NTC Report May 2018

Safety Assurance for Automated Driving Systems: Consultation Regulation Impact Statement

I find the report generally to be thorough, well supported with sound evidence and rational argument, and with some limited data where available.

The concept of self-certification is raised on several occasions throughout the document. While it is appreciated this is discussed in previous and other documents, it is my view that broad support for safety assurance is misled without establishing criteria that defines "self-certification". I make two comments from my reading of this extensive and valuable report namely the issues of (1) vehicles crashworthiness, and (2) safety philosophy.

Crashworthiness improvement has had a major contribution to vehicle safety since it was first introduced in Australia during the 1960s (there is an extensive body of evidence to support this). Prior to this milestone, vehicle manufacturers generally set their own standards, often with little concern for occupant protection (there are many reports available that support this claim). It is important to question what could happen to secondary safety under a self-certification regime?

As pointed out in the report, the vehicle industry is enthusiastically embracing a future market where technology will supposedly lead to no or minimal crashes as the human element in crash causation is effectively removed. Without explicit criteria, this will undoubtedly lead to an attitude where crashworthiness features such as structural improvement, vehicle restraints and other safety measures shown to reduce the burden of injury will no longer be seen as necessary.

Significant savings in production costs would be an attractive incentive to the industry with potential negative societal effects in ADSE. Already, I have seen one or two demonstration vehicles, capable of high speeds that I would judge to have significantly poor crashworthiness.

The proposed list of 11 - self-certify criteria listed in the report makes no mention of the need for crashworthiness assessment as part of self-certification. But surely, this will still be a critical and valid criteria certainly for the next 30 or 40 years if not beyond as these vehicles enter the fleet in the presence of non-automated vehicles. The work of governments around the world in bringing about these safety benefits through regulation and consumer testing will be lost leaving a potential large societal safety disbenefit.

I believe there is a need for a more complete discussion on this topic and where necessary some negative safety costs need to be taken into account in your computations.

Safety Philosophy has been widely adopted as a theoretical basis for road safety improvements in Australia. A report such as yours with a focus on addressing the safety assurance for automated driving systems should surely come with a fundamental inclusion of safety philosophy as a backbone to the discussions. All national and state governments in Australia (and elsewhere) are committed to a Towards ZERO safety philosophy. The Safe Systems approach flowing from a Towards ZERO target has been widely adopted for road safety improvements in this country, yet nowhere did I see any serious discussion of safety philosophy as a fundamental philosophy for automated driving system safety.

I trust you will consider these two issues seriously in your final report.

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