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A Primer on Regulatory Framework surrounding Connected Automated Vehicles in UK

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ABSTRACT

Connected automated vehicles which are widely known as CAVs are the vehicles which are driven by itself without a human intervention. They are connected in a sense that they are fitted in to sensors that can communicate with either internet of things sensors that might be embedded on the infrastructure or speak to other digital systems in other vehicles or other remote systems.

In future this is going to be a revolution for a driverless mode of transport. Many countries are competing in the race of getting a CAV to their country. In this race United Kingdom is one of the biggest competitors to bring a CAV in to a reality. Policy makers and technology experts are working hand in hand to get CAVs as soon as possible.

In this article, in the first chapter we will be discussing about the overview of the legal framework of self-driven cars in the UK, in the second chapter, we will be discussing the proposals the law commissions. In the third chapter we will do a brief analysis of the proposals, its Advantages and disadvantages. In the fourth chapter I would like to talk about the future of CAVs in UK. In the last chapter I would like to conclude by giving some observations and suggestions for the CAVs in UK.

The aim of the article is to analyse the regulatory framework given to CAVs in UK and provide suggestions to loopholes present in the proposals of the law commission in UK.

I. AN OVERVIEW OF THE LEGAL FRAMEWORK OF SELF-DRIVEN CARS IN THE UK

Testing is being done on CAVs in various jurisdictions like UK, US Germany. When coming to the legal framework of CAVs in UK, it can be civil liability, administrative and

criminal. The administrative law includes the traffic rules, certification and licensing for both the human drivers and vehicles. The criminal law is a bit complicated as some of the European states state that a human driver may be charged with negligence though it is a fully automated car.

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The UK Road traffic Act² states that a person who drives on a road must have a valid license and the person needs to be physically fit in order to drive.³ The license acquisition in UK is administered by Driver and Vehicle Standards Agency and regulation is administered by Driver and Vehicle Licensing Agency.⁴ For CAVs there is no need of human intervention. If something happens there should be a possibility that control of the car can be given to human. For that the human should also be well versed with the technicalities of the technology. There should be a separate training and certification to be given to the user in charge in the car and it is administered by vehicle certification agency.⁵

At present, all the vehicles need to undergo a type of approval under the standards established by UNECE and EU. Based on the approval by VCA in UK, the manufacturer has to send all the components and systems for independent testing established under international standards.

II. OBJECTIVE BEHIND ENACTING AUTOMATED AND ELECTRIC VEHICLES ACT, 2018

This act came into effect recently and extended the insurance principle to automated vehicles. The intention of the legislation was to emphasise that, if there is an insurance 'event', (accident) the compensation route for the individual remains within the motor insurance settlement

framework, rather than through a product liability framework against a manufacturer. This is intended to encourage manufacturers to develop transport technology in the UK, with the confidence that they will be able to exploit market opportunities.⁶

Providing that liability is clear, and the risks are quantifiable, the insurance market should be able to function and provide suitable coverage. However, moving along a sliding scale between driver in control and fully autonomous does potentially lead to significant grey areas. Some commentators have stated that the industry might find it easier to move to developing automated vehicle use cases where there is no element of manual driving at any stage of the journey, to avoid the liability issues that come with shared driving responsibility.⁷

III. PROPOSALS OF THE LAW COMMISSION

The law commission in the end of the year 2020 had given proposals after undergoing intensive research on the connected automated vehicles. The proposal had received many appraisals and criticism from many people. The proposals were to ensure legal safety through a comprehensive legal framework. There were four proposals pertaining to the connected automated vehicles. They include:

² §87, UK Road Traffic Act, 1988.

³ §92, UK Road Traffic Act, 1988.

⁴ *The Pathway to Driverless Cars: A detailed review of regulations for automated vehicle technologies*, DEPARTMENT FOR TRANSPORT, 2015.

⁵ VEHICLE CERTIFICATION AGENCY, www.vehicle-certification-agency.gov.uk.

⁶ *Automated Strategic Economic Analysis*, CCAV; LAW COMMISSION OF ENGLAND; SCOTTISH LAW COMMISSION (Jun 2021) https://www.scotlaw.com.gov.uk/files/6316/2523/0551/Automated_Vehicles_Strategic_Analysis.pdf?cv=1.

⁷ Ibid

- Framing a new safety assurance scheme for the CAVs including all the software updates to vehicles performance.
- Clearly defining the responsibilities of the owners of the vehicles and the car drivers for each level of driving automation given by SAE international.⁸
- Ensuring the technology for CAVs made by the manufacturers are efficient for safety of the vehicle though the driver is actually not driving the vehicle.

Vehicle Safety

A two-track system has been deployed to ensure the safety of the people. One the manufacturer is going to follow an international scheme or second the manufacturer is going to follow a national wide scheme. This will be followed by a categorization for whether which manufacturer is going to follow which scheme and how lawfully it can be used on roads.

