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**Datasheet for the decision
of 25 March 2021**

Case Number: T 2522/16 - 3.4.03

Application Number: 08425796.3

Publication Number: 2199960

IPC: G06Q10/00

Language of the proceedings: EN

Title of invention:

Manufacturing collaboration hub data exchange interface

Applicant:

Accenture Global Services Limited

Headword:

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - (no) - auxiliary request (no) - mixture of
technical and non-technical features

Decisions cited:

G 0003/08, G 0001/19, T 0769/92, T 0641/00, T 1670/07,
T 1463/11, T 2049/12, T 0731/17

Catchword:



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Case Number: T 2522/16 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 25 March 2021

Appellant: Accenture Global Services Limited
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 7 July 2016
refusing European patent application No.
08425796.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman T. Häusser
Members: M. Stenger
C. Heath

Summary of Facts and Submissions

- I. The appeal concerns the decision of the Examining Division to refuse European patent application No. 08 425 796.
- II. For the main request as well as for auxiliary requests 1 and 2 then on file, the Examining Division came to the conclusion that they did not fulfill the requirement of Article 52(1) EPC in combination with Article 56 EPC relating to a routine implementation of a non-technical process on a conventional networked information system (see in particular points 2.4 to 2.14, 5.1 and 8.1 of the Reasons).
- III. At the end of the oral proceedings before the Board, the appellant requested that the contested decision be set aside and that the case be remitted to the first instance with the order to grant a patent on the basis of a main request or auxiliary requests 1 or 2, all filed with the notice of appeal.
The claims of these requests are identical to the claims of the corresponding requests on which the decision is based.
- IV. Claim 1 of the main request has the following wording (labelling "f1", "f2", ... added by the Board in line with the labelling in the grounds of appeal):

A data exchange system (108) comprising:

f1 a logistics plant synchronization interface (210) operable to connect to multiple logistics plants (110, 112, 114);

f2 a virtual hub interface (212) operable to connect to a centralized manufacturing collaboration hub (104) that implements a virtual manufacturing network for the multiple logistics plants (110, 112, 114); and

f3 a memory (208) comprising:

a material master views definition (214) specifying a material master view identifier (216) for a logistics plant material master view (218, 220), a virtual manufacturing network relevance identifier (222) for the material master view identifier (216), and a logistic plant data copy flag (224) for the material master view identifier (216), wherein the material master views definition (214) is shared with the multiple logistics plants (110, 112, 114) for facilitating a mirroring operation (228);

f4 a data exchange module (226) operable to: analyze the virtual manufacturing network relevance identifier (222) to determine whether the logistics plant material master view (218, 220) is relevant; and when the logistics plant material master view (218, 220) is relevant, analyze the logistic plant data copy flag (224) to determine when to initiate the mirroring operation (228), the mirroring operation (228) comprising synchronization of data in the logistics plant material master view (218, 220) and received through the logistics plant synchronization interface (210) from an originating logistics plant from among the multiple logistics plants (110, 112, 114), with a mirrored material master view (232) for the logistics plant material master view (218, 220) in the virtual manufacturing network through the virtual hub interface (212); and

f5 a data conversion specifier (234) operable to direct the data exchange module (226) to implement a specified data conversion during the mirroring operation (228), wherein the conversion is performed

according to rules defined in the data exchange module (226); and

f6 a processor (206) operable to execute the data exchange module (226).

- V. Claim 1 of the first auxiliary request differs from claim 1 of the main request in that the term "and" at the end of feature f4 is deleted and in that it comprises, between features f4 und f5, features f7, f8 and f9 as follows (labeling "f7", "f8", ... added by the Board in line with the labelling in the grounds of appeal):

f7 where the data exchange module (226) comprises: process order creation logic that receives a process order request through the logistics plant synchronization interface (210) from the originating logistics plant to initiate execution of a production activity and communicates the process order request to the virtual manufacturing network;

f8 process order release request logic that receives a process order release status from the virtual manufacturing network and communicates the process order release status to the originating logistics plant; and

f9 operation confirmation data transfer logic that receives an operation confirmation process order closure status from the virtual manufacturing network and communicates the operation confirmation process order closure status to a selected logistics plant from among the multiple logistics plants (110, 112, 114); and

