ORU Properties

Preliminary feedback

ORU properties data table

ORU cases	Physical	Functional	Behavioral
Vehicles			
23. Police vehicles	Special livery, markings, audible, light signals.	Rapid, safety-critical transport. Law enforcement: road and vehicle	Higher relative speeds. Special rights of passage. Exemptions from traffic laws. Signal motorists to stop.
24. Rescue vehicles	Special livery, markings, audible, light signals.	Rapid, safety-critical transport.	Higher relative speeds. Special rights of passage. Exemptions from traffic laws.
25. Disabled (broken down) vehicles	Abnormal position on roadway. Hazard flashers.		May be stopped in emergency lane, road shoulder, protruding or fully in lanes of travel. May move to rejoin traffic. May have occupants nearby.
26. Other automated/ connected (V2V) vehicles			These vehicles need to have two-way information exchange with road side unit or other automated/connected vehicles.
Pedestrians/VRU			
27. Child pedestrian	Size Vulnerable Children us slowly, also child are sn adult, whic more dama crash.		Slow speed edictable motion ren may perform iregular viour,such as sudden cut dden swerve
28. Adult pedestrian	They are vulnerable during a crash with		

- **Common and special properties**
- **Basis for safety needs/requirements**
- **Request input to improve table**

Performance-relevant ORU properties

Physical

- Mobility (fixed/mobile)
- Dimensions
- Path (fixed/free)
- Visual markings
- Audible signals
- Light signals
- Visibility
- Vulnerability
- Location

Functional

- Personal transport
- Mass transit
- Transport of children
- Commercial goods
- Dangerous goods
- Exceptional cargo
- NRMM
- Emergency
- Law enforcement

Behavioral

- Relative speeds
- Trajectories
- Predictability
- Authority
- Legal exemptions
- V2V relationships

Next steps

Preliminary input is indicative of a possible framework linking property-based classifications to performance requirements.

For example, subsets of vehicles have distinctive markings and signals to warn drivers of possible exceptional behaviors. This fact suggests a need for ADS to detect such markings and signals in order to classify the vehicles and thereby respond in accordance with the information the markings and signals are intended to convey.

The task pilot proposes to continue discussions of the properties and their relevance to ADS performance towards proposing possible ADS safety requirements for FRAV consideration.