



**Building a Robust Policy
Framework for Connected
Automated Vehicles in India**

Author:

Akhil Dadwal, Research Fellow, Goeman Bind

Abstract:

Connected Automated vehicle plays a huge role in the human advancement in the automobile industry; however the tech giants who are manufacturing the same may have to face the legal complication of the same. If a person was told before 10 years back that cars will go on their own without the human intervention. That person would have laughed back at that time, because no one had seen the future and the rapid growth of AI with time.

Introduction:

An automated vehicle is a motor vehicle that has technology to assist the driver so that elements of the driving task can be transferred to a computer system. The key question that arises in prudent person's mind is how much assistance of driver is required to the vehicle?

Classification of Automated Road Vehicles:

Meanwhile, an autonomous vehicle is a fully automated vehicle equipped with the technologies capable of performing all driving functions without any human intervention.

In order to facilitate the understanding of different automated technologies within the technical domains, the Society of Automotive Engineers, SAE International, proposed a classification of road vehicles.

The SAE automation levels can be understood in simple and brief manner as Level 0 - no automation; Level 1 - hands on/shared control; Level 2 - hands off; Level 3 - eyes off; Level 4 - mind off, and Level 5 - steering wheel optional. Out of all these levels, level 4 and level 5 have been the most advanced and of utmost importance till now..

CAV Laws in the world:

Britain:

Britain is regularizing self-driving cars or CAV. In 2018, the Automated and Electric Vehicles Act, 2018 was passed. Section 2(2) of this statute is notable as it explicitly states that when an accident is caused by an automated car, the owner of the vehicle is liable for the accident. The same principle applies when a death is caused by an automated car.

Further, Section 4 of this act specifically states that if an autonomous car is insured and the accident is caused because of unauthorized software updates or failure update the software, the liability of the insurer decreases. But this Act does not address the issue of liability of the autonomous car company which has developed the car and the AI system. So, in short, all liability lies on the owner even if there is a fault of the AI. This creates multiple problems not only on the owner, but also in the process of administration of justice.

Manufacturers cannot be held harmless if a driver agrees to terms using a digital platform, regardless of whether or not they understand the risks and liabilities involved. When it comes to putting AV on the market, manufacturers and policymakers must be aware of these issues and work to establish culpability.

Germany:

Germany was one of the first countries in the world to come up with a legislation to control and regulate autonomous vehicles. The German Road Traffic (Amendment) Act, 2017 is one of the leading legislations in the world that regulates autonomous cars.

Section 1 of the act allows the driver to transfer the control of the car to automated driving system, as under the Vienna Convention on Road Traffic, 1968. After the latest update in March 2016, automated vehicles have been approved and accepted under the Convention, which can now be applied to self-driving cars.

Section 63A of the act specifies that a black box, which is a device connected to a GPS system that tracks vehicle pace, direction, distance travelled, driving pace, and time of

day should be installed in the car to maintain a record of who was controlling the car at the time of the accident. It will help decide the courts decide the culpability.

With the help of this black box, the responsibility will be easily assumed. If the accident is caused by the driver, then the driver would be held responsible and if the accident is caused due to a failure of the self-driving system, then the blame would shift to the manufacturer of the car. Also, according to section 12 of the act, in the case of death or injury due to self-driving system, the maximum amount the victim can recover is €10 million.

The German legislation, by making the manufacturers liable for the accident caused by their self-driving system, forces the manufacturer to build a more fault-proof system, which is beneficial for everyone from the owner of the car to the pedestrian walking on the road.

The Downside of CAV:

- Lack of proper infrastructure in India is a primary issue; potholes, untarred roads etc. make it difficult for an autonomous vehicle to navigate.
- Government feels the loss of jobs will be too high if autonomous vehicles are implemented in the country, as a lot of people's livelihoods are dependent on their day-to-day earnings as cab or personal drivers.
- Non-compliance with the law, people are a lot more unconcerned about adhering to some of the daily regulations in the country; jaywalking, driving on wrong side, not following lane driving, over speeding, jumping red lights etc. are common daily occurrences in India.
- Highways, rural areas, and even big cities are prone to having animals roam around the streets, even animal pulled carts as well as herds sometimes block the roads completely. The possibility of animals being hit by Automated vehicle cannot be ruled out.

These are only some of general challenges an autonomous vehicle will have to overcome in India. India is ill equipped, as India does not even permit the testing of automated vehicles under the existing regulations.

