In-Vehicle Payment
Special Interest Group Workshop

John Moon  |  February 25, 2021
Schedule

10:00 AM - 10:15 AM - Introductions / About IVP Special Interest Group
10:15 AM - 10:45 AM - Payments Ecosystem Discussion
10:45 AM - 11:00 AM - Presentation - Visa - Anthony Petit
11:00 AM - 11:30 AM - Use Case Discussion - EV Payments
11:30 AM - 11:45 AM - Presentation - Exelon - Chris Budzynski
11:45 AM - 12:00 PM - Presentation - Honda - Boris Polania
12:00 PM - 12:30 PM - Use Case Discussion - Authentication in Payments
12:30 PM - 12:45 PM - Presentation - Validsoft - Dan Thornhill
12:45 PM - 01:00 PM - Workshop Conclusion
Steve Crumb
Executive Director, GENIVI
Profiles

John Moon
• COO, Connected Travel
• GENIVI IVP SIG Team Lead
• Former Managing Director, Honda Innovations
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Michael Nunnery
• Marketing Executive, GENIVI Alliance
• a.k.a “GENIVI Mike”
• GENIVI IVP & EV Charging Group Mkt. Lead
• MikeNunnery@comcast.net
Joining Us Today
GENIVI IVP SIG Purpose

- In-vehicle payment services are an area of growing interest to Auto OEMs, suppliers, retailers and consumers
- Auto OEMs are seeking to build new in-vehicle service based businesses tied commerce and advertising
- Payments technology is complex from a technical, business and regulatory perspective
- No one organization exists to organize the payments ecosystem to work with the Auto OEM ecosystem
- In the absence of payments expertise, Auto OEM’s and partners can spend years understanding the landscape of payments technology while it also constantly evolves
- In-vehicle payments use cases have additional UX requirements for driver safety and security that are unique to the vehicle, drivers and passengers
- Merchants will want standards for integration as they are not structured to support proprietary standards, and merchants will have a hard time justifying the cost of integrating with each OEM’s systems
GENIVI IVP SIG Objectives

1. Develop technical standards in cooperation with payments ecosystem partners

1. Develop payment interfaces that lower merchants and brands ability to address drivers

1. Reduce cost for OEMs to explore service monetization

1. Explore driver UX that enables commerce transactions to be conducted safely in the vehicle
In-Vehicle Payment SIG Goals 2021

1. Establish regular meetings with core team of participants
   a. Target for core team is 10 companies
   b. At least 1 from each category (OEM, payment brand, Tier 1, etc)

2. Identify technical resources/leads (GENIVI and others)

3. Form working groups around project topics

4. Kick off 2 projects, complete 1 project in 2021
IVP Ecosystem
In-Vehicle Payments Use Cases

- Vehicle Loan or lease
- Vehicle Registration Fees
- Pay for Tolls
- Pay for Parking
- Pay for Fuel
- Pay for Charging
- Pay for Media and Entertainment
- Pay for Telematics Services
- Order for Pickup
- Insurance Payment

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Unifying Payment Options Key To Removing Friction

Driver Payment Options

- Pay Account
- ACH / Debit
- Open Loop (Credit Cards, Visa, Mastercard)
- Closed Loop (Paypal, Venmo, Fuel payment cards)
- Subscriptions or Recurring Payments
- Cryptocurrency / Blockchain / DLT

- Vehicle Loan or lease
- Vehicle Registration Fees
- Pay for Parking
- Pay for Tolls
- Pay for Fuel
- Order for Pickup
- Insurance Payment
- Pay for Charging
- Pay for Telematics Services
- Pay for Media and Entertainment
In-Vehicle Payments Technical Concepts

Payments
- Driver Interface
- Tokenization
- Merchant Integration
- Payment Processing / Gateway Integration

Authentication
- Biometric
- Eye
- Voice
- Fingerprint
- 3D Secure

UX
- Voice
- Touch
- Headunit
- Mobile
In-Vehicle Payment Challenges

Security, Fraud, Regulations, Driver Safety

Merchant Integration, Vehicle Technology Integration, Payments Ecosystem: Partner vs Vendor
In-Vehicle Payments Ecosystem - Discussion
Visa
Anthony Petit
Visa
EVs & Payment
EV Market Growth

"Simpler vehicles but more complex infrastructure"

Source: BNEF. Note: Electric share of annual sales includes battery electric and plug-in hybrid.
EV Charging Payment Use Case

User will manage the energy consumption or supply back to the grid conveniently through their account on their mobile device. The charging station or vehicle can also act as a point of sale device to enable public, single use interaction without being a registered user of the charging station operator.

