AGENDA

V2X Message Types

Communication Hardware

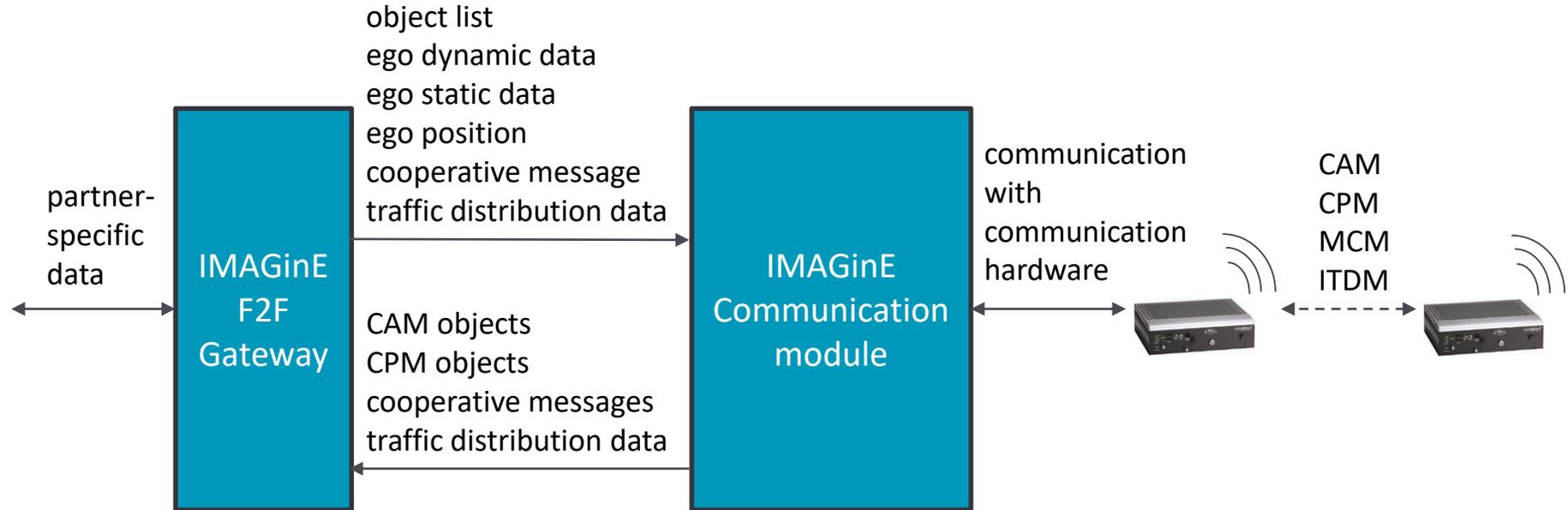IMAGinE Communication Module

V2X Message Types

- CAM (Cooperative Awareness Message)

    Provides information about own position and status

- CPM (Collective Perception Message)

    Exchanges sensor information

- MCM (Maneuver Coordination Message)

    Exchanges trajectories needed for cooperation

- ITDM (IMAGinE Traffic Distribution Message)

    Exchanges traffic distribution data

Communication Hardware

- Hardware used in IMAGinE: waveBEE Plus

- V2X communication capability
  - communication with other devices
  - exchange of V2X messages

- Provides API to interact with services

- Implementation of ETSI standardized V2X message types as well as custom messages

IMAGinE Communication Module

partner-
specific
data

**IMAGinE
F2F
Gateway**

object list
ego dynamic data
ego static data
ego position
cooperative message
traffic distribution data

CAM objects
CPM objects
cooperative messages
traffic distribution data

**IMAGinE
Communication
module**

communication
with
communication
hardware

CAM
CPM
MCM
ITDM

IMAGinE Communication Module

- Interface module between IMAGinE System and communication hardware

- Uses API provided by communication hardware to communicate with services to transfer and receive V2X messages

- Message types CAM / CPM: ETSI standard conform handling in communication hardware, data provided via API

- message types MCM, ITDM: ASN.1 en-/decoding directly in IMAGinE communication module

THANK YOU

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Images: IMAGinE, Unsplash