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Communication Technology Update and Fundamentals: Automotive Telematics

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Automotive Telematics

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Why Study Automotive Telematics?
- With local building and road changes, locations are often hard to find. GPS is an integral part of wayfinding for drivers.
- Tracking devices and quick response times can alleviate stressful situations, enhance safety, and limit stolen property threats.
- Smartphone apps will provide light and horn alerts to help find a lost car, unlock the car, direct the driver to the nearest coffee shop, and much more.
- Hands-free communication and enhanced Bluetooth technology will increase “infotainment” in the car.

Introduction

Automotive telematics can be defined as “the blending of computers and wireless telecommunications technologies” (Reise, 2007). Telematics enables drivers to get information about the location, movement, and state of their vehicles. It also enables vehicles to communicate wirelessly, which opens up a wide range of services.

Telematics is essentially a range of different features, options, and devices that are brought together by a single principle—data and communication (Coe, Purcell, & Jest, 2014). To provide the above services, telematics products may include GPS (Global Positioning System), inter-vehicle Wi-Fi connections, digital audio and video solutions, wireless telecommunication modules, and car navigation systems (Cho, Roe, Chu, & Suh, 2006).

Background

Ford Motor began a manufacturing revolution with mass production assembly lines in the early 20th century, and today it is one of the world’s largest automakers (Ford Motor Company, 2014). The history of telematics can trace back to Henry Ford’s idea in 1903 to create easy transportation for everyday people. Automobiles evolved from strictly a means of transportation to luxury items as time went on. The development of in-vehicle telecommunications, entertainment, and “infotainment” are the landmarks of today’s automotive environment.

Table 13.1 Evolution of Automotive Telematics

<table>
<thead>
<tr>
<th>Telematics</th>
<th>Feature</th>
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<tbody>
<tr>
<td>1.0</td>
<td>Hands-free calling and screen-bred navigation</td>
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<tr>
<td>2.0</td>
<td>Portable navigation and satellite radio</td>
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<td>3.0</td>
<td>Introduction of comprehensive connectivity to the vehicle</td>
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<td>4.0</td>
<td>Seamless integration of mobility and the Web</td>
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Source: SAE & CSMA (2012)

The Birth of the Car Radio

The first technological breakthrough in electronic devices was the car radio. According to Gray (n.d.), “The first radios appeared in cars in the 1920s, but it wasn’t until the 1950s that most cars contained AM radios.” William Lear, who created the Learjet, also created the first mass market car radio. The first FM...
Huge Trend at the Consumer Electronics Show
CES 2016

“WHERE AUTOMOTIVE TECHNOLOGY AND THE FUTURE COME TOGETHER

Automotive technology moves faster than any race car. From smartphone apps right on your dashboard to self-driving cars. It's all at CES 2016. Explore what's happening on the automotive technology fast track”
What is Automotive Telematics?

Automotive telematics can be defined as “the blending of computers and wireless telecommunications technologies”

(Rouse, 2007)
Telematics is essentially a range of different features, options and devices that are brought together by a single principle – data and communication. (Coe, Prime, & Jest, 2014b).

Telematics enables you to get information about the location, movement, and state of your vehicle. It also enables your vehicle to communicate wirelessly, which opens up a wide range of services.
Telematics makes your car safer, keeps you from getting lost, summons roadside assistance at the press of a button, routes you around accidents, and auto-dials 911 if you’re in the accident.

For most users, telematics means navigation, communications, safety, security, and increasingly infotainment.
Back-up Camera Technology

Driverless Cars

Image source: Martindale, 2015

Image source: Carline Jean/Sun Sentinel
The Book is used as a supplemental text in our Communication and Emerging Media Major course:

COM 244- Development of Technology in Communication
Where Do We Go From Here?
Next Edition Coming at you...
Look For...
Fleet Management trends

- Self-Driving Cars
- Driverless UBER, car rental, food delivery…etc.
- Smart technology & Connectivity gone mad
- Safety features eg. Brake sensor technology
In Conclusion…
“Communication Technology Update and Fundamentals” is a great text and/or tool for any emerging media or technology course.
Keep updated with us…

What’s next?
Thank you!