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**Datasheet for the decision  
of 12 July 2022**

**Case Number:** T 2767/19 - 3.4.03

**Application Number:** 09773492.5

**Publication Number:** 2320368

**IPC:** G06Q10/02, G06Q50/12

**Language of the proceedings:** EN

**Title of invention:**  
RESERVATION ACCEPTANCE SYSTEM

**Applicant:**  
Toyoko Inn IT Shuukyaku Solution Co., Ltd.

**Headword:**

**Relevant legal provisions:**  
EPC Art. 52(1), 56

**Keyword:**  
Inventive step - main request (no) - auxiliary request (no) -  
mixture of technical and non-technical features; mere  
automation of a business scheme

**Decisions cited:**

**Catchword:**



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Case Number: T 2767/19 - 3.4.03

**D E C I S I O N**  
**of Technical Board of Appeal 3.4.03**  
**of 12 July 2022**

**Appellant:** Toyoko Inn IT Shuukyaku Solution Co., Ltd.  
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**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 23 April 2019  
refusing European patent application No.  
09773492.5 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman** T. Häusser  
**Members:** J. Thomas  
E. Mille

## **Summary of Facts and Submissions**

- I. The appeal is against the examining division's decision to refuse European patent application No. 09 773 492 on the grounds that the subject-matter claimed in the then sole request on file did not involve an inventive step.
- II. At the end of the oral proceedings held before the Board the appellant confirmed its pending requests that the decision under appeal be set aside and a patent be granted on the basis of the set of claims of a main request filed by letter dated 12 March 2019 or alternatively, of an auxiliary request filed with the statement setting out the grounds of appeal dated 3 September 2019.
- III. Reference is made to the following document:  
D3: WO 02/095541 A2
- IV. Claim 1 of the main request reads as follows:

*"A reservation system for performing reservations of a user at a plurality of facilities, characterized in that the reservation system comprises:  
a first computer (3) handling reservations of the plurality of facilities requested from a user terminal (4) accessed through a network (5), wherein the plurality of facilities include a general facility, a certain number of reservations of the general facility are managed by the first computer (3), and a specific facility, no reservation of the specific facility are managed by the first computer (3), the first computer (3) has a first vacant room information database (332) to store the certain number of reservation of the*

*general facility and vacancy data of the rooms for respective date; and*

*a second computer (10) accessing the first computer (3) through the network (5) and having a second vacant room information database (132) to store vacancy data of a predetermined specific facility among the plurality of facilities for respective date;*

*wherein the first computer (3) comprises:*

*a central processing device (32) for controlling an overall operation of the first computer (3);*

*a hotel information database (333) to store property data containing a location and an address of a source for obtaining the vacancy data for the general facility and the specific facility, the location and the address of the source being associated with each other, where the address for the general facility is that of the first vacant room information database (332) and the address for the specific facility is an external link information on the second computer (10) which manages the specific facility;*

*a reservation information database (331) to store reservation data containing a lodging date for the general facility and the specific facility; and*

*the central processing device of the first computer (32) is specifically configured to conduct the following operation of:*

*performing a reservation option searching process that executes steps when receiving data including a lodging date and a location from the user terminal (4), the steps comprising:*

*accessing the hotel information database (333) and extracting a facility based on the property data and the received data;*

*extracting an address of a source for obtaining the vacancy data corresponding to the extracted facility;*

*accessing the extracted address and determining whether or not there exists a vacancy on the lodging date which was included in the received data:*

*performing an input data receiving process that displays an input screen for reservation at more than one facility including the general facility and the specific facility for which the reservation option searching process determined as a vacancy exists on the user terminal, and receives input data which is input to the user terminal;*

*performing a reservation data storing process that creates the reservation data, when the input data includes the reservation of the general facility managed by the first computer (3) based on the input data and writes the created reservation data into the reservation information database (331);*

*performing an input data transmission process that transmits the input data containing the specific facility, when the input data includes the specific facility, based on the address extracted by the reservation option searching process; and*

*performing a referring location changing process that sets the external link information to the second computer (10) managing the corresponding specific facility as information on an address of a source in the hotel information database (333) when the number of remaining rooms reaches zero;*

*wherein the second computer comprises:*

*a central processing device (12) for controlling an overall operation of the second computer, (10) where the central processing device of the second computer (12) is specifically configured to conduct operations of:*

*performing a vacancy data updating process that operates to decrease the number of rooms on the lodging date for the specific facility which was included in the input data from the vacancy data stored in the*

second vacant room information database (132), when the input data transmitted from the first computer (3) was received; and performing a reservation completion data displaying process that creates, after the operation of the vacancy data updating process, reservation completion data for the specific facility based on the input data, and transmits the reservation completion data to the first computer (3); wherein the reservation data storing process of the first computer (3) further creates reservation data on the specific facility based on the reservation completion data transmitted from the second computer (10) and writes the created reservation data on the specific facility into the reservation information database."

