CLAIMS

1. A reservation method operating on a distributed reservation system including a plurality of Open Back End servers (OBE), each OBE being adapted for providing a service, for controlling consistency of PNR record during a user transaction across at least two OBEs, the method including the steps of:

- a reservation interceptor module, receiving a user request comprising a data structure including the request for at least one service and reference to a PNR record;

- the reservation interceptor module enriching the data structure with information including the content of PNR record;

- the reservation interceptor module forwarding the enriched data structure to a first at least one OBE according to the at least one service requested in the user request;

- responsive to the first at least one OBE returning an up to date version of the enriched data structure, the reservation interceptor module forwarding the enriched data structure in turn to other OBEs until all requested services included in the user request have been provided;

- returning a response associated to the at least one service requested by the user.

2. The method of claim 1 wherein providing a service by an OBE includes modifying the PNR record.

3. The method of any preceding claim wherein the communications between a user and the reservation interceptor module are done through a first Integration Service Access Point (ISAP).

4. The method of claim 3 further including:

- responsive to a user submitting a user request comprising a data structure including the request for at least one service and reference to a PNR record, the first ISAP obtaining the most up to date version of the PNR.

5. The method of any preceding claim wherein the communications between the reservation interceptor module and each of the at least one OBE are done through additional Integration Service Access Points (ISAPs).

6. The method of any preceding claim wherein the servers of the distributed reservation system exchange information by means of Service Oriented Architecture (SOA) system.

7. The method of any preceding claim wherein the distributed reservation system is a multi-platform system, including a plurality of servers working on different platform, the method further including a synchronization mechanism for ensuring that the most up to date PNR record is used during a user transaction across at least two platforms of the multi-platform system, wherein a local context version of the PNR is maintained within each platform of the multi-platform system, the systems of the multiple platforms being interconnected through a system bus, the mechanism including the steps of:

- maintaining in a shared context storage area, accessible by the servers of all platforms of the multi-platform system, information on the last updated version of PNR;

- responsive to a user request causing a selected one of the servers to modify the local context version of PNR performing the following actions:

- checking on the shared context storage area which server last updated the PNR;

- if the server which last updated the PNR is active on a different platform than the selected server, obtaining the up to date version of PNR;

- modifying the local context version of PNR to satisfy the user request;

- updating the shared context storage area to reflect the last updated version of PNR.

8. The method of claim 7 wherein information on the last modified version of PNR includes the location of the last modified version of PNR.

9. A computer program comprising instructions for carrying out the steps of the method according to any preceding claim, when said computer program is executed on a computer.

10. A computer program product including computer readable means embodying the computer program of claim 9.

11. A reservation sub-system including a plurality of Open Back End servers (OBE), each OBE being adapted for providing a service, for controlling consistency of PNR record during a user transaction across at least two OBEs, wherein the sub-system comprises one or more components adapted to perform the method of any claim 1 to 8.

12. A service deployed in a data processing system for implementing the method of any claim 1 to 8.

CLAIMS

1. A method of processing a user query including a service request in a distributed reservation system including a plurality of servers, the method comprising:

receiving a first data structure at a first server of the plurality of servers, the first data structure including the service request and a reference to a passenger name record;

receiving, at the first server, a content of the passenger name record from a centralized passenger name record context;

enriching, at the first server, the first data structure with a temporary data structure containing the content of the passenger name record to produce a second data structure;

forwarding the second data structure from the first server to a second server of the plurality of servers;

performing, at the second server, the service request to generate a reply;

updating, at the second server, the second data structure to include the reply;

after the second data structure is updated to include the first reply, returning the updated second data structure from the second server to the first server;

removing, at the first server, the temporary data structure from the updated second data structure; and

after the temporary data structure is removed, returning the reply from the first server to respond to the service request in the user query.

2. The method of claim 1 wherein updating the centralized passenger name record context comprises:

modifying the passenger name record.

3. The method of claim 1 further comprising:

receiving the user query at a first Integration Service Access Point; and

in response to receiving the user query, transmitting the first data structure from the first Integration Service Access Point to the first server.

4. The method of claim 3 further comprising:

in response to receiving the first data structure at the first Integration Service Access Point, obtaining, at the Integration Service Access Point, a most up-to-date version of the passenger name record.

5. The method of claim 1 wherein the first server is communicatively coupled to each of the other servers of the plurality of servers though an Integration Service Access Point associated with the respective other servers.

6. The method of claim 1 wherein the plurality of servers of the distributed reservation system exchange information through a Service Oriented Architecture system.

7. The method of claim 1, further comprising:

in further response to the return of the second data structure, updating, by the first server, the centralized passenger name record context based upon the reply in the second data structure.

8. A computer program product comprising:

a non-transitory computer readable storage medium; and

instructions stored on the non-transitory computer readable storage medium that, when executed on one or more servers of a distributed reservation system including a plurality of servers, cause the one or more servers to:

receive at a first server of the plurality of servers, a first data structure including a service request of a user query and a reference to a passenger name record;

receive, at the first server, a content of the passenger name record from a centralized passenger name record context;

enrich, at the first server, the first data structure at the first server with a temporary data structure containing the content of the passenger name record to produce a second data structure;

forward the second data structure from the first server to a second server of the plurality of servers;

perform, at the second server, the service request to generate a reply;

update, at the second server, the second data structure to include the reply;

after the second data structure is updated to include the first reply, return the updated second data structure from the second server to the first server;

remove, at the first server, the temporary data structure from the updated second data structure; and

after the temporary data structure is removed, return the reply from the first server to respond to the service request in the user query.

9. A reservation system for processing a user query including a service request, the reservation system comprising:

a plurality of servers including a first server and a second server, the first server and the second server being configured to:

receive, at the first server, a first data structure including the service request and a reference to a passenger name record;

receive, at the first server, a content of the passenger name record from a centralized passenger name record context;

enrich, at the first server, the first data structure with a temporary data structure containing the content of the passenger name record to produce a second data structure;

forward the second data structure from the first server to the second server;

perform, at the second server, the service request to generate a reply;

update, at the second server, the second data structure to include the reply;

after the second data structure is updated to include the first reply, return the updated second data structure from the second server to the first server;

remove, at the first server, the temporary data structure from the updated second data structure; and

after the temporary data structure is removed, the reply from the first server to respond to the service request in the user query.

10. The reservation system of claim 9 wherein the first server and the second server are further configured to:

in further response to the return of the second data structure, update, by the first server, the centralized passenger name record context based upon the reply in the second data structure.

11. The reservation system of claim 10 wherein the centralized passenger name record context is updated by modifying the passenger name record.

12. The reservation system of claim 9 further comprising a first Integration Service Access Point configured to:

receive the user query; and

in response to receiving the user query, transmit the first data structure to the first server.

13. The reservation system of claim 12 wherein the Integration Service Access Point obtains a most up-to-date version of the passenger name record in response to receiving the first data structure.

14. The reservation system of claim 9 wherein the first server is communicatively coupled to each of the other servers of the plurality of servers though an Integration Service Access Point associated with the respective other servers.

15. The reservation system of claim 9 wherein the plurality of servers exchange information through a Service Oriented Architecture system.