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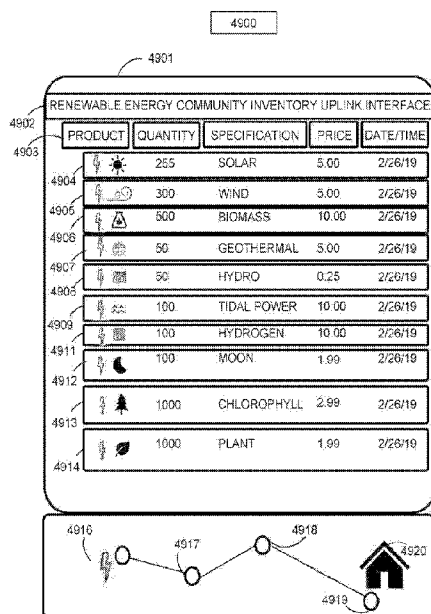


FIG. 49

(57) Abstract: Implementations of various methods and systems to transform renewable energy units with two waypoints or a destination waypoint or a series sequence of waypoints into community objects which have associated price - time priority queues for transformed renewable energy units. The present disclosed invention relates to combining the concepts of objected oriented programming, market price queues, renewable energy, navigation systems and social networking and transmission as a fungible asset class or renewable energy linked to transmission as an open market.

## **RENEWABLE ENERGY COMMUNITY OBJECTS WITH PRICE-TIME PRIORITY QUEUES FOR TRANSFORMED RENEWABLE ENERGY UNITS**

### **CROSS-REFERENCE TO RELATED APPLICATIONS**

**[0001]** This application is a PCT filing of and claims priority to Patent Application Number US 16/357241 and filed 2019 March 18, the entire disclosure of which is herein incorporated by reference.

### **RELATED APPLICATIONS**

**[0002]** this application is A CONTINUATION-IN-PART to EACH OF the following applications: (1) U.S. patent application ser. no 15/266,326, "implementations of various methods to create economic incentives to directly link users of a social network or social network reality game to actual projects and people within a charity or developing world area," filed september 15, 2016; (2) U.S. Patent application ser. no. 15/484,059, "blood and saliva biomarker optimized food consumption and delivery with artificial intelligence," filed april 10, 2017; (3) U.S. patent application ser. no 15/877,393, "electronic forward market exchange for transmission seats and capacity in transmission spaces and vehicles," filed january 23, 2018; (4) U.S. patent application ser. no 16/167,525, "multi-layered nodal network topology for a multi-modal secure forward market auction in transmission capacity and space," filed october 22, 2018; (5) U.S. patent application ser. no 16/183,647 "financial swap payment structure method and system on transmission capacity unit assets," filed november 7, 2018; (6) U.S. patent application ser. no 16/239,485, "market layer price queue routing for multi-layered nodal network topology for a multi-modal secure forward market auction in transmission capacity and space," filed january 3, 2019; (7) U.S. patent application ser. no 16/242,967, "price based navigation," filed january 8, 2019; (8) U.S. Patent application ser. no 16/242,981, "strategy game layer over price based navigation," filed january 8, 2019; (9) U.S. PATENT APPLICATION SER. NO 16/257,032 "SECURITIZATION OF TRANSMISSION UNITS," FILED JANUARY 24, 2019; (10) U.S. Patent application ser. no 16/258,658 "navigation routes as community object virtual hub sequences to which users may subscribe", filed january 27, 2019; (11) u.s. patent application ser. no 16/274,490 "ROUTE COMMUNITY OBJECTS WITH PRICE TIME PRIORITY QUEUES FOR TRANSFORMED TRANSMISSION UNITS", FILED FEBRUARY 13, 2019; (12) u.s. patent application ser. no 16/290,278, FILED MARCH 1, 2019; AND (13) u.s. patent application ser. no 16/293,712, FILED MARCH 6, 2019. All of these applications are incorporated by reference herein in their entirety.

### **BACKGROUND OF THE INVENTION**

#### **Field of the Invention**

**[0003]** Implementations of various methods and systems to transform renewable energy units into objects with geolocation transmission attributes to which a user may subscribe, and which have associated price-time priority queues for transformed renewable energy units, are disclosed herein. The present disclosed invention relates to combining the concepts of objected oriented

programming, market price-time priority queues, renewable energy, navigation systems, social networking, localized renewable energy units as a fungible asset class, or localized renewable energy units as an open market. Electricity and energy markets have grown tremendously over the past 50 years. However, energy markets are currently undergoing a renewable resource revolution where individual homes are able to install renewable energy generation at their home rather than purchasing electricity from the grid from the utility monopoly. The resulting fragmentation of power generation will allow for new methods of buying and selling power that were never possible before the disclosed invention. Just as farmers markets have allowed for a person to actually meet the farmer who made their food, online virtual renewable energy communities may allow for a homeowner to sell their excess power to a virtual community grid or buy their energy from a virtual community grid. Renewable energy communities may evolve from the disclosed invention that allow renewable energy users and consumers to bypass monopoly energy utilities who do not prioritize renewable energy. The community aspect of the disclosed invention, as well as the price-time priority queue and open market element, may provide unparalleled choice in users being able to bid or offer power with actual geolocation information for where the power came from and how the power was generated. Current utilities do provide green power programs, but deficiencies exist because the sources of power are nebulous, renewable energy is not prioritized and they do not incorporate the forthcoming wave of homeowner generated fragmented power that will come to the grid from homeowners who produce excess power from renewable resources. The disclosed method of renewable energy unit communities with associated price-time priority queues allows for buying and selling of renewable energy from local communities in a way that currently is not possible. Market deficiencies exist because there exists no such method or system to efficiently make the required search, geolocation and purchase transaction transformations necessary to complete such a demand or request in a stand-alone format or a community renewable energy format. The disclosed novel invention triangulates renewable energy unit data transformations that combine the concepts of object oriented programming, market price-time priority queues, renewable energy markets, navigation systems, transmission systems, social networking, and localized renewable energy units as fungible asset classes that reduce transaction costs of the renewable energy product and transmission costs in such a way that would allow communities and neighbors to effectively transact renewable energy by dramatically lowering transaction costs. The transmission route or path between two waypoints or generation and consumption points in energy markets is generally described as transmission on power lines run by utilities. The present disclosed invention transforms these transmission routes with one destination waypoint or two or more waypoints into objects, which may then be further transformed into communities based on renewable energy units. Prior to the disclosed invention, monopoly utilities generally govern power production by type of energy. Even worse, high transaction costs have allowed oligopolies to form in such renewable energy areas that charge unnecessarily high prices for items that will only be used very infrequently. In disparate fields of study, more recently, the concept of virtual communities has developed with examples that may range from a social network topic hashtag that would form a virtual subject community around a

topic, such as #SuperBowl, #MartinLutherKing, #baby, or many other topics. Theglobe.com, MySpace, Facebook, or many others have also developed virtual communities around many topics but remain ineffective towards areas that require more organized markets and technologies to lower transaction costs. Waze has contributed to making a virtual community of drivers that help identify road hazards, traffic accidents, gas prices, map chat, map issues, lane closures, or many other features to outsmart traffic together as a community. Waze has even attempted to combine carpooling features in their carpooling application and associated intellectual property. Methods and systems of power systems do little more than produce power and are deficient in the areas of transforming transmission objects or units into fungible commodities, transforming transmission routes into communities, or providing data transformations to form price-time priority queues around transformed transmission units. No companies or prior art have attempted to make transactional social networks for renewable energy based units such as wind, solar, biomass, geothermal, hydro, tidal power, hydrogen, moon, chlorophyll, plant or other renewable energy sources. No prior art or technology has been able to combine the concepts of transmission communities with renewable energy communities in a way that lowers transaction costs. Yet with all these innovations in other fields of study, many method and system deficiencies in renewable energy markets exist due to no organized methods to efficiently renewable energy. While former systems may have been incrementally useful, they do not place a cost or an economic value to the renewable energy production methods, which result in large transaction costs to society or spending money on items that provide an overall low utility or single use utility or unsustainable utility. Further, no invention has previously existed that transforms a renewable energy unit with geolocation attributes into a community object which may form the basis of a social network and which includes a marketplace with a time-price priority queue for the transformed renewable energy units. We reason that the invention of a transformed renewable energy unit community platform between waypoints or a single waypoint destination has never existed because people reason they are isolated in neighborhoods or communities, and there is no mechanism that pools all the local renewable energy owners on a given transmission route between two waypoints or a relevant single waypoint destination where a consumer may have buying interest. In our research, we have seen elementary forms of electronic bulletin boards for renewable energy products on Craigslist or Facebook, but these systems are disorganized, they lack transmission capability, they lack geolocation instructions, they do not provide firm service and they do not have quality standards or market structure. Further, GPS systems and transmission networks are weak or non-existent on platforms such as Facebook or Craigslist. Homeowners remain captive to very inefficient high utilities which serve a very limited purpose and sometimes only provide a high price for a renewable energy resource. After considering the effects of non-substitutability of traditional renewable energy markets and transport mechanisms, the high quality renewable energy activity is actually not economic for most people because of the time problems due to high transaction costs and lack of platform systems that would lower transaction costs. While U.S. patent application Ser. No 15/877,393, "Electronic Forward Market Exchange for Transmission Seats and Capacity in Transmission Spaces and Vehicles," filed

January 23, 2018, solves the problem of transport and renewable energy substitutability by completing substantial data transformations for transmission units by creating a method for a new data transformation and entirely new asset of a transformed transportation units, which makes transportation units fully fungible or exchangeable. Further deficiencies may exist because the transmission units are not linked to renewable energy units and the lack of linkage makes transaction costs uneconomic for most urban residents to have access to high quality renewable energy resources that are convenient from a geolocation perspective. Further, the purpose of such a renewable energy community may also be lacking because there is potentially no economic benefit, as the pools are small or the pools don't match renewable energy owners with urban customers coupled with transmission routes. Renewable energy markets have also lacked network technology development to lower transaction costs. While transmission companies and energy markets have been deregulated for a number of years, the energy marketers serve retail customers as middlemen. The deregulation has allowed for price innovation to occur when users sign up for a power provider, but these innovations have been completely devoid of allowing home owners to have market access to the power grid or for retail customers to be able to transact with one another directly if one home owner has excess retail renewable energy generation capability. Transmission network companies have created systems which allow a given company to set the prices of transmission capacity rather than an open transparent marketplace. Separately, renewable energy systems and transmission systems are completely unlinked, which creates non-transparent terms for buyers and sellers of renewable energy units. Separately, but related to transmission of power, transmission network companies even provide similar customers with pricing that may vary by 30% from the same pick-up and delivery points at the same time of request, which is necessarily price discrimination and is illegal. There is no way for customers of these transmission network companies to see if they are being offered the same price as a mobile smart phone unit across the street. While wholesale energy markets have used price-time priority queues, these systems have not been available to the general consumer and the end user consumer has limited or no choice on how the power was made and certainly no ability to have a community format to make renewable power transactions. Transmission companies know these deficiencies and openly exploit people, because there is no mechanism to ensure that the price one user pays for one good is the same as another person on the exact same transmission waypoint combination at the exact same time. The current algorithms of transmission network companies are not based on fair and open pricing mechanisms, and there is no community to enforce accountability around the pricing structures. We could not imagine going to a grocery store and seeing two customers with the same cup of coffee be charged two different prices for the same cup of coffee because of the way they look, the fact that their smart phone has a different origin location, or a plurality of other factors. These deficiencies in the market are not only illegal from a Federal Trade Commission perspective, but the government does not have the resources to police such illegal activity. The disclosed invention eliminates price discrimination, among many other deficiencies, because the renewable energy unit virtual hub community data transformations, as well as combined renewable energy and transmission unit market structure data

transformations, allow for complete transparency for similar commodity services (Federal Trade Commission, "Price Discrimination: Robinson-Patman Violations.", <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/price-discrimination-robinson-patman>).

**[0004]** In the development of the method and system of transforming a series of renewable energy units near transmission waypoint(s) into virtual communities, high quality renewable energy markets may then become virtual communities where accountability, transparency and economic markets may form in local communities. Current methods and systems leave most homeowners or users of renewable energy resources isolated from their community because there is no method or mechanism to efficiently tap into a transmission network and certainly no linkage to renewable energy markets. Prior art does not transform renewable energy unit data structures or sequences of transmission waypoint combinations into virtual communities. Accordingly, in a very real way, neighbors make a community, all the people on a given transmission route are a community, but there is no renewable energy linkage, structure, method or system to allow the communities to benefit from each other or their renewable energy resources. The implementation of the disclosed method and system creates a renewable energy unit community on a given destination waypoint or series of transmission waypoints, which is further transformed into an object to which people may subscribe, friend, follow, comment, or post. Using U.S. patent application Ser. No 15/877,393, "Electronic Forward Market Exchange for Transmission Seats and Capacity in Transmission Spaces and Vehicles," filed January 23, 2018, they may transact on an open and transparent renewable energy transmission security market, which forces the lowest cost, transparent and non-price discriminatory solution to dominate the market, since all participants have equal access to the market method and system for renewable energy and transmission capacity units or securities. It is a well-known fact that transparent open access markets create the lowest price for a good or service with fungible characteristics such as in airlines, telecom and electricity markets (Pentland, W., "After decades of doubt, deregulation delivers lower electricity prices.", October 13, 2013, <https://www.forbes.com/sites/williampentland/2013/10/13/after-decades-of-doubt-deregulation-delivers-lower-electricity-prices/#710fb94b1d13>). As the aforementioned article correctly positions the data, wholesale market deregulation has allowed wholesale prices to drop, but retail prices have increased, which precisely brings to point the deficiencies in the current market with retail renewable power not having methods that are now technologically possible through the disclosed invention. As in the aforementioned article, MIT states there has been an increased incentive for the disintermediation of power purchases from regulated utilities due to their lack of responsiveness to decreasing wholesale costs, as they still are given a virtual monopoly on retail pricing. The lowest cost and most efficient solution will greatly reduce transmission distances for renewable energy units, improve community well-being, improve community wealth by keeping wealth within a community, reduce pollution, increase transmission capacity utilization rates, reduce transmission congestion, increase service frequency and save consumers of renewable energy transmission services billions in cost by increasing utilization rates. A method to create a renewable energy community route or

waypoint sequence based object to provide a gateway to open access transparent systems for trading renewable energy units linked to transmission units will also ensure that new technologies, such as grid scale batteries, come to market more quickly by disintermediating the process. Transmission and renewable energy markets are currently some of the most inefficient markets in the world making up 30% of greenhouse gases. A renewable energy unit community route or waypoint sequence structure to provide a gateway for open forward market for renewable energy linked transmission capacity units will bring market discipline and low-cost commodity pricing to all classes and forms of renewable energy linked transmission capacity, renewable energies and services.

**[0005]** If people on a given waypoint destination or series of waypoints on a renewable energy transmission route have a method and system to make a community and a gateway to provide each other economic benefits in that renewable energy community data structure waypoint sequence, then substantial transmission congestion, pollution, and maintenance issues will be reduced.

#### **Description of the Related Art**

**[0006]** The following descriptions and examples are not admitted to be prior art by virtue of their inclusion within this section.

**[0007]** The current implementations of methods to build renewable energy unit communities linked to transmission networks suffer from lack of structure, firm service, safety, accountability, scheduling issues, substitutability issues and general lack of technology development. No vibrant renewable energy unit virtual community platforms aggregate or transform renewable energy units into virtual communities along specific routes with efficient methods or ancillary benefits. Further, most implementations of methods do not allow price discovery between various sellers and buyers of renewable energy because the systems are disparate and are not open access or transparent. Anyone skilled in the art of renewable energy rental or purchase markets would know there is no such community renewable energy based prior art with search linkages to price-time priority queues and geolocation and transmission instructions. Competing methods do not form transmission waypoint sequence based communities and do not provide gateways to price renewable energy or transmission as a linked service, with the consumer buying multiple units with no transparent marketplace governing price competition for a single renewable energy or transmission unit along a hub to hub route or at a single waypoint community hub. Furthermore, these services and methods do not foster accountability in service. Typical renewable energy or transmission systems do not enforce delivery penalties for non-performance as the method is not firm and it does not transform the transmission unit into a standardized security asset with the properties of cost of cover, liquidated damages, force majeure, or many other attributes of contract specification. Additional competing implementations of methods do not allow for forward selling or forward purchasing of renewable energy units linked to transmission capacity beyond a single transaction, which a commodity forward market for transmission unit securities allows through the disclosed systems and methods and which

are a bridged gateway from the data transformation of a social network into renewable energy unit transmission route based virtual communities of the disclosed invention. The disclosed creation of renewable energy unit route based virtual community objects to provide a gateway to a forward market of renewable energy unit security between virtual hubs along map routes has also never held the attributes of a forward contract security, which allows for one renewable energy unit security to be substitutable for another renewable energy unit security. In other words, if user A bought a renewable energy unit security from user B, but then user A was not able to perform the obligation to purchase the renewable energy unit security from user B, then user A could resell the renewable energy unit security contract to a third party user C on the forward renewable energy unit price-time priority queue auction market to retrieve the financial payment made for their original purchase from user B. Then user C would replace user A and be matched with user B while incorporating the data transformation of the overall method and system and while considering additional subordinate concepts such as cost of cover, liquidated damages and force majeure. No prior art transforms a series of waypoints or waypoint sequences into a renewable energy unit community object that has features which allow users to subscribe, friend, follow, or member, or which allows users to gain benefits of a gateway to an economic mechanism to trade renewable energy as a transformed renewable energy unit(s). No prior art discloses the disclosed renewable energy unit communities which provide gateways to transmission unit securities to incorporate the concepts of cost of cover, liquidated damages, force majeure, contract specifications or firm service to ensure reliability and asset performance. No other system or method performs the aforementioned data transformation combination, nor do the prior art methods and systems capture the technical elements that make the data transformations possible.

**[0008]** Not only does the formation of renewable energy unit route based or waypoint sequence based community objects increase accountability mechanisms along a give route or single community waypoint, it provides an efficient gateway and market data transformation structure for an open and transparent market for renewable energy unit securities and allows for large increases in price discovery and, by economic theory, results in the lowest possible price for consumers. City planners from New York to Austin to San Francisco to Paris to Mumbai to Tokyo to Beijing to Sao Paulo or Johannesburg all struggle to see how the future options of transmission will shape city planning, yet the disclosed method and system dramatically reduces travel by allowing a local community network to develop with associated price-time priority queues for renewable energy.

**[0009]** Implementations of methods have been made in systems that provide virtual communities, but none frame the problem as renewable energy unit transmission routes being a community object data structure, as a gateway to a forward commodity market, or a unitized renewable energy security capacity market with simple elegant systems and methods that allow the natural forces of supply and demand to set the price through a universally transparent medium, such as an open transmission and renewable energy capacity forward market with securitized contract

specifications. Additionally, no prior art system or method proposes a technically capable solution of integrating the technical software and hardware requirements and data transformations for integrating the tasks of a community forming system for specific routes or renewable energy unit virtual hub sequences of transmission waypoints, which are an object to which one may subscribe, friend, follow or become a member alongside a network, GPS system, mobile computing devices, servers, forward renewable energy commodity markets, grouping software for hubs, community route processors, my route processors, sequence route processors, transparent open access pricing systems, blockchain audit, safety methods and systems, virtual hub transmission systems, map routing systems, or algorithms for no arbitrage conditions in a simple easy to use graphical user interface format for mobile or virtual computing over various mediums which are connected via a network.

- 1) U.S. Patent No. 9,077,204 issued July 7, 2015 to Eduardo J. More et al., discloses a system and method for generating, controlling and storing dispatchable renewable energy. The prior art relates to the generation and dispatch of renewable power and the power is blended in with traditional power sources. The prior art is deficient of locating or identifying the GPS location of a renewable generator over a network. The prior art is deficient of creating a social network community object for generating renewable power and identifying the community from which the power generation was transmitted or delivered. The prior art is deficient of a price-time priority queue for the renewable energy. The prior art is incapable of disintermediating the utility system as the system simply blends power into the transmission grid. The prior art is deficient of an organization feature or algorithm to grant scale and community to renewable generators from homes or businesses that may be able to collectively compete against fossil fuel utilities or independent power producers. The novel invention of a renewable energy community object with price time priority queues allows grid scale or utility scale communities to form which may effectively compete on equal access to utilities with no preference other than the stated equal access price-time priority queue.
- 2) U.S. Patent No. 6,708,879 issued March 23, 2004 to Douglas Harold Hunt discloses an automated unmanned rental system that enables the automatic tracking of rental activity and equipment movement with an RFID tracking system and RFID tags. The prior art relates to a specific radio frequency method and system of tracking rental equipment. The disclosed system and method of the novel invention is fundamentally different in that the method and system specifically make a social community object data transformation for renewable energy resources with geolocation and associated price-time priority queues for transaction and rental purposes. The two systems and methods carry no overlap of invention, in that the prior art would be incapable of performing the methods disclosed in the novel invention due to lack of specific formulas or descriptive words that would enable such a system to perform

the required task, such as community object formation GPS routing or price-time priority queues to organize the transformed data.

- 3) U.S. Patent No. 6,356,838 issued March 12, 2002 to Sunil Paul discloses a method, system and program for determining an efficient transmission route. The prior art relates to a computer-implemented method is described for determining an efficient transmission route comprising: compiling travel data over one or more travel segments, the travel data transmitted from one or more transmission vehicles traveling over the travel segments; receiving positional data associated with a transmission request, the positional data including an origin and a destination; and providing a driver of a vehicle with a first efficient route from the origin to the destination using the travel data, the first efficient route including one or more of the travel segments. Also described is a computer-implemented method for providing transmission services comprising: receiving a transmission request from a passenger; tracking the passenger's position following the request using positional detection logic; and transmitting positional data identifying the passenger's position to a pickup vehicle. The prior art patent is widely cited as the business model taken by most mobile application based transmission services companies. While the prior art does describe the service model of the current construct of the market for transmission with a custom on demand service and then a corresponding company delivering that service through both the technology and the actual physical transmission, it defines a completely different market scenario than a virtual hub to virtual hub transmission sequence which has been predefined as a community as a gateway for an open transparent market forward market for an individual transmission or renewable energy capacity unit. As previously discussed, a commodity based transmission capacity unit market has a completely different market construct than is defined by all operators and patents in the space. The prior art is simply matching transmission requests through a series of servers, GPS systems, and mobile devices. The prior art clearly was a novel invention, but as evidenced by the market, the method has been utilized to replace the inefficient taxi model rather than create a community route sequence marketplace for transmission units that can be priced as a commodity with specific commodity contract specifications and the discipline a market brings to a business problem to fill up unutilized transmission capacity through the efficient mechanism of price. It is very clear the result of the methods and systems of the prior art has contributed to increased congestion and traffic unlike the disclosed methods and systems. In a renewable energy unit virtual route based community gateway to a commodity-based renewable energy capacity system with open access transparent systems and methods, the price will continue to go lower until all space has been utilized or supply for the renewable energy linked transmission units is equal to the demand for renewable energy linked transmission units. As any observer with ordinary skill would see, most transmission or renewable energy unit renewable energy resources go unutilized and this is a proof and counterexample that no such system is in existence and

that the patents and prior art in this field do not address the present novel invention of bringing an renewable energy commodity market to bear on the prices of individual units of renewable energy linked transmission or renewable energy capacity between virtual hub to virtual hub routes or they have been ineffective of removing transaction costs. If prior art addressed the novel invention, then a marketplace would exist for renewable energy units of capacity which is open access and transparent and prices would drop until a level was reached where all renewable energy linked transmission was fully utilized, just as has occurred in oil and gas or other commodity markets. The prior art simply makes the method of taxicab and private service cars more efficient and in fact adds to congestion as has been empirically documented by all cities across the world. By contrast the novel invention may use the method and system integrating the technical software and hardware requirements for integrating the tasks of a network, GPS system, mobile computing devices, servers, forward commodity markets, grouping software for hubs, route sequence processors, community route processors, transparent open access pricing systems, blockchain audit and safety methods and systems, virtual hub topology systems, securitization, algorithms for no arbitrage conditions in a simple easy to use graphical user interface format for mobile or virtual computing over various mediums which are connected via a network which dramatically lower transaction costs.

- 4) U.S. Patent No. 6,421,606 issued July 16, 2002 to Asai et al., discloses a method and system for a route guiding apparatus and medium. The prior art specifically addresses a route guiding apparatus providing information for a route using public transmission as an alternative to a vehicular route. In addition to searching for a vehicular route from a current location to a destination, it is determined whether the current location and the destination are within a zone in which public transmission can be used. When the current location and the destination are determined to be within a public transmission zone, a route using public transmission is searched for. Subsequently, the cost of the route using public transmission and the cost of the vehicular route are compared. When the cost of the public transmission route falls within a predetermined limit, the apparatus indicates the public transmission route. The route costs are calculated considering factors such as required travel time and ticket fees. The apparatus may also recommend public transmission when no parking is available near the destination or based on traffic information concerning the vehicular route. The prior art clearly addresses a comparing function to determine the lowest cost route to move from one point to another point however the prior art is completely void of providing renewable energy unit virtual hub waypoint sequence communities as a gateway to an open access transparent forward commodity market for individual renewable energy capacity units to place the method of a market over the system which would then allow for dramatically lower and more efficient prices and utilization would increase dramatically as supply and demand forces would force the market to balance through price. Accordingly, the prior art is not

comparable from a market method and system basis or from an efficiency basis. The novel invention by contrast integrates the technical software and hardware requirements for integrating the tasks of a network, community grouping objects, GPS system, mobile computing devices, servers, securitization, forward commodity markets with price-time priority queues, grouping software for hubs, transparent open access pricing systems, blockchain audit and safety methods and systems, virtual communities, virtual hub topology systems, algorithms for no arbitrage conditions in a simple easy to use graphical user interface format for mobile or virtual computing over various mediums which are connected via a network.

- 5) U.S. Patent No. 7,373,320 issued May 13, 2008 to Timothy Francis McDonough discloses a method and system for an invention relating to a futures exchange for services contracts. The SerFEx is an electronic market system that enables the exchange of cash (spot and futures) contracts and futures contracts for the delivery of services. Services are traded on the exchange similar to commodities on a prior art commodities exchange. The exchange allows the futures market to determine the right price for services for the producers and consumers of those services. Participants may buy, sell, or leverage services contracts through a variety of order types. The exchange is composed of an electronic infrastructure that has four major components: a front-end facility comprised of licensed authorized intermediaries, an automated bid/ask matching system, a clearinghouse system, and a title management system. The exchange operates twenty-four hours per day and seven days per week with all accounts settled at least once in every twenty-four hours. Participants in the exchange may be producers of services, intermediaries, speculators, and consumers of the services. The prior art very clearly calls the title and claims of the patent a contract futures exchange. A person with ordinary skill in the art would know there is a dramatic difference between a futures contract which are on regulated exchanges and forward contracts which trade over the counter. Futures contracts are highly regulated by definition. There are very specific legal differences between futures and forward contracts, and they can't be confused or used interchangeably. As one of many examples, speculators are not permitted to trade forward contracts as all contracts must be transacted with a physical underlying ownership and must be physically delivered unlike regulated futures exchanges which permit speculators. For the sake of clarity, the renewable energy linked transmission capacity market is exclusively limited to forward physical contracts which means that the contracts are limited to be traded by only those who are actually providing the underlying service or method. The prior art specifically mentions a data system method for implementing a service contract exchange for construction, transmission, warehousing, postal services, information, real estate, rental, leasing, financial, insurance, professional, scientific, technical services, management, administrative services, educational services, health care, social assistance arts, entertainment and recreation among others. Again, someone with ordinary skill would

note the specific technical difference between a forward contract which is disclosed and the prior art futures contract. As a very important further technical difference to anyone with ordinary skill in the art, the prior art does not show mobile computers or GPS systems as part of the disclosed futures exchange in any of the claims or as any part of any diagram and it would be clear this would be a necessary requirement to functionally allow for the delivery of futures or forward contracts for renewable energy units linked with transmission or renewable energy. Furthermore, the prior art does not address forming renewable energy unit virtual hub sequence based communities as objects to which people may subscribe, follow, friend or become a member. Therefore, the prior art method and system would be incapable of completing the novel invention disclosed in this patent method and systems. Figures 9A and 9B of the prior art show that the primary art of the patent in question was a futures contract to sell a royalty escrow service contract which does not require GPS or mobile based technology to complete a transaction. Accordingly, the prior art would be disqualified from comparison very clearly to someone with ordinary skill based on the futures to forwards legal differences and the technical inability to complete an renewable energy linked transmission capacity contract without mobile or GPS based technology outlined in any claim or figure of the patents. The prior art is limited to a regulated futures exchange which has a clearing house that guarantees the transactions through a highly regulated process. By contrast forward contracts carry default risks. The prior art refers to mark to market contracts which are a hall mark of futures contracts whereas the novel invention of renewable energy linked communities as a gateway to forward renewable energy unit contracts are settled on one date at the end of the contract. The prior art is clearly limited to regulated futures which are heavily participated in by speculators who are betting on price directions and usually close out positions prior to maturity as evidenced by any regulated commodity futures trading commission data. The novel invention by contrast is a forward renewable energy linked transmission or renewable energy capacity unit security contract which is mainly used by hedgers and physical participants in the market to eliminate the volatility of an asset price and physical delivery usually takes place as would be the case for someone actually using or providing the renewable energy linked transmission or renewable energy capacity unit. The prior art futures contracts are generally subject to one single regulatory regime as by definition they must be regulated by a single entity in one jurisdiction. The prior art is limited in the claims to futures which in the case of physical delivery, counterparties are chosen randomly by the exchange. By contrast the novel invention of a renewable energy forward transmission capacity or renewable energy security unit specifies to whom the delivery should be made. The prior art claims are limited to futures where there are margin requirements and periodic margin calls by which cash may change hands daily. By contrast the novel invention of a computer implemented forward commodity renewable energy linked transmission capacity unit security market, no cash flows until physical delivery takes place. By comparison the novel invention may be transacted across jurisdictional boundaries and

are primarily governed by the transactional relations between the parties. The prior art is a futures exchange for service contracts for royalties of many service products highlighting the service of renewable energy linked transmission or renewable energy linked transmission as a service which is not an actual physical fungible good such as a commodity like copper or coffee or oil which can have an associated futures contract. By contrast the novel invention is a fungible renewable energy linked transmission commodity forward contract of an actual renewable energy transmission capacity bearing unit security. A service of the prior art would not be able to group users using a virtual hub pooling server which would then combine with another virtual hub or combination of hubs to make a tradable commodity unit, again therefore rendering the prior art as incapable of delivering or even rendering the service. The novel invention by contrast integrates the technical software and hardware requirements for integrating the tasks of a network, GPS system, mobile computing devices, servers, forward commodity markets, community grouping software, grouping topology software for hubs, transparent open access pricing systems, blockchain audit and safety methods and systems, virtual hub topology systems, algorithms for no arbitrage conditions in a simple easy to use graphical user interface format for mobile or virtual computing over various mediums which are connected via a network. The prior art is technically incapable of providing the software or hardware that would allow for the completion of a transaction between two users in any of the claims. The prior art also provides no technical language or math formulas to transform the data of a service contract into a futures contract or how that contract would functionally trade with any mention of priority or queueing. Lastly, the prior art of McDonough largely resembles the recent U.S. Supreme court decision in *Alice Corp. v. CLS Bank International*. The issue in the *Alice* case was whether certain claims about a computer-implemented, electronic escrow service for facilitating financial transactions covered abstract ideas ineligible for patent protection. The patents were held to be invalid because the claims were drawn to an abstract idea, and implementing those claims on a computer was not enough to transform that idea into patentable subject matter. It is very clear that the prior art of McDonough is dangerously close in spirit if not fully resembling the *Alice* decision as the patent is simply pushing forth the concept of using a financial exchange to cover a general abstract idea with very little evidence to support a novel invention, data transformations of the actual structure of the market or a novel approach to how to make the physical market perform with either an escrow service contract futures exchange or a transmission service contract futures exchange. In this specific case, the Supreme court gave a two-step test which McDonough would follow the precedent of *Alice* in that they are simply borrowing the concept of a futures exchange without a novel technical method or system as to facilitating a transaction and as we clearly present in our arguments, the prior art could not facilitate a transmission futures contract implementation because there is no mobile technology to route renewable energy units which renders the implementation non-feasible. Further there is no specific computer system or unique program which is novel in

the implementation other than regurgitating back the business method of a prior art exchange and then applying it to the abstract concept of applying the existing prior art to service contracts. The novel system and methods of this patent specifically outline the implementation of integrating a novel interfacing of networks, GPS systems, community networks, mobile computing devices, services, forward commodity markets, securitization, grouping software for hubs, transparent open access pricing systems, virtual hub topology, no arbitrage conditions alongside a novel graphical user interface that combines all these systems and methods for forward renewable energy unit contracts based on renewable energy community objects. Clearly the current disclosed patent (unlike McDonough), adds “something extra” that embodies and “innovative concept” and is not generic, conventional or obvious as no other patent or business offers these novel concepts.

- 6) U.S. Patent No. 7,756,633 issued July 13, 2010 to Huang et al., discloses a method and system for a comprehensive security-enhanced rideshare system is provided. The rideshare program includes localization, mapping and ride matching for participants. Participation incentives and revenue methods provide for the financial viability of the rideshare system. Participant security is monitored in near real-time using location-determining communication devices used by the participants in the system. The rideshare system monitors a number of security-indicating criteria and takes action when an anomalous condition is recognized. The method claim of the prior art specifically refers to providing security in a rideshare environment and monitoring that participant to look for anomalies during the travel route or travel times by a pre-defined threshold and sending security alerts to be confirmed by the rideshare participant that indeed they are safe. Unlike Huang et al., the disclosed novel invention claims defining route or virtual hub sequences as community objects to which members may subscribe, friend, follow or become a member as a gateway to the forward renewable energy unit market with price-time priority queues. The novel invention is fundamentally different than the prior art as the blockchain technology for security within the forward renewable energy capacity market relies upon algorithms which include independent comprehensive background checks of participants combined algorithms which alert towards the actual commodity unit of the renewable energy capacity unit security not being delivered as per the forward contract specifications in the agreement. Further facial recognition, fingerprint, video 911 and photo recognition dependent sub-methods are not utilized to ensure the identity of users which are part of the novel invention and patent.
- 7) U.S. Patent No. 7,680,770 issued March 16, 2010 to Buyukkokten et al. discloses systems and methods for automatic generation and recommendation of communities in a social network or set forth. The prior art claims specifically deal with collecting user profiles or user profile attributes to create a new defined community based on matched profiles. By contrast the disclosed novel invention is defining communities based on static renewable energy

virtual hub sequences, not on user profiles. The static virtual hub(s) or hub sequence(s) are independent of people or members and further require additional data transformations that would not be possible from determining user profiles. Just as bus stops are not determined by user profiles, nor are virtual hubs or sequences. People may join, friend, follow or become a member of a renewable energy unit virtual hub routes sequence as a community object, but the object is independent of the people. The disclosed novel invention also requires use of GPS networks and servers which are not to be found in the diagrams or claims of the prior art. The disclosed novel invention also requires use of data transformations to form renewable energy unit virtual hub sequences as community objects as a gateway for additional data transformations of turning renewable energy units into securities or commodities which are substitutable in a price-time priority queue. The prior art method is specifically creating incremental communities based on a plurality of user features whereas the renewable energy unit community sequences with price-time priority queues operate and are transformed independent of user features.

- 8) U.S. Patent No. 8,121,780 issued February 21, 2012 to Gerdes et al. discloses a method for offering a user reward based on a chosen navigation route includes calculating alternative routes from a starting location to a destination location by taking into consideration route segments including public transmission route segments and road network route segments. The alternative routes are presented to a user. A reward is offered for choosing a respective one of the routes. A navigation system that performs the route calculation preferably queries a network database for public transmission information. The prior art in concept is similar to the Paul et al, US Patent application No 2015/0248689 wherein the user of the system and method are given a reward or incentive for choosing a route which in theory promotes the concept of transmission pooling or the use of public transmission. The clear differences again are that the prior art is not a renewable energy unit route based virtual hub waypoint sequence as a community to provide a gateway to a forward based renewable energy unit capacity market which may drive the renewable energy capacity price to the lowest possible economic level. Accordingly, the prior art does not necessarily lead to the most efficient outcome and is a distinctly different method from a renewable energy unit community object based on a route sequence and associated price-time priority queue for transactions. The forward commodity individual unit security transparent open access forward market is required to arrive at the most efficient lowest price outcome in the limit and therefore the disclosed invention uses methods and systems to come to a superior solution and is therefore fundamentally different and unique. The novel invention by contrast integrates the technical software and hardware requirements for integrating the tasks of an object oriented programming data transformations, network, GPS system, mobile computing devices, community grouping instructions, community route processors, sequence route processors, servers, forward commodity markets, grouping software for hubs, securitization, transparent

open access pricing systems, blockchain audit and safety methods and systems, virtual hub topology systems, algorithms for no arbitrage conditions in a simple easy to use graphical user interface format for mobile or virtual computing over various mediums which are connected via a network.

- 9) U.S. Patent No. 8,762,035 issued June 24, 2014 to Uri Levine et al., discloses a method and system for real-time community information exchange for a traffic mapping service for allowing plurality of users having each a navigation device to transmit their locations to a server and optionally to signal to the server their requested destination. The system and method are further capable of calculating traffic parameters such as current traffic speed at a given road based on the momentary locations of the users. The system and method of the invention may also calculate and advise the users of preferred roads to take in order to arrive at the requested location with minimum delay. The prior art utilizes GPS systems and mobile devices to route people most efficiently from a starting point to an ending point utilizing a community of users. The prior art makes no mention of using renewable energy unit route based virtual hub sequences as community objects to which people may subscribe, friend or follow to provide a gateway to a forward renewable energy unit market with price-time priority queues. The prior art utilizes a community but has nothing to mention of an open access transparent renewable energy, transmission or renewable energy trading market for forward renewable energy or renewable energy capacity with price-time priority queues. Further the prior art is focused on the shortest mapping route for a transmission segment, not using a market to price the value of the individual renewable energy or transmission capacity units along a given renewable energy unit virtual hub to virtual hub topology route or a series of single or multi-modal, multi-hub topology subject to constraints to price the transmission or renewable energy capacity. The novel invention by contrast integrates the technical software and hardware requirements for integrating the tasks of an object oriented programming data transformation, network, GPS system, mobile computing devices, servers, securitization, community route processors, my route processors, sequence route processors, forward commodity markets, grouping software for hubs, transparent open access pricing systems, blockchain audit and safety methods and systems, virtual hub topology systems, algorithms for no arbitrage conditions in a simple easy to use graphical user interface format for mobile or virtual computing over various mediums which are connected via a network.
- 10) U.S. Patent No. 8,798,593 issued August 5, 2014 to Haney, discloses location sharing and tracking using mobile phones or other wireless devices. The prior art systems and methods provide a system for exchanging GPS or other position data between wireless devices for purposes of group activities, child location monitoring, work group coordination, dispatching of employees etc. Cell phones and other wireless devices with GPS receivers have loaded

therein a Buddy Watch application and a TalkControl application. The Buddy Watch application communicates with the GPS receiver and other wireless devices operated by buddies registered in the user's phone as part of buddy groups or individually. GPS position data and historical GPS position data can be exchanged between cell phones of buddies and instant buddies such as tow truck drivers via a buddy watch server. Referencing the Alice Corp. v. CLS Bank International decision, the prior art generally falls under the category of an abstract concept of grouping people using GPS which is not a novel concept or method beyond a general business method from prior art without specific application. Further, the prior art would struggle to stand the light of Alice additionally considering Bilski v. Kappos that the idea of grouping people with GPS is an abstract idea and does not apply to a specific novel example of renewable energy or transmission, building a virtual community based on a route sequence data transformation, transmission as a commodity, unique renewable energy unit contract specifications, uniquely defining renewable energy unit linked transmission capacity securities as cargo space, renewable energy unit linked transmission to define a virtual or actual hub or hub series topology in the context of a forward contract market for renewable energy securities with price-time priority queues.

- 11) U.S. Patent Application No. US 2015/0248689 with publication date of September 3, 2015 to Sunil Paul et al., discloses a method and system for providing transmission discounts. The prior art systems and methods for providing transmission discounts are disclosed as a server receives, from a client device of a user, a request for a transmission service. In response, the server identifies that the request relates to a particular characteristic associated with modified pricing. The server then calculates an adjusted price for the transmission service based on the modified pricing associated with the particular characteristic. As we have reviewed in the background section of this patent application the disclosed system and method uses proprietary information for a company to price a transmission discount which is non-transparent and the company assigned the patent uses its technology to price the discount rather than an open transparent market such as a commodity market for renewable energy unit linked transmission or renewable energy capacity. The Paul et al patent application refers to a ride request in Fig. 7 which prices a discount for a ride option based on longer wait time and fewer pick-ups as a disclosed example. In this example, the ride request and the market are not for an individual security unit of renewable energy linked transmission or renewable energy capacity and the example is not an open access market forward market for the individual units of renewable energy linked transmission securities and there is no associated price-time priority queue. Custom discounts or the concept of generally used discounts are not used in Individual custom rides are not commodities which has been why the transmission market has not been able to get to the result of the disclosed invention. In a hub to hub based system (or multi-hub topology, there would be enough liquidity and participants to create a viable marketplace of substitutable renewable energy linked

transmission or renewable energy capacity securities. A hub to hub renewable energy linked transmission model may generally leave the last mile of transmission to another system or method such as the method of a custom renewable energy linked transmission request. A commodity market for renewable energy linked transmission or renewable energy capacity may be only viable where there is ample liquidity for substitution as a security. The disclosed method and system of Paul et al., is fundamentally different and more akin to the current methods and systems currently available through companies such as Uber or Lyft or Grab or Via. Paul et al, in Figure 8 propose an electronic bulletin board for matching custom requests, but clearly do not function as commodity forward market securities with defined commodity delivery points (virtual hubs or multi-layered virtual hubs), price-time priority queues, product specifications, penalties for non-performance, etc., as are standard in commodity contracts for well-known alternative products such as wheat, corn, natural gas, power, oil, etc. Further, Figure 9 disclosed by Paul et al, shows a cross promotional package approach to transmission and theater or dinner shows which defeats the purpose of defining transmission units as a commodity unit security which will bear the lowest cost and provide the highest economic incentive for usage or making a homogenous asset which can be associated with a price-time priority queue. Figure 12 from Paul et al describes a method and system for using user profile history data to generate discounts which by definition are set by the system. This is fundamentally different from setting a price by an open access market where any participant can offer any price at any time for a given hub to hub route with uniformity of contract as a security. No system or company controls the pricing, the market is left free to float which is different from the system and method Paul et al, propose which has a transmission server price the transmission request for some hot spot location. Paul makes no mention of renewable energy unit linked virtual hub sequenced based community object which allows members to subscribe, follow, friend or join to provide a gateway to a forward renewable energy linked transmission unit market. Further, Paul et al suggest some embodiments are defined from a sponsor giving a transmission discount to a particular location as a promotion. A renewable energy linked transmission unit commodity security market eliminates custom behavior and treats a renewable energy linked transmission unit security for a specific product as uniform without special characteristics such as are disclosed by Paul et al. The novel invention by contrast integrates the technical software and hardware requirements for integrating the tasks of an object oriented programming data transformations, network, GPS system, data transformations, mobile computing devices, securitization, servers, forward commodity markets with price-time priority queues, object oriented community grouping instructions, grouping software for virtual hubs, transparent open access pricing systems, blockchain audit and safety methods and systems, virtual hub topology systems, algorithms for no arbitrage conditions in a simple easy to use graphical user interface format for mobile or virtual computing over various mediums which are connected via a network.

- 12) U.S. Patent Application No. US 2009/0287401 A1 with publication date of November 19, 2009 to Uri Levine et al., disclose a system and method for traffic mapping service are disclosed for allowing plurality of users having each a navigation device to transmit their locations to a server and optionally to signal to the server their requested destination. The system and method are further capable of calculating traffic parameters such as current traffic speed at a given road based on the momentary locations of the users. The prior art fails to mention a renewable energy unit transport virtual hub sequence as a community object to which a member may subscribe, join, friend or follow as a gateway to a forward renewable energy linked transmission unit market with price-time priority queues. The system is designed to advise the users of preferred roads to take in order to arrive at the requested location with minimum delay. The prior art systems and methods clearly route based on time-based routing which is fundamentally different from market price based routing or price based navigation with associated renewable energy community linked objects which are associated with price-time priority queues. No prior art directly deals with renewable energy unit communities linked to price based navigation because no market has existed for renewable energy linked transmission unit securities such as disclosed in the novel and unique invention.
- 13) U.S. Patent No. US 9,389,094 B2 issued on July 12, 2016 to Jennifer T Brenner et al., disclose systems and methods presented for sequencing locations and events and determining routing and itineraries for the sequence. The prior art makes no mention of forming a renewable energy unit virtual hub sequence as a community object to which members may subscribe, follow, join or friend as a gateway to a forward renewable energy linked transmission unit market with associated price-time priority queues. The prior art method and system is very clearly route based on event sequencing rather than price based routing based on a market for underlying renewable energy linked transmission unit securities. Event sequencing as disclosed in the prior art is based on event addresses which would be fundamentally different from a route based on an underlying forward market for renewable energy linked transmission units. Further the prior art sequences are dynamic as compared to renewable energy community units which are route based sequences which are static once formed as transformed data objects. The prior art makes no remote referencing to forward markets for renewable energy linked transmission, transmission pricing on a route, forming virtual communities around static routes of waypoints or waypoint sequences which are fixed, price sequencing, or other related routing techniques. The prior art method and system would also be incapable of routing or navigation based on price or renewable energy community objects or forward market renewable energy linked transmission unit securities with price-time priority queues.

**SUMMARY**

**[0010]** The claimed subject matter is not limited to implementations that solve any or all of the noted disadvantages. Further, the summary section is provided to introduce a selection of concepts in a simplified form that are further described below in the detailed description section. The summary section is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used to limit the scope of the claimed subject matter.

**[0011]** The aforementioned deficiencies and other problems associated with the general renewable energy markets, lack of connectivity between renewable energy and transmission and geolocation, social network communities that lack technical capabilities, navigation systems, price-time priority queues, transmission and renewable energy markets, securitization of renewable energy linked transmission units, other novel systems and interfaces and how renewable energy linked transmission functions with large inefficiencies which use electronic devices to request renewable energy transmission services are reduced or eliminated by the disclosed method and system of integrating and interfacing a plurality of systems into one system which allows the necessary data transformations for the renewable energy community linked transmission unit security combined with the efficiency of a forward market to price and ration unused spaced as to eliminate wasted renewable energy community linked transmission units or renewable energy capacity as securities inside transmission spaces. In some embodiments, the methods and systems are on portable devices. In some embodiments, the disclosed method and system is a layer on mapping and map routing software on a plurality of computing devices. In some embodiments, the disclosed method and systems are renewable energy community networks with geolocation logistic data transformations, associated geolocation transformations and price-time priority queues. In some embodiments, the methods and systems use subordinate legal contracts to transform the data. In some embodiments, the methods and systems are on stationary devices. In yet other embodiments, the methods and system disclosed may use mixed reality, augmented reality, virtual reality, or other audio or visualization methods to allow a user to transact and trade renewable energy and renewable energy community linked transmission capacity as a forward commodity security with associated price-time priority queues. In some embodiments the graphical user interface ("GUI") on any mobile or stationary computer device interfaces with one or more processors, memory and one or more modules, programs or sets of instructions stored in the memory for performing multiple functions. In some embodiments, the user interacts with the GUI primarily through finger contacts, voice commands, or other sensory methods to interface with the GUI. In some embodiments, the functions may include the user directing the GUI to place a user profile in a renewable energy community linked virtual hub so that they may participate, transact or trade a combination of renewable energy community linked virtual hub transmission routes as a forward commodity for renewable energy community linked transmission or renewable energy capacity with associated price-time priority queues. In some embodiments, the functions may include the user instructing the GUI to participate, transact, or trade various modes of renewable energy community linked transmission capacity units,

such as wire, home, automobile, air, autonomous vehicle, bike, boat, bus, drone, limo, motorcycle, moped, shuttle, spaceship, subway, taxi, train, other transmission methods, cargo renewable energy , package renewable energy , virtual or various combinations of the aforementioned modes. In some embodiments, the functions may include the user instructing the GUI to form a new or existing renewable energy community linked virtual hub or virtual hub combination which then has a specification function which forms a basis for the GUI to present the plurality of buyers and sellers of renewable energy community linked transmission and renewable energy capacity securities between two or more virtual hubs.

**[0012]** In an aspect of the invention, a computer-implemented method for use in conjunction with a computing device with various display formats comprises: a user at a mobile or fixed computing device with a touchscreen or a computing device without a touchscreen or augmented reality non-screen display or audio non-screen interface detecting a user network login, detecting a secure login based on facial recognition, fingerprint recognition or photo scan or biometric interface recognition of the user, performing multiple local and external security and crime checks on the user, detecting and receiving from the user an origin location through the GUI user input or GPS coordinate input from the computing device and detecting from the user input a destination coordinate and transmission of said coordinates, generating and applying specific data legal contract transformations to incorporate general specifications as well as the concepts of cost of cover, liquidated damages, and force majeure, generating and applying one or more optimization techniques to form a virtual hub with other users that have similar renewable energy community linked transmission requests within a geographic boundary, determining if two or more renewable energy community linked virtual hubs are required for the path of the auction between a said starting point and ending point, generating instructions to index and rank pricing for a plurality of routes in context of renewable energy community linked virtual hubs or navigation routing, generating instructions to index navigation transmission routes based on pricing for renewable energy community linked transmission units along the routes, generating instructions for a plurality of computing devices, networks, community grouping processor and database instructions, virtual hub database servers, network member database servers, transmission platform market database servers to form a combination of virtual hubs and contract specifications for delivery of transmission services or renewable energy capacity between the virtual hubs in a format presented by a GUI which allows the user to submit prices to sell (offer) or bid (buy) in a price-time priority queue renewable energy community linked transmission or renewable energy capacity between renewable energy community linked virtual hub combinations, generating instructions to interface a plurality networks, navigation routing based on price of renewable energy community linked transmission unit securities, global positioning systems networks, servers, securitization, forward renewable energy commodity markets, grouping software for virtual hubs, map routing transmission systems and methods, transparent open access pricing systems which form a price auction with price-time priority queues of a given quality specification, blockchain audit and safety systems, renewable energy community linked virtual hub topology

servers and systems, no arbitrage constraint condition systems which form one system to implement a forward commodity renewable energy community linked transmission and renewable energy capacity unit market with price-time priority queues system and method. The programs and instructions are stored in memory and configured to be executed by one or more processes by a plurality of users. The programs may include a plurality of configurations and specification instructions for various modes of renewable energy community linked transmission capacity. The programs also may include as specification options to select a plurality of timings, quality levels of capacity and service, cost of cover, liquidated damages, force majeure, term of timings such as by the second, minute, hour, day, weekday, weekend, month, annual or day of the week, various order types such as day, good till cancelled, immediate or cancel, good till date, day till cancelled, limit, market, market if touched, snap market, snap mid, snap to primary, peg to benchmark, adaptive custom orders. The programs may also include a plurality of instruction modes such as wire, home, automobile, air, autonomous vehicle, bike, boat, bus, drone, limo, motorcycle, moped, shuttle, spaceship, subway, taxi, train, packages, multimodal and cargo for renewable energy community linked transmission or renewable energy capacity. The programs also may include: instructions for virtual hub pick up and drop off points as well as instructions to set various constraints such as cheapest route, single mode, multi-mode, fastest route, most scenic route, highest rating, routing alternatives based on the prices of the renewable energy community linked transmission unit securities between two hubs, most available or liquid, highest volume, most frequent, service level, security and safety and group restricted modes. The programs may include a plurality of interfaces with map routing software such as Google Maps, Apple Maps, TomTom Maps, Open Street Maps, Bing Maps, Nokia Maps, MapBox or a plurality of other map routing technologies to place the renewable energy community linked forward renewable transmission unit security pricing on the map navigation routes as an integration layer. The programs and instructions from the GUI provide master instructions for the plurality of computing devices and servers which interface to allow the user to participate, transact and trade a plurality of renewable energy community linked transmission and renewable energy capacity modes between a plurality of virtual hubs.

**[0013]** In another aspect of the invention, a computing system comprises: a plurality of networks, global positioning systems networks, servers, forward renewable energy commodity market servers and instructions, securitization legal data transformations, grouping program instructions for virtual hubs and associated servers, transparent open access pricing servers and instructions, community grouping processor and database instructions, GPS map routing servers, indexing databases and programs to rank alternative navigation routes based on renewable energy community linked transmission unit security pricing, blockchain audit and safety servers and instructions, price-time priority queues, user identification history and instructions against crime databases and identity databases to confirm security of the system and users, virtual hub servers and instructions, no arbitrage constraint condition servers and instructions which form one system to implement a forward

commodity renewable energy community linked transmission and renewable energy capacity unit security market system and method.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

**[0014]** Implementations of various technologies will hereafter be described with reference to the accompanying drawings. It should be understood, however, that the accompanying drawings illustrate only the various implementations described herein and are not meant to limit the scope of various technologies described herein.

**[0015]** FIG. 1 illustrates a schematic diagram of a plurality of renewable energy community linked virtual hub sequences data transformations into transmission waypoint combinations as community objects to which users may subscribe and associate price-time priority queues.

**[0016]** FIG. 2 illustrates a schematic diagram of an exemplary network configuration and of a renewable energy community linked virtual hub sequences data transformation into a transmission waypoint combination as community object to which users may subscribe and associate price-time priority queues.

**[0017]** FIG. 3 illustrates an exemplary price-time priority queue for renewable energy community linked route objects or transmission waypoint combinations and community route object sequences for transformed renewable energy community linked transmission and renewable energy units.

**[0018]** FIG. 4 illustrates an exemplary user interface with various international configurations of trading renewable energy community linked automobile or renewable energy capacity with associated price-time priority queues in accordance with some embodiments.

**[0019]** FIG. 5 illustrates an exemplary user interface to select a specification grade of renewable energy community linked transmission or renewable energy capacity with associated price-time priority queues with various timing specifications in accordance with some embodiments.

**[0020]** FIG. 6 illustrates an exemplary user interface with various term specifications for renewable energy community linked transmission or renewable energy capacity with associated price-time priority queues in accordance with some embodiments.

**[0021]** FIG. 7 illustrates an exemplary user interface with various order types and order time in force designations for renewable energy community linked transmission or renewable energy capacity with associated price-time priority queues in accordance with some embodiments.

**[0022]** FIG. 8 illustrates an exemplary user interface with various modes of renewable energy community linked transmission or renewable energy capacity with associated price-time priority queues in accordance with some embodiments.

**[0023]** FIG. 9 illustrates an exemplary user interface with the distance between the user and a renewable energy community linked virtual hub pick up point for renewable energy community linked transmission or renewable energy capacity with associated price-time priority queues as well as the distance between a user and a virtual drop off point for renewable energy community linked transmission or renewable energy capacity with associated price-time priority queues in accordance with some embodiments.

**[0024]** FIG. 10 illustrates an exemplary user interface for settings and constraints of the renewable energy community linked transmission or renewable energy capacity with associated price-time priority queues trading method and system in accordance with some embodiments.

**[0025]** FIG. 11 illustrates an exemplary user interface for transacting and trading renewable energy community linked domestic air travel transmission or air renewable energy capacity with associated price-time priority queues in accordance with some embodiments.

**[0026]** FIG. 12 illustrates an exemplary user interface for transacting and trading renewable energy community linked international train transmission or train renewable energy capacity with associated price-time priority queues in accordance with some embodiments.

**[0027]** FIG. 13 illustrates an exemplary user interface for transacting and trading renewable energy community linked international train transmission or train renewable energy capacity with associated price-time priority queues in accordance with some embodiments.

**[0028]** FIG. 14 illustrates an exemplary user interface for renewable energy community linked objects with associated price-time priority queues transacting and trading various menu options within the system and method in accordance with some embodiments.

**[0029]** FIGS. 15 illustrates a schematic diagram of a network configuration and implementations of methods which support the method and system of trading renewable energy community linked transmission capacity with associated price-time priority queues in accordance with some embodiments.

