT  
USING NETWORK PROTOCOLS

**Patent Proprietor:**  
ALSTOM Holdings

**Opponent:**  
Siemens Mobility GmbH

**Headword:**  
Data structures used for remotely monitoring railroad devices /  
Alstom

**Relevant legal provisions:**  
EPC R. 99(2)  
EPC Art. 56  
RPBA 2020 Art. 12(4)

**Keyword:**

Statement of grounds of appeal - reasons set out clearly and concisely (yes)

Inventive step - (no)

Amendment to case - amendment admitted (no)

**Catchword:**

Any reasons as to why an amendment to a party's appeal case overcomes an objection which is not part of the decision under appeal or of the appeal proceedings do not constitute valid reasons for admitting the amendment in view of Article 12(4) RPBA, second paragraph.



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Case Number: T 0248/22 - 3.5.05

**D E C I S I O N**  
**of Technical Board of Appeal 3.5.05**  
**of 15 November 2023**

**Appellant:** ALSTOM Holdings  
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(appeal withdrawn on 5 October 2023)

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**Appellant:** Siemens Mobility GmbH  
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**Representative:** Siemens Patent Attorneys  
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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
9 December 2021 concerning maintenance of the  
European Patent No. 2205473 in amended form.**

**Composition of the Board:**

**Chairman** N. H. Uhlmann  
**Members:** P. Tabery  
F. Blumer

## **Summary of Facts and Submissions**

- I. The appeal is directed against the decision of the opposition division to maintain the European patent in amended form.
- II. The opposition division found that the claimed subject-matter of the patent as granted (main request) and auxiliary request 1 did not involve an inventive step. The subject-matter of auxiliary request 2 was found to be inventive.
- III. Both the proprietor and the opponent appealed against the decision. For the sake of conciseness, the appellant-proprietor and appellant-opponent are referred to as the proprietor and opponent, respectively.
- IV. In its statement of grounds of appeal, the proprietor requested that the decision of the opposition division be set aside and that the patent be maintained as granted (main request) or on the basis of the claims of one of auxiliary requests 1 to 5 underlying the decision or one of auxiliary requests 6 to 10 submitted with the proprietor's statement setting out the grounds of appeal. If the board considered rejecting the proprietor's appeal, oral proceedings were requested.
- V. The opponent requested that the decision of the opposition division be set aside and that the patent be revoked in its entirety. Otherwise, oral proceedings were requested.
- VI. The following documents were considered in the decision of the opposition division:

**D1** M. Burkhardt et al., "*Das Diagnose- und Informationssystem VICOS S&D für sicherungs-*

*technische Anlagen des Nahverkehrs*", Signal+Draht (91), October 1999, pp. 11-14

**D5** M. Burkhardt et al., "*Ferndiagnose und Service mit VICOS S&D*", Signal+Draht (93), April 2001, pp. 43-45

**D6** S. Esser et al., "*Online-Diagnose an Bahnübergangsanlagen - Status und Erfahrungen*", Signal+Draht (94), June 2002, pp. 16-21

VII. The board issued a summons to oral proceedings. It also set out its preliminary opinion on the case in a communication of 11 August 2023 (Article 15(1) RPBA 2020).

The board concurred with the findings of the opposition division that the ground for opposition pursuant to Articles 100(a) and 56 EPC prejudiced the maintenance of the patent as granted (**main request**) and **auxiliary request 1**.

Furthermore, the board considered that **auxiliary requests 2 to 5** did not meet the requirements of Article 56 EPC either.

The board indicated that the proprietor's arguments as to why **auxiliary requests 6 to 10** should be admitted were not convincing.

VIII. In a letter dated 5 October 2023, the proprietor withdrew its appeal and thus became only a respondent in these proceedings. It also withdrew its request for oral proceedings.

IX. The parties did not comment on the board's preliminary views on the substance of the appeal as expressed in its communication of 11 August 2023.

The withdrawal of the proprietor's appeal implies that the main request and the first auxiliary request, being broader than auxiliary request 2, cannot be allowed due

to the prohibition of *reformatio in peius* in view of the opponent's appeal. However, for reasons of consistency, the main request and auxiliary 1 are referred to as such and discussed in this decision.

