The invention claimed is:

1. A system for demand-driven, flexible-topology and intelligently-enabled communication between one or more network-enabled client devices and one or more network-enabled application servers over multiple segments of the Internet concurrently; the system comprising:

one or more gateway devices, wherein the gateway devices each comprise at least two simultaneously-operating Internet access devices and enable each of the client devices to transmit and receive data to and from the application servers through at least two Internet connections simultaneously by means of connection-selection and network data transmission, reception, buffering, validation, and synchronization facilities being referred to as a connection-merging protocol, the merger of a gateway device's multiple Internet connections being referred to as a macro connection;

one or more virtual relay machines, wherein the relay machines each implement the connection-merging protocol, and act as proxies between the client devices and the application servers; and

one virtual coordination machine operating on the Internet, wherein the virtual coordination machine aggregates system status metrics, and launches, configures and terminates relay machines according to said metrics, and instructs the gateway devices as to which of the relay machines to proxy Internet traffic originating from the client devices through.

2. The system of claim 1, wherein the client devices are programmed to use at least one of the relay machines as a proxy.

3. The system of claim 1, wherein the gateway devices are physically and/or functionally enhanced to provide functionality attributed to the client devices.

4. The system of claim 1, wherein the Internet access devices are mobile broadband access devices.

5. The system of claim 1, wherein at least one of the Internet access devices utilizes a non-mobile broadband Internet access technology.

6. The system of claim 4, wherein the mobile broadband access devices are programmed to utilize distinct frequency band channels whenever possible.

7. The system of claim 1, wherein the gateway devices provide direct and/or routed, wired and/or wireless Internet connectivity to the client devices.

8. The system of claim 1, wherein the gateway devices are portable and battery powered.

9. The system of claim 1, wherein the available upstream and downstream bandwidths between each of the relay machines and the Internet are each at least as high as the summed downstream and upstream bandwidths of the macro connections of the gateway devices using said relay machine as their proxy.

10. The system of claim 1, wherein the relay machines log the Internet traffic they relay.

11. The system of claim 1, wherein the relay machines are physical machines.

12. The system of claim 1, wherein the coordination machine is a physical machine.

13. The system of claim 1, wherein the functions of the coordination machine are distributed onto at least two machines.

14. The system of claim 1, wherein the functions of the coordination machine are implemented as a peer-to-peer, decentralized, and/or distributed computer program.

15. A method for demand-driven, flexible-topology and intelligently-enabled communication between one or more network-enabled client devices and one or more network-enabled application servers over multiple segments of the Internet concurrently; where said communication transits through multiple networking equipment including gateway devices and relay machines; where said relay machines are assigned to said gateway devices by a coordination machine; the method comprising the steps of:

making network requests directed at at least one of the application servers, using the client devices;

intercepting the network requests, modifying them to support connection-selection and network data transmission, reception, buffering, validation, and synchronization facilities referred to as a connection-merging protocol, and transmitting the modified network requests for proxying to at least one of the relay machines over at least two Internet connections per gateway device, using the gateway devices;

synchronizing and reassembling the modified network requests received over the Internet connections, recreating the original network requests, and transmitting the original network requests to the application servers, using the relay machines;

receiving the network requests and transmitting network responses back to the relay machines, using the application servers;

receiving the network responses from the application servers, modifying them to support the connection merging protocol, and transmitting modified network responses to the gateway devices over the Internet connections, using the relay machines;

synchronizing and reassembling the modified network responses received over the Internet connections, recreating the original network responses, and transmitting the original network responses to the client devices, using the gateway devices; and

receiving the network responses, using the client devices.

16. The method of claim 15, wherein the client devices explicitly proxy their traffic through the relay machines.

17. The method of claim 15, wherein the network requests to the application servers originate from the gateway devices, and the network responses from said application servers are intended for said gateway devices.

18. The method of claim 15, further comprising, when the relay machines are under-utilized, the steps of the coordination machine:

initiating the termination of at least one of the relay machines, being referred to as to-be-terminated relay machines;

ensuring that the gateway devices are instructed to "migrate" away from the to-be-terminated relay machines; and

shutting down the to-be-terminated relay machines once the gateway devices have ceased using the to-be-terminated relay machines as proxies.

19. The method of claim 15, further comprising, when the relay machines become over-utilized, the steps of the coordination machine:

launching at least one new relay machine, being referred to as the newly-launched relay machines; and

instructing a subset of the gateway devices to migrate to the newly-launched relay machines.

20. The method of claim 15, wherein the coordination machine dynamically scales the performance specifications of the relay machines.

21. The method of claim 15, further comprising the steps of:

querying the coordination machine for which of the relay machines to use as a proxy, using the gateway devices; and

instructing the gateway devices as to which of the relay machines to proxy through, using the coordination machine.

22. The method of claim 15, further comprising the steps of the gateway devices:

periodically measuring at least one property of their Internet connections; and

terminating and scheduling the relaunch of certain of their Internet connections based on said measurements.

23. The method of claim 15, further comprising the steps of the relay machines:

periodically measuring their network and computational load; and

reporting said measurements to the coordination machine.