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**Datasheet for the decision
of 27 January 2022**

Case Number: T 1055/19 - 3.5.05

Application Number: 14152151.8

Publication Number: 2899643

IPC: G06F13/42

Language of the proceedings: EN

Title of invention:
Multimedia switch box

Applicant:
Harman Becker Automotive Systems GmbH

Headword:
Accelerated and reliable firmware/software update of a device
under test

Relevant legal provisions:
EPC Art. 84
RPBA Art. 12(4)

Keyword:
Claims - clarity (no)



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Case Number: T 1055/19 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 27 January 2022

Appellant: Harman Becker Automotive Systems GmbH
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Representative: Rummler, Felix
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 31 October 2018
refusing European patent application No.
14152151.8 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair A. Ritzka
Members: P. Tabery
D. Prietzel-Funk

Summary of Facts and Submissions

- I. The appeal is directed against the examining division's decision to refuse the European patent application.
- II. The examining division decided that the application (all requests) did not fulfil the requirements of Article 84 EPC.
- III. In its statement of grounds of appeal, the appellant (applicant) requested that the decision of the examining division be set aside and that a patent be granted on the basis of the claims of a main request or one of auxiliary requests 1 to 4. The main request as well as auxiliary requests 1 and 2 were those on which the impugned decision was based, whereas auxiliary requests 3 and 4 were submitted with the statement of grounds of appeal. If the main request was not considered allowable, oral proceedings were requested.
- IV. The board issued a summons to oral proceedings. In a communication pursuant to Article 15(1) RPBA, it provided its preliminary opinion on the case.

The board concurred with the findings of the examining division that neither claim 1 according to the main request nor claim 1 according to auxiliary request 1 or 2 met the requirements of Article 84 EPC. Furthermore, the board indicated that the admission of auxiliary requests 3 and 4 would have to be discussed. Moreover, the amendments according to auxiliary requests 3 and 4 did not remedy the lack of clarity.
- V. In a reply dated 3 January 2022, the appellant withdrew the request for oral proceedings and requested a partial refund of the appeal fee in accordance with Rule 103(4) (c) EPC.

VI. Oral proceedings were cancelled by letter dated 5 January 2022.

VII. **Claim 1** of the **main request** includes the following features (as labelled by the board):

"Multimedia switch box device (200), comprising

- (i) a processing means (203);
- (ii) an interface (202); and
- (iii) a plurality of universal serial bus, USB, connections (201);

wherein the processing means (203) is configured to

- (iv) initiate download of software (206) via the interface (202) to an USB memory device (204) connected to a first one of the plurality of USB connections (201);
- (v) establish data connection between the USB memory device connected to the first one of the plurality of USB connections (201) and a device (205) connected to a second one of the plurality of USB connections (201) after download of the software (206); and
- (vi) initiate download of the software (206) from the USB memory device (204) connected to the first one of the plurality of USB connections (201) to the device (205) connected to the second one of the plurality of USB connections (201) thereby updating software previously stored in the device (205); and
- (vii) wherein the processing means (203) is further configured to establish the data connection between the USB memory device (204) and the device (205) connected to the second one of the plurality of USB

connections (201) as a one-by-one data connection without employing a USB hub."

Independent **claim 12** of the **main request** is directed to a corresponding method.

VIII. **Claim 1** of the **first auxiliary request** comprises, in addition to the features of claim 1 of the main request, the features of dependent claim 2 of the main request:

"wherein the processing means (203) is configured to automatically detect that the software (206) is available for download via the interface (202)."

IX. **Claim 1** of the **second auxiliary request** is directed to a cascading multimedia switch box device, comprising a multimedia switch box device having the features of claim 1 of the main request and the additional feature that:

"the cascading multimedia switch box device further comprises another multimedia switch box (200-b, 200-c, 200-d) without a processing means (203) and connected in data connection with the multimedia switch box device (200, 200-a)."

X. **Claim 1** of the **third auxiliary request** comprises, in addition to the features of claim 1 of the main request, the features of dependent claim 5 of the main request:

"wherein the processing means (203) is further configured to automatically execute one or more tests of the device (205) connected to the second one of the plurality of USB connections (201) after download of the software (206) to that device (205)."

XI. **Claim 1** of the **fourth auxiliary request** comprises, in addition to the features of claim 1 of the third

auxiliary request, the features of dependent claim 6 of the main request:

"wherein the one or more tests comprises operating an additional device connected to a third one of the plurality of USB connections (201)."

