

AUTO-Pay Tasks Force Meeting

Meeting Presentation

Date: October 12th , 2017

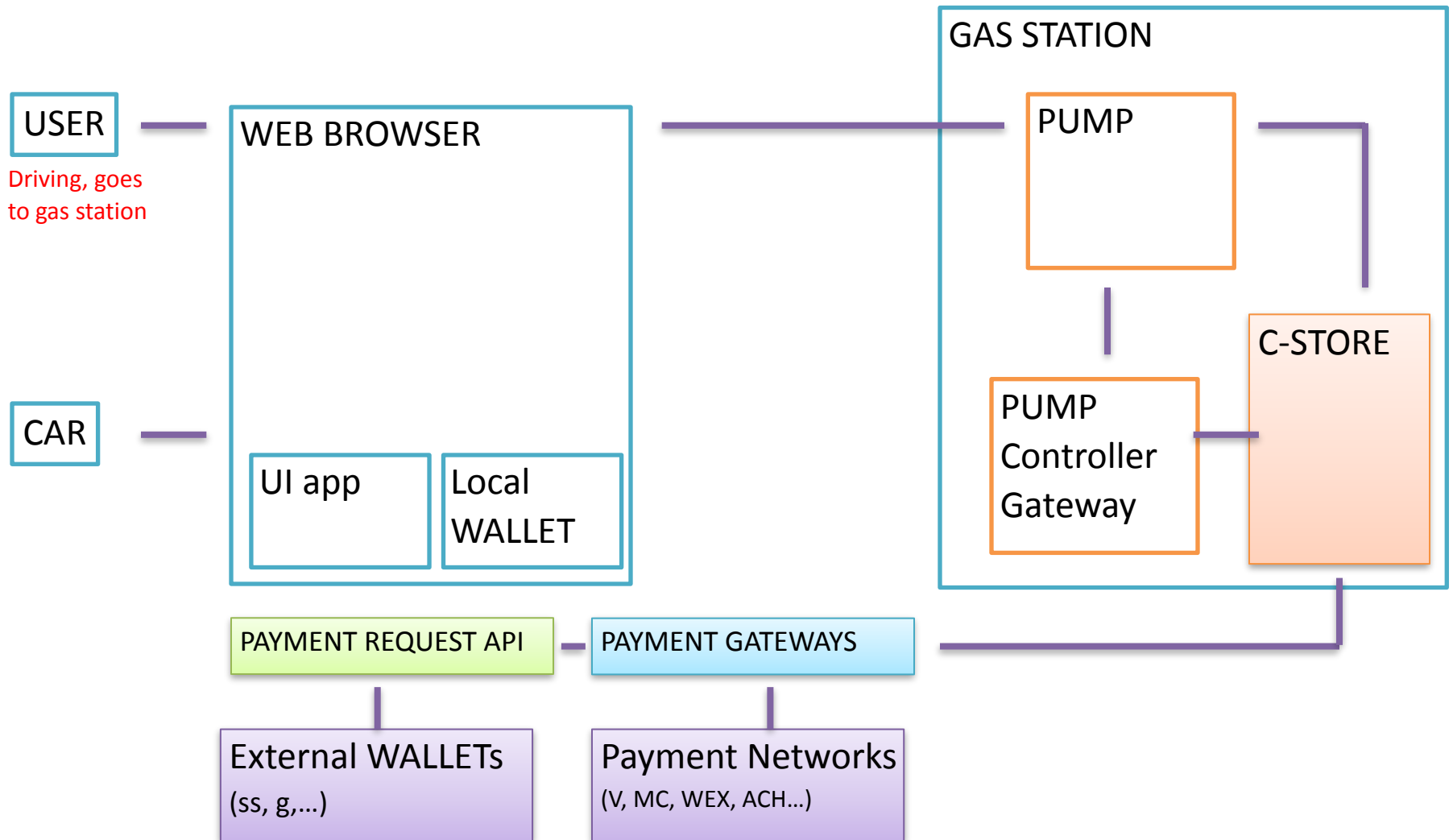
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Summary Goals

