

# **Challenges in Vehicle Domain Service for automated driving and connected vehicles**

Session1:Multimedia coding, systems and applications

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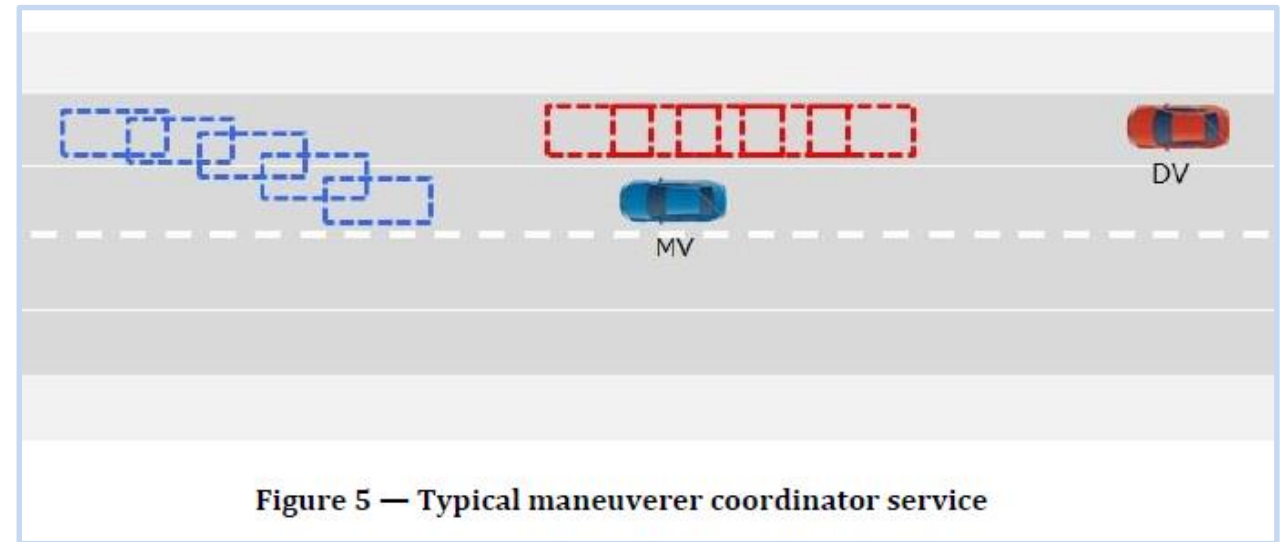
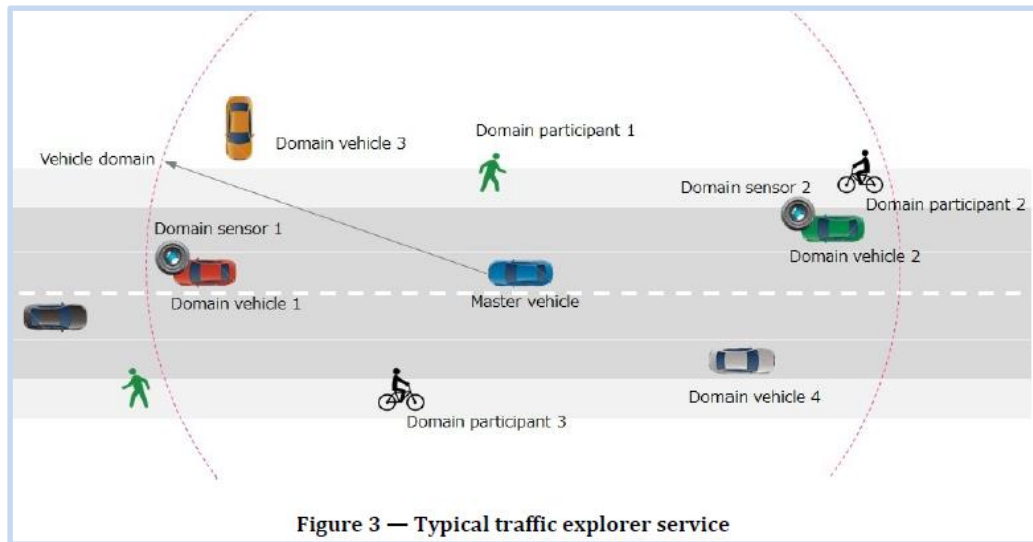
**09 September 2019**

