



HACKATHON

Chapter III - 2025





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PITCHING SESSION

WALMOPS



Idea Solution Plan

INTERSECTION
TRAFFIC JAMS



Caused by the
uncoordinated + irrational + inefficient
motion of the vehicles

Our Idea: what if the vehicles could *accelerate together at yield?*
what if the vehicles could *become a Train?*

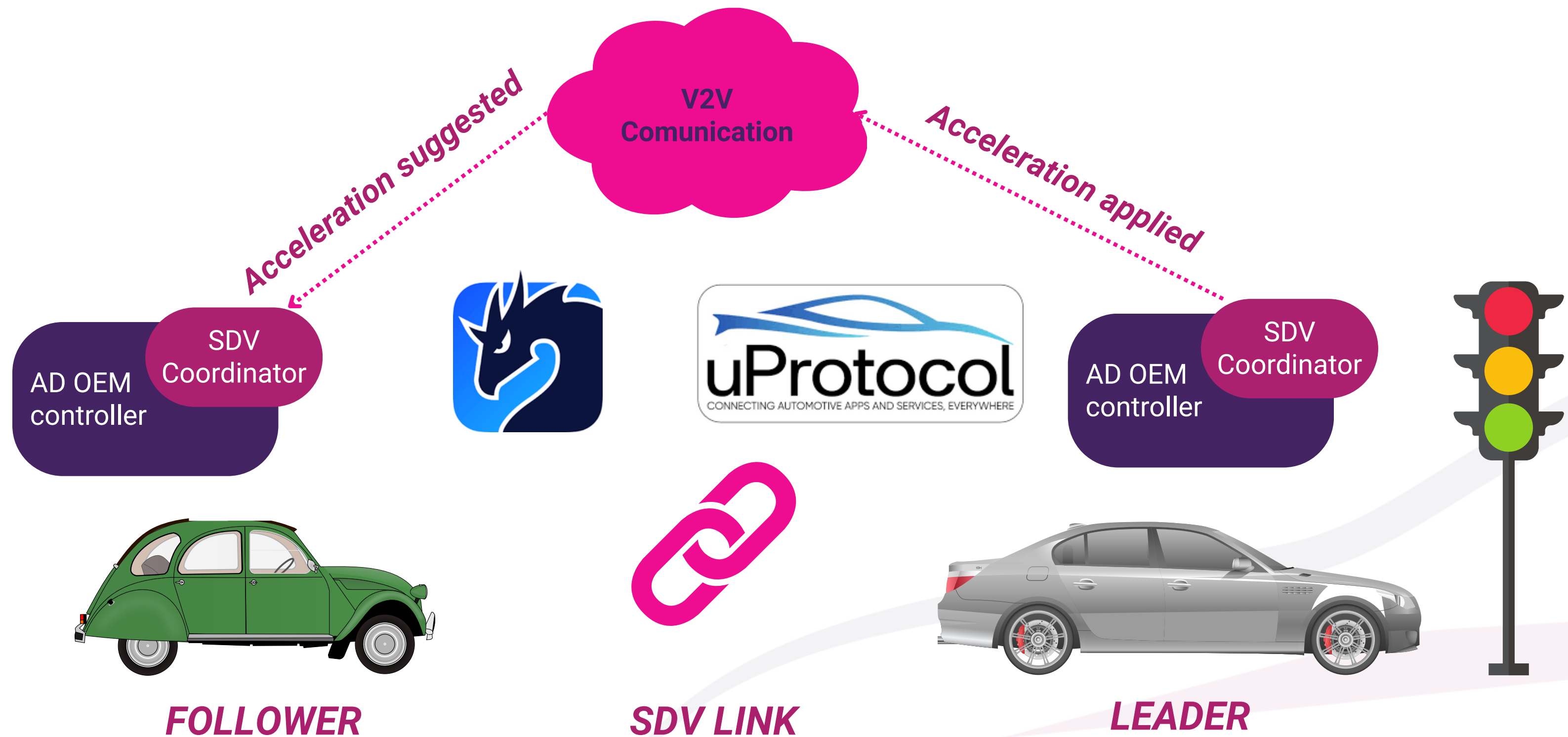
Our Solution: an *SDV based, OEM agnostic, Vehicle2Vehicle* coordinator

Our Plan: Leverage the *Open Source Eclipse SDV* software to obtain a
seamless control and communication between vehicles

Team and Structure



The Product / Service




```
def update_ackermann_control(self, ackermann_control):
    self.ackermann_control = ackermann_control


def toggle_info(self):
    self.show_info = not self.show_info

def notification(self, text, seconds=2.0):
    self.notifications.set_text(text, seconds=seconds)

def error(self, text):
    self.notifications.set_text(text, seconds=2.0)

def render(self):
    if self.show_info:
        info_text = f"Vehicle: Audi Etron\nMap: Town10HD_Opt\nSimulation time: 0:11:30\nSpeed: 9 km/h\nCompass: 90° NE\nAccelerometer: (0.6, 0.0, 9.9)\nGyroscope: (0.0, 0.8, -0.2)\nLocation: (-64.0, 28.0)\nGNSS: (-0.000252, -0.000566)\nHeight: -0 m\nThrottle: [slider]\nSteer: [slider]\nBrake: [slider]\nReverse: [checkbox]\nHand brake: [checkbox]\nManual: [checkbox]\nGear: 1\nCollision: [checkbox]"
        self.notifications.set_text(info_text, seconds=2.0)
    self.render_vehicle()
    self.render_map()
    self.render_ui()
    self.render_notifications()
    self.render_collision()
    self.render_debug()
    self.render_status_bar()
```

pygame window



Obstacle: Audi Etron at 1.6 m (total: 1356)

```
ImuMeasurementSerDe { accelerometer: Vector3DSerDe { x: -0.62158704, y: -5.8
: 9.806756 }, gyroscope: Vector3DSerDe { x: -7.50373e-5, y: -0.002906561, z: 0.0
compass: 1.5768387 }
Deserialized just fine type: imu
[2025-10-01T19:10:44Z INFO ego_vehicle_sensor_subscriber] Payload contents for
s
ImuMeasurementSerDe { accelerometer: Vector3DSerDe { x: -1.3189245, y: -0.00
: 9.818317 }, gyroscope: Vector3DSerDe { x: 9.823296e-5, y: 0.0025706133, z: 0.
, c
Des
s
Vehicle: Audi Etron
Map: Town10HD_Opt
Simulation time: 0:11:30
Speed: 6 km/h
Compass: 89° NE
Accelerometer: (-0.5, 0.0, 9.8)
Gyroscope: (-0.0, 0.1, 0.6)
Location: (-70.5, 28.1)
GNSS: (-0.000252, -0.000625)
Height: -0 m
Throttle: [slider]
Steer: [slider]
Brake: [slider]
Reverse: [checkbox]
Hand brake: [checkbox]
Manual: [checkbox]
Gear: 1
Collision: [checkbox]
Des
s
[20
s
ImuMeasurementSerDe { accelerometer: Vector3DSerDe { x: 0.5663889, y: 0.0109
```


The Added Value

Real life problem solver



According to IAmExpat, in Munich **drivers lost 56 hours** a year in traffic jams

Flexibility of application



It can be applied in any traffic jam situation:
intersections, highway, yield situations

SDV OEM Agnostic



The solution **leverages the open source SDV** to **suggest an acceleration, independent of the OEM** producer

V2V



The solution does not focus only on one vehicle,
but **coordinates 2 or more vehicles**



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Thank you Eclipse Foundation
Thank you Berlin!