- V. Claim 1 of the auxiliary request is amended compared to claim 1 of the main request by adding the following underlined features:

"... wherein the second computer comprises:  
a hotel information database of the second computer (133) containing data on locations, room types, and room charge of the respective hotels and the hotel information database (133) is configured to output a SQL data when the hotel information data is modified,  
a central processing device (12) for controlling an overall operation of the second computer (10) and the central processing device (12) is configured to process the SQL data into a XML data and transmit the hotel information to the central processing device (32) of the first computer which is configured to process the XML data into SQL data to update the hotel information database (333) of the first computer, wherein the

*central processing device of the second computer (12) is specifically configured to conduct operations of: ..."*

VI. The appellant's arguments relevant to the present decision mainly related to the features of claim 1 of the main and the auxiliary request contributing to inventive step. According to the appellant, starting from document D3 the only features known from prior art concerned the general structural features of networked computers on which a different hotel reservation system was implemented. The specific combinations of the databases and their interactions as defined in claim 1 of the main and the auxiliary request were not disclosed in document D3 and went beyond an obvious straightforward implementation of the reservation scheme.

The appellant's arguments will be assessed in detail in the reasons for the decision.

## **Reasons for the Decision**

### **1. The claimed invention**

The application relates to a specific hotel reservation system. The claimed reservation system is based on the idea that hotel room reservations can be carried out at one single reservation site (e.g. a travel agency, named "general facility" in the wording of the claims) not only for the rooms assigned to this site, but also for rooms from other, different sites (e.g. different hotels or hotel groups, named "specific facility" in the wording of the claims). Reservations directly at the general facility (i.e. the single reservation site)



are thereby possible even for vacant rooms of a specific hotel which had not assigned its vacant rooms to the general facility.

In the past, this kind of reservations was made by the travel agency with a phone call to a hotel for which the travel agency did not have specifically assigned rooms. The travel agent called the hotel in question in order to ask for available rooms and to make a reservation directly with the hotel, so that all reservations were made directly with the hotel. According to the present application the whole reservation process is automated through a common network, e.g. via the Internet. If the vacant rooms assigned from a specific hotel to the general facility reached zero, an external link, e.g. an Internet address, is automatically used in the system in order to automatically transfer the reservation done by the general facility to the reservation site of the specific facility and to carry out the complete reservation via the network. In this way, reservations can be made either for rooms previously assigned to the travel agency (i.e. the general facility) or, in case the rooms assigned to the general facility are booked out ("when the number of remaining rooms reaches zero"), the general facility is automatically transferred to the reservation system of a second facility (i.e. another hotel or the hotel group, named the specific facility) in order to reserve available rooms at this specific facility. This way of reservation has the advantage that the specific hotels or hotel groups will keep control of all of their reservations; they do not need to outsource their reservations or assign some or all of their rooms to the general facility (travel agency). Also the user is not transferred away to another reservation site in case the available rooms assigned to the general

facility reach zero, thereby avoiding the transfer of a user to a site which might be owned by a competitor.

## **2. Main request - inventive step**

### 2.1 Closest prior art

2.1.1 The Board concurs with the appellant that document D3 can be used as a suitable starting point for an inventive step argumentation, since it deals with a method for providing lodging (i.e. hotel) reservation data. The hotel room reservations are realised and stored in a central database thereby allowing to carry out the reservations in real time.

2.1.2 In particular, document D3 (references in this paragraph refer to document D3) shows a reservation system for performing reservations for a plurality of facilities ([0006]), comprising a first computer (the master reservation system; [0007]) and further computers ([0007], [0008] and [0025]) from which the reservations of a plurality of facilities are handled ([0008], [0017] and [0025]). The hotel room reservation can be done from a user terminal ([0022] and [0025]) accessing the central reservation database through a common network ([0022] and [0025]). The computers, i.e. the reservation data systems (Figure 1, reference signs 112a to 112n) together with the master reservation interfaces (reference signs 114a to 114n), from which reservations are made, are connected to the common room information database (Figures 1 and 2; [0022], [0023], [0065]) accessible through the network (Figures 1 and 2). This allows to select among a variety of proposed hotel facilities ([0025], [0026], [0031]) and to reserve the selected hotel facility in the master reservation system (104). Hence, a central processing

device of the main (first) computer (main reservation system) controls the overall propositions and selections of hotel rooms and allows the reservation of rooms at different hotels ([0031], [0032]) thereby using a single database (abstract, [0006] and [0007]). This single database contains all data related to the reservation process (Figures 1 and 2). Hence, all connected hotels provide and assign their vacant rooms in this single centralised master reservation database.

