

Self-driving vehicles: new safety ambition

Consultation response by the Motorcycle Action Group

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Introduction

The Motorcycle Action Group (MAG) is the leading riders' rights organisation in the UK. MAG membership consists of over 8,000 full members and 150,000 affiliates and associates. MAG is a founder member of the Federation of European Motorcycle Associations (FEMA). MAG is no longer a member of the recently formed National Motorcyclists Council (NMC), and the views expressed by the NMC should not necessarily be represented as consistent with those of MAG.

The views of members on this particular subject have been gathered by discussion and debate within MAG's membership and engagement and discussion with the wider riding community, other organisations, academics and the industry.

What are your views on the approach that self-driving vehicles should be expected to achieve an equivalent level of safety to that of a competent and careful human driver?

Whilst MAG broadly supports the ambition of “Connected & Automated Mobility 2025: Realising the benefits of self-driving vehicles in the UK” we have some significant concerns over safety, particularly with respect to self-driving vehicles accommodating the challenge of sharing the roads with motorcyclists. A key point that we ask policy makers to note is that not all road use is for utility purposes. Use of the road as a form of leisure - driving or riding a motorcycle for pleasure - is a legitimate use of the nation’s road infrastructure which needs to be protected throughout the process of technological developments.

Subjectivity

The safety standard of “equivalent to a competent and careful human driver” is entirely subjective and not one that we feel comfortable with. Indeed, a subjective measure for an area of such technological and scientific rigour does seem entirely incongruous. Who decides what is competent and careful, and who decides who decides?

The documentation points out that the average human driver does not meet this standard. It would seem, therefore, that driving examiners should not be given the task of assessing what is competent and careful driving.

It is not safe to assume that only drivers of below average standard will adopt self-driving vehicles. It may well be that self-driving vehicles will be more attractive to safer human drivers. The potential is thus that the average human driver will actually get worse.

The question also needs to be raised of whether the standard for self-driving vehicles is fixed at what is currently considered competent and careful. Is the subjective view of competent and careful the same now as it was 50 years ago, and will it be the same 50 years from now? Revisions to the Highway Code suggest not. We would hope that the subjective view will tend to a higher standard. Do we then potentially see a future where self-driving vehicles are actually designed for a lower standard than the prevailing view for human drivers?

MAG would recommend that a statistical basis for safety standards is developed. This would require an agreed statistical target (which can be made more ambitious over time), statistical data gathering which separates human and self-driving data points, and allows accurate modelling extrapolations from testing coupled with mechanisms to potentially suspend or remove licences for vehicles/manufacturers that do not achieve the modelled level in reality.

A fundamental of any statistical measure should be that a minimum safety improvement must be shown for all road users, not just those using the self-driving vehicles. Transfer of risk between road user groups is not acceptable.

We accept that this is a highly complex approach, but is not one we view to be more challenging than the development of self-driving vehicles.

Language and education

The document does recognise the difficulties around the public's understanding of the levels of automation, and also the potential for misrepresentation of capabilities through marketing and branding. There is much evidence of these misunderstandings leading to collisions and casualties.

MAG would recommend that a separate licence should be required for any driver or 'user in control' (UIC) of a self-driving vehicle below level 5. This would demonstrate - and allow enforcement of - a degree of education and understanding of the capabilities and, more importantly, the lack of capability of these transitional vehicles.

Self-driving vehicles accommodating motorcyclists

The largest area of concern for motorcyclists is the ability of self-driving vehicles to safely interact with motorcyclists, and potential implications of mitigation routes that may be taken.

We note that proposed trials and roll-out for self-driving vehicles in the UK will be on motorways. Motorcyclists are the only vulnerable road user group that use motorways and, as such, there is a sense of being used as the canary in the mineshaft.

There is research ^[1] and anecdotal evidence to show that detection systems are less capable of detecting motorcycles than other, larger, vehicles. This clearly places motorcyclists at a higher risk from these vehicles than other road users.

Whilst it is clear that the ambition is that self-driving vehicles should be able to interact safely with all other vehicles and pedestrians, the real world does not seem to be paying sufficient attention to delivering this ambition. This is starkly demonstrated by announcements that Euro NCAP testing for detection and reaction to motorcycles is only scheduled to begin in 2023 ^[2]. This has apparently come about only due to large amounts of lobbying by motorcycle groups.

MAG would recommend that motorcyclists are the first ones to be consulted, considered and welcomed into the debate, rather than the current situation where they are considered only as an afterthought.

Recent news stories of Teslas killing two motorcyclists within a month in the US ^[3], revelations that Tesla autopilot can switch off within a period of one second prior to a collision ^[4] and news that the testing methods of the new Euro NCAP motorcycle tests can be cheated by manufacturers ^[5] in a similar way to diesel emissions tests, are all subjects that need to be considered with the highest level of gravity. We have little doubt that issues can be resolved, but only if they are made a priority by the development process rather than a 'glitch' to be reported by the victims.

One potential solution that we particularly fear being taken is separation between self-driving vehicles and those vehicles that they cannot accommodate safely. Any consideration for segregated lanes or zones where access to motorcycles is restricted or removed would not in our view be a reasonable or fair route.

MAG recommends that a specific principle needs to be included in any legislation or regulations which states that new self-driving vehicles must adapt to human road users. There should be no

requirement for human road users to adapt to self-driving vehicles. The technology is there to serve the needs of humans, not the opposite. There should be no scenario which prohibits human road users from road space to allow for the limitations of AV technology. If the technology cannot co-exist with humans, the technology should be prohibited, not the humans.

References:

1. https://www.femamotorcycling.eu/wp-content/uploads/Final%20Report_motorcycle_ADAS_RDW.pdf
2. <https://cdn.euroncap.com/media/64154/euro-ncap-aeb-lss-vru-test-protocol-v400.pdf>
3. <https://insideevs.com/news/603364/tesla-probe-motorcyclist-crash-autopilot-highway-night/>
4. <https://www.motortrend.com/news/nhtsa-tesla-autopilot-investigation-shutoff-crash/>
5. <https://www.femamotorcycling.eu/autopilot-still-kills-motorcyclists/>