SAREF extension for Automotive

Review

* Introduction and context



Smart Appliances REFerence ontology (SAREF) as “interoperability language” in cross-domain IoT ecosystems with several verticals: Smart Cities, Smart AgriFood, Smart Industry & Manufacturing, Automotive, eHealth/Ageing-well and Wearables.

The core SAREF ontology (<https://w3id.org/saref>) imports the W3C time ontology, and defines devices with there states, properties, functions, controls… With 15 classes and 82 properties, it is not a lightweight domain-independant ontology (larger than the W3C SSN/SOSA ontologies for instance).



SAREF has extensions for specific domains such as the energy domain (http://saref.linkeddata.es/).

* SAREF4AUTO

SAREF4AUTO is an extension dedicated to the automotive domain (<https://portal.etsi.org/STF/STFs/STFHomePages/STF566>).

* Requirements

They reused the work of existing consortium and European projects: AIOTI,OneM2M, ETSI TC ITS, DATEX-II, Sensoris, W3C Automotive Ontology Group, H2020 Autopilot, H2020 SINCHRONICITY, ENSEMBLE, TransAID.

Use cases include:

* Platooning
* Automated Valet Parking (AVP)
* Cooperative Perception Service (CPS)
* Vulnerable Road Users (VRUs)
	+ Evaluation

To evaluate SAREF4AUTO, competency questions are stated, for instance:

* What type of vehicles are there?
* What are critical objects?
* What is the overall shape of an entity?

Those question come from practical requirement expressed by experts of the given se cases and will be used as a metric of the domain coverage of the ontology extension.

* Release:

The SAREF4AUTO ontology is planned to be delivered in June 2020 as an ETSI Technical Specification