
“Other Road Users (ORU)” Status Summary

Work plans:

For each specific ORU that ADS could encounter during DDT, FRAV intends to follow three steps. Our task is to provide a proposal for Step 1 to support FRAV reaching an initial agreement during its next session in May.

Step 1: Identify categories of other road users and agree on terms and definitions for these categories (for example, “police” might be a term for the category of road users with authority for law enforcement);

Step 2 (June): Clarify ADS safety needs regard to different ORU (example: cases where police officer may need to know if ADS engaged);

Step 3 (July): Define the general ADS safety requirements corresponding to ORU's safety needs (example: ADS vehicle should have an indicator of the ADS status for police officers).

Current Consensus:

The experts agreed that:

- Safe ADS interactions with other road users (ORU) depend upon the physical, functional, and/or behavioral properties of these ORU. Therefore, ADS requirements should address safety needs raised by these properties or attributes.
- In some instances, the definition of ORU categories based on common properties may be useful in defining safety requirements.
- However, the value in defining categories depends upon the safety needs being addressed (i.e., an ORU category may not be needed to ensure safe ADS interactions across all ORU).
- The work stream should consider the safety needs of individual ORU cases and define terms for categories of ORU as useful in defining the safety requirements.
- Proposes five main categories for ORU (“vehicles”, “pedestrians”, “cyclists”, “animals”, and “obstacles”). “vehicles”, “pedestrians”, and “cyclists” should be covered, but FRAV should consider whether animals and obstacles should be included within to the scope of ORU.
- Category “vehicles”, “pedestrians”, and “cyclists” (and, if needed, “animals” and “obstacles”) require further breakdowns.(showed in annex 1)

Next Steps:

- Elaboration of ORU category table (Request for comments from FRAV stakeholders)
- Determine whether “animals & obstacles safety topics” should be considered within the scope of ORU task;
- Form safety needs related to the categories based on the FRAV topics.
- Gather inputs;
- Next session

Annex 1:

Table of Other Road User Definition:

The following ORU cases were identified as a means to determine safety needs that should be addressed:

Category	Subclass	Enumerations	Further views
vehicle	Common Vehicle/ Emergency Vehicle/ Special Vehicle	<ol style="list-style-type: none"> 1. Passenger cars 2. Buses 3. School buses 4. Trams 5. Goods vehicles 6. Dangerous goods vehicles 7. Long, large vehicles 8. Vehicles transporting protruding cargo 9. Vehicles towing trailers 10. Vehicles towing combination trailers 11. Special convoys, slow-moving vehicles 12. Caravans/recreational vehicles, including towing trailers 13. Agricultural vehicles 14. Fire trucks 15. Ambulances 16. Police vehicles 17. Rescue vehicles 18. Street sweepers 19. Road sprinklers 20. Training cars 21. Cranes, NRMM 22. Other automated/connected (V2V) vehicles 23. Disabled (broken down) vehicles 	<ol style="list-style-type: none"> 1. The breakdown depends upon the physical, functional, and behavioral properties of the subsets and their relevance to ADS safety and performance. 2. Traffic laws may be relevant to the definition of ORU categories. 3. Consider the diversity of cases in order to identify common properties that can be the basis for defining categories.

Category	Enumerations	
Pedestrian	24.Child pedestrian 25.Adult pedestrian 26.Persons with disabilities 27.Hearing-impaired pedestrians 28.Visually-impaired pedestrians 29.Road-work crews 30.Police officer (on foot) 31.Police officer (in vehicle) 32.Persons directing traffic 33.Persons pushing strollers 34.Persons in wheelchairs 35.Motorists on the roadside (stranded vehicles, changing tire)	<p>Pedestrians share the common property (of being human beings traveling on foot), however the properties of special groups (children, adults, police officers, road-work crews, persons with disabilities plus variations such as persons in wheelchairs, with impaired hearing or vision, pushing a stroller or walking an animal, etc.) raise elements that may be important to safety.</p>

Category	Enumerations	
Cyclist	36.Bicyclists 37.e-Bike users 38.Skaters (roller, skateboard) 39.Motorcycles 40.Mopeds/scooters 41.Powered three-wheelers 42.Quadricycles	

Category	Enumerations	Further views	
animals	Small size animals	1. Neither "animals" nor "obstacles" are willful road users or would be expected to consciously interact with an ADS vehicle. Therefore, need FRAV to confirm whether these categories need to be addressed under "other road users".	
	Medium size animals		
	Large size animals		
Category	Enumerations		
Obstacles	Stationary vehicles		
	Debris		
	Construction equipment		