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SYSTEM AND METHOD FOR FACILITATING BUYING AND/OR RENTAL OF ONE OR MORE VEHICLES FOR RECREATIONAL PURPOSES

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SYSTEM AND METHOD FOR FACILITATING BUYING AND/OR RENTAL OF ONE OR MORE VEHICLES FOR RECREATIONAL PURPOSES

Abstract

The present invention provides a system for facilitating buying and/or rental of one or more vehicles for recreational purposes. The system comprising one or more handheld devices associated with the one or more vehicles, a plurality of sensors operatively connected to the one or more vehicles, a user module integrated with each of the one or more handheld devices, a management module configured to monitor the one or more vehicles, manage battery status, track real-time locations, and interact with the user module, a dynamic pricing module configured to adjust fees based on predetermined factors and a communication module configured to enable communication between the handheld devices, sensors, user module, management module, and dynamic pricing module. Further, a method for facilitating buying and/or rental of one or more vehicles for recreational purposes is provided.

Fig. 1

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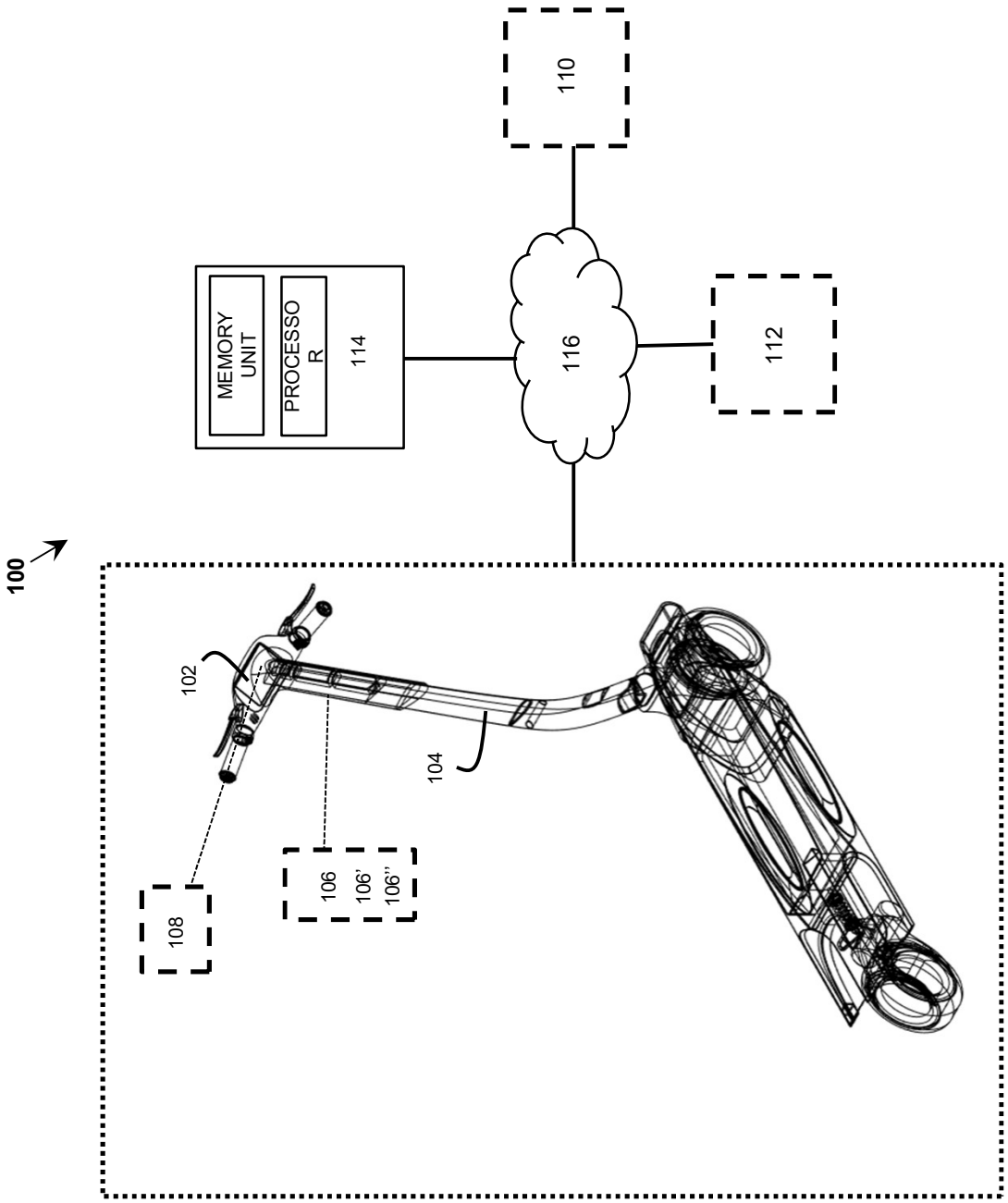

Figure 1

SYSTEM AND METHOD FOR FACILITATING BUYING AND/OR RENTAL OF ONE OR MORE VEHICLES FOR RECREATIONAL PURPOSES

FIELD OF THE INVENTION

[001] The present invention pertains to the field of shared transportation systems, specifically focusing on a hybrid solution that integrates both hardware and software components to enhance urban mobility and entertainment.

BACKGROUND OF THE INVENTION

[002] In recent years, electric scooters have surged to the forefront of urban mobility solutions, signalling a new era of transportation distinguished by its convenience, environmental sustainability, and adaptability. The introduction of electric scooter sharing systems has significantly contributed to this mode of transport's popularity, revolutionizing the way individuals navigate urban environments. These sharing systems allow users to access scooters on-demand, eliminating the need for personal ownership and addressing the growing demand for flexible and immediate transportation options. Key features of these systems include user authentication through QR codes, seamless mobile payment processes, and the versatility of picking up and dropping off scooters across multiple designated locations.

[003] Despite their widespread acceptance and growing user base, existing electric scooter sharing systems predominantly focus on the operational aspects of scooter rental, such as user authentication and payment processing. This narrow focus overlooks critical areas such as comprehensive management strategies, active user engagement beyond the initial transaction, building up community collaboration, and the integration of value-added services. Such oversight results in a rental experience that, while functional, lacks depth and fails to fully capitalize on the potential of modern technological advances.

[004] Moreover, the advent of the Internet of Things (IoT) has introduced unprecedented opportunities for enhancing urban mobility. By connecting electric scooters and other devices to the internet, it is now possible to implement sophisticated functionalities, including real-time tracking, monitoring, and remote management of scooters. These capabilities promise to streamline operations and offer a more cohesive and interactive user experience. However, the integration of IoT technologies into scooter rental

systems has been slow, and many conventional rental processes remain marred by inefficiency. Users often encounter cumbersome procedures that are not only time-consuming but also detract from the overall experience. Similarly, rental companies face high operational costs due to these inefficiencies, leading to increased rental fees for users and potentially limiting the accessibility of these services.

[005] The current landscape of shared mobility solutions, particularly within the electric scooter rental domain, is riddled with challenges. These include, but are not limited to, operational inefficiencies, a lack of meaningful engagement with users beyond mere transactions, and the underutilization of IoT and digital technologies to elevate the rental experience for community collaboration. Such challenges underscore the urgent need for an innovative solution that streamlines the rental process, provides an alternate to renting of vehicles such as buying such vehicles , enhances user engagement through interactive and value-added features, and employs efficient management tools.

[006] Any discussion of the background art throughout the specification should in no way be considered as an admission that such background art is prior art, nor that such background art is widely known or forms part of the common general knowledge in the field in Australia or any other country.

SUMMARY OF THE INVENTION

[007] According to one aspect of the invention, there is provided a system for facilitating the of one or more vehicles for recreational purposes. The system comprises one or more handheld devices associated with the vehicles, a plurality of sensors operatively connected to the vehicles, a user module integrated with each handheld device, a management module that monitors the vehicles, manages battery status, tracks real-time locations, and interacts with the user module, a dynamic pricing module that adjusts fees based on predetermined factors, and a communication module enabling interaction between the handheld devices, sensors, user module, management module, and dynamic pricing module.

[008] The system described in the first claim provides several significant advantages, primarily driven by the integration of multiple modules and components that work together seamlessly. One of the key technical features is the management module,

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which plays a central role in ensuring the effective monitoring and operation of the vehicles. By managing battery status, tracking real-time locations, and interacting with the user module, the management module significantly enhances the operational efficiency and safety of the vehicle

[009] This integration allows for real-time decision-making and optimization of resources, such as dynamically adjusting fees based on current demand and other predetermined factors through the dynamic pricing module. The inclusion of a communication module that facilitates interaction between all system components ensures that data flows seamlessly across the network, leading to improved user experiences and more efficient service delivery. In accordance with an embodiment of the present invention, fees are selected from the group of rental fee, buying fee etc.

