CLAIMS

What is claimed is:

1. An apparatus comprising:

a web-enabled user interface resident on a server that is integrated with an Ethernet exchange switch fabric and configured to automate an end-to-end process of interconnecting private Ethernet networks of two or more carriers via one or more virtual circuits established between two or more ports of the switch fabric, the web-enabled user interface configured to present web pages and templates to a browser application on a client machine to solicit information from participating carriers, which is extracted from the web pages and templates and stored in an associated database in order to enable the participating carriers to 1) publish network services and capabilities offered, 2) search for network services and capabilities offered by each carrier, 3) submit requests for quotes (RFQs) and responses to the RFQs, 4) initiate a provisioning of the virtual circuits between their private Ethernet networks, and 5) monitor and troubleshoot the virtual circuits as well as their own private Ethernet networks from the web-enabled user interface.

2. The apparatus of claim 1, wherein navigation of the web-enabled user interface by a representative in the group is personalized based on one or more of the assigned role and the access privileges granted to that representative,

wherein each of the participating carriers is to assign a representative as an administrator having administrator role, wherein the administrator is authorized to assign other roles to a group of representatives and to grant rights and permissions to these representatives.

3. The apparatus of claim 1, wherein the templates are organized to solicit information from the participating carriers for a specific topic or purpose including a first template on network capabilities and characteristics, a second template on user account information, wherein the information from the participating carriers is extracted from the templates and stored in the database for repeated uses by one or more of the web-enabled user interface and the integrated switch fabric, and wherein the templates solicit information from the participating carriers by many mechanisms including manual entry, selection of possible entries presented in a pull down type menu, selection of existing information, and auto-populating fields of the templates, and thus once data is entered into a given template and extracted from that template into a database, then that data is reused whenever potentially needed again, and wherein a first routine is coded to automatically extract the information from the templates and store the information in the database.

4. The apparatus of claim 3, wherein the templates include a carrier qualification template to allow that carrier to qualify and a carrier profile template to list their information, services offered as well as network capabilities.

5. The apparatus of claim 3, wherein the information solicited from the templates includes a participating carrier's lit building information that is subsequently stored in a searchable database to be discovered by other participating carriers using a search functionality built into the web portal based on one or more of 1) a street address, 2) a name of a metropolitan area or of a city and 3) entry of a zip code or other similar general geographical identifying conveyed information.

6. The apparatus of claim 5, wherein one or more of the representatives of the participating carriers is authorized to place restrictions on how their lit building information can be viewed.

7. The apparatus of claim 1, wherein the roles assigned to the representatives in the group include roles that are authorized to search for services, submit the RFQ and responses to the RFQs, provision the virtual circuits between the private Ethernet networks, and monitor and troubleshoot the virtual circuits.

8. The apparatus of claim 1, wherein the web-enabled user interface is associated with a website on the world wide web and comprising a homepage having a plurality of options to enable the administrator and the group of representatives to perform actions on behalf of their participating carriers, and wherein the options and web pages associated with the homepage are selectively presented to each of the representatives in the group based on one or more of their assigned roles and granted rights and permissions.

9. The apparatus of claim 8, wherein the administrator assigns roles and grants rights and permissions to the representatives in the group by inviting them to become a member of the web site, and wherein each of the representatives in the group is required to provide own credential information without involving the administrator, and wherein the rights and permissions are granted by the administrator subsequent to each of the representatives having established their own credential information with the web site.

10. The apparatus of claim 8, wherein the homepage comprises a search option configured to enable one or more representatives of the participating carriers to search for lit buildings of all the participating carriers based on one or more of 1) a street address, 2) a name of a metropolitan area or of a city and 3) a zip code or other similar general geographical identifying conveyed information, where the Ethernet exchange switch fabric is a multiple port switch fabric, with one or more

Ethernet routers and Ethernet switches for two or more Ethernet carriers, integrated with the web-enabled user interface resident on the server.