**[0030]** FIG. 16 is a flow diagram illustrating methods exemplary users move through while participating, transacting and trading renewable energy community linked transmission or renewable energy capacity with associated price-time priority queues in accordance with some embodiments.

**[0031]** FIG. 17 illustrates an exemplary user interface for displaying most frequent transmission routes in accordance with some embodiments.

**[0032]** FIG. 18 illustrates an exemplary network topology of a renewable energy community linked virtual hub combination or series of multiple renewable energy community linked virtual hub combinations for use in the market auction platform for forward renewable energy community linked

transmission or renewable energy capacity with associated price-time priority queues method in accordance with some embodiments.

**[0033]** FIG. 19 illustrates an exemplary user interface to display the map of the renewable energy community linked virtual hub to virtual hub route of a given transaction for renewable energy community linked forward transmission or renewable energy capacity with associated price-time priority queues units in accordance with some embodiments.

**[0034]** FIG. 20 illustrates an exemplary user interface to display the results of a security check and verification of user's identity for renewable energy community linked forward transmission or renewable energy capacity units with associated price-time priority queues in accordance with some embodiments.

**[0035]** FIG. 21 illustrates an exemplary user interface to display the status of the renewable energy community linked virtual hub to virtual hub route of a given transaction for renewable energy community linked forward transmission or renewable energy capacity units with associated price-time priority queues in accordance with some embodiments.

**[0036]** FIG. 22 illustrates an exemplary user interface to display the status of the renewable energy community linked virtual hub to virtual hub route of a given transaction for renewable energy community linked forward transmission or renewable energy capacity units with associated price-time priority queues in accordance with some embodiments.

**[0037]** FIG. 23 illustrates an exemplary user interface to display the status of the renewable energy community linked virtual hub to virtual hub route of a given transaction for renewable energy community linked forward transmission or renewable energy capacity units with associated price-time priority queues in accordance with some embodiments.

**[0038]** FIG. 24 illustrates an exemplary user interface to display a multi-hub, virtual-hub sequence given a start and end point for a transaction auction for renewable energy community linked forward transmission or renewable energy capacity units with associated price-time priority queues in accordance with some embodiments.

**[0039]** FIG. 25 illustrates an exemplary user interface to display open or restriction settings for auctions of the renewable energy community linked transmission or renewable energy forward market with associated price-time priority queues system and method in accordance with some embodiments.

**[0040]** FIG. 26 illustrates an exemplary user interface to display inbound and outbound renewable energy unit QR scans or UPC scans or pictures to document renewable energy community linked renewable energy units in which are delivered against the forward market renewable energy

community linked auction with associated price-time priority queues for two or more virtual hubs in accordance with some embodiments.

**[0041]** FIG. 27 illustrates an exemplary user interface to display a renewable energy community linked forward renewable energy auction for a transmission unit with associated price-time priority queues a given hub or multi-hub transmission combination in accordance with some embodiments.

**[0042]** FIG. 28 illustrates an exemplary user interface and database configuration which allow user identity or criminal record or renewable energy community linked transaction history with associated price-time priority queues to be verified in accordance with some embodiments.

**[0043]** FIG. 29 illustrates an exemplary user interface and database configuration for account balances and payment for the forward market auctions of renewable energy community linked transmission and renewable energy capacity with associated price-time priority queues between virtual hubs in accordance with some embodiments.

**[0044]** FIG. 30 illustrates an exemplary method and system configuration of multiple renewable energy community linked virtual hub transmission topology auctions with associated price-time priority queues in accordance with some embodiments.

**[0045]** FIG. 31 illustrates an exemplary method and system configuration of the integration interface with GPS map renewable energy community linked transmission routing with associated price-time priority queues such as TomTom or Apple Maps or other third party map routing software applications.

**[0046]** FIG. 32 illustrates an exemplary method and system configuration of the integration interface with GPS map renewable energy community linked transmission routing with associated price-time priority queues such as Google Maps or other third party map routing software applications.

**[0047]** FIG. 33 illustrates an exemplary method and system configuration of the integration interface with GPS map renewable energy community linked transmission routing with associated price-time priority queues such as Waze Maps or other third party map routing software applications.

**[0048]** FIG. 34 illustrates an exemplary method and system configuration of the integration interface with GPS map renewable energy community linked transmission routing with associated price-time priority queues such as Open Street Maps or other third party map routing software applications.

**[0049]** FIG. 35 illustrates an exemplary method and system configuration of the integration interface with GPS map transmission routing in a vehicle such as Tesla, VW, Audi, Daimler, GM, Ford, Honda, Fiat, Nissan, Hyundai, Renault, Suzuki, BMW, Mazda, Dongfeng, Great Wall, Geely, BAIC, Tata, Toyota or any other third party map renewable energy community linked transmission routing software with associated price-time priority queue applications inside a vehicle.

**[0050]** FIG. 36 illustrates an exemplary user interface and database configuration which allow the user to play a strategy based game overlay on the priced based transmission navigation renewable energy community linked transmission route with associated price-time priority queues.

**[0051]** FIG. 37 illustrates an exemplary user interface and database configuration which allow the user to play a strategy based game overlay on the priced based navigation renewable energy community linked transmission route with associated price-time priority queues with augmented reality.

**[0052]** FIG. 38 illustrates an exemplary user interface and database configuration which allow the user to play a strategy based game overlay on the priced based navigation renewable energy community linked transmission route with associated price-time priority queues with augmented reality.

**[0053]** FIG. 39 illustrates an exemplary user interface and database configuration which allow the user to play a strategy based game overlay on the priced based navigation renewable energy community linked transmission route with associated price-time priority queues with augmented reality.

**[0054]** FIG. 40 illustrates an exemplary user interface and database configuration which allow the user to select model, make, type, year, fuel type in configuration for renewable energy community linked price based navigation with associated price-time priority queues.

**[0055]** FIG. 41 illustrates an exemplary user interface and database configuration which displays a plurality of metrics for the performance of the user in the game overlay and general system and method of renewable energy community linked priced based navigation with associated price-time priority queues.

**[0056]** FIG. 42 illustrates an exemplary user interface and database configuration which displays a plurality of renewable energy community linked transmission routes between two user requested hubs indexed based on the pricing of renewable energy community linked transmission units or renewable energy community linked transmission unit securities with associated price-time priority queues and the associated open market transaction interface for those transformed renewable energy community linked transmission unit securities.

**[0057]** FIG. 43 illustrates an exemplary flow chart of steps in the renewable energy community linked transmission unit security data transformation and presentation of the transmission unit security with integration to navigation transmission systems with associated price-time priority queues which is another data transformation.

**[0058]** FIG. 44 illustrates an exemplary user interface of renewable energy community linked virtual hub transmission sequences with associated price-time priority queues as community object(s) to which users may subscribe.

**[0059]** FIG. 45 illustrates an exemplary user interface of an exemplary renewable energy community linked virtual hub sequence as a community object with associated price-time priority queues and the associated transmission attributes.

**[0060]** FIG. 46 illustrates an exemplary multi-virtual hub sequence renewable energy community linked object transmission combination with associated price-time priority queues.

**[0061]** FIG. 47 illustrates an exemplary menu user interface for the method and system of renewable energy community linked virtual hub transmission sequence unit market with associated price-time priority queues system and method.

**[0062]** FIG. 48 illustrates an exemplary menu user interface for the method and system of renewable energy community linked transmission price-time priority queues with delivery security sequence.

**[0063]** FIG. 49 illustrates an exemplary renewable energy unit uplink inventory interface with renewable energy community linked virtual hub transmission sequence unit market system and method with associated price-time priority queues.

**[0064]** FIG. 50 illustrates an exemplary renewable energy unit search interface with the renewable energy community linked virtual hub transmission sequence unit market with associated price-time priority queues.

#### **DETAILED DESCRIPTION**

**[0065]** The discussion below is directed to certain specific implementations. It is to be understood that the discussion below is only for the purpose of enabling a person with ordinary skill in the art to make and use any subject matter defined now or later by the patent “claims” found in any issued patent herein. In other instances, well-known methods, procedures, components, circuits and networks have not been described in detail so as not to unnecessarily obscure aspects of the embodiments.

**[0066]** It will also be understood that, although certain elements of the invention and subject matter will be described in a certain order, the order is not intended to be limiting to the invention as many steps may be performed in a plurality of configurations to accomplish the invention of using various technologies to participate, trade and transact renewable energy community linked transmission and renewable energy units with associated price-time priority queues as a physical forward commodity. It will be further understood that the terms “comprises” or “comprising,” when

used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof.

**[0067]** The terminology used in the description of the invention herein is for the purpose of describing particular embodiments only and is not intended to be limiting of the invention. As used in the description of the invention, the singular forms “a”, “an” and “the” are intended to also include the plural forms as well, unless the context clearly indicates otherwise. It will also be understood that the term “and/or” as used herein refers to and encompasses any and all possible combinations of one or more of the associated listed items. It will be further understood that the terms “comprises” and/or “comprising,” when used in this specification, specify the presence of stated features, integers, steps, operations, elements, components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof.

**[0068]** As used herein, the term “if” may be construed to mean “when” or “upon” or “in response to determining” or “in response to detecting,” depending on the context. Similarly the phrase “if it is determined” or “if [a stated condition or event] is detected” may be construed to mean “upon determining” or “in response to determining” or “upon detecting [the stated condition or event]” or “in response to detecting [the stated condition or event],” depending on the context.

**[0069]** Embodiments of a mobile computing device may be substituted for a fixed stationary computing device, a virtual reality headset, a mixed reality headset, an augmented reality headset, or an audio interfaced computer device. Embodiments may also occur on a projection computing device or in any other method or system which communicates and integrates the use of a network, community route processor, my transmission route processor, sequence route processor, global positioning system network, mobile computing devices, servers, forward renewable energy commodity forward market price-time priority auction database, price-time priority queues, grouping software instructions for hubs, securitization transformations and specifications, game servers, renewable energy community linked objects, indexing algorithms for renewable energy community linked transmission unit securities on various navigation routes, navigation servers, virtual hub topology methods and systems, transparent open access user interface pricing systems, blockchain audit and safety methods, facial recognition, fingerprint recognition or photo recognition of users for security and identity check, or algorithms for no arbitrage conditions and constraints with a user interface or graphical user interface, formatted on mobile or stationary computing devices over various mediums. The devices are connected through a network for the purpose of grouping users into virtual hub sequences of community objects as a gateway to participating, transacting or trading renewable energy community linked transmission or renewable energy capacity units between combinations of virtual hubs as a forward commodity in an auction with price-time priority queues.

**[0070]** The following paragraphs provide various techniques of various embodiments described herein such as illustrated as in FIG. 1. In one implementation as illustrated in FIG. 1, a user 110 may be assigned or may join a renewable energy community linked virtual route community 101, 103, which is a sequence of virtual transmission hub(s). In some embodiments, the renewable energy community linked virtual hub transmission sequence may be assigned a metadata tag such as #SolarITHNYC 102, which is short for a longer full name sequence such as wind energy as a renewable energy product originating in Ithaca, NY with a destination transmission waypoint of New York City, NY. In some embodiments, the origin renewable energy community linked virtual hub 105, may be a specific address and geolocation data in the city of Ithaca, NY. In some embodiments, the route 119 between the Ithaca, NY renewable energy community linked virtual hub 105 and the New York City, NY renewable energy community linked virtual hub 113 may be a sequence of two renewable energy community linked virtual hubs. In some embodiments, there may be many one or more trucks 118, cars 117, additional trucks 116, or additional cars 114 which are headed in a certain direction along the route 119. In some embodiments, additional vehicles 106, 107, 108, 109, 104, 111 may be headed the other direction along the virtual hub transmission sequence 119 between two renewable energy community linked virtual hub points 105, 113. In some embodiments virtual renewable energy hub 113 may be a home or business with solar, wind, biomass, geothermal, hydro, tidal power, hydrogen, moon, chlorophyll, plant or other renewable energy sources, whereas virtual renewable energy hub user 105 may be a home or business with a need for consumer renewable energy. In some embodiments, the transmission generation 113 or consumption waypoints 105 may include energy storage in the form of biomass, battery or other storage methods. In some embodiments, additional user(s) 112 may join the virtual hub transmission route sequence community 103. In yet another exemplary implementation, a user 110 may be assigned or may join a renewable energy community linked virtual route community 121, 123, which is a sequence of virtual hub(s). In some embodiments, the virtual hub transmission sequence may be assigned a metadata tag such as #WindKatyHOU 122, which is short for a longer full name renewable energy community linked sequence such as wind energy as a renewable energy product originating in Katy, Texas with a destination waypoint of Houston, NY. In some embodiments, the origin renewable energy community linked virtual hub 125, may be a specific address and geolocation data in the city of Katy, Texas. In some embodiments, the renewable energy community linked route 139 between the Katy, Texas virtual hub 125 and the Houston, Texas virtual hub 133 may be a sequence of two virtual hubs. In some embodiments, there may be many one or more trucks 138 along the renewable energy community linked route 139 or cars 137 or additional trucks 136 or additional cars 134 which are headed in a certain direction along the route 139. In some embodiments, additional vehicles 126, 127, 128, 129, 130, 131 may be headed the other direction along the virtual hub sequence 139 between two renewable energy community linked virtual hub points 125, 133. In some embodiments, additional user(s) 132 may join the renewable energy community linked virtual hub route sequence community 123. In yet another exemplary implementation, a user 144 may be assigned or may join a renewable energy community linked virtual transmission route community

141, 143, which is a sequence of virtual hub(s). In some embodiments, the renewable energy community linked virtual hub sequence may be assigned a metadata tag such as #WindPaloSF 142, which is short for a longer full name sequence such as a renewable energy community linked sequence such as wind energy as an renewable energy product originating in Palo Alto, California with a transmission waypoint destination of San Francisco, California. In some embodiments, the origin virtual hub 145, may be a specific address and geolocation data in the city of Palo Alto, California. In some embodiments, the renewable energy community linked route 159 between the Palo Alto, California renewable energy community linked virtual hub 145 and the San Francisco renewable energy community linked virtual hub 153 may be a sequence of two virtual hubs. In some embodiments, there may be many one or more trucks 158, cars 157, additional trucks 156, or additional cars 154 which are headed in a certain direction along the route 159. In some embodiments, additional vehicles 146, 147, 148, 149, 150, 151 may be headed the other direction along the virtual hub sequence 159 between two virtual hub points 145, 153. In some embodiments, additional user(s) 152 may join the renewable energy community linked virtual hub transmission route sequence community 143.

**[0071]** In some embodiments, renewable energy community linked virtual hub transmission sequences such as Ithaca, NY renewable energy community linked virtual hub 105 to New York City, NY renewable energy community linked virtual hub 113 are transformed into community objects, which may then be assigned a plurality of attributes in the same sense that a class in the Java programming language has methods as a part of the class object in object oriented programming. In some embodiments, the data transformation of a renewable energy community linked virtual hub sequence into a community object allows the similar benefits of the data transformations involved in computing languages with methods, where the methods help the instructions of the computer program communicate in an organized manner using modular logic. In some embodiments, renewable energy community linked virtual hub transmission sequences such as 105 to 113 #SolarITHNYC 102 may be combined with other renewable energy community linked virtual hub sequences to extend the series sequence. In some embodiments, renewable energy community linked virtual hub sequences such as 105 to 113 #SolarITHNYC 102, which is short for a longer full name sequence such as a renewable energy community linked sequence such as solar energy as a renewable energy product originating in Ithaca, New York with a transmission waypoint destination of New York, New York. In some embodiments, renewable energy community linked virtual hub sequences with price-time priority queues may be two virtual hubs that are next door to your home and only 500 feet between waypoints or they may be many miles apart. As we have discussed at length in the previous sections of the disclosed invention, while there may be hundreds, thousands, or millions of people or home generators along various renewable energy community linked transmission virtual hub sequences, there currently exists no method or system of organizing a renewable energy community linked transmission route or renewable energy community linked virtual hub sequence into a transformed data community object. The attributes of communities allow

for superior communication, accountability and even transactions to occur within a community object 101. In some embodiments, the data transformation of a renewable energy community linked virtual hub sequence community object 101 allows a plurality of network members 110, 112 to be assigned renewable energy community linked virtual transmission route communities 103 based on a plurality of attributes, prior GPS location histories, renewable energy transmission navigation search queries or other attributes. In some embodiments, renewable energy community linked virtual hub sequences which have been transformed into community objects 101 provide greater communication and organizational ability for a market to transact renewable energy community linked transmission unit(s) and provide a gateway for those transmission unit transactions as described in U.S. Patent Application Publication, 15/877,393, "Electronic Forward Market Exchange for Transmission Seats and Capacity in Transmission Spaces and Vehicles," filed January 23, 2018, the entirety of which is incorporated by reference herein.

**[0072]** In some embodiments, renewable energy community linked virtual hub sequences which have been transformed into community objects 141, 121, 101 communicate through a network 160 to associate a price-time priority queue for a transformed renewable energy community linked transmission community object using a renewable energy community linked transmission unit queue processor 162, a server 163, memory 164 and a renewable energy community linked transmission forward market database server 161. In some embodiments, the virtual hub sequences or community objects 141, 121, 101 may be independent or sequenced to construct a waypoint sequence of multiple linked renewable energy community linked virtual hub route community objects 101, 121, 141. In some embodiments, the associated price-time priority queue system for renewable energy community linked transmission units may have generated processing and user interface display instructions from the renewable energy community linked transmission unit queue processor 162, the server 163, the memory 164 and a renewable energy community linked transmission forward market database server 161 through a network 160. In some embodiments, the price-time priority queue system for transformed renewable energy community linked transmission units may process and display a plurality of time and date sequences for a plurality of forward delivery periods for renewable energy community linked transformed transmission unit(s).

**[0073]** FIG. 2 illustrates in some embodiments, an exemplary network configuration 200. In some embodiments a network of renewable energy community linked virtual transmission hubs 201, 203, 205, 207, 212, 225 may represent a renewable energy community linked virtual transmission network of a neighborhood, village, city, county, state, country, continent or even inter-virtual hub networks across geographies. Prior art as well as current inventions carry no methods or data transformations to transform renewable energy community linked transmission navigation routes 202 which are a virtual hub sequence between a series of virtual transmission hubs 201 and 203, 203 and 212, or multi-leg renewable energy community linked combinations such as 201 to 203 and 203 to 212 as a sequence. In some embodiments, user(s) 213 or the network 214 have input hundreds, thousands,

millions, or more of renewable energy community linked virtual hubs 201, which may be renewable energy generation at a home or business or renewable energy consumption at a home or business, to form a network topology for renewable energy community linked transmission virtual hub sequences 241. In some embodiments, the renewable energy community is linked transmission data transformation to a series of virtual transmission hubs 245, 253 allows for network structure 201, 203, 212, 205, 207, 225, 212 and organization, such as a hub and spoke model which is heavily utilized within the electric power and airline transmission industry, or a plurality of other competing network topologies which are not dependent on road pathways. While hub and spoke transmission systems are common for large scale power transmission networks and airplane transmission or bus and train networks, they do not exist for renewable energy networks in an organized manner. In some embodiments, renewable energy community linked virtual transmission hub topologies 241 over transmission structures 259 allow for the benefits of public transmission networks to be combined with private transmission networks. In some embodiments, the renewable energy community linked virtual transmission hub networks 201, 203, 212, 205, 207, 225, 212 have been input into the network 214. In some embodiments, the topologies of the virtual hub networks 201, 203, 212, 205, 207, 225, 212 then move for further data transformation in the community route processor 217, which transforms subsections of the renewable energy community linked transmission network topologies 201, 203, 212, 205, 207, 225, 212 into a renewable energy community linked virtual hub sequence 241. As shown, the virtual hub sequence 241 represents two addresses 245, 253 along a renewable energy community linked virtual hub sequence 259 such as Palo Alto, California 245 to San Francisco, California 253, where each renewable energy community linked virtual hub address 245, 252 corresponds with a physical address. Renewable energy community linked virtual route communities 243 may be one to one, one to two, or one to many and any superset or subset combination thereof. The My Transmission Route Processor 218 further processes renewable energy community linked virtual hub combination and renewable energy community linked virtual transmission hub sequences into a specific network member's account on the network member database server 222. In some embodiments, the renewable energy community linked sequence route processor 221 may connect a plurality of virtual hub sequences 201, 203 205, 207 in a logical order to complete a path combination 201 to 207 for renewable energy community linked navigation or community object construction. In some embodiments, community objects may be made from simple direct transmission path routes 202 between two virtual hubs 201 and 203 or multi-virtual hub constructions between two renewable energy community linked virtual hub transmission sequences 201 to 207 by transmission waypoints of 201 to 203 to 212 to 207, or any combination or superset or subset thereof. In some embodiments, the renewable energy community linked virtual route community objects 243 allow attributes to be assigned to the community objects. In some embodiments, users may be assigned to a plurality of renewable energy community virtual hub sequence objects 241. In some embodiments, network members 213 may be assigned to a renewable energy community linked virtual route community 241 because the user(s) transmission route history on the GPS satellite network 215 suggests the transmission route has overlap with

renewable energy community linked virtual hub route transmission sequences the user has used or queried on various search methods on the system for the renewable energy product. In some embodiments, the search interface interprets a keyword, such as solar, which then queries the renewable energy community linked virtual route object, which then indexes search results based on the following priority of renewable energy, then geolocation, then renewable energy community linked virtual route object price-time priority queue. In some embodiments the user 213 may use a CPU client 290, which is a visual, audio or other type of computing interface with the network 226 of renewable energy community linked navigation route communities 243. In some embodiments, the renewable energy community linked transmission forward market database server 271 may interface with a processor 219, sequence route processor 221, my route processor 218, or renewable energy community linked community route object processor 217 to process a plurality of price-time priority queues for transformed transmission unit(s). In some embodiments, a plurality of mobile generation vehicles 258, 257, 256, 254, 246, 247, 248, 249, 250, 251 may be in route between a first virtual hub 245 and a second said virtual hub 253. In some embodiments, vehicles 257, 247 may be moving in opposite directions along a route 259. In some embodiments, a truck 258 may contain a transformed transmission unit(s), a car 251 may contain a transformed transmission unit(s), a bus 250 may contain a transformed transmission unit(s), or a plurality of other vehicle types may contain a transformed renewable energy community linked transmission unit(s) under a specification which is substitutable. In some embodiments, the renewable energy community linked virtual hub or community object sequence of waypoints may be reversed from transmission waypoint 245 to transmission waypoint 253 to transmission waypoint 253 to transmission waypoint 245. In some embodiments, the renewable energy community linked route object 241 or renewable energy linked community route object sequences 101, 121, 141 may have an infinite series of associated price-time queues, whereby any subset or superset comprise a forward market for transformed renewable energy community linked transmission unit(s), transformed renewable energy community linked route object(s) and the associated transformed renewable energy community linked transmission unit(s). In some embodiments renewable energy community linked virtual route communities 241, 101, 121, 141 are transformed data structures that form objects which community users 213 may subscribe, friend, join, or follow to more efficiently have news and understanding for the renewable energy community linked transmission unit transactions, as described in U.S. Patent Application Publication, 15/877,393, "Electronic Forward Market Exchange for Transmission Seats and Capacity in Transmission Spaces and Vehicles," filed January 23, 2018, the entirety of which is incorporated by reference herein.

**[0074]** FIG. 3 illustrates exemplary user price-time priority queue 300 for transacting or matching transformed renewable energy community linked transmission unit data, participating, transacting and/or trading renewable energy community linked transmission, and representing the transformed renewable energy community linked transmission unit value as a homogeneous asset specification or renewable energy as a physical forward commodity security between combinations of virtual hubs

over various transmission modes and nodes. In some embodiments, user transformed renewable energy community linked transmission unit(s) or transformed renewable energy community linked transmission unit(s) associated with renewable energy community linked route community objects interface 300 includes the following instructions, transformations and elements, or a subset or superset thereof:

**[0075]** exemplary transformed renewable energy community linked transmission unit price-time priority sell queue 320;

**[0076]** exemplary transformed renewable energy community linked transmission unit price-time priority buy queue 321;

**[0077]** exemplary transformed renewable energy community linked transmission unit price priority bucket 305 in the transmission unit buy queue of \$5.10;

**[0078]** exemplary transformed renewable energy community linked transmission unit price priority bucket 306 in the transmission unit buy queue of \$5.30;

**[0079]** exemplary transformed renewable energy community linked transmission unit price priority bucket 310 in the transmission unit buy queue of \$5.60;

**[0080]** exemplary transformed renewable energy community linked transmission unit price priority bucket 314 in the transmission unit sell queue of \$5.70;

**[0081]** exemplary transformed renewable energy community linked transmission unit price priority bucket 315 in the transmission unit sell queue of \$5.80;

**[0082]** exemplary transformed renewable energy community linked transmission unit price priority bucket 316 in the transmission unit sell queue of \$6.60;

**[0083]** exemplary transformed renewable energy community linked transmission unit price-time priority buy price 304 in the first time position of the price priority bucket 305 of \$5.10;

**[0084]** exemplary transformed renewable energy community linked transmission unit price-time priority buy price 303 in the second time position of the price priority bucket 305 of \$5.10;

**[0085]** exemplary transformed renewable energy community linked transmission unit price-time priority buy price 302 in the third time position of the price priority bucket 305 of \$5.10;

**[0086]** exemplary transformed renewable energy community linked transmission unit price-time priority buy price 307 in the first time position of the price priority bucket 306 of \$5.30;

**[0087]** exemplary transformed renewable energy community linked transmission unit price-time priority buy price 309 in the first time position of the price priority bucket 310 of \$5.60;

**[0088]** exemplary transformed renewable energy community linked transmission unit price-time priority buy price 308 in the second time position of the price priority bucket 310 of \$5.60;

**[0089]** exemplary transformed renewable energy community linked transmission unit price-time priority sell price 311 in the first time position of the price priority bucket 314 of \$5.70;

**[0090]** exemplary transformed renewable energy community linked transmission unit price-time priority sell price 312 in the second time position of the price priority bucket 314 of \$5.70;

**[0091]** exemplary transformed renewable energy community linked transmission unit price-time priority sell price 313 in the third time position of the price priority bucket 314 of \$5.70;

**[0092]** exemplary transformed renewable energy community linked transmission unit price-time priority sell price 318 in the first time position of the price priority bucket 315 of \$5.80;

**[0093]** exemplary transformed renewable energy community linked transmission unit price-time priority sell price 319 in the second time position of the price priority bucket 315 of \$5.80;

**[0094]** exemplary transformed renewable energy community linked transmission unit price-time priority sell price 317 in the first time position of the price priority bucket 316 of \$6.60;

**[0095]** exemplary transformed renewable energy community linked transmission unit price time priority limit order book ("LOB") 325 is represented by the vector  $q(t)$  301, such that the  $i$ -th coordinate for  $i > 0$ ,  $q_i(t)$ , is the number of sell limit orders of transformed transmission units that are waiting in the LOB at time  $t$  a price  $i\delta$  ( $\delta$  is the price unit tick size of the transformed renewable energy community linked transmission unit), where the number of buy limit orders for transformed renewable energy community linked transmission units at  $i\delta$  are represented with a negative sign  $q_i(t)$ ;

**[0096]** exemplary benchmark price 326 of all sell limit orders at time  $t$  are computed as  $s(t) = s(q(t)) = \min ( \min \{ 0 < i\delta : q_i(t) > 0 \} )$ , if  $q_i(t)$  is less than or equal to 0 for all  $i > 0$ , then  $s(q(t)) = \text{infinity}$ ;

**[0097]** exemplary benchmark price 327 of all buy limit orders at time  $t$  are computed as  $b(t) = b(q(t)) = \max ( \max \{ i\delta > 0 : q_i(t) < 0 \} )$ , if  $q_i(t)$  is greater than or equal to 0 for all  $i > 0$ , then  $b(q(t)) = \text{negative infinity}$ ;

**[0098]** exemplary order match 328 in the transformed renewable energy community linked transmission unit limit order book where  $s(t) = b(t)$ , which then moves the method and system to the

matched transformed renewable energy community linked transmission unit limit order confirmation and delivery process;

**[0099]** exemplary limit order book status of no order match 329, where  $s(t) > b(t)$ ;

**[00100]** exemplary limit order book  $i$ -th  $q_i(t)$  element 330 of LOB is cancelled, remove from queue;

**[00101]** exemplary  $i$ -th  $q_i(t)$  element is a new transformed renewable energy community linked transmission unit order 331 in LOB, insert into respective limit order buy queue 321 or limit order sell queue 320 with priority of price, then time into the price time priority queues 300.

**[00102]** In some embodiments, the price – time priority queue 300 for transformed renewable energy community linked transmission units may be assigned to a renewable energy community linked commute community object 241, which is a waypoint sequence of transformed renewable energy community linked transmission units. In some embodiments, the price – time priority queue 300 may be assigned to two waypoints as an renewable energy community linked commute community object 241, or the price - time prior queue may be assigned to an renewable energy community linked commute community waypoint object sequence of many waypoints 203 to 205 to 207 to 212 which have been added together to form one continuous renewable energy community linked commute community object 241 and respective price – time priority queue for transformed renewable energy community linked transmission units through processing instructions from the renewable energy community linked Community Route Processor 217 and renewable energy community linked Sequence Route Processor 221 via the network(s) 226, 214, and 215. In some embodiments, the limit order book 301 vector may be assigned to a specific date and time for the renewable energy community linked commute community waypoint object, which is a forward market price for transformed renewable energy community linked transmission unit(s) 271 and renewable energy community linked commute community waypoint object(s) 241. In some embodiments, a specific transformed renewable energy community linked transmission unit price – time priority queue limit buy order 304 with a specific price stamp bucket 305 of \$5.10 may be cancelled. If the order 304 is cancelled, then the 303 price – time priority limit order book buy queue price moves to the higher price – time priority queue position of 304 and price - time priority price of 302 moves to position 303. In some embodiments, the price – time priority limit order sell price 319 of price – time priority bucket price 315 of \$5.80 may be cancelled. If 319 price – time priority of the transformed renewable energy community linked transmission unit is cancelled, then order 317 moves to a higher position in the overall transformed renewable energy community linked transmission queue 320 even though the limit order book price 317 remains in the price bucket of 316 which is \$6.60. In some embodiments, price – time priority insertion may occur where a new order is inserted into either the transformed renewable energy community linked transmission unit buy queue 320 or transformed renewable energy community linked transmission unit sell queue 321. In some embodiments, by example but not limiting by example, a new price – time limit order for a transformed renewable energy

community linked transmission unit may be inserted as a sell order at a price of \$5.70 at position 313, which would then assume order 312 was also at a price of \$5.70 and that order 312 was placed with a time that was before order 313 was placed. In the aforementioned example of the price – time order insertion of 313, price – time orders of 319, 318 and 317 have moved lower in their relative position even though they remain in distinctly different price buckets of 315 and 316, respectively. For the price – time priority queue 300, price is first priority, then time stamp in the price – time priority queue 300 for transformed renewable energy community linked transmission units.

**[00103]** In some embodiments, the lowest selling price  $s(t)$  326 may equal the highest buying price  $b(t)$  327, in which case the highest transformed renewable energy community linked transmission unit buy queue price bucket 310 is equal to the lowest transformed renewable energy community linked transmission unit sell queue 320 selling bucket price 314. In the example 300 of the limit order book 301, but not limiting by example, the highest transformed renewable energy community linked transmission unit buy price 310 of \$5.60 is lower than the lowest renewable energy community linked transmission unit sell queue 320 lowest selling bucket 314 of \$5.70, so no match occurs because  $s(t) > b(t)$  329. In some embodiments, many order insertions 331 or order cancellations 330 may occur for transformed renewable energy community linked transmission units from the renewable energy community linked transmission forward market database server 271 associated with renewable energy community linked community objects which are series of waypoints 241.

**[00104]** In some embodiments, the LOB 325 for transformed renewable energy community linked transmission units may contain many different types of instruction structures and specifications such as limit orders, market orders, market if touched orders, snap market orders, snap mid orders, snap to primary orders, peg to benchmark orders, or adaptive custom orders, which are custom customer designed instructions that are all standard order types for anyone skilled in the art of markets. In some embodiments, the LOB 325 for transformed transmission units may also contain instructions for order times such as good for the day, good till cancelled, immediate or cancel, good till date, day till cancelled or a plurality of additional custom instructions for the timing of the order of the transformed transmission unit in the LOB 325 that is associated with a renewable energy community linked commute community object 241. In some embodiments, a plurality of additional instructions and specifications may also be unique to each transformed renewable energy community linked transmission unit LOB 325 such as automobile mode, air mode, autonomous vehicle mode, bike mode, boat mode, bus mode, drone mode, limo mode, motorcycle mode, moped mode, shuttle mode, spaceship mode, subway mode, taxi mode, train mode, fastest optimized mode which may combine many modes or a single mode for a waypoint commute community object 241 or waypoint renewable energy community linked sequence 201 to 203 to 205 to 212 to 207 of many renewable energy community linked commute communities 241.

**[00105]** In some embodiments, the LOB 325 may be assigned to transformed renewable energy community linked transmission unit packages that have associated renewable energy community

linked commute community objects 241. In some embodiments, the LOB 325 for transformed transmission units may be assigned to cargo such as a trailer of a rig or container of a boat or container on a truck or any type of cargo that takes up the space of a transformed renewable energy community linked transmission unit. In some embodiments, the LOB 325 may even be assigned to the virtual transformed renewable energy community linked transmission unit which would be space along a packet moving medium such as a telecom pipeline, satellite telecom or wireless telecom that moves packets of power which are transformed transmission units. In some embodiments, the LOB 300 may be assigned to a home or business at a certain transmission waypoint 245, 253, 4804.

**[00106]** FIG. 4 illustrates exemplary user interfaces 210 of a mobile computing device for participating, transacting and/or trading renewable energy community linked transmission as a physical forward data transformed renewable energy community linked transmission unit commodity or security between combinations of virtual hubs which may be community objects 241 over various transmission modes. In some embodiments, user interface 210 includes the following elements, or a subset or superset thereof:

**[00107]** exemplary renewable energy community linked virtual hub combination 411;

**[00108]** exemplary renewable energy community linked virtual hub origin/from location 410 with users 412 within the renewable energy community linked virtual hub location 410;

**[00109]** exemplary specification summary of the market, level of service and time of delivery commencement 427, in this particular embodiment the GUI 210 has moved to an international renewable energy community linked virtual market hub combination market such as within London;

**[00110]** exemplary mode of renewable energy community linked transmission capacity type 430;

**[00111]** exemplary renewable energy community linked transaction summary of the last trade price-time priority queue auction quantity and price 428 in the local currency or another currency set by the user 110;

**[00112]** exemplary renewable energy community linked virtual hub destination/to location 422 and user who is being delivered on the renewable energy community linked transmission or renewable energy capacity unit 423;

**[00113]** exemplary bid/buy quantity title header 415 for an exemplary renewable energy community linked virtual transmission hub market;

**[00114]** exemplary bid/buy price title header 416 for an exemplary renewable energy community linked virtual transmission hub market;

**[00115]** exemplary offer/sell price title header 419 for an exemplary renewable energy community linked virtual transmission hub market;

**[00116]** exemplary offer/sell quantity title header 426 for an exemplary renewable energy community linked virtual transmission hub market;

**[00117]** exemplary bid/buy quantity 414 for the best bid quantity for the associated LOB 325 from a plurality of users 110 for an exemplary respective transmission capacity renewable energy community linked virtual hub combination that has undergone a plurality of data transformations in the method;

**[00118]** exemplary bid/buy quantity 413 for the second-best bid quantity for the associated LOB 325 from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method;

**[00119]** exemplary bid/buy price 418 for the best bid price for the associated LOB 325 from a plurality of users 110 for an exemplary respective renewable energy community linked transmission capacity virtual hub combination that has undergone a plurality of data transformations in the method;

**[00120]** exemplary bid/buy price 417 for the second-best bid price for the associated LOB 325 from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method;

**[00121]** exemplary offer/sell price 421 for the best offer price for the associated LOB 325 from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method;

**[00122]** exemplary offer/sell price 420 for the second-best offer price for the associated LOB 325 from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method;

**[00123]** exemplary offer/sell quantity 425 for the best offer quantity for the associated LOB 325 from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method;

**[00124]** exemplary offer/sell quantity 424 for the second-best offer quantity for the associated LOB 325 from a plurality of users 110 for an exemplary respective renewable energy community linked

transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method;

**[00125]** exemplary safety dispatch “911” button 429 to enact video and audio recording of the user 110 environment and dispatch of that information to authorities.

**[00126]** exemplary hamburger menu button 270 to move back to menu options and settings away from the participation, transaction, trading GUI 210 embodiment.

**[00127]** In some embodiments the user 110 may enter a renewable energy community linked transaction quantity and price for transformed renewable energy community linked transmission or renewable energy capacity unit securities to participate, transact and/or trade by the GUI 210 detecting user 110 contact with a bid/buy price 418 or offer/sell price 421. The GUI 210 detects user 110 contact with any of the GUI 210 buttons which have been aforementioned. The GUI 210 may detect user contact 110 with any of the GUI 210 buttons 418, 417, 420, 421 or user 110 voice interface with the application 210 method. Upon user 110 contact with buttons on the GUI 210, instructions are instantiated which allows the user 110 to change the specifications of the respective renewable energy community linked virtual hub combination 411. A plurality of prices and markets may be presented based on a plurality of contract specifications. In some embodiments, the best bid/buy price 418 may be moving up in price or down in price depending on the market conditions at any given time. In some embodiments the last auction trade or last transacted price for a given specification is listed to help the user 110 understand how the market is moving so that the user 110 may submit a competitive offer/selling price 421 or bid/buying price 417. In some embodiments, users 110 may adjust settings of the GUI 210 to show more bid/buying prices 417 or more offer/selling prices 420. In some embodiments the matrix of renewable energy community linked market quantities and prices 413, 414, 415, 416, 417, 418, 419, 420, 421, 424, 425, 426 may be referred to as market depth in the GUI 210 embodiment. In some embodiments the number of users 110 may be displayed as user icons 412 or 423 for the amount of people logged in which desire to transact, trade or participate in a given renewable energy community linked virtual hub 410 to renewable energy community linked virtual hub 422 combination auction with price-time priority queues. In some embodiments, users 110 may select the renewable energy community linked transmission mode 430 such that the user allows a market for only one form of transformed renewable energy community linked transmission capacity as a commodity or security or the user 110 may allow the system to show multiple forms of transformed renewable energy community linked transmission capacity between two virtual renewable energy community linked transmission capacity hubs 410, 411, 422. In some embodiments the GUI 210 may detect a user 110 selecting the 911 button 429 which may activate voice and video recording functions on the mobile or stationary device and transmit the data with a confirmation from the user 110 to the authorities to provide enhanced security while participating, transacting or trading forward transformed renewable energy community linked transmission or renewable energy as a commodity or security. In some embodiments the

user may toggle between the GUI 210 market view screen in FIG. 4 and other menu 270 options and settings by the user 110 selecting the hamburger button 270 and the GUI 210 detecting the user 110 input or contact. In some embodiments the GUI 210 may instantiate instructions in the memory of the mobile computing device which then transmits renewable energy community linked transmission or renewable energy capacity data 241 through the network 226, 214 or wireless GPS network 215 to call upon instruction routines and instruction sub-routines on the renewable energy community linked transmission forward market database server 271, virtual hub database server 223, network member database server 222, renewable energy community route processor 217, my route virtual hub processor 218, application processor 219, server 220, sequence route processor 221, and memory 224 which all interface together to make one system which may deliver renewable energy community linked transmission or renewable energy capacity units to users 110 from and to a plurality of virtual hubs 410, 422 with a plurality of specifications 427 at specific market prices.

**[00128]** FIG. 5 illustrates an exemplary user interface 210 for listing timing specifications 510 on a portable multifunction device (e.g., a mobile computing device) in accordance with some embodiments. In some embodiments, user interface 210 includes the following elements, or a subset or superset thereof:

**[00129]** origin/from virtual hub timing (a data transformation) 510;

**[00130]** specification of quality of renewable energy community linked transmission capacity (a data transformation) 520;

**[00131]** destination/To virtual hub (a data transformation) 530;

**[00132]** setting button 540 to transmit the timings 510 and quality specification grade 520 (a data transformation);

**[00133]** hamburger button 270 to instruct the GUI 210 to take the user 110 to the menu screen.

**[00134]** In some embodiments, the user 110 may select a plurality of timing options in the timing selection specification 510. The timing specification constraint may be the time at which the transformed renewable energy community linked transmission or renewable energy capacity unit security departs from the origin/from renewable energy community linked virtual hub 410. As in any commodity market, if a user 110 is late and they have purchased the renewable energy community linked transmission capacity unit, the user must still pay for the renewable energy community linked transmission or renewable energy capacity unit regardless if the user 110 is present at the time of delivery, departure or not. The user has the option if they know they will be late to sell back the renewable energy community linked transmission or renewable energy capacity unit to the market at the then current price. Accordingly, for the purpose of example, but not limiting by example, if a user 110 bought a transformed renewable energy community linked transmission capacity unit security

for £9.90 421 and the user 110 realized they would be late for the 8am departure specification 427, then the user 110 may either pay for the renewable energy community linked transmission unit even though the user 110 was present and did not take delivery of the renewable energy community linked transmission unit security, or the user 110 may preemptively sell back the renewable energy community linked transmission capacity unit security to the market at the then current bid price 418. The user 110 would then have offset their obligation in a timely manner and another user 110 on the network 214, 226 may then purchase the available renewable energy community linked transmission or renewable energy capacity unit security. By eliminating the initial obligation by an creating an offset obligation, the additional data renewable energy community linked transformation concepts such as cost of cover, liquidated damages or force majeure are not employed by the method. In some embodiments, virtual renewable energy community linked transmission or renewable energy hub combination units may or may not have the available liquidity if the user 110 were to wait too long before delivery of the renewable energy community linked transmission capacity unit to make an adjustment and therefore may need to take delivery even if they are not present. In some embodiments, the user 110 may select a grade specification 520. For the purpose of example, but not limiting by example, a plurality of specification grades may exist, such as "premium" which may be defined by certain classes of renewable energy community linked transmission capacity units and/or certain quality levels. Similarly, for the purpose of example, but not limiting by example, a plurality of specification grades may exist such as "intermediate" or "basic" which may be defined by certain classes of renewable energy community linked transmission or renewable energy capacity unit securities and/or certain quality levels. In some embodiments, the user 110 may select the destination/to renewable energy community linked virtual hub 530 to change the renewable energy community linked virtual hub combination. In some embodiments, the user 110, may contact the "set" button 540 to transmit the transformed renewable energy community linked transmission capacity unit security specification data by using the GUI 210 detecting the user 110 input or contact. In some embodiments the GUI 210 may instantiate instructions in the memory of the mobile computing device which then transmits renewable energy community linked transmission or renewable energy capacity data 241 through the network 226, 214 or wireless GPS network 215 to call upon instruction routines and instruction sub-routines on the renewable energy community linked transmission forward market database server 271, virtual hub database server 223, network member database server 222, renewable energy community route processor 217, my route virtual hub processor 218, application processor 219, server 220, sequence route processor 221, and memory 224 which all interface together to make one system which may deliver renewable energy community linked transmission or renewable energy capacity units to users 110 from and to a plurality of virtual hubs 410, 422 with a plurality of specifications at specific market prices.

**[00135]** FIG. 6 illustrates an exemplary user interface 210 for selecting the term transformation specification 610 on a portable multifunction device (e.g., a mobile computing device) in accordance

with some embodiments. In some embodiments, user interface 210 includes the following elements, or a subset or superset thereof:

**[00136]** term specification options (a data transformation) 610;

**[00137]** specification of quality of renewable energy community linked transmission or renewable energy capacity (a data transformation) 620;

**[00138]** destination/To renewable energy community linked virtual hub (a data transformation) 630;

**[00139]** setting button 640 to transmit the term 610 and quality specification grade (a data transformation) 620;

**[00140]** calendar button 650 to select specification start dates and end dates for a plurality of renewable energy community linked virtual transmission or renewable energy hub combinations (a data transformation);

**[00141]** hamburger button 270 to instruct the GUI 210 to take the user 110 to the menu screen.

**[00142]** In some embodiments, the term specification 610 may be used to participate, transact and/or trade in a specific renewable energy community linked virtual hub combination for a specific time period specification. Users 110 may set the term to daily, weekly, monthly, annual, weekdays, weekends, specific days such as Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday or any combination of term selections the user 110 sets as relevant for participating, transacting or trading in the transformed renewable energy community linked transmission or renewable energy capacity unit securities market. Not limiting by example, but for use of illustrating a possible subset of term selections, the user 110 may select “weekdays” 610 during a specific calendar time period 650 of a given year. In some embodiments, specific time start dates and end dates may be set by the user with the calendar button 650. In some embodiments a user 110 may select “Mondays” 610 within a specification date window 650 (a data transformation). In some embodiments, the user 110 may select “weekends” 610 during a specification calendar window of dates 650 (a data transformation). In some embodiments, the user 110, may contact the “set” button 640 to transmit the transformed renewable energy community linked transmission or renewable energy capacity unit specification data by using the GUI 210 detecting the user 110 input or contact. In some embodiments the GUI 210 may instantiate instructions in the memory of the mobile computing device which then transmits renewable energy community linked transmission or renewable energy capacity data 241 through the network 226, 214 or wireless GPS network 215 to call upon instruction routines and instruction sub-routines on the renewable energy community linked transmission forward market database server 271, virtual hub database server 223, network member database server 222, renewable energy community route processor 217, my route virtual hub processor 218, application processor 219, server 220, sequence route processor 221, and memory

224 which all interface together to make one system which may deliver renewable energy community linked transmission or renewable energy capacity units to users 110 from and to a plurality of virtual hubs 410, 422 with a plurality of specifications at specific market prices.

**[00143]** FIG. 7 illustrates an exemplary user interface 210 for selecting order time in force order types 710 (a data transformation) as well as order types 720 (a data transformation) on a portable multifunction device (e.g., a mobile computing device) in accordance with some embodiments. In some embodiments, user interface 210 includes the following elements, or a subset or superset thereof:

**[00144]** order time in force specification options (a data transformation) 710;

**[00145]** order type specification options (a data transformation) 720;

**[00146]** setting button 740 to transmit the order time in force specification 710 and Order type specification option 720 (a data transformation);

**[00147]** hamburger button 270 to instruct the GUI 210 to take the user 110 to the menu screen.

**[00148]** In some embodiments, user interface 210 may be used by the user 110 to select a plurality of order time in force specifications 710. In some embodiments, order time in force selections 710 may include a subset or superset thereof: day (DAY) order; good till cancelled order (GTC); immediate or cancel order (IOC); good till date order (GTD); day till cancelled order (DTC). Order time in force specifications 710 may be used to designate how long a user 110 order may be valid. In some embodiments, the GUI 210 may display the definitions of a plurality of order time in force specification 710 characteristics so that the user 110 may select the appropriate order time in force specification 710 for the renewable energy community linked transmission or renewable energy capacity unit that the user 110 may participate, transact and/or trade. In some embodiments, the user interface 210 may be used to select the order type specifications 720. In some embodiments, order type selections 720 may include a subset or superset thereof: Limit, Market, Market if Touched (MIT); Snap to Market; Snap to Mid; Snap to primary; Peg to benchmark; and/or adaptive custom. In some embodiments, the GUI 210 may display the definitions of a plurality of order types specification 720 characteristics so that the user 110 may select the appropriate order type specification 720 for the renewable energy community linked transmission or renewable energy capacity unit that the user 110 may participate, transact and/or trade. In some embodiments, the user 110, may contact the “set” button 740 to transmit the renewable energy community linked transmission or renewable energy capacity unit specification data by using the GUI 210 may instantiate instructions in the memory of the mobile computing device which then transmits renewable energy community linked transmission or renewable energy capacity data 241 through the network 226, 214 or wireless GPS network 215 to call upon instruction routines and instruction sub-routines on the renewable energy community linked transmission forward market database server 271, virtual hub database server

223, network member database server 222, renewable energy community route processor 217, my route virtual hub processor 218, application processor 219, server 220, sequence route processor 221, and memory 224 which all interface together to make one system which may deliver renewable energy community linked transmission or renewable energy capacity units to users 110 from and to a plurality of virtual hubs 410, 422 with a plurality of specifications at specific market prices.

**[00149]** FIG. 8 illustrates an exemplary user interface 210 for selecting renewable energy community linked virtual hub transmission capacity unit modes 810 (a data transformation) on a portable multifunction device (e.g., a mobile computing device) in accordance with some embodiments. In some embodiments, user interface 210 includes the following elements, or a subset or superset thereof:

**[00150]** virtual hub renewable energy community linked transmission capacity unit modes 810 (a data transformation);

**[00151]** setting button 840 to transmit the renewable energy community linked virtual hub transmission capacity unit modes 810;

**[00152]** hamburger button 270 to instruct the GUI 210 to take the user 110 to the menu screen.

**[00153]** In some embodiments, user interface 210 may be used by the user 110 to select a plurality of renewable energy community linked virtual hub transformed transmission capacity unit security modes 810 specifications. In some embodiments, renewable energy community linked virtual hub transmission capacity unit mode selections 810 may include a subset or superset thereof: Automobile 811; air 812; autonomous vehicle 813; bike 814; boat 815; bus 816; drone 817; limo 818; motorcycle 819; moped 820; shuttle 821; space 822; subway 823; business 824; train 825; fastest optimized 826; cheapest route 827; home 828; cargo 829; and virtual 830. In some embodiments, virtual hub renewable energy community linked transmission capacity unit modes are simply that a user 110 would have a virtual transmission or renewable energy capacity unit on their home 828 or business 824 as examples, but not limiting by example. In some embodiments, the user 110 may bid on cargo 829 or home renewable energy capacity 828 in any mode or multi-modal of transformed renewable energy community linked transmission or renewable energy capacity between a combination of virtual renewable energy community linked transmission hub locations. In some embodiments, the user 110 may use one or multiple modes of renewable energy community linked transmission between a combination of renewable energy community linked virtual transmission hub capacity points. In some embodiments, the user 110, may contact the “set” button 840 to transmit the transformed renewable energy community linked transmission or renewable energy capacity unit specification mode data by using the GUI 210 may instantiate instructions in the memory of the mobile computing device which then transmits renewable energy community linked transmission or renewable energy capacity data 241 through the network 226, 214 or wireless GPS network 215 to

call upon instruction routines and instruction sub-routines on the renewable energy community linked transmission forward market database server 271, virtual hub database server 223, network member database server 222, renewable energy community route processor 217, my transmission route virtual hub processor 218, application processor 219, server 220, transmission sequence route processor 221, and memory 224 which all interface together to make one system which may deliver renewable energy community linked transmission or renewable energy capacity units to users 110 from and to a plurality of virtual hubs 410, 422 with a plurality of specifications at specific market prices.

**[00154]** FIG. 9 illustrates an exemplary user interface 210 for identifying the distance the user 110 is from the renewable energy community linked virtual hub from a map and distance perspective on a portable multifunction device (e.g., a mobile computing device) in accordance with some embodiments. In some embodiments, user interface 210 includes the following elements, or a subset or superset thereof:

**[00155]** virtual hub renewable energy community linked transmission capacity unit ingest display 910;

**[00156]** virtual hub renewable energy community linked transmission capacity unit ingest address 920;

**[00157]** virtual hub renewable energy community linked transmission capacity unit delivery address 930;

**[00158]** virtual hub renewable energy community linked transmission capacity ingest target zone 960;

**[00159]** virtual hub renewable energy community linked transmission capacity delivery target zone 950;

**[00160]** setting button 940 to transmit the renewable energy community linked virtual hub transmission capacity unit addresses 920, 930;

**[00161]** hamburger button 270 to instruct the GUI 210 to take the user 110 to the menu screen.

**[00162]** In some embodiments, user interface 210 may be used by the user 110 to select a plurality of renewable energy community linked virtual hub transmission capacity unit address 910 specifications. In some embodiments, renewable energy community linked virtual hub transmission or renewable energy capacity unit address selections 910 may include a subset or superset thereof: renewable energy community linked virtual hub ingest address 920; renewable energy community linked virtual hub delivery address 930. In some embodiments, renewable energy community linked virtual hub transmission capacity unit addresses 920 and 930 may be changed before delivery of a

renewable energy community linked virtual transmission capacity unit. The user interface map and address GUI 910 displays the users 110 distance from the address of the renewable energy community linked virtual transmission or renewable energy hub as well as a map to assist the user 110 in finding the location of the renewable energy community linked virtual transmission hub. In some embodiments, user interface 210 displays the virtual hub pick up zone 960 on a map in context to the user's 110 location. In some embodiments, user interface 210 displays the virtual hub drop off zone 950 on a map in context to the user's 110 location. In some embodiments, the user 110, may contact the "set" button 940 to transmit the renewable energy community linked transmission capacity unit specification address data by using the GUI 210 may instantiate instructions in the memory of the mobile computing device which then transmits renewable energy community linked transmission or renewable energy capacity data 241 through the network 226, 214 or wireless GPS network 215 to call upon instruction routines and instruction sub-routines on the renewable energy community linked transmission forward market database server 271, virtual hub database server 223, network member database server 222, renewable energy community route processor 217, my route virtual hub processor 218, application processor 219, server 220, sequence route processor 221, and memory 224 which all interface together to make one system which may deliver renewable energy community linked transmission or renewable energy capacity units to users 110 from and to a plurality of virtual hubs 410, 422 with a plurality of specifications at specific market prices.

**[00163]** FIG. 10 illustrates an exemplary user interface 210 for identifying the constraints and no arbitrage settings 1010 the user 110 selects on a portable multifunction device (e.g., a mobile computing device) in accordance with some embodiments (multiple data transformations). In some embodiments, user interface 210 includes the following elements, or a subset or superset thereof:

**[00164]** constraint and no arbitrage settings 1010 (a data transformation);

**[00165]** setting button 1040 to transmit the renewable energy community linked virtual hub transmission capacity constraints and no arbitrage settings;

**[00166]** hamburger button 270 to instruct the GUI 210 to take the user 110 to the menu screen.

**[00167]** In some embodiments, user interface 210 may be used by the user 110 to select a plurality of renewable energy community linked virtual hub transmission capacity constraint and no arbitrage settings 1010. In some embodiments, renewable energy community linked virtual hub transmission capacity unit constraint and no arbitrage selections 1010 may include a subset or superset thereof: cheapest route 1011 (a data transformation); single mode 1012 (a data transformation); multi-mode 1013 (a data transformation); fastest route 1014 (a data transformation); most scenic 1015 (a data transformation); highest rating 1016 (a data transformation); most available 1017 (a data transformation); highest volume 1018 (a data transformation); most frequent 1019 (a data transformation); service level 1020 (a data transformation); and security and safety 1021 (a data transformation).

transformation). In some embodiments, the “cheapest route setting” 1011 instantiates instructions in the memory of the CPU 290 to complete a standard cost minimization linear program to assist the user 110 to complete the renewable energy community linked transmission capacity unit between two virtual hubs with the lowest cost. In some embodiments, the “single mode” 1012 instantiates instructions in the memory of the CPU 290 to set a constraint for the user 110 to complete the renewable energy community linked transmission capacity unit between two virtual hubs with the only one mode of transmission. In some embodiments, the “multi mode” 1013 instantiates instructions in the memory of the CPU 290 to set a constraint for the user 110 to complete the renewable energy community linked transmission capacity unit between two virtual hubs with more than one mode of transmission. In some embodiments, the “fastest route” 1014 instantiates instructions in the memory of the CPU 290 to complete standard linear programming equation to minimize travel time for the user 110 to complete the renewable energy community linked transmission capacity unit between two virtual hubs with the shortest time. In some embodiments, the settings 1010 may set instructions for the renewable energy community linked price based transmission navigation routing index and GUI presentation on the user(s) 110 interface 111. In some embodiments, the “most scenic” 1015 instantiates instructions in the memory of the CPU 290 to complete an algorithm with the highest ratings for scenery to assist the user 110 to complete the transformed renewable energy community linked transmission capacity unit between two virtual hubs with highest scenery rating. In some embodiments, the “highest rating” 1016 instantiates instructions in the memory of the CPU 290 to complete a rating algorithm to assist the user 110 to complete the renewable energy community linked transmission capacity unit between two virtual hubs with the highest rating. In some embodiments, the “most available” 1017 instantiates instructions in the memory of the CPU 290 to complete an algorithm to search for the route with the most open renewable energy community linked transmission capacity units to assist the user 110 to complete the renewable energy community linked transmission capacity unit between two renewable energy community linked virtual hubs with the most available open seats or open renewable energy community linked transmission capacity units. In some embodiments, the “highest volume” 1018 instantiates instructions in the memory of the CPU 290 to complete an algorithm to select the route with the highest volume of participants to assist the user 110 to complete the transformed renewable energy community linked transmission capacity unit between two virtual hubs with the largest number of users 110. In some embodiments, the “most frequent” 1019 instantiates instructions in the memory of the CPU 290 to complete most frequent route analysis from a timing constraint perspective to assist the user 110 to complete the renewable energy community linked transmission capacity unit between two renewable energy community linked virtual hubs with the most frequent departures. In some embodiments, the “service level” 1020 instantiates instructions in the memory of the CPU 290 to align the constraint to select the service level to assist the user 110 to complete the renewable energy community linked transmission capacity unit between two virtual hubs with the correct level of service. In some embodiments, the “security and safety” 1021 instantiates instructions in the memory of the CPU 290 to run safety and security algorithms on the user’s 110

based on block chain performance of drivers and riders to assist the user 110 to complete the renewable energy community linked transmission capacity unit between two virtual hubs with the highest level of safety and security. In some embodiments, the “group restricted” 1022 instantiates instructions in the memory of the CPU 290 to run grouping limitation algorithms on the user’s 110 price-time priority queue market auction based on limiting the pool of renewable energy community linked drivers and riders or renewable energy providers and shippers to assist the user 110 to complete the renewable energy community linked transmission or renewable energy capacity unit between two renewable energy community linked virtual hubs with a limit on the pool of available users. In some embodiments, a plurality of settings which transform the data may be sequenced for presenting as a transformed market 400 or as a transformed market as a layer on a navigation system with indexed routes based on price. A user(s) 110 pool for group restricted 1022 (a data transformation) settings may limit the user pool displayed by email, security, sex, rating or a plurality of other restrictions. In some embodiments, the user 110, may contact the “set” button 1040 to transmit the renewable energy community linked transmission or renewable energy capacity unit security specification constraint and arbitrage data by using the GUI 210 may instantiate instructions in the memory of the mobile computing device which then transmits renewable energy community linked transmission or renewable energy capacity data 241 through the network 226, 214 or wireless GPS network 215 to call upon instruction routines and instruction sub-routines on the renewable energy community linked transmission forward market database server 271, virtual hub database server 223, network member database server 222, renewable energy community route processor 217, my route virtual hub processor 218, application processor 219, server 220, sequence route processor 221, and memory 224 which all interface together to make one system which may deliver renewable energy community linked transmission or renewable energy capacity units to users 110 from and to a plurality of virtual hubs 410, 422 with a plurality of specifications at specific market prices in an price-time priority queue auction format.

