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**Datasheet for the decision
of 19 March 2010**

Case Number: T 1869/09 - 3.4.01

Application Number: 05016999.4

Publication Number: 1750253

IPC: G10L 15/28, H04M 3/493

Language of the proceedings: EN

Title of invention:
Integrated speech dialog system

Applicant:
Harman Becker Automotive Systems GmbH

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 54

Relevant legal provisions (EPC 1973):
-

Keyword:
"Novelty (yes)"

Decisions cited:
-

Catchword:
-



Case Number: T 1869/09 - 3.4.01

D E C I S I O N
of the Technical Board of Appeal 3.4.01
of 19 March 2010

Appellant: Harman Becker Automotive Systems GmbH
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Representative: Grünecker, Kinkeldey,
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 24. April 2009
refusing European application No. 05016999.4
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: B. Schachenmann
Members: F. Neumann
P. Fontenay

Summary of Facts and Submissions

- I. The appeal lies from the decision of the examining division to refuse the European patent application number 05016999.4.
- II. The appellant requested that the decision under appeal be set aside and that the novelty of the claims of the main request or of any of the auxiliary requests 1 to 5, as refused in the contested decision, be acknowledged. It was furthermore requested that the case be remitted to the first instance for further prosecution.

Oral proceedings were requested as an auxiliary measure.

- III. During the proceedings, the following citations were taken into account:

D1: US-A-2003/0088421;

D2: US-A-2003/0007609;

D3: WO-A-01/50453;

D4: US-A-2002/0108122;

D5: US-B1-6839748.

- IV. Independent **claim 1** reads as follows:

"Speech dialog system, comprising a Speech Application Manager (10; 26) for controlling the speech dialog system; at least two service components (12) of the speech dialog system comprising a speech recognition means (36) configured to recognize speech and a customer programmer's interface (46) configured to connect

customer services to the Message Router (14; 28; 90) of the speech dialog system by mapping the data format employed by the Message (14; 28; 90) Router to a customer system application;
a Message Router (14; 28; 90) for providing data exchange between the at least two service components (12) with each other and with the Speech Application Manager (10; 26); and
a Platform Abstraction Layer (24) being an abstract singular and adaptable interface connecting the speech dialog system to an hardware platform (20; 60), an operating system (22; 62), an bus architecture and at least one device driver."

Independent **claim 9** reads as follows:

"Method for running a speech dialog system comprising service components (12), comprising the steps of controlling the speech dialog system by a Speech Application Manager (10; 26);
exchanging data between the service components (12) and between the service components (12) and the Speech Application Manager (10; 26) by a Message Router (14; 28; 90);
connecting the speech dialog system to an hardware platform (20; 60), an operating system (22; 62), an bus architecture and at least one device driver by a Platform Abstraction Layer (24) as an abstract singular and adaptable interface;
wherein the service components (12) comprise a speech recognition means (36) configured to recognize speech and a customer programmer's interface (46); and
connecting customer services by the customer programmer's interface to the Message Router (14; 28;

90) of the speech dialog system by mapping the data format employed by the Message (14; 28; 90) Router format to a customer system application."

Claims 2 to 7 and 10 to 15 are dependent on claims 1 and 9 respectively.

Claim 8 relates to the use of a speech dialog system according to one of claims 1 to 7 in a vehicle.

Claim 16 is directed to a
"Computer program product, comprising one or more computer readable media having computer-executable instructions for performing the steps of the method according to one of the claims 9 - 15."

- V. The arguments of the appellant, insofar as they are pertinent to the present decision, are set out below in the reasons for the decision.

Reasons for the Decision

1. Reference is made to the transitional provisions for the amended and new provisions of the EPC, from which it may be derived which Articles of the EPC 1973 are still applicable to the present application and which Articles of the EPC 2000 shall apply.
2. The appeal is admissible.
3. The present application concerns an integrated speech dialog system which comprises a number of independent applications which are loosely coupled via a messaging

system such that each application can work with its own language yet can communicate with the other applications through a common messaging paradigm. Connection to the necessary operating system and hardware platform is achieved via a platform abstraction layer which serves as a translator between the software kernel of the speech dialog system and the platform on which it will run.

