DatexII at Volvo Cars

DatexII at Volvo Cars, Security Class: Public

2021.05.25

Volvo Connected Safety – a C-ITS service since 2016

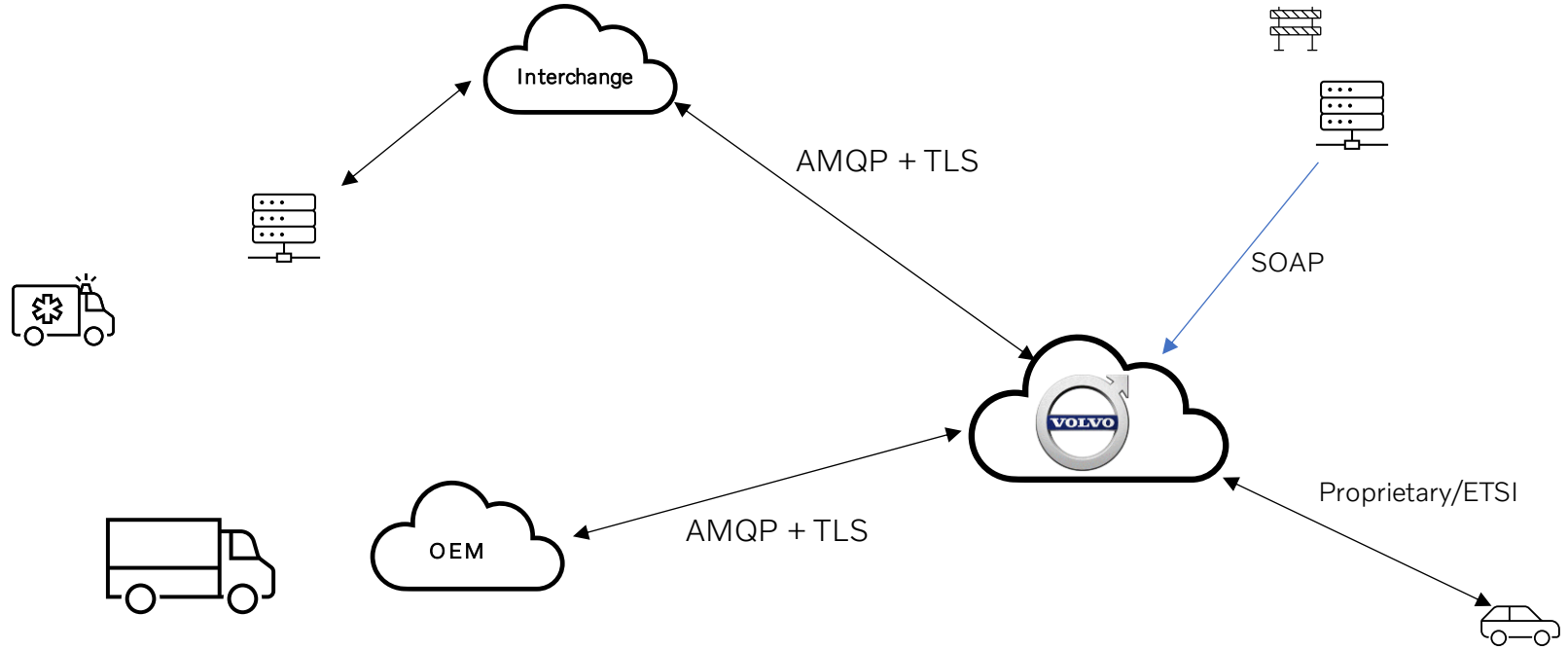
Slippery Road Alert

1. Cars report low friction events to Volvo Cloud.
2. Volvo Cloud aggregates and analyses event data.
3. Volvo Cloud determines road segments with a slippery road situation.
4. Cars that approach these segments are warned about the situation.

Hazard Light Alert

1. Cars report activation of hazard light to Volvo Cloud.
2. Volvo Cloud aggregates and analyses event data.
3. Volvo Cloud determines road segments with a hazard situation.
4. Cars that approach these segments are warned about the situation.

Exchange: DatexII + C-Roads Interface 2



Nordic WAY

DatexII v 2.3 with level B extensions

- Exporting slippery road data
- Exporting hazard light warning
- Importing roadworks data

DatexII v 3.0 with level B extensions

- Roadworks Warnings
- Emergency Vehicle Warnings

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DatexII v 3.0 - SRTI profile

- Hazard Light Alert – Obstacle on road
- Slippery Road Alert – Temporary Slippery Road

Reflections

- We chose DatexII because it provided the most mature information model for road safety data at the time (2015).
- The progression from 2.3 to 3.0 and the modularisation is a great improvement for usage.
- The navigable UML model is the "killer app" of DatexII.
- The extension mechanism provides great flexibility especially in research and pre-deployment contexts.
- The XML encoding, however archaic, is the most usable delivery mechanism due to its flexibility.
- The model is naturally skewed towards road operator data sets, we have used many of the elements in a "re-interpreted" way to fulfill some use-cases.
- Profiles is a good concept for contracts, but in the implementation you usually end up using the complete schemas, since you want to re-use your code.
- The tool chain for creating extensions (EA + generation tool) is a steep learning curve.
- The website and community around DatexII is a really great asset.


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