This is NOT a test: Inaugural AV safety standard published

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On April 1, 2020, Underwriters Laboratories (UL) published the first dedicated safety standard for fully autonomous vehicles: UL 4600, “Standard for Evaluation of Autonomous Products”.

UL 4600 is a starting point for addressing the concern of many autonomous vehicle stakeholders: is their product “safe enough” given the complete absence of human supervision? To ensure that the appropriate parties were at the table, UL created a diverse body of international stakeholders to develop the standard, including government agencies, academia, autonomous vehicle developers, technology suppliers, insurance companies and many others.

As it stands, UL 4600 serves as a guide for autonomous vehicle designers to make a “safety case” for their products. At a high level, this includes three elements: goals, argumentation and evidence. It asks developers what it means to be safe in a specific context (*e.g.* do not hit other vehicles), how that goal will be achieved and what is the evidence that these arguments are valid.

In that respect, UL 4600 is essentially a standard of care, not a test. It does not prescribe hardware or software specifications. Instead, it recognizes there are no humans in charge and specifies a level of care that would ensure an acceptable safety system. In that regard, it provides developers with an extensive list of factors that will essentially force the question “did you think of that”?

Notably, UL 4600 does not provide guidance on the following:

- Performance criteria;
- Which technology to use;
- Pass/fail criteria for safety;
- Benchmarks for road testing of prototype vehicles;
- Acceptable risk levels; or
- Ethical decisions.

While UL 4600 is a huge leap in the safety direction, many questions remain up in the air surrounding certification, potential conflicts with existing safety standards and non-

compliance. Although the document is promoted as fluid and evolving, it will certainly be interesting to follow how manufacturers, designers and developers alike will adhere to this new standard.

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