11. The apparatus of claim 10, wherein the homepage comprises a side bar configured to display updated information related to one or more of RFQ, bids, participating carriers, services, and lit buildings.

12. The apparatus of claim 1, wherein the switch fabric is configured to perform translation services in between two private Ethernet networks independent of the proprietary protocol used in either private Ethernet network, wherein the switch fabric includes an application coded to act as an agent to convert back and forth between various protocols, bandwidth requirements among the private Ethernet networks of the participating carriers.

13. The apparatus of claim 12, wherein the web-enabled user interface is configured to provide application programming interfaces (API's) 1) to enable the participating carriers to push information regarding their network from their database across the API in a standard way to the web-enabled user interface or 2) to enable the web-enabled user interface to pull information regarding a participating carrier's network from their database across the API in a standard way, wherein the API's are configured to enable the participating carriers 1) to

view information the participating carriers' applications on the web-enabled user interface ,and 2) to store the information in their own database, which is then replicated in the database associated with the Ethernet exchange, and eliminate a need to manually map out a migration of the data in particular fields in the participating carriers' database to the fields in the database associated with the Ethernet exchange.

14. The apparatus of claim 13, wherein the API's include participating carriers' lit building API, pricing and quoting API, and Network Operational Control (NOC) API.

15. The apparatus of claim 1, wherein the switch fabric and the web-enabled user interface are carrier-neutral, wherein the web-enabled user interface is configured to allow discovery of lit buildings by capacity, price, service level, and buildings that have Ethernet services, wherein the discovery is enabled by one or more templates, and wherein information provided by the participating carriers via the templates is stored and aggregated to searchable and publishable.

16. A method comprising:

enabling a plurality of carriers to participate in an Ethernet exchange service that comprises a web-enabled user interface and an integrated switch fabric having one or more Ethernet exchangers, the plurality of carriers having their private Ethernet networks connected to ports of the Ethernet exchanger, the Ethernet exchanger configured to provision virtual circuits interconnecting the private Ethernet networks;

enabling each of the plurality of carriers to assign roles and rights and permissions to an administrator and to a group of representatives to act on behalf of each of the carriers;

enabling the administrator and each of the representatives in the group to have a different experiences using the web-enabled user interface based on one or more of their roles and rights and permissions; and

enabling the administrator and one or more of the representatives in the group to enter lit building information on behalf of their carrier using one or more templates, wherein the lit building information is to be stored in a searchable database for discovery by other carriers.

17. The method of claim 16, further comprising:

enabling the administrator and one or more of the representatives in the group to submit request for quotes, respond to request for quotes, placing orders for the virtual circuits, and monitor and troubleshoot issues related to the virtual circuits.

18. The method of claim 17, wherein the administrator and the representatives in the group performs tasks on behalf of their carriers using web pages associated with the web-enabled user interface, wherein the web pages include a home page having options to enable searching for lit buildings based on street addresses and metropolitan areas or cities, and wherein the homepage includes options to submit the request for quotes and respond to the request for quotes.

19. A system comprising:

means for providing a web-enabled user interface integrated with a switch fabric and configured to automate an end-to-end process of interconnecting private Ethernet networks of carriers via one or more virtual circuits established by one or more Ethernet exchangers of the switch fabric, the thernet exchanger configured to connect the private Ethernet networks of participating carriers via their own ports;

means for each of the participating carriers is to assign a representative as an administrator having administrator role, wherein the administrator is authorized to assign other roles to a group of representatives and to grant rights and permissions to the representatives in the group; and

means for configuring the web-enabled user interface to present web pages and templates to solicit information from the participating carriers, to enable the participating carriers to submit requests for quotes (RFQs) and responses to the RFQs, to provision the virtual circuits between their private Ethernet networks, and to monitor and troubleshoot the virtual circuits, wherein the web-enabled user interface and the integrated switch fabric are not biased to any of the participating carriers.

20. The apparatus of claim 19, further comprising means for configuring the web-enabled user interface such that navigation by a representative in the group is personalized based on one or more of the assigned role and the access privileges granted to that representative.

