PATROLL Winning Submission

U.S. Patent 9,171,268

U.S. Patent 9,171,268 ("*Emerging Automotive*" or the "patent-at-issue") was filed on October 9, 2013, and has an earliest priority date on April 22, 2011. Claim 1 of the patent-at-issue is generally directed to a system of shared vehicle network. The system involves a server receiving a user's request to locate and use a vehicle for a shared duration, linked to the user's account. The server also presents vehicle options within the requested area and determines the user's proximity to a selected vehicle. After examining the user's profile and the vehicle's settings, the server transfers the profile to the vehicle, enabling automatic configuration of compatible vehicle settings aligned with the user's preferences. During this active profile transfer, the server collects usage data related to the vehicle, associating it with the user's account. Essentially, the method streamlines vehicle selection, tailoring settings to user preferences, and records usage data for the user account within the shared vehicle network.

The primary reference, U.S. Pat. App. 2010/ 0228405 ("*Intrago*"), was filed on June 13, 2008, and claims an earliest priority date on June 13, 2007. The patent describes a shared vehicle system consisting of multiple vehicles, and each vehicle is equipped with a user interface for subscriber identification and authorization. These vehicles integrate a vehicle management subsystem to monitor their operational status, along with a data communications subsystem that interacts with a communication network for transmitting and receiving data. Additionally, a system management server oversees location, assignment, and operational data for these vehicles. The server maintains communication links with each vehicle through the network and provides a user interface enabling individuals to subscribe to the system, gaining access to utilize the vehicles within this network.

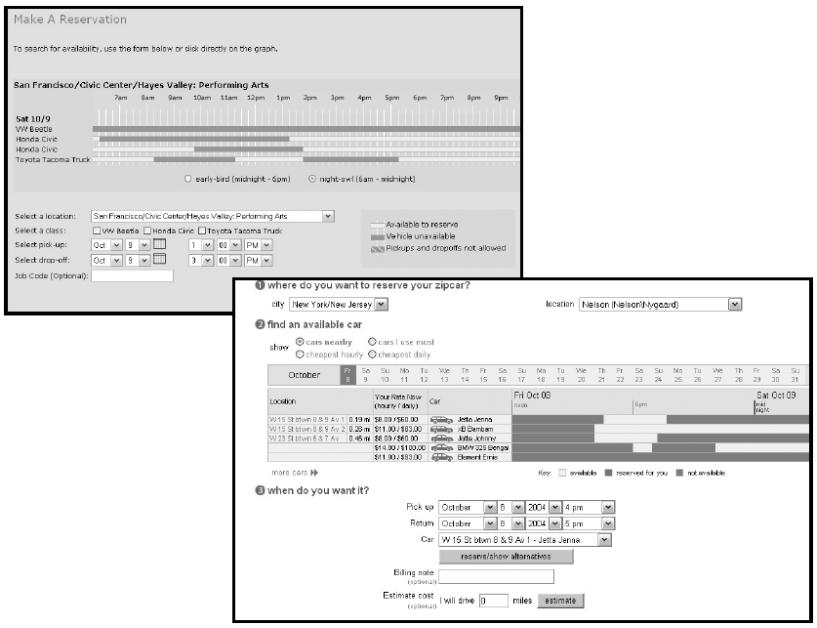
A secondary reference, U.S. Patent 8,463,488 ("*Hart*"), was filed on June 24, 2010, and claims priority on the same date. The patent describes a vehicle control and monitoring system integrating a vehicle device with distinct subsystems and processing instructions. It stores multiple user profiles specifying operational limits for automotive vehicles and an administrator profile containing contact information for wireless data transmission to an administrator device. When a user, in an operator role, utilizes a vehicle equipped with this system, the processing subsystem identifies their profile and checks if their actions align with the preset operational limits. If any parameters exceed these limits, an out-of-profile parameter process is triggered, sending a violation report wirelessly to the administrator device via SMS. This report includes location data and details on the parameters breaching the limits. Additionally, the system includes software executable on the administrator device, enabling it to process the received SMS violation report by visualizing the vehicle's location on a map, displaying relevant information about the parameters, and prompting the initiation of a voice call to the vehicle device, facilitating communication with the user in control of the vehicle.