**[00168]** FIG. 11 illustrates exemplary user interfaces 210 for participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy as a physical forward commodity or security between combinations of renewable energy community linked virtual hubs over various transmission modes. In some embodiments, user interface 210 includes the following elements, or a subset or superset thereof:

**[00169]** exemplary renewable energy community linked virtual hub combination 1111;

**[00170]** exemplary renewable energy community linked virtual hub origin/from location 1110 with users 1112 within the renewable energy community linked virtual hub location 1110;

**[00171]** exemplary specification summary of the market, level of service and time of delivery commencement 1127;

**[00172]** exemplary mode of air transmission or renewable energy capacity type 1130;

**[00173]** exemplary transaction summary of the last trades quantity and price 1128;

**[00174]** exemplary renewable energy community linked virtual hub destination/to location 1122 and user who is being delivered on the transmission capacity unit 1123;

**[00175]** exemplary bid/buy quantity title header 1115 for an exemplary renewable energy community linked virtual transmission hub market;

**[00176]** exemplary bid/buy price title header 1116 for an exemplary renewable energy community linked virtual transmission or renewable energy hub market;

**[00177]** exemplary offer/sell price title header 1119 for an exemplary renewable energy community linked virtual transmission or renewable energy hub market;

**[00178]** exemplary offer/sell quantity title header 1126 for an exemplary renewable energy community linked virtual transmission or renewable energy hub market;

**[00179]** exemplary bid/buy quantity 1114 for the best bid quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity renewable energy community linked virtual hub combination that has undergone a plurality of data transformations in the method 1111;

**[00180]** exemplary bid/buy quantity 1113 for the second-best bid quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1111;

**[00181]** exemplary bid/buy price 1118 for the best bid price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1111;

**[00182]** exemplary bid/buy price 1117 for the second-best bid price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1111;

**[00183]** exemplary offer/sell price 1121 for the best offer price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy

capacity virtual hub combination that has undergone a plurality of data transformations in the method 1111;

**[00184]** exemplary offer/sell price 1120 for the second-best offer price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1111;

**[00185]** exemplary offer/sell quantity 1125 for the best offer quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1111;

**[00186]** exemplary offer/sell quantity 1124 for the second-best offer quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1111;

**[00187]** exemplary safety dispatch “911” button 1129 to enact video and audio recording of the user 110 environment and dispatch of that information to authorities.

**[00188]** exemplary hamburger menu button 270 to move back to menu options and settings away from the participation, transaction, trading auction GUI 210 embodiment.

**[00189]** In some embodiments the user 110 may enter a transaction quantity and price for transformed renewable energy community linked transmission or renewable energy capacity unit securities to participate, transact and/or trade by the GUI 210 detecting user 110 contact or audio interface with a bid/buy price 1118 or offer/sell price 1121. The GUI 210 detects user 110 contact with any of the GUI 210 buttons which have been aforementioned. Upon user 110 contact or audio interface with buttons on the GUI 210, instructions are instantiated which allow the user 110 to change the specifications of the respective virtual hub combination 1111. A plurality of prices and markets may be presented based on a plurality of contract specifications. In some embodiments, the best bid/buy price 1118 may be moving up in price or down in price depending on the market conditions at any given time. In some embodiments the last trade or last transacted price for a given specification is listed to help the user 110 understand how the market is moving so that the user 110 may submit a competitive offer/selling price 1121 or bid/buying price 1118. In some embodiments, users 110 may adjust settings of the GUI 210 to show more bid/buying prices 1117 or more offer/selling prices 1120. In some embodiments the matrix of market quantities and prices 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 1121, 1124, 1125, 1126 may be referred to as market depth in the GUI 210 embodiment. In some embodiments the number of users 110 may be displayed as user icons 1112 or 1123 for the amount of people logged in which desire to transact,

trade or participate in a given virtual hub 1110 to virtual hub 1122 combination. In some embodiments, users 110 may select the renewable energy community linked transmission mode 1130 such that the user allows a market for only one form of renewable energy community linked transmission capacity as a commodity or the user 110 may allow the system to show multiple forms of transmission capacity between two renewable energy community linked virtual transmission capacity hubs 1110, 1111, 1122. In some embodiments the GUI 210 may detect a user 110 selecting the 911 button 1129 which may activate voice and video recording functions on the mobile or stationary device and transmit the data with a confirmation from the user 110 to the authorities to provide enhanced security while participating, transacting or trading transformed renewable energy community linked forward transmission as a commodity or security. In some embodiments the user may toggle between the GUI 210 market view screen in FIG. 11 and other menu 270 options and settings by the user 110 selecting the hamburger button 270 and the GUI 210 detecting the user 110 input or contact or audio instruction. In some embodiments the GUI 210 may instantiate instructions in the memory of the mobile computing device which then transmits renewable energy community linked transmission or renewable energy capacity data 241 through the network 226, 214 or wireless GPS network 215 to call upon instruction routines and instruction sub-routines on the renewable energy community linked transmission forward market database server 271, virtual hub database server 223, network member database server 222, renewable energy community route processor 217, my route virtual hub processor 218, application processor 219, server 220, sequence route processor 221, and memory 224 which all interface together to make one system which may deliver renewable energy community linked transmission or renewable energy capacity units to users 110 from and to a plurality of virtual hubs 1110, 1122 with a plurality of specifications at specific market prices.

**[00190]** FIG. 12 illustrates exemplary user interfaces 210 for participating, transacting and/or trading transformed renewable energy community linked transmission as a physical forward commodity or security between combinations of renewable energy community linked virtual hubs over various transmission modes. In some embodiments, user interface 210 includes the following elements, or a subset or superset thereof:

**[00191]** exemplary renewable energy community linked virtual hub combination 1211;

**[00192]** exemplary renewable energy community linked virtual hub origin/from location 1210 with users 1212 within the renewable energy community linked virtual hub location 1210;

**[00193]** exemplary specification summary of the market, level of service and time of delivery commencement 1227;

**[00194]** exemplary mode of train renewable energy community linked transmission capacity type 1230;

**[00195]** exemplary transaction summary of the last trades quantity and price 1228;

**[00196]** exemplary renewable energy community linked virtual hub destination/to location 1222 and user who is being delivered on the renewable energy community linked transmission or renewable energy capacity unit 1223;

**[00197]** exemplary bid/buy quantity title header 1215 for an exemplary virtual renewable energy community linked transmission or renewable energy hub market;

**[00198]** exemplary bid/buy price title header 1216 for an exemplary renewable energy community linked virtual transmission or renewable energy hub market;

**[00199]** exemplary offer/sell price title header 1219 for an exemplary renewable energy community linked virtual transmission or renewable energy hub market;

**[00200]** exemplary offer/sell quantity title header 1226 for an exemplary renewable energy community linked virtual transmission for renewable energy hub market;

**[00201]** exemplary bid/buy quantity 1214 for the best bid quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1211;

**[00202]** exemplary bid/buy quantity 1213 for the second-best bid quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1211;

**[00203]** exemplary bid/buy price 1218 for the best bid price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1211;

**[00204]** exemplary bid/buy price 1217 for the second-best bid price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1211;

**[00205]** exemplary offer/sell price 1221 for the best offer price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1211;

**[00206]** exemplary offer/sell price 1220 for the second-best offer price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1211;

**[00207]** exemplary offer/sell quantity 1225 for the best offer quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1211;

**[00208]** exemplary offer/sell quantity 1224 for the second-best offer quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1211;

**[00209]** exemplary safety dispatch “911” button 1229 to enact video and audio recording of the user 110 environment and dispatch of that information to authorities.

**[00210]** exemplary hamburger menu button 270 to move back to menu options and settings away from the participation, transaction, trading GUI 210 embodiment.

**[00211]** In some embodiments the user 110 may enter a transaction quantity and price for renewable energy community linked transmission or renewable energy capacity units to participate, transact and/or trade by the GUI 210 detecting user 110 contact with a bid/buy price 1218 or offer/sell price 1221. The GUI 210 detects user 110 contact with any of the GUI 210 buttons which have been aforementioned. Upon user 110 contact with buttons or audio interface on the GUI 210, instructions are instantiated which allows the user 110 to change the specifications of the respective renewable energy community linked virtual hub combination 1211. A plurality of transformed prices and transformed markets may be presented based on a plurality of transformed contract specifications. In some embodiments, the best bid/buy price 1218 may be moving up in price or down in price depending on the market conditions at any given time. In some embodiments the last trade or last transacted price for a given specification is listed to help the user 110 understand how the market is moving so that the user 110 may submit a competitive offer/selling price 1221 or bid/buying price 1214. In some embodiments, users 110 may adjust settings of the GUI 210 to show more bid/buying prices 1217 or more offer/selling prices 1220. In some embodiments the matrix of market quantities and prices 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1224, 1225, 1226 may be referred to as market depth in the GUI 210 embodiment. In some embodiments the number of users 110 may be displayed as user icons 1212 or 1223 for the amount of people logged in which desire to transact, trade or participate in a given renewable energy community linked virtual hub 1210 to renewable energy community linked virtual hub 1222 combination. In some embodiments, users 110

may select the renewable energy community linked transmission mode 1230 such that the user allows a market for only one form or mode of renewable energy community linked transmission capacity as a commodity or security or the user 110 may allow the system to show multiple forms (multi-modal) of transmission capacity between two virtual renewable energy community linked transmission capacity hubs 1210, 1211, 1222. In some embodiments the GUI 210 may detect a user 110 selecting the 911 button 1229 which may activate voice and video recording functions on the mobile or stationary device and transmit the data with a confirmation from the user 110 to the authorities to provide enhanced security while participating, transacting or trading transformed forward renewable energy community linked transmission or renewable energy units as a commodity or security. In some embodiments the user may toggle between the GUI 210 market view screen in FIG. 12 and other menu 270 options and settings by the user 110 selecting the hamburger button 270 and the GUI 210 detecting the user 110 input or contact or audio instructions. In some embodiments the GUI 210 may instantiate instructions in the memory of the mobile computing device which then transmits renewable energy community linked transmission or renewable energy capacity data 241 through the network 226, 214 or wireless GPS network 215 to call upon instruction routines and instruction sub-routines on the renewable energy community linked transmission forward market database server 271, virtual hub database server 223, network member database server 222, renewable energy community route processor 217, my route virtual hub processor 218, application processor 219, server 220, sequence route processor 221, and memory 224 which all interface together to make one system which may deliver renewable energy community linked transmission or renewable energy capacity units to users 110 from and to a plurality of virtual hubs to users 110 from and to a plurality of virtual hubs 1210, 1222 with a plurality of specifications at specific market prices.

**[00212]** FIG. 13 illustrates exemplary user interfaces 210 for participating, transacting and/or trading transformed renewable energy community linked transmission as a physical forward commodities or securities between combinations of renewable energy community linked virtual hubs over various transmission modes. In some embodiments, user interface 210 includes the following elements, or a subset or superset thereof:

**[00213]** exemplary renewable energy community linked virtual hub combination 1311;

**[00214]** exemplary renewable energy community linked virtual hub origin/from location 1310 with users 1312 within the renewable energy community linked virtual hub location 1310;

**[00215]** exemplary specification summary of the market, level of service and time of delivery commencement 1327;

**[00216]** exemplary mode of train renewable energy community linked transmission capacity type 1330;

**[00217]** exemplary transaction summary of the last trades quantity and price 1328;

**[00218]** exemplary renewable energy community linked virtual hub destination/to location 1322 and user who is being delivered on the renewable energy community linked transmission or renewable energy capacity unit 1323;

**[00219]** exemplary bid/buy quantity title header 1315 for an exemplary renewable energy community linked virtual transmission or renewable energy hub market;

**[00220]** exemplary bid/buy price title header 1316 for an exemplary renewable energy community linked virtual transmission or renewable energy hub market;

**[00221]** exemplary offer/sell price title header 1319 for an exemplary renewable energy community linked virtual transmission or renewable energy hub market;

**[00222]** exemplary offer/sell quantity title header 1326 for an exemplary renewable energy community linked virtual transmission or renewable energy hub market;

**[00223]** exemplary bid/buy quantity 1314 for the best bid quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1311;

**[00224]** exemplary bid/buy quantity 1313 for the second-best bid quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1311;

**[00225]** exemplary bid/buy price 1318 for the best bid price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1311;

**[00226]** exemplary bid/buy price 1317 for the second-best bid price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1311;

**[00227]** exemplary offer/sell price 1321 for the best offer price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1311;

**[00228]** exemplary offer/sell price 1320 for the second-best offer price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1311;

**[00229]** exemplary offer/sell quantity 1325 for the best offer quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1311;

**[00230]** exemplary offer/sell quantity 1324 for the second-best offer quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination that has undergone a plurality of data transformations in the method 1311;

**[00231]** exemplary safety dispatch “911” button 1329 to enact video and audio recording of the user 110 environment and dispatch of that information to authorities.

**[00232]** exemplary hamburger menu button 270 to move back to menu options and settings away from the participation, transaction, trading GUI 210 embodiment.

**[00233]** In some embodiments the user 110 may enter a transaction quantity and price for renewable energy community linked transmission or renewable energy capacity units to participate, transact and/or trade by the GUI 210 detecting user 110 contact or audio instructions with a bid/buy price 1318 or offer/sell price 1321. The GUI 210 detects user 110 contact with any of the GUI 210 buttons which have been aforementioned. Upon user 110 contact or audio interface with buttons or audio instructions on the GUI 210, instructions are instantiated which allows the user 110 to change the specifications of the respective virtual hub combination 1311. A plurality of prices and markets may be presented based on a plurality of transformed contract specifications. In some embodiments, the best bid/buy price 1318 may be moving up in price or down in price depending on the market conditions at any given time. In some embodiments the last trade or last transacted price for a given transformed specification is listed to help the user 110 understand how the market is moving so that the user 110 may submit a competitive offer/selling price 1321 or bid/buying price 1314. In some embodiments, users 110 may adjust settings of the GUI 210 to show more bid/buying prices 1317 or more offer/selling prices 1320. In some embodiments the matrix of market quantities and prices 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1320, 1321, 1324, 1325, 1326 may be referred to as market depth in the GUI 210 embodiment. In some embodiments the number of users 110 may be displayed as user icons 1312 or 1323 for the amount of people logged in which desire to transact, trade or participate in a given virtual hub 1310 to virtual hub 1322 transformed combination. In some embodiments, users 110 may select the renewable energy community linked transmission mode

1330 such that the user allows a market for only one form of renewable energy community linked transmission capacity as a commodity or the user 110 may allow the system to show multiple forms of transformed renewable energy community linked transmission or renewable energy capacity or securities between two renewable energy community linked virtual transmission capacity hubs 1310, 1311, 1322. In some embodiments, by way of example and not to limit by example to avoid doubt, transformed renewable energy community linked transmission units or transformed transmission unit securities may even be substitutable between modes if the other specifications meet the grade category of the transformed renewable energy community linked transmission unit specification or transformed renewable energy community linked transmission unit security. A user(s) 110 may have bought a transformed renewable energy community linked transmission unit with a specification and the delivery mechanism was a solar home, however the solar home user 110 bought back their transformed renewable energy community linked transmission unit or transformed renewable energy community linked transmission unit security and now the original purchaser may be matched with a home solar unit of another user 110 who will deliver the transformed renewable energy community linked transmission unit or transformed renewable energy community linked transmission unit security. In some embodiments, home 828, train 1330, airplane 1130, car 430, or a plurality of other modes may be substitutable if the transformed renewable energy community linked transmission unit or transformed renewable energy community linked transmission unit security meets the delivery transformed specification grade. In some embodiments the GUI 210 may detect a user 110 selecting the 911 button 1329 which may activate voice and video recording functions on the mobile or stationary device and transmit the data with a confirmation from the user 110 to the authorities to provide enhanced security while participating, transacting or trading forward renewable energy community linked transmission or renewable energy as a commodity. In some embodiments the user may toggle between the GUI 210 market view screen in FIG. 13 and other menu 270 options and settings by the user 110 selecting the hamburger button 270 and the GUI 210 detecting the user 110 input or contact. In some embodiments the GUI 210 may instantiate instructions in the memory of the mobile computing device which then transmits renewable energy community linked transmission or renewable energy capacity data 241 through the network 226, 214 or wireless GPS network 215 to call upon instruction routines and instruction sub-routines on the renewable energy community linked transmission forward market database server 271, virtual hub database server 223, network member database server 222, renewable energy community route processor 217, my route virtual hub processor 218, application processor 219, server 220, sequence route processor 221, and memory 224 which all interface together to make one system which may deliver renewable energy community linked transmission or renewable energy capacity units to users 110 from and to a plurality of virtual hubs 1310, 1322 with a plurality of specifications at specific market prices.

**[00234]** FIG. 14 illustrates an exemplary user interface 210 for selecting menu options 1410 on a portable multifunction device in accordance with some embodiments. In some embodiments, user interface 210 includes the following elements, or a subset or superset thereof:

**[00235]** menu options 1410;

**[00236]** origin (From) / Destination (to) menu option 1411;

**[00237]** market menu option 1412;

**[00238]** timings and specs menu option 1413;

**[00239]** term and specs menu option 1414;

**[00240]** order time and type menu option 1415;

**[00241]** modes menu option 1416;

**[00242]** virtual Hubs menu option 1417;

**[00243]** no arb settings menu option 1418;

**[00244]** orders and Confirms menu option 1419;

**[00245]** pool message menu option 1420;

**[00246]** tax and accounting menu option 1421;

**[00247]** setting button 1440 to transmit the menu option;

**[00248]** hamburger button 270 to instruct the GUI 210 to take the user 110 to the menu screen.

**[00249]** In some embodiments, user interface 210 may be used by the user 110 to select a plurality of menu options 1410. In some embodiments, the user 110 may select the origin (from) / destination (to) menu option 1411 which may instruct the GUI 210 to go to an address input rendering 910 and/or FIG. 2. In some embodiments, the user 110, may contact the “market” menu option 1412 which may instruct the GUI 210 to render a market participation, transaction and/or trading screen such as 400, 1100, 1200, or 1300. In some embodiments the user may toggle between the GUI 210 market view screen in FIG. 4 and other menu 270 options and settings by the user 110 selecting the hamburger button 270 and the GUI 210 detecting the user 110 input or contact. In some embodiments, the user 110, may contact the “timings and specs” menu option 1413 which may instruct the GUI 210 to render a timings and specs screen such as 500. In some embodiments, the user 110, may contact the “term and specs” menu option 1414 which may instruct the GUI 210 to render a term and specs screen such as 600. In some embodiments, the user 110, may contact the “order time and type” menu option 1415 which may instruct the GUI 210 to render an order time and type screen such as 700. In some embodiments, the user 110, may contact the “modes” menu option 1416 which may instruct the GUI 210 to render a mode screen such as 800. In some

embodiments, the user 110, may contact the “Virtual Hubs” menu option 1417 which may instruct the GUI 210 to render a virtual hubs screen such as 900. In some embodiments, the user 110, may contact the “no arb settings” menu option 1418 which may instruct the GUI 210 to render a no arbitrage constraint screen such as 1000. In some embodiments, the user 110, may contact the “orders and confirms” menu option 1419 which may instruct the GUI 210 to render the market orders and transaction confirmations for the user 110. In some embodiments, the user 110, may contact the “pool message” menu option 1420 which may instruct the GUI 210 to message either the actual renewable energy community linked transmission capacity unit or the opposite seller user 110 or buyer user 110 depending on if the user 110 was an opposite buyer or seller of the renewable energy community linked transmission capacity unit. In some embodiments, the user 110, may contact the “tax and accounting” menu option 1421 which may instruct the GUI 210 to render tax and accounting information for the respective user 110. In some embodiments the GUI 210 menu option selection 1410 may instantiate instructions in the memory of the mobile computing device which then transmits renewable energy community linked transmission or renewable energy capacity data 241 through the network 226, 214 or wireless GPS network 215 to call upon instruction routines and instruction sub-routines on the renewable energy community linked transmission forward market database server 271, virtual hub database server 223, network member database server 222, renewable energy community route processor 217, my route virtual hub processor 218, application processor 219, server 220, sequence route processor 221, and memory 224 which all interface together to make one system which may deliver renewable energy community linked transmission or renewable energy capacity units to users 110 from and to a plurality of virtual hubs 410, 422 with a plurality of specifications at specific market prices.

**[00250]** FIG. 15 illustrates an exemplary network configuration 1500 in one exemplary implementation of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity units or securities in accordance with some embodiments. In some embodiments, network configuration 1500 includes the following elements, or a subset or superset thereof:

**[00251]** wireless global positioning system (GPS) network 1510;

**[00252]** network/s 1511;

**[00253]** additional global positioning system (GPS) network 1512;

**[00254]** user member portable multifunction device 1513;

**[00255]** virtual hub database server 1514;

**[00256]** renewable energy community linked transmission forward market database server 1519;

[00257] additional user member portable multifunction device 1515;

[00258] network member database server 1520;

[00259] network member user 1516;

[00260] additional network member user 1517;

[00261] no arbitrage constraint database server 1521;

[00262] cloud and Local CPUs 1522;

[00263] renewable energy community linked transmission or renewable energy capacity unit mode 1518.

[00264] In some embodiments, the software and/or instructions stored in memory of the cloud & local CPUs 1522 and portable multifunction devices 1513, 1515 may include additional instructions to instantiate specification requirements, participation, transactions, and/or trading on the renewable energy community linked transmission or renewable energy capacity unit network 1511. In some embodiments, instructions may include standard database web services with the database as service provider (i.e. calling from the outside in, which lets the client GUI 210 or 1513 call each of the renewable energy community linked virtual hub database server 1514 and/or renewable energy community linked transmission forward market database server 1519 and/or network member database server 1520 and/or no arbitrage constraint database server 1521 and/or cloud & local CPUs 1522 through the wireless GPS network 1510 or network 1511. In some embodiments, each of the renewable energy community linked virtual hub database server 1514 and/or renewable energy community linked transmission forward market database server 1519 and/or network member database server 1520 and/or no arbitrage constraint database server 1521 and/or cloud & local CPUs 1522 may instruct the network to instantiate the database servers 1514, 1519, 1520, 1521, 1522 as service consumers (i.e. calling from the inside out, which lets a SQL query or application module in the database session consume an external web service. In some embodiments, users 1516 and/or 1517 may use portable multifunction devices 1513 and/or 1515 to access the renewable energy community linked transmission or renewable energy capacity unit market GUI 210 so that the users 1516 and/or 1517 may participate, transact and/or trade renewable energy community linked transmission or renewable energy capacity units. In some embodiments, the virtual hub database server 1514 stores map tile data in addition to user location data which is utilized by the GUI 210 to display or render location of virtual hubs and user 1516 proximity to those virtual hubs 400, 900, 1100, 1200, 1300. In some embodiments, the renewable energy community linked transmission forward market database server 1519 stores bid and offer data for respective quantities of users as well as transaction data and a plurality of market data for each renewable energy community linked virtual hub combination. In some embodiments, the network member database server 1520 stores

user profile, user transaction, user trade, user settings, user specifications, user rating, user criminal history or background check data or facial recognition data or fingerprint recognition data or photo scan recognition data or ride history data, user track record, user bank data, user credit card data, user history data, user tax data and a plurality of other data. In some embodiments, the no arbitrage constraint database server 1521 stores data and algorithms to identify user 110 constraints 1000 and run algorithm calculations for users on specific constraints to check for compliance with constraints. In some embodiments, network servers and CPUs 1514, 1519, 1520, 1521, 1522, 1513, 1515 my interface through the network 1511 and/or wireless GPS networks 1510, 1512 such that renewable energy community linked transmission or renewable energy capacity units may be participated in, transacted and/or traded efficiently in the context of a market for transmission capacity units or securities. Included aforementioned data elements may be a subset or superset of data used for any specific calculation or transformation to participate, transact or trade renewable energy community linked transmission or renewable energy capacity units or securities.

**[00265]** FIG. 16 illustrates a flowchart embodiment of steps a user may perform to participate, transact and/or trade transformed renewable energy community linked transmission capacity units or securities between virtual hub combinations. In some embodiments a user at a mobile or portable multifunction device and/or fixed computing device with a touchscreen or a computing device without a touchscreen or augmented, audio interface computing device, mixed reality non-screen display may detect user login to the renewable energy community linked transmission capacity unit network 1610. In some embodiments, the GUI of the transmission capacity unit network may detect and receive origin location from user input or current GPS coordinate information and detect destination address from user input and transmission of data 1620. In some embodiments, the GUI and/or CPUs and/or databases may generate and apply one or more optimization techniques to form a renewable energy community linked virtual hub with other users that have similar renewable energy community linked transmission requests within a geographic boundary 1630. In some embodiments, the GUI and/or CPUs and or databases may generate instructions for a plurality of computing devices, network, virtual hub database server, network member database server and renewable energy community linked transmission forward market database server 161 to form a combination of virtual hubs and transformed contract specifications for delivery of renewable energy community linked transmission services or transmission or renewable energy capacity between the virtual hubs in a format presented by a graphical user interface which allows users to enter forward physical prices to sell (offer) or bid (buy) transmission capacity units or securities between virtual hub combinations 1640 in an open market price-time priority queue auction format. In some embodiments, the GUI and/or CPUs and or databases may generate instructions to interface a plurality of networks, global positioning systems networks, servers, forward commodity market auctions, map routing servers, grouping instruction software for virtual hubs, navigation servers, transparent open access pricing systems, game servers, blockchain audit and safety systems, virtual hub servers and systems, no arbitrage constraint condition systems which form one system to

implement a forward commodity transmission or renewable energy capacity unit forward market system and method 1650.

**[00266]** FIG. 17 illustrates an exemplary embodiment of a user 110 most frequent transmission or renewable energy unit routes 1710 in one exemplary implementation of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity units in accordance with some embodiments. In some embodiments, most frequent my routes include the following elements, or a subset or superset thereof:

**[00267]** Home to Work 1711 (may have subsets of transformed data);

**[00268]** Work to Home 1712 (may have subsets of transformed data);

**[00269]** Home to School 1713 (may have subsets of transformed data);

**[00270]** School to Home 1714 (may have subsets of transformed data);

**[00271]** Work to Gym 1715 (may have subsets of transformed data);

**[00272]** Home to Gym 1716 (may have subsets of transformed data);

**[00273]** Gym to Home 1717 (may have subsets of transformed data);

**[00274]** Home to Grocery 1718 (may have subsets of transformed data);

**[00275]** Home to Downtown 1719 (may have subsets of transformed data);

**[00276]** Downtown to Home 1720 (may have subsets of transformed data);

**[00277]** Renewable energy Center to X where X is a delivery route or multi virtual hub combination 1721 (may have subsets of transformed data);

**[00278]** + Add Route 1722 (may have subsets of transformed data);

**[00279]** Edit 1723 or 1750 (may have subsets of transformed data);

**[00280]** Setting button 1740 to transmit the My Routes data;

**[00281]** Hamburger button 270 to instruct the GUI 210 to take the user 110 to the menu screen.

**[00282]** In some embodiments, the GUI 210 may be used to select, store and/or edit user 110 frequent or preferred routes ("MY ROUTES") 1710 for more efficient access to renewable energy community linked transmission capacity unit markets over various modes and specifications of transmission capacity. In some embodiments, the user 110 may select, store and/or edit address

and specification data for “Home to Work” 1711 and/or “Work to Home” 1712 and/or “Home to School” 1713 and/or “School to Home” 1714 and/or “Work to Gym” 1715 and/or “Home to Gym” 1716 and/or “Gym to Home” 1717 and/or “Home to Grocery” 1718 and/or “Home to Downtown” 1719 and/or “Downtown to Home” 1720 and/or “Renewable energy Center to X” 1721 and/or “+ Add Route” 1722. In some embodiments, the My Routes 1710 module may include any route a user 110 may request on any renewable energy community linked transmission or renewable energy capacity unit mode and/or specification. In some embodiments the user may toggle between the GUI 210 market view screen in FIG. 4 and other menu options (e.g., options 1410 of FIG. 14) and settings by the user 110 selecting the hamburger button 270 and the GUI 210 detecting the user 110 input or contact. In some embodiments, the user 110 is notified via SMS text, in application, email or a plurality of other well-known communication methods when market activity occurs on a given route or virtual hub combination. In other words, the “my routes” 1710 feature not only allows for one touch access to a saved transmission route, but also performs notification features between users. Lastly, in some embodiments, the EDIT buttons 1723 or 1750 allow a user 110 to modify a plurality of notification settings such as email, SMS text, in application, voice, messaging or other notification methods.

**[00283]** FIG. 18 illustrates an exemplary network topology configuration 1800 in one exemplary implementation of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity units or securities in accordance with some embodiments. In some embodiments, network configuration 1800 includes the following elements, or a subset or superset thereof:

**[00284]** large renewable energy community linked Virtual Hub nodes such as 1801, 1802, 1803, 1804, 1805;

**[00285]** medium renewable energy community linked Virtual Hub nodes such as 1810, 1811, 1809, 1808, 1807, 1806;

**[00286]** small renewable energy community linked Virtual Hub nodes such as 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821;

**[00287]** In some embodiments, the overall network node topology 1800 is comprised of large virtual hub nodes 1801, 1802, 1803, 1804, 1805 and medium virtual hub nodes 1810, 1811, 1809, 1808, 1807, 1806 and small virtual hub nodes 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821, or a subset or superset thereof. In some embodiments a user may input a starting point or renewable energy generation point of 1815 and an renewable energy delivery point of 1818 which represent specific geographic virtual hub locations in a city, multiple cities, a country, or multiple countries. In some embodiments, renewable energy community linked forward transmission market price-time priority queue auctions may occur directly between two exemplary points such as 1815

and 1818 or the method and system may combine a series of smaller auctions to comprise a larger price-time priority queue auction between two endpoints on the system. In some embodiments, a series of smaller price-time priority queue auctions may be combined between 1815 and 1811 as well as 1811 and 1802, 1802 and 1805, 1805 and 1808, and/or 1808 and 1818, which would be added together to make a combined renewable energy community linked virtual hub price-time priority queue auction. A combined series of smaller auctions may be constrained by instructions which form auctions based on cheapest renewable energy community linked transmission or renewable energy route 1011, single mode renewable energy community linked transport or renewable energy auctions 1012, multi-mode transport or renewable energy 1013, fastest transport or renewable energy constraints 1014, most scenic auctions 1015, highest rating auctions 1016, most available or liquid auctions 1017, highest volume renewable energy community linked auctions 1018, most frequent renewable energy community linked auctions 1019, service level renewable energy community linked auctions 1020, security and safety level renewable energy community linked auctions 1021, group restricted auctions by sex, email, organization, gender or other groups 1022. In some embodiments, the constraints allow for many types of auctions which are unique and novel for renewable energy community linked transformed transmission and renewable energy capacity units or securities in a forward transmission and renewable energy market. In some embodiments, the user 110 may specify instructions that set renewable energy community linked forward market price-time priority queue auction constraints based on one or a plurality of constraints. In some embodiments, the constrained auctions may have fungible units which allow many participants to transact in the auctions. In some embodiments, the disclosed creation of a renewable energy community linked forward market of transmission units between virtual hubs 1801 and 1804 or other combinations along transmission map routes has the attributes of a fungible forward contract which allows for one renewable energy community linked transmission unit to be substitutable for another transmission unit because the unit has been transformed and defined as a commodity contract. In other words, if user A bought a renewable energy community linked transmission unit from user B between virtual hub 1801 and virtual hub 1804, but then user A was not able to perform the obligation to purchase the renewable energy community linked transmission unit between renewable energy community linked virtual hub 1801 and renewable energy community linked virtual hub 1804 from user B, then user A could resell the renewable energy community linked transmission unit contract between renewable energy community linked virtual hub 1801 and renewable energy community linked virtual hub 1804 to a third party user C on the renewable energy community linked forward transmission unit auction market between virtual hub 1804 and renewable energy community linked virtual hub 1801 to retrieve the financial payment made for their original purchase from user B. Then user C would replace user A and be matched with user B for the renewable energy community linked transmission unit transformation between renewable energy community linked virtual hub 1804 and renewable energy community linked virtual hub 1801. No other prior art system or method performs the aforementioned data transformation combination. In some embodiments, the renewable energy community linked transmission or renewable energy unit

auction substitutability dynamic creates a unique and novel invention that does not exist in the world today. In some embodiments, user 110 input instructions use constrained optimization to form one auction between two points or a series of multiple auctions that form one larger auction with price-time priority queues.

**[00288]** In some embodiments, the forward renewable energy community linked transmission and renewable energy unit auctions subject to various constraints may be presented as a linear programming cost minimization problem in the exemplary case where the user 110 selects the cheapest route 1011 constraint. In such an exemplary case, the series of auctions may be combined that utilize the lowest cost path between the start point 1815 and the ending point 1818. In such an exemplary case, the linear programming cost minimization function may select the following path of 1815 to 1811 to 1802 to 1804 to 1805 to 1808 to 1818 if that combination is the lowest cost price-time priority queue auction path. In another such exemplary case, the user 110 may select instructions for the auction to minimize both cost and shortest route. In such an exemplary case, the linear programming function may minimize cost subject to a constraint that time is the shortest along the path and the resulting auction may combine a different and unique series of auctions between the starting point of 1815 and ending point 1818. Accordingly, the path may be optimized to minimize cost subject to the shortest path, which may yield a path of 1815 to 1811 to 1802 to 1805 to 1808 to 1818. The plurality of combinations of linear programming sequences of auctions for renewable energy community linked transmission or renewable energy units between two points may consider an infinite set of combinations and permutations.

**[00289]** In some embodiments, the forward transformed renewable energy community linked transmission and renewable energy unit or transformed renewable energy community linked transmission security unit auctions may be held side by side between two competing renewable energy transmission routes 4200. By way of example, but not limited to the example, a user may input instructions for the method and system to route between renewable energy community linked virtual hub 1801 and renewable energy community linked virtual hub 1805. One route may be directly between renewable energy community linked virtual hub 1801 and renewable energy community linked virtual hub 1805. Another route may be between renewable energy community linked virtual hub 1801 and renewable energy community linked virtual hub 1805 by way of renewable energy community linked virtual hub 1802. The time between the routes may vary due to traffic, construction, road conditions, accidents or a plurality of other exogenous factors. However, the data transformation of the disclosed method allows for two price-time priority queue auctions to form side by side. Side by side price-time priority auctions may be displayed on a market based user interface 1300 or as a software layer of instructions over a navigation system. The first renewable energy community linked transmission unit price-time priority queue auction may be between renewable energy community linked virtual hub 1805 and renewable energy community linked virtual hub 1801 directly as one auction. A second auction may be by combining two smaller price-time

priority queue auctions between renewable energy community linked virtual hub 1805 and renewable energy community linked virtual hub 1802 with the auction between renewable energy community linked virtual hub 1802 and renewable energy community linked virtual hub 1801, which could be expressed independently or as a combined auction. The plurality of route auctions for the transmission unit (e.g., auction one directly between virtual hub 1801 and virtual hub 1805, auction two between renewable energy community linked virtual hub 1801 and renewable energy community linked virtual hub 1805 by way of renewable energy community linked virtual hub 1802) may allow for the user to have transparent price auction information for the value of various proposed routes which have different price values.

**[00290]** FIG. 19 illustrates an exemplary delivery and pick up status configuration 1900 in one exemplary implementation of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity units or securities in accordance with some embodiments. In some embodiments, the delivery and pick up status configuration 1900 includes the following elements, or a subset or superset thereof:

**[00291]** computing device unit GUI 210 to display a method of multi layered network node topology for forward market of renewable energy community linked transmission and renewable energy units.

**[00292]** hamburger menu toggle 270 to move between different application configurations;

**[00293]** renewable energy community linked virtual hub 1 pickup address and renewable energy community linked virtual hub 2 destination address at a contract specification with regards to quality, day, date and time 1910;

**[00294]** trip status of PickUp or ingest for renewable energy community linked transmission or renewable energy unit 1920;

**[00295]** checkIn passenger or renewable energy status for renewable energy community linked transmission unit 1930;

**[00296]** messaging texts and instructions between users to make pick up or ingest and delivery of renewable energy community linked transmission or renewable energy capacity units 1940;

**[00297]** call between users with number masking for privacy security 1950;

**[00298]** GPS map location of user 1960 who is a rider or if renewable energy cargo location 1960;

**[00299]** GPS map location of user 1970 who is a driver or transmission conduit or if renewable energy community linked renewable energy, cargo carrier renewable energy community linked unit location 1970;

**[00300]** GPS map of renewable energy community linked transmission or renewable energy unit delivery and pick up or ingest 1980;

**[00301]** texting message window for renewable energy or renewable energy community linked transmission unit communication between users 1991;

**[00302]** Pickup or ingest address data window during Pickup or ingest status 1992;

**[00303]** security button to report security issues to 911 and system database 1990;

**[00304]** In some embodiments, the GUI 210 transmits delivery instructions to the users 110 to help the user 1960 have a rendering or map of their GPS location relative to the selling user 1970 of renewable energy or renewable energy community linked transmission units. In some embodiments, the GUI 210 displays the trips status such as Pickup or ingest status 1920, the trip status may include subsets or supersets of various status conditions such as Pickup or ingest, start, leaving, on-going, in-progress, arriving, arrived or a plurality of other trip status conditions. In some embodiments, the trip view of the GUI 210 may include a CheckIn 1930 button to confirm a passenger or renewable energy community linked renewable energy transformed transmission unit has been moved into the transformed renewable energy community linked transmission unit object which could be a wire, home, car, airplane, autonomous vehicle, bike, boat, ship, bus, drone, limo, motorcycle, moped, shuttle, spaceship, subway, taxi, train, cargo, combination of transformed modes or other type of transmission mode. In some embodiments, the user 110 may transmit a message using the message 1940 button which may transmit audio, visual or text messages between users 1970, 1960. In some embodiments, the users 1960, 1970 may call each other using the call 1950 button to communicate pickup or delivery instructions. In some embodiments, a user 1960, 1970 may message another user 1960, 1970 to communicate using the Pickup or ingest Message window 1991 which may utilize visual, audio or text communication modes as well as log a message history between users. In some embodiments the users 1960, 1970 may toggle to other modes of the application using the menu hamburger button 270. In some embodiments the GPS display of a map with the relative position of a renewable energy community linked transmission or renewable energy unit seller 1970 and a transmission or renewable energy unit buyer 1960 are displayed to help users understand each other's relative position and location on a map 1980. In some embodiments the GPS location of the renewable energy community linked transmission and renewable energy unit seller 1970 and transmission or renewable energy unit buyer 1960 are tracked in real time with location updates on the map 1980.

**[00305]** FIG. 20 illustrates an exemplary CheckIn configuration 2000 in one exemplary implementation of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity units in accordance with some embodiments. In some embodiments, the CheckIn 2050 for a buyer or seller of a renewable energy community linked

transmission or renewable energy unit includes the following elements, or a subset or superset thereof:

**[00306]** computing device unit GUI 210 to display method of multi layered network node topology for forward market of renewable energy community linked transmission and renewable energy units with security CheckIn;

**[00307]** hamburger menu toggle 270 to move between different application configurations;

**[00308]** driver or seller of renewable energy community linked transmission or renewable energy unit scan check for fingerprint, face scan or picture photo scan to verify identity of user 2051;

**[00309]** passenger or renewable energy and renewable energy community linked transmission unit buyer unit scan check for fingerprint, face scan or picture photo scan to verify identity of user 2052;

**[00310]** transport verification confirmation window to confirm identities of users in the system at the application system level 2053;

**[00311]** buyer and seller of renewable energy community linked transmission or renewable energy unit facial recognition confirmation 2010;

**[00312]** buyer and seller of renewable energy community linked transmission or renewable energy unit fingerprint recognition confirmation 2020;

**[00313]** buyer and seller of renewable energy community linked transmission or renewable energy unit photo recognition confirmation 2030;

**[00314]** In some embodiments, the GUI 210 of a computing device transmits and confirms the identity of users against identity records in the Network Member Database Server 222 which also confirms security checks for criminal records or other activity that would suspend a user from the platform environment. In some embodiments, the driver verification window 2051 may fail an identity verification due to a user not being the registered user 2010 on the Network Member Database Server 222. In some embodiments, the passenger or renewable energy verification window 2052 may fail an identity verification due to a user 2010 not being the registered user on the network member database server 222. In some embodiments, the transport verification window 2053 may instruct the user 2010 to proceed to destination if verification is successful. In some embodiments, the transport verification window 2053 may instruct the user not to proceed to the destination if the verification is not successful. The identity verification system is unique and novel and dependent on a novel and unique price-time priority queue auction forward market for transformed renewable energy community linked transmission unit or renewable energy unit or securities over multiple nodes or virtual hubs topologies.

**[00315]** FIG. 21 illustrates an exemplary delivery and pick up status configuration 2100 once a renewable energy community linked transmission or renewable energy unit delivery has started in one exemplary implementation of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity units in accordance with some embodiments. In some embodiments, the delivery and pick up status configuration 2100 includes the following elements, or a subset or superset thereof:

**[00316]** computing device unit GUI 210 to display method of multi layered network node topology for renewable energy community linked forward market of transmission and renewable energy units;

**[00317]** hamburger menu toggle 270 to move between different application configurations;

**[00318]** renewable energy community linked virtual Hub 1 pickup address and renewable energy community linked Virtual Hub 2 destination address at a transformed contract specification with regards to quality, day, date and time of delivery 2103 of a transmission or renewable energy unit;

**[00319]** trip status of Started for renewable energy community linked transmission or renewable energy unit or security 2102;

**[00320]** finish trip passenger or renewable energy status for renewable energy community linked transmission unit 2104 once a renewable energy community linked transmission or renewable energy unit has been delivered;

**[00321]** messaging texts and instructions between users to make ingest pick-up, on-going route status and delivery complete of renewable energy community linked transmission or renewable energy capacity units 2105;

**[00322]** call between system users with number masking for privacy security 2106;

**[00323]** GPS map location of user 2109, who is a rider, or, if renewable energy community linked renewable energy, cargo location 2109;

**[00324]** GPS map location of user 2108, who is a driver, or, if renewable energy community linked renewable energy, cargo carrier unit location 2108;

**[00325]** GPS map of transmission or renewable energy unit delivery and pick up or ingest 2110;

**[00326]** texting message window for renewable energy or renewable energy community linked transmission unit communication between users 2112;

**[00327]** starting point of virtual hub for forward renewable energy community linked transmission or renewable energy units 2107;

**[00328]** security button to report security issues to 911 and system database 2111;

**[00329]** drop off address for delivery of passenger or renewable energy for transmission or renewable energy unit 2113.

**[00330]** In some embodiments, the GUI 210 transmits delivery instructions to the users 110 to help the user 2109 have a rendering or map of their GPS location relative to the selling user 2108 of transformed renewable energy community linked renewable energy or transmission units or securities. In some embodiments, the GUI 210 displays the trip's status, such as Started status 2102, where the trip status may include subsets or supersets of various status conditions such as PickUp, Started, leaving, on-going, in-progress, arriving, arrived or a plurality of other trip status conditions. In some embodiments, the trip view of the GUI 210 may include a Finish 2104 button to confirm a passenger or renewable energy community linked renewable energy transmission unit has been delivered or completed by the renewable energy community linked transmission unit object, which could be a wire, home, business, car, airplane, autonomous vehicle, bike, boat, ship, bus, drone, limo, motorcycle, moped, shuttle, spaceship, subway, taxi, train, cargo or other types of transmission modes. In some embodiments, the user may transmit a message using the message 2105 button which may transmit audio, visual or text messages between users 2109, 2108. In some embodiments, the users 2109, 2109 may call each other using the call 2106 button to communicate pickup or delivery instructions or other necessary communication. In some embodiments, a user 2109, 2108 may message another user 2109, 2108 to communicate using the Message - User window 2112 which may utilize visual, audio or text communication modes as well as log a message history between users. In some embodiments the users 2109, 2108 may toggle to other modes of the application using the menu hamburger button 270. In some embodiments the GPS display of a map with the relative position of a transformed renewable energy community linked transmission or renewable energy unit or security seller 2108 and a transformed renewable energy community linked transmission or renewable energy unit or security buyer 2109 are displayed to help users 110 understand each other's relative position and location on a map 2110. In some embodiments the GPS location of the renewable energy community linked transmission and renewable energy unit seller 2108 and renewable energy community linked transmission or renewable energy unit buyer 2109 are tracked in real time with location updates on the map 2110.

**[00331]** FIG. 22 illustrates an exemplary delivery and pick up status configuration 2200 once a transmission or renewable energy unit delivery is ongoing in one exemplary implementation of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity units or securities in accordance with some embodiments. In some embodiments, the delivery and pick up status configuration 2200 includes the following elements, or a subset or superset thereof:

**[00332]** computing device unit GUI 210 to display method of multi layered network node topology for forward market of renewable energy community linked transmission and renewable energy units;

**[00333]** hamburger menu toggle 270 to move between different application configurations;

**[00334]** renewable energy community linked virtual Hub 1 pickup or ingest address and renewable energy community linked virtual Hub 2 destination or delivery address at a contract specification with regards to quality, day, date and time of delivery 2201 of a renewable energy community linked transmission or renewable energy unit;

**[00335]** trip status of Ongoing for renewable energy community linked transmission or renewable energy unit 2202;

**[00336]** finish trip passenger or renewable energy status button for renewable energy community linked transmission unit 2203 once a renewable energy community linked transmission or renewable energy unit has been delivered;

**[00337]** messaging texts and instructions between users to make pick-up or ingest, on-going route status and delivery complete of renewable energy community linked transmission or renewable energy capacity units 2204;

**[00338]** call between system users with number masking for privacy security 2205;

**[00339]** GPS map location of user 2207 who is a rider or if renewable energy community linked renewable energy, cargo location 2207;

**[00340]** GPS map location of user 2208 who is a driver or if renewable energy community linked renewable energy, cargo carrier unit location 2208;

**[00341]** GPS map of renewable energy community linked transmission or renewable energy unit delivery and pick up or ingest 2209;

**[00342]** texting message window for renewable energy community linked renewable energy or transmission unit communication between users 2211;

**[00343]** starting point of virtual hub for forward renewable energy community linked transmission or renewable energy units 2206;

**[00344]** security button to report and record security issues to 911 and system database 2210;

**[00345]** drop off address for delivery of passenger or renewable energy community linked renewable energy for transmission or renewable energy unit 2212.

**[00346]** In some embodiments, the GUI 210 transmits delivery instructions to the users 110 to help the user 2207 have a rendering or map of their GPS location relative to the selling user 2208 of renewable energy community linked renewable energy or transmission units. In some embodiments, the GUI 210 displays the trip's status, such as On-Going status 2202, where the trip status may include subsets or supersets of various status conditions such as PickUp or ingest, Started, leaving, on-going, in-progress, arriving, arrived or a plurality of other trip status conditions. In some embodiments, the trip view of the GUI 210 may include a Finish 2203 button to confirm a passenger or renewable energy community linked renewable energy transmission unit or security has been delivered or completed by the transmission unit object, which could be a wire, home, business, car, airplane, autonomous vehicle, bike, boat, ship, bus, drone, limo, motorcycle, moped, shuttle, spaceship, subway, taxi, train, cargo or other types of transmission modes. In some embodiments, the users 2207, 2208 may transmit a message using the message 2204 button which may transmit audio, visual or text messages between users 2207, 2208. In some embodiments, the users 2207, 2208 may call each other using the call 2205 button to communicate pickup or delivery instructions or other necessary communication. In some embodiments, a user 2207, 2208 may message another user 2207, 2208 to communicate using the Message - User window 2211 which may utilize visual, audio or text communication modes as well as log a message history between users 2207, 2208. In some embodiments the users 2207, 2208 may toggle to other modes of the application using the menu hamburger button 270. In some embodiments the GPS display of a map with the relative position of a renewable energy community linked transmission or renewable energy unit seller 2208 and a renewable energy community linked transmission or renewable energy unit buyer 2207 are displayed to help the users understand each other's relative position and location on a map 2209. In some embodiments the GPS location of the renewable energy community linked transmission and renewable energy unit seller 2208 and renewable energy community linked transmission or renewable energy unit buyer 2207 are tracked in real time with location updates on the map 2209. In some embodiments, the GUI 210 may display the delivery or Drop Off Address 2212 of the renewable energy community linked transmission or renewable energy unit. In some embodiments a user 2207, 2208 may use a 911 button 2210 to submit a recording to the system servers and to authorities who are connected to the system if anything has occurred that may compromise the security of any user or renewable energy community linked transmission unit.

**[00347]** FIG. 23 illustrates an exemplary delivery and pick up status configuration 2300 once a renewable energy community linked transmission or renewable energy unit delivery has arrived in one exemplary implementation of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity units in accordance with some embodiments. In some embodiments, the delivery and pick up status configuration 2300 includes the following elements, or a subset or superset thereof:

**[00348]** computing device unit GUI 210 to display method of multi layered network node topology for forward market of renewable energy community linked transmission and renewable energy units.

**[00349]** hamburger menu toggle 270 to move between different application configurations;

**[00350]** renewable energy community linked virtual hub 1 pickup or ingest address and renewable energy community linked virtual hub 2 destination or delivery address at a contract specification with regards to quality, day, date and time of delivery 2301 of a renewable energy community linked transmission or renewable energy unit;

**[00351]** trip status of Arrived for renewable energy community linked transmission or renewable energy unit 2302;

**[00352]** finish trip passenger or renewable energy status button for renewable energy community linked transmission unit 2303 once a renewable energy community linked transmission or renewable energy unit has been delivered;

**[00353]** messaging texts and instructions between users to make pick-up, on-going route status and delivery complete of renewable energy community linked transmission or renewable energy capacity units 2304;

**[00354]** call between system users with number masking for privacy security 2305;

**[00355]** GPS map location of user 2321 who is a homeowner renewable generator or if renewable energy, cargo location 2321;

**[00356]** GPS map of renewable energy community linked transmission or renewable energy unit delivery and ingest or pick up 2308;

**[00357]** texting message window for renewable energy community linked renewable energy or transmission unit communication between users 2311;

**[00358]** starting point of virtual hub for renewable energy community linked forward transformed transmission or renewable energy units or securities 2306;

**[00359]** ending point of virtual hub for renewable energy community linked forward transformed transmission units or renewable energy units or securities 2307;

**[00360]** security button to report and record security issues to 911 and system database 2309;

**[00361]** drop off address for delivery of renewable energy community linked renewable energy for transmission or renewable energy unit 2312;

**[00362]** In some embodiments, the GUI 210 transmits delivery instructions to the users 110 to help the user 2321 have a rendering or map of their GPS location relative to the selling user 2320 of renewable energy community linked renewable energy or transmission units. In some embodiments, the GUI 210 displays the renewable energy transmission trip's status, such as "Arrived" status 2302, where the transmission trip status may include subsets or supersets of various status conditions such as PickUp, Started, leaving, on-going, in-progress, arriving, arrived or a plurality of other transmission trip status conditions. In some embodiments, the trip view of the GUI 210 may include a Finish 2303 button to confirm a renewable energy community linked renewable energy transmission unit has been delivered or completed by the renewable energy community linked transmission unit object which could be a wire, home, business, car, airplane, autonomous vehicle, bike, boat, ship, bus, drone, limo, motorcycle, moped, shuttle, spaceship, subway, taxi, train, cargo or other types of transmission modes. In some embodiments, the user may transmit a message using the message 2304 button which may transmit audio, visual or text messages between users 2320, 2321. In some embodiments, the users 2320, 2321 may call each other using the call 2305 button to communicate pickup, ingest, or delivery instructions or other necessary communication. In some embodiments, a user 2320, 2321 may message another user 2320, 2321 to communicate using the Message - User window 2311 which may utilize visual, audio or text communication modes, as well as log a message history between users 2320, 2321. In some embodiments the users 2320, 2321 may toggle to other modes of the application using the menu hamburger button 270. In some embodiments the GPS display of a map with the relative position of a renewable energy community linked transmission or renewable energy unit seller 2320 and a renewable energy community linked transmission or renewable energy unit buyer 2321 are displayed to help users 110 understand each other's relative position and location on a map 2308. In some embodiments, the GPS location of the renewable energy community linked transmission and renewable energy unit seller 2320 and transformed renewable energy community linked transmission or renewable energy unit or security buyer 2321 are tracked in real time with location updates on the map 2308. In some embodiments, the GUI 210 may display the Drop Off Address 2312 of the transformed renewable energy community linked transmission or renewable energy unit or security. In some embodiments, a user 2320, 2321 may use a 911 button 2309 to submit a recording to the system servers and to authorities who are connected to the system if anything has occurred that may compromise the security of any user or renewable energy community linked transmission unit.