- VI. Claim 1 of the second auxiliary request differs from claim 1 of the first auxiliary request in that the term "and" at the end of features f8 and f9 is deleted and

in that it comprises, between features f8 und f9, features f10, f11 and f12 and, between features f9 and f5, features f13 and f14 as follows (labeling "f10", "f11", ... added by the Board in line with the labelling in the grounds of appeal):

f10 *additional material transfer logic that receives an additional material request from the virtual manufacturing network and communicates the additional material request to a selected logistics plant from among the multiple logistics plants (110, 112, 114);*
f11 *dynamic bins logic that receives materials movement information from the originating logistics plant and communicates the materials movement information to the virtual manufacturing network;*
f12 *material return logic that receives material-to-return-to-warehouse information from the virtual manufacturing network and communicates the material-to-return-to-warehouse information to a selected logistics plant from among the multiple logistics plants (110, 112, 114);*

f13 *material consumption transfer logic that receives materials consumption information from the virtual manufacturing network and communicates the materials consumption information to a selected logistics plant from among the multiple logistics plants (110, 112, 114); and*

f14 *stock transfer logic that receives final goods receipt information from the virtual manufacturing network and communicates the final goods receipt information to the selected logistics plant; and*

VII. The relevant arguments of the appellant may be summarized as follows:

(a) Main request

Care should be taken when distinguishing between non-technical and technical features according to the Comvik approach as set out in **T 0641/00**, in line with the Case Law of the Boards of Appeal.

For instance, for a feature to be technical, it was sufficient that it was based on technical considerations, as discussed in **T 0769/92**. Although this decision dated from before the Comvik decision, it had not been invalidated in the Enlarged Board of Appeal's opinion **G 03/08**. Instead, it had been endorsed by the Enlarged Board of Appeal in its recent decision **G 01/19** under point 126 and thus still applied. An application to the present case would result in recognizing that, while the content of the rules defined in the claims reflected business needs, their implementation by means of the data structure defined in feature f3, including technical aspects like a "copy flag", was based on technical considerations.

On the other hand, the non-technical requirements that the notional business person would give to the technically skilled person should be limited to abstract business concepts and should not contain any technical matter at all, in order to ensure that all technical matter was considered for obviousness, as set out in **T 1463/11**, point 16 of the Reasons.

In the present case, the notional business person would not have required that a data structure as the one defined in feature f3 with its functionalities be used. Instead, they would have indicated a more abstract requirement such as access to certain data across the entire system at certain locations.

Further, all technical concepts of a claim not disclosed in the closest prior art were to be taken into account for assessing inventive step, even if they were notorious, as set out in **T 0731/17** (point 6.4 of the Reasons).

In line therewith, in the present case, the technical concept of accessing data was not disclosed by a conventional networked information system. Other technical concepts of the present invention which were not disclosed by a conventional networked information system were mirroring and data conversion as defined in features f4 and f5.

Taking the reasoning of these decisions into account, the invention did not differ from a conventional networked computer system only by purely business administrative process steps not achieving any technical effects. Instead, the subject-matter of claim 1 of the main request, directed to a data exchange system and further defined by features f1 to f6, achieved the effects of

- i) ensuring data integrity in the sense of data consistency across different locations in a networked information system as defined in features f1 and f2 in real time,
- ii) facilitating centralized control of logistics plants by the data structure and its functionalities defined in feature f3 and illustrated in Table 7 and paragraphs [75] and [76] of the published application,
- iii) improving data exchange to other logistics plants by mirroring and converting relevant data according to features f4 and f5.

Effects i) to iii) were technical and the corresponding features of claim 1 of the main request had thus to be taken into account for assessing inventive step.

In view of technical effects i), ii) and iii) the objective technical problem to be solved by the skilled person starting from a networked information system could then be formulated as

- how to enable an efficient data exchange with improved data integrity within a heterogeneous networked information system.

This problem could be solved in a number of different ways, for instance by providing a central database pulling all available data or by providing not only one single Material Master Views Definition, but a plurality of such definitions for different purposes.

The technically skilled person would have had no incentive to solve the objective technical problem as defined above in the manner of the invention. The particular implementation of the business needs as claimed was thus inventive.