## 2.2 Differentiating features

2.2.1 The features defined in claim 1 which are not disclosed in document D3 (see point 2.1.2 above) relate to the computer implementation of the specific reservation scheme using a specific construction of databases, namely the hotel information database (333), the first and second vacant room databases (332 and 132) and the reservation information databases for the general and the specific facilities (331 and 131), as well as their interaction in order to accomplish the specific reservation scheme (see point 1. above).

2.2.2 The specific reservation scheme as established by an administrative business designer is the following one:

*A reservation scheme for performing reservations of a user at a selected facility out of a plurality of facilities the reservation scheme being the following: Handling reservations of the plurality of facilities requested by a client, wherein the plurality of facilities include a general facility and a specific facility. At the general facility site (first site), no reservation of the specific facility is managed by the first site. The first site has a first vacant room information table wherein a number of reservations of*

*the general facility and vacancy data of the rooms for respective dates are stored. The second site (related to the specific facility) has a second vacant room information table to store vacancy data of the specific facility among the plurality of facilities for a respective date.*

*Further, the first site comprises a hotel information data table to store property data containing a location and an address of a source (like a local information table or a contact data) for obtaining the vacancy data for the general facility and the specific facility, the location of the facility and the address of the source is associated with each other, where the address for the general facility is the table which stores the first vacant room information and the address for the specific facility is the contact data of the hotel which manages the reservations of the specific facility.*

*At the first facility a reservation information table stores reservation data containing a lodging date for the general facility and the specific facility.*

*The hotel reservation process searches for reservation options by selecting data including a lodging date and a location from the hotel information table and extracting a facility based on the property data and the selecting data.*

*It selects an address of a source for obtaining the vacancy data corresponding to the selected facility (hence either the local information table or a contact data);*

*accessing the selected address and determining whether or not there exists a vacancy on the lodging date which was included in the received data:*

*providing the selected lodging possibilities to the client and receiving the selection of the client;*

*performing a reservation for the selection when the input data includes the reservation of the general facility thereby writing the created reservation data into the reservation information table of the general facility;*

*performing a contact with the specific facility using the contact data if the specific hotel was chosen by the client and no rooms were available among the assigned rooms at the general facility and updating the indication in the hotel information table of the general facility that the second facility must be called when the number of remaining rooms reaches zero.*

*If in the reservation process the hotel rooms at the specific facility are to be reserved, contacting the specific facility using the contact data in order to perform an update of their vacancy data and performing the reservation with the specific facility confirming the desired reservation*

*wherein the reservation comprises the update of the hotel information tables of both, the general and the specific facilities, the update of the vacant room information tables at both facilities and of the reservation information tables for the specific facility.*

The administrative designer would thus construct a process in its specific formulation thereby including and respecting the following boundary conditions / business constraints of the reservation process:

- The general facility can propose vacant rooms from the general and the specific facilities.
- Only the reservations of rooms assigned to the general facility can be made directly at the general facility, all other reservations have to be made directly at the specific facility.

- The bookings are to take place in real time.
- All reservations have to be carried out by the general facility and the client should not be transferred to another agent.

2.2.3 Therefore, the differentiating features relate to the programming of the first and second computers at the general and specific facilities and their central processing devices together with the different databases in order to control the administrative reservation process as specified above under point 2.2.2.

The differentiating features do not concern any physical structural entity, all physical entities (user terminals, networked computer, processing units, displays etc.) being known from document D3. They concern exclusively the specific construction of the databases and their interactions in order to carry out the above mentioned reservation process.

2.3 Technical effect and objective technical problem to be solved

2.3.1 As detailed under points 2.1 and 2.2 above, the subject-matter defined in claim 1 consists of a mixture of technical and non-technical features. In particular, the hotel reservation scheme as specified above under point 2.2.2 concerns a non-technical, administrative process which is implemented on a networked computer system. Hence, the differentiating features relate to the computer implementation of this non-technical reservation process in order to automate the reservation process.