**[00363]** FIG. 24 illustrates an exemplary delivery and pick up configuration 2400 for a renewable energy community linked transmission or renewable energy unit multi layered network node topology in one exemplary implementation of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity units in accordance with some embodiments. In some embodiments, the multi layered network node topology of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity configuration 2400 includes the following elements, or a subset or superset thereof:

**[00364]** computing device unit GUI 210 to display method of multi layered network node topology for forward market of renewable energy community linked transmission and renewable energy units;

**[00365]** hamburger menu toggle 270 to move between different application configurations;

**[00366]** from node starting point 2401 of a multi layered network node topology for forward market of renewable energy community linked transmission and renewable energy units;

**[00367]** to or destination node ending point 2402 of a multi layered network node topology for forward market of renewable energy community linked transmission and renewable energy units;

**[00368]** date module 2403 in GUI 210 of an auction for a multi layered network node topology for renewable energy community linked forward market of transformed transmission and renewable energy units or securities;

**[00369]** time module 2404 in GUI 210 of pickup and delivery of an auction for a multi layered network node topology for renewable energy community linked forward market of transmission and renewable energy units;

**[00370]** go button 2405 to form a price-time priority queue auction for a multi layered network node topology for renewable energy community linked forward market of transformed transmission and renewable energy units or securities;

**[00371]** My Routes button 2406 to quickly obtain common From 2401 or To 2402 points in a price-time priority auction for a multi layered network node topology for renewable energy community linked forward market of transformed transmission and renewable energy units for a user on the system;

**[00372]** multi-hub network 2407, 2408, 2409, 2410 which may form a single dual node price-time priority auction 2407 to 2408 or 2407 to 2410 or any possible node combination or a multi-node auction series for a multi layered network node topology for renewable energy community linked forward market of transmission and renewable energy units for a user on the system.

**[00373]** In some embodiments, the GUI 210 transmits a From node 2401 and To node 2402 with instructions to the users 110 with a specific date 2403 and time 2404 of a multi layered network node topology for forward market of transformed renewable energy community linked transmission and renewable energy units for a user on the system to perform an auction by pressing the Go button 2405. The system may use a plurality of constraints such as, but not limited by, cheapest route 1011, single mode of renewable energy community linked transmission 1012, multi type method mode of renewable energy community linked transmission 1013, fastest route 1014, most scenic route 1015, highest rated route or highest rated transmission 1016, most available transmission route 1017, highest volume route 1018, most frequent route 1019, service level route 1020, security and

safety of route 1021, and group restricted email or group criteria 1022 to use any two node points 2407, 2408, 2409, 2410 or any combination of points 2407, 2408, 2409, 2410. In some embodiments the system may use no constraint, one constraint or a plurality of constraints to allow the user 110 to participate, transact or trade in a multi layered network node topology for renewable energy community linked forward market of transmission and renewable energy units in a price-time priority queue auction. In some embodiments the price-time priority queue auction for renewable energy community linked forward market transformed transmission or renewable energy units or securities may be comprised of an auction between only two points or a plurality of points subject to a plurality of constraints. In some embodiments the from or starting point or ingest virtual hub may be 2407, but the system selects an auction between 2408 and 2409 rather than starting at 2407 because one or more constraints were selected to frame the price-time priority queue auction for renewable energy community linked forward market transmission or renewable energy units. In some embodiments, an auction may be comprised of multiple modes of renewable energy community linked transmission comprising a vehicle renewable energy community linked transmission or renewable energy unit auction between 2407 and 2408 points, followed by an renewable energy community linked solar transmission or renewable energy unit auction between 2408 and 2409, followed by an renewable energy community linked wind auction between 2410 and 2409 for renewable energy community linked transmission or renewable energy units. In some embodiments the various plurality of auctions may be displayed as one price-time priority auction or a series of price-time priority auctions. In some embodiments, auctions for a multi layered network node topology for a renewable energy community linked forward market of transmission and renewable energy units may consist of any subset or superset of the aforementioned possibilities including any constraints 1000 or any plurality of modes 810.

**[00374]** FIG. 25 illustrates an exemplary setting configuration 2500 for a renewable energy community linked transmission or renewable energy unit multi layered network node topology in one exemplary implementation of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity units in accordance with some embodiments. In some embodiments, the multi layered network node topology of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity configuration 2500 includes the following setting elements, or a subset or superset thereof:

**[00375]** computing device unit GUI 210 to display method of multi layered network node topology for forward market of transformed renewable energy community linked transmission and renewable energy units or securities.

**[00376]** hamburger menu toggle 270 to move between different application configurations;

**[00377]** open markets setting toggle 2510 which allows a user to see all market participants of a given auction on a multi layered network node topology for a forward market of transformed renewable energy community linked transmission and renewable energy units or securities;

**[00378]** restricted markets setting By Organization 2520, By Sex 2530, By Rating 2540, By Security 2550 or by any other restriction the user 110 defines which limit the price-time priority queue auction participants for the user;

**[00379]** privacy settings which restrict push notifications 2560, location information 2570, Sync with contacts 2580, or other privacy settings;

**[00380]** In some embodiments, a user 110 may select open markets 2510 which show every participant in a given auction for a multi layered network node topology for a forward market of renewable energy community linked transmission and renewable energy units. In some embodiments, participants or users 110 may select to restrict the market view of the GUI such as 400 by organization email 2520, by sex 2530, by rating of driver 2540, rating of user 2540, by security 2550, or by a plurality of other restrictions, but not limited to those restrictions. In some embodiments, users 110 may change privacy settings which restrict push notifications 2560, location settings 2570, Sync with Contacts settings 2580 or a plurality of other settings. In some embodiments, the toggle switches 2510, 2520, 2530, 2540, 2550, 2560, 2570, 2580 may be set to off or on depending on if they hold a right or left toggle switch position. The restricted market settings 2520, 2530, 2540, 2550 may be a subset or superset of the aforementioned in the formation of an open market price-time priority auction for a multi layered network node topology for a forward market of renewable energy community linked transmission and renewable energy units.

**[00381]** FIG. 26 illustrates an exemplary setting for a package battery or cargo battery scan configuration 2600 for a transformed renewable energy community linked transmission or renewable energy unit multi layered network node topology in one exemplary implementation of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity units in accordance with some embodiments. In some embodiments, the multi layered network node topology of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity configuration 2600 includes the following setting for a package battery or cargo battery scan elements, or a subset or superset thereof:

**[00382]** computing device unit GUI 210 to display method of multi layered network node topology for forward market of renewable energy community linked transformed transmission and renewable energy units.

**[00383]** hamburger menu toggle 270 to move between different application configurations;

**[00384]** package battery or Cargo battery Scan module 2610 to document the status and position of transformed forward market renewable energy or renewable energy community linked transmission units or security;

**[00385]** package battery or Cargo battery Inbound or received module 2692 to scan a picture, universal product code barcode, QR code, or other transformed renewable energy community linked transmission or renewable energy unit identifier or security;

**[00386]** package battery or Cargo battery Inbound scan toggle switch 2620 to scan a picture, universal product code barcode, QR code, or other transformed renewable energy community linked transmission or renewable energy unit identifier or security;

**[00387]** cargo battery unit Inbound scan toggle switch 2640 to scan a picture, universal product code barcode, QR code, or other transformed renewable energy community linked transmission or renewable energy unit identifier or security;

**[00388]** trailer battery unit Inbound scan toggle switch 2650 to scan a picture, universal product code barcode, QR code, or other transformed renewable energy community linked transmission or renewable energy unit identifier or security;

**[00389]** container battery unit Inbound scan toggle switch 2660 to scan a picture, universal product code barcode, QR code, or other transformed renewable energy community linked transmission or renewable energy unit identifier or security;

**[00390]** package battery or Cargo battery Outbound or delivered module 2693 to scan a picture, universal product code barcode, QR code, or other transformed renewable energy community linked transmission or renewable energy unit or security identifier or security;

**[00391]** package battery or Cargo battery Outbound or delivered scan toggle 2670 to scan a picture, universal product code barcode, QR code, or other transformed renewable energy community linked transmission or renewable energy unit identifier or security;

**[00392]** cargo battery outbound or delivered scan toggle 2680 to scan a picture, universal product code barcode, QR code, or other transformed renewable energy community linked transmission or renewable energy unit identifier;

**[00393]** trailer battery Outbound or delivered scan toggle 2690 to scan a picture, universal product code barcode, QR code, or other transformed renewable energy community linked transmission or renewable energy unit identifier;

**[00394]** container battery unit outbound or delivered scan toggle 2691 to scan a picture, universal product code barcode, QR code, or other transformed renewable energy community linked transmission or renewable energy unit identifier.

**[00395]** In some embodiments, a user 110 may select the package battery or cargo battery unit scan module 2610 to scan or take a picture of a package battery or cargo battery identification code such as a QR code, Uniform Product code or other identifying package battery or cargo battery characteristic. In some embodiments, the user 110 may select the inbound Scan/Picture Package battery toggle 2620 which captures the identification characteristic which may include QR Codes, Uniform Product Codes, Serial Numbers or other cargo battery identification characteristics of a package battery or cargo battery renewable energy community linked transmission or renewable energy unit. In some embodiments, inbound cargo may include a larger unit structure than a package battery such as a crate battery or large battery movable unit with identification characteristics which may include QR Codes, Uniform Product Codes, Serial Numbers or other cargo identification characteristics. For such larger units, a user 110 may use the Scan battery Cargo Unit toggle 2640 to capture the cargo battery identification characteristic for inbound receipt of the renewable energy community linked transmission or renewable energy unit. In some embodiments, an inbound Scan Trailer Unit toggle 2650 option may be used by a user 110 to instruct the system configuration that receipt of a large battery trailer unit, such as an eighteen wheel battery trailer unit or smaller trailer, may be scanned to identify the renewable energy community linked transmission or renewable energy unit. In some embodiments, an inbound Scan Container Unit 2660 toggle may be utilized to track the receipt or location of a shipping container. In some embodiments, a user 110 may select the outbound package or cargo unit scan module 2693 to scan or take a picture of a package battery or cargo battery identification code such as a QR code, Uniform Product code or other identifying package battery or cargo battery characteristic to confirm delivery to a delivery address of the renewable energy community linked transmission or renewable energy unit. In some embodiments, the user 110 may select the outbound Scan/Picture battery Package toggle 2670 which captures the identification characteristic of a package or cargo renewable energy community linked transmission or renewable energy unit once the unit is delivered to the delivery address. In some embodiments, cargo may include a larger unit structure than a package battery, such as a crate battery or large movable battery unit with identification characteristics which may include QR Codes, Uniform Product Codes, Serial Numbers or other cargo identification characteristics. For such larger units, a user 110 may use the outbound Scan Cargo battery Unit toggle 2680 to capture the cargo battery identification characteristic for outbound receipt of the transformed renewable energy community linked transmission or renewable energy unit or security. In some embodiments, an outbound Scan Trailer battery Unit toggle 2690 option may be used by a user 110 to instruct the system configuration that delivery of a large trailer battery unit, such as an eighteen wheel trailer battery unit or smaller battery trailer, may be scanned to identify the renewable energy community linked transmission or renewable energy unit and confirm delivery. In some embodiments, the cargo

battery unit 2680 may be installed in a home or business to allow for renewable energy storage of the renewable energy community linked unit. In some embodiments, an outbound Scan Container battery Unit 2691 toggle may be utilized to track the delivery or location of a shipping battery container which has been delivered. In some embodiments, transformed renewable energy community linked transmission or renewable energy units or securities may be a subset or superset of the aforementioned in the formation of an open forward market auction for a multi layered network node topology for a forward market of transformed renewable energy community linked transmission and renewable energy units or securities.

**[00396]** FIG. 27 illustrates an exemplary setting for a renewable energy community linked package battery or cargo battery market configuration 2700 for a transformed renewable energy community linked transmission or renewable energy unit or security multi layered network node topology in one exemplary implementation of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity units or securities in accordance with some embodiments. In some embodiments, user interface 210 includes the following elements, or a subset or superset thereof:

**[00397]** exemplary renewable energy community linked virtual hub combination from a battery shipping center location (a data transformation) 2711;

**[00398]** exemplary renewable energy community linked virtual hub origin/from location 2710 with users or renewable energy originators 2712 within the renewable energy community linked virtual hub location 2710 (a data transformation);

**[00399]** exemplary specification summary of the market, level of service and time of delivery commencement 2727 (a data transformation);

**[00400]** exemplary mode of ground transmission or renewable energy capacity type 2730 (a data transformation);

**[00401]** exemplary transaction summary of the last trades quantity and price 2728;

**[00402]** exemplary renewable energy community linked virtual hub destination/to location 2722 and user who is being delivered on the renewable energy community linked transmission or renewable energy capacity unit 2723 (a data transformation);

**[00403]** exemplary bid/buy quantity title header 2715 for an exemplary renewable energy community linked virtual transmission or renewable energy unit hub market (a data transformation);

**[00404]** exemplary bid/buy price title header 2716 for an exemplary virtual renewable energy community linked transmission or renewable energy hub market (a data transformation);

**[00405]** exemplary offer/sell price title header 2719 for an exemplary virtual renewable energy community linked transmission or renewable energy hub market (a data transformation);

**[00406]** exemplary offer/sell quantity title header 2726 for an exemplary virtual renewable energy community linked transmission or renewable energy hub market (a data transformation);

**[00407]** exemplary bid/buy quantity 2414 for the best bid quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination 2711 (a data transformation);

**[00408]** exemplary bid/buy quantity 2713 for the second-best bid quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination 2711 (a data transformation);

**[00409]** exemplary bid/buy price 2718 for the best bid price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination 2711 (a data transformation);

**[00410]** exemplary bid/buy price 2717 for the second-best bid price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination 2711 (a data transformation);

**[00411]** exemplary offer/sell price 2721 for the best offer price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination 2711 (a data transformation);

**[00412]** exemplary offer/sell price 2720 for the second-best offer price from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination (a data transformation) 2711;

**[00413]** exemplary offer/sell quantity 2725 for the best offer quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination (a data transformation) 2711;

**[00414]** exemplary offer/sell quantity 2724 for the second-best offer quantity from a plurality of users 110 for an exemplary respective renewable energy community linked transmission or renewable energy capacity virtual hub combination (a data transformation) 2711;

**[00415]** exemplary safety dispatch “911” button 2729 to enact video and audio recording of the user 110 environment and dispatch of that information to authorities and system servers.

[00416] exemplary hamburger menu button 270 to move back to menu options and settings away from the participation, transaction, trading price-time priority auction GUI 210 embodiment.

[00417] In some embodiments, the user 110 may enter a transaction quantity and price for renewable energy community linked transmission or renewable energy capacity units to participate, transact and/or trade by the GUI 210 detecting user 110 contact or audio interface with a bid/buy price 2718 or offer/sell price 2721. The GUI 210 detects user 110 contact with any of the GUI 210 buttons which have been aforementioned. Upon user 110 contact or audio interface with buttons on the GUI 210, instructions are instantiated which allow the user 110 to change the specifications of the respective virtual hub combination 2711. A plurality of prices and markets may be presented based on a plurality of transformed renewable energy community linked contract specifications. In some embodiments, the best bid/buy price 2718 may be moving up in price or down in price depending on the market conditions at any given time. In some embodiments the last trade or last transacted price for a given specification is listed to help the user 110 understand how the market is moving so that the user 110 may submit a competitive offer/selling price 2721 or bid/buying price 2718. In some embodiments, users 110 may adjust settings of the GUI 210 to show more bid/buying prices 2717 or more offer/selling prices 2720. In some embodiments the matrix of market quantities and prices 2713, 2714, 2715, 2716, 2717, 2718, 2719, 2720, 2721, 2724, 2725, 2726 may be referred to as market depth in the GUI 210 embodiment. In some embodiments the number of users 110 may be displayed as user icons 2712 or 2723 for the amount of people logged in which desire to transact, trade or participate in a given virtual hub 2710 to virtual hub 2722 combination for renewable energy community linked transmission or renewable energy units. In some embodiments, users 110 may select the transmission mode 2730 such that the user allows a market for only one form of transformed renewable energy community linked transmission or renewable energy capacity as a commodity or the user 110 may allow the system to show multiple forms of renewable energy community linked transmission or renewable energy capacity between two renewable energy community linked virtual transmission capacity hubs 2710, 2711, 2722. In some embodiments the GUI 210 may detect a user 110 selecting the 911 button 2729 which may activate voice and video recording functions on the mobile or stationary device and transmit the data with a confirmation from the user 110 to the authorities and system servers to provide enhanced security while participating, transacting or trading forward transformed renewable energy community linked transmission or renewable energy as a commodity or security. In some embodiments the user may toggle between the GUI 210 market view screen in FIG. 27 and other menu 270 options and settings by the user 110 selecting the hamburger button 270 and the GUI 210 detecting the user 110 input or contact or audio instruction. In some embodiments the GUI 210 may instantiate instructions in the memory of the mobile computing device which then transmits renewable energy community linked transmission or renewable energy capacity data 241 through the network 226, 214 or wireless GPS network 215 to call upon instruction routines and instruction sub-routines on the renewable energy community linked transmission forward market database server 271, virtual hub database server 223, network member

database server 222, renewable energy community route processor 217, my route virtual hub processor 218, application processor 219, server 220, sequence route processor 221, and memory 224 which all interface together to make one system which may deliver renewable energy community linked transmission or renewable energy capacity units to users 110 from and to a plurality of virtual hubs 2710, 2722 with a plurality of specifications at specific market prices.

**[00418]** FIG. 28 illustrates an exemplary check in and security database configuration 2800 for a renewable energy community linked transmission or renewable energy unit multi layered network node topology in one exemplary implementation of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity units or securities in accordance with some embodiments. In some embodiments, the multi layered network node topology of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity configuration 2800 includes the following security configuration elements, or a subset or superset thereof:

**[00419]** exemplary uniform crime reporting ("UCR") database 2854 from international agencies who report crime;

**[00420]** exemplary International State or Provincial crime reporting database 2855 from international governments who report crime;

**[00421]** exemplary International National Incident Based Reporting System ("NIBRS") crime reporting database 2856 from international governments who report crime;

**[00422]** exemplary Interpol crime reporting database 2857 from international governments who report crime which connects National Central Bureaus ("NCBs");

**[00423]** exemplary International application program interface and ABC ("API/ABC") crime reporting database 2860 from international governments who report crime;

**[00424]** exemplary national crime reporting database 2858 from international governments who report crime;

**[00425]** exemplary internal system crime reporting database 2859 from crimes which occurred on system;

**[00426]** exemplary facial scan to identify user against a plurality of crime databases;

**[00427]** exemplary fingerprint scan to identify user 2820 against a plurality of crime databases;

**[00428]** exemplary photo or photo scan to identify user 2830 against a plurality of crime databases;

**[00429]** exemplary voice scan to identify user 2810 against a plurality of crime databases;

**[00430]** exemplary Computing device unit GUI 210 to display method of multi layered network node topology for forward market of renewable energy community linked transmission and renewable energy units;

**[00431]** hamburger menu toggle 270 to move between different application configurations;

**[00432]** exemplary renewable energy community linked Driver or Renewable energy transport or renewable energy or transport seller unit user interface 2851 to confirm identity verification against a plurality of crime databases;

**[00433]** exemplary renewable energy community linked passenger unit or renewable energy unit user interface 2852 to confirm identity verification against a plurality of crime databases;

**[00434]** exemplary handshake verification user interface 2853 to confirm both buyer and seller of renewable energy community linked transmission or renewable energy units were correctly verified against crime databases;

**[00435]** In some embodiments, a plurality of crime databases UCR Database 2854, State and Province Database 2855, NIBRS database 2856, INTERPOL database 2857, API/ABC database 2860, National database 2858, and Internal system database 2859 are used to confirm a user 110, does not have a criminal history in accordance with instructions on the method and system. In some embodiments, renewable energy community linked transmission or renewable energy unit security may be a subset or superset of the aforementioned in the formation of an open forward market auction for a multi layered network node topology for a forward market of renewable energy community linked transmission and renewable energy units. Such security checks are standard in airports, but they are not automated, and they are not utilized in other modes of transmission, which degrades the overall safety of other transmission methods if they are not utilized. In some embodiments, the check in instructions may reject a user from confirmed verified transmission if they fail the plurality of safety checks. In some embodiments, confirmed no crime history users 110 do not have activity reported in the plurality of crime databases that may include the UCR Database 2854, State and Province Database 2855, NIBRS database 2856, INTERPOL database 2857, API/ABC database 2860, National database 2858, and Internal system database 2859 and are confirmed to renewable energy community linked transport verified status 2853 in the system.

**[00436]** FIG. 29 illustrates an exemplary user accounting configuration 2900 for a transformed renewable energy community linked transmission or renewable energy unit or security multi layered network node topology in one exemplary implementation of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity unit auctions in accordance with some embodiments. In some embodiments, the multi layered network node topology of participating, transacting and/or trading transformed renewable energy community

linked transmission or renewable energy capacity configuration 2900 includes the following accounting elements, or a subset or superset thereof:

**[00437]** computing device unit GUI 210 to display method of multi layered network node topology for forward market of renewable energy community linked transmission and renewable energy units.

**[00438]** exemplary hamburger menu toggle 270 to move between different application configurations;

**[00439]** exemplary account button 2910 to edit or confirm user account data;

**[00440]** exemplary deposit button 2920 to add transaction funds or transaction currency or transaction balances to the user account;

**[00441]** exemplary deposit method button 2930 to add transaction funds or transaction currency or transaction balances to the user account through Debit, Credit, Cash, Check, virtual currency, digital currency or a plurality of other payment methods;

**[00442]** exemplary withdrawal button 2940 to send transaction funds or transaction currency or transaction balances to the user account in a different institution;

**[00443]** exemplary withdrawal method button 2970 to send transaction funds or transaction currency or transaction balances to the user account at a different institution through Debit, Credit, Cash, Check, virtual currency, digital currency or a plurality of other payment methods;

**[00444]** exemplary balances button 2950 to confirm user account balances;

**[00445]** exemplary tax button 2960 to track user account activity for taxation reporting;

**[00446]** exemplary month to date tax reporting button 2980;

**[00447]** exemplary year to date tax reporting button 2990;

**[00448]** exemplary prior year tax reporting button 2991;

**[00449]** exemplary "911" security button 2992;

**[00450]** exemplary Network Member Database Server 222;

**[00451]** exemplary cloud and CPU and Network configuration 290 to send and receive Network Member account data.

**[00452]** In some embodiments, user account 2910 data may be displayed with voice or screen or non-screen computing devices with instructions from the GUI 210 in accordance with instructions on the method and system. In some embodiments, user deposit 2920 data may be displayed with voice

or screen or non-screen computing devices with instructions from the GUI 210 in accordance with instructions on the method and system. In some embodiments, user deposit method 2930 data such as Debit, Credit, Cash, Check, virtual currency, digital currency or a plurality of other payment methods may be displayed with voice or screen or non-screen computing devices with instructions from the GUI 210 in accordance with instructions on the method and system. In some embodiments, user withdrawal 2940 data may be displayed with voice or screen or non-screen computing devices with instructions from the GUI 210 in accordance with instructions on the method and system. In some embodiments, user withdrawal method 2970 data such as Debit, Credit, Cash, Check, virtual currency, digital currency or a plurality of other payment methods may be displayed with voice or screen or non-screen computing devices with instructions from the GUI 210 in accordance with instructions on the method and system to place money in the system account into a different institution specified by the user 110. In some embodiments, user balances 2950 data may be displayed with voice or screen or non-screen computing devices with instructions from the GUI 210 in accordance with instructions on the method and system. In some embodiments, user tax button 2960 data may be displayed with voice or screen or non-screen computing devices with instructions from the GUI 210 in accordance with instructions on the method and system. In some embodiments, user month to date tax data button 2980, year to date tax data button 2990, prior year tax data button 2991 may be displayed with voice or screen or non-screen computing devices with instructions from the GUI 210 in accordance with instructions on the method and system. In some embodiments, the accounting and tax information may be stored in the Network Member Database Server 222 and transmitted through the cloud, network and CPUs 290 to the GUI computing device 210. In some embodiments, transmission or renewable energy unit accounting and fund interfaces may be a subset or superset of the aforementioned in the formation of an open forward market price-time priority auction for a multi layered network node topology for a forward market of renewable energy community linked transmission and renewable energy units.

**[00453]** FIG. 30 illustrates an exemplary network configuration 3000 for a renewable energy community linked transmission or renewable energy unit multi layered network node topology in one exemplary implementation of participating, transacting and/or trading transmission or renewable energy capacity unit auctions in accordance with some embodiments. In some embodiments, the multi layered network node topology of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity configuration 3000 includes the following accounting elements, or a subset or superset thereof:

**[00454]** exemplary wireless GPS Network and Server 3083;

**[00455]** exemplary wireless computing device that is audio, video, screen or non-screen interfaced 3082;

**[00456]** exemplary Network Member Database Server 3050;

**[00457]** exemplary renewable energy community linked Transmission Forward Market Database Server 3060;

**[00458]** exemplary renewable energy community linked No Arbitrage Condition Database Server 3070;

**[00459]** exemplary renewable energy community linked Virtual Hub Database Server 3080;

**[00460]** exemplary Network, Network Cloud, and local CPUs 3081;

**[00461]** exemplary Network Multi Layered Network Virtual Hub Node Topology for forward market renewable energy community linked transmission of renewable energy unit price-time priority auctions 3010, 3020, 3030, 3040.

**[00462]** In some embodiments, the network topology 3010 may utilize a voice or screen or non-screen computing device 3082 to interface with system and method instructions over a Network and Network Cloud and Networked CPUs 3081. The instructions may be used on CPUs to order a constrained or unconstrained virtual hub network topology auction over two or more virtual hub nodes 3010, 3020, 3030, 3040 over one or multiple modes of renewable energy community linked transmission or renewable energy with instructions and data from the Virtual Hub Database Server 3080, the No Arbitrage Condition Database Server 3070, the renewable energy community linked Transmission Forward Market Database Server 3060, the Network Member Database Server 3050 and the Wireless GPS Network Server 3083. Network Data may be displayed with voice or screen or non-screen computing devices with instructions from the GUI 210 in accordance with instructions on the method and system.

**[00463]** FIG. 31 illustrates an exemplary network configuration 3100 integrating the disclosed method and system as a renewable energy community linked layer on a traditional third party map software. In some embodiments, the multi layered network node topology of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity configuration 3100 includes the following accounting elements, or a subset or superset thereof:

**[00464]** exemplary computing device 3105;

**[00465]** exemplary route input by user 3175;

**[00466]** exemplary route node structure 3190 to satisfy user renewable energy community linked route request 3175;

**[00467]** exemplary alternative route node structure 3180 to satisfy user renewable energy community linked route request 3175 with associated time 3181;

**[00468]** exemplary time estimate 3185 for route 3190;

**[00469]** exemplary live auction price value 3110 for route 3190;

**[00470]** exemplary alternative live price-time priority queue auction price value 3116 for renewable energy community linked route 3180;

**[00471]** exemplary navigation mode button 3171;

**[00472]** exemplary game mode button 3172;

**[00473]** exemplary date and time modification button 3195 for disclosed route 3175;

**[00474]** exemplary transformed forward renewable energy community linked transmission unit price-time priority auction value and modification feed 3115 and selection GO 3145 button to transact the given transmission route with a basic renewable energy community linked transmission unit or security feature and characteristic for one route 3190 that satisfies the user route request 3175;

**[00475]** exemplary alternative transformed forward renewable energy community linked transmission unit price-time priority auction value and modification feed 3120 and selection GO 3150 button to transact the given transmission route with a basic renewable energy community linked transmission unit or security feature and characteristic for one alternative route 3180 that satisfies the user route request 3175;

**[00476]** exemplary transformed forward renewable energy community linked transmission unit auction value and modification feed 3125 and selection GO 3155 button to transact the given route with an intermediate renewable energy community linked transmission unit or security feature and characteristic for one transmission route 3190 that satisfies the user route request 3175;

**[00477]** exemplary alternative transformed forward renewable energy community linked transmission unit auction value and modification feed 3130 and selection GO 3160 button to transact the given transmission route with an intermediate renewable energy community linked transmission unit or security feature and characteristic for one alternative route 3180 that satisfies the user route request 3175;

**[00478]** exemplary transformed forward renewable energy community linked transmission unit auction value and modification feed 3135 and selection GO 3166 button to transact the given transmission route with a premium renewable energy community linked transmission unit or security feature and characteristic for one transmission route 3190 that satisfies the user route request 3175;

**[00479]** exemplary alternative renewable energy community linked transformed forward renewable energy community linked transmission unit auction value and modification feed 3140 and selection

GO 3165 button to transact the given route with a premium renewable energy community linked transmission unit or security feature and characteristic for one alternative transmission route 3180 that satisfies the user transmission route request 3175;

**[00480]** exemplary market display feature 3170 as an overlay onto map routing for user requests 3175.

**[00481]** In some embodiments, map routing interfaces 3105 such as Apple Maps or TomTom or another third party, may integrate the disclosed method and system to display the transformed forward renewable energy community linked transmission unit or security market auction price along a various transmission route given various virtual hub topologies 1800 over the user 110 defined route request 3175. The computing device 3105 may disclose over visual, audio or other communication methods the forward transformed renewable energy community linked transmission unit auction price 3110 on a given route 3190. In yet other embodiments, the disclosed transmission unit transformation may communicate the forward transformed renewable energy community linked transmission unit or security auction price 3116 of an alternative route 3180 such that a user may select either route 3190 or 3180 based on the disclosed method and system price 3110 or 3116 which was generated by instructions from a plurality of users between two virtual hubs on the user defined route 3175. The disclosed forward market renewable energy community linked transmission unit auction may be communicated on an on demand basis representing the current time and day or on a forward basis by changing the Date/Time 3195 user interface button feature to represent the then current market pricing for future time intervals on a plurality of given routes 3190 and 3180 along the user requested virtual hub combination 3175. Renewable energy community linked virtual hubs may represent the end points of a route defined by the user 3175 or renewable energy community linked virtual hubs may represent points along a given route but not including the endpoints or renewable energy community linked virtual hubs may represent points not along the renewable energy community linked route the user defined 3175. Renewable energy community linked virtual hub combinations transform transmission capacity units into a forward market which allow users of the method and system to transact in the physical market by either delivering transformed renewable energy community linked transmission units as a driver of a vehicle or capacity holder or by receiving them as a passenger or package if the renewable energy community linked unit is a package rather than a person. A renewable energy community linked transmission unit or security represents space which may be filled by a renewable energy community linked package or unit. Further the forward transformed renewable energy community linked transmission unit market price-time priority queue auction 3170 overlay may be a layer on traditional GPS map routing software or as an alternative to time based routing or mileage based routing. The forward renewable energy community linked transmission unit market specification such as "Basic" 3115, 3120, "Intermediate" 3125, 3130, or "Premium" 3135, 3140 may also have a plurality of other characteristics or levels which form the basis of a fungible transformed contract or substitutable

contract between users which is exchangeable with the same terms and conditions if one user is unable to fulfil their contract obligations for the transformed renewable energy community linked transmission unit. In some embodiments, the navigation mode 3171 may move the user to turn by turn directions along the price based navigation renewable energy community linked route 3190. In some embodiments, the game mode 3172 may move the user to a game based overlay on the price based navigation renewable energy community linked route 3190. In some embodiments, the market mode 3170 may move the user to a market based overlay on the priced based navigation renewable energy community linked route 3190.

**[00482]** The disclosed method and system of a transformed renewable energy community linked transmission capacity unit may be fully functional as a layer in map routing software or as a standalone application.

**[00483]** In some embodiments, the disclosed method and system renewable energy community linked transmission unit price-time priority queue auction price 3110 and 3116 has two prices or more in other embodiments. Two renewable energy community linked transmission route prices 3110 are disclosed at \$3 and \$3.10. The former price of \$3 is the price where a user is willing to buy or pay for a renewable energy community linked transmission unit along the given route 3190. The later price of \$3.10 is the price at which a user is willing to sell a renewable energy community linked transmission unit along the given route 3190. The instructions of the auction may match the highest bidding price of \$3 with the lowest selling price in the price queue when the prices match. In other words, in the exemplary embodiment, if a user wanted to sell a transmission unit at the current forward market price-time priority auction queue 3110 on route 3190, the user would enter a price of \$3 which is the current highest bidding price in the method and system queue 3110. By way of further example, another user may desire to buy a renewable energy community linked transmission unit on the forward transformed renewable energy community linked transmission unit auction method and system on route 3190, to match, the user would enter a price of \$3.10 which is the lowest selling price of a seller on the forward market renewable energy community linked transmission unit auction method and system.

**[00484]** FIG. 32 illustrates another exemplary network configuration 3200 integrating the disclosed method and system as a renewable energy community linked layer on another traditional third party map software. In some embodiments, the multi layered network node topology of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity configuration 3200 includes the following accounting elements, or a subset or superset thereof:

**[00485]** exemplary computing device 3205;

**[00486]** exemplary transmission route input by user 3210;

**[00487]** exemplary renewable energy community linked transmission route node structure 3295 to satisfy user renewable energy community linked route request 3210;

**[00488]** exemplary alternative renewable energy community linked transmission route node structure 3230 to satisfy user renewable energy community linked route request 3210 with associated time;

**[00489]** exemplary time estimate 3225 for route 3295;

**[00490]** exemplary navigation mode button 3291;

**[00491]** exemplary game mode button 3292;

**[00492]** exemplary market mode button 3293;

**[00493]** exemplary live price-time priority queue auction price value 3220 for route 3295;

**[00494]** exemplary alternative live price-time priority auction price value 3231 for renewable energy community linked route 3230;

**[00495]** exemplary date and time modification button 3296 for disclosed renewable energy community linked transmission route 3210;

**[00496]** exemplary transformed forward renewable energy community linked transmission unit or security auction value and modification feed 3235 and selection GO 3265 button to transact the given transmission route with a basic renewable energy community linked transmission unit feature and characteristic for one transmission route 3295 that satisfies the user transmission route request 3210;

**[00497]** exemplary alternative transformed forward renewable energy community linked transmission unit or security price-time priority auction value and modification feed 3240 and selection GO 3270 button to transact the given transmission route with a basic renewable energy community linked transmission unit feature and characteristic for one alternative route 3230 that satisfies the user transmission route request 3210;

**[00498]** exemplary transformed forward renewable energy community linked transmission unit or security auction value and modification feed 3245 and selection GO 3275 button to transact the given transmission route with an intermediate renewable energy community linked transmission unit feature and characteristic for one route 3295 that satisfies the user renewable energy community linked transmission route request 3210;

**[00499]** exemplary alternative transformed forward renewable energy community linked transmission unit or security auction value and modification feed 3250 and selection GO 3280 button to transact the given transmission route with an intermediate renewable energy community linked transmission

unit feature and characteristic for one alternative renewable energy community linked route 3230 that satisfies the user renewable energy community linked route request 3210;

**[00500]** exemplary transformed forward renewable energy community linked transmission unit or security auction value and modification feed 3255 and selection GO 3285 button to transact the given transmission route with a premium renewable energy community linked transmission unit feature and characteristic for one renewable energy community linked route 3295 that satisfies the user renewable energy community linked transmission route request 3210;

**[00501]** exemplary alternative transformed forward renewable energy community linked transmission unit or security price-time priority auction value and modification feed 3260 and selection GO 3290 button to transact the given route with a premium transformed renewable energy community linked transmission unit feature and characteristic for one alternative renewable energy community linked transmission route 3230 that satisfies the user renewable energy community linked transmission route request 3210;

**[00502]** exemplary market display feature 3215 as an overlay onto map renewable energy community linked routing for user requests 3210.

**[00503]** In some embodiments, map routing interfaces 3205, such as Google Maps or Garmin or another third party navigation method, may integrate the disclosed method and system to display the transformed forward renewable energy community linked transmission unit or security market auction price along a various transmission route given various virtual hub topologies 1800 over the user 110 defined route request 3210. The computing device 3205 may disclose over visual, audio or other communication methods the forward transformed renewable energy community linked transmission unit or security auction price 3220 on a given route 3295. In yet other embodiments, the disclosed renewable energy community linked transmission unit transformation may communicate the forward transformed renewable energy community linked transmission unit auction price 3231 of an alternative route 3230 such that a user may select either route 3295 or 3230 based on the disclosed method and system price 3231 or 3220 which was generated by instructions from a plurality of users between two renewable energy community linked virtual hubs on the user defined renewable energy community linked transmission route 3210 and instructions to generate a price-time priority queue for buyers and sellers of renewable energy community linked transmission units long given routes. In some embodiments, the user(s) 110 may alter the date 3296 such that the transformed renewable energy community linked transmission unit or security may be updated with user 110 submitted prices 3235 for forward looking time periods. The disclosed forward market transformed renewable energy community linked transmission unit or security price-time priority queue auction may be communicated on an on demand basis representing the current time and day or on a forward basis by changing the Date/Time 3296 user interface button feature to represent the then current market pricing for future time intervals on a plurality of given routes 3295 and 3230 along the user requested

virtual hub combination 3210. Renewable energy community linked virtual hubs may represent the end points of a route defined by the user 3210 or virtual hubs may represent points along a given transmission route but not including the endpoints or renewable energy community linked virtual hubs may represent points not along the route the user defined 3210. Renewable energy community linked virtual hub combinations transform transmission capacity units or securities into a forward market which allow users of the method and system to transact in the physical market by either delivering transformed renewable energy community linked transmission units as a driver of a vehicle or capacity holder or by receiving them as a passenger or package if the unit is a package rather than a person. Further the forward transformed renewable energy community linked transmission unit market auction 3215 overlay may be a layer on traditional GPS map routing software as an alternative to time based routing. The forward renewable energy community linked transmission unit market specification such as "Basic" 3235, 3240, "Intermediate" 3245, 3250, or "Premium" 3255, 3260 may also have a plurality of other characteristics or levels which form the basis of a fungible contract or substitutable contract between users which is exchangeable with the same terms and conditions if one user is unable to fulfil their contract obligations for the transformed renewable energy community linked transmission unit. In some embodiments, the navigation mode 3291 may move the user to turn by turn directions along the price based navigation renewable energy community linked transmission route 3295. In some embodiments, the game mode 3292 may move the user to a game based overlay on the price based navigation renewable energy community linked transmission route 3295. In some embodiments, the market mode 3293 may move the user to a market based overlay on the priced based navigation renewable energy community linked transmission route 3295.

**[00504]** The disclosed method and system of a transformed renewable energy community linked transmission capacity unit may be fully functional as a layer in map routing software or as a standalone application.

**[00505]** In some embodiments, the disclosed method and system transformed renewable energy community linked transmission unit or security price-time priority auction price 3220 and 3231 has two prices or more in other embodiments. Two route prices 3220 are disclosed at \$3 and \$3.10. The former price of \$3 is the price where a user is willing to buy or pay for a renewable energy community linked transmission unit along the given route 3295. The later price of \$3.10 is the price at which a user is willing to sell a renewable energy community linked transmission unit along the given route 3295. The instructions of the price-time priority auction may match the highest bidding price of \$3 with the lowest selling price in the price queue when the prices match. In other words, in the exemplary embodiment, if a user wanted to sell a renewable energy community linked transmission unit at the current forward market price-time auction queue 3220 on transmission route 3295, the user would enter a price of \$3 which is the current highest bidding price in the method and system queue 3220. By way of further example, another user may desire to buy a transformed

renewable energy community linked transmission unit on the forward transformed transmission unit or security auction method and system on transmission route 3295, to match, the user would enter a price of \$3.10 which is the lowest selling price of a seller on the forward market transformed renewable energy community linked transmission unit price-time priority auction method and system.

**[00506]** FIG. 33 illustrates another exemplary network configuration 3300 integrating the disclosed method and system as a layer on another traditional third party map software. In some embodiments, the multi layered network node topology of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity configuration 3300 includes the following accounting elements, or a subset or superset thereof:

**[00507]** exemplary computing device 3335;

**[00508]** exemplary renewable energy community linked route node structure 3340 to satisfy user route requests with associated time and price priority queues;

**[00509]** exemplary alternative renewable energy community linked route node structure 3345 to satisfy user transmission route request with associated time and price priority queues;

**[00510]** exemplary alternative route node structure 3350 to satisfy user route request with associated time and price priority queues;

**[00511]** exemplary live price-time priority auction queue price value 3305 for price based renewable energy community linked route 3340;

**[00512]** exemplary navigation mode button 3391;

**[00513]** exemplary game mode button 3392;

**[00514]** exemplary market mode button 3393;

**[00515]** exemplary go 3330 button to transact or modify the price based renewable energy community linked transmission routing;

**[00516]** exemplary go 3325 button to transact or modify the price based renewable energy community linked transmission routing;

**[00517]** exemplary go 3320 button to transact or modify the price based renewable energy community linked transmission routing;

**[00518]** exemplary alternative live price-time priority auction price value 3310 for renewable energy community linked transmission route 3345;

**[00519]** exemplary alternative live price-time priority auction price value 3315 for renewable energy community linked transmission route 3350;

**[00520]** exemplary date and time modification button 3355 for disclosed renewable energy community linked transmission route 3340;

**[00521]** exemplary date and time modification button 3360 for disclosed renewable energy community linked transmission route 3345;

**[00522]** exemplary date and time modification button 3365 for disclosed renewable energy community linked transmission route 3350;

**[00523]** In some embodiments, map routing interfaces 3335, such as Waze Maps or another third party, may integrate the disclosed method and system to display the transformed forward transmission unit market price-time priority auction price along a various route given various virtual hub topologies 1800 over the user 110 defined route requests. The computing device 3335 may disclose over visual, audio or other communication methods the forward transformed renewable energy community linked transmission unit or security auction price 3305 on a given route 3340. In yet other embodiments, the disclosed transmission unit renewable energy community linked transformation may communicate the forward transformed transmission unit auction price 3310 of an alternative route 3345 such that a user may select either route 3340, 3345, or 3350 based on the disclosed method and system price 3305, 3310, or 3315 which was generated by instructions from a plurality of users between two renewable energy community linked virtual hubs on the user defined route and instructions to generate a price-time queue for buyers and sellers of renewable energy community linked transmission units along given routes. The disclosed forward market transformed renewable energy community linked transmission unit or security price-time priority auction may be communicated on an on demand basis representing the current time and day or on a forward basis by changing the Date/Time 3355, 3360, 3365 user interface button feature to represent the then current market pricing for future time intervals on a plurality of given routes 3340, 3345, or 3350 along the user requested virtual hub combination. In some embodiments, the user(s) 110 may alter the date 3355 such that the transformed renewable energy community linked transmission unit or security may be updated with user 110 submitted prices 3305 for forward looking time periods. Renewable energy community linked virtual hubs may represent the end points or ingest point or delivery point of a route defined by the user or virtual hubs may represent points along a given route but not including the endpoints or renewable energy community linked virtual hubs may represent points not along the route the user defined. Virtual hub combinations transform renewable energy community linked transmission capacity units into a forward market which allow users of the method and system to transact in the physical market by either delivering renewable energy community linked transmission units as a generator or capacity holder or by receiving them as a user or consumer. Further the forward transmission unit market price-time priority auction overlay may be a

layer on traditional GPS map routing software or as an alternative to time based routing. The forward renewable energy community linked transmission unit market specification, such as “Basic” 3305, may also have a plurality of other transformed characteristics or levels which form the basis of a fungible contract or substitutable contract specifications between users which is exchangeable with the same terms and conditions if one user is unable to fulfil their contract obligations for the transformed renewable energy community linked transmission unit or security. In some embodiments, the navigation mode 3391 may move the user to turn by turn directions along the price based navigation renewable energy community linked route 3350. In some embodiments, the game mode 3392 may move the user to a game based overlay on the price based navigation renewable energy community linked route 3340. In some embodiments, the market mode 3393 may move the user to a market based overlay on the priced based navigation renewable energy community linked route 3350.

**[00524]** The disclosed method and system of a transformed renewable energy community linked transmission capacity unit may be fully functional as a layer in map routing software or as a standalone application.

**[00525]** In some embodiments, the disclosed method and system transmission unit price-time priority auction prices 3305, 3310, and 3315 each have two prices or more in other embodiments. Two route prices 3305 are disclosed at \$3 and \$3.10. The former price of \$3 is the price where a user is willing to buy or pay for a renewable energy community linked transmission unit along the given route 3340. The later price of \$3.10 is the price at which a user is willing to sell a renewable energy community linked transmission unit along the given route 3340. The instructions of the price-time priority auction may match the highest bidding price of \$3 with the lowest selling price in the price queue when the prices match. In other words, in the exemplary embodiment, if a user wanted to sell a transmission unit at the current forward market auction queue 3305 on route 3340, the user would enter a price of \$3 which is the current highest bidding price in the method and system queue 3305. By way of further example, another user may desire to buy a renewable energy community linked transmission unit on the forward renewable energy community linked transmission unit auction method and system on route 3340, to match, the user would enter a price of \$3.10 which is the lowest selling price of a seller on the forward market renewable energy community linked transmission unit price-time priority auction method and system.

**[00526]** FIG. 34 illustrates another exemplary network configuration 3400 integrating the disclosed method and system as a layer on another traditional third party map software. In some embodiments, the multi layered network node topology of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity unit or security configuration 3400 includes the following accounting elements, or a subset or superset thereof:

**[00527]** exemplary computing device 3405;

**[00528]** exemplary route 3410;

**[00529]** exemplary live price-time priority auction price value 3430 for renewable energy community linked route 3410;

**[00530]** exemplary alternative live price-time priority auction price value 3426 for renewable energy community linked route 3425;

**[00531]** exemplary navigation mode button 3491;

**[00532]** exemplary game mode button 3492;

**[00533]** exemplary market mode button 3493;

**[00534]** exemplary date and time modification button 3435 for disclosed renewable energy community linked transmission route 3410;

**[00535]** exemplary mileage estimate 3455 for disclosed transmission route 3410;

**[00536]** exemplary route estimate 3450 for disclosed transmission route 3410;

**[00537]** exemplary transformed forward transmission unit auction value and modification feed 3415 and selection GO 3440 button to transact the given route with a basic transmission unit or security feature and characteristic for one route 3425 that satisfies the user route request;

**[00538]** exemplary transformed forward renewable energy community linked transmission unit or security auction value and modification feed 3420 and selection GO 3445 button to transact the given route with a premium renewable energy community linked transmission unit feature and characteristic for one route 3410 that satisfies the user route request;

**[00539]** In some embodiments, the navigation mode 3491 may move the user to turn by turn directions along the price based navigation renewable energy community linked route 3410. In some embodiments, the game mode 3492 may move the user to a game based overlay on the price based navigation route 3410. In some embodiments, the market mode 3493 may move the user to a market based overlay on the priced based navigation transmission route 3410.

**[00540]** FIG. 35 illustrates another exemplary network configuration 3500 integrating the disclosed method and system as a layer on another traditional third party map software in the setting of a vehicle GPS navigation system. In some embodiments, the multi layered network node topology of participating, transacting and/or trading renewable energy community linked transmission or

renewable energy capacity configuration 3500 includes the following accounting elements, or a subset or superset thereof:

**[00541]** exemplary computing device 3550;

**[00542]** exemplary vehicle renewable energy community linked transmission unit carrier unit 3505;

**[00543]** exemplary vehicle renewable energy community linked transmission unit steering wheel 3510;

**[00544]** exemplary navigation mode button 3581;

**[00545]** exemplary game mode button 3580;

**[00546]** exemplary market mode button 3530;

**[00547]** exemplary user of renewable energy community linked transmission unit as seller or driver 3515;

**[00548]** exemplary user route request address information 3545;

**[00549]** exemplary date and time modification button 3540 for disclosed route 3546;

**[00550]** exemplary transformed forward renewable energy community linked transmission unit auction value and modification feed 3525 and selection GO 3535 button to transact the given route with a basic transmission unit feature and characteristic for one route 3546 that satisfies the user route request;

**[00551]** exemplary live price-time priority auction price value 3555 for price based renewable energy community linked route 3546;

**[00552]** exemplary live price-time priority auction price value 3561 for price based alternative renewable energy community linked transmission route 3560;

**[00553]** exemplary market layer routing overlay 3530;

**[00554]** In some embodiments, the disclosed method and system transformed renewable energy community linked transmission unit or security auction market layer may be in a vehicle unit GPS navigation system 3550. In some embodiments, the user 3515 may input driving address instructions 3545 that have an origin location and a destination location. In some embodiments, the user 3515 may communicate with the computing device 3550 through a touchscreen 3520 or and audio interface or another interface. In some embodiments the user 3515 may edit the date/time 3540 button to communicate the market price-time priority auction price based renewable energy

community linked route 3546 from on demand or current time to a forward time or date. Market price-time priority auction based pricing 3555 may vary by date and time due to a plurality of market factors. In some embodiments the user 3515 may edit the market based auction price for the renewable energy community linked transmission units by selecting the market feature button 3525. In some embodiments the user 3515 may select a given renewable energy community linked transmission unit auction price to transact by selecting the go button 3535. In some embodiments, the navigation mode 3581 may move the user to turn by turn directions along the price based navigation renewable energy community linked route 3555. In some embodiments, the game mode 3580 may move the user to a game based overlay on the price based navigation route 3555. In some embodiments, the market mode 3530 may move the user to a market based overlay on the priced based navigation renewable energy community linked route 3555.

**[00555]** In some embodiments, the disclosed method and system renewable energy community linked transmission unit auction prices 3555 and 3561 each have two prices or more in other embodiments. Two route prices 3555 are disclosed at \$3 and \$3.10. The former price of \$3 is the price where a user is willing to buy or pay for a transmission unit along the given route 3546. The later price of \$3.10 is the price at which a user is willing to sell a renewable energy community linked transmission unit along the given route 3546. The instructions of the price-time priority auction may match the highest bidding price of \$3 with the lowest selling price in the price queue when the prices match. In other words, in the exemplary embodiment, if a user 3515 wanted to sell a renewable energy community linked transmission unit at the current forward market auction queue 3555 on route 3546, the user 3515 would enter a price of \$3 which is the current highest bidding price in the method and system queue. By way of further example, another user may desire to buy a renewable energy community linked transmission unit on the forward transformed renewable energy community linked transmission unit or security auction method and system on route 3546, to match, the user would enter a price of \$3.10 which is the lowest selling price of a seller on the forward market transformed renewable energy community linked transmission unit or security auction method and system. In some embodiments, alternative renewable energy community linked routes based on prices in alternative renewable energy community linked transmission unit price-time priority auctions 3560 may have different prices based on supply and demand conditions. In some embodiments the market based routing layer 3530 serves as an alternative to time based routing or mileage based routing which are fundamentally different premises. In some embodiments, the overall software system 3505 and associated instructions may ask the user 3515 with visual or audio interface if the user 3515 would like to monetize their routes upon starting any navigation sequence for transformed renewable energy community linked transmission units or securities.

**[00556]** FIG. 36 illustrates another exemplary network configuration 3600 integrating the disclosed method and system as a game layer on another internal mapping system or traditional third party map system in the setting of a mobile computing device. In some embodiments, the multi layered

network node topology of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity units or securities for price based navigation configuration 3600 includes the following accounting elements, or a subset or superset thereof:

**[00557]** exemplary computing device 3605;

**[00558]** exemplary game overlay user score 3610;

**[00559]** exemplary game overlay user power 3615;

**[00560]** exemplary game overlay SOV (single occupancy vehicle) count 3620;

**[00561]** exemplary game overlay weapon strength 3625;

**[00562]** exemplary game overlay account balance 3630;

**[00563]** exemplary game overlay passenger pick ups 3688;

**[00564]** exemplary game overlay Single Occupancy Vehicle target 3645;

**[00565]** exemplary game overlay Single Occupancy Vehicle weapon 3650;

**[00566]** exemplary game overlay GPS standard map view 3655;

**[00567]** exemplary game overlay augmented or mixed reality view 3660;

**[00568]** exemplary game overlay passenger mode 3687;

**[00569]** exemplary game overlay fire button 3665;

**[00570]** exemplary game overlay multi-purpose direction button 3670;

**[00571]** exemplary game overlay go button 3680;

**[00572]** exemplary game overlay stop button 3675;

**[00573]** exemplary navigation overlay button 3686;

**[00574]** exemplary game overlay button 3689;

**[00575]** exemplary market overlay button 3685;

**[00576]** exemplary market overlay weapon selection button 3683, 3682, 3681, 3694;

**[00577]** exemplary market overlay aim finder toggle 3684.

**[00578]** In some embodiments, the game overlay 3689 awards score and points for destroying the single occupancy vehicle, compute and distribute positive or negative renewable energy community linked transmission unit game auction strategy points, power, or rewards based on any superset combination or subset combination of price 3635, route mileage, number of single occupancy vehicles destroyed or passed 3620, number of passengers 3688, route time estimates, renewable energy community linked transmission unit route 3640, renewable energy community linked transmission unit specifications, renewable energy community linked transmission unit model type based on model type and age, renewable energy community linked transmission unit make type, transmission unit age, matched transmission unit specification, matched transmission unit fuel type, matched renewable energy community linked transmission unit emission specification, cumulative user renewable energy community linked transmission unit specifications, transmission unit rating, transmission unit safety, transmission unit time, transmission unit delay, transmission unit driver rating, renewable energy community linked transmission unit rider rating, renewable energy community linked transmission unit timeliness relative to contract specification.

**[00579]** In some embodiments, the game overlay 3689 may use a plurality of weapon or scoring configurations such as a rifle 3683, an axe 3681, a flower gift 3682, or a X logo 3694 to take away points or gain points from other users on the system. In some embodiments the scoring may be independent of other players on the system, but dependent on the user's actions in the game overlay 3689. In some embodiments a selected weapon 3650 may be used to destroy single occupancy vehicles. In some embodiments the user may accelerate with the go button 3680 to avoid an attack or fire. In some embodiments the user may slow down or stop with the stop button 3675 to avoid enemy fire or attack. In some embodiments, the stop button 3675 may interface with an autonomous driving system of a vehicle to pick up passengers along a price based navigation renewable energy community linked route to increase the score 3610 of the player and increase the balances 3630 by earning money on the system. In some embodiments user(s) may be identified by the X logo 3694 or by a person logo for a bidder on the priced based navigation renewable energy community linked route 3640 to increase score and balances 3630. In some embodiments user(s) may scan navigation view 3655 or augmented reality view 3660 to look for single occupancy vehicle targets or X logo(s) 3694 or 3645 for users who are bidding on the price based navigation renewable energy community linked route 3640.

**[00580]** In some embodiments, the strategy of the priced based navigation game overlay is to pick up as many passengers or bidders as possible along the price based navigation route 3640, destroy as many single occupancy vehicles along the price based navigation route 3640 and to give flowers 3682 and rewards to transmission unit providers who have more than one person in the vehicle along the price based navigation route 3640. In some embodiments user(s) may work independently or collectively in tribes to maximize user score in strategy.

**[00581]** FIG. 37 illustrates another exemplary network configuration 3700 integrating the disclosed method and system as a game layer on another internal mapping navigation system or traditional third party navigation map system in the setting of a mobile computing device. In some embodiments, the multi layered network node topology of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity for price based navigation renewable energy community linked configuration 3700 includes the following accounting elements, or a subset or superset thereof:

**[00582]** exemplary computing device 3705;

**[00583]** exemplary game overlay user score 3710;

**[00584]** exemplary game overlay user power 3720;

**[00585]** exemplary game overlay SOV (single occupancy vehicle) count 3730;

**[00586]** exemplary game overlay weapon strength 3715;

**[00587]** exemplary game overlay account balance 3725;

**[00588]** exemplary game overlay passenger pick ups 3788;

**[00589]** exemplary game overlay Single Occupancy Vehicle target 3735;

**[00590]** exemplary game overlay Single Occupancy Vehicle weapon 3771;

**[00591]** exemplary game overlay GPS standard map view 3740;

**[00592]** exemplary game overlay augmented or mixed reality view 3745;

**[00593]** exemplary game overlay passenger mode 3790;

**[00594]** exemplary game overlay fire button 3750;

**[00595]** exemplary game overlay multi-purpose direction button 3755;

**[00596]** exemplary game overlay go button 3767;

**[00597]** exemplary game overlay stop button 3760;

**[00598]** exemplary navigation overlay button 3765;

**[00599]** exemplary game overlay button 3792;

**[00600]** exemplary market overlay button 3768;

**[00601]** exemplary market overlay weapon selection button 3775, 3770, 3769, 3796;

**[00602]** exemplary market overlay aim finder toggle 3780.

**[00603]** In some embodiments, the game overlay view of the price based transmission navigation system may alert the user to a single occupancy vehicle 3735 which would then be a target for the user to use a weapon 3775, 3769 to destroy the single occupancy vehicle to increase user score 3710. In some embodiments, the user may identify a vehicle as having more than one passenger in the vehicle and therefore award or gift flowers 3770 to the vehicle or renewable energy community linked transmission user in the price based transmission navigation renewable energy community linked game strategy. In some embodiments, the user may use a weapon 3775, 3769 against a single occupancy vehicle 3735 at which point the vehicle would explode and the passenger would be left without a vehicle in the augmented reality view 3745 or GPS view 3740. In some embodiments, the user may award flowers 3770 to a vehicle with more than one passenger to increase their score 3710 and add to the score of the user that has more than one passenger in their vehicle.