- Activities
 - Build shared understanding: To start, the task force will build a shared understanding of the connected vehicle ecosystem.
 - Describe use cases: The task force will describe use cases for automotive Web payments.
 - Do a gap analysis: The task force will study existing and emerging Web standards that might bear on the use cases, then identify and prioritize gaps in Web technology to address the use cases.
- Identified Topics (Use cases)
 - Pay at the pump / charging station (Focus Today)
 - Tolls & Road usage
 - Parking
 - Retail Point of Sale (POS) (such as "drive-thru")
 - Driver Distractibility
 - Automated payments (e.g., delegation of authority to the vehicle to make payments)
 - Shared Vehicles
 - Connectivity
 - Some but not all vehicles will include browser runtimes, so the task force may explore both in-browser and out-of-browser approaches (such as described in the [ViWi protocol](#))

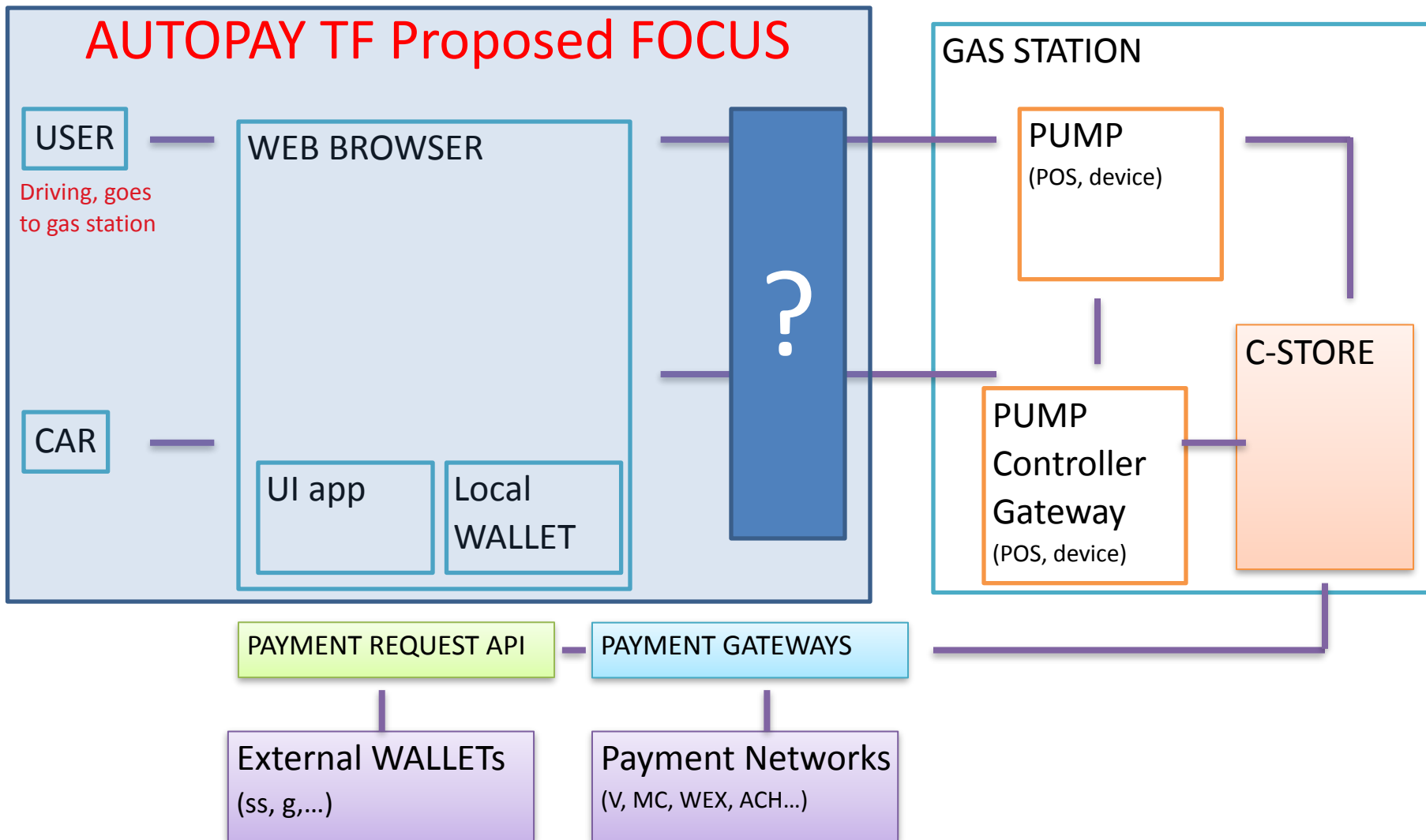
Pay at the PUMP

High level view of the entities involved in the transaction



Pay at the PUMP

High level view of the entities involved in the transaction



Pay at the PUMP

- Identified opportunities:
 - Propose/Define a WEB Standard to enable a common interface for the interaction between the user experience device browser and the pump/charging station.

Pay at the PUMP

- List of Experiences:

- User: driver
- Experience: in-car / out-car
- Capability: in-browser, out-of-browser
- Payment form factor: mobile app, auto app
- Where: at-location, remote-in-advance
- Payment credential: local in-browser wallet, 3rd Party Wallet App
- Dispenser Types: OIL PUMP, EV Charging Station
- Fuel experience: fueled by driver, fueled by non-driver

- Priority Use Cases (Recommended/Proposal/Please comment):

- User out-car pay via mobile app at-location fueled by driver
- User out-car pay via auto app at-location fueled by driver
- User in-car pay via auto app remote/in-advance fueled by driver

All Use Cases with in-browser capability and OIL PUMP

Conceptual Experience in-Browser

- Proposal:
