The Public Safety Case

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Why do we regulate safety?

To correct market failures, particularly those that could undermine safety or trust.

- Safety: Where developers lack internal or external incentives to act reasonably safely.
- Trust: Where the public lacks information, time, or other resources to decide if something is reasonably safe.

This regulation involves the exercise of a government’s authority and credibility.
How safe is safe enough?

• We don’t know, and we won’t know!

• The public expects perfect safety.

• But nothing is perfectly safe today (including humans).
Today’s regulation is also imperfect

• These imperfections might advance or stymie automated driving.

• Automated driving might ameliorate or exacerbate these imperfections.
Trust matters

Shift from assessing the product to assessing its developer/deployer, as products will be:

– Diverse.
– Complex.
– Dynamic.
– Part of broader systems.
– Services!

Benchmark for assessing performance may shift from point of sale to point of use!
Diversity in assessment

• There is no single universal method of safety assessment.
• Some philosophical disputes may never be resolved empirically.
• Assessment is also a subject of innovation! And its high cost provides an economic incentive.
• This innovation is critical for driving automation and other technologies.
The public safety case

• To manage public expectations.

• To obtain an approval or exemption.
To manage public expectations

• A developer shares its safety philosophy with the public through data and analysis:

• How does the developer define, design for, establish, and monitor reasonable safety over the lifetime of its system?

• What are the system’s risks and opportunities?
To obtain an approval or exemption

• A developer seeks a regulatory approval or exemption.

• The developer makes a public argument for the safety of its system.

• The regulator, with input from the public, evaluates the reasonableness of that argument.

• The regulator exercises substantial discretion and receives substantial deference.
Why a public safety case matters

• Regulators can’t have all the answers – but they can get better at asking key questions.

• Developers need space for technical innovation.

• Regulators need space for regulatory innovation.

• The public is an essential partner.
Why public expectations matter

• Legislators and regulators act in the context of public opinion.

• Civil liability often depends on the perceived reasonableness of a company or product.
Public safety case as option or obligation

• A lot is already legal!
• Developers can always choose to comply with or seek to change existing law.
• Nonetheless:
  – There are some regulatory gates.
  – There may be some legal obstacles.
  – There will be a post-crash minefield.
• A public safety case can be a stick or carrot.
Predicates for a public safety case

• More expansive and explicit exemption authority (federal and state).

• Cultivation of technology-agnostic safety expertise.

• More robust public disclosure mechanisms.
Evaluating the public safety case (Metaregulation)

Reasonableness rather than correctness.

• Substantial evidence (agency action).
• Arbitrary and capricious with hard look (same).
• Daubert (expert witnesses).
• Materiality (securities disclosures).
• Exclusively public data.
My prediction

When an automated driving developer shares its safety philosophy with the public through data and analysis...

...automated driving will be truly imminent.
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