**[00604]** FIG. 38 illustrates another exemplary network configuration 3800 integrating the disclosed method and system as a game layer on another internal mapping transmission navigation system or traditional third party navigation map system in the setting of a mobile computing device. In some embodiments, the multi layered network node topology of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity for price based transmission navigation configuration 3800 includes the following accounting elements, or a subset or superset thereof:

**[00605]** exemplary computing device 3805;

**[00606]** exemplary game overlay user score 3810;

**[00607]** exemplary game overlay user power 3815;

**[00608]** exemplary game overlay SOV (single occupancy vehicle) count 3820;

**[00609]** exemplary game overlay weapon strength 3825;

**[00610]** exemplary game overlay account balance 3830;

**[00611]** exemplary game overlay passenger pick ups 3888;

**[00612]** exemplary game overlay flower gift 3896;

**[00613]** exemplary game overlay GPS standard map view 3845;

**[00614]** exemplary game overlay augmented or mixed reality view 3840;

[00615] exemplary game overlay passenger mode 3885;

[00616] exemplary game overlay fire button 3850;

[00617] exemplary game overlay multi-purpose direction button 3855;

[00618] exemplary game overlay go button 3865;

[00619] exemplary game overlay stop button 3860;

[00620] exemplary navigation overlay button 3866;

[00621] exemplary game overlay button 3897;

[00622] exemplary market overlay button 3868;

[00623] exemplary market overlay weapon selection button 3869, 3870, 3875, 3898;

[00624] exemplary market overlay aim finder toggle 3880.

[00625] In some embodiments, the game overlay view of the price based transmission navigation renewable energy community linked system may alert the user to a vehicle with more than one passenger 3899 which would then be a way for the user to gift a flower to the other user 3899.

[00626] FIG. 39 illustrates another exemplary network configuration 3900 integrating the disclosed method and system as a game layer on another internal mapping navigation system or traditional third party navigation map system in the setting of a mobile computing device. In some embodiments, the multi layered network node topology of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity for price based navigation configuration 3900 includes the following accounting elements, or a subset or superset thereof:

[00627] exemplary computing device 3905;

[00628] exemplary game overlay user score 3910;

[00629] exemplary game overlay user power 3915;

[00630] exemplary game overlay SOV (single occupancy vehicle) count 3920;

[00631] exemplary game overlay weapon strength 3925;

[00632] exemplary game overlay account balance 3930;

[00633] exemplary game overlay passenger pick ups 3988;

**[00634]** exemplary game overlay weapon 3968;

**[00635]** exemplary game overlay GPS standard map view 3940;

**[00636]** exemplary game overlay augmented or mixed reality view 3967;

**[00637]** exemplary game overlay passenger mode 3985;

**[00638]** exemplary game overlay fire button 3945;

**[00639]** exemplary game overlay multi-purpose direction button 3950;

**[00640]** exemplary game overlay go button 3961;

**[00641]** exemplary game overlay stop button 3960;

**[00642]** exemplary navigation overlay button 3955;

**[00643]** exemplary market overlay button 3962;

**[00644]** exemplary market overlay weapon selection button 3963, 3966, 3965, 3979;

**[00645]** exemplary market overlay aim finder toggle 3964;

**[00646]** exemplary user in augmented reality view who has had their single occupancy vehicle destroyed 3935.

**[00647]** In some embodiments, the game overlay view of the price based transmission navigation renewable energy community linked system may show a user who has had their single occupancy vehicle destroyed 3935 which increases the score 3910 of the user. In some embodiments, the user may target additional single occupancy vehicles 3969 to destroy along the priced based navigation route.

**[00648]** FIG. 40 illustrates another exemplary network configuration module 4000 of the disclosed method and system which records the vehicle specifications for a given user on the system in the setting of a mobile computing device 4010. In some embodiments, the multi layered network node topology of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity units or securities for price based navigation configuration 4000 includes the following elements, or a subset or superset thereof:

**[00649]** exemplary computing device 4010;

**[00650]** exemplary transmission unit model make 4015;

[00651] exemplary transmission unit model type 4025;

[00652] exemplary transmission unit model year 4035;

[00653] exemplary system menu toggle box 4051;

[00654] exemplary renewable energy community linked transmission unit model fuel type 4045;

[00655] exemplary renewable energy community linked transmission unit model make selection box toggle 4020;

[00656] exemplary renewable energy community linked transmission unit model type selection box toggle 4030;

[00657] exemplary renewable energy community linked transmission unit model year selection box toggle 4040;

[00658] exemplary renewable energy community linked transmission unit model fuel type selection box toggle 4050;

[00659] In some embodiments, the disclosed method and system may allow the user to select the model make such as by example an Acura 4020 as a model make 4015. In some embodiments the user may select an unlimited variety of vehicle types in the method and system, not limiting the system to those vehicle make 4015 or model 4025 types in FIG. 40. In some embodiments, the user may configure the system for the renewable energy community linked transmission unit specification model year 4035, the model fuel type 4045, or a plurality of other vehicle specifications for the purpose of recording specification for the priced based navigation renewable energy community linked system. In some embodiments, the data transformation of the transformed renewable energy community linked transmission unit or security links the attributes, supersets, or subsets of the model make 4015, model type 4025, model year 4035, model fuel type 4045, or a plurality of other vehicle features to create specification pools as a feature in the data transformations for the transformed transmission units or securities. In some embodiments, the combinations of similar vehicle model make 4015, model type 4025, model year 4035, model fuel type 4045 and plurality of other vehicle attributes are fungible or substitutable in the method of the transformed renewable energy community linked transmission unit or security. To avoid confusion, and to provide further example, but not limited by the example, bus, subway, train, air, private automobile, or other transformed renewable energy community linked transmission units or securities may be substitutable under broad specifications of the transformed transmission or security pool, provided that the broad transformed specifications are met for delivery within the transformed renewable energy community linked transmission unit or security pool. In some embodiments, electric vehicles may ingest the

renewable energy community linked transmission unit at a grocery store, at a home, at an apartment building, at a workplace, or any other parking location.

**[00660]** FIG. 41 illustrates another exemplary network configuration module 4100 of the disclosed method and system which records the transmission driver renewable energy community linked transmission unit specification ratings for a given user on the system in the setting of a mobile computing device 4110. In some embodiments, the multi layered network node topology of participating, transacting and/or trading renewable energy community linked transmission or renewable energy capacity for price based navigation configuration 4100 includes the following elements, or a subset or superset thereof:

**[00661]** exemplary menu toggle box 4115;

**[00662]** exemplary rider renewable energy community linked transmission unit rating category summary 4120;

**[00663]** exemplary rider renewable energy community linked transmission unit rating summary 4125;

**[00664]** exemplary rider renewable energy community linked transmission unit rating X logo amount 4126;

**[00665]** exemplary rider renewable energy community linked transmission unit rating score for navigation route 4130;

**[00666]** exemplary rider renewable energy community linked transmission unit rating lifetime score 4135;

**[00667]** exemplary rider renewable energy community linked transmission unit SOV kills 4140;

**[00668]** exemplary rider renewable energy community linked transmission unit ride count 4145;

**[00669]** exemplary rider renewable energy community linked transmission unit ride safety score 4146;

**[00670]** exemplary driver renewable energy community linked transmission unit rating category summary 4150;

**[00671]** exemplary driver renewable energy community linked transmission unit rating summary 4155;

**[00672]** exemplary driver renewable energy community linked transmission unit rating X logo amount 4180;

**[00673]** exemplary driver renewable energy community linked transmission unit rating score for navigation route 4160;

**[00674]** exemplary driver renewable energy community linked transmission unit rating lifetime score 4165;

**[00675]** exemplary driver renewable energy community linked transmission unit SOV kills 4170;

**[00676]** exemplary driver renewable energy community linked transmission unit ride count 4175;

**[00677]** exemplary driver renewable energy community linked transmission unit ride safety score 4185;

**[00678]** In some embodiments the price based transmission navigation renewable energy community linked system game overlay layer uses a plurality of the aforementioned combinations to account for user actions in the game overlay of the disclosed method and system.

**[00679]** FIG. 42 illustrates another exemplary network configuration module 4200 of the disclosed method and system which records the rider or driver transformed renewable energy community linked transmission unit or security specification and market framework for the transformation for a specified plurality of routes. In some embodiments, the multi layered network node topology of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity units or securities for price based navigation configuration 4200 includes the following elements, or a subset or superset thereof:

**[00680]** exemplary computing device to display the method or system 4205;

**[00681]** exemplary estimated time of a primary indexed price based transmission navigation route of a transformed renewable energy community linked transmission unit or security 4120;

**[00682]** exemplary market price of a buyer and seller of primary price based transmission navigation route of a transformed renewable energy community linked transmission unit or security 4233;

**[00683]** exemplary price based navigation route of a primary transformed renewable energy community linked transmission unit or security 4211;

**[00684]** exemplary estimated time of a secondary indexed price based transmission navigation renewable energy community linked route of a transformed renewable energy community linked transmission unit or security 4212;

**[00685]** exemplary market price of a buyer and seller of secondary price based transmission navigation route of a transformed transmission unit or security 4230;

**[00686]** exemplary starting point virtual hub of an indexed price based transmission navigation renewable energy community linked route of a transformed renewable energy community linked transmission unit or security 4206;

**[00687]** exemplary ending point virtual hub of an indexed price based transmission navigation renewable energy community linked route of a transformed renewable energy community linked transmission unit or security 4232;

**[00688]** exemplary ending point and starting point address of virtual hub(s) of an indexed price based navigation renewable energy community linked route of a transformed renewable energy community linked transmission unit or security 4213;

**[00689]** exemplary date and time specification of an indexed price based transmission navigation renewable energy community linked route of a transformed renewable energy community linked transmission unit or security 4229;

**[00690]** exemplary number or quantity of transformed renewable energy community linked transmission units or securities that are bidding or buying for purchase by riders of a secondary indexed price based transmission navigation route of a transformed renewable energy community linked transmission unit or security which is first in the rider queue indexed by highest price 4215;

**[00691]** exemplary price of transformed renewable energy community linked transmission units or securities that are bidding or buying for purchase by riders of a secondary indexed price based navigation route of a transformed renewable energy community linked transmission unit or security which is first in the rider queue indexed by highest price 4214;

**[00692]** exemplary price of transformed renewable energy community linked transmission units or securities that are bidding or buying for purchase by riders of a secondary indexed price based navigation route of a transformed renewable energy community linked transmission unit or security which is second in the rider queue indexed by second highest price 4216;

**[00693]** exemplary number or quantity of transformed renewable energy community linked transmission units or securities that are bidding or buying for purchase by riders of a secondary indexed price based transmission navigation route of a transformed renewable energy community linked transmission unit or security which is second in the rider queue indexed by second highest price 4217;

**[00694]** exemplary number or quantity of transformed renewable energy community linked transmission units or securities that are offering or selling by drivers of a secondary indexed price based transmission navigation route of a transformed renewable energy community linked transmission unit or security which is first in the driver queue indexed by lowest price 4226;

**[00695]** exemplary price of transformed renewable energy community linked transmission units or securities that are offering or selling by drivers of a secondary indexed price based transmission navigation route of a transformed renewable energy community linked transmission unit or security which is first in the driver queue indexed by lowest price 4228;

**[00696]** exemplary number or quantity of transformed renewable energy community linked transmission units or securities that are offering or selling by drivers of a secondary indexed price based transmission navigation route of a transformed renewable energy community linked transmission unit or security which is second in the driver queue indexed by second lowest price 4224;

**[00697]** exemplary price of transformed renewable energy community linked transmission units or securities that are offering or selling by drivers of a secondary indexed price based transmission navigation route of a transformed renewable energy community linked transmission unit or security which is second in the driver queue indexed by second lowest price 4225;

**[00698]** exemplary order entry submit button to the method and system for a user order 4218;

**[00699]** exemplary order on the method and system by a driver to sell a specified quantity of transformed renewable energy community linked transmission units or securities 4223;

**[00700]** exemplary order confirmation on the method and system by a driver sold two units of transformed renewable energy community linked transmission units or securities 4222;

**[00701]** exemplary market view of priced based transmission navigation layer to display indexed prices of a plurality routes which may be one, two, three, or an infinite number of routes between two virtual hubs 4221;

**[00702]** exemplary game view layer of a transformed renewable energy community linked transmission unit or security 4220;

**[00703]** exemplary navigation view layer of a transformed renewable energy community linked transmission unit or security 4219;

**[00704]** In some embodiments, the disclosed method and system may allow the user to select the model make such as by example an Acura 4020 as a model make 4015, which is placed in a certain transformed renewable energy community linked transmission specification pool that may be aggregated with similar transformed transmission unit specification participants or units that then display a user 110 selected navigation route 4211, plurality of routes 4231 and 4211, or an infinite number of routes between the renewable energy community linked virtual hub start point 4206 and renewable energy community linked virtual hub endpoint 4232. In some embodiments the prices 4230 on a route 4231 may display the buy price of the highest bidder or rider on a given route 4231,

which is listed in more detail in the rider queue display for highest indexed price bid 4214 for a route 4231. In some embodiments, the highest bid price 4214 for a rider on a given route 4231 has an associated quantity 4215 of transformed renewable energy community linked transmission units or securities. Similarly, in some embodiments, the lowest offer or sale price 4228 for a driver on a given route 4231 has an associated quantity 4226 of transformed renewable energy community linked transmission units or securities. In some embodiments, the rider quantity 4215 listed as three units, which may be one rider, two riders, or three riders who desire to purchase a given transformed renewable energy community linked transmission unit(s) or securities so long as the indexed price is queued to the top based on a highest price index and time stamp for a given specification of a transformed renewable energy community linked transmission unit or security. In some embodiments, transformed renewable energy community linked transmission units or securities may represent a similar pool of transformed renewable energy community linked transmission units or securities based on a superset or subset or the plurality of attributes such as vehicle mode make 4015, vehicle mode model type 4025, vehicle model year 4035, cheapest route 1011, single mode 1012, multi modal 1013, fastest route 1014, most scenic 1015, highest rating 1016, most available 1017, highest volume 1018, most frequent 1019, service level 1020, security and safety 1021, group restricted 1022, modes 810, automobile 811, air 812, autonomous vehicle 813, bike 814, boat 815, bus 816, drone 817, limo 818, motorcycle 819, moped 820, shuttle 821, spaceship 822, subway 823, business 824, train 825, fastest optimized 826, cheapest route 827, home 828, cardo 829, virtual 830, order types 710, 720, term specification, timing specification, virtual hub end point and start point, or a plurality of other specifications. In some embodiments, the match of rider price 4214 and driver price 4228 for a transformed renewable energy community linked transmission unit(s) or securities occurs if the lowest price in the driver queue 4228 equals the highest price in the rider queue 4214. In some embodiments, if no such match of prices occur between driver and rider queues for a given specification of a transformed renewable energy community linked transmission unit or security, then prices remain in the queue until a match or a new order entry re-indexes the order of all the deals, because the price is higher than the current highest bid in the rider queue 4214. In other implementations, the queue entries for the transformed renewable energy community linked transmission unit or security may become re-indexed to place an order with the appropriate price index ranking in a queue that places the highest rider price 4214 in the top and descends by price 4216, and then time of order entry, where all other things equal. In some embodiments, the driver price queue 4228, 4225 similarly ranks from lowest driver price 4228 at the top of the queue to highest driver price 4228 at the bottom on the queue, and then indexed by time subordinate to price for a given pool specification of transformed renewable energy community linked transmission units or securities. In some embodiments, a plurality of routes 4231 and 4211 may be displayed as price based renewable energy community linked navigation options indexed by market pricing. In some embodiments, the user may select one, two or many, many more routes as to how many they desire to be displayed as options between their virtual hubs in order to perform calculations that may maximize the number of renewable energy community linked transmission units or securities they

sell on a given route specification, the prices which they obtain, or any combination of specifications or objectives the user may have in the price based navigation method and display of transformed renewable energy community linked transmission unit or security.

**[00705]** FIG. 43 illustrates an exemplary flow chart 4300 of user 110 experience during a transformed transmission unit or security life cycle. In some embodiments the user 110 may login 4301 to the system which requires the user to go to a plurality of menu options 4302 or user input for origin and destination of renewable energy community linked virtual hubs 4311 alongside user inputs of time and date 4312 for a given specification. The specification may contain a subset or superset of attributes, such as vehicle mode make 4015, vehicle mode model type 4025, vehicle model year 4035, cheapest route 1011, single mode 1012, multi modal 1013, fastest route 1014, most scenic 1015, highest rating 1016, most available 1017, highest volume 1018, most frequent 1019, service level 1020, security and safety 1021, group restricted 1022, modes 810, automobile 811, air 812, autonomous vehicle 813, bike 814, boat 815, bus 816, drone 817, limo 818, motorcycle 819, moped 820, shuttle 821, spaceship 822, subway 823, business 824, train 825, fastest optimized 826, cheapest route 827, home 828, cardo 829, virtual 830, order types 710, 720, term specification, timing specification, renewable energy community linked virtual hub end point and start point, or a plurality of other specifications. In some embodiments, the user may save a route to the “My Routes” 4313 in “Add My Routes” 4314, whereby the user route is saved in the system for one touch retrieval in the future. In some embodiments, the user may enter a price or quantity to buy or sell a transformed renewable energy community linked transmission unit or security of a given specification or specification combination 4303, which has many steps involved with the transformation of the renewable energy community linked transmission unit or security. In some embodiments, additional data transformations 4305 occur to process, market transmission navigation route options and indexing, virtual hub or virtual hub combination data transformations, renewable energy community linked transmission unit transformations and many other subsets or supersets of transformed transmission unit combinations and combination specifications. In some embodiments, if a transformed renewable energy community linked transmission unit or security matches 4306 in price and specification, then the transformed renewable energy community linked transmission unit or security moves into delivery 4308 and the deliver process has many steps of electric signal handoff and security checks, 911 system checks, GPS server and user 110 position checks, transmission unit rating checks, and many other possible checks for all the data elements of the transformed renewable energy community linked transmission unit or security for verification of delivery. In some embodiments, if prices of the buyer and seller queue do not match 4307, then the steps of processing 4304, 4305, 4306 repeat until a match is made 4306 to 4308 or an order is cancelled before it expires for the transformed renewable energy community linked transmission unit or security.

[00706] FIG. 44 illustrates an exemplary user interface 4410 for the My Routes Communities functions 4411. In some embodiments, the user interface 4410 may have a menu option 4451 to move to other areas of the method and system. In some embodiments, the virtual renewable energy community linked transmission hub sequence as an object may be metadata tag #PaloSF 4412 to represent Palo Alto, California to San Francisco, California. In some embodiments, #PaloSF 4412 may have an option 4426 for the user 110 to follow, join, subscribe, or add the virtual renewable energy community linked virtual transmission hub sequence #PaloSF 4412. In one example, the number of followers or network members who are joined to that community object transformed data structure 4412 is 502,000. In some embodiments, the virtual transmission hub sequence as an object may be metadata tag #MenloSF 4413 to represent Menlo Park, California to San Francisco, California. In some embodiments, #MenloSF 4413 may have an option 4427 for the user 110 to follow, join, subscribe, or add the virtual renewable energy community linked transmission hub sequence #MenloSF 4413. In one example, the number of followers or network members who are joined to that community object transformed data structure 4413 is 100,000. In some embodiments, the virtual renewable energy community linked transmission hub sequence as an object may be metadata tag #SFSantaCruz 4414 to represent San Francisco, California to Santa Cruz, California. In some embodiments, #SFSantaCruz 4414 may have an option 4428 for the user 110 to follow, join, subscribe, or add the virtual renewable energy community linked transmission hub sequence #SFSantaCruz 4414. In one example, the number of followers or network members who are joined to that community object transformed data structure 4414 is 42,000. In some embodiments, the virtual renewable energy community linked transmission hub sequence as an object may be metadata tag #NobHillWharf 4415 to represent Nob Hill San Francisco, California to Fishermans Wharf, San Francisco, California. In some embodiments, #NobHillWharf 4415 may have an option 4429 for the user 110 to follow, join, subscribe, or add the virtual renewable energy community linked transmission hub sequence #NobHillWharf 4415. In one example, the number of followers or network members who are joined to that community object transformed data structure 4415 is 15,000. In some embodiments, the virtual renewable energy community linked transmission hub sequence as an object may be metadata tag #CornellWegmans 4416 to represent Cornell University, Ithaca, NY to Wegmans, Ithaca, NY. In some embodiments, #CornellWegmans 4416 may have an option 4430 for the user 110 to follow, join, subscribe, or add the virtual renewable energy community linked transmission hub sequence #CornellWegmans 4416. In one example, the number of followers or network members who are joined to that community object transformed data structure 4416 is 3,000. In some embodiments, the virtual renewable energy community linked transmission hub sequence as an object may be metadata tag #ICWegmans 4417 to represent Ithaca College, Ithaca, NY to Wegmans, Ithaca, NY. In some embodiments, #ICWegmans 4417 may have an option 4431 for the user 110 to follow, join, subscribe, or add the virtual renewable energy community linked transmission hub sequence #ICWegmans 4417. In one example, the number of followers or network members who are joined to that community object transformed data structure 4417 is 1,000. In some embodiments, the virtual renewable energy community linked transmission hub sequence as an

object may be metadata tag #KatyDtownHouston 4418 to represent Katy, Texas to Houston, Texas. In some embodiments, #KatyDtownHouston 4418 may have an option 4432 for the user 110 to follow, join, subscribe, or add the virtual renewable energy community linked transmission hub sequence #KatyDtownHouston 4418. In one example, the number of followers or network members who are joined to that community object transformed data structure 4418 is 380,000. In some embodiments, the virtual renewable energy community linked transmission hub sequence as an object may be metadata tag #UEastGrandCent 4419 to represent Upper East Side, NYC to Grand Central Station, NYC. In some embodiments, #UEastGrandCent 4419 may have an option 4433 for the user 110 to follow, join, subscribe, or add the virtual renewable energy community linked transmission hub sequence #UEastGrandCent 4419. In one example, the number of followers or network members who are joined to that community object transformed data structure 4419 is 400,000. In some embodiments, the virtual transmission hub sequence as an object may be metadata tag #PennStatGrandCent 4420 to represent Penn Station, NYC to Grand Central Station, NYC. In some embodiments, #PennStatGrandCent 4420 may have an option 4434 for the user 110 to follow, join, subscribe, or add the virtual renewable energy community linked transmission hub sequence #PennStatGrandCent 4420. In one example, the number of followers or network members who are joined to that community object transformed data structure 4420 is 280,000. In some embodiments, the virtual transmission hub sequence as an object may be metadata tag #IthacaNYC 4421 to represent Ithaca, NY to Grand Central Station, NYC. In some embodiments, #IthacaNYC 4421 may have an option 4435 for the user 110 to follow, join, subscribe, or add the virtual renewable energy community linked transmission hub sequence #IthacaNYC 4421. In one example, the number of followers or network members who are joined to that community object transformed data structure 4421 is 19,000. In some embodiments, the virtual renewable energy community linked transmission hub sequence as an object may be metadata tag #AustinHou 4422 to represent Austin, TX to Houston, TX. In some embodiments, #AustinHou 4422 may have an option 4436 for the user 110 to follow, join, subscribe, or add the virtual renewable energy community linked transmission hub sequence #AustinHou 4422. In one example, the number of followers or network members who are joined to that renewable energy community linked community object transformed data structure 4422 is 100,000. In some embodiments, the virtual renewable energy community linked transmission hub sequences may be recommended 4423 to follow as an object may be metadata tag #HarvardBCommons 4424 to represent Harvard, Cambridge, Mass to Boston Commons. In some embodiments, #HarvardBCommons 4424 may have an option 4437 for the user 110 to follow, join, subscribe, or add the virtual renewable energy community linked transmission hub sequence #HarvardBCommons 4424. In one example, the number of followers or network members who are joined to that community object transformed data structure 4424 is 89,000. In some embodiments, the virtual renewable energy community linked transmission hub sequences may be recommended 4423 to follow as an object may be metadata tag #NapervilleChiMkt 4425 to represent Naperville, Chicago to Marketplace, Chicago, Ill. In some embodiments, #NapervilleChiMkt 4425 may have an option 4438 for the user 110 to follow, join, subscribe, or add the virtual renewable energy

community linked transmission hub sequence #NapervilleChiMkt 4425. In one example, the number of followers or network members who are joined to that renewable energy community linked community object transformed data structure 4425 is 39,000.

**[00707]** FIG. 45 illustrates an exemplary user interface 4510 for the My Routes Communities Group 4515 for a specific transformed data structure of a transformed renewable energy community linked community virtual hub sequence 4520. In some embodiments, the meta data virtual hub sequence #PaloSF 4520 may list the long form route details in the about the renewable energy community linked route section 4522. In some embodiments, the specific hub sequence #PaloSF 4520 may list the number of followers and an option to follow 4560. In some embodiments, the specific hub sequence #PaloSF 4520 may list the ability to share the renewable energy community linked community group with another social network or text or email or other network protocol. In some embodiments, the specific hub sequence #PaloSF 4520 may list a group as public 4550 or private 4545. In some embodiments, the specific hub sequence #PaloSF 4520 may list a gateway to buy or sell 4540 transformed transmission units using the LOB for a commute community. In some embodiments, the specific hub sequence #PaloSF 4520 may list specific pick up hub address location 4535 or drop off point address 4530. In some embodiments, the specific hub sequence #PaloSF 4520 may list the activity statistics and data 4525 with respect to the number of riders, number of drivers, number of seats, number of trades, frequency of renewable energy community linked transmission units, volume of renewable energy community linked transmission units, daily high price for transmission units, daily low price for renewable energy community linked transmission units on the community object of #PaloSF 4520, yearly high price, yearly low price, news, research, trending, and/or feeds for the #PaloSF 4520 virtual hub sequence.

**[00708]** FIG. 46 illustrates an exemplary user interface 4610 with respect to My Route Sequences 4615 which may transform sequences with more than two virtual hubs into sequences as two or three or more series of transmission route sequences 4620. In some embodiments, #PaloSF #SFSaus 4620 may represent an origin virtual hub sequence of Palo Alto, California to San Francisco, California followed by a secondary sequence of San Francisco, California to Sausalito, California 4620. Multi leg virtual hub sequences allow for the power of the data transformation to link the villages, cities or states from a network renewable energy community linked transmission topology structure from multiple providers of renewable energy community linked transmission units to provide higher levels of frequency and market opportunity to link public and private systems among many other benefits. In some embodiments, #PaloSF #SFSaus 4620 may allow input from users to join, follow, subscribe or become a member 4680 of multi leg sequences which help solve potential last mile issues within renewable energy community linked transmission systems. In some embodiments, #IthacaNYC #NYCMid 4625, may allow for a renewable energy community linked transmission unit seller or buyer to connect two disparate renewable energy community linked transmission networks to provide last mile renewable energy community linked transmission to a

destination at the lowest market cost because each leg or series of renewable energy community linked virtual hub sequences has an independent market associated with the leg or renewable energy community linked virtual hub sequence #IthacaNYC #NYCMid 4625. In some embodiments, #IthacaNYC #NYCMid 4625 may allow input from users to join, follow, subscribe or become a member 4675 of multi leg sequences which help solve potential last mile issues within renewable energy community linked transmission systems. In some embodiments, three two leg sequences may be attached through data transformations such that #AustinHou then takes a transmission unit to #HouMem which then takes a transmission unit to #MemVoss. The #AustinHou #HouMem #MemVoss 4635 three leg virtual hub sequence combination may further solve last mile issues for travelers where public transport may be an issue or private rides simply are going a different direction. The sequence renewable energy community linked community object transformation may help travelers understand options and piece multiple renewable energy community linked transmission systems onto a single community based object to aggregate communication and transaction benefits of the system. In some embodiments, prior history navigation searches and locations may be used to build recommended additional sequences 4640 which may be recommended for users to subscribe, join, follow or become a member. In some embodiments, the virtual hub route sequence may link 4 or more virtual hub sequence pairs or even combinations of already linked community object pairs 4645. In some embodiments, #AustinHou #HouMem #MemVoss #VossBein 4645 may be linked to provide a last mile sequence to a traveler or driver from Austin to the Memorial Area of Houston in a specific address. Traversing a series of linked trips may allow for the cost of non-linked trips to be dramatically lower due to using a series of connected local renewable energy resources, rather than a private for hire vehicle which may be 10 times the cost and add a reverse dead head trip that further pollutes the environment and leaves the driver without additional income on the dead head return leg. The transformed virtual hub sequence methodology allows for renewable energy community linked transmission systems to be integrated in ways that were not formerly possible because the systems were disparate or simply did not allow for linked trips or linked community objects that could optimize topological network structures over existing inefficient structures. In some embodiments, virtual hub sequences which have been linked 4645 may also allow users to subscribe 4660. In some embodiments, #PaloSF #SFSaus #SausMarinTerm 4650 may be linked to provide a last mile sequence to a traveler or driver from Palo Alto, California to Marin Terminal in Sausalito, California at a specific address. In some embodiments, virtual hub sequences which have been linked 4650 may also allow users to subscribe 4655.

**[00709]** FIG. 47 illustrates an exemplary user menu interface 4710. In some embodiments, menu options may include buy/sell/trade 4716 to go to the renewable energy community linked transmission unit gateway trading platform for virtual hub combinations and virtual hub sequences. In some embodiments, the user interface may allow a user to go to the transmission navigation module 4717 for price based transmission navigation or route selection based on cost or earnings from a

route as described in U.S. Patent Application Ser. No 16/242,967, "Price Based Navigation," filed January 8, 2019, the entirety of which is incorporated by reference herein. Furthermore, U.S. Patent Application Publication, 15/877,393, "Electronic Forward Market Exchange for Transmission Seats and Capacity in Transmission Spaces and Vehicles," filed January 23, 2018, is incorporated by reference herein in its entirety. In some embodiments, a user 110 may select my routes 4718 to toggle to routes that are important to their user profile or needs in the network member database 222. In some embodiments, trips 4719 may be selected to toggle to the trip delivery view. In some embodiments, orders 4720 may be selected to toggle to cancel or adjust orders in the system that are unfilled. In some embodiments, users may toggle to the account 4721 page or renewable energy community linked communities object page or the route sequences page 4723. In some embodiments, users 110 may add additional hubs 4724 or may toggle to the gaming interface. In some embodiments, renewable energy community linked renewable energy transmission units may need to be scanned on the renewable energy scanning module 4726. In some embodiments, users may select the reward program module 4727 or the dashboard module 4728. In some embodiments, the user may select the music 4729 or shopping module 4730. In some embodiments, the user may select help 4731 or settings 4732 to update account information or privacy settings. In some embodiments, users 110 may invite friends 4733 for rewards or bonuses or cash or credits 4733. In some embodiments, users may also logout 4734.

**[00710]** FIG. 48 illustrates another exemplary network configuration 4800 module of the disclosed method and system which records the network architecture of a typical renewable energy community linked object with a price-time priority queue and resulting delivery sequence and integration with the renewable energy linked virtual community object. In some embodiments, the multi layered network node topology of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity units or securities for renewable energy community linked objects 4800 includes the following elements, or a subset or superset thereof:

**[00711]** exemplary renewable energy community object waypoint origin 4801;

**[00712]** exemplary renewable energy community object waypoint destination 4802;

**[00713]** exemplary renewable energy community object during transit 4803;

**[00714]** exemplary renewable energy community object 4804 to which a user may subscribe, join, friend, follow, etc.;

**[00715]** exemplary barn or renewable energy community unit storage unit at a renewable energy community waypoint origin 4804;

**[00716]** exemplary storage security device which electronically locks or unlocks the renewable energy community object for transport 4805 at waypoint origin;

- [00717]** exemplary renewable energy community object user at waypoint origin 4806;
- [00718]** exemplary renewable energy community object unit in the form of an exemplary renewable energy unit at the renewable energy community waypoint origin 4807;
- [00719]** exemplary renewable energy community object unit in the form of an exemplary renewable energy unit at the renewable energy community waypoint origin 4808;
- [00720]** exemplary storage security device which electronically locks or unlocks the renewable energy community object for transport 4809 at destination waypoint;
- [00721]** exemplary renewable energy community object user at waypoint destination 4810;
- [00722]** exemplary renewable energy community delivery lock box at waypoint destination 4811 for renewable energy community unit;
- [00723]** exemplary renewable energy community unit transport vehicle in transit between origin and destination waypoint 4816;
- [00724]** exemplary renewable energy community unit in transit between origin and destination waypoint 4815;
- [00725]** exemplary renewable energy community unit transport driver in transit between origin and destination waypoint 4814;
- [00726]** exemplary renewable energy community unit transport mobile computer device method and system interface in transit between origin and destination waypoint 4813;
- [00727]** exemplary renewable energy community unit transport mobile computer device method and system security interface in transit between origin and destination waypoint 4812;
- [00728]** exemplary renewable energy community object tag between origin and destination waypoint(s) for a specified renewable energy community object such as a wind energy 4817;
- [00729]** exemplary renewable energy community linked transport unit user at origin waypoint 4818;
- [00730]** exemplary renewable energy community linked virtual transport route object 4828;
- [00731]** exemplary renewable energy community linked transport user 4830;
- [00732]** exemplary renewable energy community linked object origin waypoint 4819 with users and renewable energy units;

**[00733]** exemplary renewable energy community linked object destination waypoint 4826 with users and renewable energy units;

**[00734]** exemplary renewable energy community linked object unit transport vehicles on an exemplary waypoint combination 4833, 4832, 4831, 4829, 4820, 4821, 4822, 4823, 4824, 4825.

**[00735]** In some embodiments, users 4806, 4810, 4814, 4818, 4830, 4819, 4826 may follow, subscribe, or friend a renewable energy community 4828 linked virtual route for a particular renewable energy unit, such as wind energy by example, but not limited by example. In some embodiments, the renewable energy community linked transport unit may be comprised of renewable energy 4808, solar, biomass, wind, geothermal, hydro, tidal power, hydrogen, moon, chlorophyll, or other renewable energy varieties. In some embodiments, the renewable energy community linked transport unit user may be a community member 4806 who owns renewable energy inventory 4807, 4808 at a waypoint origin 4819 and desires to participate or transact in the price-time priority queue for a certain renewable energy unit 4807 on a waypoint sequence 4819, 4826 or 4801, 4802. In some embodiments, the renewable energy community linked transport unit user may be an end consumer, restaurant, hotel, carpenter or other end user 4810 who desires to participate in the price-time priority queue for certain renewable energy units 4807, 4808. In some embodiments, the end user 4810 or origin owner 4806 of the renewable energy community linked object with waypoint 4804 may use a mobile, fixed, visual, or audio interface of a computer unit 4813 to enter price-time priority queue based transactions for renewable energy units 4807, 4808, 4815 along a renewable energy community linked waypoint combination path 4827. In some embodiments, renewable energy virtual route communities may serve as virtual rental markets with associated price time priority queues and GPS tracking of the renewable energy units 4807, 4808, 4815 through the scanning of renewable energy units at renewable energy unit waypoint origin 4801, waypoint destination 4802, or along the waypoint sequence path 4803. In some embodiments, the user 4806 may transfer renewable energy units 4807, 4808 by using the scan feature of the mobile, fixed, visual, or audio interface of the computer unit 4813 to a renewable energy community linked transport user 4814 in the renewable energy community linked vehicle 4816 as a security authorized transaction participant of the price-time priority queue of the renewable energy community linked transport unit. In some embodiments, the renewable energy community linked transport unit may be delivered to an end user 4810 at an end user destination waypoint 4834 by using the mobile, fixed, visual, or audio interface of the computer unit 4813 and unlock sequence 4809 interface to deliver the renewable energy community linked transport unit 4815 to a secure delivery storage unit 4811. In some embodiments, scanning procedures of the mobile, fixed, visual, or audio interface of the computer unit 4813 may comprise secure transfer and records of the renewable energy community linked transport unit 4815 for both pickup transfer at the renewable energy community unit object origin 4801, waypoint combination transfer transport 4803, and waypoint destination delivery 4802.

**[00736]** FIG. 49 illustrates an exemplary renewable energy community inventory uplink interface 4900 of the disclosed method and system to upload renewable energy community linked transport unit inventory to the renewable energy linked virtual community object. In some embodiments, the uplink element of the multi layered network node topology of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity units or securities for renewable energy community linked objects includes the following elements, or a subset or superset thereof:

**[00737]** exemplary renewable energy community object unit uplink interface 4901 for renewable energy unit inventory automation;

**[00738]** exemplary renewable energy community object unit product type, quantity, specification, price, date and time 4903;

**[00739]** exemplary renewable energy community unit object of solar 4904 with a plurality of specifications;

**[00740]** exemplary renewable energy community unit object of wind 4905 with a plurality of specifications;

**[00741]** exemplary renewable energy community unit object of biomass 4906 with a plurality of specifications;

**[00742]** exemplary renewable energy community unit object of geothermal 4907 with a plurality of specifications;

**[00743]** exemplary renewable energy community unit object of hydro 4908 with a plurality of specifications;

**[00744]** exemplary renewable energy community unit object of tidal power 4909 with a plurality of specifications;

**[00745]** exemplary renewable energy community unit object of hydrogen 4911 with a plurality of specifications;

**[00746]** exemplary renewable energy community unit object of moon 4912 with a plurality of specifications;

**[00747]** exemplary renewable energy community unit object of chlorophyll 4913 with a plurality of specifications;

**[00748]** exemplary renewable energy community unit object of plants 4914 with a plurality of specifications;

**[00749]** exemplary renewable energy community unit object at origin waypoint 4916;

**[00750]** exemplary renewable energy community linked transport unit object transfer or bypass waypoint 4917;

**[00751]** exemplary renewable energy community linked transport unit object transfer or bypass waypoint 4918;

**[00752]** exemplary renewable energy community linked transport unit object destination waypoint 4919 and storage delivery unit 4920;

**[00753]** In some embodiments, the method and system of renewable energy community linked transport units 4916 with renewable energy community linked transport price-time priority queues may utilize an uplink module interface 4901 to upload renewable energy unit inventory to the renewable energy community linked transport unit object which may also be a form of a virtual rental market interface to users of the method and system. In some embodiments, the renewable energy may include a subset or superset of the following renewable energy unit examples but not limited to the example: solar 4904, wind 4905, biomass 4906, geothermal 4907, hydro 4908, tidal power 4909, hydrogen 4911, moon 4912, chlorophyll 4913, plants 4914 or a plurality of other renewable energy units common to the renewable energy market. In some embodiments, the renewable energy units may include specifications and specification profiles in the specifications to standardize the units in the data transformations of the renewable energy units 4916. In some embodiments, the sequence of the transformed renewable energy community unit may follow a transmission sequence set, subset or superset of 4916 to 4917 to 4918 to 4919 to 4920.

**[00754]** FIG. 50 illustrates an exemplary renewable energy community search interface 5000 of the disclosed method and system to search for a renewable energy community linked transport unit inventory to the renewable energy linked virtual community object. In some embodiments, the search element of the multi layered network node topology of participating, transacting and/or trading transformed renewable energy community linked transmission or renewable energy capacity units or securities for renewable energy community linked objects includes the following elements, or a subset or superset thereof:

**[00755]** exemplary renewable energy community unit object search interface of a mobile, fixed, or audio computer unit 5001;

**[00756]** exemplary renewable energy community unit object search interface title 5003;

**[00757]** exemplary renewable energy community unit object search interface for user renewable energy search input 5002;

**[00758]** exemplary renewable energy community unit object category title header such as renewable energy unit power source, distance to renewable energy, price of renewable energy, availability of renewable energy, rent or buy option for associated price-time priority queue of renewable energy 5004;

**[00759]** exemplary renewable energy community unit object of solar energy 5005 with a distance of 500 feet from the user at a price of \$5.00 in the price-time priority queue with an immediate availability and an associated rent or buy now option button 5010;

**[00760]** exemplary renewable energy community unit object of wind energy 5006 with a distance of 2000 feet from the user at a price of \$5.00 in the price-time priority queue with an immediate availability and an associated rent or buy now option button 5011;

**[00761]** exemplary renewable energy community unit object of biomass energy 5007 with a distance of 1500 feet from the user at a price of \$10.00 in the price-time priority queue with an immediate availability and an associated rent or buy now option button 5012;

**[00762]** exemplary renewable energy community unit object of chlorophyll 5008 with a distance of 3000 feet from the user at a price of \$5.00 in the price-time priority queue with an immediate availability and an associated rent or buy now option button 5013;

**[00763]** exemplary renewable energy community unit object of geothermal 5009 with a distance of 3000 feet from the user at a price of \$5.00 in the price-time priority queue with an immediate availability and an associated rent or buy now option button 5014.

**[00764]** In some embodiments, the search function 5002 for the renewable energy community object 4804 with a price-time priority queue auction indexes the search result with the following prioritization of first the renewable energy unit, then the distance of the renewable energy unit from the user in the community object sequence, and then by price-time priority. In some embodiments, the search function may prioritize as a second priority price-time prioritization followed by distance as a third index ranking. In some embodiments, the search function 5002 may provide instructions for the graphical user interface 5001 to state if availability of the renewable energy is immediately available, available the next day or available a plurality of other time and date designations. In some embodiments, the renewable energy community object 5005 may state only the lowest price \$5.00 of the then current price-time priority queue for the specific object requested in the search function 5002. In some embodiments, the renewable energy unit may be solar energy 5005, wind energy 5006, biomass energy 5007, chlorophyll energy 5008, plant energy 5009 or a plurality of other alternative renewable energy resources. In some embodiments, the specific renewable energy may have a buy now or rent now button. In some embodiments, rare renewable energy resources community objects may require long transport transmission distances over air, sea, road, or a plurality of other transport transmission options for the waypoint sequence of the associated

renewable energy community object. In some embodiments, the rent now button instantiates the instructions to allow the application to consummate a transaction with geolocation and step by step delivery instructions with the user interface as shown from the match of the user who owns the renewable energy the user who seeks to rent or buy the renewable energy.

**[00765]** The aforementioned description, for purpose of explanation, has been described with reference to specific embodiments. However, the illustrative discussions above are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the invention and its practical applications, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated.

**What Is Claimed Is:**

1. A method, comprising:
  - receiving origin location data and destination location data from a plurality of users, wherein the origin location data corresponds to geographic origins and the destination location data corresponds to geographic destinations;
  - determining a plurality of virtual hubs based on the origin location data and the destination location data, wherein the plurality of virtual hubs comprises one or more origin virtual hubs determined based on the origin location data and one or more destination virtual hubs determined based on the destination location data;
  - determining a plurality of virtual hub routes based on the plurality of virtual hubs, wherein a respective virtual hub route corresponds to a geographic route from a location corresponding to a respective origin virtual hub to a location corresponding to a respective destination virtual hub;
  - receiving energy attribute data from the plurality of users, wherein the energy attribute data corresponds to one or more attributes of available renewable energy from the plurality of users for delivery using the plurality of virtual hub routes; and
  - determining an energy exchange for one or more renewable energy units based on the plurality of virtual hub routes and the energy attribute data, wherein the one or more renewable energy units correspond to the available renewable energy configured for transfer between the respective origin virtual hub and the respective destination virtual hub.
2. The method of claim 1, wherein the energy attribute data comprises renewable energy type, purchase price, renewable energy availability, renewable energy location, or combinations thereof.
3. The method of claim 1, wherein the available renewable energy comprises energy generated using solar power, biomass, wind, geothermal power, hydroelectrical power, tidal power, hydrogen, lunar power, chlorophyll, or combinations thereof.
4. The method of claim 1, further comprising receiving transaction input data from the plurality of users, wherein the transaction input data comprises data corresponding to one or more bid prices and one or more offer prices for the one or more renewable energy units, acceptance of a respective bid price or a respective offer price, or combinations thereof.
5. The method of claim 1, further comprising arranging for the transfer between the respective origin virtual hub and the respective destination virtual hub of the available renewable energy using computerized scanning at the respective origin virtual hub and the respective destination virtual hub.
6. The method of claim 1, further comprising arranging for the transfer between the respective origin virtual hub and the respective destination virtual hub of the available renewable energy using

an automobile, an aircraft, an autonomous vehicle, a boat, a train, a delivery vehicle, or combinations thereof.

7. The method of claim 1, wherein the respective virtual hub route comprises one or more additional locations along the geographic route, wherein the one or more additional locations correspond to one or more additional virtual hubs.

8. A computing system, comprising:

one or more processors; and

one or more memory comprising program instructions executable by the one or more processors to:

receive origin location data and destination location data from a plurality of users, wherein the origin location data corresponds to geographic origins and the destination location data corresponds to geographic destinations;

determine a plurality of virtual hubs based on the origin location data and the destination location data, wherein the plurality of virtual hubs comprises one or more origin virtual hubs determined based on the origin location data and one or more destination virtual hubs determined based on the destination location data;

determine a plurality of virtual hub routes based on the plurality of virtual hubs, wherein a respective virtual hub route corresponds to a geographic route from a location corresponding to a respective origin virtual hub to a location corresponding to a respective destination virtual hub;

receive energy attribute data from the plurality of users, wherein the energy attribute data corresponds to one or more attributes of available renewable energy from the plurality of users for delivery using the plurality of virtual hub routes; and

determine an energy exchange for one or more renewable energy units based on the plurality of virtual hub routes and the energy attribute data, wherein the one or more renewable energy units correspond to the available renewable energy configured for transfer between the respective origin virtual hub and the respective destination virtual hub.

9. The computing system of claim 8, wherein the energy attribute data comprises renewable energy type, purchase price, renewable energy availability, renewable energy location, or combinations thereof.

10. The computing system of claim 8, wherein the available renewable energy comprises energy generated using solar power, biomass, wind, geothermal power, hydroelectrical power, tidal power, hydrogen, lunar power, chlorophyll, or combinations thereof.

11. The computing system of claim 8, wherein the one or more memory further comprises program instructions executable by the one or more processors to receive transaction input data from the plurality of users, wherein the transaction input data comprises data corresponding to one or more bid prices and one or more offer prices for the one or more renewable energy units, acceptance of a respective bid price or a respective offer price, or combinations thereof.

12. The computing system of claim 8, wherein the one or more memory further comprises program instructions executable by the one or more processors to arrange for the transfer between the respective origin virtual hub and the respective destination virtual hub of the available renewable energy using computerized scanning at the respective origin virtual hub and the respective destination virtual hub.

13. The computing system of claim 8, wherein the one or more memory further comprises program instructions executable by the one or more processors to arrange for the transfer between the respective origin virtual hub and the respective destination virtual hub of the available renewable energy using an automobile, an aircraft, an autonomous vehicle, a boat, a train, a delivery vehicle, or combinations thereof.

14. The computing system of claim 8, wherein the respective virtual hub route comprises one or more additional locations along the geographic route, wherein the one or more additional locations correspond to one or more additional virtual hubs.

15. A non-transitory computer-readable medium having stored thereon a plurality of computer-executable instructions which, when executed by a computer, cause the computer to:

receive origin location data and destination location data from a plurality of users, wherein the origin location data corresponds to geographic origins and the destination location data corresponds to geographic destinations;

determine a plurality of virtual hubs based on the origin location data and the destination location data, wherein the plurality of virtual hubs comprises one or more origin virtual hubs determined based on the origin location data and one or more destination virtual hubs determined based on the destination location data;

determine a plurality of virtual hub routes based on the plurality of virtual hubs, wherein a respective virtual hub route corresponds to a geographic route from a location corresponding to a respective origin virtual hub to a location corresponding to a respective destination virtual hub;

receive energy attribute data from the plurality of users, wherein the energy attribute data corresponds to one or more attributes of available renewable energy from the plurality of users for delivery using the plurality of virtual hub routes; and

determine an energy exchange for one or more renewable energy units based on the plurality of virtual hub routes and the energy attribute data, wherein the one or more renewable

energy units correspond to the available renewable energy configured for transfer between the respective origin virtual hub and the respective destination virtual hub.

16. The non-transitory computer-readable medium of claim 15, wherein the energy attribute data comprises renewable energy type, purchase price, renewable energy availability, renewable energy location, or combinations thereof.

17. The non-transitory computer-readable medium of claim 15, wherein the available renewable energy comprises energy generated using solar power, biomass, wind, geothermal power, hydroelectrical power, tidal power, hydrogen, lunar power, chlorophyll, or combinations thereof.

18. The non-transitory computer-readable medium of claim 15, wherein the plurality of computer-executable instructions which, when executed by a computer, further cause the computer to receive transaction input data from the plurality of users, wherein the transaction input data comprises data corresponding to one or more bid prices and one or more offer prices for the one or more renewable energy units, acceptance of a respective bid price or a respective offer price, or combinations thereof.

19. The non-transitory computer-readable medium of claim 15, wherein the plurality of computer-executable instructions which, when executed by a computer, further cause the computer to arrange for the transfer between the respective origin virtual hub and the respective destination virtual hub of the available renewable energy using computerized scanning at the respective origin virtual hub and the respective destination virtual hub.

20. The non-transitory computer-readable medium of claim 15, wherein the plurality of computer-executable instructions which, when executed by a computer, further cause the computer to arrange for the transfer between the respective origin virtual hub and the respective destination virtual hub of the available renewable energy using an automobile, an aircraft, an autonomous vehicle, a boat, a train, a delivery vehicle, or combinations thereof.

