# IEEE P2846: Assumptions for Models in Safety-Related Automated Vehicle Behavior

## March - June 2020 Status Report
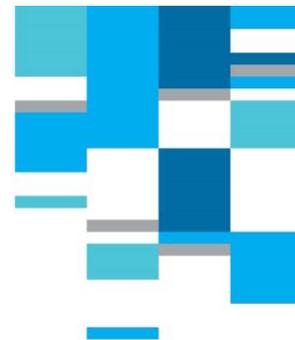
This [scope of this standard](#) is to describe the minimum set of reasonable assumptions used in foreseeable scenarios to be considered for road vehicles in the development of safety-related models, to identify verification methods for conformance, and to define an example model conformant with the standard.

## Accomplishments

While the COVID-19 pandemic has impacted the Working Group's ability to meet in-person, overall we have still made great strides in developing this standard during these challenging times. Here are some of our key accomplishments during this time period (March - June 2020):

- Elected 2 officers to serve as Vice Chair ([Qi Hommes](#), Waymo) and Secretary ([Kevin Gay](#), Uber ATG) to complete the leadership team which also includes the Chair ([Jack Weast](#), Intel)
- Conducted a 2-day virtual workshop to outline plan for accelerating content development
- Established 4 separate task forces to develop key sections of the content for the standard (see below)
- Revised the Project Authorization Request and resubmitted to the IEEE New Standards Committee
- Initiated the liaison request with ISO 21448 to ensure alignment between these emerging standards
- Invited speakers from NHTSA, NIST, Intel, nVidia, Motional, Mapless AI, and others to present technically relevant materials to working group members to further inform development process

## Task Force Updates

Thus far, the following task forces have been established (more to follow):



**Task Force 1:** Define the rationale for scenario selection and identify the scenarios for use in the development of assumptions for road users and operators within each scenario. (e.g. VRU's, Intersections). For example, one of the four initial scenarios is a pedestrian crossing the street, and it identifies assumptions for pedestrian velocity, acceleration, heading angle, heading rate change and reaction time.

**Task Force 2:** Survey the landscape of existing models (e.g. RSS, SFF, Rulebook, etc.) and identify the set of common attributes and their descriptions for suitable models. Examples of attributes for suitable models could include: Applicable to All Traffic Scenarios, Technology Neutral, and Simulatable.

**Task Force 3:** Identify a common set of source definitions and taxonomy for use in P2846 (such as model, attribute, assumptions, scenario, etc) from published and in-development standards and best practices.

**Task Force 4:** Identify adjacent standards for P2846 alignment and establish working relationships to avoid redundancy and technical contradictions, such as ISO 21448.
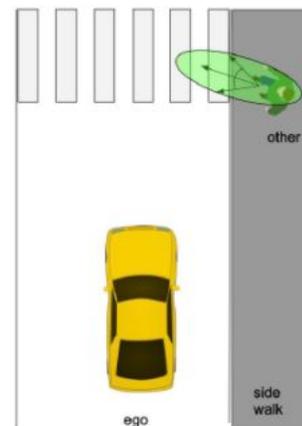
## Wrap-Up & More Information

The Working Group is targeting a draft standard available for public comment by early 2021. To keep our stakeholders informed as we move through the development process we will continue to publish quarterly updates on our progress. For more information and a schedule of upcoming meetings please see our [public site](#) or contact one of the Working Group officers.