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Datasheet for the decision of 21 October 2022

Case Number: T 1615/17 - 3.5.01

Application Number: 11847078.0

Publication Number: 2650839

IPC: G06Q50/00, G06F17/30, G06Q30/02, G06Q30/06

Language of the proceedings: EN

Title of invention:
SERVER, INFORMATION-MANAGEMENT METHOD, INFORMATION-MANAGEMENT PROGRAM, AND COMPUTER-READABLE RECORDING MEDIUM WITH SAID PROGRAM RECORDED THEREON

Applicant:
Rakuten Group, Inc.

Headword:
Linking place information based on position/RAKUTEN

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - linking place information based on position (no - non-technical organisation of cognitive data)

Decisions cited:
G 0001/19, T 0309/10, T 1798/13, T 1234/17

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Case Number: T 1615/17 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 21 October 2022

Appellant: (Applicant)	Rakuten Group, Inc. 1-14-1 Tamagawa Setagaya-ku Tokyo 158-0094 (JP)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 14 February 2017 refusing European patent application No. 11847078.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	M. Höhn
Members:	A. Wahrenberg
	L. Basterreix

Summary of Facts and Submissions

I. This case concerns the appeal against the examining division's decision to refuse European patent application No. 11847078.0 for lack of inventive step (Article 56 EPC).

II. The decision, and the supplementary European Search report, referred to a notoriously known system consisting of a server connected via a network to a plurality of GPS-equipped smartphones. The examining division argued that the claimed subject-matter distinguished itself over this prior art only in the specification of non-technical aspects, and, therefore, the invention did not provide a technical contribution that could establish an inventive step.

III. In the statement of grounds of appeal, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request or one of the first to fourth auxiliary requests submitted therewith. The main request and the first to third auxiliary requests were identical to the corresponding requests in the decision under appeal.

IV. In a communication under Rule 100(2) EPC, the Board set out its preliminary view of the case. The Board tended to agree with the examining division that the claimed invention did not provide a technical contribution over notorious prior art, or the prior art mentioned in the published application.

V. In a reply dated 22 July 2021, the appellant provided further arguments in favour of technicality and inventive step.

VI. In the communication accompanying the summons to oral proceedings dated 23 June 2022, the Board maintained the preliminary opinion as set out in its previous communication.

VII. In a reply dated 29 July 2022, the appellant advanced further arguments supporting the presence of an inventive step.

VIII. Oral proceedings took place by videoconference on 21 October 2022. The appellant confirmed its requests submitted in writing that the decision under appeal be set aside and that a patent be granted on the basis of the main request or one of the first to fourth auxiliary requests, all filed with the statement of grounds of appeal.

IX. Claim 1 of the main request reads:

A server (10) comprising:

an input information storage means (14) for storing input information where position information indicating a geographic position, a word given to the position, and a user ID identifying a user having given the word to the position are associated with one another;

a dictionary storage means (15) for storing dictionary data indicating associations between words;

an association means (17) for extracting a plurality of input information where the geographic positions are included in one geographic range and the words are associated with each other by referring to the input information storage means and the dictionary storage means, and associating the extracted plurality

of input information with each other by assigning a common identifier to the plurality of input information; and

a registration means (13) for entering the plurality of input information associated with each other by the association means into a result storage means (14b), wherein

the dictionary storage means (15) stores dictionary data generated by associating different words given by different users when the different words are given at a predetermined number or more of common positions, and

the association means (17) determines whether the words indicated by the input information are associated with each other by using the dictionary data.

X. The first auxiliary requests adds the following feature at the end of claim 1:

the server further comprising:

a facility storage means (11) for storing facility information related to facilities and at least including a facility ID identifying a facility and information indicating a geographic range of the facility,

wherein the association means (17) extracts a plurality of input information where the geographic positions are included in a geographic range indicated by one facility information and the words are associated with each other by referring further to the facility storage means (11), and associates the extracted plurality of input information with each

other by assigning a facility ID of the facility information as the common identifier to the plurality of input information; and

when a plurality of geographic positions indicated by the extracted plurality of input information are included in a geographic range indicated by the one facility information and a geographic range indicated by another facility information, the association means (17) compares a midpoint of the plurality of geographic positions with a center of each of the geographic ranges and assigns a facility ID corresponding to a geographic range whose center is closest to the midpoint to the plurality of input information.