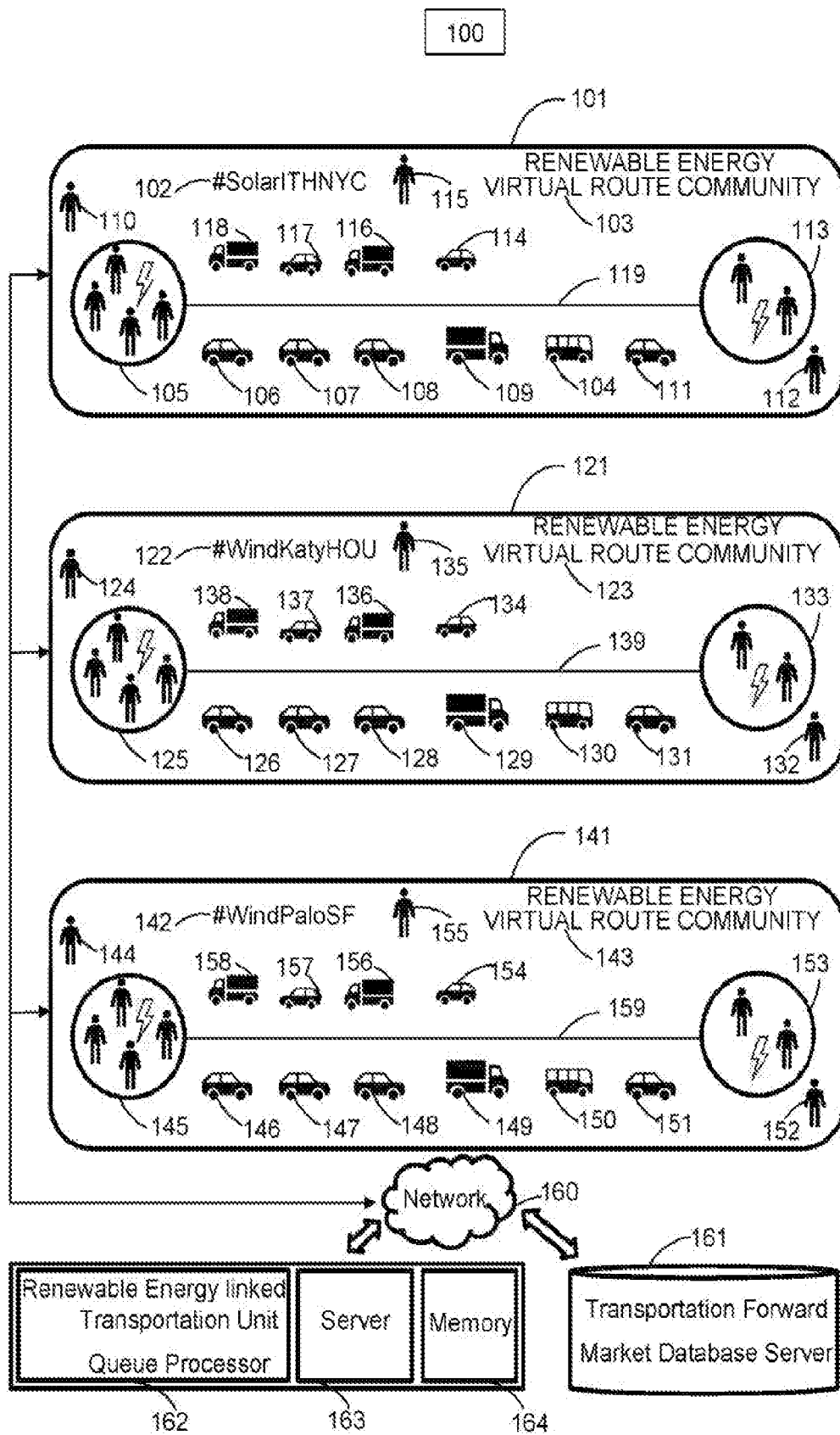


FIG. 1

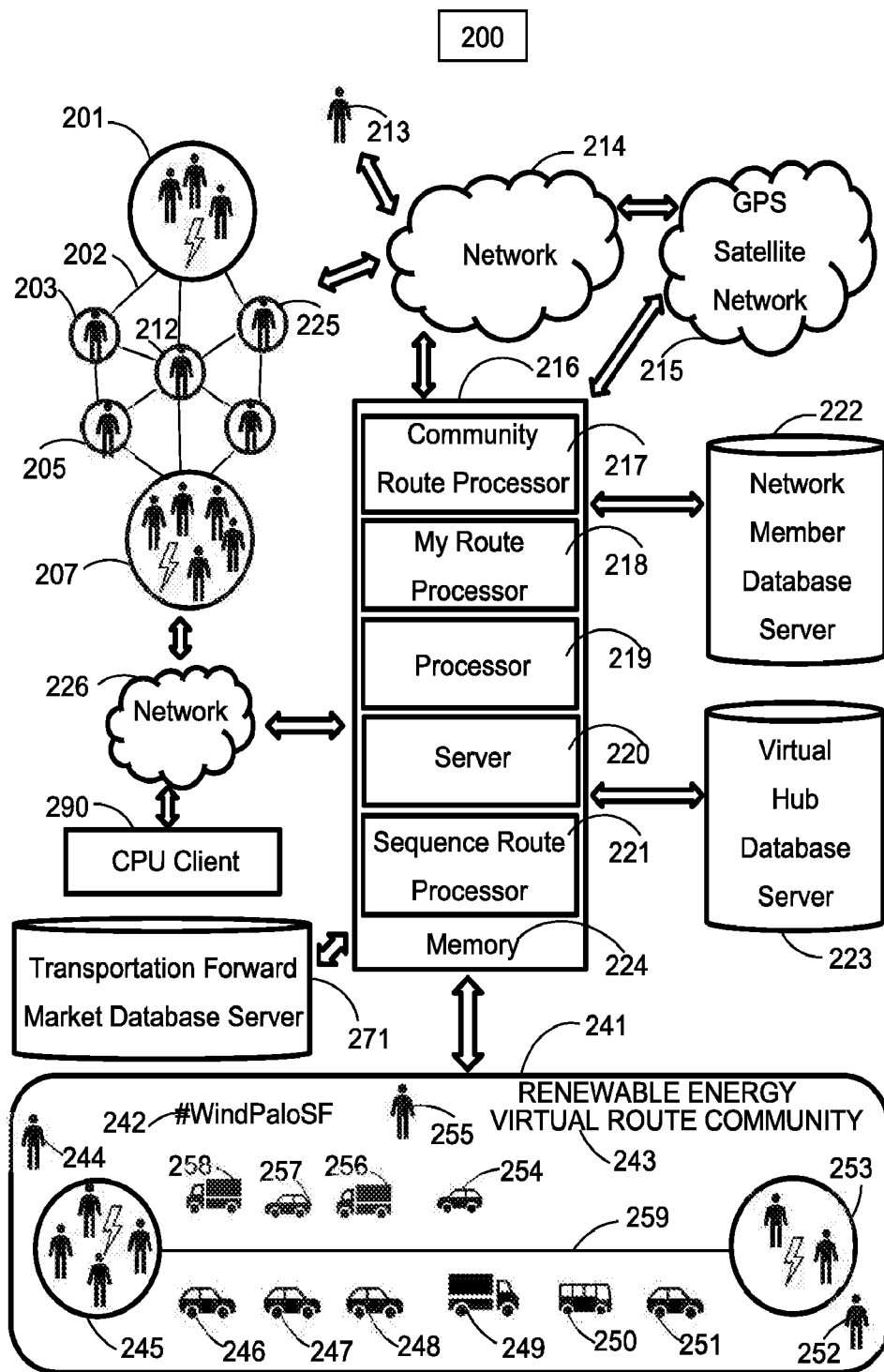


FIG. 2

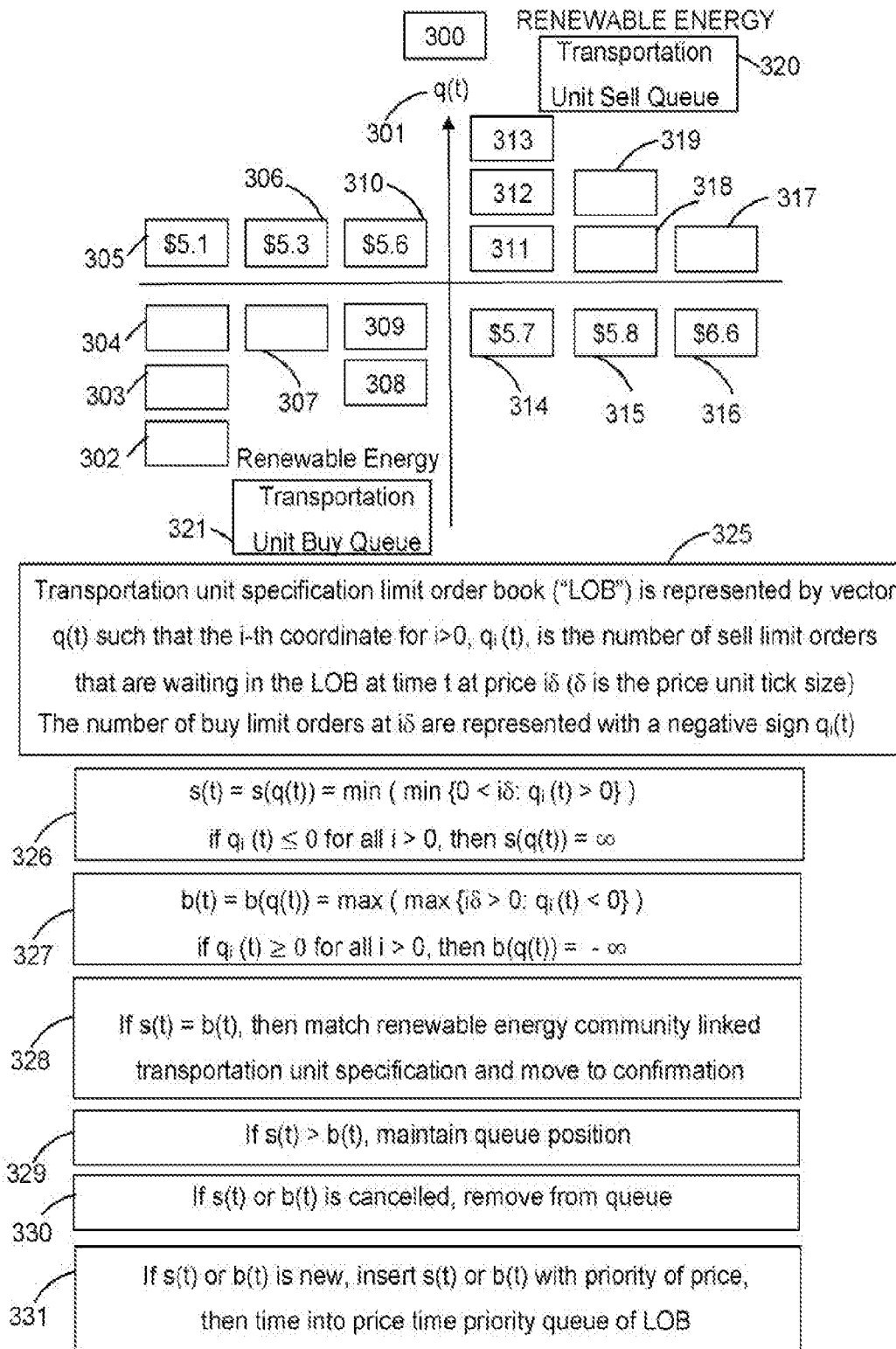


FIG. 3

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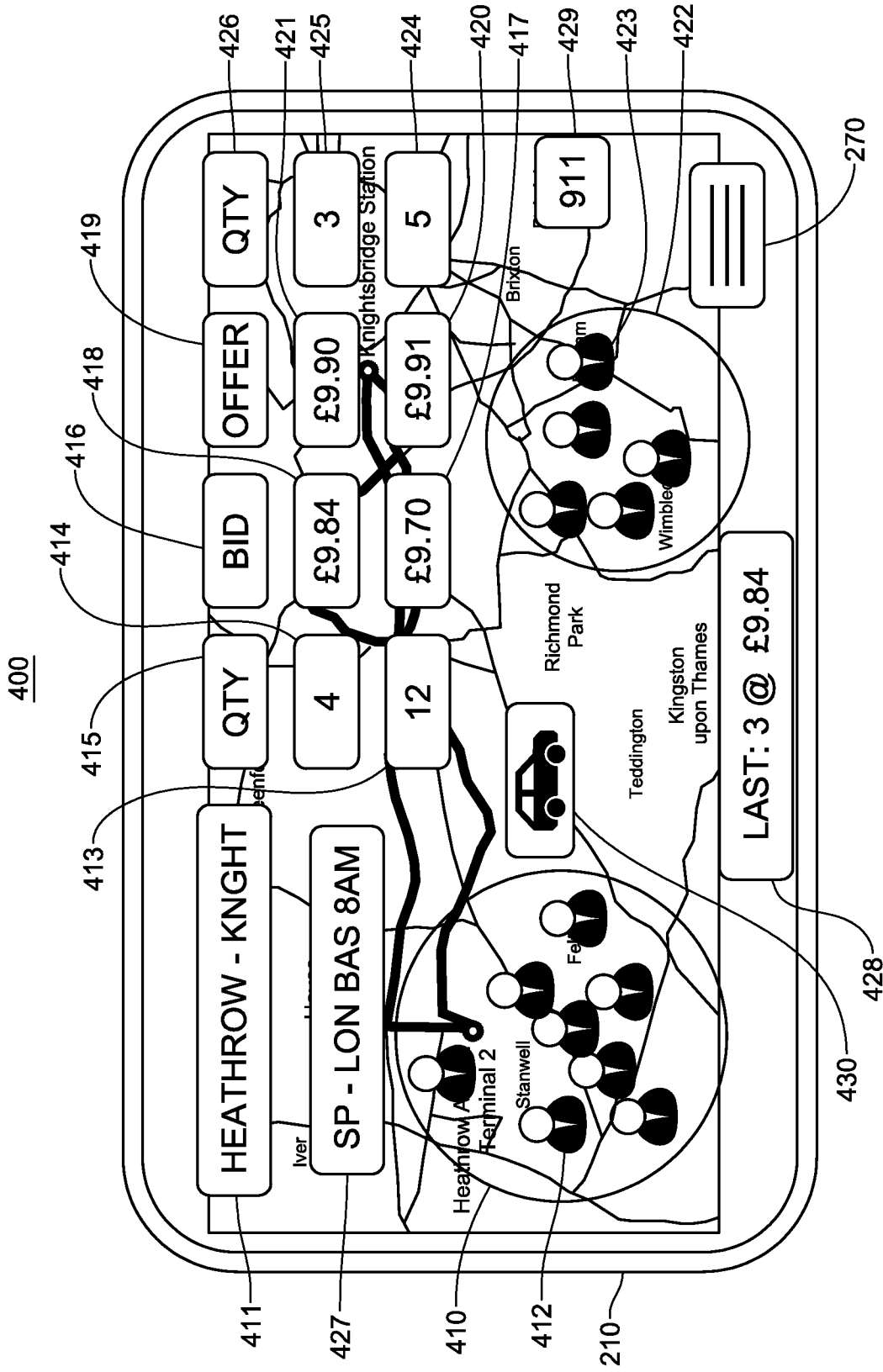


FIG. 4

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5/50

500

210

510

FROM: KATY, TEXAS

TIMING:

| 0 | HOUR | 0 | MINS | AM |
|---|------|---|------|----|
| 1 |      | 1 |      | PM |
| 2 |      | 2 |      |    |
| 3 |      | 3 |      |    |

520

SPECIFICATION:

PREMIUM

INTERMEDIATE

BASIC

530

TO: HOUSTON, TEXAS

SET

540

270

FIG. 5

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6/50

600

210

610

TERM: MONTHLY  
DAILY ANNUAL  
WEEKDAYS WEEKENDS  
MONDAY  
TUESDAY  
WEDNESDAY

START DATE:  
[Date Grid]

END DATE:

650

620

SPECIFICATION:  
PREMIUM  
INTERMEDIATE  
BASIC

630

TO: HOUSTON, TEXAS

640

SET

270

FIG. 6

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700

210

710

ORDER TIME IN FORCE:

DAY

GOOD TILL CANCELLED (GTC)

IMMEDIATE OR CANCEL (IOC)

GOOD TILL DATE (GTD)

DAY TILL CANCELLED (DTC)

ORDER TYPE:

LIMIT

MARKET

MARKET IF TOUCHED (MIT)

SNAP MARKET

SNAP MID

SNAP TO PRIMARY

PEG TO BENCHMARK

ADAPTIVE CUSTOM

720

SET

740

270

FIG. 7

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800

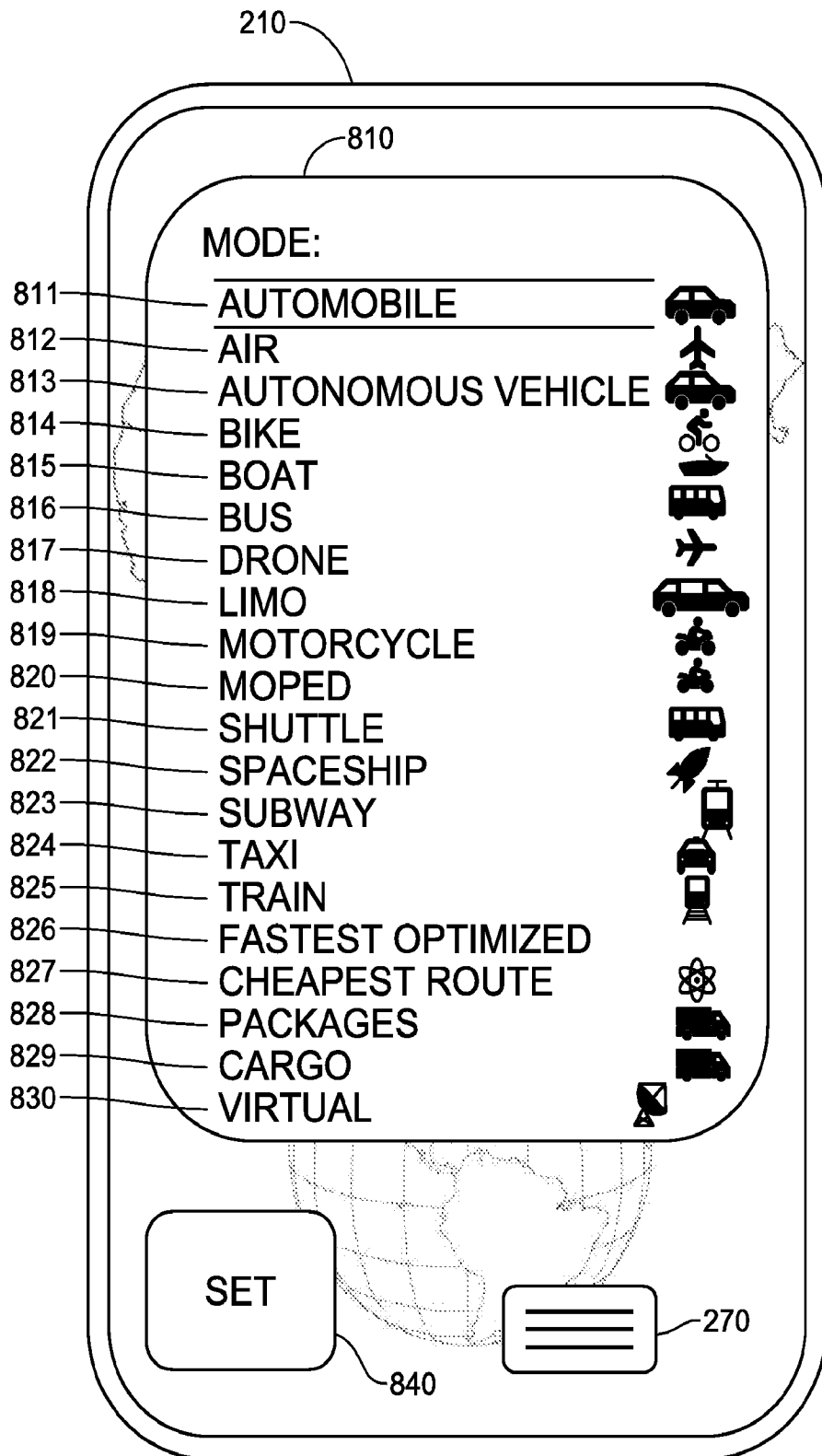


FIG. 8

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900

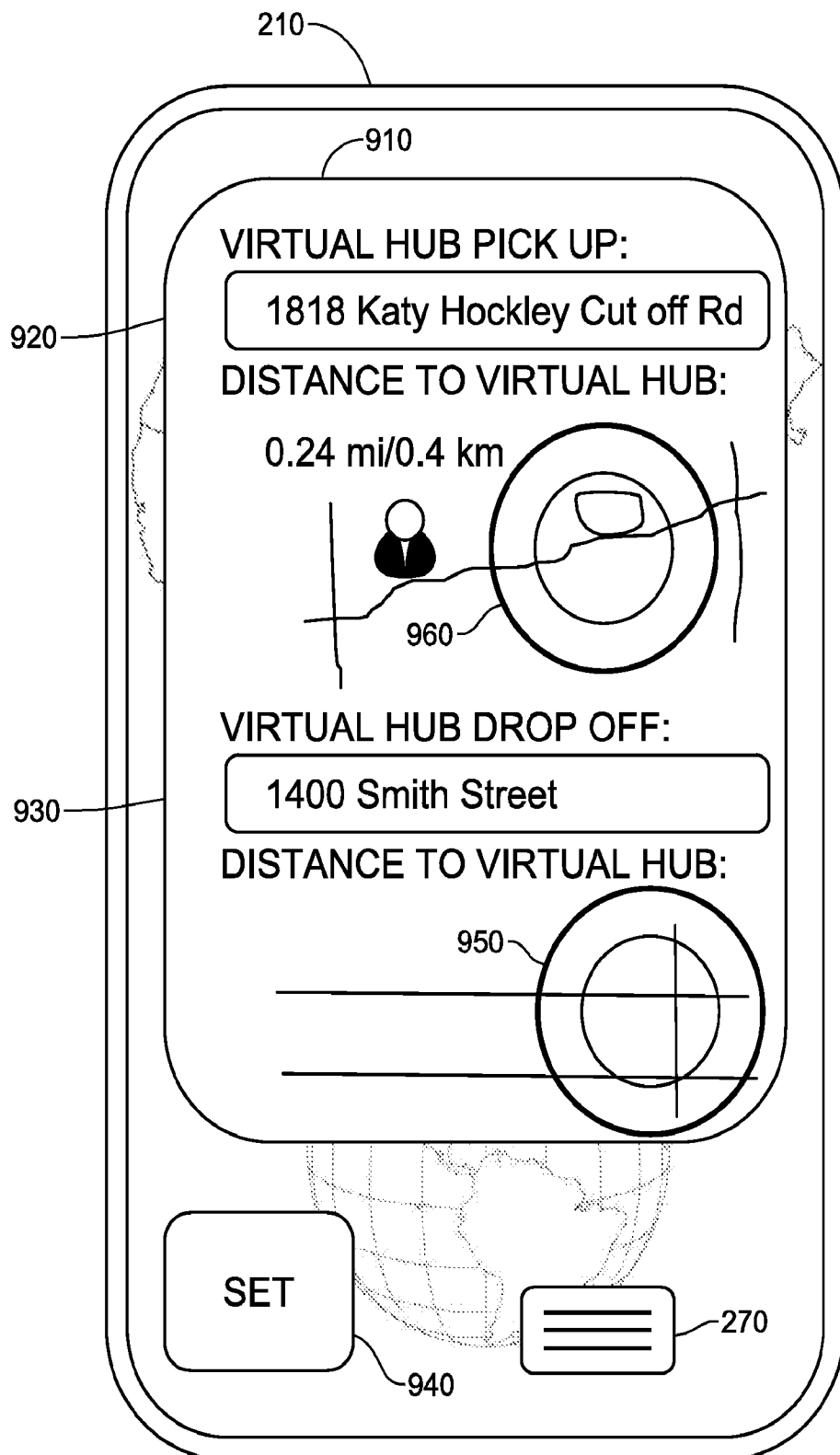


FIG. 9

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1000

210

1010

**NO ARBITRAGE SETTINGS:**

|      |                     |                                     |
|------|---------------------|-------------------------------------|
| 1011 | CHEAPEST ROUTE      | <input checked="" type="checkbox"/> |
| 1012 | SINGLE MODE         | <input checked="" type="checkbox"/> |
| 1013 | MULTI MODE          | <input type="checkbox"/>            |
| 1014 | FASTEST ROUTE       | <input type="checkbox"/>            |
| 1015 | MOST SCENIC         | <input type="checkbox"/>            |
| 1016 | HIGHEST RATING      | <input checked="" type="checkbox"/> |
| 1017 | MOST AVAILABLE      | <input type="checkbox"/>            |
| 1018 | HIGHEST VOLUME      | <input checked="" type="checkbox"/> |
| 1019 | MOST FREQUENT       | <input type="checkbox"/>            |
| 1020 | SERVICE LEVEL       | <input type="checkbox"/>            |
| 1021 | SECURITY AND SAFETY | <input checked="" type="checkbox"/> |
| 1022 | GROUP RESTRICTED    | <input checked="" type="checkbox"/> |

SET

1040

270

FIG. 10

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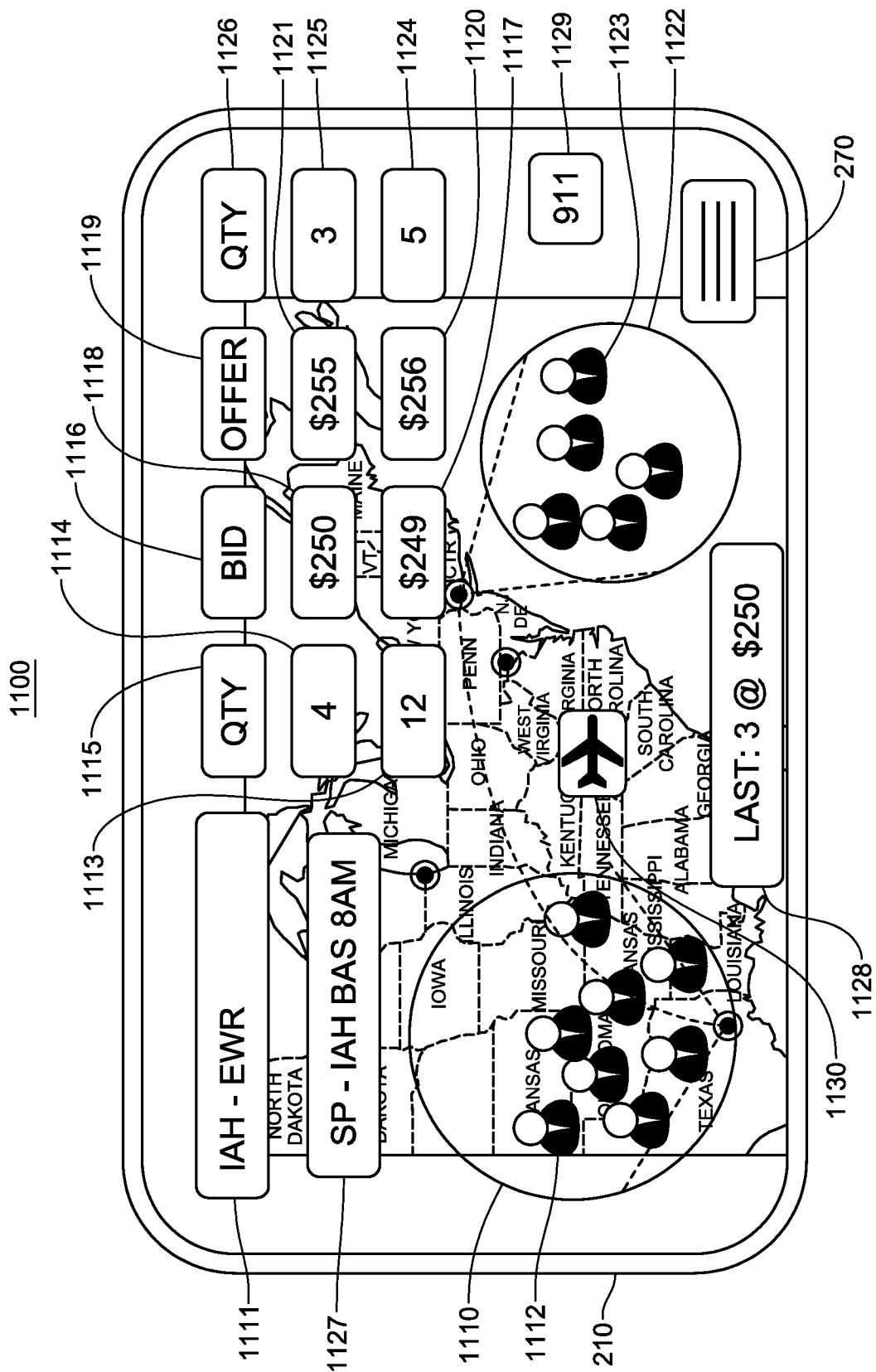


FIG. 11

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12/50

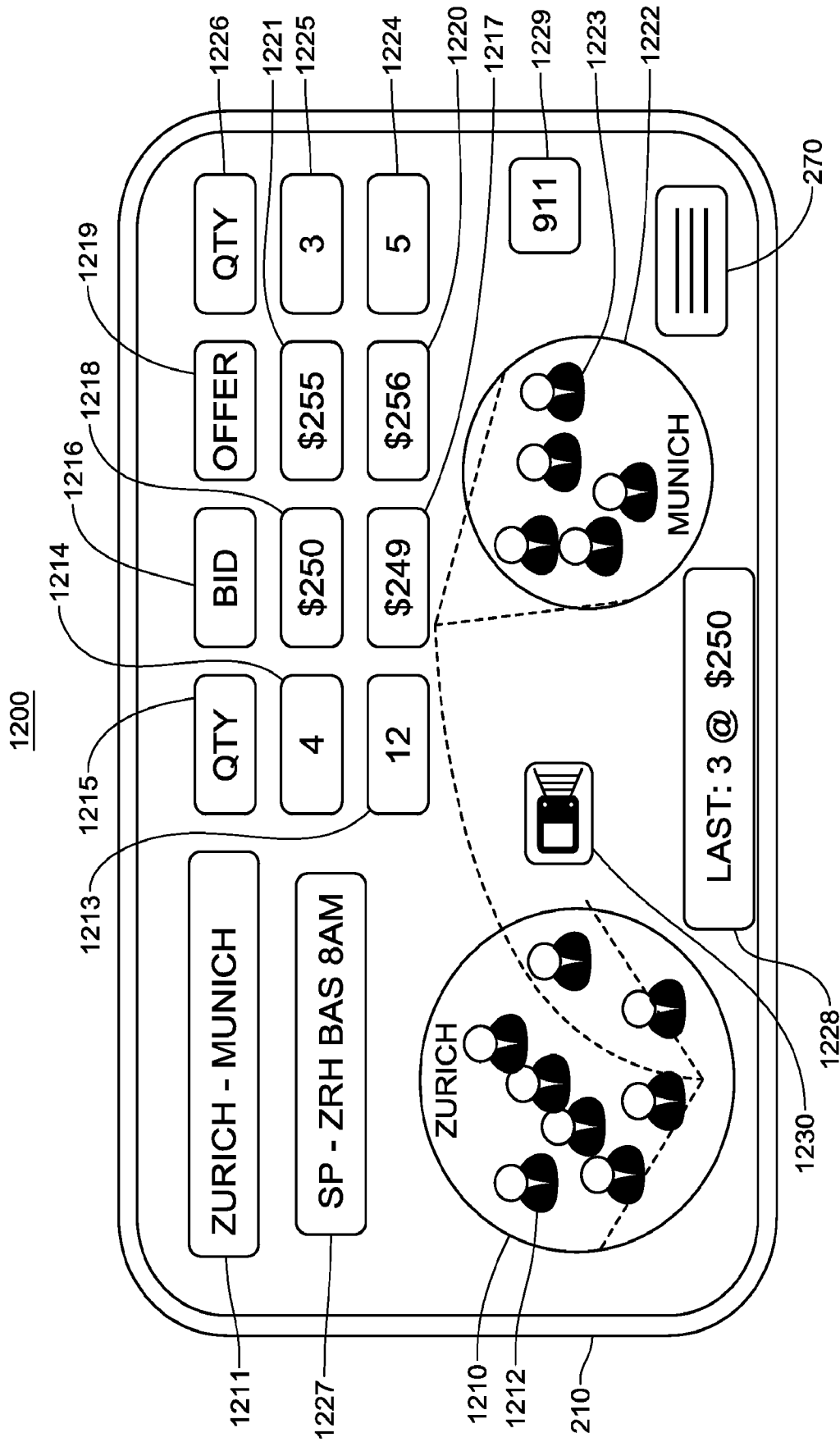


FIG. 12

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13/50

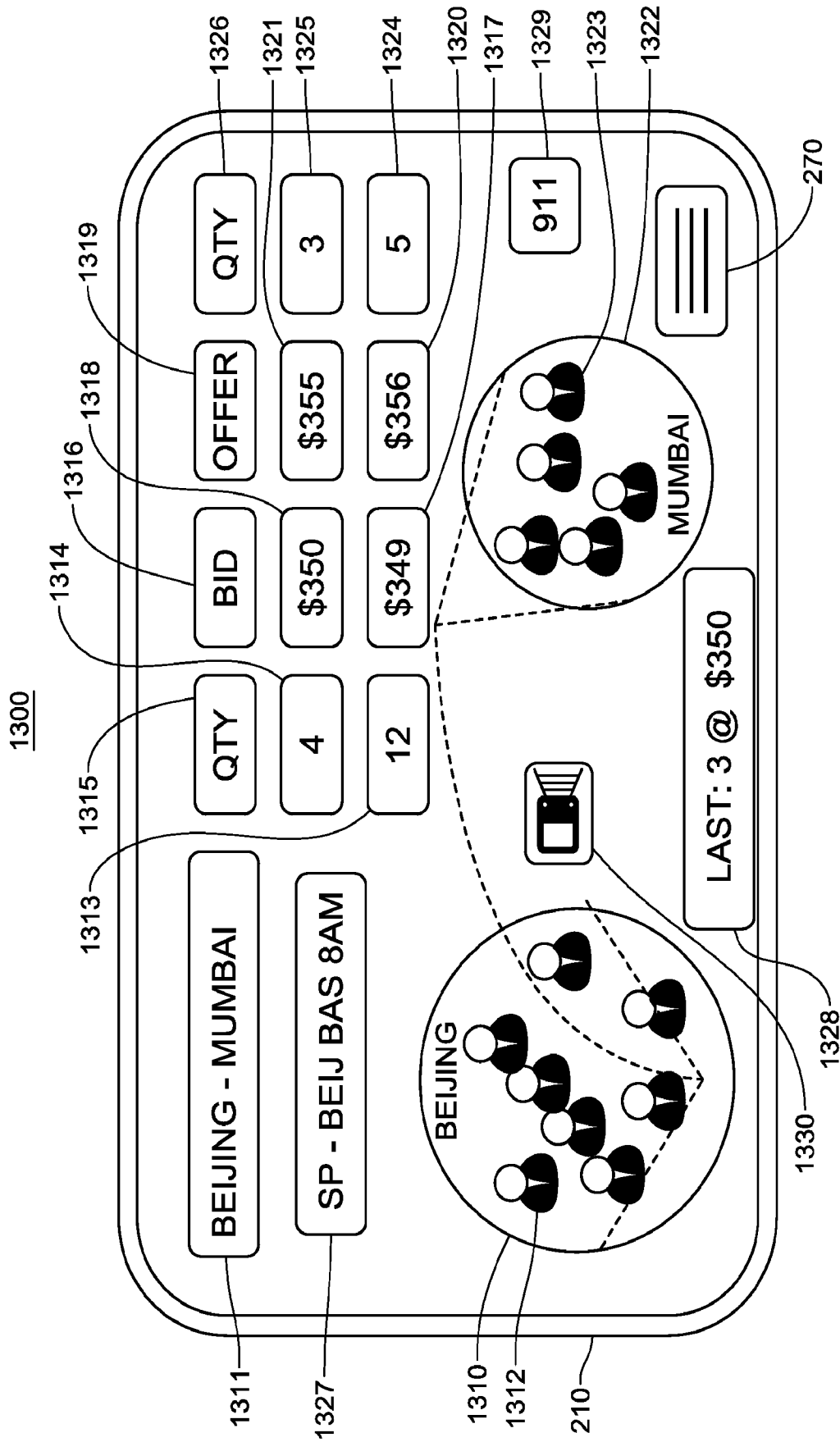


FIG. 13

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14/50

1400

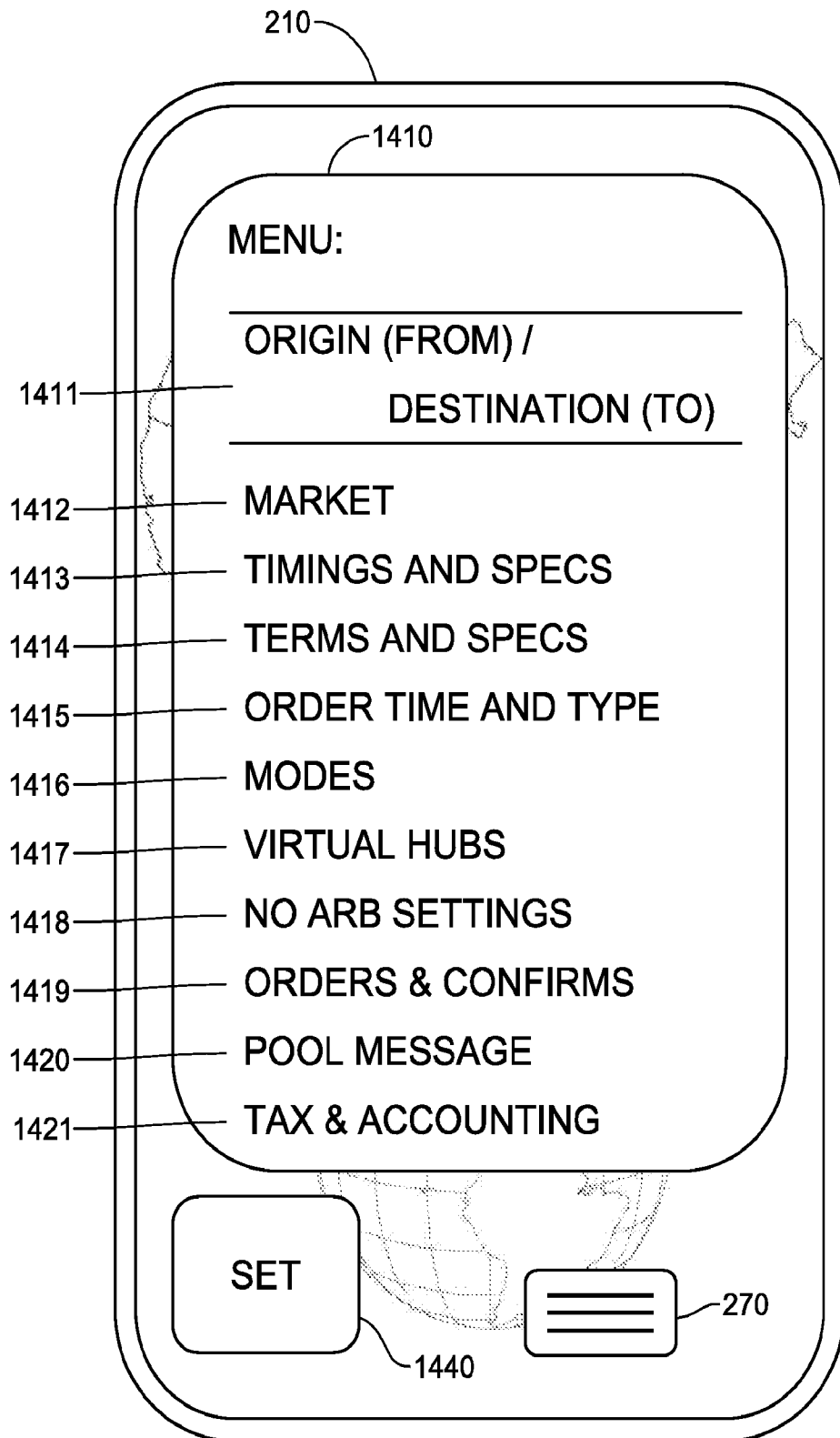


FIG. 14

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15/50

1500

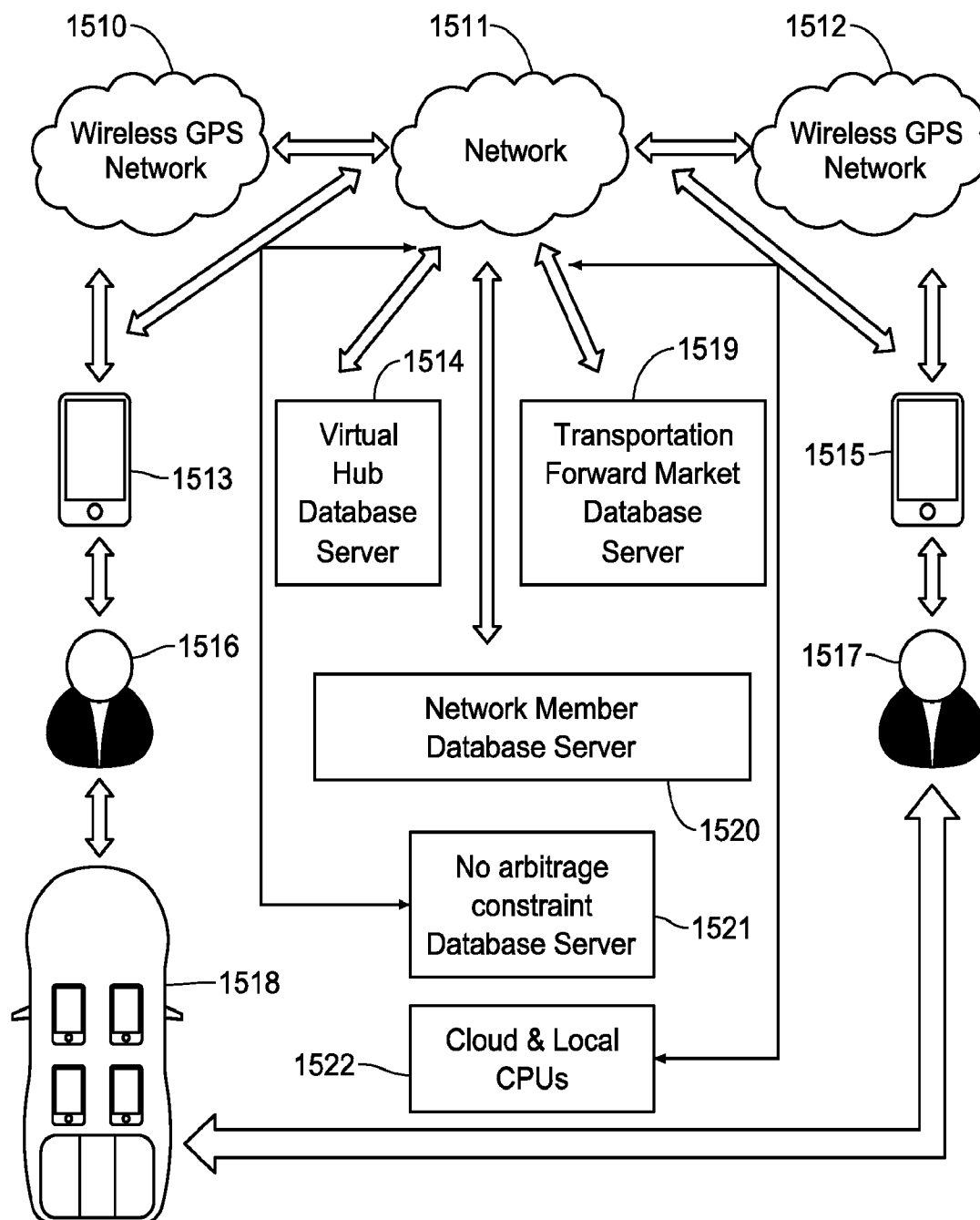


FIG. 15

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16/50

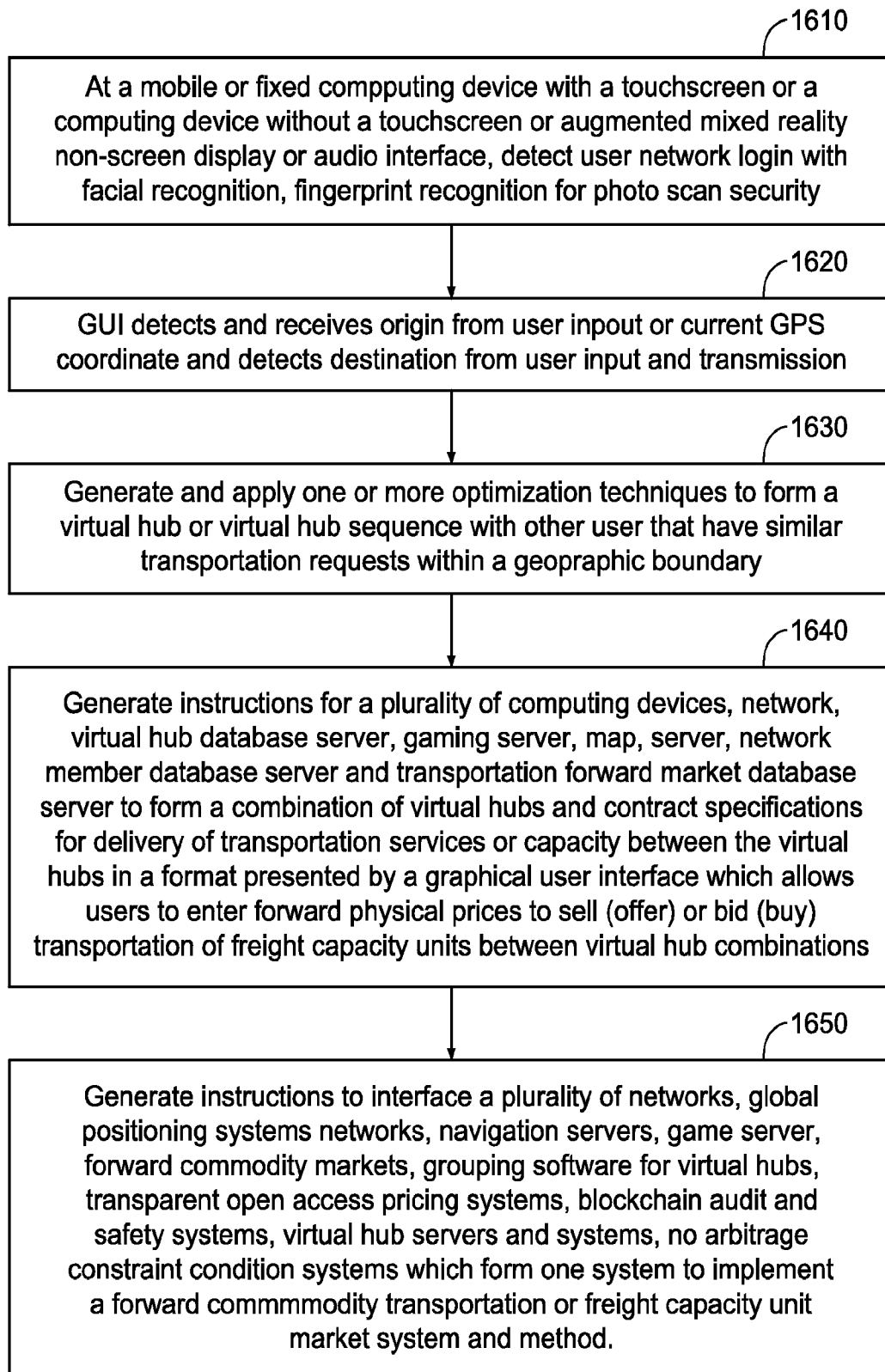
1600

FIG. 16

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17/50

1700

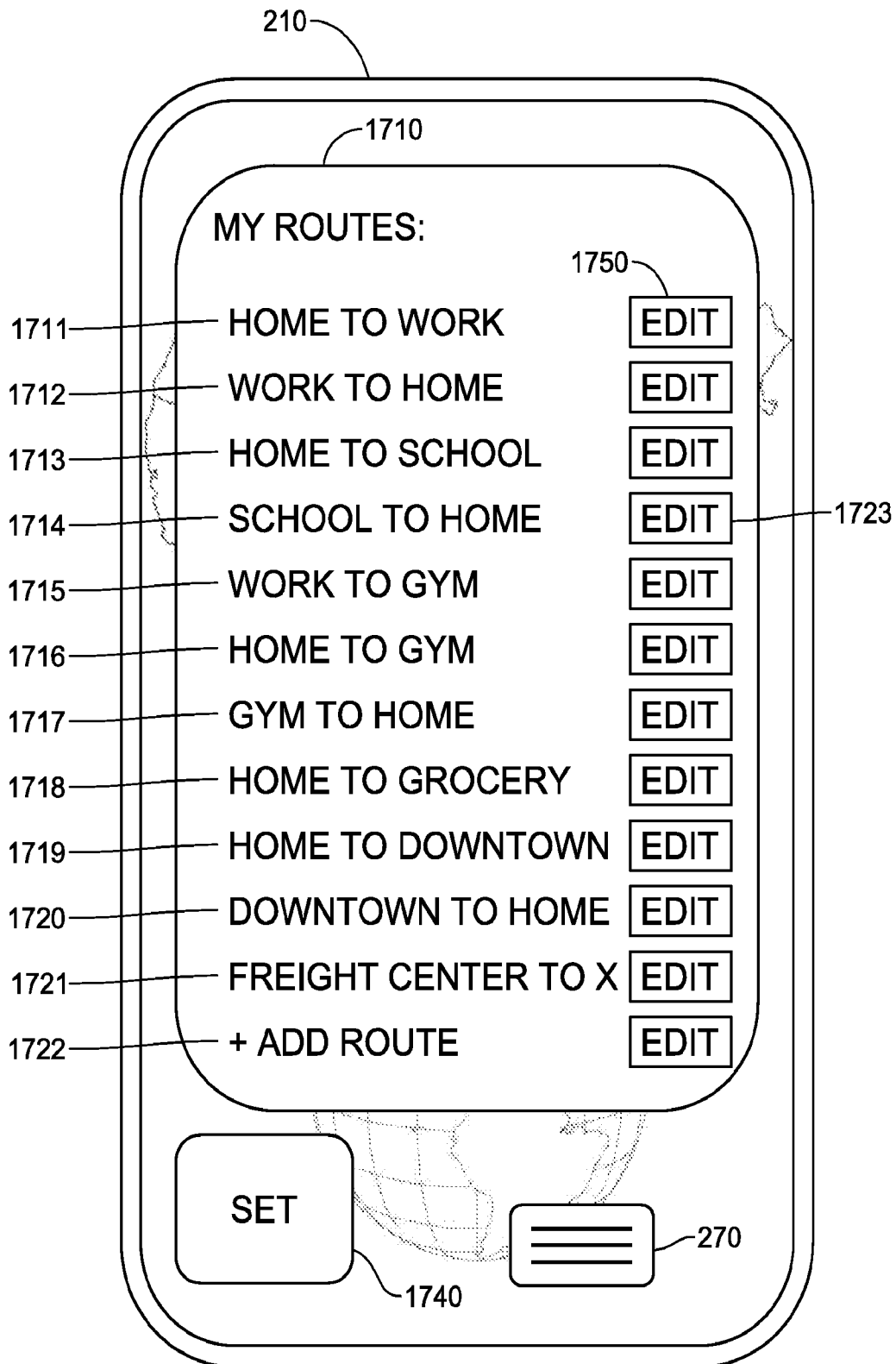


FIG. 17

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18/50

1800

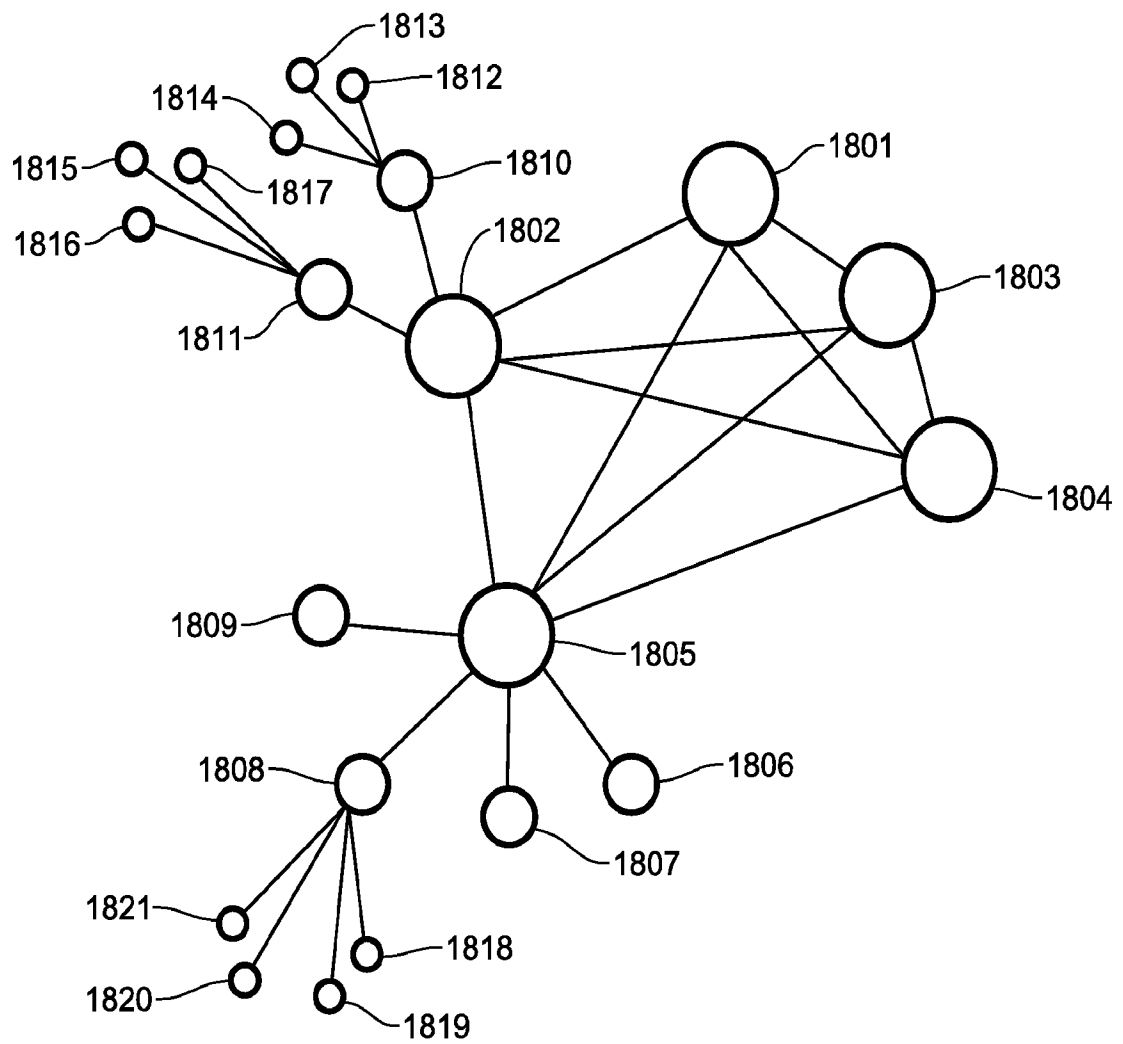


FIG. 18

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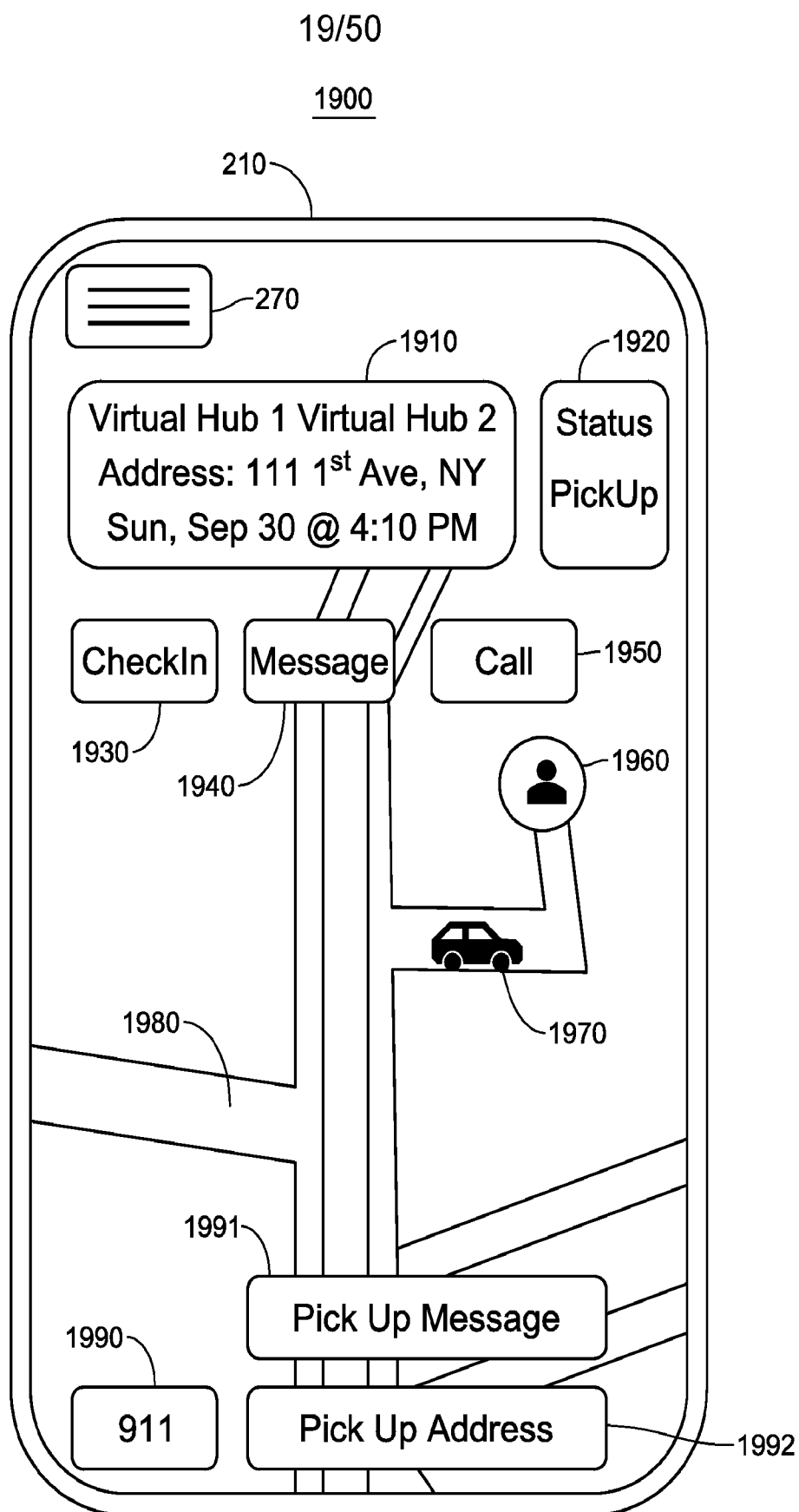


