Monday, 5th September 2022

National Transport Commission

Public submission – On-road enforcement for automated vehicles

Level 3, 600 Bourke Street

Melbourne VIC 3000

Att: National Transport Commission,

**South Australia Police Submission - “On-road enforcement for automated vehicles”**

South Australia Police (SAPOL) are pleased to provide the following submission in relation to the National Transport Commission’s July 2022 Discussion Paper “On-road enforcement for automated vehicles”. This submission is provided with the understanding that autonomous vehicle technology is yet to be fully developed in Australia which impacts SAPOL’s ability to provide a comprehensive response.

Providing on-road directions to automated vehicles

SAPOL supports amending enforcement powers to ensure Police Officers can legally provide directions. Currently, South Australian legislation authorises police to stop a vehicle and provide directions, however these authorities relate to directions being given to the driver of a vehicle and would need be expanded to encompass directions to automated vehicles. With the introduction of Automated Driving System vehicles (ADS) to Australian roads further authorities will need to be developed.

Whilst it is anticipated that amendments to the Australian Road Rules and supplementary laws such as the Road Traffic Act and Motor Vehicle Act in South Australia would require amendments. It would be prudent to have national guidance documentation to provide the automated driving system entity (ADSE) with a national framework to build their technological capability as well as provide a single enforcement approach. Guidance documentation, in company with ADR 90/01 could be placed Australian Road Rules to help formulate a national approach.

Disabling an automated driving system – roadside and remotely

SAPOL is supportive of further review of technologies that would enable remote communication with an automated vehicle to safely undertaken investigations both for road safety enquiries and investigations under other circumstances. The reference to the Remote Engine Immobilisation (REI) as discussed in the paper refers to instantly stopping the vehicle. It is agreed that this action would present significant risks to other road users and persons within the targeted vehicle. It would be requested that remote stopping of an automated vehicle would simply instruct the vehicle to initiate the minimum risk manoeuvre engagement system as stipulated in the proposed ADR 90/01 and come to a stop in a safe position at the determination of the vehicles on board systems. Further powers would need to be developed to provide remote electronic direction to a vehicle to bring it to a safe stop without the need for current tyre strip immobilisation devices being utilised.

The ability for an authorised person to be able to disable an automated vehicle’s ADS roadside should be incorporated into the ADR 90/01. ADS operating vehicles would be required to be disabled once the vehicle has been stopped on the roadside so that the vehicle is not able to be moved from this point until authorised by police.

SAPOL supports that the ADS should be disabled roadside to ensure the vehicle is not able to be moved at any stop undertaken by an authorised officer. The preferred option for disabling ADS as per figure 2 pg 36, is:

*Option 4B – Option 3B + first supply guidance states ADSE must demonstrate the ADS’ ability to be disabled to meet the “interaction with enforcement requirement”.*

It is understood that Option 2 as could apply as this would enable implementation whilst further review is being undertaken and be more conducive to the entry of vehicles into Australia by ADSE’s.

This option reduces the unknown nature of ADS technology and would provide for a broader set of circumstances where Police are able to disable an ADS if required. There is still scope for ongoing review of this option to meet the requirements of road safety and the reduction of risk.

In South Australia there would be a requirement to amend legislation to enable authorised officers to have a specific power to disable ADS at the roadside.

In situations where the vehicle has been stopped and the ADS disabled, Police or other authorised officers may be required to have the vehicle moved from its original stopping location for a number of reasons. These reasons would include subsequent safety risks being identified, impounding of a vehicle, removing the vehicle from the scene of a collision or seizure of the vehicle as an exhibit. To meet these requirements, it would be necessary to have the power to remove or tow the vehicle regardless of whether occupants can safely drive the vehicle. The preferred option for removing or towing a vehicle once the ADS has been disabled is as per figure 3 pg 42, is:

*Option 3B – Enforcement officers have the power to remove or tow the vehicle where they have disabled the ADS but are not required to consider whether one or more vehicle occupants can safely drive the vehicle with the ADS disabled. The vehicle must be creating a danger or an obstruction to traffic.*

SAPOL officers already have some powers under the Road Traffic Act in relation to removing a vehicle causing harm or obstruction;

*Section 40J—Direction to move vehicle if danger or obstruction (1) This section applies if an authorised officer believes on reasonable grounds that a light vehicle on a road—*

*Under (2a) which provides that a driver* ***or operator*** *of the vehicle to do either or both of the following:*

*(a) to move it, or cause it to be moved, to the extent necessary to avoid the harm or obstruction;*

*(b) to do anything else reasonably required by the officer, or to cause anything else reasonably required by the officer to be done, to avoid the harm or obstruction.*

This authority would require amendment to include authority to direct the operator of an autonomous vehicle to comply with this section. It is noted that the authority under S40J relates to light vehicles, there would also need to have corresponding authorities for heavy vehicles.