- 2.3.2 According to the problem solution approach as established by the Boards of Appeal for subject-matter consisting of a mixture of technical and non-technical features, the aim achieved by the differentiating non-technical features may legitimately appear in the formulation of the problem as part of the framework of the technical problem that is to be solved, in particular as a constraint that is to be met (*Case Law of the Boards of Appeal*, 9th Edition, 2019, I.D.9.1.3 c) and I.D.9.1.4).
- 2.3.3 In the present case the desired reservation process allows reservations either at the general facility or at the specific facility, so that the user (client) does not leave the general facility for another (competitor's) agent if no vacant rooms are available at the general facility or the desired hotel. In addition, the owner of the specific facility can keep control of its vacant rooms without assigning a certain number or all of their rooms to the general facility. However, these advantages and benefits are purely administrative and business-related. The Board cannot identify any further technical effects.
- 2.3.4 Moreover, the Board cannot see why the subject-matter defined in claim 1 should provide a particular improvement of the computer functionalities or the advantage of a reduced workload of the computer. The differentiating features concern merely the automation of the process which has at best the advantage for the user (the person who is in charge of the reservation) to have less administrative work (no phone calls are necessary). In addition, automating a process usually saves time and makes the process more efficient. This is the nature of automation. However, no further technical advantage can be identified beyond these

standard advantages resulting from automation and / or computer implementation of the specific administrative reservation process.

2.3.5 In view of the above the objective technical problem to be solved is the computer implemented automation of the desired non-technical administrative reservation process (see point 2.2.2 above).

2.4 Obviousness

2.4.1 The concept of the present reservation process (see point 2.2.2 above) is drafted by the administrative designer and considered to be handed over to the technically skilled person, a computer programmer.

2.4.2 The skilled person implements this non-technical administrative reservation process using only its standard programming skills. The construction of the different databases and their interaction result in an obvious manner from the constraints imposed by the reservation scheme and from the fact that only a limited number of rooms can be reserved directly through the general facility. Moreover, the non-technical reservation concept as established by the administrative designer includes concrete indications for the technically skilled person on how the reservations have to be handled, where the reservations have to take place, where the databases have to be located and how the different databases should interact.

Consequently, the technically skilled person implements the specific reservation process in the networked computer system known from document D3 in a



straightforward manner and arrives at the reservation system as defined in claim 1 in an obvious way.

2.4.3 To the appellant's arguments for inventive step, the Board replies as follows.

In the appellant's view the specific construction of the hotel information database (333) as defined in claim 1 (lines 18 to 24 in combination with lines 52 to 56) and discussed at length at the oral proceedings before the Board was neither disclosed in document D3 nor obvious to the skilled person. In particular the appellant stated that the change of address of the source when the number of remaining rooms at the general facility reached zero was neither obvious nor straightforward.

The Board agrees that this change of address of the source is not disclosed in document D3 but cannot agree that it is not an obvious consequence of the implementation of the non-technical reservation scheme. The change of address of the source within the meaning of this passage results directly from the business constraint imposed by the designer of the administrative method that only a specific number of rooms is assigned to the general facility, but other (not assigned) vacant rooms should also remain accessible for reservation without redirecting the user to another reservation site. In particular, if the rooms allocated to the travel agency are fully booked, the business scheme prescribes to contact the hotel or hotel group directly in order to evaluate and reserve vacant rooms directly with them. Thus, if automated processing is desired, it appears an immediate consequence of the business scheme to change the address of a source for obtaining vacancy data from the

"first vacant room information database" to an "external link information on the second computer" as defined in claim 1, lines 18 to 24 in combination with claim 1, lines 52 to 56. This corresponds to what was done manually in the past, namely, to use the telephone number of the hotel / hotel group when the travel agency realised that the locally assigned rooms were fully booked. The travel agent directly called at the hotel asking for further vacancies. The telephone number is now replaced by the Internet web-address, i.e. "*an external link information*", in order to automate the reservation process using a networked computer system. Hence, the disputed features are the immediate result of the computer implementation of the non-technical administrative reservation scheme.

Moreover, the Board concedes that other realisations of the hotel information database (333) of the first computer (i.e. at the general facility) or all other related databases might well be possible. This might include a different realisation of the redirection to the specific facility instead of the defined change of address once the number of the remaining rooms at the general facility reaches zero. However, no alternative solution has in fact been indicated by the appellant and no such solution is apparent to the Board, either. Therefore, the Board concludes that the present technical implementation is the most obvious solution the computer programmer would consider when being confronted with the business constraints of the specific reservation process.

