

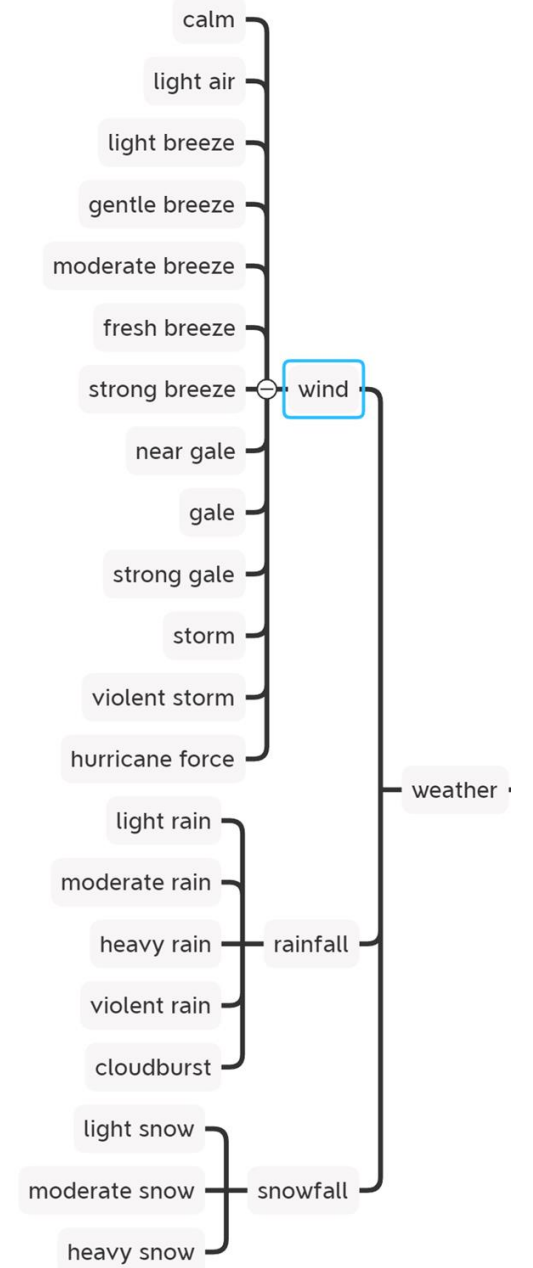
ASAM OpenODD Webinar

- WP1: ODD Attributes

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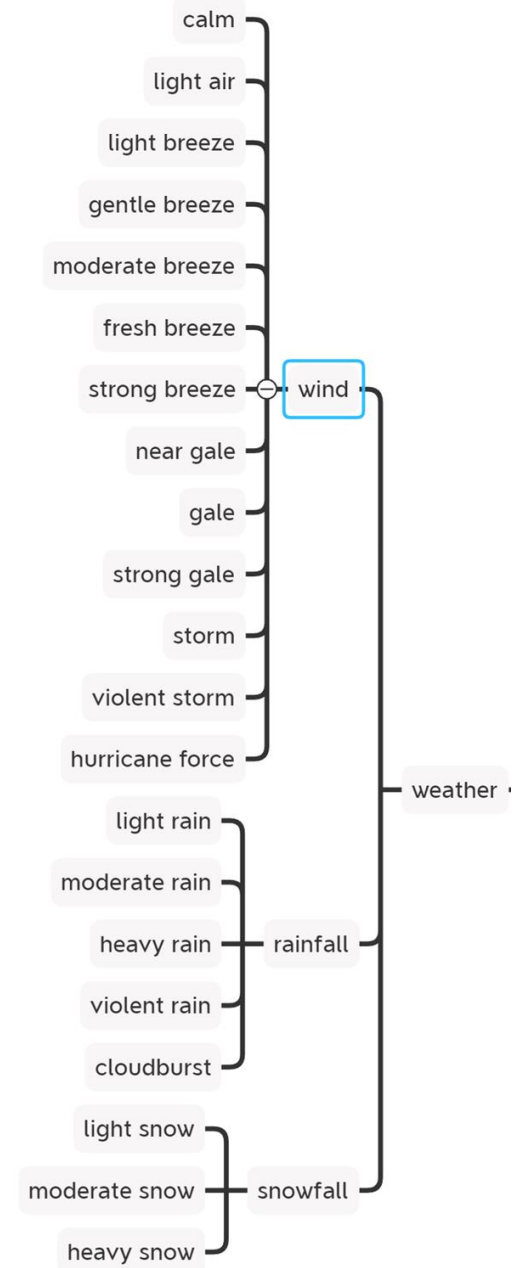
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Intro and Scope

WP1: ODD Attributes

- *The goal is not to standardize a specific ODD Taxonomy*
- *Provide a format template/approach for ODD attributes that fulfils the reqs. Of the rest of the standard*
- *This is a concept Project, not yet a full standardization project*