X. By a notification dated 19 October 2023, the board announced that the oral proceedings had been cancelled.

XI. **Claim 1** of the main request comprises the following features (numbering as in the notice of opposition):

**M1** A method for remotely monitoring railroad equipment, said method comprising:

**M1.1** defining a data structure corresponding to one or more of a plurality of wayside controller railroad devices (206) located within a railroad infrastructure,

**M1.2** wherein each of the wayside controller railroad devices is arranged to populate the corresponding defined data structure with data representing a state of the wayside controller railroad device to provide an alert about a problem;

**M1.3** receiving, by a computing device (204) via a network management protocol, one or more of the populated data structures from the wayside controller railroad devices (206),

**M1.4** said computing device being remotely situated from the wayside controller railroad devices,

**M1.5** wherein the data received from the wayside controller railroad devices comprises one or more of the following operating parameters of the wayside controller railroad devices (206):

**M1.5.1** a deteriorating ballast condition, a signal crossing warning time out of range, and an intermittent track circuit; and

**M1.6** analyzing the data within the received data structures to diagnose the wayside controller railroad devices providing the alert about the problem.

XII. **Claim 1** of **auxiliary request 1** differs from claim 1 of the main request in that the "*signal crossing warning time out of range*" alternative has been deleted.

XIII. **Claim 1** of **auxiliary request 2** differs from claim 1 of the main request in that it further specifies the step of:

polling each of the plurality of wayside controller railroad devices, wherein each of the wayside controller railroad devices populates, responsive to said polling, the corresponding defined data structure with the data representing the state of the wayside controller railroad device;

and that:

receiving the populated data structures from the wayside controller railroad devices comprises receiving, responsive to said polling, the populated data structures from the wayside controller railroad devices;

XIV. **Claim 1** of **auxiliary request 3** differs from claim 1 of auxiliary request 2 in that the "*signal crossing warning time out of range*" alternative has been deleted.

XV. Claim 1 of **auxiliary requests 4 and 5** differs from claim 1 of auxiliary requests 2 and 3, respectively, in that the "*polling*" is now defined as "*periodically polling*".

XVI. The wording of the claims of **auxiliary requests 6 to 10** is of no importance for this decision.

### **Reasons for the Decision**

1. The current patent concerns remotely monitoring railroad devices using data structures corresponding to each of the railroad devices. The railroad devices are located within a railroad infrastructure and populate the corresponding data structure with data representing a state of the railroad device.

2. Admissibility of the opponent's appeal (Rule 99(2) EPC)  
In its response of 16 August 2022 to the opponent's grounds of appeal (page 2), the proprietor alleged that the opponent's appeal was not admissible since it did not relate to the reasons of the decision of the opposition division.

The board asserts that the opponent's grounds of appeal of 11 April 2022 contain arguments why the subject-matter of claim 1 of auxiliary request 2 was not inventive in view of document **D1** and the common general knowledge of the skilled person. These arguments clearly relate to the appealed decision, which based its conclusion that the subject-matter of claim 1 of auxiliary request 2 was inventive, inter alia, on document **D1** and the common general knowledge of the skilled person.

Therefore, the opponent's appeal is admissible.



3. Main request

The main request cannot be allowed for procedural reasons alone (see Facts and Submissions, point IX above). The request is nevertheless examined on its substance in view of the assessment of auxiliary requests 2 to 5.

3.1 Novelty (Article 54(1) EPC)

3.1.1 In the decision under appeal, the opposition division concluded that the difference between the subject-matter of **claim 1** and that of document **D1** resided in feature **M1.5.1**.

3.1.2 The proprietor argued that document **D1** did not disclose whether the messages ("*Meldungen*") used a data structure populated with data representing a state of the wayside controller railroad device. Therefore, features **M1.2** and **M1.3** were not directly and unambiguously disclosed by document **D1**.

The opponent countered that it was evident from document **D1**, page 12, section 2.1 that the messages were sent from the interlocking component ("*Stellwerkskomponente*") to the diagnostic station ("*Diagnose-Station*"). Since the claim did not further specify the data structure, feature **M1.2** was unambiguously derivable from that passage. The same applied to feature **M1.3** since the claimed "*network management protocol*" was not further specified.

The board notes that features **M1.2** and **M1.3** of claim 1 do not specify any features of the "*data structure*" or the "*network management protocol*". Therefore, the proprietor's arguments are not convincing.

3.1.3 The proprietor submitted that feature **M1.4** was not disclosed in document **D1** since **D1** mentioned storing data locally.

