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Datasheet for the decision of 18 December 2012

Case Number: T 1316/09 - 3.5.01

Application Number: 05007058.0

Publication Number: 1587004

IPC: G06F 17/30

Language of the proceedings: EN

Title of invention:
Automated suggestion of responses based on a categorization of messages

Applicant:
SAP AG

Opponent:
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Headword:
-

Relevant legal provisions:
-

Relevant legal provisions (EPC 1973):
EPC Art. 56

Keyword:
"Inventive step - no (all requests)"

Decisions cited:
-

Catchword:
-

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Case Number: T 1316/09 - 3.5.01

D E C I S I O N
of the Technical Board of Appeal 3.5.01
of 18 December 2012

Appellant: (Applicant)
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Representative:
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Decision under appeal:
Decision of the Examining Division of the European Patent Office posted 12 February 2009 refusing European patent application No. 05007058.0 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman: W. Chandler
Members: R. R. K. Zimmermann
P. Schmitz

Summary of Facts and Submissions

I. European patent application number 05007058.0 relates to a method and a system for suggesting automated responses to an incoming electronic message based on content analysis and categorisation.

II. In the course of the examination procedure, the examining division raised objections concerning inventive step, clarity of the claims and disclosure of the invention. Following a request of the applicant for a decision based on the state of the file, the examining division refused the application. The decision, posted 12 February 2009, referred to the communication dated 3 February 2009.

III. The appellant (applicant) lodged an appeal against the refusal of the application on 4 March 2009 and paid the appeal fee on the following day. A statement setting out the grounds of appeal was filed by a letter received on 28 May 2009, including three sets of claims referred to as the main, first and second auxiliary request, respectively. Claim 1 of the main request reads as follows (angle brackets [1]<>, [2]<> etc. have been added for convenience of reference):

"1. A method of analyzing the content of an incoming electronic message (IEM), the method comprising:
- classifying (66) the IEM using query-based classification to select (68) at least one category that relates to the content of the IEM[1]<;>
- performing (70) content analysis of the IEM using an example-based classification algorithm to search through a set of stored previous electronic messages,

each stored previous electronic message being associated with at least one of the selected categories, to identify at least one stored previous electronic message that relates to the content of the IEM, said example-based classification algorithm comprising:

-- comparing the IEM with the set of stored previous electronic messages; [2]<and>

-- determining which stored previous electronic messages in the set of stored previous electronic messages are most similar to the IEM[3]<;> the method further comprising,

- identifying (72) at least one business object (230, 240, 250) that is associated with the selected category and with the identified at least one stored previous electronic message, wherein the at least one business object (230, 240, 250) is a type of stored information, wherein each business object is associated with an object ID, and where each stored previous electronic message is linked to an object ID."

Claim 1 of the first auxiliary request differs from the preceding in that passage [1]<...> reads as follows:

", wherein classifying the IEM using query-based classification comprises:
--evaluating content of the IEM using pre-defined queries associated with each of a plurality of pre-defined categories in a categorisation scheme; and
--selecting a category for which one of the pre-defined queries evaluates as true;
--wherein the categories in the categorisation scheme relate to each other in a hierarchy, and where queries

of each parent category of the selected category all evaluate as true;"

Claim 1 of the second auxiliary request further differs in that, passage [2]<...> is deleted and passage [3]<...> reads as follows:

"-- calculating a text-mining score for each of the stored previous electronic messages most similar to the IEM, where the text-mining score is a measure of the similarity between the stored previous electronic message and the IEM;
-- calculating a classification result that includes a list of one or more candidate classes, wherein each candidate class is an association of messages that share one or more features;
-- calculating a class weight for each candidate class in the classification result, wherein the class weights are proportional to text mining scores for distinct candidate classes and where the class weights are normalized; and
-- calculating a class score for each candidate class in the classification result, wherein the class scores are not normalized and are calculated as the weighted average of the text-mining scores per class;"

IV. In an annex to the summons to oral proceedings, the Board drew attention to the requirement of inventive step, making the following observations:

"2. ...it appears from the discussion of inventive step in the first instance proceedings and the nature of the appellant's arguments on inventive step in the grounds of appeal that the central issue to be discussed at the

forthcoming oral proceedings should be the question of inventive step...