[010] Moreover, the system's ability to monitor and manage multiple aspects of the vehicle and user interaction in real time provides a reliable and responsive solution for recreational vehicle sales and/or rentals. This reduces downtime, increases user satisfaction by offering a smoother buying and/or rental experience, and supports the sustainable management of vehicle fleets through proactive monitoring and maintenance. These technical advantages highlight the system's potential to transform recreational vehicle buying and/or rentals by leveraging advanced technology for more efficient and user-friendly service delivery.

[011] In accordance with an embodiment of the present invention, the user module enables a user to access network connectivity solutions, ensuring reliable internet services, location tracking, information exchange, and consistent access to digital services with a framework that supports future network advancements. In addition, the network connectivity solutions automatically adapt to the best available network to ensure uninterrupted service while optimizing operational costs.

[012] In another embodiment, the system includes a distributed content delivery framework that enhances service and content update efficiency across various operational regions. Additionally, the user module provides enhancements aimed at vehicle safety, user interaction, and utility, including auxiliary power sources, interactive lighting, and onboard environmental monitoring tools.

[013] In accordance with an embodiment of the present invention, the plurality of sensors collect environmental and operational data contributing to broader data-driven

initiatives and service improvements. This data is utilized in collaboration with external entities to support environmental urban planning and community health projects.

[014] In accordance with an embodiment of the present invention, the user module ensures compatibility with various third-party digital services and technological ecosystems, enabling a richer service offering and seamless integration of new features and technologies. The system also includes advanced analytics and a management module for multiple stakeholders, incorporating safety compliance, predictive maintenance, and strategic planning capabilities to optimize service delivery and user satisfaction.

[015] In accordance with an embodiment of the present invention, the one or more handheld devices in the system are designed to run multiple applications that support user navigation, entertainment, and interaction, focusing on ease of use and robust performance in diverse environments. These devices ensure operational reliability and safety under extreme environmental or usage conditions.

[016] In accordance with an embodiment of the present invention, an integrated digital service module is provided within the system which allows users to book services, conduct financial transactions, and access support, employing advanced security measures for authentication and data protection. This module also includes various digital entertainment and educational content designed to enhance the user experience during vehicle use, with capabilities to support emerging immersive technologies. The user management module employs personalized user engagement features utilizing data analytics and machine learning to offer customized service recommendations and content, prioritizing user privacy and data security.

[017] In accordance with an embodiment of the present invention, the management module comprises operational management software tailored for different administrative roles, offering real-time oversight, user interaction customization, and platform maintenance, designed to adapt based on feedback and usage patterns. Additionally, the management module includes a safety module to monitor and ensure compliance with operational safety standards.

[018] In another embodiment, the one or more vehicles comprise customizable elements for personal expression and enhanced user identification and safety in varying environmental conditions. Furthermore, the one or more vehicles feature a vehicle

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configuration module facilitating ease of maintenance, upgrades, and sustainability efforts by allowing component replacements or updates.

[019] According to second aspect of the invention, there is provided a method for facilitating the buying and/or rental of one or more vehicles for recreational purposes. The method comprises associating one or more handheld devices with the vehicles, operatively connecting a plurality of sensors to the vehicles, integrating a user module with each handheld device, monitoring the vehicles, managing battery status, tracking real-time locations, and interacting with the user module using a management module, adjusting fees based on predetermined factors using a dynamic pricing module, and enabling communication between the handheld devices, sensors, user module, management module, and dynamic pricing module using a communication module.

[020] The method described in the first method claim offers substantial advantages, primarily due to the comprehensive and integrated approach it takes to managing recreational vehicle. A critical technical feature of this method is the integration of various operational components—such as the handheld devices, sensors, user module, management module, dynamic pricing module, and communication module—into a coherent and efficient workflow.

[021] By associating handheld devices with the vehicles and connecting a plurality of sensors, the method ensures that all necessary data regarding the vehicle's status and environment is captured and relayed in real time. The management module then utilizes this data to monitor the vehicles, manage battery status, and track real-time locations, which are crucial for ensuring the operational reliability and safety of the vehicles.

[022] Another significant advantage arises from the dynamic pricing module, which adjusts fees based on real-time data and predetermined factors. This ensures that the pricing remains competitive and fair, reflecting the actual usage and demand conditions. The communication module further enhances this system by enabling seamless interaction between all components, ensuring that data is shared and processed effectively, leading to timely and accurate decision-making. In accordance with an embodiment of the present invention, fees are selected from the group of rental fee, buying fee etc.

[023] This method not only streamlines the vehicle buying and/or rental process but also enhances the user experience by providing real-time updates and pricing adjustments.

The method's ability to manage and optimize various aspects of the buying and/or rental process reduces operational inefficiencies, minimizes downtime, and ensures a more reliable and user-friendly service. Overall, the method represents a significant advancement in the management and operation of recreational vehicle buying and/or rentals, leveraging modern technology to deliver a superior and efficient service.

[024] In accordance with an embodiment of the present invention, the method includes enabling a user to access network connectivity solutions through the user module, ensuring reliable access to internet services, location tracking, information exchange, and consistent access to digital services with a framework that supports future network advancements. In addition, the network connectivity solutions automatically adapt to the best available network to ensure uninterrupted service while optimizing operational costs.

[025] In accordance with an embodiment of the present invention, the method comprises enhancing the efficiency and responsiveness of service and content updates across various operational regions using a distributed content delivery framework. Additionally, the method includes providing vehicle enhancements through the user module aimed at safety, user interaction, and utility, including auxiliary power sources, interactive lighting, and onboard environmental monitoring tools.

[026] In accordance with an embodiment of the present invention, the method also involves collecting environmental and operational data using the plurality of sensors, contributing to broader data-driven initiatives and service improvements. This data is further utilized in collaboration with external entities to support environmental urban planning and community health projects.

[027] In accordance with an embodiment of the present invention, the method ensures compatibility of the user module with various third-party digital services and technological ecosystems, enabling a richer service offering and seamless integration of new features and technologies. Additionally, the method includes incorporating advanced analytics and a management module for multiple stakeholders, incorporating safety compliance, predictive maintenance, and strategic planning capabilities to optimize service delivery and user satisfaction.

[028] In accordance with an embodiment of the present invention, the method also includes running multiple applications on the handheld devices designed to support user

navigation, entertainment, and interaction, focusing on ease of use and robust performance in diverse environments. Additionally, the method provides an integrated digital service module offering tools for service booking, financial transactions, and user support, employing advanced security measures for authentication and data protection.

[029] In accordance with an embodiment of the present invention, the method comprises offering a variety of digital entertainment and educational content through the vehicle-mounted devices, designed to enhance the user experience during vehicle use, with capabilities to support emerging immersive technologies. The method also involves employing personalized user engagement features within the user management module, utilizing data analytics and machine learning to offer customized service recommendations and content while prioritizing user privacy and data security.

[030] In accordance with an embodiment of the present invention, the method includes providing tailored administrative roles offering real-time oversight, user interaction customization, and platform maintenance, designed to adapt based on feedback and usage patterns. In addition, the method involves monitoring and ensuring compliance with operational safety standards using a safety module within the management module.

[031] In accordance with an embodiment of the present invention, the method features customizable elements on the vehicles to allow personal expression and enhanced user identification and safety in varying environmental conditions. The method also facilitates ease of maintenance, upgrades, and sustainability efforts by allowing component replacements or updates.

[032] Other aspects of the invention are also disclosed.

BRIEF DESCRIPTION OF THE DRAWINGS

[033] Notwithstanding any other forms which may fall within the scope of the present invention, a preferred embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawings in which:

[034] Figure 1 illustrates a system for facilitating one or more vehicles for recreational purposes, in accordance with a preferred embodiment of the present invention;

[035] Figure 2 illustrates a method for facilitating the buying and/or rental of one or more vehicles for recreational purposes, in accordance with a preferred embodiment of the present invention; and

[036] Figure 3A, 3B and 3C illustrates exemplary embodiment of the one or more handheld devices integration with the one or more vehicles of figure 1, in accordance with a preferred embodiment of the present invention.

Description of Embodiments

[037] It should be noted in the following description that like or the same reference numerals in different embodiments denote the same or similar features.

[038] Further, the various embodiments described herein below include specific method steps in an exemplary order, but a wide variety of other such method steps could be implemented within the scope of the invention, including additional steps, omission of some steps, or performing the method in a different order.

