

The claims defining the invention are as follows:

1. A method for data communication via a network, the method comprising the steps of:
configuring, on a first computer, a first sequence comprising an ordered plurality of first blocks associated with at least one segment; and
initialising the first blocks and undertaking data communication between the first computer and a second computer,
wherein each first block represents a configurable data communication function.
2. A method as claimed in claim 1, further comprising assigning one or more first blocks to a first segment and one or more other first blocks to a second segment; initialising the first blocks of the first segment and initialising the first blocks of the second segment; and subsequently causing a data communication between a first block of the first segment and a first block of the second segment.
3. A method as claimed in claim 2, wherein at least one segment is associated with data communication with an application running on the first computer.
4. A method as claimed in either claim 2 or claim 3, wherein at least one segment is associated with data communication with the second computer or another computer over a data network.
5. A method as claimed in any one of claims 1 to 4, further comprising:
configuring, on the second computer, a second sequence comprising an ordered plurality of second blocks associated with at least one segment, wherein each of one or more of the second blocks is uniquely associated with a first block; and
initialising the second blocks and undertaking data communication between the first computer and the second computer,
wherein each second block represents a configurable data communication function.
6. A method as claimed in claim 5, wherein at least one first block is an originating first block configured to interact with an application running on the first computer and/or wherein

at least one second block is an originating second block configured to interact with an application running on the second computer.

7. A method as claimed in claim 5 or claim 6, wherein initialising the first blocks of a segment and/or second blocks of a segment comprises traversing each separately in a first direction followed by traversing in an opposite second direction, wherein traversing comprises activating the communication functions associated with the first blocks and the second blocks according to activation rules.

8. A method as claimed in claim 7, wherein each first block and each second block is configurable as a top-down block type or a bottom-up block type, and an activation rule is such that only the communication functions associated with the first blocks and the second blocks of the top-down block type are activated when traversed in the first direction and such that only the communication functions associated with the first blocks and the second blocks of the bottom-up type are activated when traversed in the second direction.

9. A method as claimed in claim 5 or claim 6, wherein initialising the first blocks and second blocks comprises traversing each separately in a respective first direction only, wherein traversing comprises activating the communication functions associated with the first blocks and the second blocks according to activation rules.

10. A method as claimed in any one of claims 5 to 9, wherein at least one first block and/or at least one second block is configured as an encapsulating block type, such that the communication functions associated with said defined first blocks and second blocks undertake the data communication after initialisation.

11. A method as claimed in claim 10, wherein at least one first block and at least one second block is configured as a network protocol for communication with an IP network, for example a public network such as the Internet.

12. A method as claimed in any one of claims 5 to 11, wherein at least one first block and/or at least one second block is configured as a non-encapsulating block type, such that the

communication functions associated with said defined first blocks and second blocks do not take part in the data communication after initialisation.

13. A method as claimed in any one of claims 5 to 12, further comprising one or more first blocks and one or more second blocks associated with communication functions configured to communicate with at least one relay server.

14. A method as claimed in claim 13, wherein the first blocks of the first sequence and the second blocks of the second sequence communicate with the network via the first blocks and second blocks configured to communicate with the at least one relay server.

15. A method as claimed in any one of claims 5 to 14, further comprising one or more first blocks and one or more second blocks associated with communication functions configured to communicate with a connection server.

16. A method as claimed in claim 15, wherein at least one first block and at least one second block associated with communication functions configured to communicate with the connection server is only used for initialising the data communication.

17. A method as claimed in any one of claims 5 to 16, wherein initialisation of the first sequence is in response to receipt of an activation command and/or initialisation of the second sequence is in response to receipt of an activation command.

18. A method as claimed in any one of claims 5 to 17, wherein the data communication is between a first application running on the first computer and a second application running on the second computer.

19. A method for creating data communications between a plurality of applications, comprising the step of implementing the method of claim 18 for each of one or more applications running on a first computer and one or more applications running on a second computer.

