Ad-Driven Self-Driving Car

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Recommended Citation
Farrar, Christopher and Ross, Steven, 'Ad-Driven Self-Driving Car', Technical Disclosure Commons, (March 03, 2017)
http://www.tdcommons.org/dpubs_series/408

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AD-DRIVEN SELF-DRIVING CAR

ABSTRACT

A system and a device are disclosed for a self-driving car that is funded by advertising revenue. The car has large touch-screen displays highly visible and accessible to all its seats. A person may summon the car through a mobile or web app that is linked with a trusted user ID, and the car will come and pick the user(s) up where they specify. The destination could be deduced by the car (processed using machine learning) or entered manually. The users are then shown a continuous stream of ads, with the option to search, if required. The destination could be modified by clicking on appropriate links in the ads or on the search results. If their credit card is linked, the system provides the user the option to buy things, and potentially go pick them up. The system is an excellent medium for brand advertising, while benefiting users.

BACKGROUND

People often run into situations where it isn't safe for them to drive (alcohol, a medical condition, unsafe location, or if they are just tired), but they need to go a distance that is too far to walk, which includes the need to make purchases. Currently, self-driving cars are being considered for commercial taxi services. However, if the persons in need of the commute do not have significant funds for travel, they may not be able to use a commercial service.

DESCRIPTION

Disclosed herein is a self-driving device or car that is funded by advertising revenue, with large touch-screen displays highly visible and accessible to all its potential users (passengers). The display is placed in front of the user, at a comfortable distance covering a large portion but not all of their vision. It may be a single display per row (if there is more than one seating row in the vehicle), or one display per user.
The self-driving car can be summoned through a mobile or web app that is linked with a trusted user ID (e.g. an email account, phone number, credit card, government-issued ID, password, or biometric identifier). The app could scan this ID with a camera if it isn't already integrated in the phone (if they're logged into a trusted account on the phone this additional step isn't necessary). Once the ID is verified, the car picks them up where they specify (as long as it's reasonably near the device they summon it from), with a default of picking them up where they are. The user must specify the number of people to pick up (the default value of users may be 1), and a vehicle with appropriate capacity is sent.

The user may optionally specify a destination ahead of time, and likely destinations are suggested. The app rejects requests from “bad” users (e.g. people with a recorded history of breaking things or failing to pay, or who have repeatedly summoned rides without using them). The car then verifies either their ID using the same approach as the app (using sensors or a small screen and keypad on the door), or detect that they are holding the device that they summoned the vehicle with using a wireless approach like Bluetooth or NFC. Once they've been authenticated, the user will get in. They are asked their destination (the car listens for their destination and processes it using machine learning, or they enter it manually via touchscreen), or if already provided it is confirmed on the screens and by a speaker in the car. They are then asked to buckle up, and once they have, the vehicle drives them to their destination. Once the destination has been confirmed, the users are shown a continuous stream of ads, unless they touch the screen and select an option to search, in which case the search allows them to navigate to other web pages. The web access automatically times out after some period (e.g. 1 minute) of inactivity, issuing a countdown overlay warning for a short period (e.g. 10 seconds), before switching back to ads. They may always return to their prior web page or stop the timeout by
tapping the screen again. When they leave, their search history is cleared before the next user gets in.

All options done through the touchscreen are also accessible through a voice interface that may be activated with a key phrase. The users will also have the option to select a new destination based on their web access or through ads, and the vehicle reroutes to the new destination. Ads shown on the system could optionally have a "go here" option integrated with them, and destinations in maps or search are provided a button for "go here".

If the user’s credit card is linked, it may provide the user the option to buy things, and potentially go pick them up. Obvious use case: A user is hungry, the user sees pizza ads, clicks on one, say "< key phrase>, buy a large pepperoni to go", sees or hears a confirmation of the price, and then says "yes, buy it", and the order will be entered. Then the car will ask the user whether to redirect to go pick it up, and upon the command "yes", the car will go there.

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![FIG. 1: Method of operating an ad-funded self-driving car](image)

User summons self-driving ad-funded car through a mobile or web app

System identifies user/links to trusted ID of user, determines user location

User(s) accepts free ride from self-driving car, subject to agreed conditions

User(s) gets into car and is shown a screen with continuously running advertisements

Ads are customized to user or users based on their emotions, age, gender, etc.

Car drives user to destination either pre-selected or selected via advertisement/search
The disclosed concept is comparable to a taxi-ride funded completely by advertising targeted at the specific user. It may have sensors (cameras) inside the vehicle to detect the user's emotions, age, and gender based on facial (and whole-body) cues and their voice. The system may track user conversations and select ads based on what they're talking about, and the ads could also be targeted based on their demographics. This may all be linked with their ID, with appropriate disclosure and consent before they get in. The system and device are intended to pay the users for their ad-viewing time with a free ride. This is safer than directly paying people to watch ads which tends to be gamed and not work well. People tend to react very differently to "free" options, decreasing barriers to entry. The disclosed system is an excellent medium for brand advertising, and for getting users to stop and make purchases of things they might actually need, like food. The system also allows excellent tracking of ad conversion.

Further to the descriptions above, a user may be provided with controls allowing the user to make an election as to both if and when systems, programs or features described herein may enable collection of user information (e.g., information about a user’s social network, social actions or activities, personal information, a user’s preferences, or a user’s current location), and if the user is sent content or communications from a server. In addition, certain data may be treated in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user’s identity may be treated so that no personally identifiable information may be determined for the user, or a user’s geographic location may be generalized where location information is obtained (such as to a city, ZIP code, or state level), so that a particular location of a user cannot be determined. Thus, the user may have control over what information is collected about the user, how that information is used, and what information is provided to the user.