[039] The present invention relates to a system and method designed to streamline and enhance the buying and/or rental experience of recreational vehicles. In an increasingly connected world, the need for an efficient, user-friendly, and technologically advanced solution for managing vehicle buying and/or rentals has become paramount. This invention addresses this need by integrating a variety of digital tools and modules into a cohesive platform that not only simplifies the buying and/or rental process but also ensures safety, convenience, and real-time management.

[040] At its core, the present invention includes a set of handheld devices, sensors, and modules that work together to monitor vehicle status, manage operations, and dynamically adjust pricing based on real-time factors. The system allows users to easily connect to essential services, access and control vehicle features, and receive updates and support through an intuitive interface. Moreover, the invention supports advanced data collection and analytics, contributing to broader initiatives such as urban planning and environmental sustainability. By offering seamless integration with third-party services and futureproofing with adaptable network solutions, this invention sets a new standard for efficiency and user satisfaction in the recreational vehicle buying and/or rental industry.

[041] As shown in figure 1, the system 100 comprising a one or more handheld devices 102 associated with one or more vehicles 104, a plurality of sensors 106, 106', 106'' operatively connected to the one or more vehicles 104, a user module 108 integrated with each of the one or more handheld devices 102, a management module 110, a dynamic pricing module 112 and a communication module 114 .

[042] The one or more vehicles 104 is selected from a group of, but not limited to, electric scooters, snow scooters, jet ski or any other vehicles. In an embodiment, the one or more vehicles 104 for personal transportation and recreational activities. The structural components of these one or more vehicles 104 include a frame, motor, battery, and docking mechanism for the handheld device. In an embodiment, materials used in one or more vehicles 104 include lightweight metals for durability and composite materials for the body, ensuring the one or more vehicles 104 are robust and suitable for different environments. Alternatives to these vehicles could include bicycles or small electric cars, depending on the application.

[043] Further, the one or more handheld devices 102 configured to detachably coupled with the one or more vehicles (as shown in figure 3B and 3C).

[044] In an embodiment, the one or more handheld devices 102 may be personal handheld devices of one or more users, which can be attached with the one or more vehicles by using communication medium such as near filed communication, Bluetooth and any other suitable communication medium. Further, the one or more users are permitted to download user module in their respective personal handle devices to connect with the one or more vehicles 104.

[045] In an embodiment, the one or more handheld devices 102 are integrated with the one or more vehicles 104 and may be operated by one or more users by creating their respective profile in the user module 108 integrated with each of the one or more handheld devices 102.

[046] In an embodiment, the one or more handheld devices 102 are portable electronic gadgets, such as smartphones. The one or more handheld devices 102 communicate with the one or more vehicles 104 and the communication module through communication protocols such as Near Field Communication (NFC), Bluetooth, or Wi-Fi. Preferably, the one or more handheld devices 102 may include a display, input mechanisms like touchscreens or buttons, and communication hardware. Preferably,

the one or more handheld devices 102 are typically manufactured using standard electronics processes, with durable plastics for the casing, tempered glass for the display, and silicon for the internal components. As an alternative, wearable devices or voice-activated assistants could provide similar functionalities.

[047] Figure 3A, illustrates an exemplary embodiment of interface between one or more vehicles 104 and one or more handheld devices 102. A shown in figure 3A, the one or more handheld devices 102 is integrated with various controls and interactive features provided on a handle bar of one of the vehicle of one or more vehicles 104 enhancing both the operational functionality and user experience. This embodiment showcases a range of hardware components and controls, each serving a specific purpose, making the one of the vehicle of one or more vehicles 104, in this example an electric scooter, not only a practical mode of transportation but also a platform for entertainment and connectivity.

[048] As shown in figure 3, the handlebar of one of the vehicle of one or more vehicles 104 having plurality of blinkers, laser receivers, and lights. These components are essential for ensuring safety and visibility. The blinkers act as indicators for signalling turns, while the lights provide illumination, especially useful during low-light conditions. The laser receivers are likely intended for interaction with external devices or for participating in augmented reality games, adding a layer of entertainment to the ride.

[049] Central to the interface is the one or more handheld devices 102 display having the user module 108. The user module 108 is the main control hub for the electric scooter, allowing the user (‘the rider’) to unlock the vehicle using a numeric keypad, navigate through various menus, and interact with apps and features during their ride. Positioned above the one or more handheld devices 102 are two cameras and a GoPro screw mount. The cameras could be used for navigation assistance or recording the ride, while the GoPro mount allows users to attach an action camera for capturing high-quality footage from their journey.

[050] As shown in figure 3A, the handlebar of one of the vehicle of one or more vehicles 104 having gaming buttons, a horn, a blinker and receiver, a coloured LED and receiver, and the throttle. The gaming buttons indicate that the scooter is designed with interactive features in mind, allowing riders to engage with in-game functions while on

the move. The horn is a standard safety feature, used to alert others of the rider's presence. The throttle controls the scooter’s speed, making it a vital component for managing acceleration.

[051] As shown in figure 3A, the handlebar of one of the vehicle of one or more vehicles 104 having a brake lever, which is essential for controlling the scooter’s deceleration and stopping safely. Additionally, there is an angle adjust feature that likely allows the user to modify the handlebar’s position, enhancing comfort and ergonomics during the ride.

[052] Beneath the one or more handheld devices 102, a power button is positioned, providing a straightforward means to turn the scooter on or off. This button controls the main power circuit, ensuring that all systems are operational when needed.

[053] Overall, the arrangement shown in figure 3A, showcase a smart scooter that not only meets the practical needs of transportation but also integrates advanced features for entertainment and user engagement. The inclusion of gaming elements, adjustable controls, and camera integration points to a product that appeals to tech-savvy users who value both functionality and an enhanced riding experience.

[054] In an embodiment, the plurality of sensors 106, 106’, 106’’ operatively connected to the one or more vehicles 104 are selected from a group of sensors, but not limited to, weather sensors, speed sensors, geo-fencing sensors, laser tags, near proximity sensors, location detection sensor or any other suitable sensors required to provide recreational activities. In an embodiment, the plurality of sensors 106, 106’, 106’’ configured to collect data that contributes to the safe and efficient operation of the one or more vehicles 104. And provide real-time data to the management module 114. The plurality of sensors 106, 106’, 106’’ are made from materials like silicon and plastics, designed to be highly sensitive and durable. Furthermore, the plurality of sensors 106, 106’, 106’ are LIDAR sensors to be used for spatial awareness and navigation.

[055] In an embodiment, the user module 108 enables users to create profiles, track vehicle data, and access various system features. Further, the user module 108 provides the interface through which users interact with the system 100, such as vehicle access, profile management, and real-time updates on vehicle status. The user module 108 is configured to be compatible with various operating systems and optimized for

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performance and security, ensuring a seamless user experience. An alternative to this module could be a web-based interface accessible through any internet-enabled device.
[056] In an embodiment the management module 110 is configured to allow r monitoring and managing various aspects of the one or more vehicles 104 and user interactions. It communicates with all other components of the system 100, ensuring real-time management and oversight. The management module 110 may include features for tracking vehicle locations, managing battery levels, and analysing usage data, all supported by robust software frameworks hosted on secure servers. Alternatives could involve decentralized management systems or blockchain-based solutions for enhanced transparency and security.

[057] In an embodiment, the management module 110 comprising two distinct sub-modules: an administrative module and a rental provider module. The administrative module is responsible for the controlling and integration of all information across the system 100. It allows seamless communication between different components, ensuring that data flows efficiently between the handheld devices, vehicles, sensors, and other modules. This module plays a crucial role in managing the system's operations, providing administrators with tools to oversee system performance, ensure data integrity, and maintain operational efficiency.

[058] On the other hand, the rental provider module is specifically designed to cater to the needs of the rental companies that operate the one or more vehicles 104. This module enables the rental company to receive bookings, monitor ongoing rentals, and manage customer interactions in real-time. It provides a user-friendly interface for rental companies to track the status of their fleet, manage reservations, and handle customer queries or issues. The rental provider module thus ensures that the operational aspects of vehicle rentals are managed smoothly, allowing rental companies to focus on delivering a high-quality service to their customers. Together, these sub-modules within the management module work synergistically to maintain the overall efficiency and effectiveness of the system, from administrative control to customer-facing rental operations.

[059] In an embodiment, the management module 110 comprising a development module enabling users to develop augmented games as per their needs, customised existing games provided by the administrative module. In an embodiment, the development module may be configured with the user module 102 of the one or more

vehicles. In an embodiment, the development module may be configured to connect with user's handheld devices enabling users to play the games on their handled devices.

[060] A dynamic pricing module 112 is configured to adjust fees based on real-time factors such as demand and environmental conditions. This module interfaces with the management and user modules to calculate and display appropriate buying and/or rental prices, using algorithms designed to be responsive and fair. As an alternative, a static pricing model could be employed, offering fixed rates without real-time adjustments.