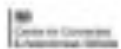


Approach


WP1: ODD Attributes

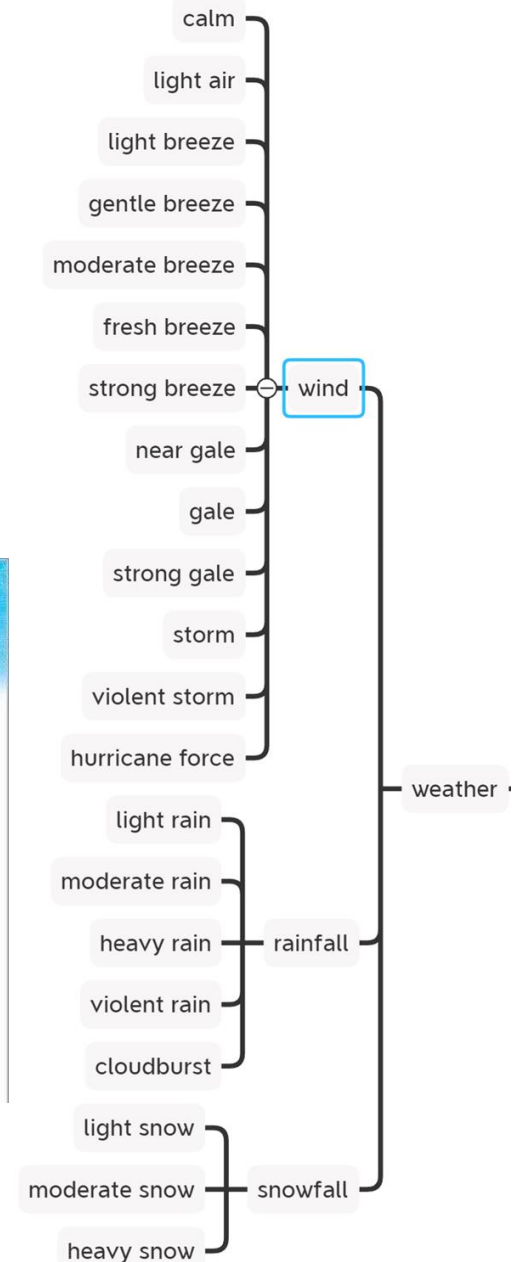
- Starting from existing standardized ODD Taxonomies

BSI PAS 1883



AVSC Lexicon

 Automated Vehicle Safety Consortium™ <small>A Program of SAE ITC</small>	Automated Vehicle Safety Consortium™ Best Practice	AVSC00002202004
	AVSC Best Practice for Describing an Operational Design Domain: Conceptual Framework and Lexicon	Issued 2020-04
Rationale This document provides a conceptual framework and the parameters of interest, along with operational definitions, that manufacturers and developers can use to describe an Automated Driving System (ADS) Operational Design Domain (ODD). The document seeks to establish commonly defined terms and a framework in which to apply them. Where applicable, labels, definitions, and measurement ranges are provided to promote consistent communication and help ensure that users' ADS expectations are aligned with capabilities.		



Approach

WP1: ODD Attributes

- Taxonomies Comparison

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Examples for describing the time and space scales include:

- "the average rainfall intensity measured by a meteorological rain gauge over a period of a minute";
- "the average rainfall in a rainfall radar pixel of specified size in km".

Due to the natural variability, instantaneous rainfall values that are potentially significantly higher than this headline value might occur at the precise location of the CAV.

NOTE 2 In addition to the average rainfall intensity, the type of rainfall may also be categorized to inform the degree of spatial variability and the rate of onset as well as the relative abundance of smaller or larger drop sizes. Rainfall may be described as:

- dynamic (commonly "frontal") – associated with large scale weather systems;
- convective – typically showery and potentially very intense;
- orographic (commonly "relief") – associated with hilly/mountainous terrain.

NOTE 3 Stakeholders may classify rainfall intensity as follows:

- light rain: when the precipitation rate is < 2.5 mm/h;
- moderate rain: when the precipitation rate is between 2.5 mm/h and 7.6 mm/h;
- heavy rain: when the precipitation rate is between 7.6 mm/h and 50 mm/h;
- violent rain: when the precipitation rate is between 50 mm/h and 100 mm/h;
- cloudburst: when the precipitation rate is > 100 mm/h.

NOTE 4 Stakeholders may choose a different categorization of rain.