The opponent referred to Figure 2 of document **D1**. This figure showed that one of the diagnostic stations is connected to interlocking system 2 ("*Stellwerk 2*") and interlocking system 3 and thus has to be remote from at least one of these interlocking systems.

The board notes that Figure 2 indeed mentions that the diagnostic station is local. However, as there is a central service information computer ("*Serviceinformations-Rechner*"), this may well be understood as describing these stations as being decentralised. This becomes evident from the fact that one diagnostic station shown in Figure 2 is depicted as having connections with two different interlocking systems. This rules out the possibility of the diagnostic station being local to both of them. The board thus considers that feature **M1.4** is disclosed in document **D1**.

3.1.4 Moreover, the proprietor brought forward that feature **M1.6** was not disclosed in document **D1**. An alert could not be generated since the diagnostic component ("*Diagnose-Komponente*") was disclosed as having no user interface.

The opponent countered that the diagnostic station in Figure 2 was shown as having a user interface. Moreover, SMS alerts were disclosed in document **D1** (page 14, middle column).

The board holds that the opponent's arguments are convincing. It further notes that the opposition division cited page 13, left column, second paragraph of document **D1** as disclosing feature **M1.6**. The board

holds that this passage indeed discloses that the data is analysed ("Bezeichnung der Störung") and an alert is provided ("*zeigt ... Störungsliste ... an*").

Hence, feature **M1.6** is disclosed in document **D1**.

- 3.1.5 Finally, the proprietor pointed out that, according to the decision under appeal, the claimed computing device was mapped to the diagnostic stations of document **D1**. In contrast, the opponent had argued that the service information computer of **D1** corresponded to the claimed computing device.

The opponent submitted that, according to document **D1**, the diagnostic station and service information computer could be combined in a single device (see page 12, right-hand column, bottom third).

The board notes that the passage cited by the opponent discloses that, in the standard configuration, the central service information component is executed locally on the diagnostic station. The board thus holds that the argument of the opponent is not in contradiction with the decision under appeal.

- 3.1.6 In view of the above, the board holds that the subject-matter of claim 1 differs from the disclosure of document **D1** by the feature identified by the opposition division, i.e. feature **M1.5.1**.

### 3.2 Inventive step (Article 56 EPC)

- 3.2.1 In the decision under appeal, the opposition division held that the difference had the technical effect that more detailed information about any technical problem or disturbance reported from the wayside controller railroad device could be obtained, this allowing

identification of the underlying cause of the problem. The objective technical problem to be solved could thus be considered the increasing of the efficiency of maintenance and repair of railroad equipment. Since the equipment mentioned in feature **M1.5.1** was commonly encountered along any railway track, the opposition division held that it would have been obvious to the skilled person to incorporate its operating parameters in the system known from document **D1**.

- 3.2.2 The proprietor argued that document **D1** did not provide any suggestion to consider the operating parameters, and thus feature **M1.5.1** was not obvious.
- 3.2.3 The opponent pointed out that document **D1** related to diagnosing any railway equipment problem and was not limited to specific problems. In the discussion about Article 100(b) EPC, it had even been acknowledged by the proprietor that the individual aspects of feature **M1.5.1** were commonly known. The skilled person would thus have arrived at feature **M1.5.1** without using inventive skill.
- 3.2.4 The board notes that, in the decision under appeal, the opposition division concluded that claim 1 met the requirements of Article 100(b) EPC. This was due to the fact that it was immediately clear to the skilled person that "*a deteriorating ballast condition, a signal crossing warning time out of range, and an intermittent track circuit*" were undesirable states of railroad equipment. The opposition division could only have come to its conclusion if it also considered it to be commonly known how the wayside controllers determine these operating parameters.

- 3.2.5 The board therefore concurs with the opposition division that, starting from the system of document **D1**, the skilled person would have arrived at the subject-matter of claim 1 by using this common knowledge without employing any inventive skill.
- 3.3 In view of the above, the **main request** is not allowable on its substance.
4. Auxiliary request 1
- Auxiliary request 1 cannot be allowed for procedural reasons alone (see Facts and Submissions, point IX above). The request is nevertheless examined on its substance in view of the assessment of auxiliary requests 2 to 5.
- 4.1 Inventive step (Article 56 EPC)
- 4.1.1 In the decision under appeal, the opposition division held that the reasoning provided for the main request applied also to auxiliary request 1. Thus, the subject-matter of claim 1 of auxiliary request 1 did not involve an inventive step either for the same reasons.
- 4.1.2 Both the proprietor and the opponent referred to their arguments provided for the main request.
- 4.1.3 The board concurs with the opposition division that the subject-matter of claim 1 of auxiliary request 1 is not inventive over document **D1** in combination with common knowledge for the reasons provided above for the main

request. The reasoning provided on the parties' arguments is not affected by the amendments.

