

CLAIMS:

1. A communication system comprising:

a first network communication subsystem connected over a communication network to a second network communication subsystem;

the first network communication subsystem comprising:

a first processing circuitry configured to execute a first application and being operatively connected to a first database used for storing data related to the first application; a first database manager operatively connected to the first database; and a first network communication device;

the first database manager is configured, in response to an indication of a data update, made at the first application, to: update the database according to updated data corresponding to the data update;

the network communication device is configured to:

automatically generate, in response to the database update, a network data-update message comprising data indicative of the database update; and

transmit the data-update message over the communication network to the second network communication subsystem.

2. The communication system of claim 1, wherein the second network communication subsystem comprises:

a second processing circuitry executing a second application being operatively connected to a second database used for storing data related to the second application; a second database manager operatively connected to the second database; and a second network communication device;

the second network communication device is configured, responsive to receiving the network data-update message transmitted by the first network communication device, to extract the data from the network data-update message;

the second database manager is configured to:

update the second database with the extracted data; and

wherein the database update is made to the second database, this induces an update to the second application with data pertaining to the database update, thereby providing data input to the second application induced by the database update.

3. The communication system of any one of the preceding claims, wherein the first application and the second application are identical or operationally compatible.

4. The communication system of any one of the preceding claims, wherein the first application is operatively connected to one or more input interfaces, each interface configured for receiving data input from a respective data source.

5. The communication system of any one of the preceding claims, wherein the network data-update message further includes metadata identifying a respective database entry that has been updated in the first database.

6. The communication system of any one of the preceding claims, wherein the first application is indirectly connected for data transmission to the first network communication device via a database layer comprising the first database and the first database manager.

7. The communication system of any one of the preceding claims, wherein the first application is operatively connected to a database interface enabling communication of data between the first application and the first database manager.

8. The communication system of any one of the preceding claims, wherein the network is a wireless network.

9. The communication system of claim 8, wherein the network is an RF network.

10. The communication system of any one of the preceding claims, wherein the first network communication subsystem is mounted onboard a vehicle and the communication network is used for communication between vehicles in a fleet.

11. The communication system of claim 10 wherein the vehicle is an

aircraft and the fleet is an aerial vehicles fleet.

12. The communication system of any one of the preceding claims, wherein the first database manager is further configured to forward data indicative of the database update to the first network communication device.

13. The communication system of any one of the preceding claims, wherein the first database manager is configured to identify a difference between the updated data and corresponding old data stored in the first database before the update; and wherein the data indicative of the database update includes a re-constructible part of the data corresponding to the difference.

14. The communication system of any one of the preceding claims, wherein while the first application is in standby mode, the first processing circuitry is configured, in response to data updates at the first database, to update the first application.

15. A communication system comprising:

a first network communication subsystem connected over a communication network to a second network communication subsystem;

the first network communication subsystem and the second network communication subsystem are each divided into a plurality of layers including an application layer, a database layer, and a network layer; wherein transmission of data updates between the application layer and the network layer is performed through the database layer;

wherein, in the first network communication subsystem:

the application layer comprises: a first processing circuitry executing a first application; the database layer comprises a first database used for storing data related to the first application; the network layer comprises a network communication device;

the database layer is configured, in response to an indication of a data update, made at the application, to: update the database according to updated data corresponding to the data update;

the network communication device is configured, in response to the database

update, to:

automatically generate a network data-update message comprising data indicative of the database update; and

transmit the data-update message over the communication network to the second network communication subsystem;

wherein, in the second network communication subsystem:

the application layer comprises: a second processing circuitry executing a second application; the database layer comprises a second database used for storing data related to the second application; the network layer comprises a second network communication device;

the second network communication device is configured, responsive to receiving the network data-update message transmitted by the first network communication subsystem, to:

extract the data from the network data-update message;

update the second database with the extracted data; and

following the database update made to the second database, provide the data pertaining to the database update to the second application at the application layer, thereby providing data input to the second application induced by the database update.