FIG. 19

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20/50

2000

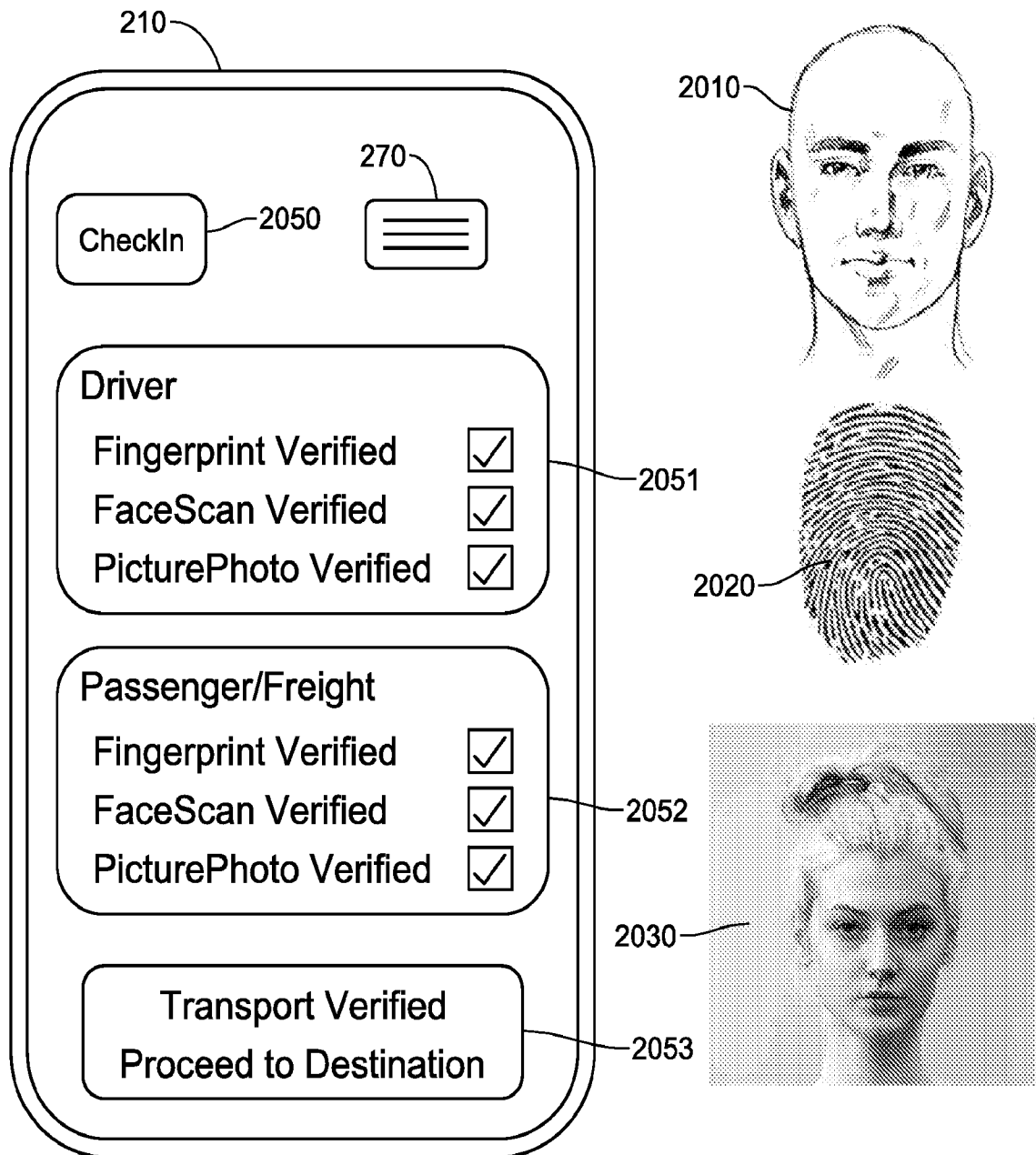


FIG. 20

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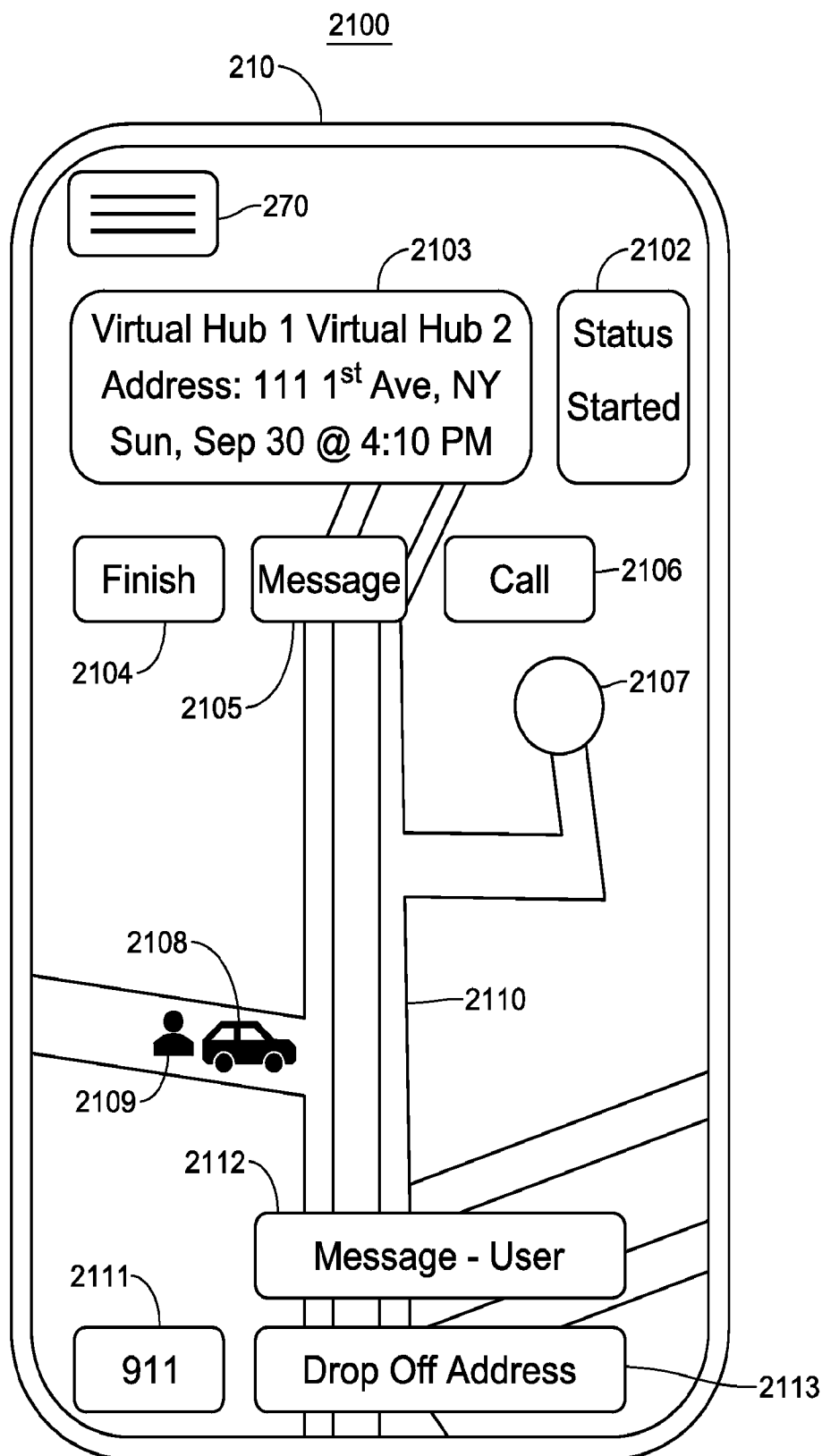


FIG. 21

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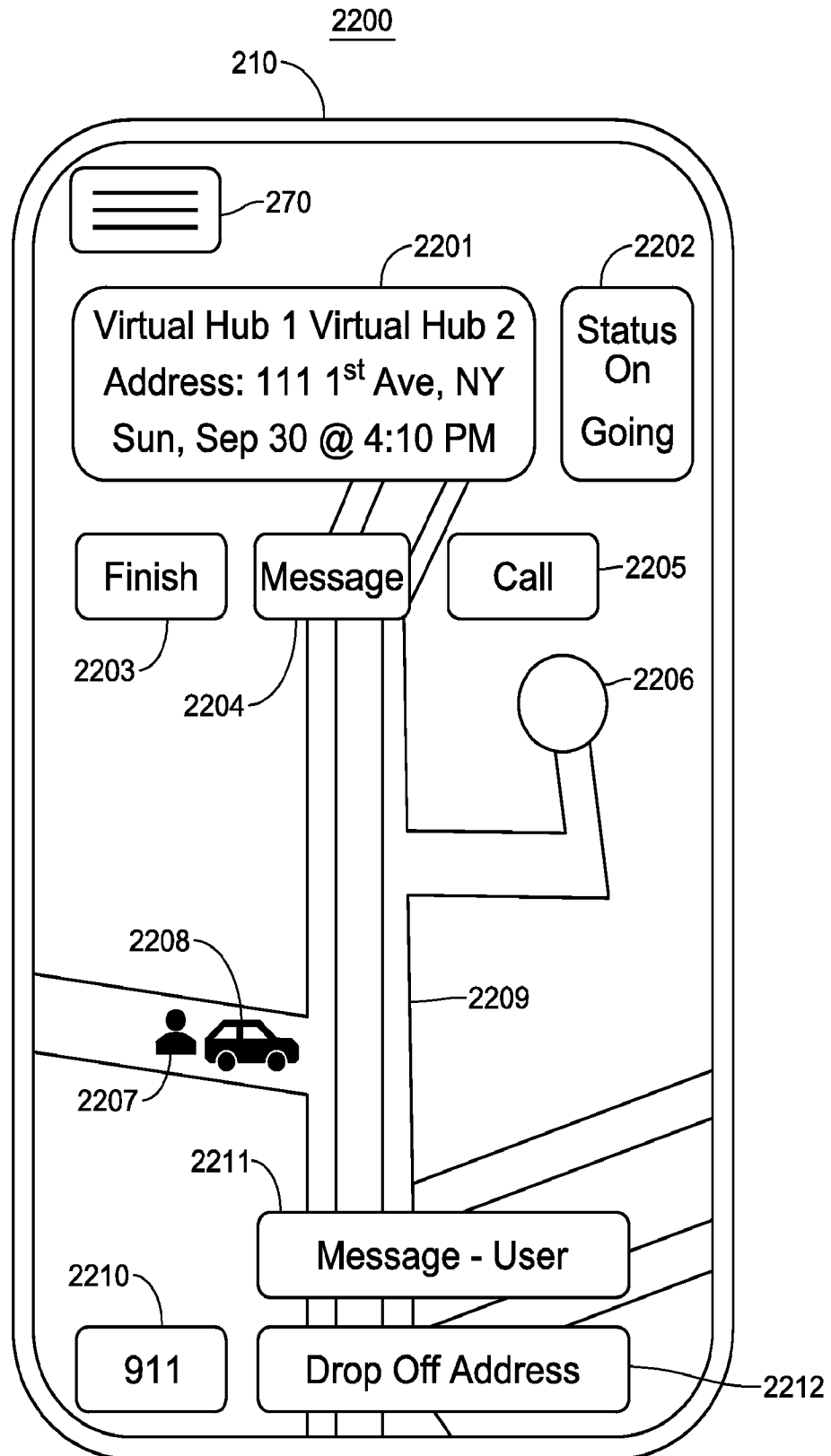


FIG. 22

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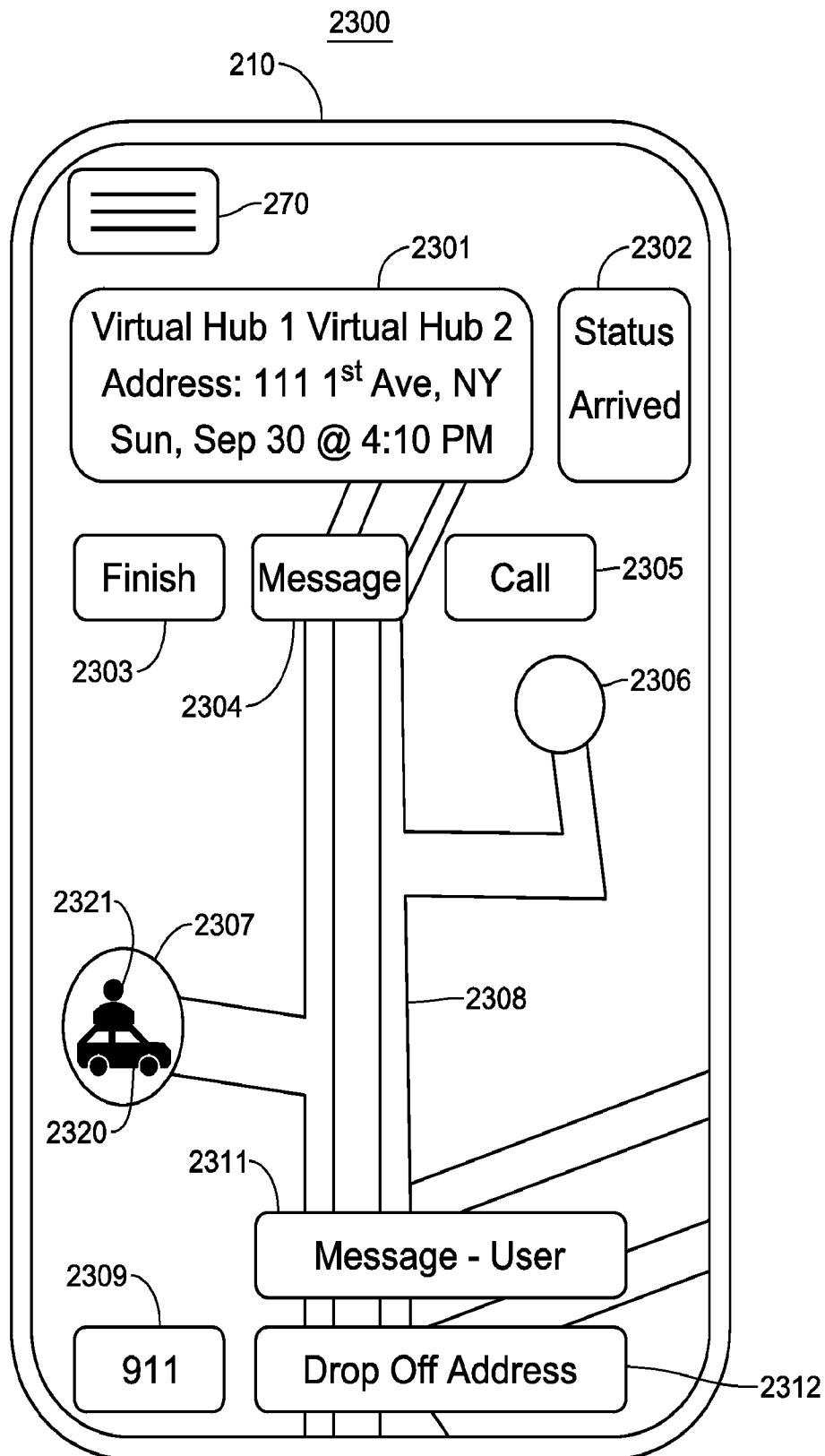


FIG. 23

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24/50

2400

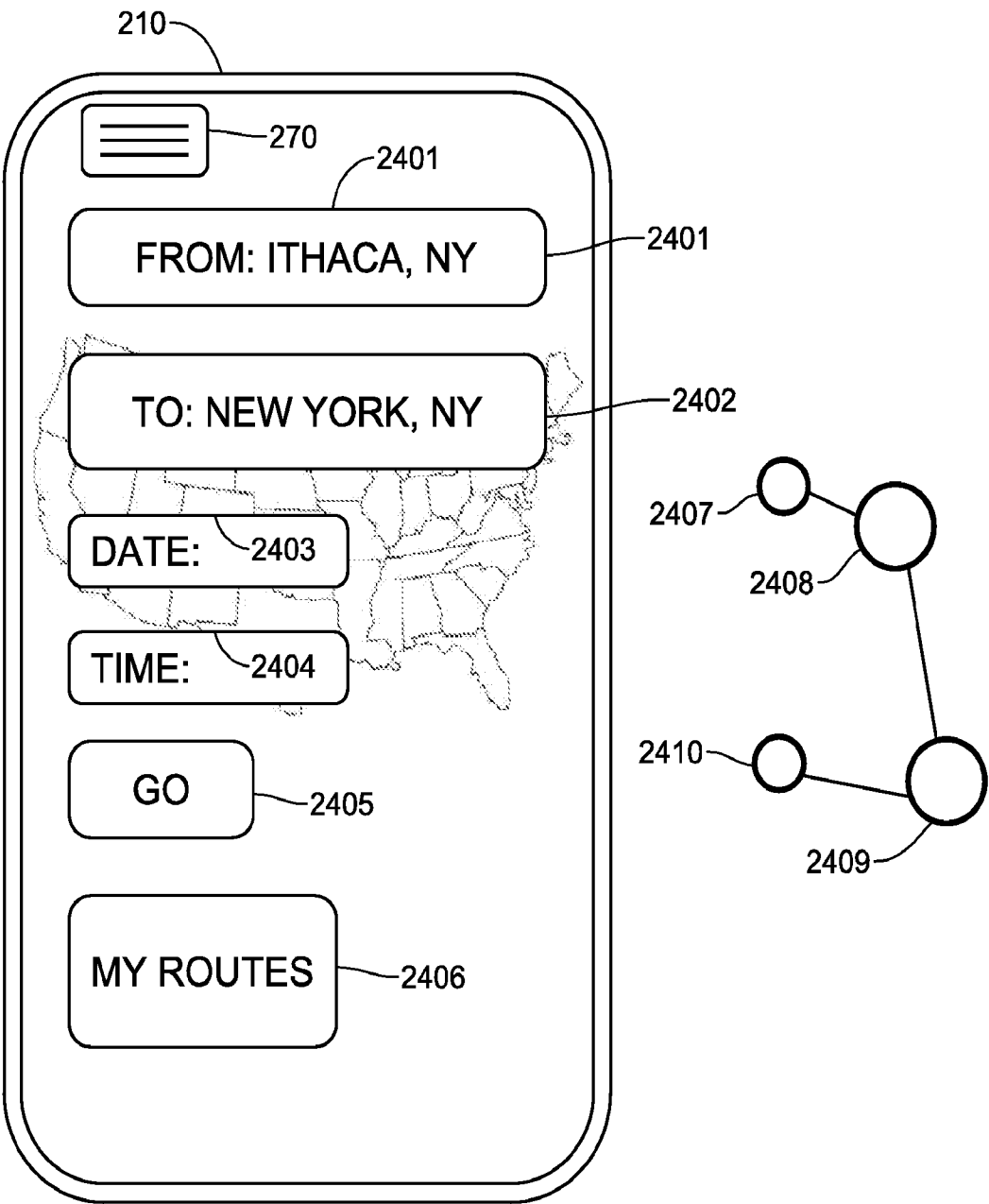


FIG. 24

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25/50

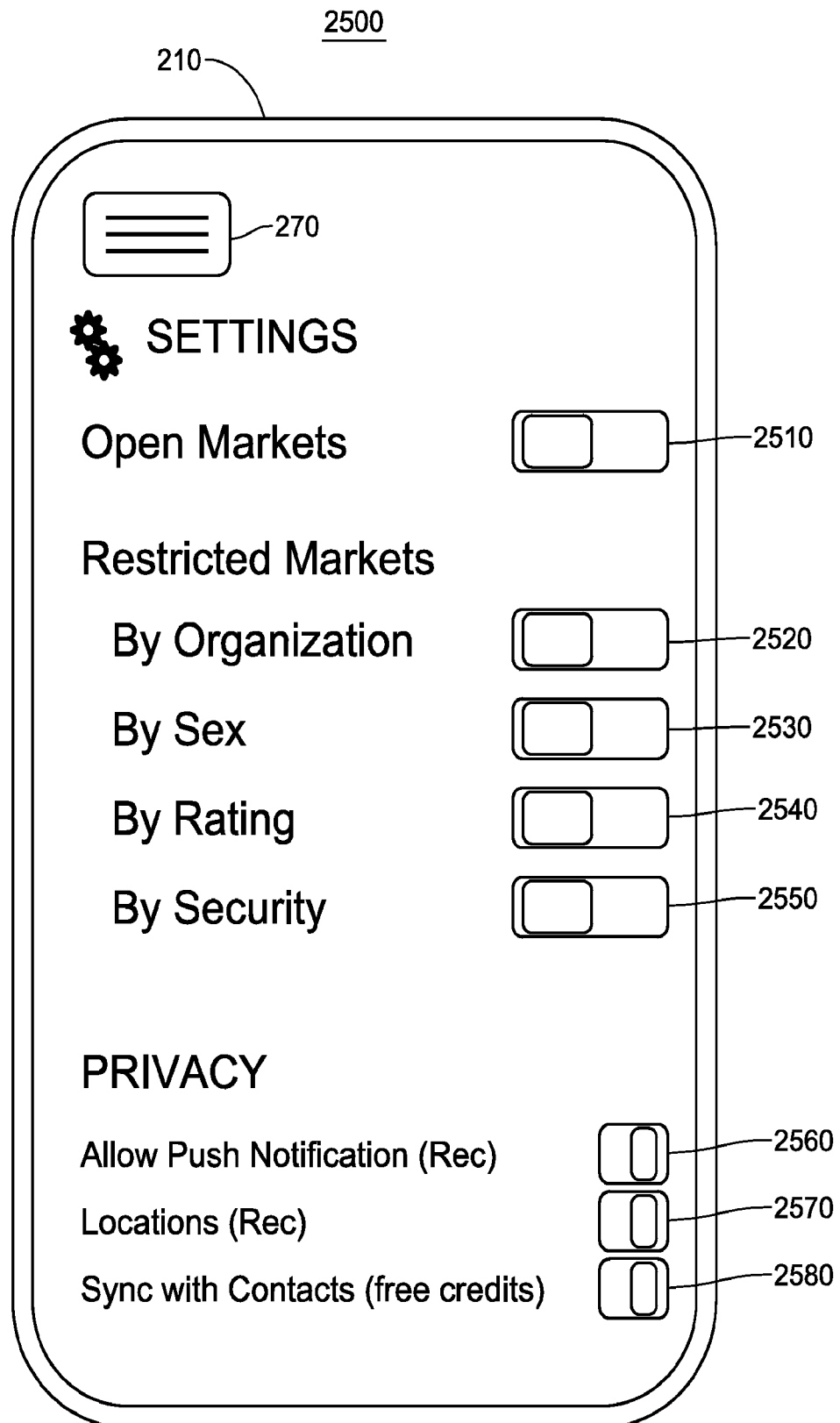


FIG. 25

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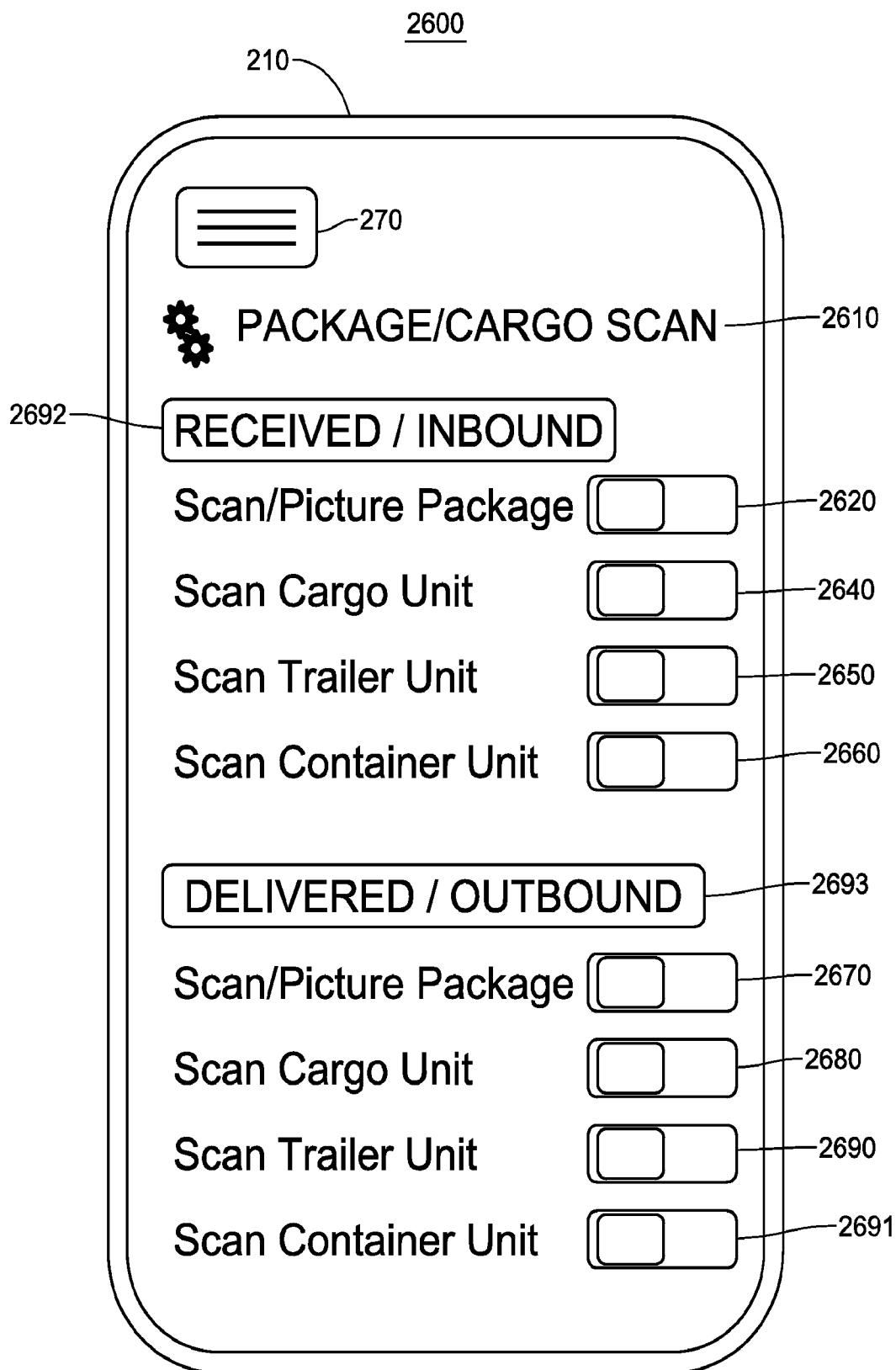


FIG. 26

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27/50

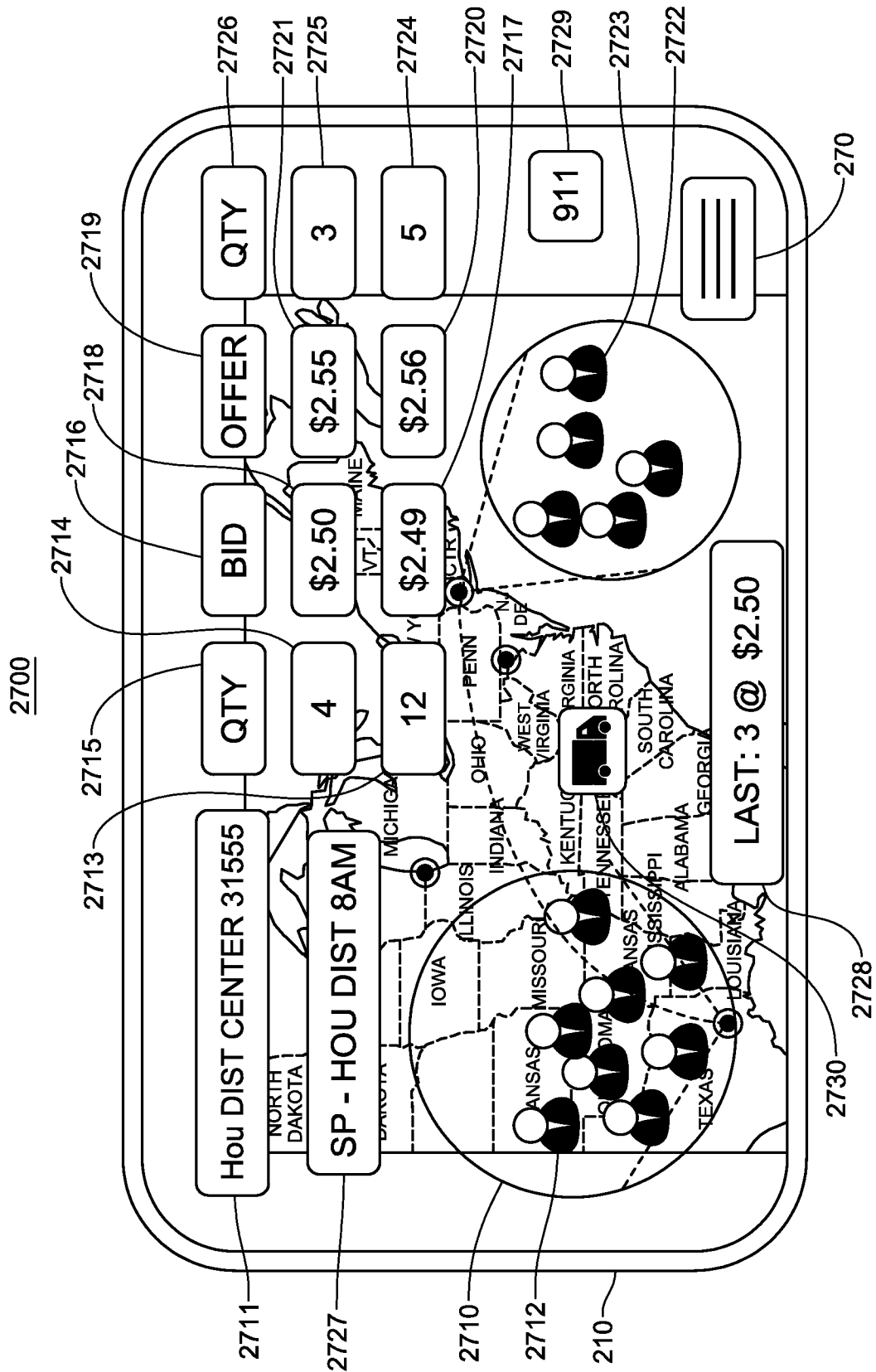


FIG. 27

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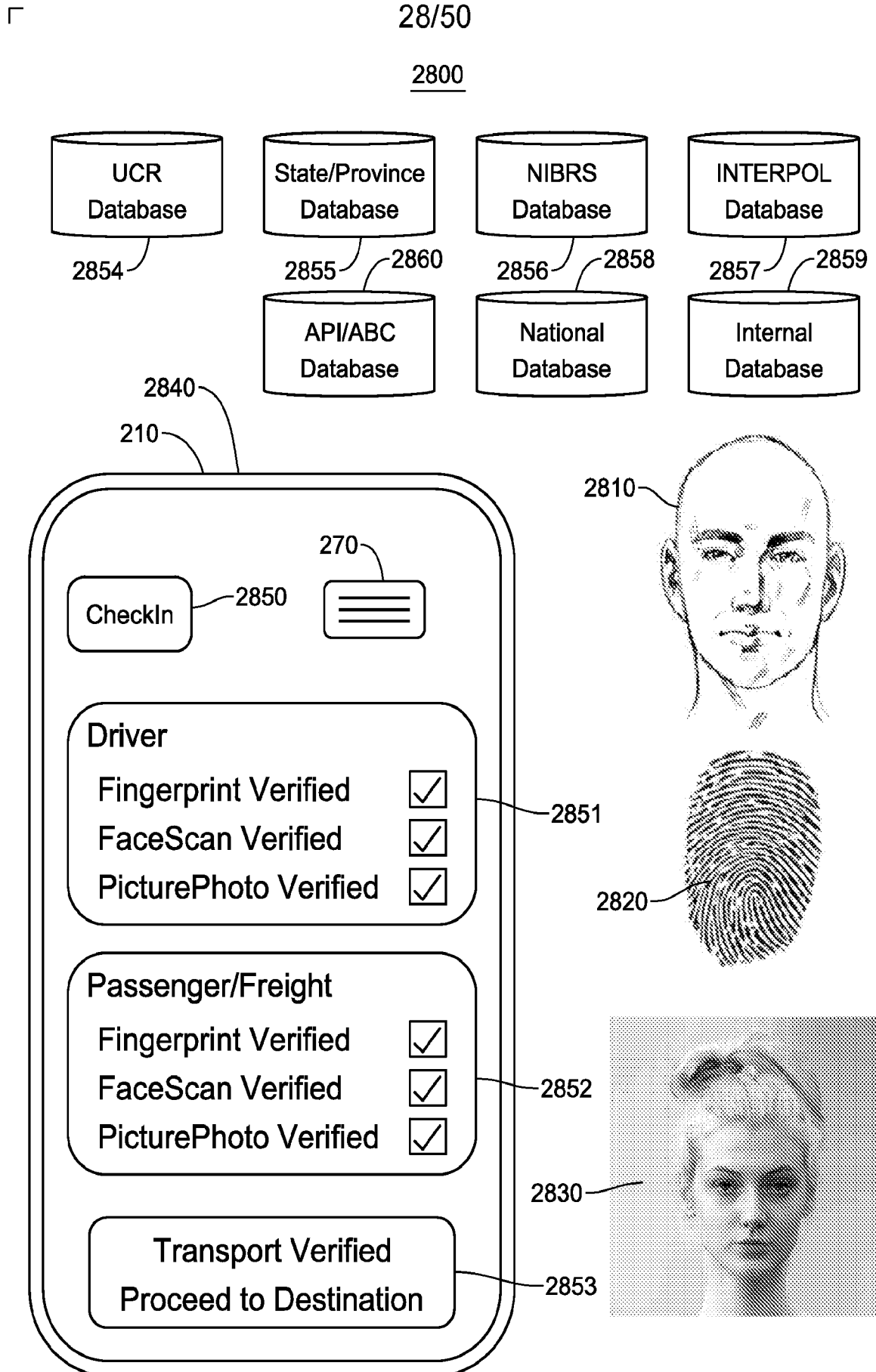


FIG. 28

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2900

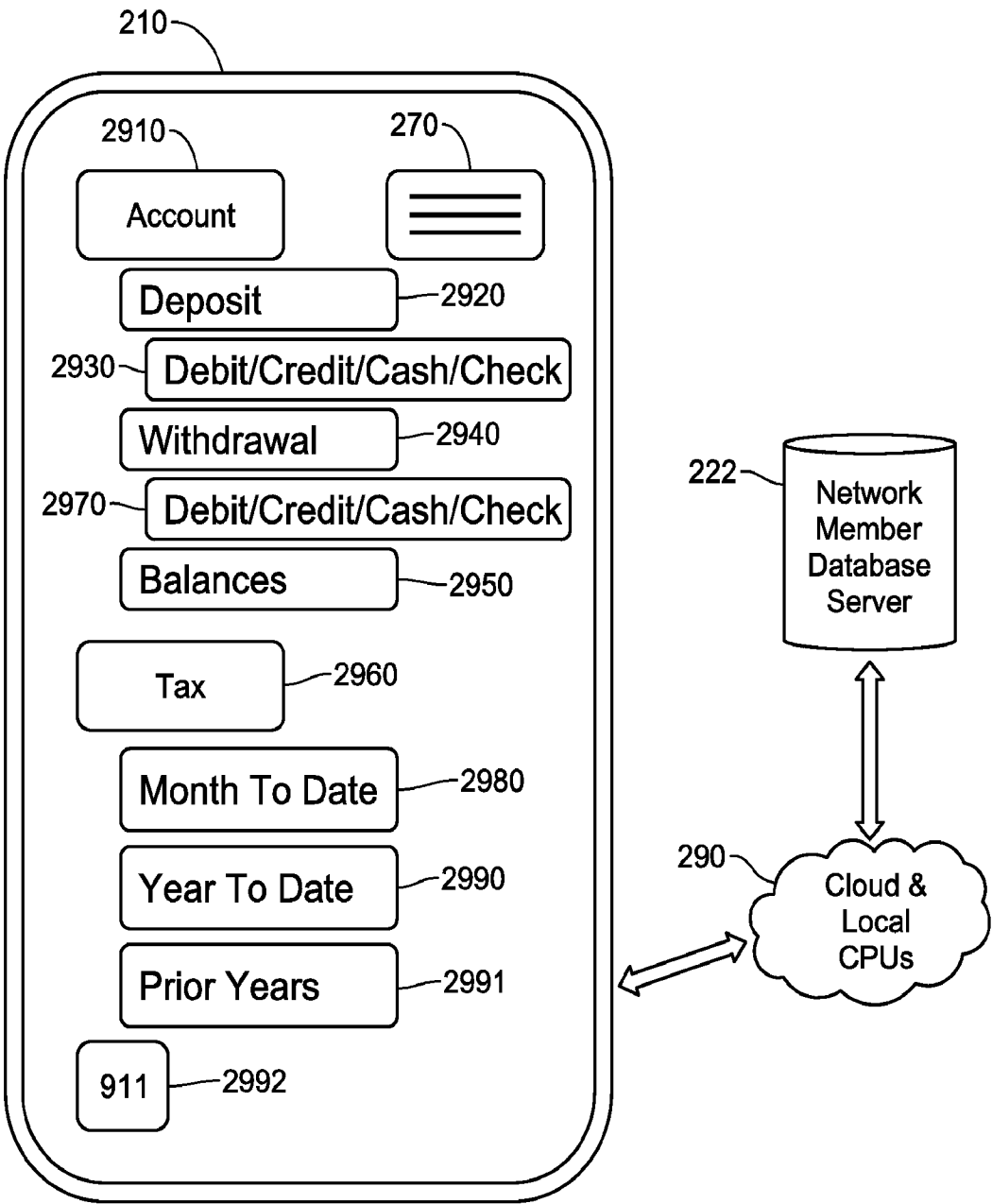


FIG. 29

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3000

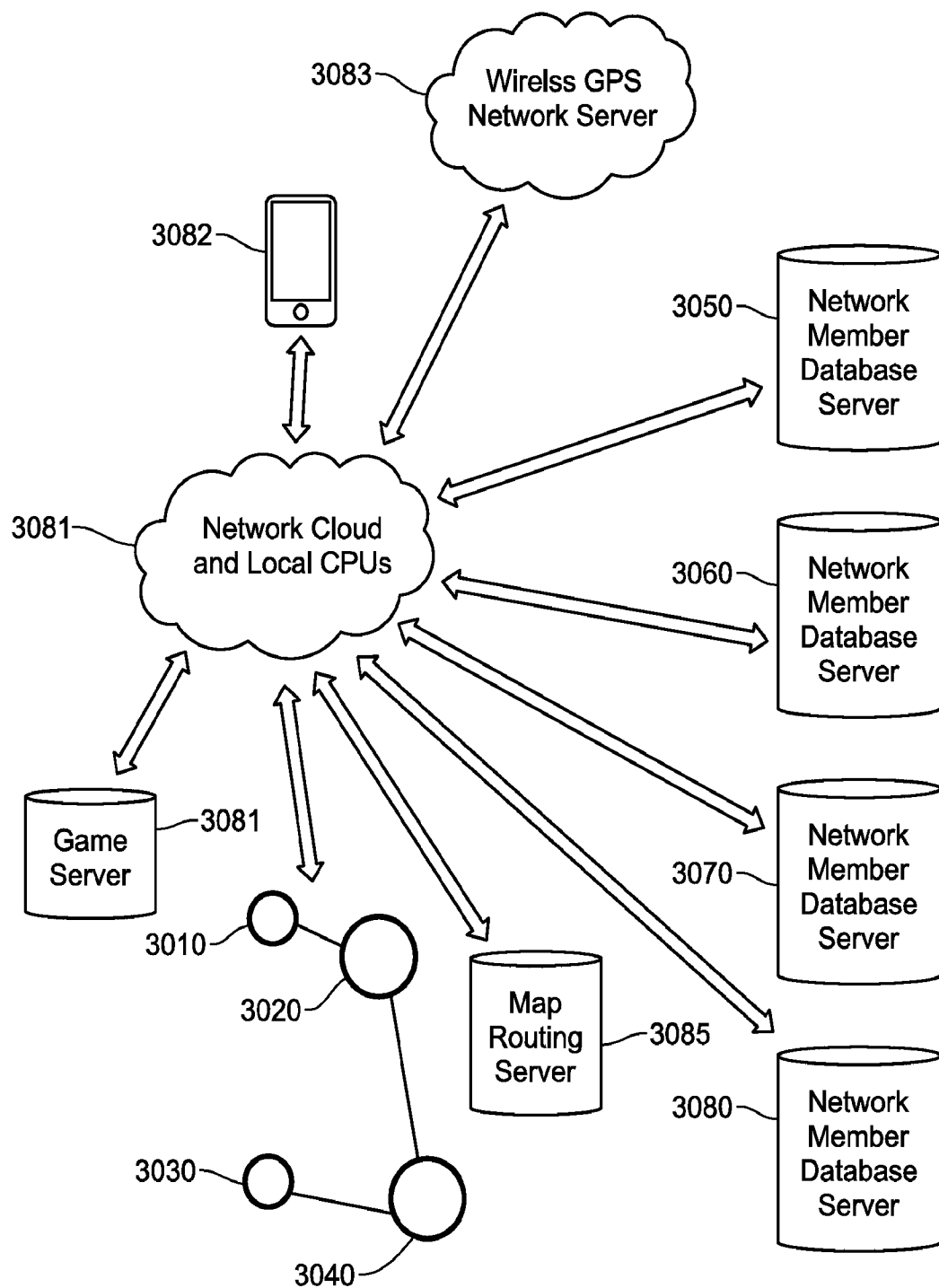


FIG. 30

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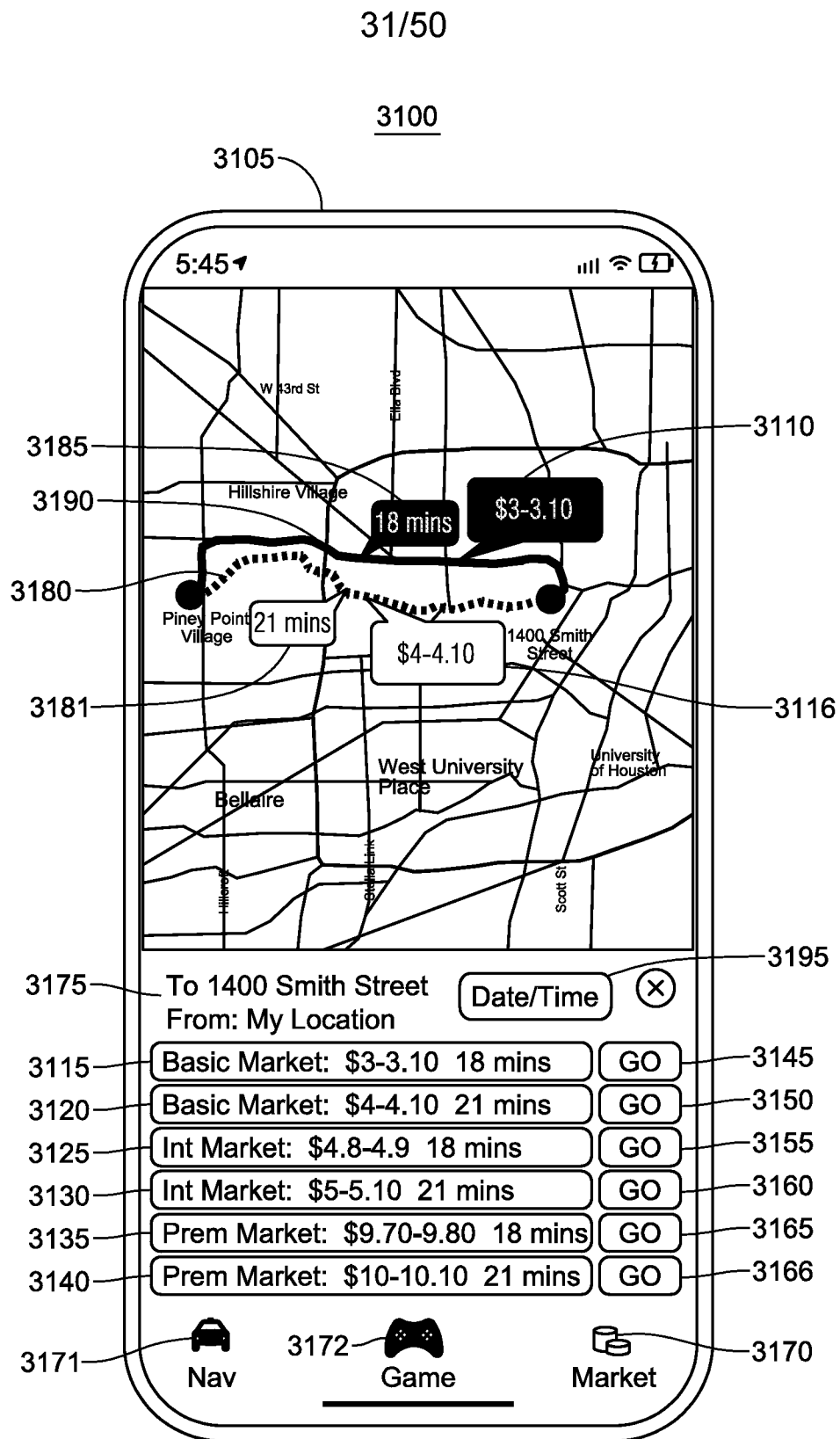


FIG. 31

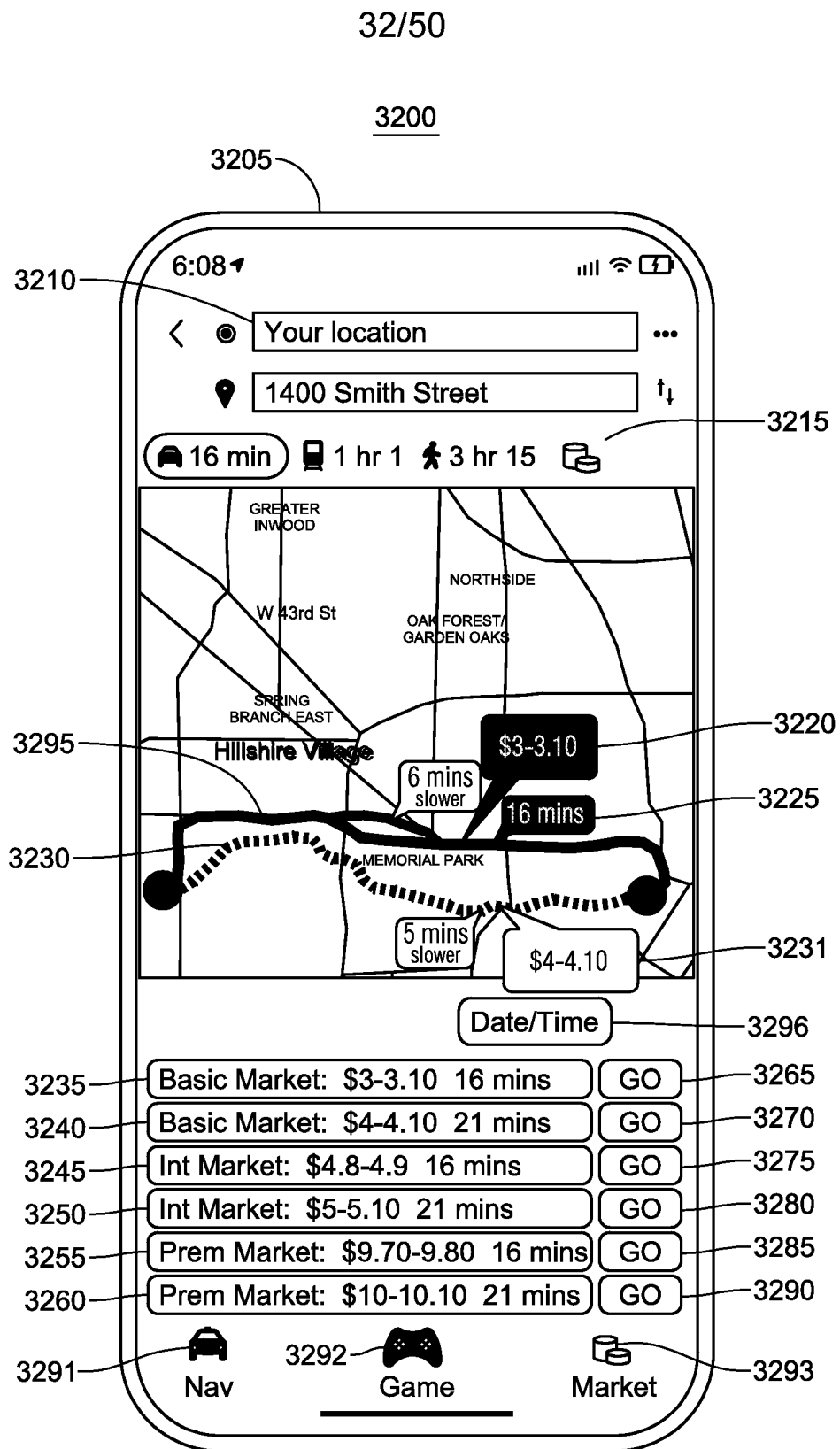


FIG. 32

33/50

3300

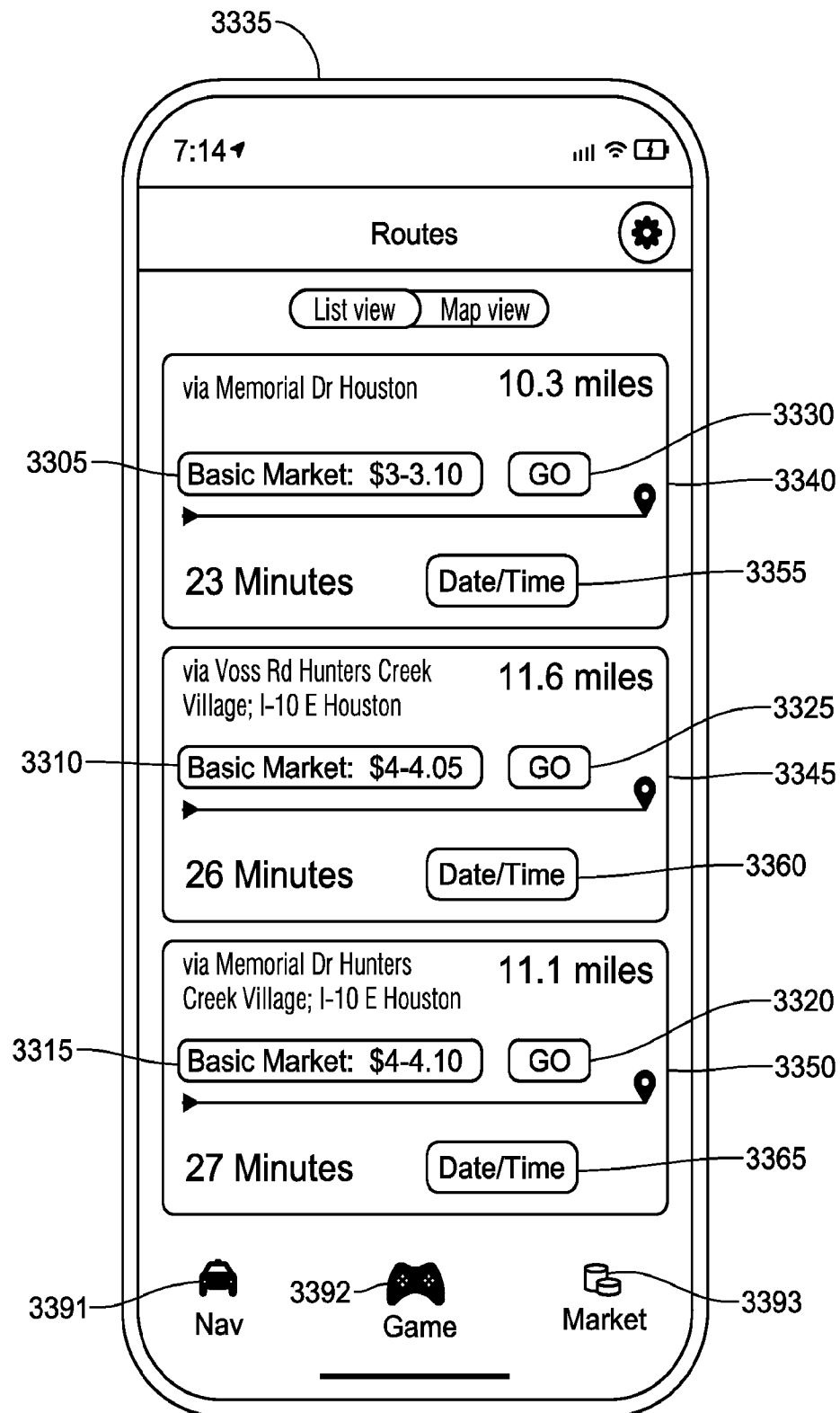


FIG. 33

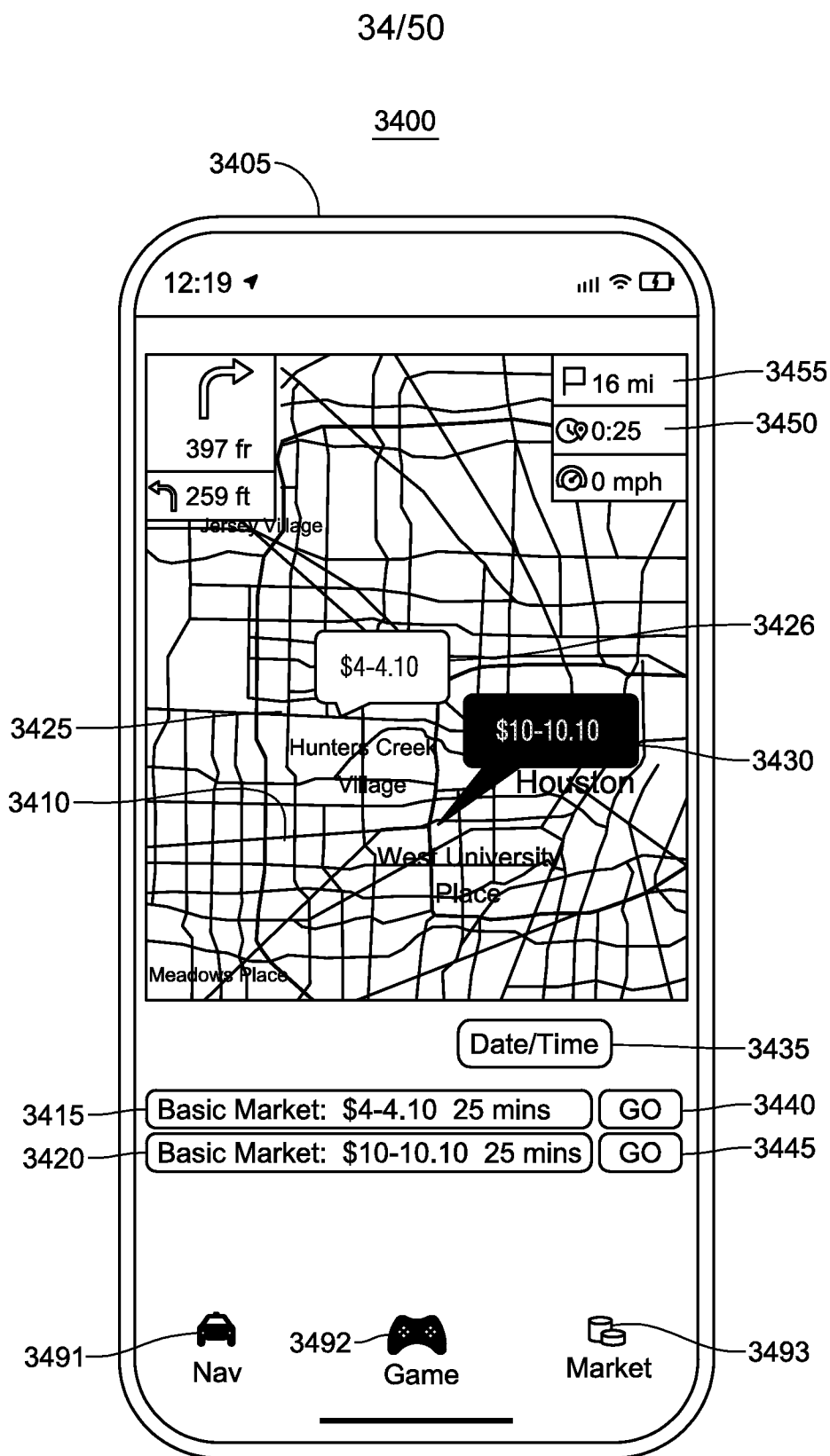


FIG. 34

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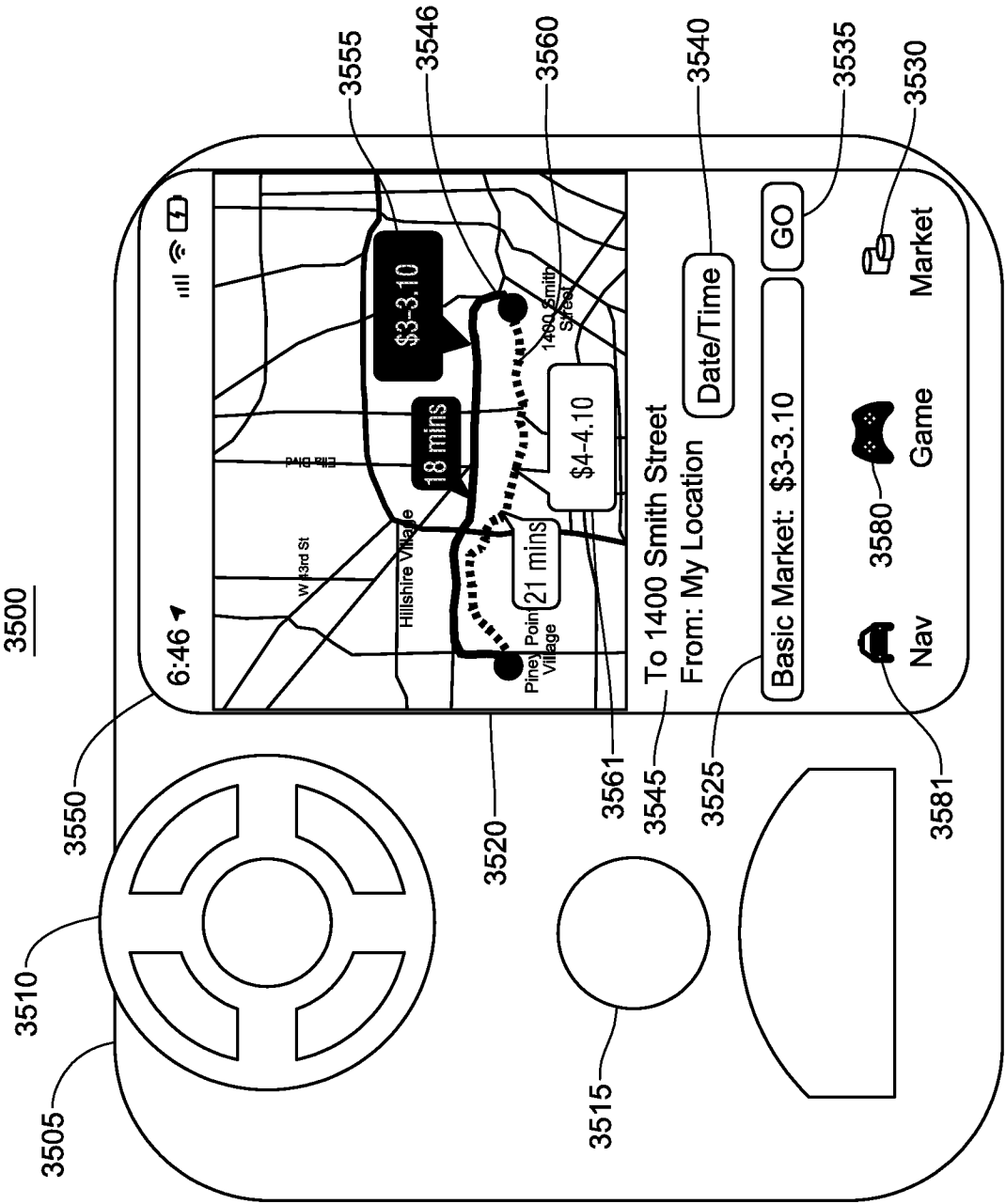