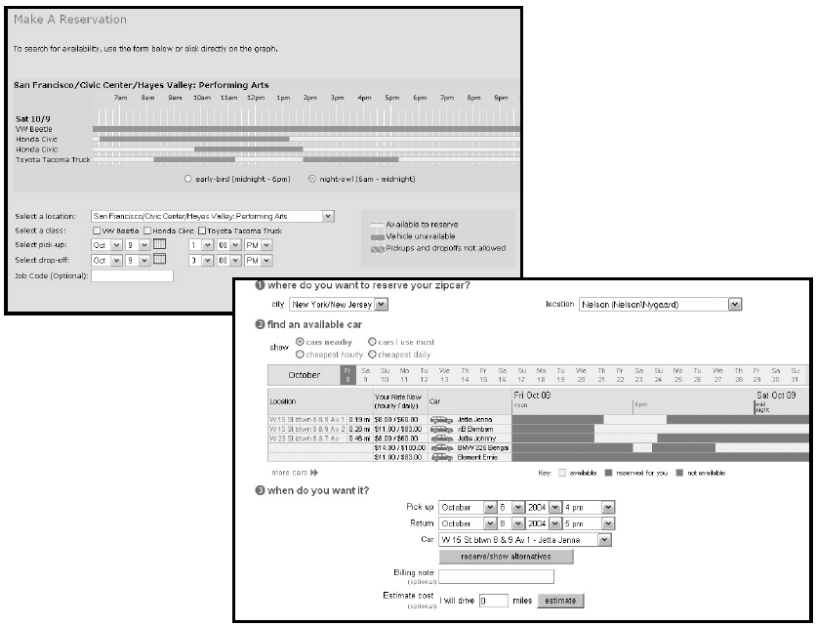
A secondary reference, "Car-Sharing: Where and How It Succeeds (2005)" ("*National Academies*"), was published in 2005. The publication likely examines the operational models, infrastructure, user behaviors, and environmental impacts of car-sharing services, aiming to

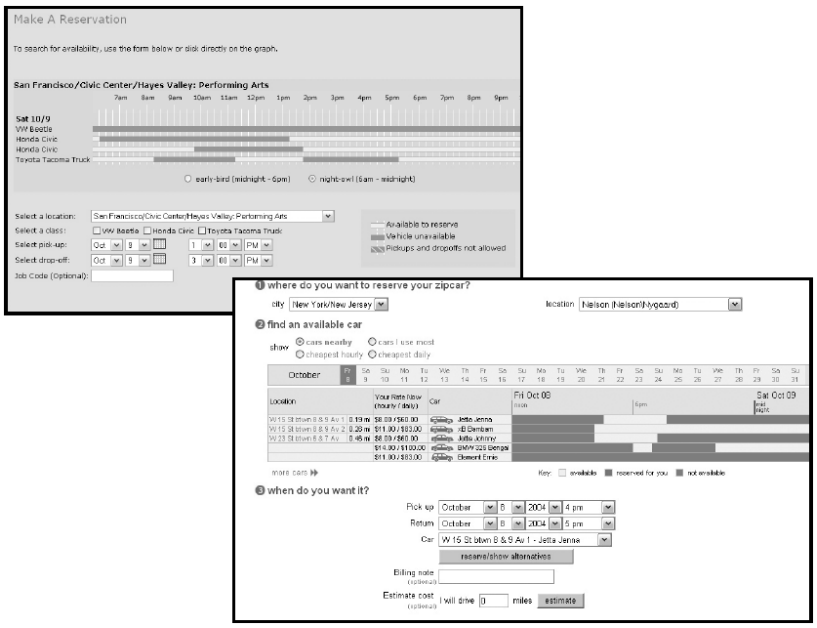
identify the key elements contributing to their success. This analysis likely serves as a guide for policymakers, urban planners, and businesses interested in implementing or improving car-sharing schemes, providing valuable insights into the conditions under which such initiatives can flourish.

A sample claim chart comparing claim 1 of *Emerging Automotive* to *Intrago*, *Hart*, and *National Academies* is provided below.

