L-03

CSCI - P436 | *Brandon Young*

My Car:

 Make: Ford

 Model: Fiesta Titanium

 Year: 2014

Defining Black Boxes:

Black baxes are crash resistant devices that are often referred to as EDRs. The device will record data about a crash and the moments leading up to it in order to help with understanding how to improve safety and avoid similar events.

These boxes are small SOC chips that were originally designed to ensure that airbags deployed at the time of a crash. These chipsets must track “speed, steering, braking, acceleration, seatbelt use, and in the event of a crash, force of impact and whether airbags deployed” (Reference 3). However, manufacturers can record much more than this. They are not required to reveal everything they track, so there no easy way to discover what data they are storing.

Most black boxes are behind the steering wheel or in the dash somewhere. They are often embedded to prevent ease of access, as it would hopefully never need to be accessed. When a crash is detected, it can store up to 5 seconds of data. This data is hard to access and a kit to do it would cost you multiple thousands of dollars. Even then the data retrieved takes skill to interpret.

Theoretically the owner of the car owns the data, but because of the cost barrier that is practically almost never true. And dealers want access to the data as well for analyzing potential problems. The government law enforcement would also benefit from the data to help establish what exactly happened.

History:

Some companies have been integrating these chips from all the way back to 1994. The government has been using them to collect crash data since 2000.

Current Status:

Most modern cars after 2013 have these black boxes. "Less than 5 percent of new cars came without one in 2013" (Reference 2). At this point the government at the state level has started to regulate some use of black boxes. Some states have had significant controversy over who owns the data in a black box or if the owner of the car should be able to opt-out of collecting data.

There have also been suits on the matter. People can sue to prove innocence or guilt in a car crash. This can pose valid concerns for all current drivers and even pedestrians who could happen to be in an accident.

Bibliography:

1. <https://www.ford.com/>
2. Does my car have a black box?, <https://www.hyperlube.com/blog/blog/does-my-car-have-a-black-box/>
3. <https://www.edmunds.com/car-technology/car-black-box-recorders-capture-crash-data.html>