Claim 1 defines that the speech dialog system comprises, *inter alia*, a message router, a speech application manager and at least two service components, the first of these two service components being a speech recognition means and the second being a customer programmer's interface. The Board notes that claim 3 could be interpreted to mean that these two specific service components may be replaced by other different service components; however, for the purposes of the discussion of novelty, the speech dialog system of claim 1 has been interpreted as comprising a speech recognition means and a customer programmer's interface, the service components listed in claim 3 being regarded as additional - and not alternative - service components. Claim 1 goes on to define that the customer programmer's interface is configured to connect customer services to the message router by mapping the data format employed by the message router to a customer system application and that the message router provides data exchange between the at least two service components with each other as well as with the speech application manager.

4. The examining division refused the current application on the basis of a lack of novelty with respect to the disclosure of D1.

The appellant contests that all features of claim 1 may be found in the disclosure of D1. In the statement setting out the grounds of appeal, it was argued that D1 discloses neither a speech application manager for controlling the speech dialog system nor a customer programmer's interface configured to connect customer services to the message router of the speech dialog system by mapping the data format employed by the message router to a customer system application.

5. In general terms, D1 discloses a system which enables distributed conversational computing applications to be built around a web service-based model. Speech engines and audio I/O units can be programmed by a customer application using standard communication protocols, thus enabling deployment of various applications across a wide range of distributed voice processing platforms and gateways. Broadly speaking, the web service-based framework may be regarded as an interface between the customer system application and the specific services which are made available via the IP network. Within the web service-based environment, a standard messaging format is used for communication.

6. In the decision to refuse the application, the examining division failed to precisely identify the components of the system of D1 which were considered to correspond to the various components of the system of claim 1, providing only broad references to a number of paragraphs of the disclosure which were considered to

support their finding of lack of novelty. The Board notes that, when providing the reasons for an objection of lack of novelty, in particular in a case where a one-to-one correspondence of features is not immediately apparent, it is imperative - in order to meet the requirement of a reasoned decision set out in Rule 111(2) EPC - to include a full explanation of why each specific feature is considered to be disclosed in the prior art citation. This explanation will normally include a precise reference as to where each individual feature can be found in the prior art. It is only on the basis of a decision reasoned in this manner that a fair appraisal of the correctness of the decision can be undertaken, both by the parties affected by the decision and by the Board in the case of appeal.

7. In order to assess whether or not D1 discloses the specific features highlighted by the appellant in the statement setting out the grounds of appeal, it is first necessary to establish which components in the system of D1 may be considered to correspond to which components in the system defined in claim 1.
- 7.1 The Board agrees with the appellant that, contrary to the position taken in section MR.3 of the contested decision, paragraph [0045] of D1 does not refer to any component which could be considered to equate to a speech application manager for controlling the speech dialog system. However, the examining division goes on to explain in section MR.5.1 of the contested decision that - in their opinion - the task manager of D1 may be equated with the speech application manager of claim 1. The appellant contested this view, arguing that the speech application manager of claim 1 is a central

control unit and cannot be compared to the task manager of D1.

The Board notes that in D1 the task manager 15 is responsible for task execution and for the acquisition and partition of resources (paragraph [0051], lines 1-5). Thus, the task manager identifies and obtains the services required by the specific customer application 14 to which the task manager is assigned. Moreover, whilst the illustrated embodiments of D1 depict separate task managers associated with each application, lines 1 to 3 of paragraph [0051] of D1 makes clear that a single task manager can be common across a plurality of applications. In this latter case, the task manager of D1 would indeed fulfil the role of controlling the speech dialog system at least as far as the allocation of available services and the execution of tasks required by the various applications is concerned. Thus, the Board agrees with the examining division that the role of the task manager of D1 may be compared to that of the speech application manager defined in claim 1 of the present application.

- 7.2 In the statement setting out the grounds of appeal, the appellant argued that the framework discussed in paragraphs [0105], [0108] and [0131] of D1, which passages were relied upon by the examining division to support their finding of lack of novelty, did not include a customer programmer's interface which allowed for connection of customer services to the message router of the speech dialog system.

