

Hierarchical Edge AI

TOYOTA

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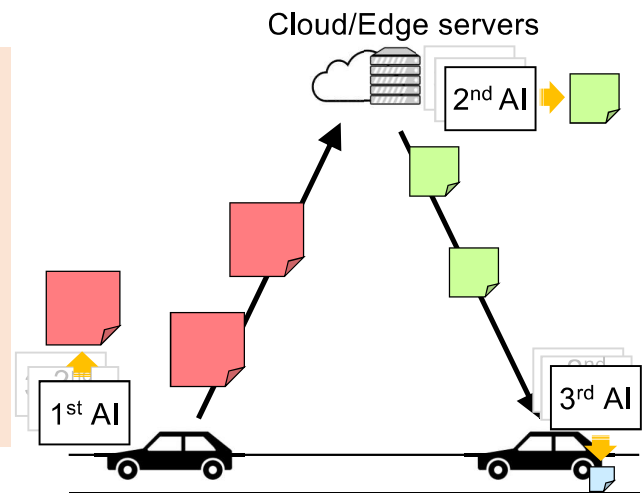
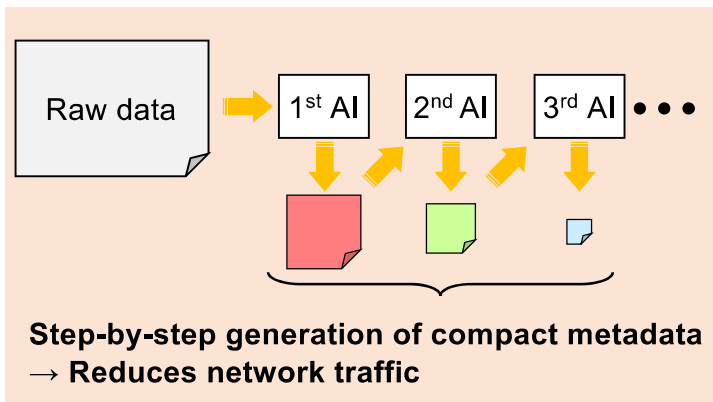
Goal

Sharing raw data between vehicles increases network traffic and server processing load.

- Reduces traffic by abstracting raw data into metadata using hierarchical AI processes
- Mitigates computation load by distributing each AI process

Concept Overview

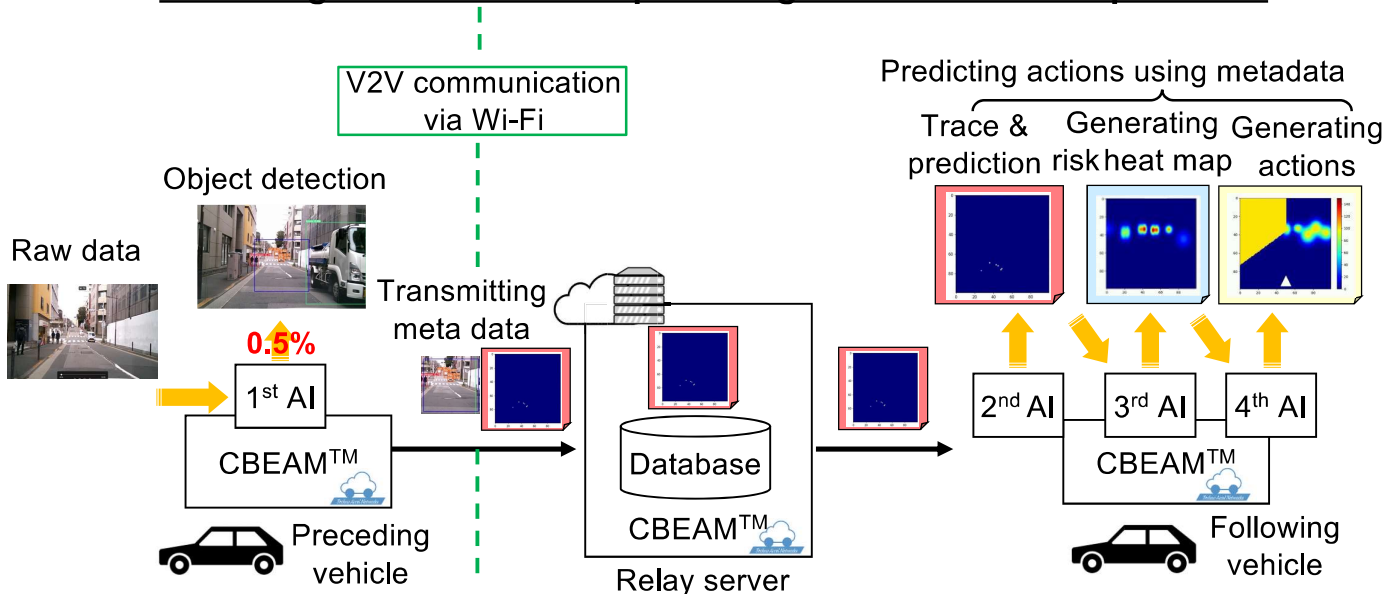
Hierarchical AI processes



Distributing each AI process
→ Mitigates computation load

Demo Overview (Based on Field Experiment)

Predicting the actions of the preceding vehicle via field experiment



※In this experiment, the server is utilized only for the relay. (The 2nd AI operates on the following vehicle.)

CBEAM™ (Cyber Brain Edge AI Module) is a hierarchical edge AI framework developed by Techno-Accel Networks Corporation.