Legal Position in India:

Motor Vehicles Act, 1988

Motor Vehicles Act, 1988 is not made by the legislators with an eye to the future. It does not provide for autonomous vehicles in any capacity, including testing of autonomous vehicles on Indian roads under the current regulation. An amendment for the MV Act which allows for autonomous vehicle testing has been pending for over 4 years, which is not going anywhere.

To avoid any encumbrance, separate legislation with regulation can be made. In which, the provisions of the same legislation should be read out and go with consonance with MV Act.

As the Act provides that only a person above the age of 18 who has a driving licence is permitted to drive a vehicle, the rule itself becomes redundant for autonomous vehicles, unless the government provides for a separate licence for autonomous vehicle users. Many concerned questions pose, can a minor be a passenger on a fully autonomous vehicle i.e. of level 5 of SAE automation level alone as he/she is not technically driving the car?

Further section 109 of the Motor Vehicles Act states, every motor vehicle shall be so constructed and so maintained as to be always under the effective control of the person driving the vehicle, which is not the case when it comes to autonomous vehicles.

Further when it comes to the liability after an accident, wherein the insurer has to pay for the damages, who will be liable? The owner? the driver? Or the manufacturer?

Consumer Protection Act, 2019

Under section 2(34) of the Consumer Protection Act, the definition of product liability is given as “the responsibility of a product manufacturer or product seller, of any product or service, to compensate for any harm caused to a consumer by such defective product manufactured or sold or by deficiency in services relating thereto”.

On the very facet of narration of this provision it is not possible that the owner or driver of a fully autonomous vehicle could have caused an accident themselves. Either the

manufacturer or the software developer or both will have to see the liability for any damages caused by the autonomous vehicle.

Assigning of responsibility and the scope of contributory negligence is something that will have to be defined by the regulations in order to remove ambiguity and assign responsibility to the correct and rightful party.

Information Technology Act, 2000

Under the Sections 65 of the Act, Whoever knowingly or intentionally conceals, destroys or alters or intentionally or knowingly causes another to conceal, destroy, or alter any computer source code used for a computer, computer programme, computer system or computer network, when the computer source code is required to be kept or maintained by law for the time being in force, shall be punishable with imprisonment up to three years, or with fine which may extend up to two lakh rupees, or with both. Explanation.-- For the purposes of this section, "computer source code" means the listing of programmes, computer commands, design and layout and programme analysis of computer resource in any form.

Will the word "alter" comes into this definition. If it does, would Indian legislation have to prosecute the manufacturer or software developer? This is the matter of interpretation. The above provisions will be directly applicable to autonomous vehicles.

Modifications and Amendments:

Certain modifications and amendments will have to be made to the existing regulations and procedures in India to inculcate the development of autonomous vehicles in the country.

- Amending the Motor Vehicles Act in consonance with the new legislation specifically about the regulation of AV.
- The automated driving system can be defined as a separate entity, whose responsibility will lie either upon the software developer, manufacturer, or both

- Determining the liability in case of an accident with an autonomous vehicle, owner of the vehicle has no control, so will it be the autonomous driving system? The manufacturer? Or the software developer? Or both?
- Also, a new procedure for such incidents determining, whether it was a technical issue or a hack on the software running the vehicle by a third-party must be established.
- Stricter laws for jaywalking and implementing basic traffic rules in towns, cities, and highways, this will generally help the traffic situation in India, and benefit development of autonomous vehicles as well. There is categorically no law if a person who is walking negligently on the wrong side of the road. It is more of question of fact than question of law.
- Laws will also have to incorporate necessary provisions dealing with protection and responsible utilization of passenger/occupier data, along with increased penalties/punishment for threat of hackers and cyber espionage.
- Ideally a new legislation for autonomous vehicles, covering their use, reductions, liability, insurance etc.

Conclusion:

Most of the road accidents are caused by humans, but with the advancement in technology and through machine learning, most autonomous vehicle software systems are going to negate all human errors. Reduction of road accidents, adherence to speed limits and lane driving, are just some of the benefits that will arise from usage of autonomous vehicles.

German legislators are one of the most advanced legislators regarding AV in the world right now. The way they handled it deserved to be noted. Indian legislatures can take a page out of their book. For the sake of brevity, please refer to the German laws as mentioned aforesaid.

The substantial question remains in mind and is being faced by almost all countries that if Driver agrees to legal terms and responsibility, enabled by an integrated digital interface, can fail under the extreme scrutiny of the courts in the event of an accident

and subsequent lawsuit or insurance dispute. How would issue resolve? Infrastructure and legislations must begin. There is positive and negative which lies in the plate, however for the betterment of the society and for the human race, AV laws should be adopted with open arms because of some negatives; the interest of the society at large cannot be compromised.