[061] The communication module 114 ensures seamless data exchange across all components of the system. It manages the communication protocols and facilitates data transmission between the handheld devices, vehicles, sensors, and other modules. This module includes hardware and software for managing wireless communication and may also involve cloud-based services for data storage. Alternatives to this setup could include mesh networks for improved coverage or satellite communications for more remote areas.

[062] In an embodiment, all user interactions can be integrated directly within the one or more vehicles 104, using built-in touchscreens or voice-controlled systems, thus eliminating the need for separate one or more handheld devices 102. This approach could enhance user experience by integrating control more seamlessly within the vehicle itself.

[063] In an embodiment, a decentralized sensor network could be implemented, where sensors operate independently but only communicate with the central system when necessary, reducing data traffic and improving system efficiency.

[064] In an embodiment, a subscription-based model for the service is adopted, offering users unlimited access to vehicles within a specific period for a fixed fee.

[065] Figure 2 illustrates a method for facilitating buying and/or rental of one or more vehicles for recreational purposes, in accordance with a preferred embodiment of the present invention and the same has been explained by way following examples.

Example 1 - Caravan park

[066] In the practical implementation of the system 100 by using the disclosed method within a caravan park, an exciting feature that enhances the user experience is the ability to engage in interactive games, such as laser tagging, using the integrated capabilities of the system.

[067] After renting a vehicle 104, such as an electric scooter, and setting up their user profile through the user module 108 on their handheld device 102, guests have the option to participate in various recreational activities offered by the park. One of these activities is a laser tagging game, which utilizes the vehicle's advanced sensor suite and communication capabilities.

[068] The laser tagging game is enabled by the plurality of sensors 106, 106', 106'' integrated into each vehicle 104. These sensors include laser tags and proximity sensors, which are specifically designed to interact with each other during the game. When a guest opts to participate in the laser tagging game, the user module 108 on their handheld device 102 synchronizes with the vehicle's sensors and other participating vehicles in the vicinity.

[069] As the game begins, the laser tag sensors on each vehicle 104 emit and detect infrared signals, simulating a laser tagging environment. The proximity sensors help determine the relative positions of other players' vehicles, allowing for accurate detection when one player tags another. The handheld device 102 displays real-time game statistics, such as the number of successful tags, remaining time, and player rankings, providing an immersive and competitive experience.

[070] The management module 110 oversees the game's operations, ensuring fair play and recording game data. The administrative module within the management module tracks each player's performance, while the rental provider module ensures that the game does not interfere with regular rental operations, allowing players to enjoy the game within specific geo-fenced areas designated for such activities.

[071] In the event that a player rides into a restricted or unsafe area, the system immediately sends alerts through the communication module 114, notifying the player and the park management to ensure safety. Additionally, the dynamic pricing module 112 could offer incentives or discounts to players who participate in these interactive games, adding an extra layer of engagement and encouraging more users to take part.

[072] At the end of the laser tagging session, players can view their game stats on their handheld device 102, including detailed breakdowns of their performance and how they ranked against other players. The system may also offer options to share these results on social media or to challenge other players to future games, fostering a community atmosphere among park visitors.

[073] Overall, the integration of interactive games like laser tagging within the system 100 not only enhances the recreational aspect of the caravan park but also showcases the versatility and engaging potential of the technology. By combining mobility with entertainment, the system provides a unique and memorable experience for all guests, blending the thrill of outdoor activities with the convenience of modern technology.

Example 2 - Snowy resort

[074] In a snowy resort setting, the system 100 by using the disclosed method can be effectively utilized to create an engaging and adventurous treasure hunt game using snow scooters 104, providing an immersive experience for guests. This treasure hunt game is designed to take full advantage of the system’s capabilities, including location detection sensors, user modules, and real-time communication features.

[075] Upon arrival at the resort, guests are introduced to the snow scooters 104 available for rental. These scooters are specifically designed for use in snowy environments, built with a durable frame, motor, battery, and a docking mechanism for handheld devices 102. After renting a snow scooter, guests can participate in the treasure hunt game by setting up their user profile via the user module 108 on their handheld device 102. This module provides all necessary information about the game, including the rules, objectives, and the area within the resort where the treasure hunt takes place.

[076] The treasure hunt begins with the user receiving the first clue on their handheld device 102. This clue is a hint about the treasure's location, which is hidden somewhere within the designated game area. The treasure is equipped with a location indicator, a device that emits signals detectable by the snow scooter’s location detection sensors 106, 106’, 106’’. These sensors are connected to the scooter and are designed to interact with the location indicator, providing real-time feedback to the player as they move closer to or further away from the treasure.

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[077] As the player rides the snow scooter 104 through the snowy terrain, the handheld device 102 displays a map of the game area. The map updates in real-time, showing the player's current location, the area where the treasure is hidden, and proximity indicators that guide the player toward the treasure. The closer the player gets to the treasure, the stronger the signal from the location indicator becomes, which is reflected on the handheld device as a visual or auditory cue.

[078] Throughout the game, the system's communication module 114 ensures seamless data transmission between the snow scooter, the location indicator, and the handheld device. This module manages all communication protocols, enabling real-time updates and maintaining the flow of information necessary for an engaging treasure hunt experience.

[079] The management module 110 plays a key role in overseeing the treasure hunt game. It monitors the location of all participating players, ensures they remain within the designated game area, and provides safety alerts if any player strays into restricted zones. The dynamic pricing module 112 could also be employed to offer rewards or discounts to players who successfully find the treasure, adding an incentive for participation.

[080] As players navigate the snowy terrain, the game can offer additional clues and challenges, such as puzzles or tasks that need to be completed at specific locations marked on the map. These challenges not only make the treasure hunt more engaging but also encourage exploration of the resort's scenic areas.

[081] When a player finally locates the treasure, the location indicator triggers a notification on their handheld device 102, signalling the successful completion of the hunt. The system then records the player’s achievement, and the user module 108 offers the option to share the victory on social media or to challenge other players in subsequent games. The treasure itself could be a physical prize or a digital reward that can be redeemed at the resort, further enhancing the overall experience.

[082] This snow scooter treasure hunt game exemplifies how the system 100 can be utilized to create an interactive and memorable experience in a snowy environment. By combining the thrill of exploration with the excitement of a treasure hunt, the system provides a unique way for guests to enjoy their time at the resort, making the most of

the advanced technological integration offered by the snow scooters and the overall platform.

Example 3 - Urban environment

[083] In an urban environment, the system 100 by using the disclosed method can be effectively employed to enhance the daily commute experience for a group of friends using scooters 104 while introducing a gamified element that rewards efficiency and skill. This example demonstrates how the system can transform a routine commute into an engaging and competitive activity that encourages safe and efficient riding.

[084] Imagine a group of friends living in a bustling city where they each use electric scooters 104 for their daily commute to work or school. These scooters are part of a shared mobility service integrated with the system 100, which offers various features designed to improve the commuting experience and promote safe, efficient riding habits.

[085] Each friend begins their commute by using their personal handheld device 102, which is either attached to the scooter via a docking mechanism or connected wirelessly through communication protocols like NFC, Bluetooth, or Wi-Fi. The user module 108 installed on their handheld devices allows them to log in, track their commute, and access features such as route optimization, ride analytics, and a gamified leaderboard.

[086] During their commute, the system tracks various performance metrics through the plurality of sensors 106, 106', 106'' integrated into the scooters. These sensors monitor speed, route efficiency (such as choosing the shortest or most traffic-free path), and the precision with which the scooter is handled (e.g., smooth acceleration, braking, and cornering). The communication module 114 ensures that all data collected by the sensors is transmitted in real-time to the user module 108, where it is processed and displayed to the user.

[087] As the friends ride to their destinations, they can earn points based on how well they optimize their speed, select the most efficient routes, and demonstrate precise handling of the scooter. For example, maintaining an optimal speed that balances efficiency with safety could earn extra points, while selecting a route that avoids heavy traffic and minimizes travel time would be rewarded as well. Additionally, smooth and safe handling of the scooter—avoiding sudden stops or sharp turns—would contribute to a higher score.

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[088] These points are accumulated over time and contribute to each user's standing on a leaderboard that is accessible through the user module 108. This leaderboard not only ranks the group of friends but also compares their performance with other users of the scooter service across the city. The leaderboard can be filtered to show daily, weekly, or monthly rankings, allowing the friends to track their progress, set goals, and challenge each other for the top spot.

[089] The management module 110 oversees the entire system, ensuring that the collected data is accurate and that the points awarded reflect real riding performance. It also ensures that all rides are conducted safely and within the guidelines set by the service. The dynamic pricing module 112 could offer incentives, such as discounted rides or bonus points, to users who consistently rank highly or show significant improvement in their riding skills.