This scheme also includes many additional responsibilities to the manufacturer and also to the vehicle owner. This protects from in response to cyber checks, software updates and map updates This scheme basically ensures the safety of the person.

User & Fleet Operator Responsibilities

The law commission has proposed two categories for the user and fleet operator responsibilities.

Category-1 The CAVs might drive only on the motorway and might need a human for the remaining trip. So, when an AV is driving on a motorway then the human will be a user in charge. He will be responsible for putting seat belts, duties if they met with an accident.

Category-2 The AV might be driving without a human intervention. In that case the user in charge will be a passenger. Then it is the responsibility of a licensed operator to check if everything is fine with the vehicle and should provide support if any damage occurs. Categorised rules will ensure safety of the technology which indirectly will protect the AV

No Blame Culture

Though the CAVs get updated day by day, there is always a possibility of an accident. Then the human who is a user in charge will not have any sort of criminal responsibility because ultimately the AV itself is driving the car. The people will not have anyone to put the blame because the AV is driving. The law commission doesn't want to take the blame. So, it is creating a legal framework to cater the needs of the people and learn through mistakes towards a society where there no accidents happen.⁹

IV. A BRIEF ANALYSIS OF THE PROPOSALS

The first proposal was to create a safety assurance scheme. This is a very important proposal because a safety assurance scheme talks

⁸ Levels of Driving Automation, SAE INTERNATIONAL, <https://www.sae.org/blog/sae-j3016-update>.

⁹ Comprehensive regulatory framework for self-driving vehicles proposed to Government (Dec.18. 2020) <https://www.lawcom.gov.uk/comprehensive-regulatory-framework-for-self-driving-vehicles-proposed-to-government/>

about the monitoring performance, software updates. Monitoring performance is quite essential because though the AV is driven without the human help, it cannot adjust with cars driving with extreme low speeds. AV needs to have the same engines and the same performance besides to driving a car without a human. Software updates are also important because it provides an overall efficiency to the vehicle and also provides a uniformity to stay updated with the other cars. So, there is a need for a safety assurance scheme throughout the vehicle's life.

The second proposal talks about the defining responsibilities of user in charge, fleet owners and the person who is actually driving the AV. They should define the responsibilities to cater the needs of the technology and also according to the levels of automation set by SAE international. The user in charge of AV will not be holding any sort of criminal liability if the car hits someone or any property ultimately it is the car who is driving. There may be a possibility that an AV gets hacked and hits a person. Hacking can be done by a person to which he can be made liable. In these cases, the responsibility of a manufacturer gets very important that if a software is not efficient enough to protect a software, there are chances where data leaks can happen.

The third proposal talks about the efficiency of the technology made by the manufacturers. This plays a vital role in connected automated vehicles because in AV it is ultimately the software who is driving the vehicle. The efficiency of the vehicle should be tried and tested from time to time in many situations before keeping it in the

open public. If the software is defective, can the manufacturer be held liable? If yes, how can he be held liable? If the software is not strong and efficient enough then it might be stolen easily or can get hacked which ultimately affects the safety of the passenger in the car.

There are a bunch of legal issues which we should consider in order to provide a clear framework for connected automated vehicles. First is the liability part, if a car hits a person who will be liable, is the car owner, manufacturer, user in charge, or the software itself and when we talk about the automated driving, who will be responsible for software updates and if software hasn't installed properly. If its product liability at whom can they recourse against. Second is the intellectual property, under which aspect of IP can we protect the software of a particular AV. If it is a trade secret. How can we protect it? Due to technological advancements hacking has been more common. We will be arising many legal issues if we have a data leak and data thefts of the software and programmes. These problems can surely arise once we have AVs open to the public.

V. AUTOMATED VEHICLES STRATEGIC ECONOMIC ANALYSIS

Automated vehicles are having a missing market due to the uncertain legal liabilities, this is because of a unclear legal framework. Intervention at particular intervals should be made to prevent market failure by having an appropriate framework and clearly defining legal responsibilities. With the help of a regulatory

legal framework, the AVs can economically develop at a higher pace without having a missing market.¹⁰

VI. CONCLUSION

CAV is going to be a revolutionary technology in future. This technology is going to pose many threats besides to advantages. The policymakers, and the technology experts should work hand in hand in order to reduce the upcoming problems pertaining to CAVs. The legislators should interpret the laws according to the upcoming technologies in order to lead a convenient life ahead.

¹⁰*Automated Strategic Economic Analysis*, CCAV; LAW COMMISSION OF ENGLAND; SCOTTISH LAW COMMISSION (Jun 2021)

https://www.scotlawcom.gov.uk/files/6316/2523/0551/Automated_Vehicles_Strategic_Analysis.pdf?cv=1.