1. Allow user to charge at a variety of public or private charging infrastructure
2. Payment can be made or credit earned at charging infrastructure
3. Charging Station Operator reconciles energy use by users and can bill or credit users accordingly
EV Charging Payment Use Case
EV Charging - Discussion
Boris Polania
Honda
ID & Authentication
ID & Authentication Use Case

Strong Customer Authentication

Needs to supply two of the following three elements:

- **Something the customer knows** (e.g., pin or password)
- **Something the customer has** (e.g., a phone or car)
- **Something the customer is** (e.g., finger or iris scan)

Now being enforced in the European Economic Area (EEA) Countries. Why does this matter to OEMs?
ID & Authentication Use Case
Closing
TU Automotive Collaboration

TU Automotive IVP Survey:

Here it is: https://www.surveymonkey.com/r/genivi-connected-vehicle-payments

Save the Date (Jun 8-10):

GENIVI IVP Participants Discount Code When Registration Goes Live…

“GENIVI25”

Learn More: https://wardsauto.informa.com/focus-connected-vehicle-commerce/
GENIVI IVP & EV Charging WIKI

In-Vehicle Payment (SIG)
1. Project Overview
2. SIG Activity
3. Proposed Areas of Project Focus
4. Community
5. Mailing List for IVP SIG notifications
6. IVP SIG Collaboration Workshop
7. Documentation
8. Meeting minutes recorded sessions & workshops
9. Downloadable Assets
10. Presentations
11. White papers
12. Resource articles
13. Links
14. Contact Leads
15. Survey’s
16. Upcoming Events

The link to view more regarding the GENIVI IVP Special Interest Group along with resources, upcoming events, surveys, articles, etc.

1) From your browser enter “projects.genivi.org”
2) Select In-Vehicle Payment SIG from MENU
3) or to go to direct...url below

https://at.projects.genivi.org/wiki/pages/viewpage.action?pageId=65896819
Events Related to IVP & EV Charging

- **February 25, 2021** - 1st IVP Collaborative Workshop
- **April 2021** - SAE World Congress (WCX)
- **May 4-7th, 2021** - GENIVI Virtual AMM Experience with IVP panel discussions & possible workshop session
- **June 8-10th, 2021** - TU Automotive FOCUS: Connected Vehicle Commerce (IVP)
- **June/July 2021** - IVP & EV Charging Webinar
- **August 2021** - TU Automotive Week w/IVP & EV Charging panels
- **August 2021** - LIVE GENIVI IVP Collaboration Workshop During TU Automotive Week
- **September 2021** - GENIVI Technical Summit
- **September 21-22nd, 2021** - Automobili-D (part of Autoshow Week)
- **October/November 2021** - GENIVI AMM with IPV panels and workshop
- **November/December** - Possible IVP Automotive World Webinar
- **January 5, 2022** - CES 2022 Connect2Car (IVP/EV Charging Panel)
- **January 5, 2022** - CES 2022 GENIVI CES Networking Reception and Showcase with IVP Pavilion Area

**Note:** In-Vehicle Payment (IVP) & EV Charging Group monthly calls to be announced shortly following the Feb 25th workshop
Future Payment Topics

- ACH / Debit
- Close loop payment methods
  - Paypal
  - Venmo
- Headunit tokenization
- Secure Remote Commerce (SRC)
- Blockchain / Distributed Ledger
Thank you!

Visit GENIVI:
http://www.genivi.org
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