

2a. The computational innovation I choose was bluetooth in a car. The bluetooth allows drivers to make calls and text others without looking at their phone. The bluetooth is able to give directions to a place so the driver doesn't have to constantly look at their phone for directions. Since drivers can look at the road, bluetooth can prevent car crashes. My artifact represents the uses of bluetooth and how it makes driving safer.

2b. When I was creating my artifact I was researching the uses of bluetooth and how it uses data to work. I looked up different sources for information to see how much was the same between them. I used Google Slides to create my artifact. I looked up pictures that represented what bluetooth can do and how it helps to keep focused on driving. I did not use words to describe the pictures so my artifact is made up of pictures. They show drivers hands-free to drive and not focus on their phone.

2c. A beneficial effect bluetooth in a car has on society is it allows drivers to focus their attention on the road and not on their phone. Bluetooth handles phone calls and text messages that can be accessed through talking so the driver doesn't have to push any buttons. Bluetooth can give audio directions and displays the directions the same way a phone does so the driver doesn't have to look at their phone to see where they are going. Drivers on their phones causes many car crashes, bluetooth allows drivers to put their phone away to prevent crashes. A harmful effect bluetooth has is when bluetooth is in rental cars. When the car is returned to the company, data the car collected is not deleted. Someone could access personal data. Someone could find out your name and social media through bluetooth. If the bluetooth is used for directions home, someone could find your address. The bluetooth stores directions history, the name of the device, in-car internet search, calls and text-messages sent and received, and wi-fi.

2d. Bluetooth connects two devices to each other. Bluetooth uses short-range communication that phones use. Since the frequencies are the same as other devices bluetooth has to move around their signals. The signal between the devices jumps around frequencies so the signal between the two devices is uninterrupted by other devices close by. The connection between the devices work in a certain amount of distance. Listening to music and making phone calls are easier for bluetooth. Larger amounts of data are not used since it takes too long to transfer the data. Bluetooth does not need a lot of power to run. It runs for long periods of time without needing to have new batteries installed. Bluetooth does not drain the power of phones either so the phone can keep running. To connect, one device is public while the other finds the device. When the devices are connected, data from outside devices do not interfere with either device. The hardware sends and receives data from the frequency. The software takes the data and transforms it into data other devices can read and sends out the data. Bluetooth only collects data from the two connected devices.

2e. <https://www.digitaltrends.com/mobile/how-does-bluetooth-work/>

Author: Brad Bourque Title: This is how Bluetooth Works, and no, it's not by magic Source: digitaltrends Date I retrieved it: 3/15/19 Date it was posted: 8/16/14

<https://www.lifewire.com/using-bluetooth-in-your-car-534647>

Author: Jeremy Laukkonen Title: 5 Ways to Use Bluetooth in Your Car Source: lifewire Date I retrieved it: 3/15/19 Date it was posted: 3/2/19

<https://www.edmunds.com/car-technology/car-tech-101-bluetooth-basics.html>

Author: Doug Newcomb Title: Car Tech 101: Bluetooth Basics Source: edmunds Date I retrieved it: 3/15/19 Date it was posted: 8/25/11

<https://www.yourmechanic.com/article/5-essential-things-to-know-about-your-car-s-bluetooth>

Author: Valerie Johnston Title: 5 Essential Things to Know About Your Car's Bluetooth Source: yourmechanic Date I retrieved it: 3/15/19 Date it was posted: 12/14/15

<https://www.usatoday.com/story/money/cars/2018/01/30/car-renters-beware-bluetooth-use-can-reveal-your-private-data/1080225001/>

Author: Rebekah Sanders Title: Car renters beware: Bluetooth use can reveal your private data Source: usatoday Date I retrieved it: 3/15/19 Date it was posted: 1/30/18