XI. The second auxiliary request replaces *"a geographical position"* in the first feature of claim 1 of the first auxiliary request with *"at least a latitude and a longitude obtained by a GPS function of a mobile terminal"* and *"geographical positions"* in the third feature with *"latitudes and longitudes"*.

XII. The third auxiliary request adds the following additional feature at the end of claim 1 of the first auxiliary request:

the server further comprising:

a receiving means (18) for receiving a request signal containing a specified category name input by a user from a terminal (T) of the user;

a search means (19) for reading facility information corresponding to the request signal received by the receiving means from the facility storage means (11); and

a transmitting means (20) for transmitting the facility information read by the search means to the terminal, wherein

the word indicated by the input information includes a category name given to a facility located in a specific position, and

the search means reads facility information including a facility ID associated with the specified category name from the facility storage means by referring to the result storage means and the facility storage means.

XIII. Claim 1 of the fourth auxiliary reads (additions over the third auxiliary request underlined, deletions struck-through)

A server (10) comprising:

an input information storage means (14) for storing input information where first position information indicating a geographic position, a word given to the position, and a user ID identifying a user having given the word to the position are associated with one another, the word indicated by the input information including a category name given to a facility located in a specific position;

a dictionary storage means (15) for storing dictionary data indicating associations between words;

an association means (17) for extracting a plurality of input information where the geographic positions are included in one geographic range and the words are associated with each other by referring to

the input information storage means and the dictionary storage means, and associating the extracted plurality of input information with each other by assigning a common identifier to the plurality of input information; and

a registration means (13) for entering the plurality of input information associated with each other by the association means into a result storage means (14b), wherein

the dictionary storage means (15) stores dictionary data generated by associating different words given by different users when the different words are given at a predetermined number or more of common positions, and

the association means (17) determines whether the words indicated by the input information are associated with each other by using the dictionary data;
the server further comprising:

a facility storage means (11) for storing facility information related to facilities and at least including a facility ID identifying a facility and information indicating a geographic range of the facility,

wherein the association means (17) extracts a plurality of input information where the geographic positions are included in a geographic range indicated by one facility information and the words are associated with each other by referring further to the facility storage means (11), and associates the extracted plurality of input information with each other by assigning a facility ID of the facility information as the common identifier to the plurality

of input information;

the server further comprising:

a receiving means (18) for receiving, from a user terminal (T), a request signal containing a specified category name input by a user ~~from a terminal (T) of the user~~and second position information indicating a current position of the user terminal (T);

a search means (19) for reading facility information corresponding to the request signal received by the receiving means from the facility storage means (11); and

a transmitting means (20) for transmitting the facility information read by the search means to the user terminal (T), wherein

~~the word indicated by the input information including a category name given to a facility located in a specific position, and~~

the search means executes steps of: (i) extracting an associated category name that is associated with the specified category from the dictionary storage means (15); and (ii) ~~reads~~reading, from the facility storage means (11), facility information including a facility ID associated with the specified category name or the associated category name and indicating a facility located within a predetermined geographic range from the current position of the user terminal (T), ~~from the facility storage means~~by referring to the result storage means and the facility storage means.

XIV. The appellant's arguments are discussed in detail in the reasons for the decision.

Reasons for the Decision

1. *Background*

1.1 The invention concerns a service that allows a user to search for information relating to a facility, such as a store or a restaurant, based on a geographical location. As shown in Figures 1 and 5 of the published application, there is a server (10) that stores information about facilities in a database (11) and provides a search functionality to users of mobile terminals (T).