## Presenter's profile

- Organization
  - Honda R&D Co., Ltd., Chief Engineer
  - 06M/Y EU5D, 09M/Y US4D/2D CIVIC Project leader of electrical system test/design
  - Field of specialty; Vehicle control/communication system design & test
- ISO / IEC Expert
  - ISO TC22 SC31 data communication expert, HOD of Japan
  - ISO 15118-2 ED2 V2G CI PT2 Project leader (2015-2017)
  - ISO TC22 SC31 WG8 "Vehicle domain service" Convener

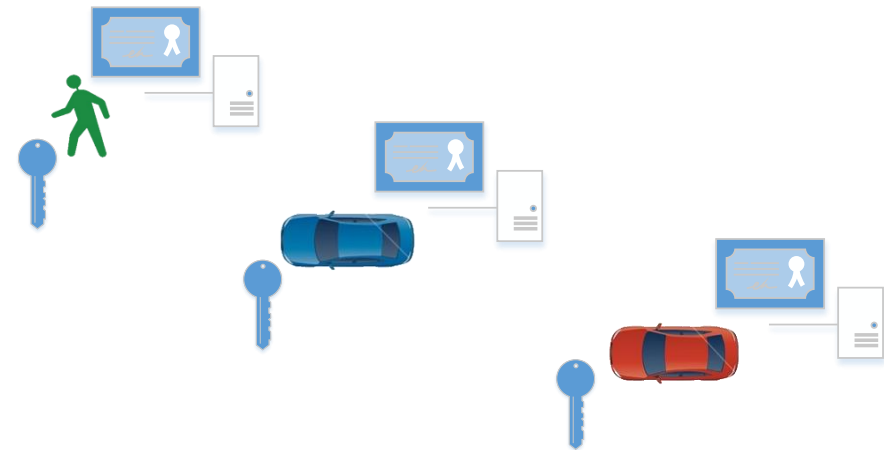
# Overview of vehicle domain service (VDS)

- VDS, server application implemented in a vehicle
  - Master vehicle communicates with surrounding domain actors



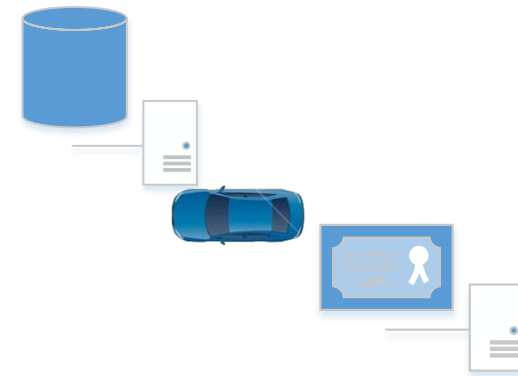
## Challenge of identification in VDS

- MV have to identify domain actors
  - Existing certificate based identification might be applicable.
  - More sophisticated direct identification shall be required.