(b) Auxiliary request 1

Additional features f7 to f9 initiated and controlled a production process and were therefore technical in view of **T 1670/07**, according to which it was sufficient for a feature to be technical if it provided data about a technical process (point 13 of the Reasons). These features thereby contributed to data consistency, as described in paragraphs [40] and [96] of the application.

(c) Auxiliary request 2

Feature f10 had physical consequences because material was blocked as described in paragraph [45]. Features f11 and f12 concerned physical materials which were unblocked. These features therefore also had physical consequences as described in paragraph [51]. Feature f13, as described in paragraph [50], related to production control and enabled the correct triggering of processes. Feature f14 related to the produced quantities.

Together, additional features f10 to f14 contributed to data consistency as set out in paragraph [46] of the published application by sharing the technical information about what had been produced.

Reasons for the Decision

1. The appeal is admissible.
2. The application

The application is directed at a virtual manufacturing network (VMN). The manufacturing processes of multiple geographically separated logistics plants are to be controlled and monitored (paragraph [30] of the published application), for instance in view of stringent regulation associated with pharmaceutical and processed food products (paragraphs [1] and [2] of the published application). For example, the application aims at improving and identifying alternatives to the cumbersome manual processes employed to compile batch

records during production (paragraph [3] of the published application).

The ultimate aim of the invention is an improved business administration process, in particular involving rules and regulations for pharmaceutical products (see further paragraphs [4] to [6] of the published application).

For this purpose, information selected according to predefined criteria is kept consistent across different logistics plants. Data selected according to predefined criteria is copied, in a distributed or networked computer system, between local computers and a central computer, these computers being connected to each other through interfaces.

The application thus comprises a mix of technical and non-technical features.

3. Main request (see point VII.(a) above)

3.1 Preliminary remark

As set out in **T 0641/00** (Comvik), inventive step of mixed-type claims is to be assessed by taking into account all features having a technical effect while features not having a technical effect, alone or in combination with other features, are to be considered as a requirement specification provided to the person skilled in the art to be implemented (see point 2.2 of the Reasons of the contested decision). This is in line with the appellant's submissions.

3.2 Claim 1

When applying the Comvik approach, the features of a claim providing a technical effect have to be identified. The appellant submitted that features f1 to f6 of claim 1 of the main request achieved the three effects i) to iii) as defined under point VII.(a) above. The appellant further submitted that these effects were technical.

3.2.1 Effect i), data consistency

A process for achieving consistency of manufacturing information across different locations does *per se* not solve a technical problem, but merely fulfills a business administration aim. Such a non-technical process includes specifying the information which is to be kept consistent, or, in the words of claim 1, specifying the data which are to be synchronized.

The process to achieve data consistency / synchronization according to claim 1 is implemented using a networked information system such as the one referred to in features f1 and f2, in accordance with the submissions of the appellant.

The Board does not doubt that particular technical problems may arise when a process for achieving a business administration aim is to be implemented using a networked information system. However, no such problem is apparent from claim 1, nor is such a problem mentioned anywhere else in the application. Instead, claim 1 does not go beyond requiring that certain data (as specified by the "material master views definition" and its elements) are to be synchronized in such a system, i. e. made available at certain locations of such a system. This requirement corresponds to the mere wish to have access to certain data at certain

locations of such a system, which, in accordance with the appellant's submissions, was something the notional business person might indicate to the technically skilled person.

Thereby, the technical aspects of effect i) do not go beyond the commonly known effects arising whenever a generally known networked information system is used to receive, store, process and send information or, in computer terminology, data.

3.3 Effect ii), centralized control

The centralized control of plants mentioned in the application (see paragraph [30]) does not relate to any technical industrial control system at production process level in the form of, e. g., a supervisory control and data acquisition (SCADA) system or a distributed control system (DCS).

Instead, the invention according to claim 1 only provides a central memory storing the "material master views definition" data structure as defined in feature f3. The functionality of this data structure with its elements "material master view identifier", "network relevance identifier" and "data copy flag" is limited to specifying which information is to be kept consistent.