1.2 The database may be populated by the users themselves (paragraph [0004] of the published application). For example, the user may give a name to a facility at a geographical position. In that case, there is the problem that different users input different information describing the same facility. In particular, the position information may be different for the same facility, for example because the users are located at different positions within or slightly outside the same facility or because of differences in the positioning systems of different devices. This makes it difficult for the server to recognise that the resulting plurality of information records relate to the same place, which leads to poor search results.

1.3 The invention solves this problem by grouping information records relating to positions included in a predetermined geographical range and having names that

are associated with each other according to a dictionary (paragraphs [0062] to [0067]). The records are assigned a common identifier in the database.

The dictionary is not just a thesaurus that is based on language. It also contains associations between names given by different users for a predetermined number of common positions (paragraphs [0055] to [0057]).

2. *Main request*

2.1 Claim 1 of the main request relates to parts of the server in Figure 5, which comprise: an input information storage means (database 14) for storing input information including position information, a name (word) given to the position, and a user ID; a dictionary storage means (15) for storing the dictionary; an association means (17) for associating the input information records and assigning a common identifier to them; and a registration means (13) for storing the result in a result storage means (14b).

2.2 The examining division argued in the decision under appeal (see points 1.1 and 1.2) that the invention in claim 1 distinguished itself from notorious prior art only in the specification of non-technical aspects relating to the storage, association, and processing of cognitive data. Therefore, it was not possible to identify a technical contribution which could support the presence of an inventive step.

2.3 The appellant argued that the invention in claim 1 had the technical effect of improving a database that was in an inaccurate state in the sense of having multiple uncorrelated records relating to the same facility. As

a consequence of the improved database, the server was capable of delivering better search results. Thus, there was also an improvement in the functioning of the server which went beyond the improvement of the database.

The appellant further argued that the generation of dictionary data and the grouping of information was performed automatically by analysing position data having a latitude and a longitude. Such data was technical by nature as it had been measured by a position measurement system. According to G 1/19 - *Pedestrian simulation,* measurements had technical character.

Another argument was that the invention was motivated by technical considerations of the position measurement system. It would have required technical expertise to recognise that a position acquired by means of a GPS function was prone to measurement errors, since the GPS receiver was subject to different noise and/or reception conditions varying among different devices. This was the motivation for associating records and providing the common identifier in claim 1.

2.4 The Board is not convinced by the appellant's arguments. The claimed invention does not improve the database in a technical sense. It merely links data on the basis of cognitive information and a mathematical model of a geographical space.

The Board's view is in line with decision T 309/10 - *Archival and retrieval/MULTEX* which held that linking data records by means of a common identifier (parent identifier) was an administrative matter that did not contribute to inventive step under the "Comvik

approach". The Board in that case compared the indexing of database records with the work of a librarian (see point 9). The librarian would choose one representative form for all the variants of each entry (e.g. "IBM", "iBM", "IbM", and so on). There would be nothing technical in what the librarian would be doing. He would simply be a good administrator, solving the non-technical problem of storing and locating data (books).

In the Board's view, the position data is cognitive information just like the names given to the positions in claim 1 and data entries in T 309/10. A position is just a point in a geographic coordinate system. Claim 1 does not contain any features relating to how the position information was measured using e.g. GPS, but even if it did, the position information is simply given as an input to the algorithm. The position information does not retain any technical character related to how it was measured in the subsequent data processing. Moreover, the Board does not consider that the association of information in claim 1 involves any technical considerations of how the position information was measured. Indeed, the same algorithm would apply if the position information was inputted manually by the user or a database administrator. Such manually inputted data would also be "inaccurate" due to human error or the lack of an agreed format.

In previous cases of the Boards of Appeal (see for example T 1234/17 - *Customization based on physiological data/ADIDAS AG*, and T 1798/13 - *Forecasting the value of a structured financial product/SWISS REINSURANCE COMPANY LTD*), it has been held that it is not enough that an algorithm makes use of a technical quantity in the form of a measured physical parameter for it to be technical. What matters

is whether the algorithm reflects any additional technical considerations about the parameter, such as its measurement. As set out above, the Board does not see any such additional technical considerations in the present case.