FIG. 35

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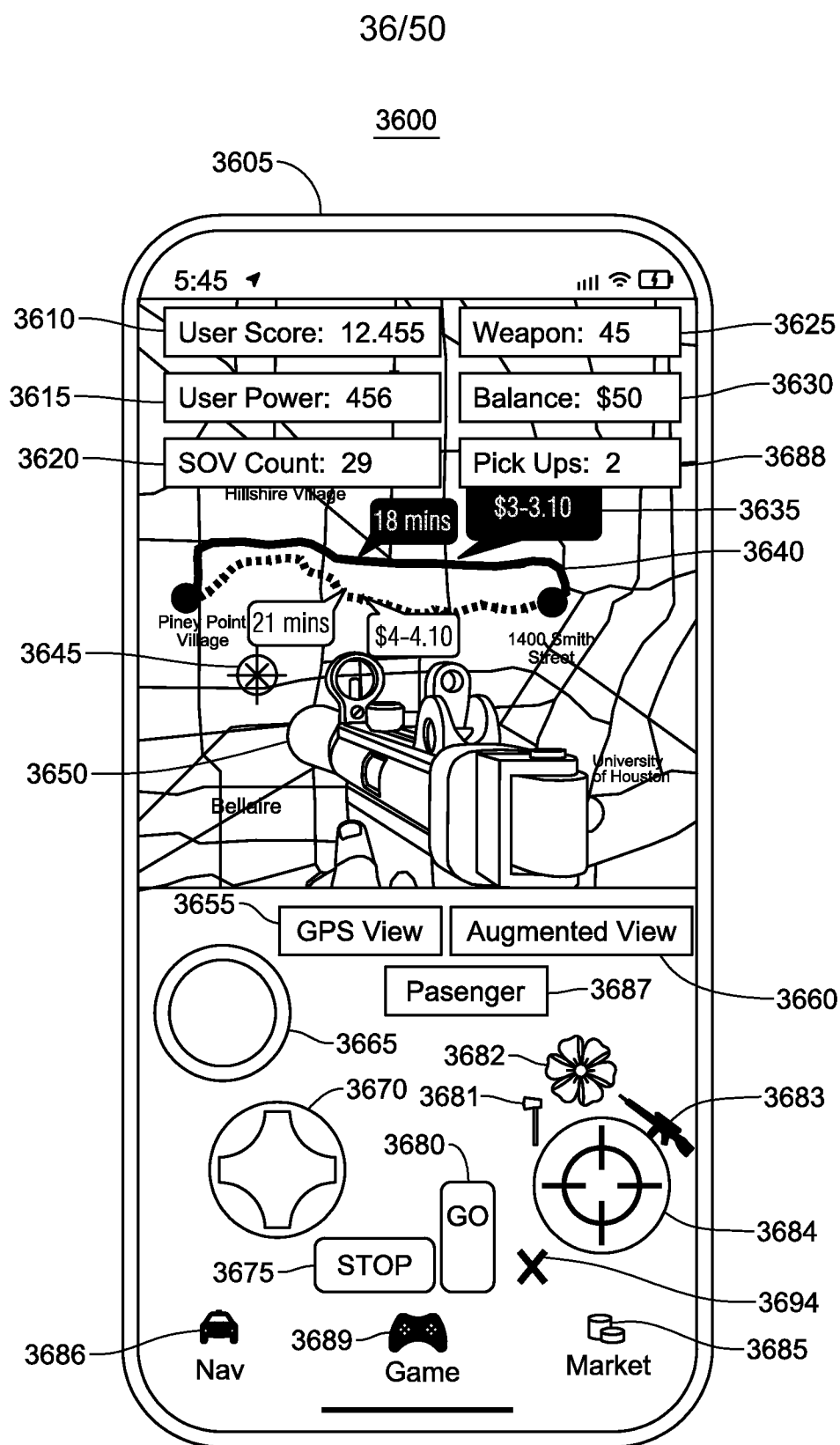


FIG. 36

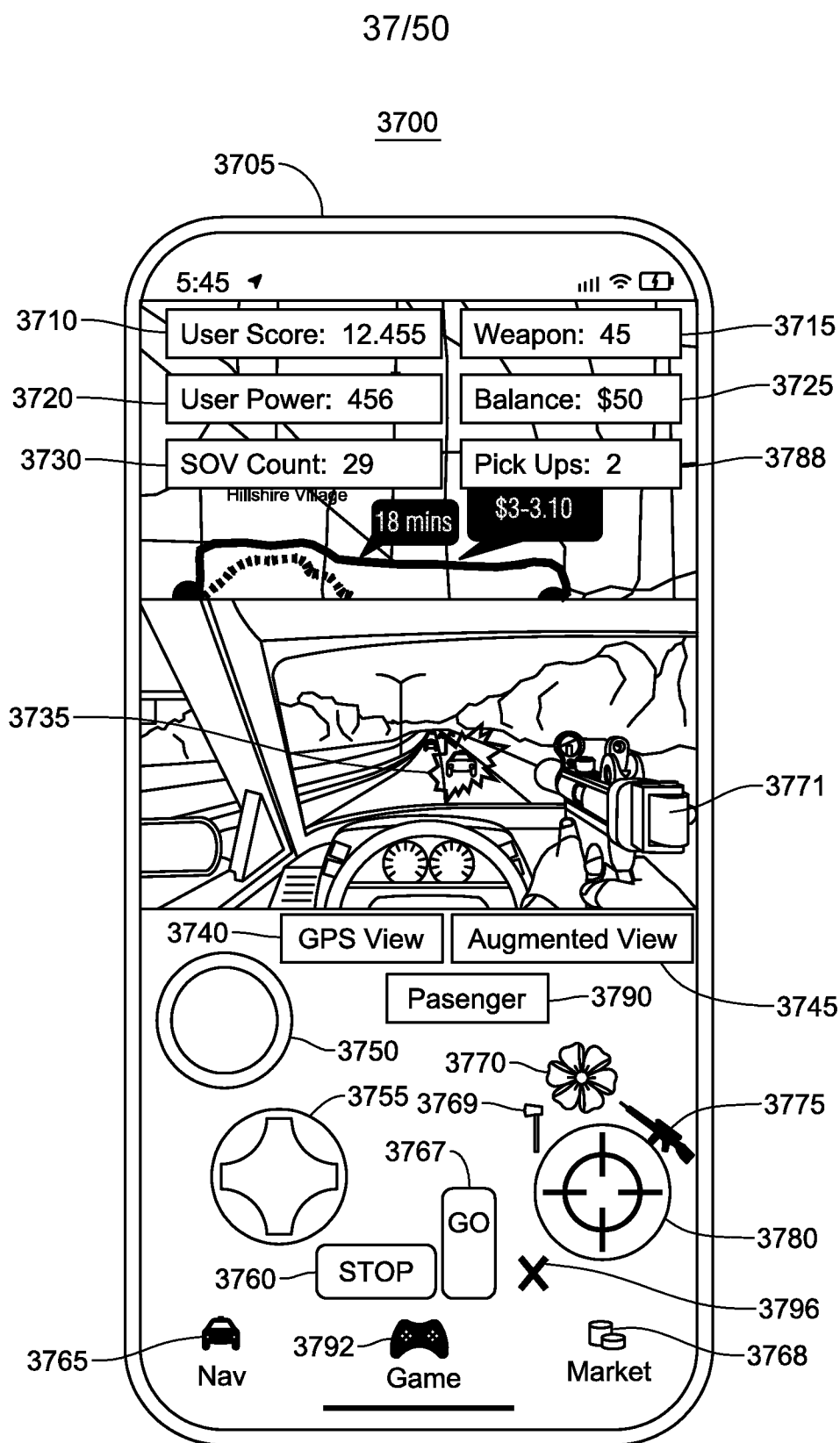


FIG. 37

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3800

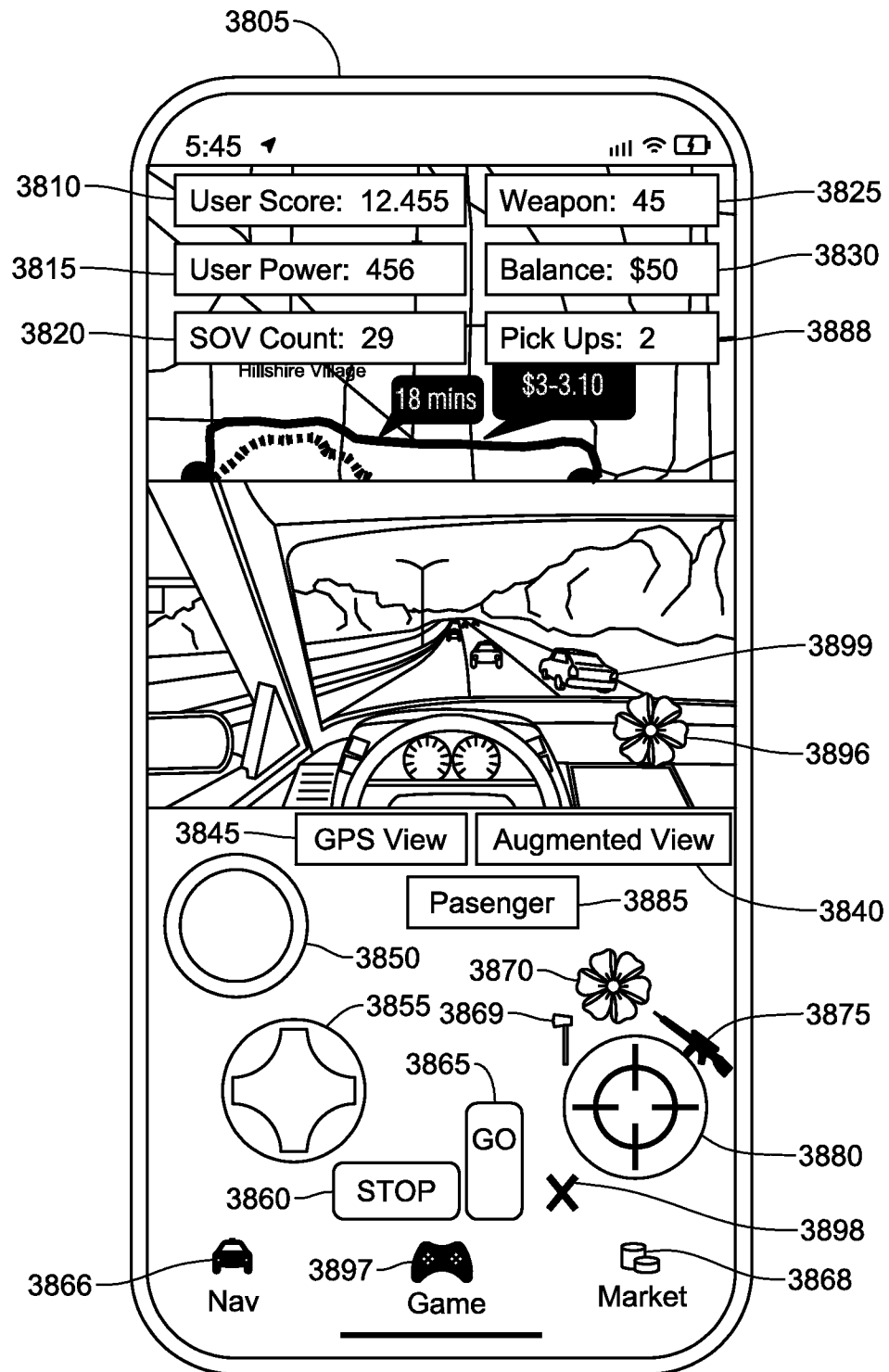


FIG. 38

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3900

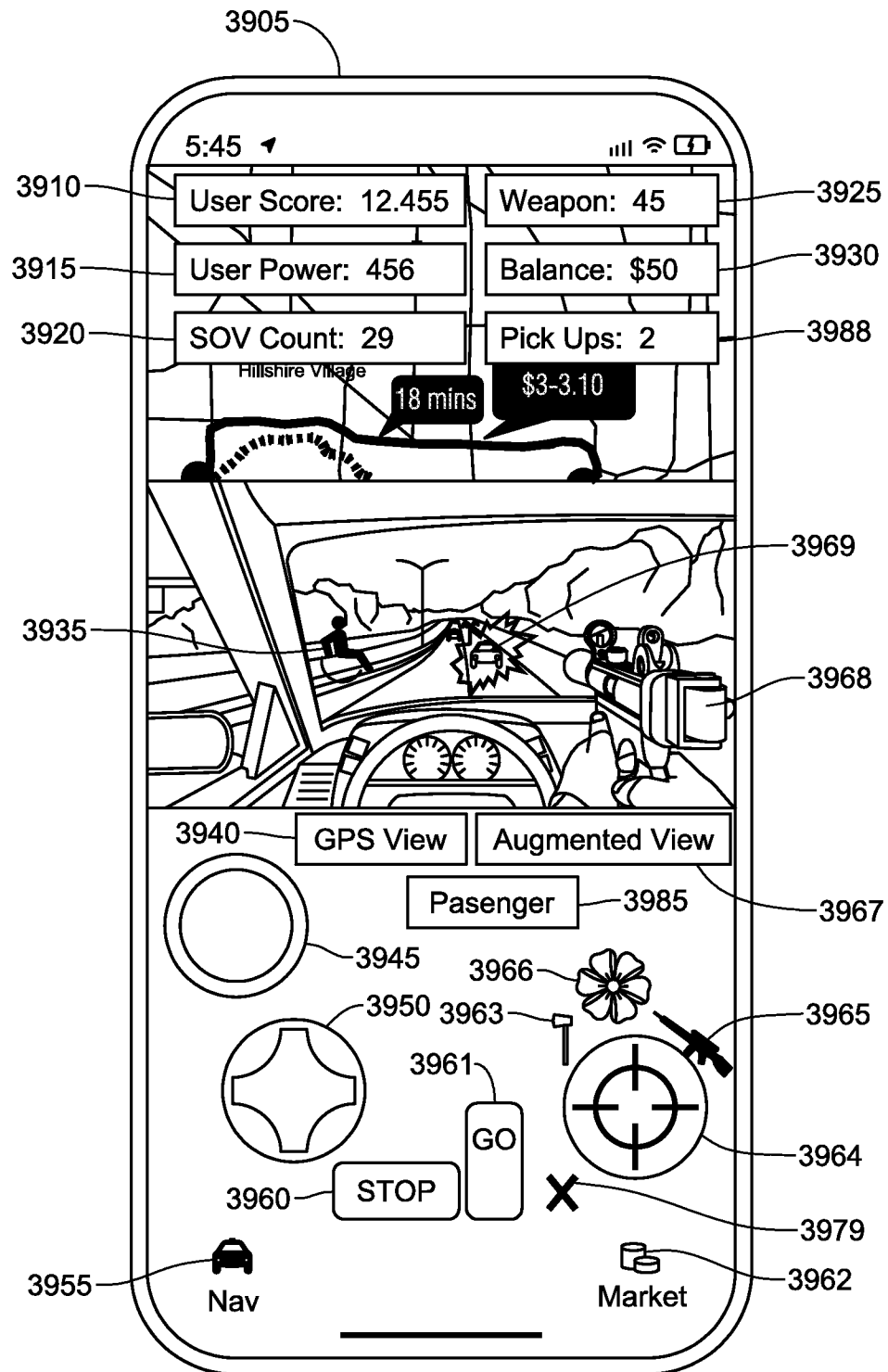


FIG. 39

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40/50

4000

4010

4051

MODEL MAKE — 4015

|                 |                                     |      |
|-----------------|-------------------------------------|------|
| ACURA           | <input checked="" type="checkbox"/> | 4020 |
| BMW             | <input type="checkbox"/>            |      |
| DAIMLER         | <input type="checkbox"/>            |      |
| FORD            | <input type="checkbox"/>            |      |
| GM, HONDA, ETC. | <input type="checkbox"/>            |      |

MODEL TYPE — 4025

|     |                                     |      |
|-----|-------------------------------------|------|
| MDX | <input checked="" type="checkbox"/> | 4030 |
| BDX | <input type="checkbox"/>            |      |
| NSX | <input type="checkbox"/>            |      |
| TLX | <input type="checkbox"/>            |      |
| ILX | <input type="checkbox"/>            |      |

MODEL YEAR — 4035

|      |                                     |      |
|------|-------------------------------------|------|
| 2019 | <input checked="" type="checkbox"/> | 4040 |
| 2020 | <input type="checkbox"/>            |      |

MODEL FUEL TYPE — 4045

|          |                                     |      |
|----------|-------------------------------------|------|
| ELECTRIC | <input type="checkbox"/>            |      |
| GASOLINE | <input checked="" type="checkbox"/> | 4050 |
| DIESEL   | <input type="checkbox"/>            |      |
| SOLAR    | <input type="checkbox"/>            |      |

FIG. 40

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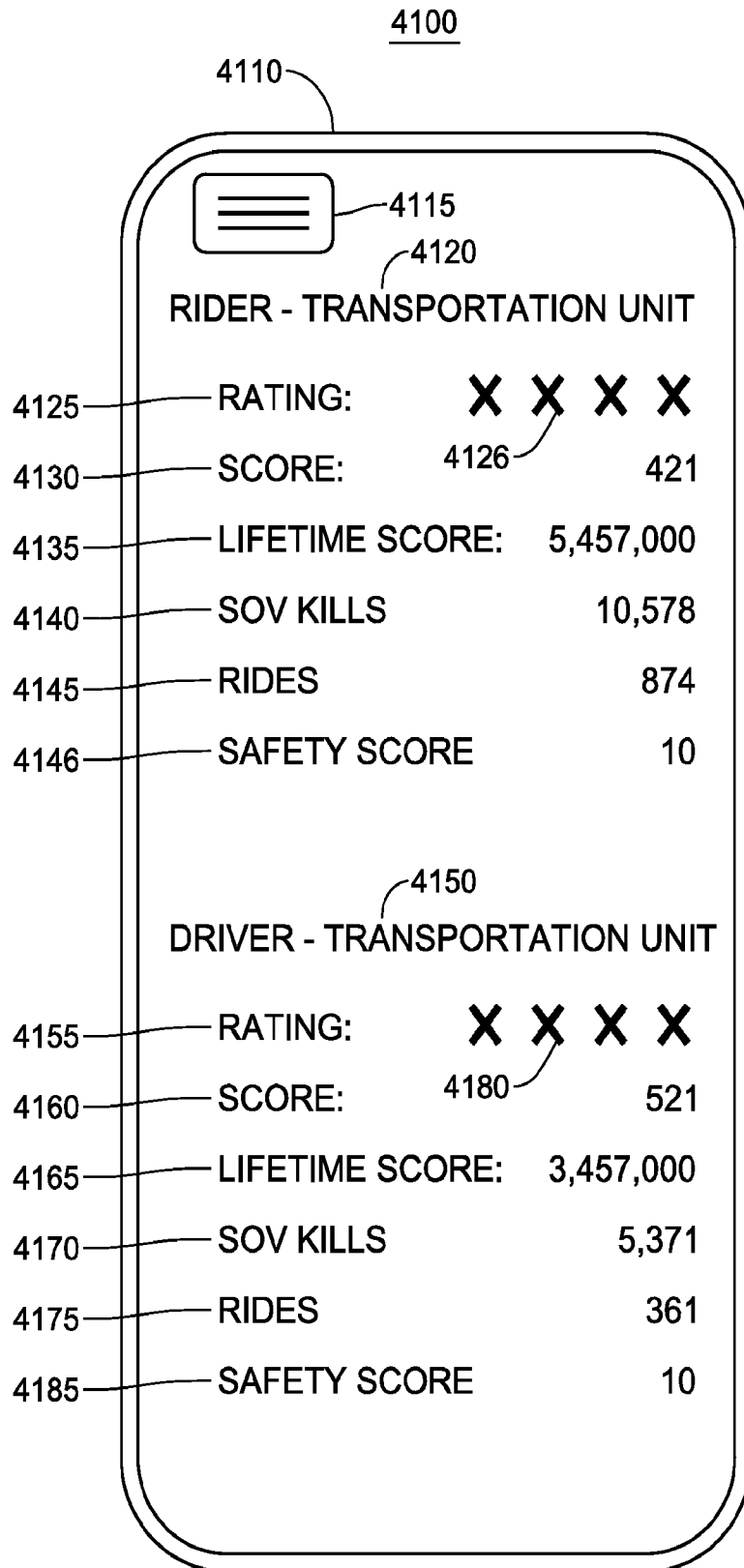


FIG. 41

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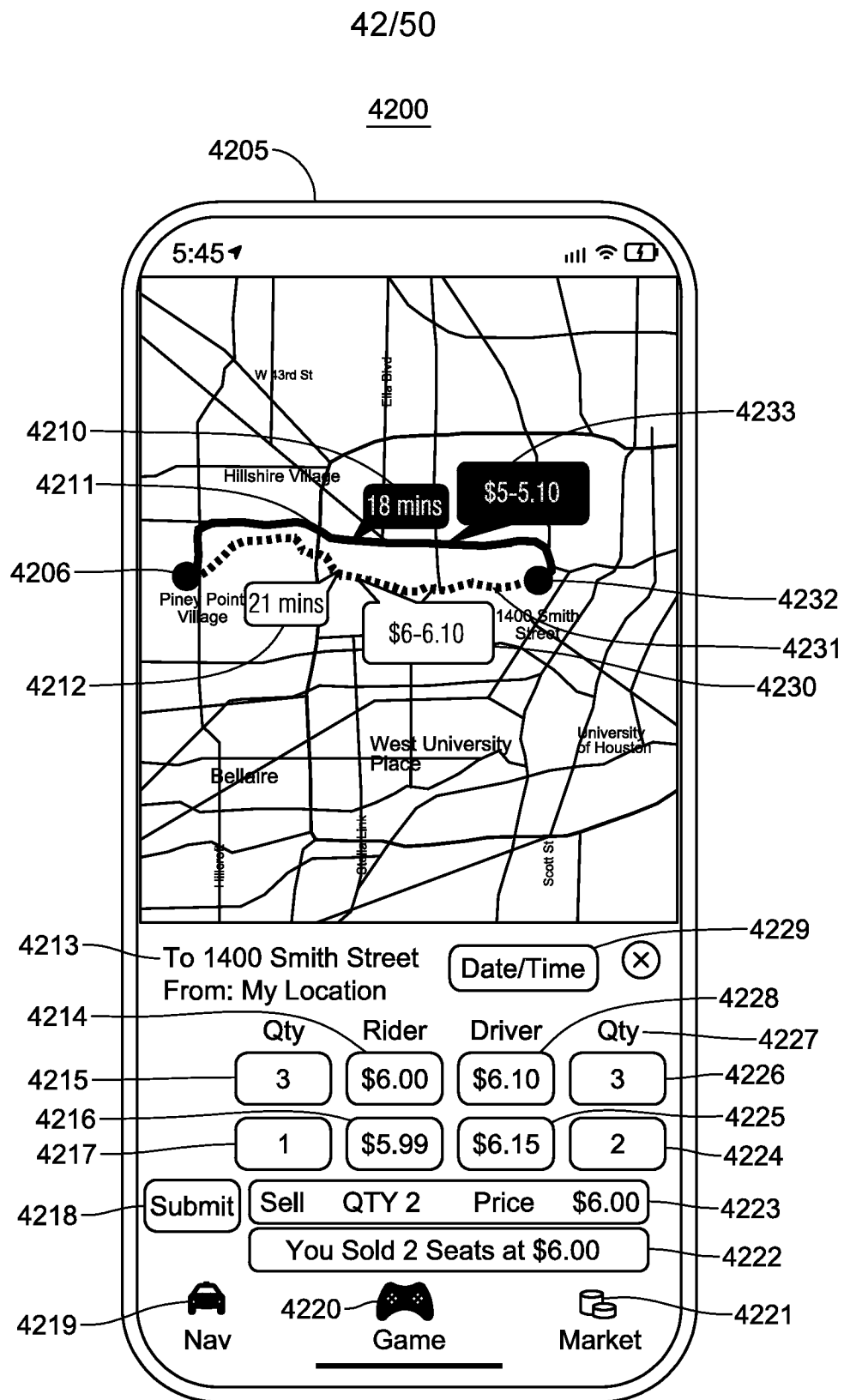


FIG. 42

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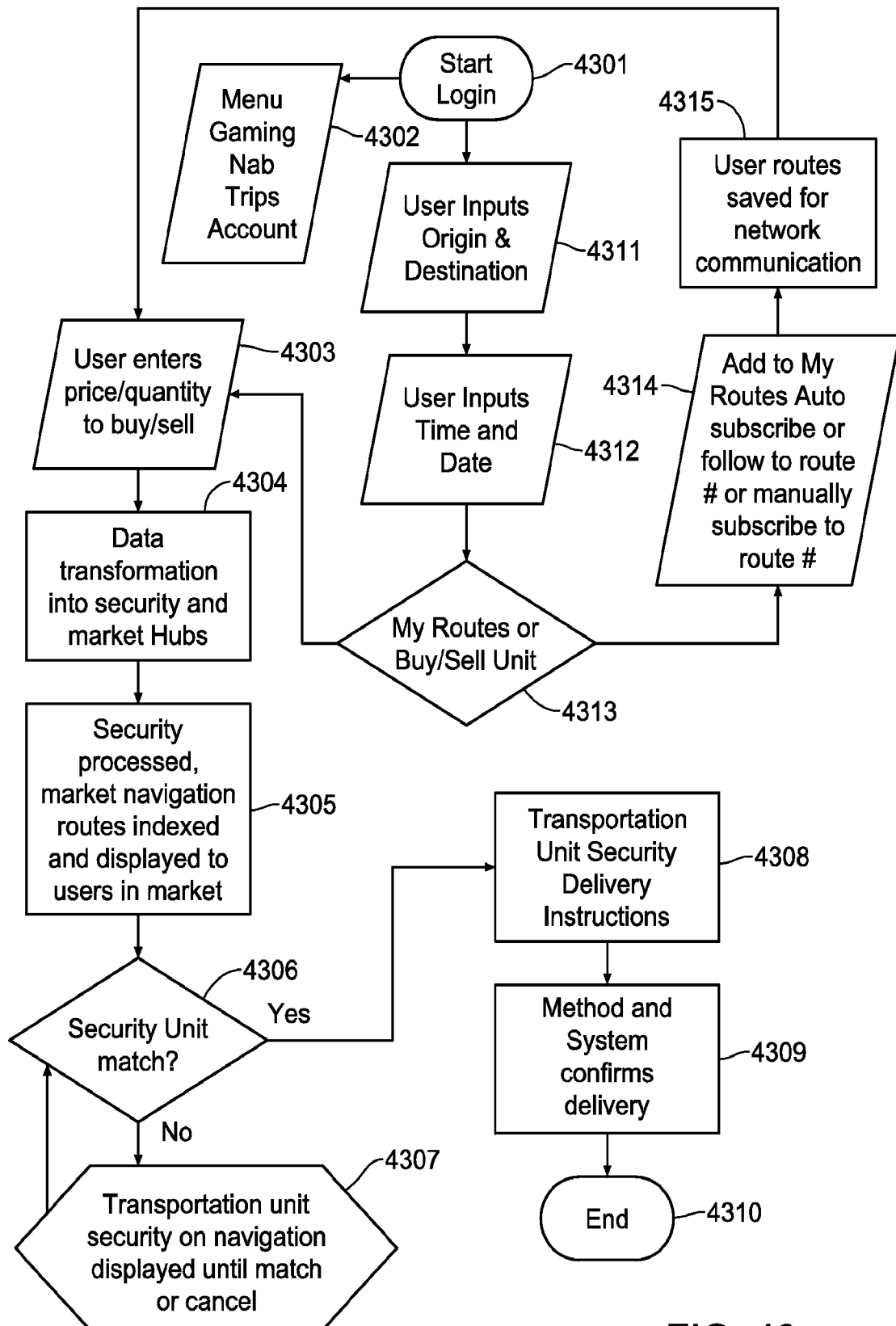
4300

FIG. 43

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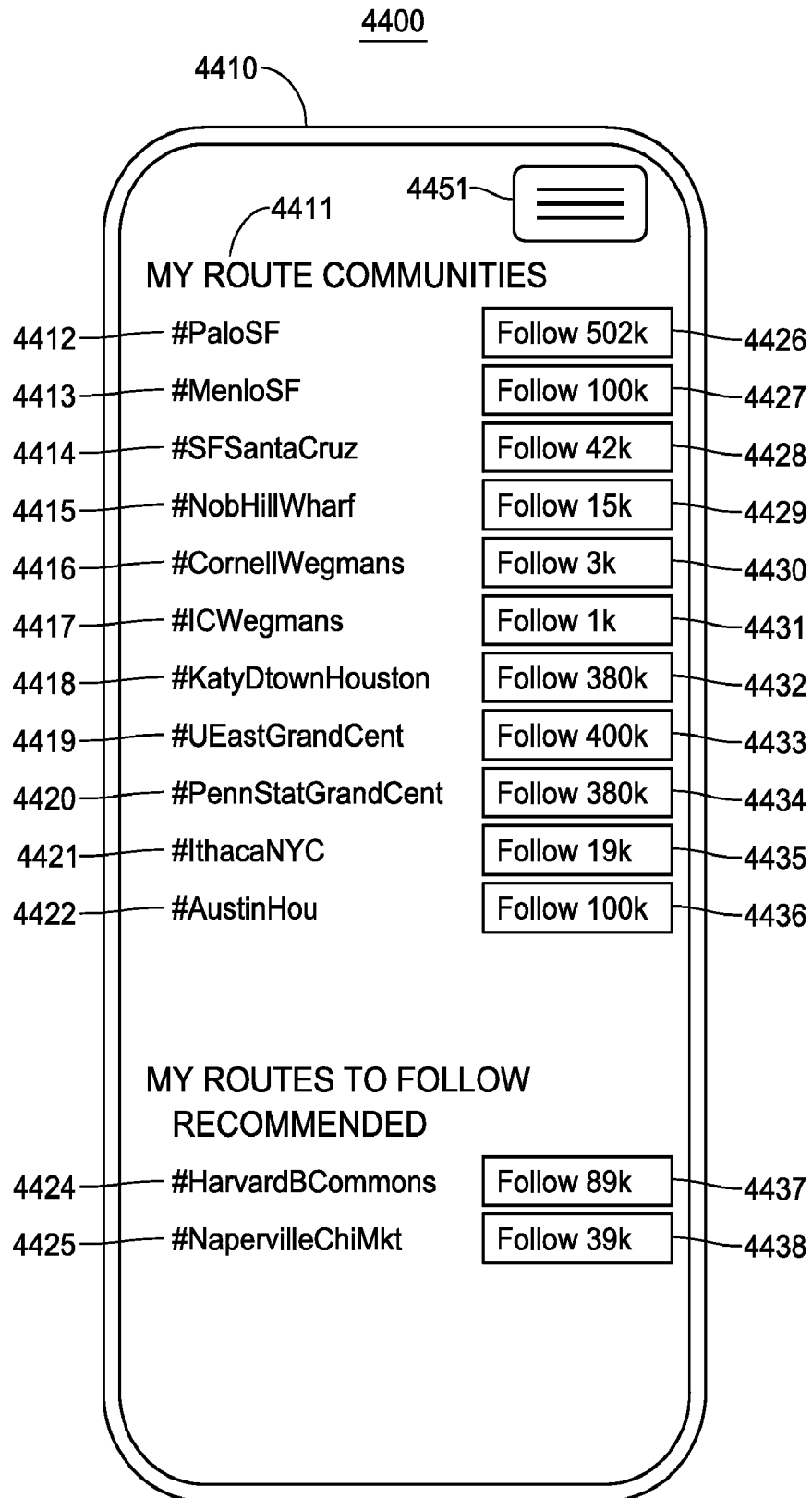


FIG. 44

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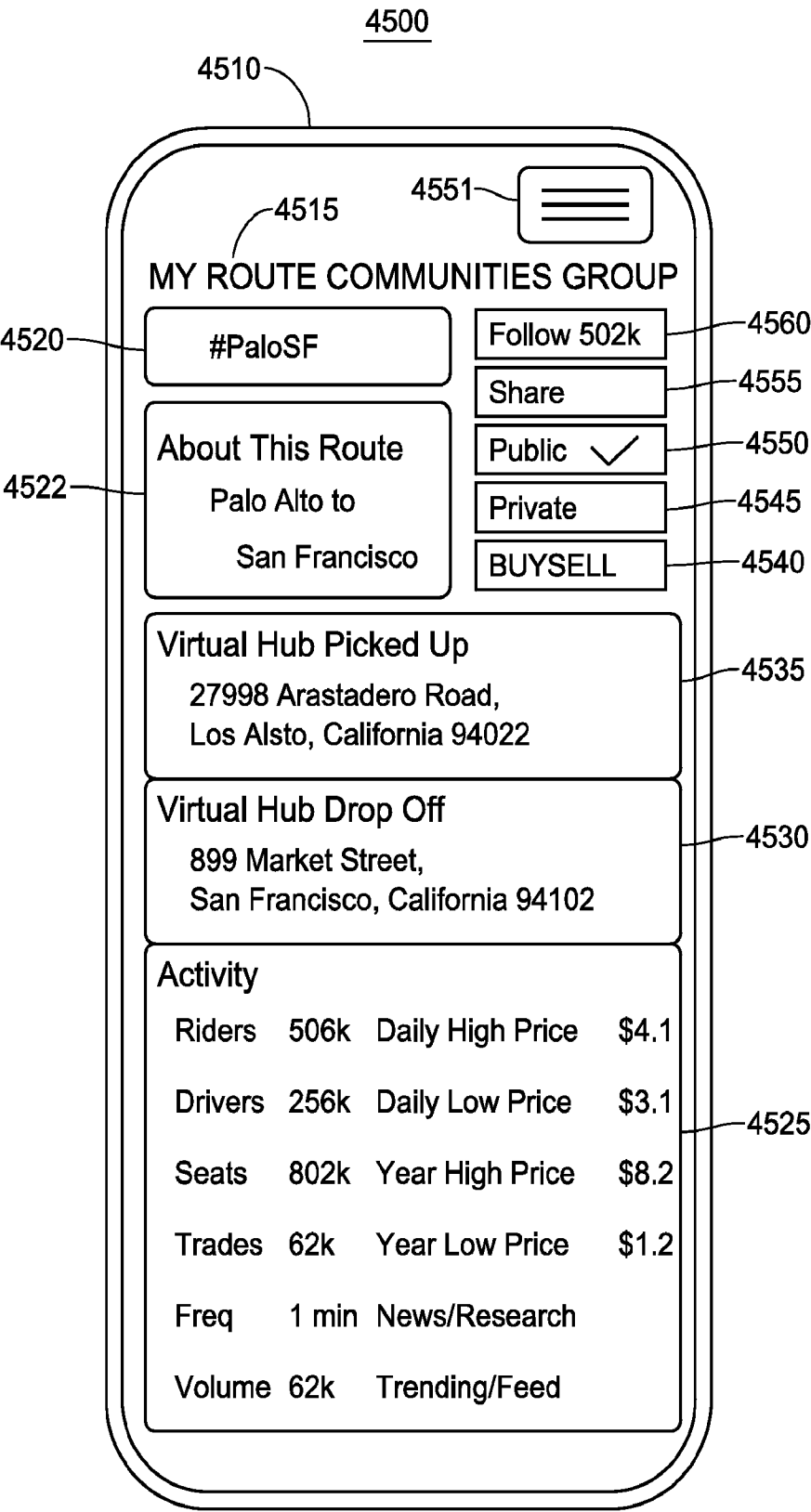


FIG. 45

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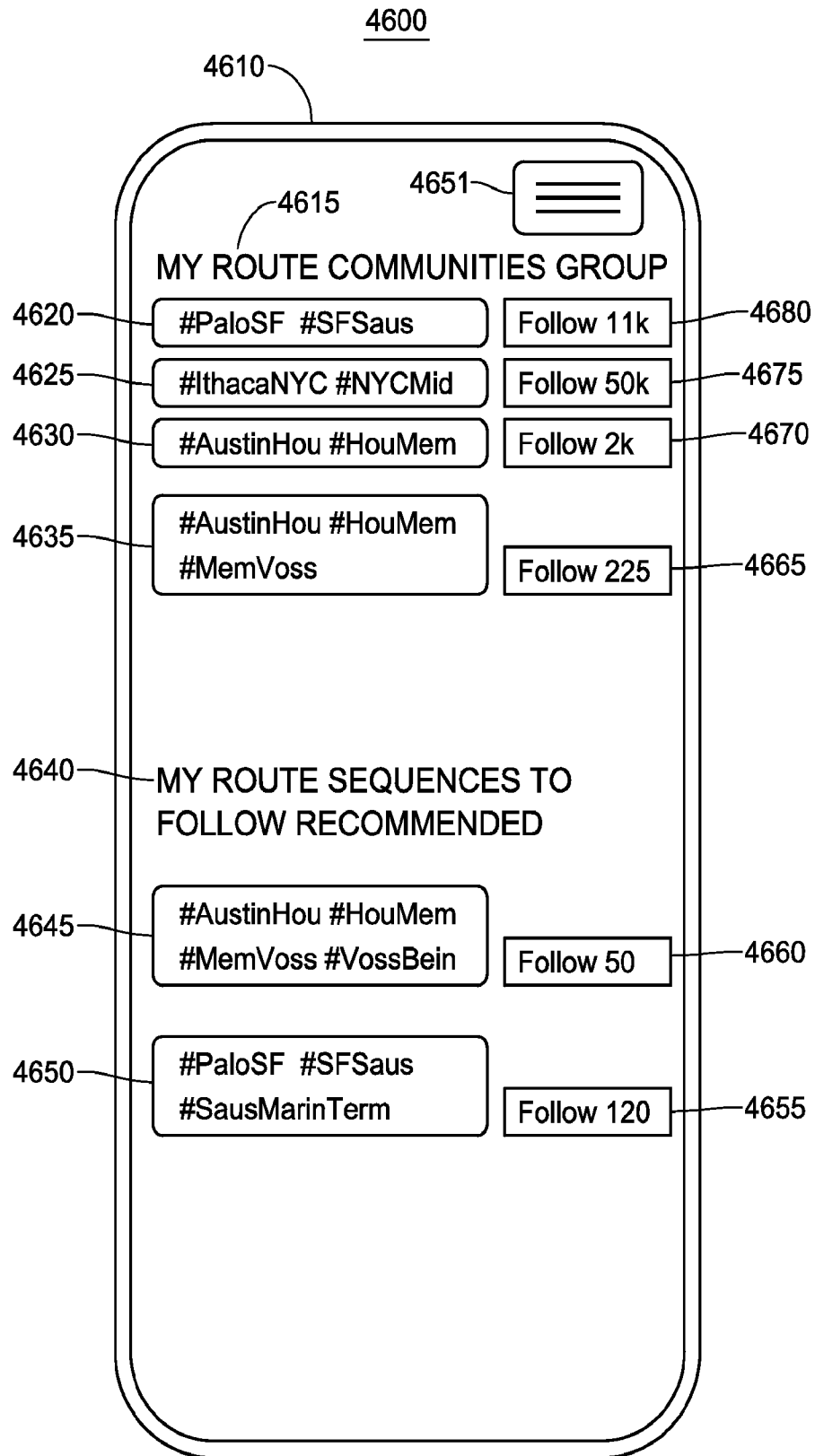


FIG. 46

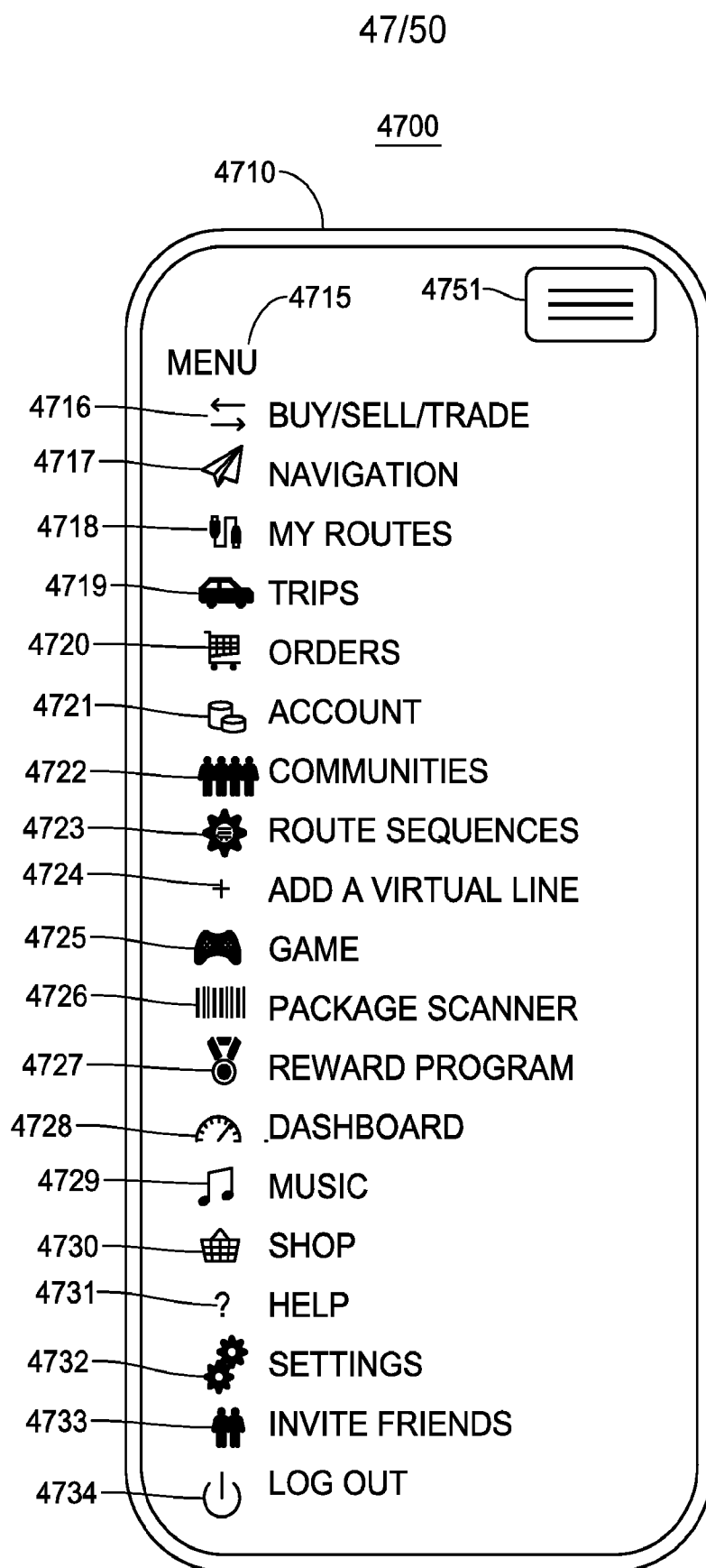


FIG. 47

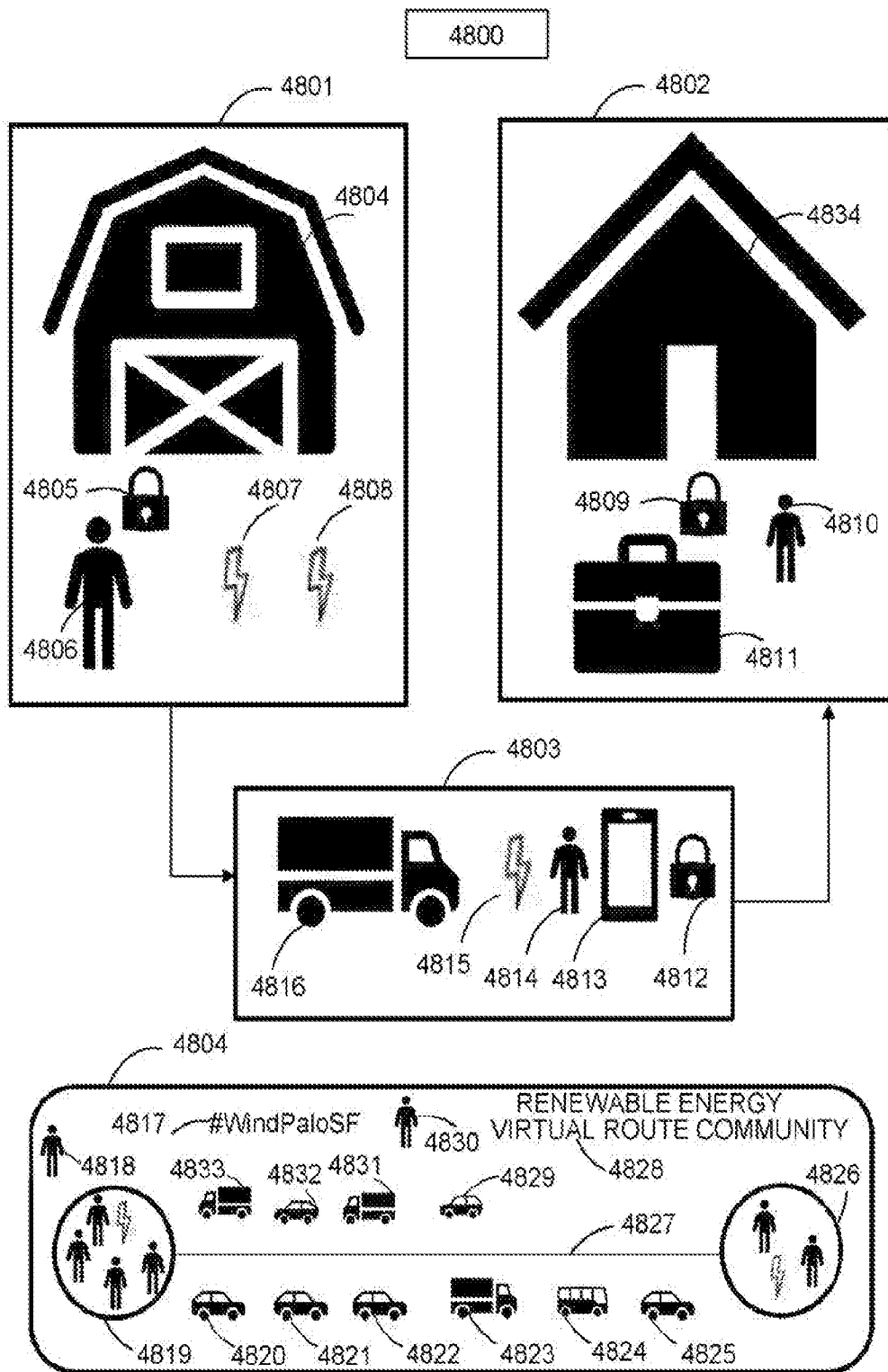


FIG. 48

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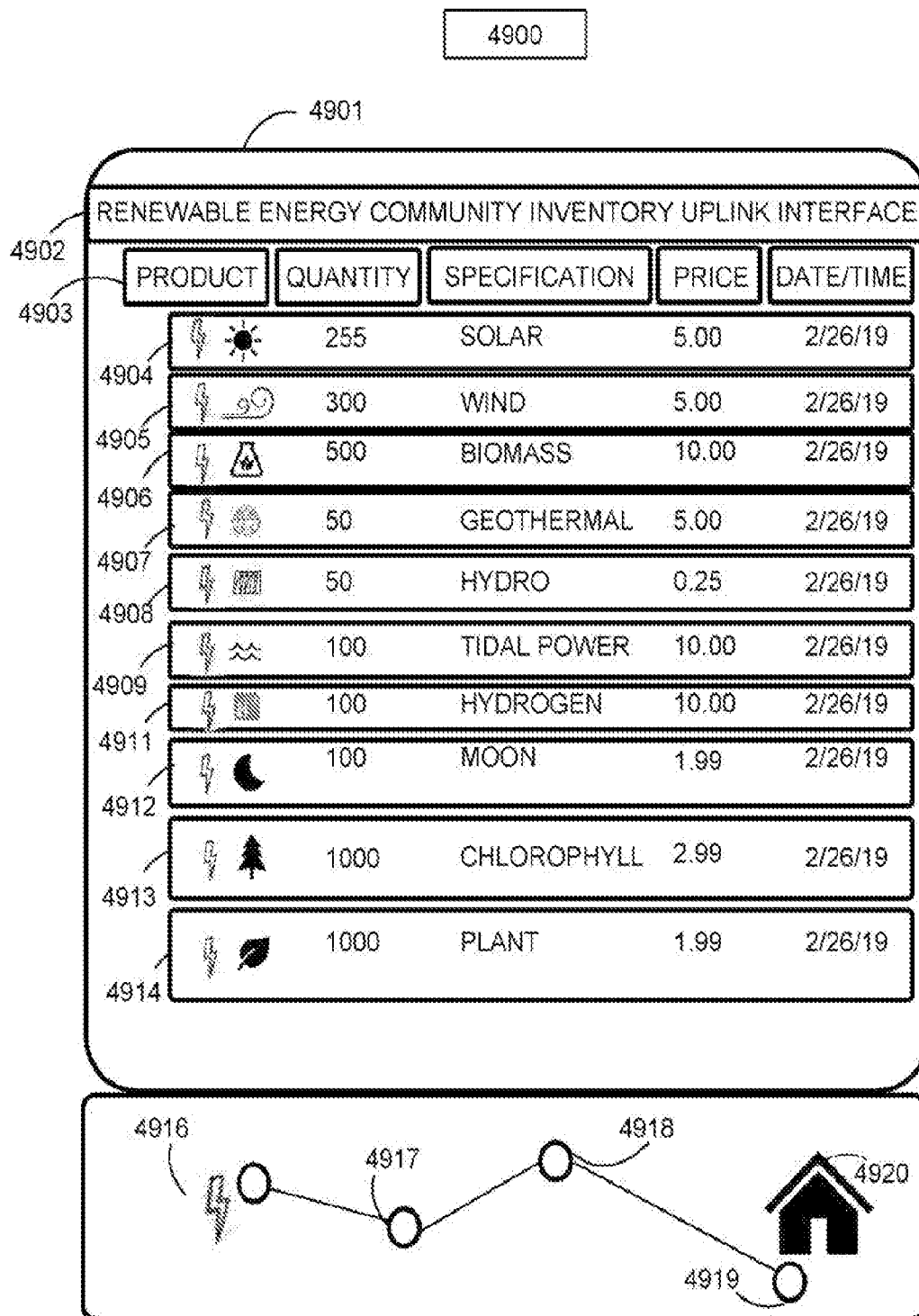


FIG. 49

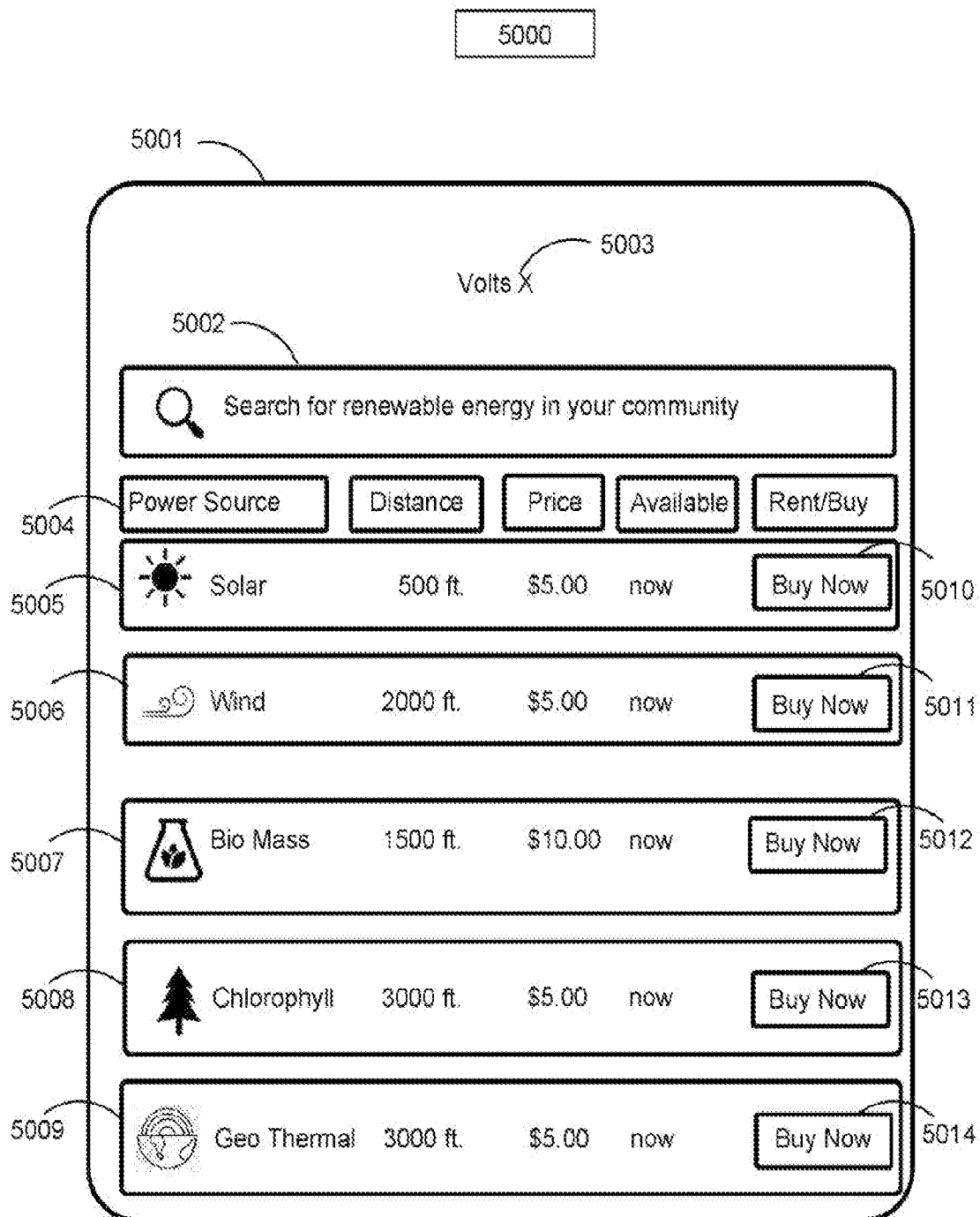


FIG. 50

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 20/23223

## A. CLASSIFICATION OF SUBJECT MATTER

IPC - G05D 1/00 (2020.01)

CPC - G05D 1/0272, G05D 1/0255, G05D 1/0278, G05D 1/027, G05D 1/0274, G08G 1/096811, G08G 1/096872, G01C 21/34, G01C 21/3629, G08G 1/096816, G01C 21/26, G01C 21/36 G01C 21/00, G01C 21/3611, G08G 1/096827

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History document

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                                                                                                                 | Relevant to claim No. |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| X         | US 2016/0297316 A1 (PENILLA et al.) 13 October 2016 (13.10.2016), entire document, especially Fig. 22; para [0107], [0172], [0183], [0215], [0225], [0237], [0238], [0245], [0256], [0258], [0261] | 1-20                  |
| A         | US 2003/0055776 A1 (SAMUELSON) 20 March 2003 (20.03.2003), entire document                                                                                                                         | 1-20                  |
| A         | US 2005/0288986 A1 (BARTS et al.) 29 December 2005 (29.12.2005), entire document                                                                                                                   | 1-20                  |
| A         | US 2013/0024041 A1 (GOLDEN et al.) 24 January 2013 (24.01.2013), entire document                                                                                                                   | 1-20                  |

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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"&amp;" document member of the same patent family

Date of the actual completion of the international search

18 May 2020

Date of mailing of the international search report

19 JUN 2020

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