4.2 Hence, auxiliary request 1 is not allowable on its substance.

5. Auxiliary request 2

5.1 Inventive step (Article 56 EPC)

5.2 In the decision under appeal, the opposition division held that the features added to claim 1 constituted additional distinguishing features over the disclosure of document **D1**. In view of the same objective technical problem as for the main request, these features were considered not to be obvious.

5.3 The opponent acknowledged that the added features constituted additional distinguishing features. It was then, however, argued that the objective technical problem had to be formulated as providing an enhanced diagnosis method having continuously updated information. Since updating a database constituted a common practice for the skilled person, the added features were also not based on inventive activity.

5.4 The proprietor submitted that the added features (granted claim 7) enabled pro-active diagnostics of the wayside controller railroad devices. Since document **D1** implied that the messages were only actively sent by the interlocking components and not polled, the added features were inventive over document **D1**.

5.5 The board notes that the added features relate to polling (querying) the devices and receiving updated information in return. The board concurs with the opponent that updating data in a database constitutes a routine task of the skilled person and is thus not based on inventive activity. The skilled person knows that there are only two options as to which device initiates the transmission of the updated information - either the sender or the receiver - and that these two options are well known to the skilled person. Selecting one out of two possible options does not require inventive skill.

5.6 Therefore, the subject-matter of claim 1 of auxiliary request 2 is not inventive.

5.7 In view of the above, **auxiliary request 2** is not allowable.

6. Auxiliary request 3

The board concurs with the parties that the same considerations apply for auxiliary request 3 as for auxiliary request 2.

Therefore, **auxiliary request 3** is not allowable for the same reasons as auxiliary request 2.

7. Auxiliary requests 4 and 5

7.1 Auxiliary requests 4 and 5 were filed during the proceedings before the opposition division but not discussed as the opposition division decided to maintain the patent in accordance with auxiliary request 2.

- 7.2 The proprietor argued that the *periodical* polling of the data enabled pro-active collection of the status of the wayside controller railroad device.
- 7.3 The opponent submitted that polling periodically constituted a common measure for the skilled person.
- 7.4 The board is not convinced by the proprietor's argument. The "*pro-active collection of the status*" is already achieved by polling, no matter whether periodic or not. Furthermore, the board notes that there are only two options for determining when to poll a device: time based (i.e. periodic) or event based. These are well known to the skilled person, who would thus have selected one of these options depending on the circumstances, without employing any inventive skill.
- 7.5 Therefore, the subject-matter of claim 1 of each of auxiliary requests 4 and 5 is not inventive.
- 7.6 In view of these considerations and the reasoning on auxiliary request 2, **auxiliary requests 4 and 5** are not allowable.
8. Auxiliary requests 6 to 10
- 8.1 The board asserts that these are amended requests filed for the first time with the grounds of appeal. These requests had not been previously presented in the proceedings. Therefore, their admission is at the discretion of the board (Article 12(4) RPBA).



8.2 The proprietor brought forward that these requests were filed in response to the opponent's objection against the "*a deteriorating ballast condition*" feature. As this objection pursuant to Article 123(2) EPC was presented for the first time during the oral proceedings before the opposition division, the proprietor argues that these requests could not have been submitted earlier.

8.3 When exercising its discretion whether to admit an amendment to a party's case, the board has to consider whether the amendment is suitable for addressing the objections *raised* (Article 12(4) RPBA). In the current case, the proprietor argued that the amendments remedied an objection which is not part of the decision under appeal or the appeal proceedings. Any reasons why an amendment overcomes an *unraised* objection do not constitute valid reasons for admitting an amended request in view of Article 12(4) RPBA, second paragraph.

8.4 Consequently, in the absence of any valid reasons for admitting **auxiliary requests 6 to 10**, the board decides not to admit them into these proceedings.

9. Hence, none of the proprietor's requests is admissible and allowable.

**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:



K. Götz-Wein

N. H. Uhlmann

Decision electronically authenticated