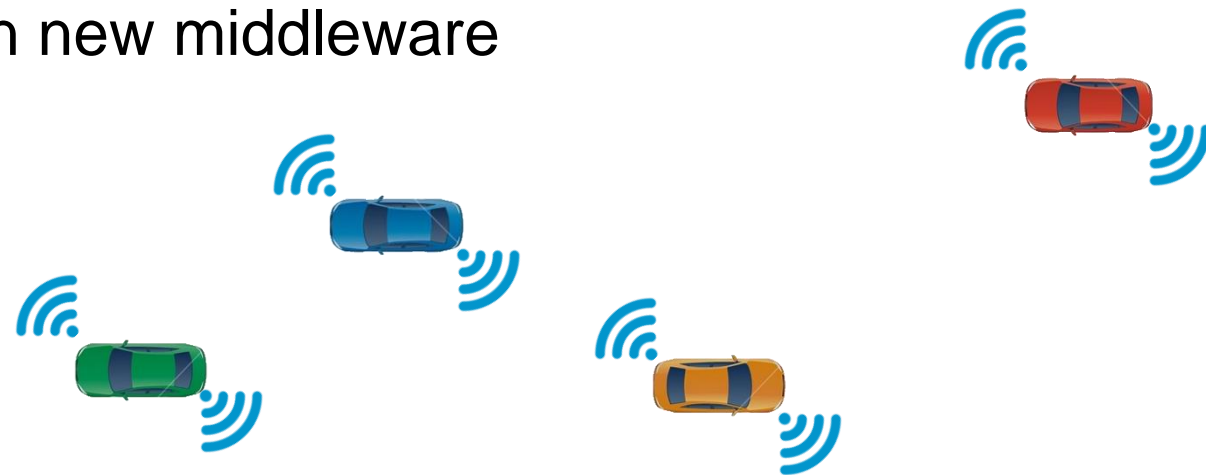
## Discussions about ID vs. account

- Service account is better than ID for service implementations
  - Service provider will identify user account with user ID.
  - Certificate management will be provided with services.



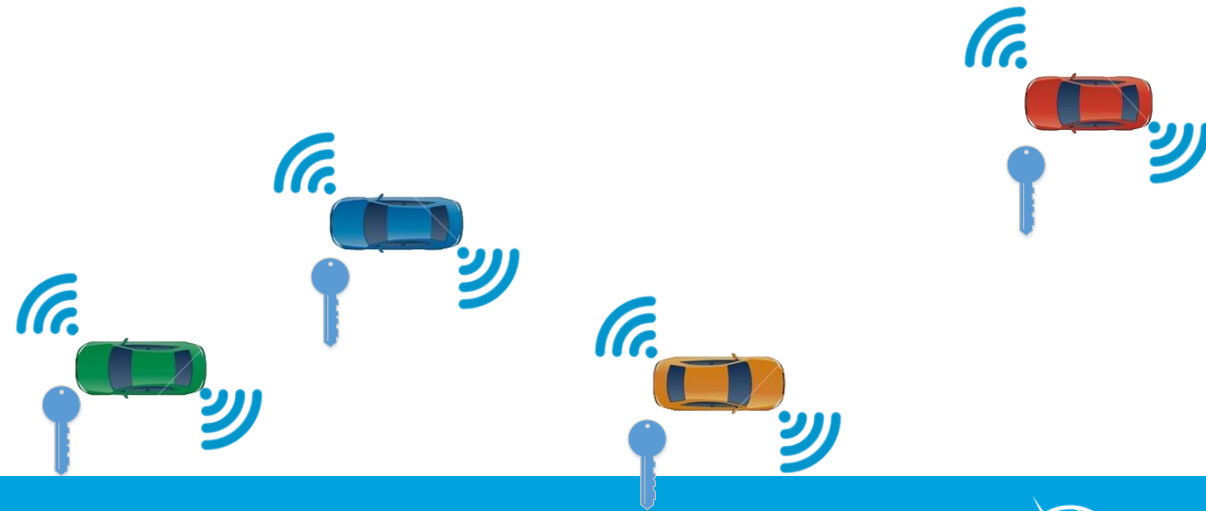
## Challenge of flexible protocol in VDS

- MV and DA talk each other
  - Master vehicle and other vehicles will flexibly talk each other.
  - If server-client-model is applied, their roles shall be changed flexibly.
  - Numbers of actors will be change drastically.
  - Improvement of existing stacks vs. bran new middleware



## Challenge of secure connection in VDS

- Secure connection shall be applied
  - It will be applied on flexible and scalable network.
  - Speedy and light establishment will be required.
  - Certificate based approach vs. edge credential one



## **Strategic direction to be taken by ITU-T**

- Harmonization with SG16, SG17 and other related SGs.
- Open discussions with other SDOs related to autonomous driving and connected vehicles.
- Share challenges, their definitions, goals and discussions.



## Questions for SGLA discussion

- Question 1 ?
- Question 2 ?
- Question 3 ?