

The State of CATV in Ohio

Introduction

Ohio is known to have a strong automotive foundation with the capability to complete the full automotive supply chain with a strong and capable workforce. Ohio has many resources that are needed to build this industry from iron and steel to rubber, plastics, and glass manufacturing. Because of Ohio's central location in the Midwest, it has the ability to assemble and ship manufactured goods to 10 different locations within 600 miles of the state. This gives Ohio the control over the industry and its future developments with the CATV technology.

This change in direction for the automobile industry is led by the DriveOhio, the Ohio State University Center for Automotive Research (CAR) and the Transportation Research Center (TRC). The DriveOhio program was constructed during John Kasich's term, former Governor of Ohio, with Executive Order 2018--01K. Later that year, he signed another Executive Order 2018-04K that allowed autonomous vehicle testing throughout the state. Kasich was succeeded by Mike DeWine in 2019, who has made no further movement upon legislation.

All projects are currently run through the DriveOhio initiative and the procedures that it has set in place. However, the difficulty with Ohio's current state of the CATV technology is that there is no current legislation passed that outlines the definitions and liability.

Stakeholders

Ohio has managed to hold 12 stakeholder engagement meetings through September 2018 to October 2018. It is here where 50 stakeholders gather to discuss current topics including but not limited to: trucking, manufacturing, research testing, possible liability issues, infrastructure, education, and business associations. The meetings are considered to be beneficial and the next step to move forward with all ideas, issues, and concerns of possible parties involved.



Legislation

2017:

Transportation and Public Safety Appropriations (OH H 26)

The legislation was passed as Act No. 2017-3. The bill creates the Fiscal Year 2018-2019 transportation budget for programs related to transportation and public safety, provides authorization and conditions for the operation of those programs. There is little mention of autonomous vehicles in the text of the bill, and the text that does refer to autonomous vehicles was vetoed before the bill was passed.

2018:

Council on Transportation Technology (OH H 519)

The bill is currently pending; the last action was on February 27, 2018. The bill aims at creating the Ohio Council on Transportation Technology and makes recommendations regarding state policies related to autonomous technology. Within the text of the bill it states, "The council shall examine and evaluate methods and changes in state policy that will ensure that the state is the world leader in autonomous, driverless, and connected vehicle technology;" illustrating the motivation for the State of Ohio to remain as a leader in developing and researching new technology in a new and promising field.

Automated Commercial Motor Vehicle Operation (OH H 699)

The bill is currently pending; the last action was on June 5, 2018. The bill is meant to outline the definitions surrounding autonomous transportation in order to establish a set of standardized terms, which

will be used when referring to the development, research, procedures, and legal aspects of introducing autonomous vehicles into the state. The bill also outlines the insurance and liability aspects of autonomous transportation and specifies the requirements for operating an automated commercial vehicle in the state.

Executive Order 2018-01K

On January 18, 2018 Ohio Governor John Kasich signed Executive Order 2018-01K. The order created DriveOhio to, aim at bringing together individuals or corporations who are responsible for building infrastructure in Ohio with those who are focused on developing the advancing mobility technologies. In doing so Ohio will be able to allow their transportation system to reach its full potential by improving safety conditions and traffic flow." This order was an essential step forward for the future of autonomous vehicles in Ohio.

Executive Order 2018-04K

In May of 2018 Ohio Governor Kasich signed Executive Order 2018-04K. The order allowed autonomous vehicle testing and pilot programs in the state. In order to do so, companies must register with DriveOhio, which was created by the executive order noted above, and must submit information on their companies, intended areas and conditions to test in and other requirements. Autonomous vehicles tested in the state must have a designated operator, although they are not required to be inside the vehicle.

Safety

Executive order 2018-04K discusses the rules and regulations surrounding the safety operation of the CATV. Every company must register with DriveOhio and follow all driving laws and must have a designated operator, in or outside the vehicle. In the event of an accident or violation of a law the company and operator must work with law enforcement and provide them any information that may be needed.

Liability

OH H 699 Section 4506.30 (F) states under the term “Proof of Financial Responsibility,” the party must indicate that they are able to respond in damages for liability due to accident caused by ownership, maintenance or use of a commercial vehicle in the amount of one million dollars for occurrences with death or bodily injury. In the case of just a system installed the manufacturer must have and maintain proof of financial responsibility. Executive Order 2018-04K also discusses issues of liability and insurance of CATV technology.

Privacy

The December 2018 Ohio Transportation and Public Safety Committee Chairman’s Report discusses the issue of privacy mainly to be dealt with through policies and actions taken by the federal government rather than the state. The report moves through several acts and policies that are currently in place that could be applied to CATV. These include but are not limited to:

- 1) Driver's Privacy Protection Act

- 2) Electronic Communication Privacy Act
- 3) Telecommunication Act of 1996
- 4) Federal Trade Commission
- 5) Communication Assistant for Law Enforcement Act (CALEA)

With these and other still being developed Ohio is taking an active role in establishing the roles of the federal and state government.

Projects and Research

SMART

Partners in Youngstown have been awarded a \$10.5 million U.S. DOT BUILD grant to employ more programs for developmental research of CATV technology including a self-driving shuttle that will connect Youngstown State University to St. Elizabeth Hospital.

Smart Columbus

A smart transportation system that will improve the quality of life for Ohio citizens through the increase of jobs and public transportation.

The Ohio UAS Center

Support of industry and government application of unmanned aerial systems.

Ohio Turnpike

The turnpike is outfitted with fiber-optic cable and has already been testing self-driving trucks. This program will also be installing Roadside Units in a 60-mile stretch as well as on-board units in the vehicles. This will allow the Ohio turnpike commission the ability to produce traffic and weather alerts to use vehicle and road

condition data to better treat roads and avoid incidents.

I-670 Smart Lane

The Ohio DOT has begun construction on the state's first smart lane that will be used for drivers in congested times.

Connected Marysville

Marysville has installed traffic signals which have the ability to communicate with 1,500 public and private vehicles equipped with onboard automation units. This is being used to see how the technology interacts with its environment.

33 Smart Mobility Corridor

This is a 35 mile stretch of U.S. 33 between Dublin and East Liberty that goes through Marysville. This is the site of testing for real world application to these vehicles.

I-90 Lake Effect corridor

The Ohio Department of Transportation is equipping 60 miles of I-90 with short-range digital communication units to test wireless technologies to send and receive data from those units and other public service vehicles.

FlyOhio: SkyVision

Ohio and the Air Force Research Laboratory in Dayton are working together to install a \$5 million project to install ground-based sense- and -avoid radar systems to the airport in Springfield, OH.

FlyOhio: US Route 33 Traffic Monitoring

Is a three-year long project with Ohio State University to develop a low-altitude air

traffic management system to aid in traffic management and other commercial uses.

Uber Movement/Cincinnati Mobility Lab

A partnership between Uber and Cincinnati to develop a function model of CATV systems.

Largest Autonomous and Connected Vehicle Testing Facility

The Transportation Research Center (TRC) is the largest independent automotive proving ground in North America. It is designed to test advanced automotive technologies in a safe, secure, and repeatable environment.

City Use Cases in Development

Discussions are active for future projects in Athens, Akron, Canton, Cincinnati, Cleveland, Dayton, Dublin, and Toledo.

Center for Automotive Research (CAR)

This is Ohio State's research center focused on intelligent transportation systems, vehicle safety and sustainable mobility