[090] Throughout their commutes, the friends can monitor their progress in real-time on their handheld devices 102, seeing how their current ride is contributing to their overall score. This gamified experience not only makes the daily commute more enjoyable but also encourages safer and more efficient riding habits, benefiting both the users and the broader urban community.

[091] At the end of each commute, the system provides a summary of the ride, including points earned, route efficiency, and handling performance. Users can also review their standings on the leaderboard, compare their scores with friends, and set new challenges for the next day. This continual feedback loop helps to keep the friends engaged and motivated to improve their performance.

[092] This example of urban mobility illustrates how the system 100 can turn a routine daily commute into a rewarding and competitive activity, fostering a sense of community among users while promoting safe and efficient scooter usage. By combining practical transportation with elements of gamification, the system not only enhances the user experience but also contributes to a more sustainable and enjoyable urban commuting environment.

Interpretation

[093] Unless otherwise defined, all terms (including technical and scientific terms) used herein have the same meaning as commonly understood by one of ordinary skill in the

art to which this invention belongs. It will be further understood that terms used herein should be interpreted as having a meaning that is consistent with their meaning in the context of this specification and the relevant art and will not be interpreted in an idealized or overly formal sense unless expressly so defined herein. For the purposes of the present invention, additional terms are defined below. Furthermore, all definitions, as defined and used herein, should be understood to control over dictionary definitions, definitions in documents incorporated by reference, and/or ordinary meanings of the defined terms unless there is doubt as to the meaning of a particular term, in which case the common dictionary definition and/or common usage of the term will prevail.

[094] The terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting of the invention. As used herein, the singular articles “a”, “an” and “the” are intended to include the plural forms as well, unless the context clearly indicates otherwise and thus are used herein to refer to one or to more than one (i.e. to “at least one”) of the grammatical object of the article. By way of example, the phrase “an element” refers to one element or more than one element.

[095] Throughout this specification, unless the context requires otherwise, the words “comprise”, “comprises” and “comprising” will be understood to imply the inclusion of a stated step or element or group of steps or elements but not the exclusion of any other step or element or group of steps or elements.

[096] The term “real-time” for example “displaying real-time data,” refers to the display of the data without intentional delay, given the processing limitations of the system and the time required to accurately measure the data.

[097] As used herein, the term “exemplary” is used in the sense of providing examples, as opposed to indicating quality. That is, an “exemplary embodiment” is an embodiment provided as an example, as opposed to necessarily being an embodiment of exemplary quality for example serving as a desirable model or representing the best of its kind.

[098] The phrase “and/or,” as used herein in the specification and in the claims, should be understood to mean “either or both” of the elements so conjoined, i.e., elements that are conjunctively present in some cases and disjunctively present in other cases. Multiple elements listed with “and/or” should be construed in the same fashion, i.e., “one

or more" of the elements so conjoined. Other elements may optionally be present other than the elements specifically identified by the "and/or" clause, whether related or unrelated to those elements specifically identified. Thus, as a non-limiting example, a reference to "A and/or B", when used in conjunction with open-ended language such as "comprising" can refer, in one embodiment, to A only (optionally including elements other than B); in another embodiment, to B only (optionally including elements other than A); in yet another embodiment, to both A and B (optionally including other elements); etc.

[099] As used herein in the specification and in the claims, "or" should be understood to have the same meaning as "and/or" as defined above. For example, when separating items in a list, "or" or "and/or" shall be interpreted as being inclusive, i.e., the inclusion of at least one, but also including more than one of a number or list of elements, and, optionally, additional unlisted items.

[0100] As used herein in the specification and in the claims, the phrase "at least one," in reference to a list of one or more elements, should be understood to mean at least one element selected from any one or more of the elements in the list of elements, but not necessarily including at least one of each and every element specifically listed within the list of elements and not excluding any combinations of elements in the list of elements. This definition also allows that elements may optionally be present other than the elements specifically identified within the list of elements to which the phrase "at least one" refers, whether related or unrelated to those elements specifically identified. Thus, as a non-limiting example, "at least one of A and B" (or, equivalently, "at least one of A or B," or, equivalently "at least one of A and/or B") can refer, in one embodiment, to at least one, optionally including more than one, A, with no B present (and optionally including elements other than B); in another embodiment, to at least one, optionally including more than one, B, with no A present (and optionally including elements other than A); in yet another embodiment, to at least one, optionally including more than one, A, and at least one, optionally including more than one, B (and optionally including other elements); etc.

[0101] As used herein in the specification and the claims, the term 'high voltage' is any voltage with a value of 1 KV or greater.

Bus

[0102] In the context of this document, the term “bus” and its derivatives, while being described in a preferred embodiment as being a communication bus subsystem for interconnecting various devices including by way of parallel connectivity such as Industry Standard Architecture (ISA), conventional Peripheral Component Interconnect (PCI) and the like or serial connectivity such as PCI Express (PCIe), Serial Advanced Technology Attachment (Serial ATA) and the like, should be construed broadly herein as any system for communicating data.

Module

[0103] The module is envisaged to include computing capabilities such as a memory unit (not shown) configured to store machine readable instructions. The machine-readable instructions may be loaded into the memory unit from a non-transitory machine-readable medium such as, but not limited to, CD-ROMs, DVD-ROMs and Flash Drives. Alternately, the machine-readable instructions may be loaded in a form of a computer software program into the memory unit. The memory unit in that manner may be selected from a group comprising EPROM, EEPROM and Flash memory.

[0104] Further, the module includes a processor or plurality of high-speed computing processors with multiple cores (not shown) operably connected with the memory unit. In various embodiments, the processor is one of, but not limited to, a general-purpose processor, an application specific integrated circuit (ASIC) and a field-programmable gate array (FPGA).

In accordance with:

[0105] As described herein, ‘in accordance with’ may also mean ‘as a function of’ and is not necessarily limited to the integers specified in relation thereto.

Composite items

[0106] As described herein, ‘a computer implemented method’ should not necessarily be inferred as being performed by a single computing device such that the steps of the method may be performed by more than one cooperating computing devices.

[0107] Similarly objects as used herein such as ‘web server’, ‘server’, ‘client computing device’, ‘computer readable medium’ and the like should not necessarily be construed

as being a single object, and may be implemented as a two or more objects in cooperation, such as, for example, a web server being construed as two or more web servers in a server farm cooperating to achieve a desired goal or a computer readable medium being distributed in a composite manner, such as program code being provided on a compact disk activatable by a license key downloadable from a computer network.

Database:

[0108] In the context of this document, the term “database” and its derivatives may be used to describe a single database, a set of databases, a system of databases or the like. The system of databases may comprise a set of databases wherein the set of databases may be stored on a single implementation or span across multiple implementations. The term “database” is also not limited to refer to a certain database format rather may refer to any database format. For example, database formats may include MySQL, MySQLi , XML or the like.

Wireless:

[0109] The invention may be embodied using devices conforming to other network standards and for other applications, including, for example other WLAN standards and other wireless standards. Applications that can be accommodated include IEEE 802.11 wireless LANs and links, and wireless Ethernet.

[0110] In the context of this document, the term “wireless” and its derivatives may be used to describe circuits, devices, systems, methods, techniques, communications channels, etc., that may communicate data through the use of modulated electromagnetic radiation through a non-solid medium. The term does not imply that the associated devices do not contain any wires, although in some embodiments they might not. In the context of this document, the term “wired” and its derivatives may be used to describe circuits, devices, systems, methods, techniques, communications channels, etc., that may communicate data through the use of modulated electromagnetic radiation through a solid medium. The term does not imply that the associated devices are coupled by electrically conductive wires.

Processes:

[0111] Unless specifically stated otherwise, as apparent from the following discussions, it is appreciated that throughout the specification discussions utilizing terms such as

“processing”, “computing”, “calculating”, “determining”, “analysing” or the like, refer to the action and/or processes of a computer or computing system, or similar electronic computing device, that manipulate and/or transform data represented as physical, such as electronic, quantities into other data similarly represented as physical quantities.

Processor:

[0112] In a similar manner, the term “processor” may refer to any device or portion of a device that processes electronic data, e.g., from registers and/or memory to transform that electronic data into other electronic data that, e.g., may be stored in registers and/or memory. A “computer” or a “computing device” or a “computing machine” or a “computing platform” may include one or more processors.

[0113] The methodologies described herein are, in one embodiment, performable by one or more processors that accept computer-readable (also called machine-readable) code containing a set of instructions that when executed by one or more of the processors carry out at least one of the methods described herein. Any processor capable of executing a set of instructions (sequential or otherwise) that specify actions to be taken are included. Thus, one example is a typical processing system that includes one or more processors. The processing system further may include a memory subsystem including main RAM and/or a static RAM, and/or ROM.