The Board notes that D1 states that control messages between the application 14 and the task manager 15 are

based on a web services framework that implements SOAP/WSDL or the control messages can be passed through other APIs or communication protocols (paragraph [0051], lines 17-21). Thus, the Board concludes - in concordance with the view of the examining division - that the system of D1 does indeed comprise a customer programmer's interface which is not depicted in Figure 1 but is located between the task manager 15 and the application 14. This customer programmer's interface is configured to connect customer services (the application 14 which may be programmed in its own proprietary format: see paragraph [0050], lines 11-25) to the router 21 (indirectly via the task manager 15 and the IP network 13) by mapping the data format (XML/SOAP) employed by the router 21 to a customer system application 14.

However, the Board further notes, that claim 1 sets out that the message router provides data exchange between the at least two service components - i.e. between the speech recognition means and the customer programmer's interface - with each other and with the speech application manager. This means not only that communication between the speech recognition means and the customer programmer's interface and between the speech recognition means and the speech application manager is performed via the message router, but also that data exchange **between the customer programmer's interface and the speech application manager** is performed via the message router. In the context of D1, and under the understanding that the task manager 15 may be regarded as a speech application manager, this would require that communication between the task manager 15 and the application 14 takes place via the

router 21, which - as will be shown below - is not the case.

Inspection of Fig. 1 of D1 reveals that data exchange between the customer programmer's interface (which is located between the task manager 15 and the application 14) and the speech application manager (task manager 15) is not performed via the router 21. The applications 14 of D1 each have an individual task manager 15 assigned to them; indeed, Figures 1, 2, 5, 6 and 10 indicate that the task manager in fact forms part of the application itself. Admittedly, D1 does mention at lines 1 to 2 of paragraph [0051] that one task manager can be shared across a plurality of applications but nevertheless, the task manager 15 appears to communicate directly with the application 14, either via Sockets, SOAP/WSDL or via an API or other communication protocol (paragraph [0051], lines 16-21). Thus an interface is provided between the task manager and the conversational application for mapping the data format (SOAP/WSDL) used by the router 21 to the application, but the router 21 is not responsible for providing the data exchange between the task manager and the customer programmer's interface.

In the view of the Board, this exposes the flaw in the line of argument adopted by the examining division: the task manager of D1 cannot be fully equated with the speech application manager of claim 1 since the architecture defined in claim 1 requires that the customer programmer's interface communicates with the speech application manager **via the message router**. In the absence of a more precise reasoning in the contested decision, the Board is unable to appreciate

why the examining division considered this feature to be disclosed in D1.

Under section MR.4.2 of the contested decision, it is noted that the appellant was of the opinion that the task manager of D1 "*was not able to communicate with a customer application **via a message router** employing a format that is mapped to a customer system application by a customer programmer's interface*" (emphasis added by the Board). In sections MR.5.2 and MR.5.3 the examining division focussed on the mapping of data formats in D1 and neglected to comment on the detail that a message router is employed for communication between the speech application manager and the customer programmer's interface. The Board does not contest the findings of paragraph MR.5.2 of the contested decision, but cannot agree with the conclusion of paragraph MR.5.3 which states that communication between the speech application manager and the customer programmer's interface takes place via a message router in D1.

8. In view of this difference, the Board has to conclude that claim 1 is novel with respect to D1. Similar considerations apply to independent method claim 9 which includes the step of exchanging data between the customer programmer's interface and the speech application manager by a message router.

9. None of the further prior art documents on file are considered to be more relevant. In particular, neither D4 nor D5 refer to a speech dialog system and neither D2 nor D3 disclose a message router for providing data

exchange between a customer programmer's interface and a speech application manager.

10. For these reasons, the Board is of the opinion that the subject matter of claims 1 and 9 of the current application is indeed novel with respect to the prior art cited in the European Search Report. The same applies to the subject matter of claims 8 and 16 and to dependent claims 1 to 7 and 10 to 15.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance for further prosecution.

The Registrar:

The Chairman:

R. Schumacher

B. Schachenmann