The Board furthermore considers that the improvement of the search results, which potentially leads to fewer search queries, is a mere consequence of the non-technical organisation of data. The only difference between this effect and the non-technical effect of a library indexing scheme is that the claimed invention is implemented on a computer system comprising a server and a number of mobile devices. However, this is not enough to confer technical character to the method of organising data. There has to be a further technical effect going beyond the normal effect of implementing something on a computer system. The Board does not see any such further technical effect in this case, because the invention does not improve the functioning of the server in a technical sense.

In conclusion, the Board does not see a technical effect or motivation based on technical considerations.

2.5 Starting from the notorious system in the decision under appeal, the problem to be solved is how to implement the method of associating data using a common identifier. The claim does not contain any technical features that go beyond those necessary for implementing an algorithm, i.e. suitable computer means for storing and processing data. This is not inventive.

2.6 For these reasons, the Board judges that the invention in claim 1 of the main request lacks an inventive step (Article 56 EPC).

3. *First auxiliary request*

3.1 The reasons provided with regard to the main request already take into account the features added by the first auxiliary request. In particular, the assignment of a "facility ID" as the common identifier based on whether a geographic position is within a geographic range is not technical for the reasons already given. Here, the Board sees the "facility ID" as an example of the common identifier defined in the main request.

Therefore, the invention in claim 1 of the first auxiliary request does not involve an inventive step (Article 56 EPC).

4. *Second auxiliary request*

4.1 Claim 1 of the second auxiliary request further specifies that the position information indicates at least a latitude and a longitude obtained by a GPS function of a mobile terminal.

However, as already stated above with respect to the main request, the Board considers that it is not enough that the position information has been measured by a technical measurement system to confer technical character on the measured information and the subsequent processing thereof. Claim 1 of the second auxiliary request does not contain any actual step of measuring, or any other feature that involves additional considerations of the measurement.

Thus, the reasons given for the main request are

equally applicable to the second auxiliary request. Claim 1 of the second auxiliary request therefore lacks an inventive step (Article 56 EPC).

5. *Third auxiliary request*

5.1 Claim 1 of the third auxiliary request includes further features of the server in Figure 5 for providing a category-based search for facility information. The server includes receiving means (18) for receiving a request including a category from a user terminal, search means (19) for retrieving facility information corresponding to the request, and transmitting means (20) for transmitting the result to the user's terminal.

Although the additional features of the third auxiliary request go beyond the notorious prior art mentioned in the decision under appeal, which does not specify any interaction between the server and the smartphones, they are described as known in the published application (see paragraph [0002] and [0004]). The appellant did not contest this. Rather, it is common ground that the contribution of the invention over the prior art lies in the linking of data records that relate to the same place or facility. As set out above, this is not technical. Thus, starting from the prior art search system described in the application, the distinguishing features relating to the linking of data items by providing a common identifier (facility ID) do not contribute to inventive step. Therefore, an inventive step is lacking (Article 56 EPC).

6. *Fourth auxiliary request*

6.1 The fourth auxiliary request further specifies that the request signal received from the user terminal includes position information indicating the current position of the user terminal, and that the search means reads facility information corresponding to an "associated category" associated with the category name in the user's request, for facilities located within a predetermined geographic range from the current position of the terminal.

The additional features of the fourth auxiliary request relate to subject-matter that is either described as prior art in the application (see paragraph [0002] which describes a destination search device), or is non-technical. The search based on the terminal's current position is known from the prior art. Providing information related to an "associated category" is, in the Board's opinion, part of the non-technical requirement to retrieve, not only the information that the user requested, but also related information as a sort of recommendation. It is not an improved data retrieval function in a technical sense. Therefore, this feature does not contribute to inventive step.

Consequently, the Board considers that claim 1 of the fourth auxiliary request lacks an inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

T. Buschek M. Höhn

Decision electronically authenticated