Computer-Readable Medium:

[0114] Furthermore, a computer-readable carrier medium may form, or be included in a computer program product. A computer program product can be stored on a computer usable carrier medium, the computer program product comprising a computer readable program means for causing a processor to perform a method as described herein.

Networked or Multiple Processors:

[0115] In alternative embodiments, the one or more processors operate as a standalone device or may be connected, e.g., networked to other processor(s), in a networked deployment, the one or more processors may operate in the capacity of a server or a client machine in server-client network environment, or as a peer machine in a peer-to-peer or distributed network environment. The one or more processors may form a web appliance, a network router, switch or bridge, or any machine capable of executing a set of instructions (sequential or otherwise) that specify actions to be taken by that machine.

[0116] Note that while some diagram(s) only show(s) a single processor and a single memory that carries the computer-readable code, those in the art will understand that many of the components described above are included, but not explicitly shown or described in order not to obscure the inventive aspect. For example, while only a single machine is illustrated, the term “machine” shall also be taken to include any collection of machines that individually or jointly execute a set (or multiple sets) of instructions to perform any one or more of the methodologies discussed herein.

Additional Embodiments:

[0117] Thus, one embodiment of each of the methods described herein is in the form of a computer-readable carrier medium carrying a set of instructions, e.g., a computer program that are for execution on one or more processors. Thus, as will be appreciated by those skilled in the art, embodiments of the present invention may be embodied as a method, an apparatus such as a special purpose apparatus, an apparatus such as a data processing system, or a computer-readable carrier medium. The computer-readable carrier medium carries computer readable code including a set of instructions that when executed on one or more processors cause a processor or processors to implement a method. Accordingly, aspects of the present invention may take the form of a method, an entirely hardware embodiment, an entirely software embodiment or an embodiment combining software and hardware aspects. Furthermore, the present invention may take the form of carrier medium (e.g., a computer program product on a computer-readable storage medium) carrying computer-readable program code embodied in the medium.

Carrier Medium:

[0118] The software may further be transmitted or received over a network via a network interface device. While the carrier medium is shown in an example embodiment to be a single medium, the term “carrier medium” should be taken to include a single medium or multiple media (e.g., a centralized or distributed database, and/or associated caches and servers) that store the one or more sets of instructions. The term “carrier medium” shall also be taken to include any medium that is capable of storing, encoding or carrying a set of instructions for execution by one or more of the processors and that cause the one or more processors to perform any one or more of the methodologies of the present invention. A carrier medium may take many forms, including but not limited to, non-volatile media, volatile media, and transmission media.

Implementation:

[0119] It will be understood that the steps of methods discussed are performed in one embodiment by an appropriate processor (or processors) of a processing (i.e., computer) system executing instructions (computer-readable code) stored in storage. It will also be understood that the invention is not limited to any particular implementation or programming technique and that the invention may be implemented using any appropriate techniques for implementing the functionality described herein. The invention is not limited to any particular programming language or operating system.

Means For Carrying out a Method or Function

[0120] Furthermore, some of the embodiments are described herein as a method or combination of elements of a method that can be implemented by a processor of a processor device, computer system, or by other means of carrying out the function. Thus, a processor with the necessary instructions for carrying out such a method or element of a method forms a means for carrying out the method or element of a method. Furthermore, an element described herein of an apparatus embodiment is an example of a means for carrying out the function performed by the element for the purpose of carrying out the invention.

Connected

[0121] Similarly, it is to be noticed that the term connected, when used in the claims, should not be interpreted as being limitative to direct connections only. Thus, the scope of the expression a device A connected to a device B should not be limited to devices or systems wherein an output of device A is directly connected to an input of device B. It means that there exists a path between an output of A and an input of B which may be a path including other devices or means. “Connected” may mean that two or more elements are either in direct physical or electrical contact, or that two or more elements are not in direct contact with each other but yet still co-operate or interact with each other.

Embodiments:

[0122] Reference throughout this specification to “one embodiment” or “an embodiment” means that a particular feature, structure or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus,

appearances of the phrases “in one embodiment” or “in an embodiment” in various places throughout this specification are not necessarily all referring to the same embodiment but may. Furthermore, the particular features, structures or characteristics may be combined in any suitable manner, as would be apparent to one of ordinary skill in the art from this disclosure, in one or more embodiments.

[0123] Similarly, it should be appreciated that in the above description of example embodiments of the invention, various features of the invention are sometimes grouped together in a single embodiment, figure, or description thereof for the purpose of streamlining the disclosure and aiding in the understanding of one or more of the various inventive aspects. This method of disclosure, however, is not to be interpreted as reflecting an intention that the claimed invention requires more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive aspects lie in less than all features of a single foregoing disclosed embodiment. Thus, the claims following the Detailed Description of Specific Embodiments are hereby expressly incorporated into this Detailed Description of Specific Embodiments, with each claim standing on its own as a separate embodiment of this invention.

[0124] Furthermore, while some embodiments described herein include some, but not other features included in other embodiments, combinations of features of different embodiments are meant to be within the scope of the invention, and form different embodiments, as would be understood by those in the art. For example, in the following claims, any of the claimed embodiments can be used in any combination.

Specific Details

[0125] In the description provided herein, numerous specific details are set forth. However, it is understood that embodiments of the invention may be practiced without these specific details. In other instances, well-known methods, structures and techniques have not been shown in detail in order not to obscure an understanding of this description.

[0126] It will be appreciated that the methods/apparatus/devices/systems described/illustrated above at least substantially provide a system and method for pathology specimen collection.

[0127] The system and method for pathology specimen collection described herein, and/or shown in the drawings, are presented by way of example only and are not

limiting as to the scope of the invention. Unless otherwise specifically stated, individual aspects and components of the system and method for pathology specimen collection may be modified, or may have been substituted therefore known equivalents, or as yet unknown substitutes such as may be developed in the future, or such as may be found to be acceptable substitutes in the future. The system and method for pathology specimen collection may also be modified for a variety of applications while remaining within the scope and spirit of the claimed invention, since the range of potential applications is great, and since it is intended that the present invention be adaptable to many such variations.

Terminology

[0128] In describing the preferred embodiment of the invention illustrated in the drawings, specific terminology will be resorted to for the sake of clarity. However, the invention is not intended to be limited to the specific terms so selected, and it is to be understood that each specific term includes all technical equivalents which operate in a similar manner to accomplish a similar technical purpose. Terms such as "forward", "rearward", "radially", "peripherally", "upwardly", "downwardly", and the like are used as words of convenience to provide reference points and are not to be construed as limiting terms.

Different Instances of Objects

[0129] As used herein, unless otherwise specified the use of the ordinal adjectives “first”, “second”, “third”, etc., to describe a common object, merely indicate that different instances of like objects are being referred to and are not intended to imply that the objects so described must be in a given sequence, either temporally, spatially, in ranking, or in any other manner.

Comprising and Including

[0130] In the claims which follow and in the preceding description of the invention, except where the context requires otherwise due to express language or necessary implication, the word “comprise” or variations such as “comprises” or “comprising” are used in an inclusive sense, i.e. to specify the presence of the stated features but not to preclude the presence or addition of further features in various embodiments of the invention.

[0131] Any one of the terms: including or which includes or that includes as used herein is also an open term that also means including at least the elements/features that follow the term, but not excluding others. Thus, including is synonymous with and means comprising.

Scope of Invention

[0132] Thus, while there has been described what are believed to be the preferred embodiments of the invention, those skilled in the art will recognize that other and further modifications may be made thereto without departing from the spirit of the invention, and it is intended to claim all such changes and modifications as fall within the scope of the invention. For example, any formulas given above are merely representative of procedures that may be used. Functionality may be added or deleted from the block diagrams and operations may be interchanged among functional blocks. Steps may be added or deleted to methods described within the scope of the present invention.

[0133] Although the invention has been described with reference to specific examples, it will be appreciated by those skilled in the art that the invention may be embodied in many other forms.

Chronological order

[0134] For the purpose of this specification, where method steps are described in sequence, the sequence does not necessarily mean that the steps are to be carried out in chronological order in that sequence, unless there is no other logical manner of interpreting the sequence.

Industrial Applicability

[0135] It is apparent from the above, that the arrangements described are applicable to the transport and recreational industry.

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CLAIMS

1. A system for facilitating buying and/or rental of one or more vehicles for recreational purposes, comprising:

one or more handheld devices associated with the one or more vehicles;

a plurality of sensors operatively connected to the one or more vehicles;

a user module integrated with each of the one or more handheld devices;

a management module configured to monitor the one or more vehicles, manage battery status, track real-time locations, and interact with the user module;

a dynamic pricing module configured to adjust fees based on predetermined factors; and

a communication module configured to enable communication between the handheld devices, sensors, user module, management module, and dynamic pricing module.