Overview of enforcement needs and access to automated vehicle data

SAPOL supports the need for timely and unconstrained access to automated vehicle data to investigate crashes and enforcement of Road law as outlined in the discussion paper.

It is recognised that automated vehicles present unique information that would be necessary to investigate offences and collisions. This information would be required to be available to the authorised officer within a short timeframe to enable efficiency of process to be applied to the circumstances. It would be considered necessary to a process to be developed that enables data access roadside relative to a particular vehicle. This should be considered as a requirement for ADSE’s.

The proposed ADR 90/01 outlines requirements for each vehicle to be fitted with a data system for automated driving (DSSAD) which would meet the needs of roadside data recovery. The process and authorities required to access this equipment may need development.

South Australia currently has legislation with the RTA that provides the authority to access information relative to vehicle information which would require amendment to accommodate the obligation or the ADSE or access to information of an autonomous vehicle.

40W—Direction to produce records, devices or other things

(1) An authorised officer may, for compliance purposes, direct any responsible person to produce—

(a) any records required to be kept under an Australian road law; or

(b) any records comprising transport documentation or journey documentation in the person's possession or under the person's control;

or

(c) any records, or any devices or other things that contain or may contain records, in the person's possession or under the person's control relating to or indicating—

(i) the use, performance or condition of a vehicle; or

(ii) ownership, insurance or registration of a vehicle; or

(iii) any load or equipment carried or intended to be carried by a vehicle (including insurance of any such load or equipment); or

(d) any records, or any devices or other things that contain or may contain records, in the person's possession or under the person's control demonstrating that a vehicle's garage address recorded in the relevant register is or is not the vehicle's actual garage address.

The timeframe in which this information should be provided should be outlined as being on request by an authorised officer. This information could be enabled with the development of data sharing agreements between industry and government. It would be proposed that there is continued review into the viability of a data lake process with access portals for authorised officers.

Access to data at the roadside and more broadly

South Australia’s RTA currently has additional authorities relative to locating, searching and recovering information relative to vehicles. RTA Sections 40S, 40T and 41E, allow enforcement officers to inspect and search premises, and provide authority to seize digital devices or copy digital information won’t need amended or additional authorities.

The development of technology and interoperability between Government and industry is imperative. This will necessitate the requirement for either a legislated data sharing requirement or by way of a data sharing agreement with the ISR of ADSE’s. A proposed avenue for enabling data access to enforcement agencies in a timely manner could be addressed through the creation of a secure data pool in line with point 5.2.3. This data could then be accessed by enforcement agencies through a secure portal for the recovery of data. This access would enable appropriate information to be available in situation of enforcement roadside and for obtaining relevant data to enable appropriate level of thoroughness to be applied to investigations. Data from vehicles would be required to be stored externally of the vehicle with the secure cloud.

South Australia has a legislative limitation in the recovery of data from the cloud, current legislation enables the obtaining of records relative to a vehicle but does not clearly stipulate from cloud. Data sharing for this application could be modelled of the HVNL legislation.

This data would enable the recovery of information in the situation where a ADSE or vehicle withdraws from the market as the data in the data pool should remain accessible. This level of information available on this platform should be more expansive than the identified information in the proposed ADR 90/01. The development of guidelines would be required to establish a pathway for authorised officers to access all information relative to the operating systems within autonomous vehicles. Further review or authorities and development of process would be required to establish this capability.

South Australia currently operates with the authorities outlined in the RTA and through the use of a General Search Warrant issued under the Summary Offences Act. It would be necessary to ensure that these authorities are sufficient to enable access to appropriate information which may be stored in the cloud.

Additional data availability and access considerations

Whilst noting the argument for not having visual indicators, SAPOL does support the use of visual indicators on ADS vehicles to determine if the vehicle is being operated by a driver or is operating on full automation. This will assist police on the road side to determine liability for any driving offences, physically observed by police or in case of evidence obtained from traffic cameras, CCTV or “dash cam” footage. Whilst data from other sources is likely to be available there is a probable delay in sourcing this information at the road side. The use of visual indicators on emergency vehicles already exists to indicate in the event of activating a traffic camera, if the emergency vehicles warning lights were operating at the time of the traffic camera activation.