US9171268 ("*Emerging Automotive*")	**A. US20100228405** (*"Intrago"*) **B. US8463488** (*"Hart"*) **C. "Car-Sharing: Where and How It Succeeds (2005)"** (*"National Academies"*)
1.pre. A method for **locating and providing access to a shared vehicle of a shared vehicle network**, comprising,	**A. US20100228405** "1. A **shared vehicle system** comprising **a plurality of vehicles** each having . . . **a system management server configured to manage location, assignment, and operational state data concerning the plurality of vehicles** and further comprising a communications link that communicates with each of the plurality of vehicles over the communication network; . . . ." *Intrago* at claim 1 "3. The system of claim 2, wherein the communications and location subsystems are global in nature, creating **a global shared vehicle system accessible by any subscriber with access to the global communications network**" *Intrago* at claim 3 **B. US8463488** "1. A vehicle control and monitoring system, comprising: **a vehicle device comprising a processing subsystem, a communication subsystem that communicates over a wireless network**, and a memory subsystem that stores: . . . ." *Hart* at claim 1 **C. "Car-Sharing: Where and How It Succeeds (2005)"** "In addition, **each car is equipped with an on-board computer and access control mechanism**. These handle functions such as access – including, if desired, verifying that the user has a valid registration – and recording time or mileage. **Some operators also equip their cars with a Global Positioning System (GPS) device, which allows vehicles to be located** in the event of theft, late return, or being parked in the wrong location." *National Academies* at p. 2-26

1.a. **receiving, by a server, a request from a user device of a user to locate a vehicle to use for a shared period of time**, the **request being associated with a user account of the user**;	**A. US20100228405** "10. A method for sharing vehicles in a global shared vehicle management system comprising **receiving a query for a shared vehicle from a subscriber of the system over a communication network**; . . . **locating one or more shared vehicles in the geospatial inventory in geographic proximity of the subscriber**; . . . **receiving confirmation of identification and authorization of the subscriber from the proximate shared vehicle**; and **assigning the vehicle to the subscriber for exclusive use for a period of time**." *Intrago* at claim 10 **C. "Car-Sharing: Where and How It Succeeds (2005)"** "**Member database**. **This contains contact information, marketing preferences, date joined, and other information specific to each member**." *National Academies* at p. 2-25  Exhibit 2-12, *National Academies* at p. 2-26 "In addition, each car is equipped with an on-board computer and access control mechanism. **These handle functions such as access – including, if desired, verifying that the user has a valid registration** – and recording time or mileage. Some operators also equip their cars with a Global Positioning System (GPS) device, which allows vehicles to be located in the event of theft, late return, or being parked in the wrong location." *National Academies* at p. 2-26

1.b. **providing, by the server, an option of vehicles within a range of a location identified by the request**;	**A. US20100228405** "11. The method of claim 10 further comprising **receiving a request to reserve the proximate shared vehicle for the subscriber**; . . . ." *Intrago* at claim 11 "In another implementation, a PEV is equipped with wireless communication components and can inform the management system of its location and status from any location where communications links and location information is available. A **user can use a communication device to query the location of the closest vehicle to his or her location** (e.g., via a wireless telephone or PDA which may have GPS features)." *Intrago* at par. 0008 **C. "Car-Sharing: Where and How It Succeeds (2005)"** "Fleet and parking system. **This component identifies the types of vehicles in the fleet, and their locations**." *National Academies* at p. 2-25  Exhibit 2-12, *National Academies* at p. 2-26
1.c. **receiving data from the user device to identify proximity of the user device to a vehicle that is selected**;	**A. US20100228405** "10. A method for sharing vehicles in a global shared vehicle management system comprising . . . **receiving confirmation of identification and authorization of the subscriber from the proximate shared vehicle**; and . . . ." *Intrago* at claim 10