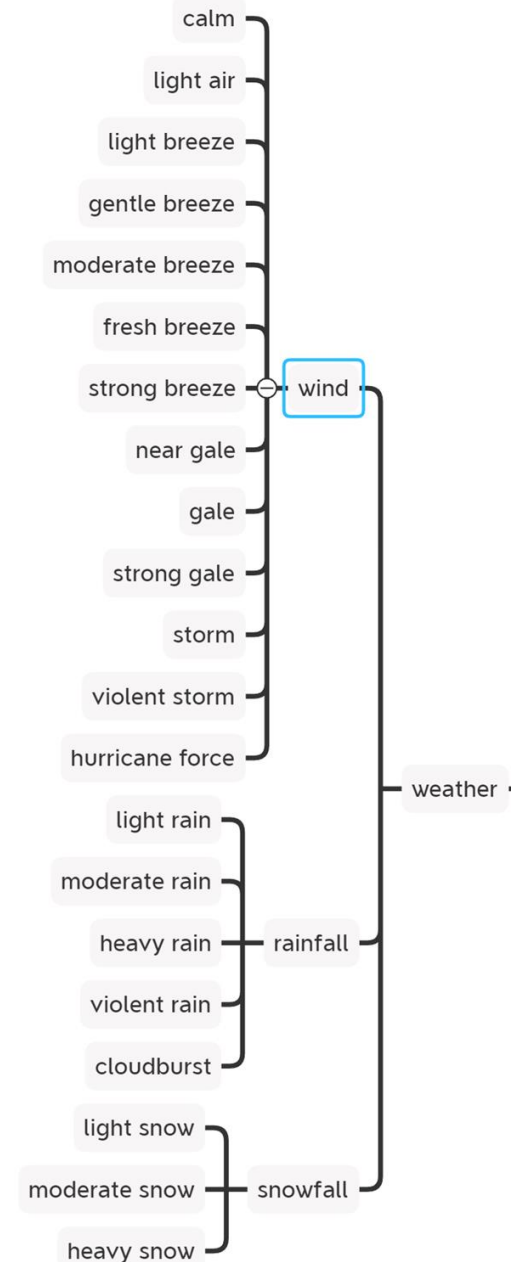
AVSC Lexicon

TABLE 1 Rainfall Rates [16]

Description	Inches per Hour	Centimeters per Hour
Light rain	0.01 (trace)-0.10	< 0.25
Moderate rain	0.11 - 0.30	0.26 - 0.76
Heavy rain	>0.3	> 0.76

TABLE 2 Fog Severity (adapted from NWS Experimental Fog Severity Index) [19]

Fog Severity	Visibility in Feet (Meters)
5	200 (61)-0
4	800 (244)-200 (61)
3	2,640 (805)-800 (244)
2	5,280 (1609) (mist) -2,640 (805)
1	>5,280 (1609) (mist)