The centralized control achieved by the present invention is thereby limited to a centralized specification of the information which is to be kept consistent, or, in the words of claim 1, of the data which are to be synchronized. Such a centralized specification is, however, a necessary part of the administrative process to achieve the business

administration aim of keeping certain manufacturing information consistent.

The "material master views definition" data structure with its elements and functionality thereby only concerns the nature of the data processed in the business context in which the invention is applied. It does not concern any further technical considerations beyond merely finding a computer algorithm necessary in the context of the implementation of the data processing in relation to the administrative process.

It is therefore not based on "technical considerations" in the sense in which, according to the understanding of the Board, this expression mentioned in **T 0769/92** was analyzed in decision **G 01/19** (last sentence of point 126) and in opinion **G 03/08** (last sentences, respectively, of points 13.5 and 13.5.1), contrary to the submissions of the appellant.

The Board notes that the "data copy flag" merely represents a "Yes" or a "No", as apparent from Table 7. That is, this term only reflects an indication whether or not particular information / data is to be kept consistent / synchronized / copied. It does not indicate any further technical considerations in the present context, either, contrary to the submission of the appellant.

It follows from the above that the "material master views definition" data structure, its elements and its functionality are not based on any further technical considerations, do not produce a technical effect and thereby have no technical character, in line with what

was set out in point 5.8 of **T 2049/12**. Instead, they represent pure business matter.

Thus, the only technical aspect of the "material master views definition" as defined in feature f3 is that it is stored in a memory of a networked information system.

Thereby, the technical aspects of effect ii) do not go beyond the commonly known effects arising whenever a generally known conventional networked information system is used to receive, store, process and send data.

3.4 Effect iii), efficient data exchange by mirroring and converting relevant data

The "data conversion specifier" referred to in feature f5 relates to specifying which data are to be converted upon synchronization, or, in the words of the description, when being "copied" (see Table 8). The conversion may be as basic as leaving the data unchanged or transforming it to a blank data entry in accordance with the administrative needs. The "data conversion specifier" has therefore a similar functionality as the "material master views definition" and hence represents, like the latter, pure business matter.

The technical aspects of the "mirroring operation" defined in feature f4 and also mentioned in features f3 and f5 and of the "data conversion" during the mirroring operation referred to in feature f5 do not go beyond performing basic data transformation and copying certain data from one location in a network (the "logistics plant material master view") to another (the

"mirrored material master view for the logistics plant material master view") by a processor as defined in feature f6.

However, copying data from one location to another using a processor and performing basic data transformations as appropriate are the very purpose of *networked* information systems and thereby implicitly disclosed in any such system.

The Board notes that this finding is not in contradiction to **T 0731/17** cited by the appellant. In this decision, the Board did not consider that a network of general-purpose computers failed to disclose *data access in general* as alleged by the appellant. Instead, the Board concluded that the more specific concept of *accessing information contained in a database store via a database server* was not disclosed by a network of general-purpose computers (see point 6.4 of the Reasons). The wording of present claim 1, however, is more general than that and does not, for instance, mention any database server.

The other aspects of the "mirroring operation" and of the "data conversion" and thus of features f4, f5 and f6 relate essentially only to the specification of which data are "relevant" (in the words of the submission of the appellant) and in what form, i. e. which information / data is to be kept consistent / synchronized, as defined by the "material master views definition" and the "data conversion specifier". These other aspects thus represent pure business matter.

Therefore, the technical aspects of effect iii) do not go beyond the commonly known effects arising whenever a generally known conventional networked information

system is used to receive, store, process and send data.

3.5 Conclusion concerning technical effects / closest state of the art

In line with the Case Law of the Boards of Appeal mentioned by the appellant, it follows from the above that the technical aspects of effects i) to iii) referred to by the appellant do not go beyond commonly known effects arising whenever a conventional networked information system is used to receive, store, process and send data. The Board is not aware of any other technical effects provided by the features of claim 1 of the main request, either.

A conventional networked information systems as generally known at the filing date of the present application may therefore be regarded as representing the closest state of the art, in line with point 2.6 of the contested decision.

3.6 Inventive step

The subject-matter of claim 1 of the main request differs from such a conventional networked information system only by aspects relating to an administrative information exchange process which do not provide a technical effect, as set out by the Examining Division (see points 2.3.1 to 2.3.10 of the Reasons).

