UPDATING CONNECTED CAR SOFTWARE OVER-THE-AIR. WHY WAIT?

Over-the-Air Updates Become Standard
As the dawning age of the connected car makes vehicles predominantly software-driven, the number of ECUs (Electronic Control Units) and lines of code running in each vehicle is skyrocketing. It's no wonder that Thilo Koslowski, VP and Distinguished Analyst at Gartner wrote earlier this year “We’ll see a lot more OTA [Over-the-Air] software in the next 12 to 18 months”.

A significant point of concern for car manufacturers should be the fact that the percentage of software-related recalls and service calls is steadily on the rise. Numerous research reports indicate that software-driven recalls are already approaching 50% of the tens of millions of recalls made in the U.S. today. And with a per-service event cost of roughly 100 dollars, these recalls are becoming a substantial expense category.

With cars becoming much like other connected devices, it’s only natural for their owners to expect their software to be easy to update. Can you imagine being required to visit your local smartphone or tablet store nowadays, only to have the latest firmware or application version installed? Similarly, consumers will soon no longer be willing to accept the need to manually download automotive software updates and having to visit the nearest dealership to have them applied.

An effective way for car manufacturers to cope with consumer expectations for updating ease is to implement remote OTA firmware and software update technology. Given the mounting costs of software-related recalls and warranty service, over-the-air updates have to – and will – become standard, and the sooner car manufacturers implement the technology, the better.

**OTA software update benefits**

Remote OTA software updates can deliver significant financial benefits, specifically as a result of the substantial cost savings they offer over conventional, manual software updates. Savings are not limited to after sales service, and can impact car manufacturers’ bottom line for the duration of a vehicle’s entire lifecycle – from engineering, through production and staging, and all the way to service at dealerships and on consumers’ own driveways.

OTA updates can cut car testing cycles and Tier 1 partner testing support workloads, minimize production software flashing bottlenecks, and eliminate the need for time- and cost-consuming “flash parties”. They can no less importantly lower warranty- and recall-related car service loads (eliminating the need for consumers to visit dealerships for manual updates), professional training requirements and OBD2 update tool and labor costs – all while reducing customer servicing complexities and software update efforts. OTA software update technology can ultimately help guarantee both fast accelerated Time-to-Market and Time-to-Road, enabling fully automated update flashing, comprehensive version control, and simplified, generic hardware-driven software localization.

Car manufacturers embracing the technology can effectively increase warranty- and recall-related service handling capacity, enhance customer satisfaction and assure long-term consumer loyalty.

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1 HIS - Remote software update: Future growth business, Egil Julussen, 1/2015
So what does it really take to implement OTA update technology in the automotive industry?

Let's take a closer look at what it takes to implement an OTA software update solution.

To support OTA updates, car manufacturers need to have a backend software management solution situated either within the auto OEM's IT environment or on secure cloud infrastructure, and a dedicated software agent deployed in-vehicle.

The agent’s primary function as a software management gateway is to determine exactly what automotive systems need be updated, allocate all necessary resources, and perform security validation, so as to assure failsafe updates and uncompromising software integrity. It orchestrates any software updates required – map updates, cyber-security patches and upgrades of any software-driven automotive component – with the highest precision, and in strict compliance with instructions received from the OEM’s backend software management system.

Why wait?

Today’s connected drivers are already demanding up-to-date content and fully updated electronic components that only over-the-air updates can facilitate. Do car manufacturers really need to wait for next generation cars to reap the benefits of OTA, become more consumer-centric and build closer engagement with customers? And given ongoing software integrity’s increasing impact on car safety, can they really afford to leave current generation cars vulnerable in the meantime?

The answer is a definite no. The beauty of OTA technology lies not only in its ability to deliver connected car software, firmware and configuration setting updates. A sufficiently advanced OTA offering, utilizing authorized and 100% secured cellular data network access, can quickly and easily deliver the remote software management and update agent itself over-the-air today, to existing connected cars having originally shipped without OTA update technology.

Instead of holding the technology back until such time as next generation cars go through the production line, manufacturers can flash in-vehicle software management agents to current car models over-the-air – anywhere, and at any time, whether at dealership lots, on owner driveways, or on the road.
Redbend’s Connected Car Software Management –
the future is here now

With Connected Car Software Management, Redbend offers automotive OEMs the most sophisticated, field-proven OTA software update solution available today. Ready to deploy right now.

Redbend’s comprehensive technology offering allows car manufacturers to implement over-the-air updates for full optimization of car production and servicing. It helps address all software update requirements and potential challenges via failsafe and completely secure remote OTA software management, contributing to a dramatic reduction of warranty- and recall-related expenses, and even enabling rapid response to security threats, such as hacking and cyber-attacks.

The solution helps achieve and maintain continuous control of a range of on-board components, including head units, ADAS (Advanced Driver Assistance Systems), ECUs and telematics boxes, delivering the fastest, most efficient software updates – in-place, utilizing whatever RAM and storage happens to be available – completely risk-free, and with all potential interdependencies fully and automatically addressed. Connected Car Software Management additionally empowers car manufacturers by providing them with access to a constant stream of infotainment-generated data, for analysis and quality improvement purposes.

Best of all, the solution’s OTA technology can be leveraged by car manufacturers today, to embed Connected Car Software Management’s own in-vehicle software agent in current car models, over-the-air, and open the door to OTA automotive software updates going forward.

No need to manually download anything, nor for car owners to visit dealerships. Redbend makes it easy for manufacturers to flash Connected Car Software Management into existing cars at their owners’ convenience, anywhere and at any point in time – even while parked on residential driveways or on the road – and enjoy the benefits of OTA without delay.