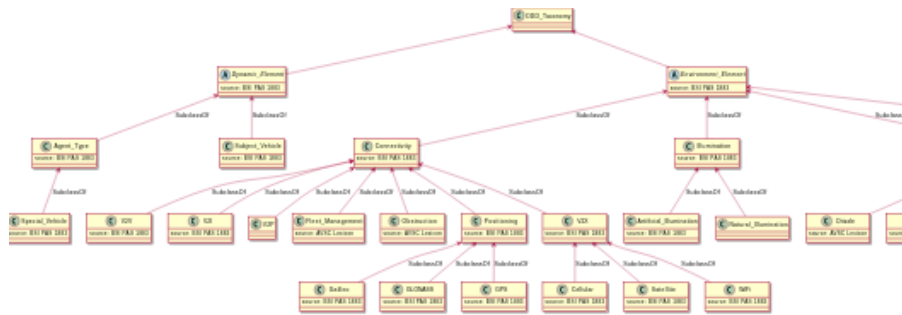


Solution

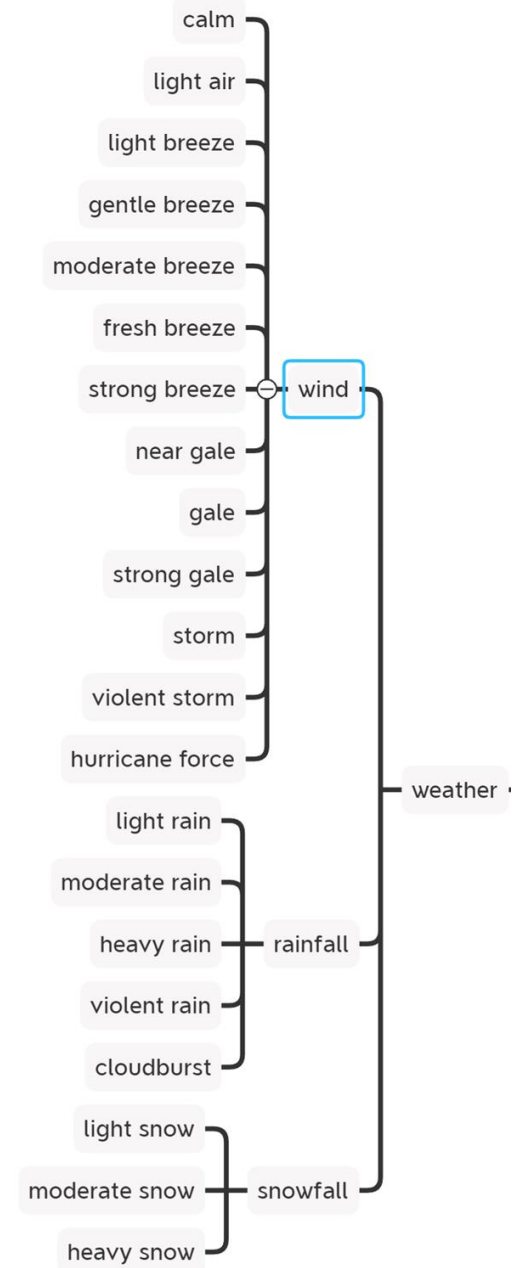
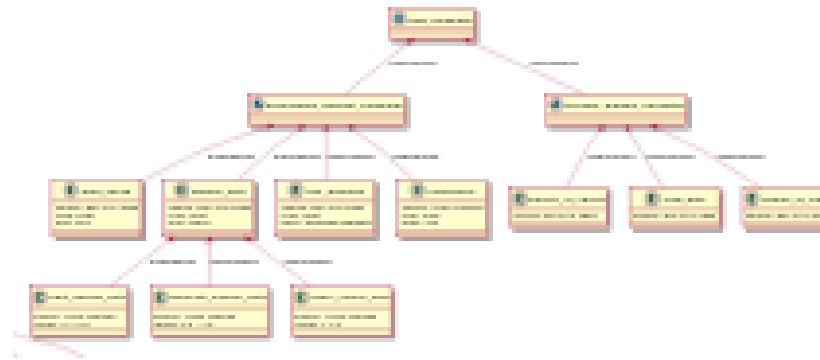
WP1: ODD Attributes

- Distinction between Taxonomical attributes that declare concepts, and Parameter attributes, that measure or define concepts

Taxonomical concepts



ODD Parameters

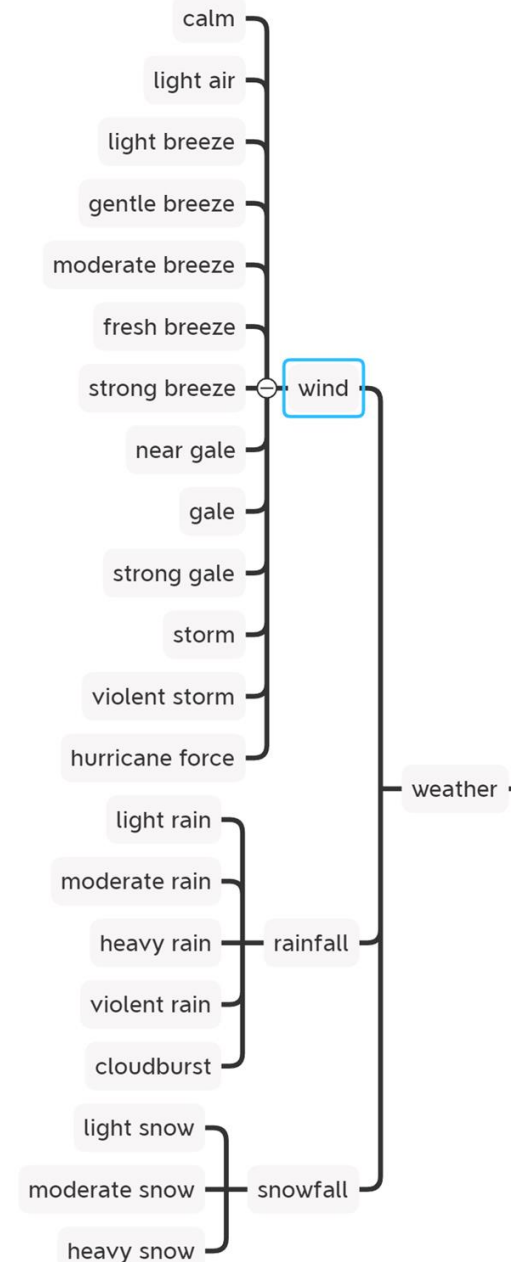


Solution Rationale

WP1: ODD Attributes

- Distinction between Taxonomical attributes that declare concepts, and Parameter attributes, that measure or define concepts
- Allows for multiple ODD_parameters to define/measure the same Taxonomical attributes
- Easier to extend and maintain
- Enables reusability of concepts and adaptability to different definition approaches

Note: this is a concept project so this is a suggested approach, we are not doubling down on a specific implementation solution yet



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That was all, thank you!