(cont.) 1.c. **receiving data from the user device to identify proximity of the user device to a vehicle that is selected**;	"11. The method of claim 10 further comprising **receiving a request to reserve the proximate shared vehicle for the subscriber**; . . . ." *Intrago* at claim 11 "In another implementation, a PEV is equipped with wireless communication components and can inform the management system of its location and status from any location where communications links and location information is available. A **user can use a communication device to query the location of the closest vehicle to his or her location** (e.g., via a wireless telephone or PDA which may have GPS features)." *Intrago* at par. 0008 **C. "Car-Sharing: Where and How It Succeeds (2005)"** "Fleet and parking system. **This component identifies the types of vehicles in the fleet, and their locations**." *National Academies* at p. 2-25  Exhibit 2-12, *National Academies* at p. 2-26
1.d. **examining of a user profile of the user, wherein the examining includes identifying available vehicle settings of the vehicle** to **determine vehicle settings that are compatible to settings defined by one or more user preferences of the user profile**;	**A. US20100228405** "1. A shared vehicle system comprising . . . **a user interface that allows a user to subscribe to the system to access use of the vehicles**." *Intrago* at claim 1

(cont.) 1.d. **examining of a user profile of the user, wherein the examining includes identifying available vehicle settings of the vehicle** to **determine vehicle settings that are compatible to settings defined by one or more user preferences of the user profile**;	"6. The system of claim 1, wherein **the user interface further comprises a subscription interface configured to create a subscription account for a new subscriber to access and operate any of the plurality of vehicles**." *Intrago* at claim 6 **B. US8463488** "1. A vehicle control and monitoring system, comprising: . . . **a plurality of user profiles, each user profile specifying a profile parameters for the user profile, the profile parameters defining operational limits for an automotive vehicle**; . . . processing instructions that are executable by the processing subsystem and upon such execution cause the processing subsystem to perform operations comprising: **determine a profile of a user that is in an operator role of a vehicle in which the vehicle device is installed**; if the profile of the user in one of the user profiles, then: **obtain vehicle parameters that describe the current operation of the vehicle**; **determine whether the vehicle parameters are within the operational limits defined by the profile parameters of the user profile of the user that is in the operator role of the vehicle**; . . . ." *Hart* at claim 1
1.e. **transferring the user profile**, wherein **after transfer of the user profile the vehicle is configured to automatically set on the vehicle one or more of the available vehicle settings that are determined compatible with settings identified in one or more of the user preferences of the user profile**; and	**A. US20100228405** "6. The system of claim 1, wherein **the user interface further comprises a subscription interface configured to create a subscription account for a new subscriber to access and operate any of the plurality of vehicles**." *Intrago* at claim 6 **B. US8463488** "1. A vehicle control and monitoring system, comprising: . . . **a plurality of user profiles, each user profile specifying a profile parameters for the user profile, the profile parameters defining operational limits for an automotive vehicle**; . . . processing instructions that are executable by the processing subsystem and upon such execution cause the processing subsystem to perform operations comprising: **determine a profile of a user that is in an operator role of a vehicle in which the vehicle device is installed**;

(cont.) 1.e. **transferring the user profile**, wherein **after transfer of the user profile the vehicle is configured to automatically set on the vehicle one or more of the available vehicle settings that are determined compatible with settings identified in one or more of the user preferences of the user profile**; and	if the profile of the user in one of the user profiles, then: **obtain vehicle parameters that describe the current operation of the vehicle**; **determine whether the vehicle parameters are within the operational limits defined by the profile parameters of the user profile of the user that is in the operator role of the vehicle**; . . . ." *Hart* at claim 1
1.f. **receiving, by the server, use data of the vehicle while the user profile transferred to the vehicle is active**, the **use data being associated to the user account**.	**A. US20100228405** "6. The system of claim 1, wherein **the user interface further comprises a subscription interface configured to create a subscription account for a new subscriber to access and operate any of the plurality of vehicles**." *Intrago* at claim 6 **B. US8463488** "1. A vehicle control and monitoring system, comprising: . . . **a plurality of user profiles, each user profile specifying a profile parameters for the user profile, the profile parameters defining operational limits for an automotive vehicle**; . . . processing instructions that are executable by the processing subsystem and upon such execution cause the processing subsystem to perform operations comprising: **determine a profile of a user that is in an operator role of a vehicle in which the vehicle device is installed**; if the profile of the user in one of the user profiles, then: **obtain vehicle parameters that describe the current operation of the vehicle**; **determine whether the vehicle parameters are within the operational limits defined by the profile parameters of the user profile of the user that is in the operator role of the vehicle**; . . . ." *Hart* at claim 1