16. A method of sharing data updates between network nodes connected over a communication network, the method comprising:

at a first network node, using at least one processing circuitry for:

executing a first application; the application being operatively connected to a first database used for storing data related to the first application;

in response to an indication of a data update, made at the first application, updating the database according to updated data corresponding to the data update;

generating a network data-update message comprising data indicative of the

database update, wherein the generation is automatically induced in response to the database update; and

transmitting the network data-update message over the communication network to at least one other network node connected over the communication network.

17. The method of claim 16 further comprising:

at a second network node connected to the communication network, using at least one processing circuitry for:

executing a second application, the second application being operatively connected to a second database used for storing data related to the second application;

receiving, via the communication network, the network data-update message;

extracting the data from the network data-update message;

executing a database update in the second database using the extracted data;

and

following the database update made to the second database, providing the data pertaining to the database update to the second application, wherein the providing of data to the second application is automatically induced in response to the database update.

18. The method of any one of claims 16 to 17, wherein the first application and the second application are identical or operationally compatible.

19. The method of any one of claims 16 to 18, wherein the network data-update message further includes metadata identifying a respective database entry that has been updated in the first database.

20. The method of any one of claims 16 to 19, wherein the network is a wireless network.

21. The method of claim 20, wherein the network is an RF network.

22. The method of any one of claims 16 to 21, wherein the first network node is mounted onboard a vehicle and the communication network is used for communication between vehicles in a fleet.

23. The method of claim 22 wherein the vehicle is an aircraft.

24. The method of any one of claims 16 to 23 further comprising: at the first network node, identifying a difference between the updated data and corresponding old data stored in the first database before the update; and wherein the data indicative of the database update includes a re-constructible part of the data corresponding to the difference.

25. The method of any one of claims 16 to 24 further comprising:

while the first application is in standby mode, updating the first application in response to data updates at the first database.

26. A non-transitory computer readable storage medium tangibly embodying a program of instructions that, when executed by a computer, cause the computer to perform a method of sharing data updates between network nodes connected over a communication network, the method comprising:

at a first network node, using at least one processing circuitry for:

executing a first application; the application being operatively connected to a first database used for storing data related to the first application;

in response to an indication of a data update that includes updated data, made at the first application, updating the database according to data received in the data update;

generating a network data-update message comprising data indicative of the database update, wherein the generation is automatically induced in response to the database update; and

transmitting the network data-update message over the communication network to at least one other network node connected over the communication network.

27. A non-transitory computer readable storage medium tangibly embodying a program of instructions that, when executed by a computer, cause the computer to perform a method of sharing data updates between network nodes connected over a communication network, the method comprising:

at a first network node connected to the communication network, using at least one processing circuitry for:

executing a first application, the first application being operatively connected to a first database used for storing data related to the first application;

receiving, via the communication network, a network data-update message indicative of a data update that occurred at a second application executed at a different network node;

extracting the data from the network data-update message;

executing a database update in the first database using the extracted data; and

following the database update made to the first database, providing the data pertaining to the database update to the first application, wherein the provision of data to the first application is automatically induced in response to the database update.

28. A first network communication subsystem connectible over a communication network to a second network communication subsystem;

the first network communication subsystem comprising:

a first processing circuitry executing a first application and being operatively connected to a first database used for storing data related to the first application; a first database manager operatively connected to the first database; and a first network communication device;

the first database manager is configured, in response to an indication of a data update that includes updated data, made at the first application, to: update the database according to the received data;

the network communication device is configured to:

automatically generate, in response to the database update, a network data-update message comprising data indicative of the database update; and

transmit the data-update message over the communication network to the second network communication subsystem.

29. The first network communication subsystem of claim 28, wherein the first network communication device is configured, responsive to receiving a network data-update message transmitted by the second network communication subsystem and indicative of a data update that occurred at a second application executed at the second network communication subsystem, to:

extract data from the network data-update message;

update the first database with the extracted data; and

following the database update made to the first database, provide the data pertaining to the database update to the first application, thereby performing updates to the first application induced by the database update.