2. The system of claim 1, wherein the user module is configured to enable a user to access network connectivity solutions ensuring reliable access to internet services, enabling location tracking, information exchange, and consistent access to digital services, with a framework to support future network advancements.

3. The system of claim 2, wherein the network connectivity solutions automatically adapt to the best available network to ensure uninterrupted service while optimizing operational costs.

4. The system of claim 2, further comprising a distributed content delivery framework to enhance the efficiency and responsiveness of service and content updates across a plurality of operational regions.

5. The system of claim 1, wherein the user module is configured to provide enhancements aimed at safety of one or more vehicles, user interaction, and utility, including auxiliary power sources, interactive lighting, and onboard environmental monitoring tools.

6. The system of claim 1, wherein the plurality of sensors is configured to collect environmental and operational data, contributing to broader data-driven initiatives and service improvements.

7. The system of claim 6, wherein the environmental and operational data collected by the onboard sensors is utilized in collaboration with external entities to support environmental, urban planning, and community health projects.

8. The system of claim 1, wherein the user module is configured to ensure compatibility with various third-party digital services and technological ecosystems,

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enabling a richer service offering and seamless integration of new features and technologies.

9. The system of claim 8, further comprising advanced analytics and management module for a plurality of stakeholders, incorporating safety compliance, predictive maintenance, and strategic planning capabilities to optimize service delivery and user satisfaction.

10. The system of claim 1, wherein the one or more handheld devices are configured to run multiple applications, designed to support user navigation, entertainment, and interaction with a focus on ease of use and robust performance in diverse environments.

11. The system of claim 10, wherein the one or more handheld devices configured to ensure operational reliability and safety under extreme environmental or usage conditions.

12. The system of claim 11, further comprising an integrated digital service module configured to enable user to book service, conduct financial transactions, and get support, employ advanced security measures for authentication and data protection.

13. The system of claim 12, wherein the integrated digital service module includes a variety of digital entertainment and educational content designed to enhance the user experience during use of the one or more vehicles, with capabilities to support emerging immersive technologies.

14. The system of claim 12, wherein the user management module employs personalized user engagement features, utilizing data analytics and machine learning to offer customized service recommendations and content, prioritizing user privacy and data security.

15. The system of claim 1, wherein the management module comprises operational management software tailored for different administrative roles, offering real-time oversight, user interaction customization, and platform maintenance, designed to adapt based on feedback and usage patterns.

16. The system of claim 15, wherein the management module includes a safety module configured to monitor and ensure compliance with operational safety standards.

17. The system of claim 1, wherein the one or more vehicles comprising customizable elements for personal expression and enhanced user identification and safety in varying environmental conditions.

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18. The system of claim 1, wherein the one or more vehicles comprising vehicle configuration module enabling vehicle configuration, facilitating ease of maintenance, upgrades, and sustainability efforts by allowing component replacements or updates.

19. A method for facilitating buying and/or rental of one or more vehicles for recreational purposes, comprising:

associating one or more handheld devices with the one or more vehicles;

operatively connecting a plurality of sensors to the one or more vehicles;

integrating a user module with each of the one or more handheld devices;

monitoring the one or more vehicles, managing battery status, tracking real-time locations, and interacting with the user module using a management module;

adjusting fees based on predetermined factors using a dynamic pricing module; and

enabling communication between the handheld devices, sensors, user module, management module, and dynamic pricing module using a communication module.

20. The method of claim 19, further comprising enabling a user to access network connectivity solutions through the user module, ensuring reliable access to internet services, enabling location tracking, information exchange, and consistent access to digital services, with a framework to support future network advancements.

21. The method of claim 20, further comprising automatically adapting the network connectivity solutions to the best available network to ensure uninterrupted service while optimizing operational costs.

22. The method of claim 20, further comprising enhancing the efficiency and responsiveness of service and content updates across various operational regions using a distributed content delivery framework.

23. The method of claim 19, further comprising providing vehicle enhancements through the user module, aimed at safety, user interaction, and utility, including auxiliary power sources, interactive lighting, and onboard environmental monitoring tools.

24. The method of claim 23, further comprising collecting environmental and operational data using the plurality of sensors, contributing to broader data-driven initiatives and service improvements.

25. The method of claim 24, further comprising utilizing the environmental and operational data collected by the plurality of sensors in collaboration with external entities to support environmental, urban planning, and community health projects.

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26. The method of claim 19, further comprising ensuring compatibility of the user module with various third-party digital services and technological ecosystems, enabling a richer service offering and seamless integration of new features and technologies.

27. The method of claim 26, further comprising incorporating advanced analytics and management module for a plurality of stakeholders incorporating safety compliance, predictive maintenance, and strategic planning capabilities to optimize service delivery and user satisfaction.

28. The method of claim 19, further comprising running multiple applications by the one or more handheld devices designed to support user navigation, entertainment, and interaction with a focus on ease of use and robust performance in diverse environments.

29. The method of claim 28, further comprising providing an integrated digital service module offering tools for service booking, financial transactions, and user support, employing advanced security measures for authentication and data protection.

30. The method of claim 29, further comprising offering a variety of digital entertainment and educational content through the vehicle-mounted devices, designed to enhance the user experience during vehicle use, with capabilities to support emerging immersive technologies.

31. The method of claim 30, further comprising employing personalized user engagement features within the user management module, utilizing data analytics and machine learning to offer customized service recommendations and content, while prioritizing user privacy and data security.

32. The method of claim 31, further comprising providing tailored administrative roles, offering real-time oversight, user interaction customization, and platform maintenance, and designed to adapt based on feedback and usage patterns.

33. The method of claim 33, further comprising monitoring and ensuring compliance with operational safety standards using a safety module within the management module.

34. The method of claim 19, further comprising featuring customizable elements on the one or more vehicles to allow personal expression and enhanced user identification and safety in varying environmental conditions.

35. The method of claim 19, further comprising facilitating ease of maintenance, upgrades, and sustainability efforts by allowing component replacements or updates.

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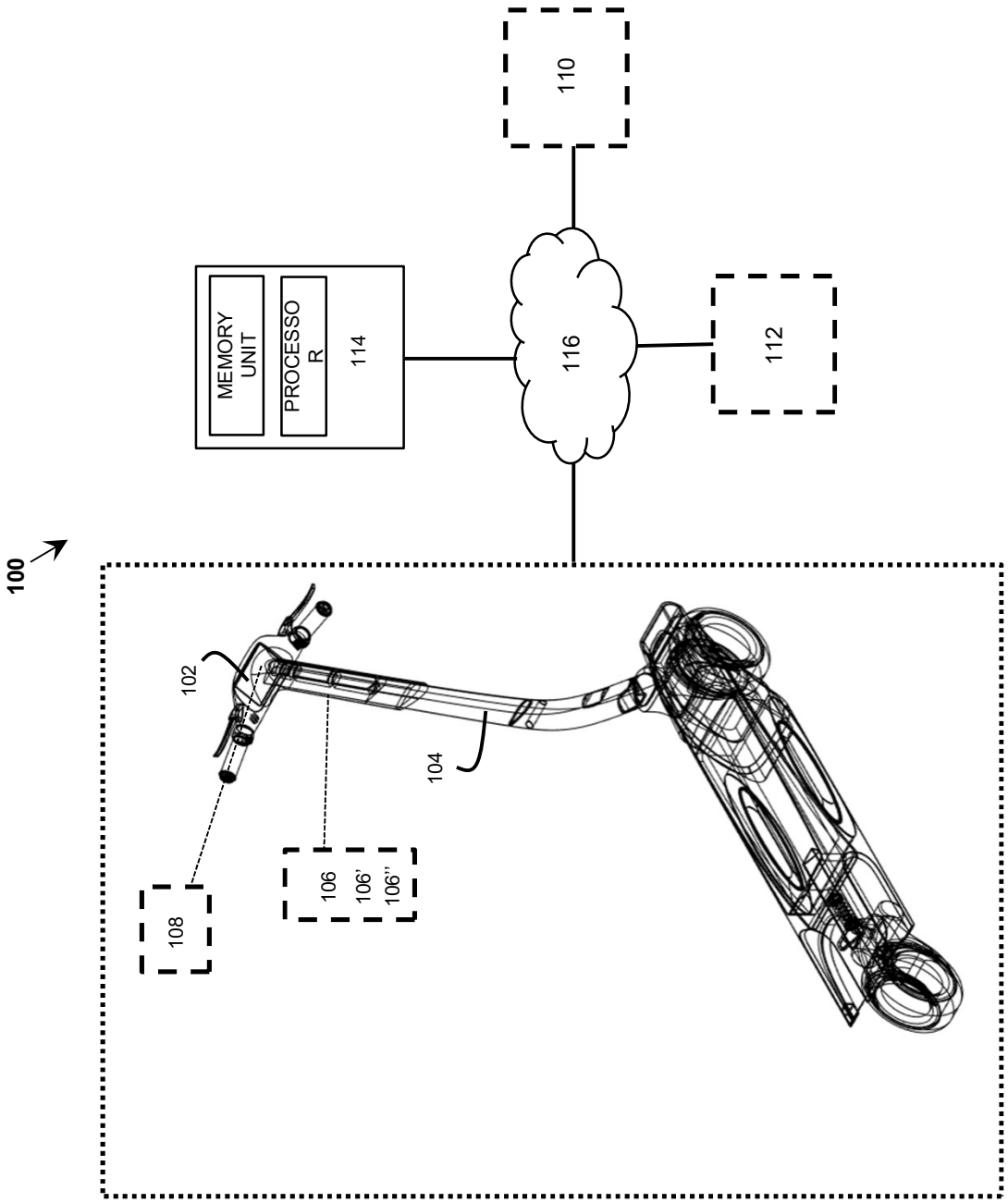

