Over The Air updates

Everyday technology makes it easier and easier for humans to perform their daily life routine. One of the new technologies which most people are familiar with now is OTA updates. As technology always aims to increase human satisfaction, OTA saves people from having to pay visits to a dealership to get their newest updates and fixes.

For example, Firmware Over The Air (FOTA) is where the manufacturer uses his phone to update the firmware of a mobile device wirelessly and remotely. Firmware runs without any input from the user in the background and is also there to ensure that the phone’s hardware functions properly.

Another example is Software Over The Air (SOTA). SOTA is a method in which the manufacturer sends a file to a vehicle for download via mobile network, WiFi, or Bluetooth. Once it’s downloaded, the vehicle's operating system is updated with the new feature.

Typically, the types of updates that are sent OTA include software that controls moving pats and user interfaces for entertainment systems.

Automotive OTA updates allow the manufacturer to make the vehicle safer by improving their algorithms and centralization and ensuring that it’s done safely and efficiently.

Like any other technology, OTA has its advantages, such as that it enables developers to upload updates dynamically and go to the market rapidly with richer features and reduced costs. Those updates are received by a secure connected gateway in the vehicle; that downloads and validates the updates then updates the other systems in the vehicle at an appropriate time so that the vehicle is safely updated.

In addition to making a vehicle more secure, OTA updates can also make a car more efficient. From adjusting transmission to improving fuel efficiency and performance. A more efficient car makes for a better driving experience. Furthermore, manufacturers can continually monitor a vehicle’s performance and roll out relevant tuning to promote better driving efficiency over the long term.

Although SOTA can be used to enhance a vehicle’s security, it can also make it more at risk of cybersecurity threats.

OTA updates have been used for years within the software industry, allowing bug fixes and enhancements to desktop, laptop, and mobile operating systems and applications. Automotive vehicles now rely on software to the extent that manufacturers are turning to Over The Air updates for critical vehicle functionality.