In-Vehicle Payment
Special Interest Group

John Moon, COO, Connected Travel | 12 May 2020
WE ARE IN A EPOCH SHIFT MOMENT
Auto OEM Share of US Driver Retail Economy

Advertisers spent $111B in 2019 to incent 282m US Drivers to drive and buy over $2T in consumer retail products from brick & mortar retailers.

$764B

Fuel Payments - $370 B
Auto Insurance - $288 B
Mobile Advertising - $87 B
Radio Advertising - $18 B
Tolls - $15 B
Parking Industry - $10 B
Billboards - $6 B

$0

Fuel Payments - $0 B
Auto Insurance - $0 B
Mobile Advertising - $0 B
Radio Advertising - $0 B
Tolls - $0 B
Parking Industry - $0 B
Billboards - $0 B

Sources: US Energy Information Administration, TIAA, Statista, American Transportation Research Institute
In-Vehicle Payments Use Cases

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

Payments:
- 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
- Card On File
- Tokenization
- Merchant Integration
- Payment Processing / Gateway Integration

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

## UX
- Voice
- Touch

Future Topics: ACH, Alternative Payments (Paypal, Venmo, etc), Head Unit Tokenization, Secure Remote Commerce (SRC), Blockchain / Distributed Ledger
In-Vehicle Payment Challenges

- Security
- Fraud
- Regulations
- Driver Safety

Merchant Integration
Vehicle Technology Integration
Payments Ecosystem: Partner vs Vendor
Opportunities and Benefits of a GENIVI SIG

1. Develop technical standards in cooperation with payments ecosystem partners

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

3. Reduce cost for OEMs to explore service monetization

4. Explore driver UX that enables commerce transactions to be conducted safely in the vehicle
EV Charging Payment Use Case

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

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.
EV Charging Payment Use Case

3. Charging Station Operator

Public Or Private Utility

User Application

Infotainment System

Standard Charging API

EV Charging Controller

User Application

Infotainment System

Standard Charging API

EV Charging Controller

3. Charging Station Operator

Public Or Private Utility
Current GENIVI Partners Interested in Payments
Speaker Profile

John Moon, COO Connected Travel

John Moon is Chief Operating Officer of ConnectedTravel focused on company growth and customer success. John has worked in a wide range of industries including mobile software development, video game middleware, interactive advertising and credit card security. John was most recently Managing Director at Honda Innovations exploring the integration of Honda vehicles and product with apps and services from startups to established partners. John holds a B.S. in Cognitive Sciences from UCLA.
Thank you!

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