Global Impact Around 2025

100M units
Connected Vehicles

1~10EB/mo.
Communication

Source: AECC estimation based on PwC and SBD
Domains for Connected Vehicles

- **ITS**
  - Local Danger Warning
  - Collision Avoidance
  - Cooperative Adaptive Cruise Control

- **IVI**
  - Navigation
  - Audio/TV
  - Phone, Internet

- **Big Data**
  - High Definition Map
  - Intelligent Driving Support
  - Vehicle Quality Control
  - Location Based Services
Key Issues and Potential Solutions

The future use cases of connected car

Research and Development
- CAN data
- ECU data
- Driver’s condition

Advanced Driving Assistance
- Intelligent driving support
- High-resolution map
- Cruise assist

Traffic
- Traffic control
- Traffic info.
- Mobility sharing
- Multimodal

Mobility Services

Challenge*: Processing enormous data

Use-case realization

Distributed high-speed big data processing by utilizing edge computing

Connected car

Video/Still Image Camera

ECU/Sensor

Map
Automotive Edge Computing Consortium

Cross-industry ecosystem for next generation connected cars and mobility services

Launched in January 2018 as a NPO in the U.S.
AECC Principal Concept

Topology Aware Distributed Clouds Architecture

In AECC, it is called “Edge Computing.”

Different edge locations w/ initial focus on network infrastructure
AECC Focus

Network/Computing for Automotive BIG DATA
To accommodate the automotive big data in a smart and efficient fashion.

Global and Sustainable Ecosystem
The next generation connected cars will require advanced systems in order to evolve.

Initial Focus on Vehicle to Cloud
The context is the high volume Vehicle-to-Cloud services.

Leading Market Actors Joint Forces
Toyota, Toyota ITC, Ericsson, Intel, Denso, NTT DOCOMO, KDDI, NTT were initial members and more companies now, and more in the pipe to join.
Recent Activities

- All Member Meetings (AMM) held 3 times in a year.
  - 23 companies participated at the last AMM in San Jose.
- Regular on-line/f2f discussions in the 2 working groups
  - WG1: Use cases & requirements, WG2: Technical solutions
- Giving external lectures, panel discussions
AECC Workflow

RELEVANT COMMUNITIES

- Cellular
- Wireless LAN
- Internet Standards
- OS/Platform OSS

TARGETED ACTIVITIES

- Marketing Ecosystem
- Use cases and Requirements White Paper
- Solutions Functional Architecture

Liaison / contribution to related communities

Evaluation Next Step

White Papers
WG1: Use-cases

Intelligent driving

High definition map

V2Cloud Cruise Assist

Mobility Services

Finance & Insurance

1EB~10EB/Month Network Traffic

100M~ Connected Cars
WG2: Key Issues

- Edge Data Offloading
- Local Data
- Cloud
- Connected Car
- Distributed Computing
- V2C2V
- Intelligent driving
- High-definition map
- Localized Network
- MSP Server Selection
- Vehicle System Reachability
- Connected Car
Thank you for your attention

Let’s Get Connected!
Panel Discussion and Q & A

Kenichi Murata
Toyota Motor Corporation and Chairman of AECC
General Manager – Connected Strategy

Christer Boberg
Ericsson
Director of IoT & Cloud Technology Strategies

Dr. Ryutaro Kawamura
NTT
Senior Vice President and Director

Joel Obstfeld
Cisco
Distinguished Engineer, Chief Technical and Architects Office

Said Tabet
Dell EMC
Chief Architect Emerging Technology & Ecosystems
Technology Lead, IoT & AI Strategy
AECC Website

Visit our Web page and get more information!

https://aecc.org

Download our White Paper

Sign-up Process:
1. Inquiry
2. Approval
3. Membership package
4. Membership Agreement (MA) signed
5. MA countersigned (by AECC)
6. Welcome email with invoice
7. Payment