Since the distinguishing aspects represent pure business matter, they can be included in a non-technical requirement specification given to the technically skilled person in line with what was set out in **T 1463/11** (see point 13 of the Reasons).

Thus, it is not appropriate to formulate the objective technical problem as suggested by the appellant. Instead, the objective technical problem can be formulated as how to implement the administrative information exchange process as defined by the Examining Division in points 2.3.1 to 2.3.10 of the Reasons of the contested decision on a generally known conventional networked information system.

Such an implementation would have been a straightforward task for the technically skilled person.

The Board notes the appellant's argument (albeit in relation to the objective technical problem suggested by the appellant) that the technically skilled person would have had no incentive to arrive at the solution as defined in the invention and that they could also have provided a central database pulling all available data or, instead of a single Material Master Views Definition, a plurality of such definitions for different purposes.

However, providing a central database pulling all available data would in substance not amount to more than a straightforward implementation of the non-technical wish to have one location where all information is always accessible. In a similar manner, providing a plurality of "Master Material Views Definitions" would, in substance, not go beyond a straightforward implementation of the non-technical indication that the data which is to be kept consistent varies depending on their purpose.

That is, the appellant's propositions of what the technically skilled person could have done only relate

to straightforward implementations of other non-technical requirement specifications than the administrative information exchange process as defined by the Examining Division in points 2.3.1 to 2.3.10 of the Reasons of the contested decision.

In view of the above, the subject-matter of claim 1 of the main request lacks inventive step within the meaning of Article 56 EPC.

4. Auxiliary request 1 (see point VII.(b) above)

The "data about a technical process" mentioned in point 13 of **T 1670/07** cited by the appellant refer to the status of a technical system (see also point 12 of that decision).

In the present case, however, the additional features f7, f8 and f9 of auxiliary request 1 define a "process order creation logic", a "process order release request logic" and a "operation confirmation data transfer logic" in a very abstract manner. These "logics" are not linked to any technical aspect of a production process itself, either. Instead, they concern the status of an order, that is, the status of business information. Thereby, the "logics" defined in features f7 to f9 cannot be seen as representing "data about a technical process" in the sense of this expression as used in **T 1670/07**.

The Board accepts that features f7 to f9 may contribute to data consistency, as submitted by the appellant. This is, however, *per se* not a technical effect as set out above with respect to effect i).

Instead, features f7 to f9 relate to purely administrative information about an order which is received, stored, processed and sent using a conventional networked computer system. The technical aspects of these features therefore do not go beyond the technical aspects of the features of claim 1 of the main request.

Thus, the subject-matter of independent claim 1 of auxiliary request 1 lacks an inventive step within the meaning of Article 56 EPC for the same reasons as independent claim 1 of the main request.

5. Auxiliary request 2 (see point VII.(c) above)

"Blocking" and "unblocking" of material, although they may result in material being physically moved or not as set out in paragraphs [45] and [51] of the published application, are *per se* administrative tasks. On the abstract level referred to in claim 1 of auxiliary request 2, triggering of production processes as described in paragraph [50] of the published application is an administrative task as well. The same applies to keeping track of quantities of produced items as described in paragraph [51] of the published application.

Further, these aspects of features f10 to f14 may contribute to data consistency according to paragraph [46] of the published application, as submitted by the appellant. This is, however, *per se* not a technical effect as set out above with respect to effect i).

The effects that, according to the appellant, were achieved by features f10 to f14, are thus not of a technical nature. Instead, the "logics" defined in

features f10 to f14 of independent claim 1 of auxiliary request 2 relate to administrative information or data about material required, moved and consumed that is communicated, received and processed by a conventional networked computer system.

The technical aspects of these features therefore do not go beyond the technical aspects of the features of claim 1 of auxiliary request 1.

The subject-matter of independent claim 1 of auxiliary request 2 thus lacks an inventive step within the meaning of Article 56 EPC for the same reasons as independent claim 1 of the main request and independent claim 1 of auxiliary request 1.

6. The Board thus comes to the same conclusion as the Examining Division that none of the requests fulfils the requirements of Article 56 EPC. Consequently, the appeal must fail.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



B. Atienza Vivancos

T. Häusser

Decision electronically authenticated