The appellant further argued that the differentiating features defined in claim 1 are rather specific, present a unique data structure and went beyond the realm of the business person designing the reservation

process, so that an inventive step should be acknowledged.

The Board takes a different view. Even though the entire reservation process seems rather specific in its definition according to claim 1, it is essentially a necessary consequence of the business process itself and its related business constraints (see point 2.2.2 above). The particular solutions selected and used for the computer implementation of this business process, such as the specific construction and addressing of the databases, are within the standard knowledge of the technically skilled person.

Finally, the commercial success of this method is also not a convincing argument. In the present case the cause of the success lies in the advantageous business method itself and not in its technical realisation. The technical computer implementation merely allows to carry out the business method in an automated manner but has no further technical effect on which an inventive step can be based.

- 2.4.4 Based on these considerations, the Board concludes that the subject-matter defined in claim 1 of the main request does not involve an inventive step based on the teaching of document D3 in combination with the skilled person's common general knowledge (Article 52(1) EPC in combination with Article 56 EPC).

### **3. Auxiliary request - inventive step**

- 3.1 Claim 1 of the auxiliary request was amended to include the additional features related to the specific data included in the hotel information database (i.e. locations, room types, room charge) and the SQL and XML

data formats used in the central processing unit and the second computer in order to allow data exchange between the processing units of the general facility and the specific facility.

3.2 In the Board's view, the specific claimed data, namely locations, room types or room charges, are well-known standard data which are normally included in every hotel information database. If they are not implicit to document D3, they are obvious, and their definition cannot provide any contribution to inventive step of the claimed subject-matter.

3.3 SQL data file formats and XML data formats relate to standard formats in the field of databases, the XML data format is even disclosed in document D3 ([0065]). Both formats were known long before the priority date (according to Wikipedia the SQL query language appeared in 1974 and the first release of the SQL file format was in 1986; XML started in 1996). Since these formats belong to standard formats in relation to databases, the skilled person would take them into account without exercising any inventive skills.

In addition, no particular use is specified in the given context which might attribute a specific advantage to them. Their rather unspecified use as defined in claim 1 does not go beyond an ordinary use in its standard form.

3.4 The appellant did not provide any convincing argument with regard to the specific selection of the particular data of the hotel information database or of the SQL file formats and the XML data formats.

In particular, with regard to the SQL and XML data formats, the appellant did not argue why this selection was not obvious. The fact that the SQL data format is not disclosed in document D3 is not sufficient to render the choice of these formats inventive. Rather, since their selection is considered obvious, their definition in claim 1 cannot contribute to inventive step, either.

- 3.5 The appellant's argument that a patent was granted in the United States of America for the same subject-matter as the one defined in claim 1 cannot convince the Board, either. Jurisdiction is different in Europe and in the United States of America, as both have different requirements for what constitutes patentable subject-matter, in particular with regard to the computer implementations of administrative methods. According to the EPC the patentable inventions must be technical (Article 52(1) EPC, "*European patents shall be granted for any inventions, in all fields of technology, ...*", emphasis by the Board). Furthermore, according to the jurisprudence of the Boards of Appeal in relation to such computer implementations, the claimed subject-matter must go beyond the mere automation of a non-technical business or administrative scheme by providing a further technical effect or a further technical advantage (*Case Law of the Boards of Appeal*, 9th Edition, 2019, I.D.9.1.3.e)).
- 3.6 Finally, the appellant cited European patents EP 2 377 060 B1 and EP 2 534 596 B1 which were allegedly granted for similar subject-matter.

The Board points out that each case must be dealt with and decided separately. The mere fact that the cited patents relate to computer-implemented algorithms using

databases is not sufficient to equate them to the present case.

Moreover, EP 2 377 060 B1 relates to a computer-simulated method that provides technical support for the precise construction of a dental implant and EP 2 534 596 B1 relates to a method of managing physician's profiles used by hospitals and insurances. Hence, both patents clearly relate to entirely different technical fields and to different technical problems which cannot be directly compared to the present case.

- 3.7 The Board concludes that the subject-matter defined in claim 1 of the auxiliary request does not involve an inventive step based on the teaching of document D3 in combination with the skilled person's common general knowledge (Article 52(1) EPC in combination with Article 56 EPC).

#### **4. Conclusion**

Since the subject-matter defined in respective claim 1 of the main request and the auxiliary request does not involve an inventive step contrary to the requirements of Article 52(1) EPC in combination with Article 56 EPC, the appeal must fail.

#### **Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



S. Sánchez Chiquero

T. Häusser

Decision electronically authenticated