What is claimed is:

1. A method for an Ethernet exchange service implementing a physical integrated switch fabric, comprising: enabling a plurality of carriers to participate in the Ethernet exchange service that comprises a web-enabled user interface and the physical integrated switch fabric having one or more Ethernet exchangers, the plurality of carriers having their private Ethernet networks connected to ports of the one or more Ethernet exchangers, the one or more Ethernet exchangers are configured to provision virtual circuits interconnecting the private Ethernet networks; enabling each of the plurality of carriers to assign roles and rights and permissions to an administrator and to a group of representatives to act on behalf of each of the carriers; enabling the administrator and each of the representatives in the group to have a different experience using the web-enabled user interface based on one or more of their assigned roles, rights, and permissions; and enabling the administrator and one or more of the representatives in the group to enter lit building information on behalf of their carrier using one or more templates, wherein the lit building information is to be stored in a searchable database for discovery by other carriers, where portions of the Ethernet exchange service including the steps of the method are implemented by software scripted routines, hardware logic, and any combination of both, and any software is tangibly stored on a non-transitory machine-readable medium.

2. The method of claim 1, further comprising: enabling the administrator and the one or more representatives in the group of representatives to submit request for quotes, respond to the request for quotes, placing orders for the virtual circuits, and monitor and troubleshoot issues related to the virtual circuits.

3. The method of claim 2, wherein the administrator and the representatives in the group performs tasks on behalf of their carriers using web pages associated with the web-enabled user interface, wherein the web pages include a home page having options to enable searching for lit buildings based on street addresses and metropolitan areas or cities, and wherein the homepage includes options to submit the request for quotes and respond to the request for quotes.

4. The method of claim 3, wherein the templates include a carrier qualification template to allow that carrier to qualify and a carrier profile template to list their information, services offered as well as network capabilities.

5. The method of claim 1, wherein the roles assigned to the one or more representatives in the group include roles that are authorized to search for services, submit a request for quote and responses to the request for quotes, provision the virtual circuits between the private Ethernet networks, and monitor and troubleshoot the virtual circuits.

6. The method of claim 1, further comprising associating the web-enabled user interface with a website on the world wide web with a homepage having a plurality of options to enable the administrator and the group of representatives to perform actions on behalf of their participating carriers, and wherein the options and web pages associated with the homepage are selectively presented to each of the representatives in the group based on their one or more assigned roles and granted rights and permissions.

7. The method of claim 6, further comprising the assigned roles and the granted rights and permissions to the representatives in the group by inviting them to become a member of the web site, and requiring each of the representatives in the group to provide own credential information without involving the administrator, and wherein the rights and permissions are granted by the administrator subsequent to each of the representatives having established their own credential information with the web site.

8. The method of claim 1, further comprising performing translation services in between two private Ethernet networks independent of the proprietary protocol used in either private Ethernet network, wherein the switch fabric includes an application coded to act as an agent to convert back and forth between various protocols, bandwidth requirements among the private Ethernet networks of the participating carriers.

9. The method of claim 8, further comprising providing application programming interfaces (API's) 1) to enable the participating carriers to push information regarding their private Ethernet network from their searchable database across the API in a standard way to the web-enabled user interface or 2) to enable the web-enabled user interface to pull the information regarding a participating carrier's network from their searchable database across the API in a standard way, wherein the API's are configured to enable the participating carriers 1) to view the information the participating carriers' applications on the web-enabled user interface, and 2) to store the information in their own database, which is then replicated in the searchable database associated with the Ethernet exchange service, and eliminate a need to manually map out a migration of data in particular fields in a participating carriers' database to the particular fields in the searchable database associated with the Ethernet exchanger.

10. The method of claim 1, wherein the switch fabric and the web-enabled user interface are carrier-neutral, wherein the web-enabled user interface is configured to allow the discovery of lit buildings by capacity, price, service level, and buildings that have Ethernet services, wherein the discovery is enabled by the one or more templates, and wherein information provided by participating carriers via the one or more templates is stored and aggregated to be searchable and publishable.