The proposal of police officers having the practical ability to access data from in-vehicle cameras is supported but needs to be cautiously limited in scope and clear on the purpose for which that data is being used, for obvious privacy reasons. Police will have obligations to investigate crashes were the question of whether an ADS user should have taken back control of a vehicle or taken back the vehicle within a reasonable time needs to be determined. It is unclear if data from the ADS alone will be able to determine this. Ideally this information needs to be provided road side. SAPOL supports in principal the overall approach of the NTC articulating how such a power could operates per 6.2.3, page 64.

SAPOL officers are able to rely on the Summary Offences Act 1953 (SA), s 74AB when investigating offences in relation to identifying a driver of a vehicle at a particular time or occasion. This legislation does not just apply to a driver but the owner as well. This power is widely used when investigating crashes and road law offences and would be used to identify who was in control of the vehicle at a particular point in time.

There are significant challenges surrounding the use of vehicle data as evidence in court, including obtaining correct recognised training for investigators in vehicle data analysis and interpretation, which currently is not available in Australia. The issue of overcoming the burden of proof as to the accuracy of vehicle data would be critical to any prosecution and determination of facts. This process would require either co-operation from the system manufacturers (which may be different than the ADSE’s) or through the use of suitably qualified international experts. Another challenge is confirming the authority(s) to seize vehicle components which containing vehicle data from an ADS. Investigators will also need the ability to validate the accuracy of vehicle data using another reconstruction methodology (If this can’t be done then there could be an inability to prove accuracy of ADS data).

There would also be a requirement to upskill prosecutors on the relevancy and significance of vehicle data, overcoming this challenge is important so that data is properly included in their prosecution strategy. The introduction of automated vehicles being so recent and complex does create issues around suitable persons being able to give credible expert opinion in court. Obtaining expert opinion for the courts system will then be a challenge to both police and defence.

Some automotive vehicle data is already used in courts to determine vehicle events, location data and what devices are connected. As this data is already admissible and in use, SAPOL believes that data collected from ADS vehicles is just a further extension of this admissible data.

Heavy vehicle technologies which could (or in part, could) be transferable to an ADS vehicles for the investigation of liability include; Electronic Control Module downloads, ABS module downloads, fatigue and distraction detection technology (FDDT), GPS location data and intelligent access programs.

Interactions with the in-service regulator, ADSEs and registered owners

SAPOL supports the sharing of data with the in-service regulator for significant incidents (particularly if the incident results in or has potential to result in serious injury or death) and particularly if the incident involves a defective ADS which would indicate that all ADS of that model carry that defect. Individual Police jurisdictions, at least initially, may struggle to identify an underlying defect in an ADS and reporting to the in-service regulator which would assist in the identification and investigation of potential safety issues or breaches. Once the in service regulator collects data from ADSEs and enforcement organisations there should be capacity to translate the data to predictive factors which identify the contributions to serious crashes which can then be fed back to ADSEs. It is important to continually enhance the understanding of crash risk and then the ability to mitigate it.

It is difficult to identify additional data that enforcement agencies need to share with the in service regulator at this point in time due to the relatively short period time autonomous vehicles have been operating and the fact that they do not currently make up a significant proportion of Australia’s vehicle fleet and therefore crash data is scarce. However, consideration should be given to any data which relates to the occurrence of malfunctions, degradations, or failures in a way that can be used to establish the cause of any crash. This might include the system(s) being used by an ADS, the training provided to operators and the operation of those vehicles.

SAPOL supports the proposed approach of drafting new powers specifying the types and purpose of vehicle data that can be disclosed. The in-service regulator will need to identify clearly, the standard of information to be shared and the processes for the exchange of that data. As well as governance surrounding the sharing and use of the data from enforcement agencies, otherwise the absence of clear standards and processes for the exchange of such information may limit the benefits of supplying such data to improve the safety of ADS and identifying appropriate liability in the event of a crash and may also harm the commercial operations of the ADSE.

Establishing a time frame for ADSEs to provide the in-service regulator with data is important. The different types of data and the relevancy to an investigation should drive the timeframes that the ADSEs must comply with. Timeframes and their appropriateness are likely to change over time as ADS events occur.

SAPOL’s preferred position would be for the in-service regulator to disclose relevant data and information to ADSEs. Although without being able to identify the specific situations were SAPOL would need to provide data to an ADSE it is difficult to communicate an appropriate positon.

A privacy impact assessment provides governance and clarity to the sharing of data and SAPOL would support this with the overview of the requirement of SAPOL to provide thorough investigative oversight to an incident. Completing a privacy impact assessment at the design stage of new data disclosure powers would enhance credibility of the enforcement agency and provide integrity to the process.

Sincerely,

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