20. A system comprising a first computer,
wherein the first computer is configured to:
generate a first sequence comprising an ordered plurality of first blocks
associated with at least one segment;
initialise the first blocks according to the first sequence; and
undertake data communicate with a second computer according to the
initialising the first blocks,
wherein each block represents a configurable data communication function.
21. A system as claimed in claim 20, the first computer further configured to: assign one
or more first blocks to a first segment and one or more other first blocks to a second segment;
initialise the first blocks of the first segment and initialise the first blocks of the second
segment; and subsequently cause a data communication between a first block of the first
segment and a first block of the second segment.
22. A system as claimed in claim 21, wherein at least one segment is associated with data
communication with an application running on the first computer.
23. A system as claimed in either claim 21 or claim 22, wherein at least one segment is
associated with data communication with the second computer or another computer over a
data network.
24. A system as claimed in any one of claims 20 to 23, further comprising the second
computer which is configured to:
generate a second sequence comprising an ordered plurality of second blocks
associated with at least one segment;
initialise the second blocks according to the second sequence; and
undertake data communicate with the first computer according to the initialised the
second blocks, wherein each of at least one second block is uniquely associated with a first
block.

25. A system as claimed in claim 24, wherein at least one first block is an originating first block configured to interact with an application running on the first computer and/or wherein at least one second block is an originating second block configured to interact with an application running on the second computer.

26. A system as claimed in claim 24 or claim 25, wherein:
the first computer is configured, when initialising the first blocks, to traverse the first blocks of a segment in a first direction followed by traversing in an opposite second direction;
and
the second computer is configured, when initialising the second blocks, to traverse the second blocks of a segment in a first direction followed by traversing in an opposite second direction,
wherein traversing comprises activating the communication functions associated with the first blocks and the second blocks according to activation rules.

27. A system as claimed in claim 26, wherein each first block and each second block is configurable as a top-down block type or a bottom-up block type, and an activation rule is such that only the communication functions associated with the first blocks and the second blocks of the top-down block type are activated when traversed in the first direction and such that only the communication functions associated with the first blocks and the second blocks of the bottom-up type are activated when traversed in the second direction.

28. A system as claimed in 24 or 25, wherein:
the first computer is configured, when initialising the first blocks, to traverse the first blocks of a segment in a first direction only; and
the second computer is configured, when initialising the second blocks, to traverse the second blocks of a segment in a first direction only,
wherein traversing comprises activating the communication functions associated with the first blocks and the second blocks according to activation rules.

29. A system as claimed in any one of claims 24 to 27, wherein at least one first block and/or at least one second block is configured as an encapsulating block type, such that that

the communication functions associated with said defined first blocks and second blocks cause their respective computers to undertake the data communication after initialisation.

30. A system as claimed in claim 29, wherein at least one first block and at least one second block is configured as a network protocol for communication with an IP network, for example a public network such as the Internet.

31. A system as claimed in any one of claims 24 to 30, wherein at least one first block and/or at least one second block is configured as a non-encapsulating block type, such that the communication functions associated with said defined first blocks and second blocks do not take part in the data communication after initialisation.

32. A system as claimed in any one of claims 24 to 31, further comprising one or more first blocks and one or more second blocks associated with communication functions configured to communicate with at least one relay server.

33. A system as claimed in claim 32, wherein the first blocks of the first sequence and the second blocks of the second sequence communicate with the network via the first blocks and second blocks configured to communicate with the at least one relay server.

34. A system as claimed in claim 32 or claim 33, comprising the at least one relay server.

35. A system as claimed in any one of claims 24 to 34, further comprising one or more first blocks and one or more second blocks associated with communication functions configured to communicate with a connection server.

36. A system as claimed in claim 35, wherein at least one first block and at least one second block associated with communication functions configured to communicate with the connection server is only used for initialising the data communication.

37. A system as claimed in claim 35 or claim 36, comprising the connection server.

38. A system as claimed in any one of claims 24 to 37, wherein initialisation of the first sequence is in response to receipt of an activation command and/or initialisation of the second sequence is in response to receipt of an activation command.

39. A system a claimed in any one of claims 24 to 38, wherein the data communication is between a first application running on the first computer and a second application running on the second computer.

40. A computer comprising a computer program configured to cause the computer to implement the method of any one of claims 1 to 4.