FLORIDA AUTOMATED VEHICLES
ACES Breakout Session

Electric Vehicles

The Logical Platform for Autonomous Transportation
Drive Electric Florida

Plug-in to a revolution in motion
Advancing the energy, economic, and environmental security of the state of Florida by promoting the growth of electric vehicle ownership and the accompanying infrastructure.

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Doug Kettles
Drive Electric Florida
Electric Vehicle Transportation Center
EVs - The Logical Autonomous Platform

Tesla Autopilot
EVs-The Logical Autonomous Platform

Inductive Charging  (AKA, Wireless)

- Stationary Application Stats
  - Power transfer efficiency 90%
  - 3.3-20kW power
  - SAE TIR J2954, IEEE C95.1-2005 (EMF exposure)

- Commercially Available
  - Plugless
  - Qualcomm HALO
  - WiTricity

- Dynamic Inductive Charging
  - Up to 20kW at highway speed
  - Utah State University
  - Qualcomm/VEDECOM, France
  - England
Autonomous Network Infrastructure Challenges

- Physical Plant
  - Network infrastructure has to be route redundant
  - Network powering has to be redundant
  - Network electronics have to be redundant

- Data Transport
  - Spectrum and bandwidth require management and augmentation
  - External applications will drive localized bandwidth demand
  - IP, MAC, software/firmware, inventory and network management
  - Standards management, DSRC interface with private networks

- Resources
  - Staffing has to grow and become/stay highly trained
  - Proactive network management and disaster recovery
  - Capital resource requirements are intense
  - Must be open-sourced, very flexible, outward facing
Speakers

Doug Kettles – SR. Research Analyst, EVTC

Dale Hill – Founder, Proterra Electric Bus

Frank Jackalone – Director, Florida Sierra Club

Amitai Bin-Nun – VP, Autonomous Vehicles & Mobility Innovation
Securing America’s Future Energy (SAFE)