3. Concerning inventive step, the Board has serious doubts whether any one of the present requests passes the test in the light of documents D1 and D2...

4. A decisive factor in any assessment of inventive step is the objective technical problem underlying the invention. The inventive solution of the objective technical problem must be based on the technical features of the invention as claimed. Text classification per se, however, does not serve any technical purpose. Neither does the combination of different methods of text categorisation per se provide any relevant technical effect that could form a valid basis for defining the objective technical problem. In the light of document D2, the invention seems merely to consist of proposing an alternative to the classifier 34 in the form of a "classifier committee" combining the rule-based scheme of D1 with an example-based classifier based on the k-nn algorithm disclosed in document D1..."

V. In a letter dated 24 October 2012, after a requested postponement of the oral proceedings, the appellant filed a new set of claims as third auxiliary request and submitted arguments in support of the requests. Claim 1 of the third auxiliary request adds to claim 1 of the first auxiliary request the additional purpose in the opening line of "automating at least a portion of a process for generating a response to the IEM" and at the end of the claim the following features:

"the at least one business object (230, 240, 250) includes a quick solution document (48) that addresses questions in the IEM and/or a response template (50) that provides text of the response to the IEM; and using the at least one business object (230, 240, 250) to generate the response to the IEM".

The letter, section V, cites - as features distinguishing the invention from the prior art - the combination of query-based classification and example-based classification as defined in claim 1. Concerning the technical problem solved by the invention, the letter contains the following observations:

In section IV of the letter: "Thus, according to an aspect, it is a problem to more efficiently and effectively provide a response to an incoming message. This problem is solved according to the independent claims."

In section VI of the letter: "... D2 does not disclose the features cited in section V. These features lead to the following technical effects:
- more relevant responses to an incoming message can be located, i.e. a greater number of irrelevant responses are filtered out...,
- the time and effort required to respond to incoming messages is reduced...,
- messages can be processed at a greater rate, i.e. more efficiently...,
- the quality of responses to messages can be improved...,
- the synergistic combination of query based classification and example based classification yields

greater efficiency and better results than either method taken alone....
Accordingly, the skilled person is confronted with the objective technical problem of
how to more efficiently and effectively provide a response to an incoming message."

VI. In a letter of 10 December 2012, the Board was informed that neither the appellant nor its representative would attend the oral proceedings.

At the oral proceedings held as scheduled on 18 December 2012, the appellant was not present. The Board considered the appellant's arguments and requests as filed in writing, i.e. that the decision under appeal be set aside and that a patent be granted on the basis of the main, first or second auxiliary request filed with the statement setting out the grounds of appeal dated 20 May 2009, or the third auxiliary request filed with the letter dated 24 October 2012.

Reasons for the Decision

1. The appeal although admissible is not allowable since none of the requests before the Board justifies an annulment or a modification of the decision under appeal.

2. In its communication the Board set out why it considered that the claimed invention did not involve an inventive step (see point IV above). The reasons were that a method or a combination of methods of text classification *per se* was not considered to produce any

relevant technical effect and to provide a technical solution to any technical problem.

3. In response to the Board's observations, the appellant filed a further auxiliary request and argued that the synergistic combination of query-based and example-based classification provided a more efficient and effective response to incoming electronic messages.

4. However, the Board is not convinced by these submissions.

Firstly, the alleged effects are speculative, considering that nothing in the claimed invention prevents the intersection of the categories provided by a query and by the example-based algorithm being empty and hence that the claimed method is a complete failure. Even more importantly, the appellant did not provide any substantive reason why a more efficient and better categorisation of the informational content of an IEM qualifies as a technical effect at all and why such an advancement over the prior art has technical character.

This gap in the reasoning applies to all the requests before the Board. Having considered the facts and circumstances of the case, the Board therefore determines that none of the requests is allowable because of a lack of inventive step (Article 56 EPC 1973).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

T. Buschek W. Chandler

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