Reasons for the Decision

1. The application concerns providing an accelerated and reliable firmware/software update of a device under test.
2. Main request
 - 2.1 Clarity (Article 84 EPC)
 - 2.1.1 In the impugned decision (see section 6.1 thereof), the examining division considered claim 1 to lack clarity since the term *"one-by-one"* was not clear in the context of the claim.

The appellant argued that *"the term is simply take[n] in the usual usage as a connection between one entity and another one and it is explicitly further specified that the connection is established without employing a USB hub"*.

The board holds that the term *"one-by-one data connection"* has no established meaning in the art. According to the Merriam-Webster dictionary, *"one-by-one"* means *"separately in a series : one at a time"*. Thus, the term *"one-by-one"* requires that a series of data connections is present here. In the context of a single data connection, as in feature (vii), the term would be meaningless. Therefore, the term *"one-by-one"* raises doubts about the intended limitation. As to the argument of the appellant that it was *"further specified that the connection is established without employing a USB hub"*, the board notes that this is

formulated as an additional limitation rather than an explanation of the term "*one-by-one data connection*". Hence, this argument does not convince the board.

2.1.2 Moreover, the examining division held (see section 6.2 of the decision under appeal) that claim 1 did not define the means for establishing a "*one-to-one data connection*" [emphasis by the board]. This resulted in an attempt to define the subject-matter in terms of the result to be achieved.

The appellant argued that "*it is explicitly stated that it is a connection between a USB memory device and another device by means of the **processing means** of the switch that has to address the involved ports*" [emphasis by the board].

The board notes that claim 1 does not contain the wording "*one-to-one*" and that the wording "*one-to-one*" cannot be unambiguously derived from the application as originally filed.

In the description as originally filed, the "*one-by-one data connection*" is defined as follows (see page 13, lines 21-28):

"The one-by-one data connection is an exclusive connection between the device under test 205 and the USB data storage device 204. No other data connection between the device under test 205 and any other USB device apart from the USB data storage device 204 is established by the processing means 203."

Using this definition to interpret the term "*one-by-one data connection*" in claim 1, it follows that the "*processing means of the switch box device*" is also excluded from having a USB connection with the device under test. However, such a connection is required by

feature (vi) for the processing means to "[*initiate*] *download of the software*". Since claim 1 does not define any other connection between the "*processing means*" and the "*device under test*", claim 1 fails to define the means necessary for carrying out feature (vi). Hence, the board finds that, when feature (vii) is interpreted in the light of the description, feature (vi) merely defines the result to be achieved.

Regarding this aspect, the board notes that the original description discloses the step of feature (vi) as being performed "*by the device under test 205*" (see page 13, lines 14-16) rather than by the processing means of the switch box device (see the present claim 1 as well as the original claim 1).

2.1.3 In view of the findings in sections 2.1.1 and 2.1.2 above, the board decides that claim 1 is not clear as required by Article 84 EPC.

2.2 In view of the above, the **main request** is not allowable.

3. Auxiliary requests 1 and 2

Since claim 1 of auxiliary request 1 also contains the wording "*one-by-one data connection*", the considerations of section 2.1.1 apply here too. Consequently, the board decides that claim 1 of auxiliary request 1 is not clear, contravening Article 84 EPC.

The same applies to auxiliary request 2.

In view of the above, neither **auxiliary request 1** nor **auxiliary request 2** is allowable.

4. Auxiliary requests 3 and 4

The board notes that these are amended requests which had not previously been submitted in the proceedings. Claim 1 of both requests contains the wording "*one-by-one data connection*", which the board considers to be unclear (see the reasoning provided with respect to the main request). Hence, the amendments contained in auxiliary requests 3 and 4 do not overcome the objections pursuant to Article 84 EPC as raised in the impugned decision.

In view of the above, the board decides not to admit **auxiliary requests 3 and 4** into the proceedings (Article 12(4) RPBA 2007).

5. Since the appellant's requests are either not allowable or not admitted, the appeal is not allowable.

6. Partial reimbursement of the appeal fee

The board holds that the appeal fee is to be reimbursed at 25% based on Rule 103(4) (c) EPC.

The appellant requested oral proceedings in the statement setting out the grounds of appeal. The communication of the board in preparation for the oral proceedings was notified on 2 December 2021 and deemed to have been received on 12 December 2021 in accordance with Rule 126(2) EPC. The request for oral proceedings was withdrawn by letter received on 5 January 2022, i.e. within one month of notification of the communication of the board. No oral proceedings took place. The requirements of Rule 103(4) (c) EPC are thus fulfilled.

Order

For these reasons it is decided that:

1. The appeal is dismissed.
2. The appeal fee is reimbursed at 25%.

The Registrar:

The Chair:



K. Götz-Wein

A. Ritzka

Decision electronically authenticated