 - Browser should be able to receive a notification to start “pay at the pump” event and trigger a cloud-based transaction.
 - Browser should be able to capture and enable Level 2 and Level 3 data to be sent in the transaction.
- Work in progress / Feedback requested on relevant attributes to consider.

Benefits (WEB Standard)

- Ecosystem is very fragmented in all layers of the technology stack and integration interfaces.
- WEB Standard would provide a common denominator for user experiences to request events (load fuel, send data,...) in a very reliable architecture and harmonized in the industry for all invested parties.
- Interoperability between user devices, PUMP vendors and data service providers would create a richer ecosystem for everyone.

Pay at the PUMP

- Use Case description: **Out-of-car Payment at the PUMP**
 - User out-car pay via mobile app at-location fueled by driver
 - Requirements/Pre-requisites:
 1. Wallet/Experience: User would be able to purchase from merchant without the need to download a specific wallet from the location/merchant.
 2. Feedback required from TF Team

Pay at the PUMP

- Use Case description: **Out-of-car Payment at the PUMP**
 - User out-car pay via mobile app at-location fueled by driver
 - Discovery: User decide to load fuel to the auto (based on notification or own decision)
 - Exploration: User request availability of sites available/nearby and select a venue/pump/charging station.
 - Fuel Experience: User leaves the AUTO and interact with the (PUMP or Device) to select (FUEL type, payment method, Pump/Charging Station Identifier)
 - Payment Experience:
 - Via Browser: User selects the payment method via Device-App (WEB or mobile) and trigger PAYMENT REQUEST API to process payment (Including extra metadata).
 - Via Card-based Payment : User enters the payment method via PUMP and process payment.
 - PUMP Notification/Confirmation:
 - Pump is notified of successful/failed transactions and enable user to fuel the AUTO.

Pay at the PUMP

- Use Case description: **Out-of-car Payment at the PUMP**
 - User out-car pay via mobile app at-location fueled by driver
 - Data Flow: Proposal for next meeting.