11. A non-transitory machine-readable medium storing instructions, which when executed by a machine, are configured to cause the machine to perform the operations in claim 1.

12. A system for enabling a plurality of carriers to participate in an Ethernet exchange service, comprising: a web-enabled user interface and a physical integrated switch fabric having one or more Ethernet exchangers, the plurality of carriers having their private Ethernet networks connected to ports of the one or more Ethernet exchangers, where they are configured to provision virtual circuits interconnecting the private Ethernet networks, wherein the physical integrated switch fabric is configured to enable each of the plurality of carriers to assign roles and rights and permissions to an administrator and to a group of representatives to act on behalf of each of the plurality of carriers, wherein the web-enabled user interface is configured to provide a different experience to the administrator and each of the representatives in the group based on one or more of their roles and rights and permissions, and one or more templates from the web-enabled user interface configured to permit the administrator and one or more of the representatives in the group to enter lit building information on behalf of their carrier, wherein the lit building information is stored in a searchable database for discovery by other carriers, where portions of the system including the web-enabled user interface and the physical integrated switch fabric are implemented by software scripted routines, hardware logic, and any combination of both, and any software is tangibly stored on a non-transitory machine-readable medium.

13. The system of claim 12, wherein the web-enabled user interface is configured to enable the administrator and the one or more representatives in the group to submit request for quotes, respond to the request for quotes, place orders for the virtual circuits, and monitor and troubleshoot issues related to the virtual circuits.

14. The system of claim 13, wherein the administrator and the representatives in the group performs tasks on behalf of their carriers using web pages associated with the web-enabled user interface,

wherein the web pages include a home page having options to enable searching for lit buildings based on street addresses and metropolitan areas or cities, and wherein the homepage includes options to submit the request for quotes and respond to the request for quotes.

15. The system of claim 14, wherein the templates include a carrier qualification template to allow that carrier to qualify and a carrier profile template to list their information, services offered as well as network capabilities.

16. The system of claim 12, wherein the roles assigned to the representatives in the group include roles that are authorized to search for services, submit a request for quote and responses to the request for quotes, provision the virtual circuits between the private Ethernet networks, and monitor and troubleshoot the virtual circuits.

17. The system of claim 12, wherein the web-enabled user interface is associated with a website on the world wide web and comprises a homepage having a plurality of options to enable the administrator and the group of representatives to perform actions on behalf of their participating carriers, and wherein options and web pages associated with the homepage are selectively presented to each of the one or more representatives in the group based on the one or more of their assigned roles and the granted rights and permissions.

18. The system of claim 12, wherein the switch fabric is configured to perform translation services in between two private Ethernet networks independent of the proprietary protocol used in either private Ethernet network, wherein the switch fabric includes an application coded to act as an agent to convert back and forth between various protocols, bandwidth requirements among the private Ethernet networks of the participating carriers.

19. The system of claim 18, wherein the web-enabled user interface is configured to provide application programming interfaces (API's) 1) to enable the participating carriers to push information regarding their network from their database across the API in a standard way to the web-enabled user interface or 2) to enable the web-enabled user interface to pull information regarding a participating carrier's network from their database across the API in a standard way, wherein the API's are configured to enable the participating carriers 1) to view the information from participating carriers' applications on the web-enabled user interface ,and 2) to store the information in their own said database, which is then replicated in the database associated with the Ethernet exchange service, and eliminate a need to manually map out a migration of data in particular fields in a participating carriers' database to the particular fields in the database associated with the Ethernet exchange service.

20. The system of claim 12, wherein the physical integrated switch fabric and the web-enabled user interface are carrier-neutral, wherein the web-enabled user interface is configured to allow discovery of lit buildings by capacity, price, service level, and buildings that have Ethernet services, wherein the discovery is enabled by the one or more templates, and wherein information provided by the participating carriers via the one or more templates is stored and aggregated to be searchable and publishable.