Figure 1

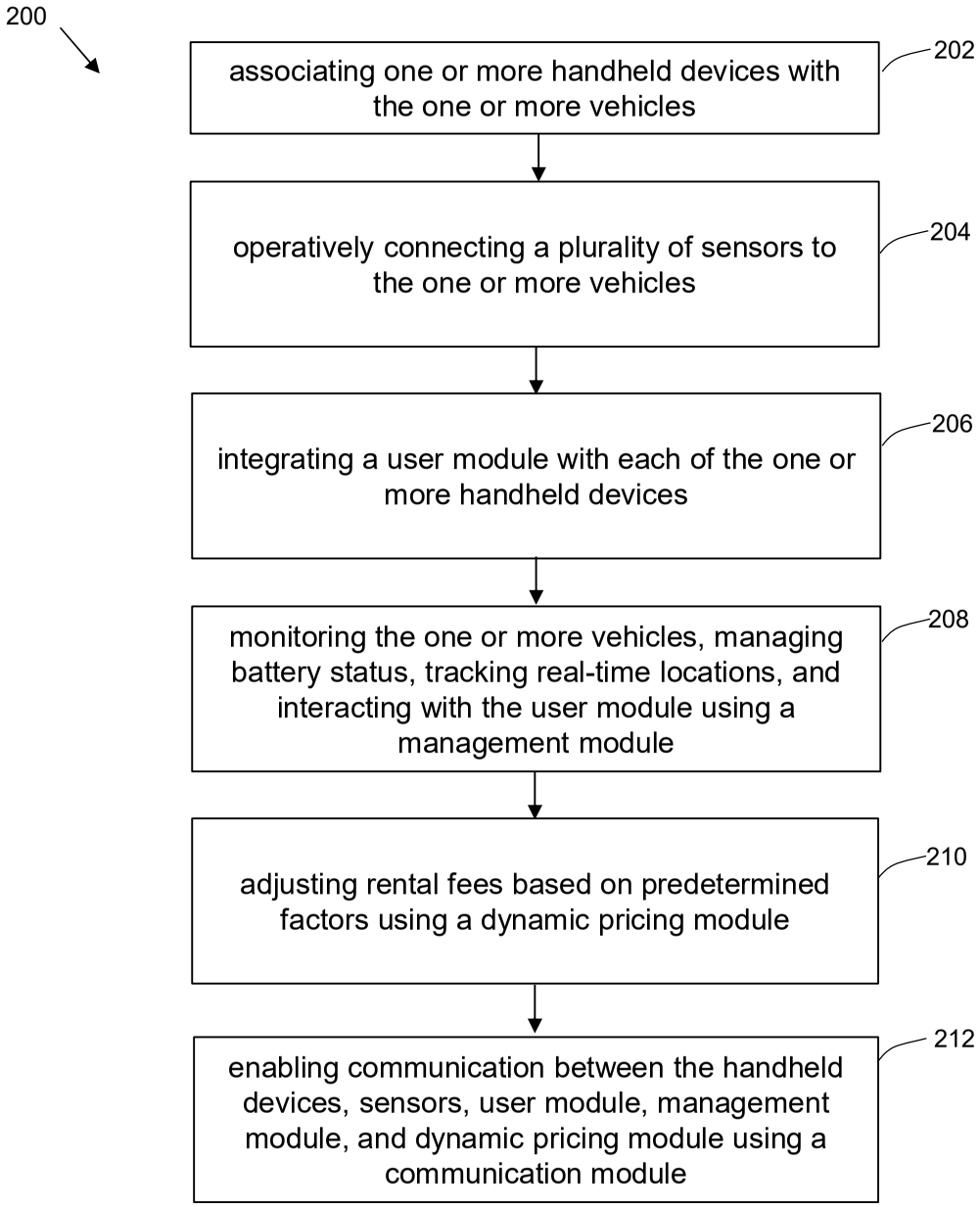
200
associating one or more handheld devices with the one or more vehicles
202
operatively connecting a plurality of sensors to the one or more vehicles
204
integrating a user module with each of the one or more handheld devices
206
monitoring the one or more vehicles, managing battery status, tracking real-time locations, and interacting with the user module using a management module
208
adjusting rental fees based on predetermined factors using a dynamic pricing module
210
enabling communication between the handheld devices, sensors, user module, management module, and dynamic pricing module using a communication module
212

Figure 2

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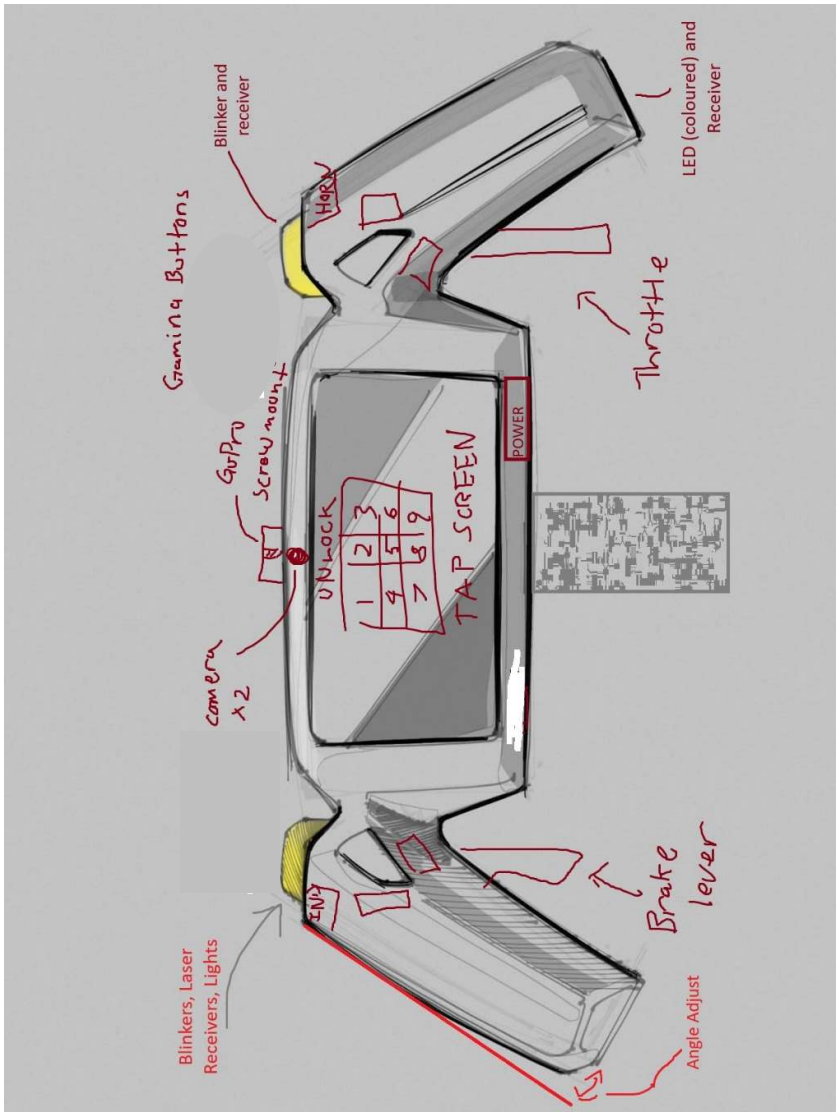

Figure 3A

400

Figure 3B

500

Figure 3C