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**Datasheet for the decision
of 5 October 2007**

Case Number: T 0279/05 - 3.5.01

Application Number: 00911699.7

Publication Number: 1159698

IPC: G06F 17/60

Language of the proceedings: EN

Title of invention:

Method and apparatus for providing availability of airline seats

Applicant:

ITA Software, Inc.

Opponent:

-

Headword:

Predicting availability/ITA

Relevant legal provisions:

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Relevant legal provisions (EPC 1973):

EPC Art. 56

EPC R. 45

Keyword:

"Additional search of amended claims"

Decisions cited:

T 0641/00, T 0258/03, T 0690/06

Catchword:

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Case Number: T 0279/05 - 3.5.01

D E C I S I O N
of the Technical Board of Appeal 3.5.01
of 5 October 2007

Appellant: ITA Software, Inc.
One Kendall Square,
Building 400, Suite 411
Cambridge, MA 02139 (US)

Representative: Charig, Raymond Julian
Eric Potter Clarkson LLP
Park View House
58 The Ropewalk
Nottingham NG1 5DD (GB)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 24 September 2004
refusing European application No. 00911699.7
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: R. R. K. Zimmermann
Members: W. Chandler
A. Pignatelli

Summary of Facts and Submissions

- I. The application originates from a PCT application for which a search report was drawn up in the US. On entry into the European phase, the EPO issued a declaration of no search under Rule 45 EPC.
- II. This appeal is against the decision of the examining division to refuse the application on the grounds that claim 1 of the main request contained added subject-matter (Article 123(2) EPC), claim 1 of the first and third auxiliary requests was considered to be an abstract scheme (Article 52(2) and (3) EPC), and claim 1 of the second and fourth requests did not involve an inventive step (Article 56 EPC).
- III. In the grounds of appeal, the appellant requested that the decision be set aside and that a patent be granted on the basis of the refused claims and submitted a fifth auxiliary request.
- IV. In the communication accompanying the summons to oral proceedings, the Board summarised the issues to be discussed and expressed some doubts about the patentability and inventive step of the requests. In response, the appellant filed sixth to eighth auxiliary requests.
- V. At the oral proceedings, the appellant requested that the decision under appeal be set aside and that the case be remitted for further prosecution on the basis of the claims according to the main request or, alternatively, according to one of the auxiliary requests 1 to 6 all submitted during the oral

proceedings. At the end of the oral proceedings, the Chairman announced the decision.

VI. Claim 1 of the main request reads as follows:

"A method for automatically providing availability information for a seat on a mode of transportation, comprising the steps of:

submitting queries from a travel planning system server (12) to an availability system (66) remotely located over a computer network that includes a yield management management algorithm and a seat availability algorithm, receiving availability responses therefrom and storing said availability responses in a database (70) of prior queries local to said server;

receiving, by the server, a query (48) for seat availability information, the query including one or more fields that specify at least one of: points of travel, dates of travel, times of travel, class of travel, or booking code;

determining whether the query can be responded to based on information in the local database (70) and,

(i) if so, producing a prediction of availability of a seat based on information from the database (70) in accordance with the availability query; and

(ii) if not, submitting a query to the availability system over the computer network in accordance with the availability query."

System claim 19 corresponds to method claim 1.

The independent claims of the auxiliary requests contain further details of the availability prediction.

VII. The appellant argued essentially as follows:

The invention solved the problem of relieving processing load on the availability system caused by the large number of searches that are necessary to find low-fare flights. This was solved essentially by providing a travel planning system server that stored previous flight availability searches in a database and used this data to predict future searches.

The invention recognised that it was not necessary to have 100% confidence in an availability search since the validity of the search would be tested when a ticket was finally booked. Customers would tolerate some percentages of wrong searches provided that it was not too high. Thus, all that was needed was a reliable prediction of the availability using previous data and this eliminated the need for many actual searches.

This was not obvious to the skilled person who was a computer engineer knowing nothing about availability searches.

Prediction in the sense of the invention was not the same as "caching" as asserted by the examining division. A cache always produced correct data, whereas in the invention the idea was to produce a prediction that did not always need to be correct.

There was no evidence on file for how the skilled person would solve the problem of reducing the load on the availability system so that it could not be considered obvious.

Reasons for the Decision

1. The application relates to determining airline seat availability. As explained by the appellant (see point VII, above), the invention solves the problem of relieving processing load on the availability system caused by the large number of low-fare flight searches. It achieves this by providing a travel planning system server that stores previous flight availability search results in a database and uses this data to predict results of subsequent searches.

2. The invention involves a mixture of technical aspects, e.g. servers and databases, and not technical aspects, e.g. airline seat availability and yield management. Decision T 641/00 - Two identities/COMVIK (OJ EPO 2003, 352) sets out the approach to judge inventive step in such cases:

"This approach requires identification of the technical field of the invention (which will also be the field of expertise of the person skilled in the art to be considered for the purpose of assessing inventive step), the identification of the closest prior art in this field, the identification of the technical problem which can be regarded as solved in relation to this closest prior art, and then an assessment of whether or not the technical feature(s) which alone or together form the solution claimed, could be derived as a whole by the skilled person in that field in an obvious manner from the state of the art.

For the purpose of the problem-and-solution approach, the problem must be a technical problem, it must actually be solved by the solution claimed, all the features in the claim should contribute to the solution, and the problem must be one that the skilled person in the particular technical field might be asked to solve at the priority date."

3. The technical field is computer engineering, and database querying in particular. The closest prior art, and the only prior art presently available, are the activities of the travel agent requesting seat availability from an availability system as described in the background section of the application. Starting out from this prior art, the appellant argued that the feature of "predicting" seat availability solved the problem of relieving processing load on the availability system.
4. Predicting seats in this general sense may cover non-technical methods and activities, such as circumventing the problem altogether by avoiding queries to certain airlines at certain times based on the travel agent's previous experience of that airline (cf. T 258/03, OJ 2004, 575, Headnote II). However, method claim 1 (and apparatus claim 19) presently on file limits the invention to a technical aspect, namely having a travel planning system server submitting the queries to the availability system as well as storing the responses and performing the prediction of availability.
5. In the Board's view, the result of the prediction being performed in a server is that it is now distinguished

from any manual activity of the travel agent, such as remembering previous search results. Thus, the Board considers that the solution can no longer be the mere implementation of a known business activity, but involves technical considerations, such as providing the travel planning system server and using it to implement the prediction rather than the travel agent client. The Board therefore judges that the solution in the amended claims is no longer obvious from this point of view.

6. The examining division argued that the solution was obvious in view of the well-known use of local caching servers relieving main servers from processing load, but gave no detailed arguments provided, nor any evidence of this. The appellant has disputed that the solution is common knowledge. Regardless of whether the presently claimed prediction is distinguished from the caching operation, the Board judges that the distinguishing features at least go beyond what is "notorious", or essentially irrefutable, in this art. In the Board's view this removes the basis for not performing a search under Rule 45 EPC, so that an additional search should be performed (cf. T 690/06, points 2 and 8) to establish the relevant prior art by which to judge the inventive step. Thus both search and examination work need to be carried out, which is the task of the examining division, and accordingly the Board remits the case for further prosecution on the basis of independent claims 1 and 19, submitted during the oral proceedings.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance for further prosecution on the basis of the main request submitted during the oral proceedings before the Board.

The Registrar:

The Chairman:

T. Buschek

R. R. K Zimmermann