NEW CONNECTED EXPERIENCE IN VEHICLES DELIVERS HIGHER PRODUCTIVITY

APPLICATION NOTE

Alcatel·Lucent Enterprise

INTRODUCTION

The smart device era has enabled users to stay connected at all times, thanks to Wi-Fi®, 3G and 4G/LTE wireless technologies. People spend a good part of their time working or commuting in vehicles — children in school buses and workers in metros, buses and trains. The staff of public and private services spend a significant amount of their time in vehicles, such as ambulances, or police or package delivery vehicles.

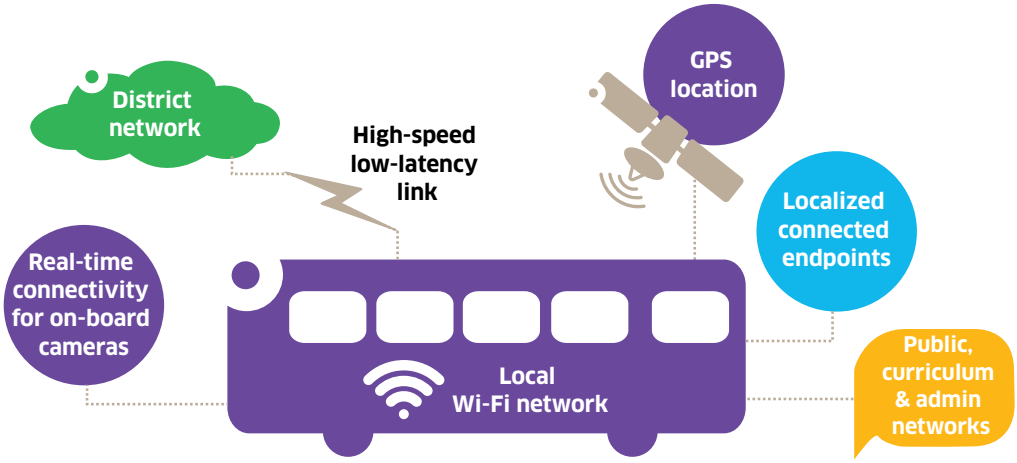
However, the connectivity within vehicles is limited and governed by each person's individual data cellular coverage. A solution is needed to enable high-quality on-board services in vehicles so that people can remain connected, and be more effective and safe while commuting.

Alcatel-Lucent Enterprise enables a whole new connected experience for commuters, transport enterprises, and public services by providing on-board communication services including the monitoring and management of critical resources.

Alcatel-Lucent Enterprise introduces a new paradigm, offering multiple solutions to the transportation vertical with best-of-breed products. The following use cases solve business-critical problems while enhancing end-user experience.

USE CASE: CONNECTED SCHOOL BUS

Through Internet connectivity, GPS, SIP telephony, connection to radio frequent identification (RFID) readers, and closed-circuit television (CCTV) for monitoring on school buses, school districts can add a whole new service dimension to school transportation. This enables school districts to maximize safety, improve learning, and facilitate administrative tasks and communication. Everyone in the school ecosystem – students, parents, faculty, and drivers – benefits from innovative communication solutions. The Connected Bus offers a real opportunity to extend and improve education in a safe environment.

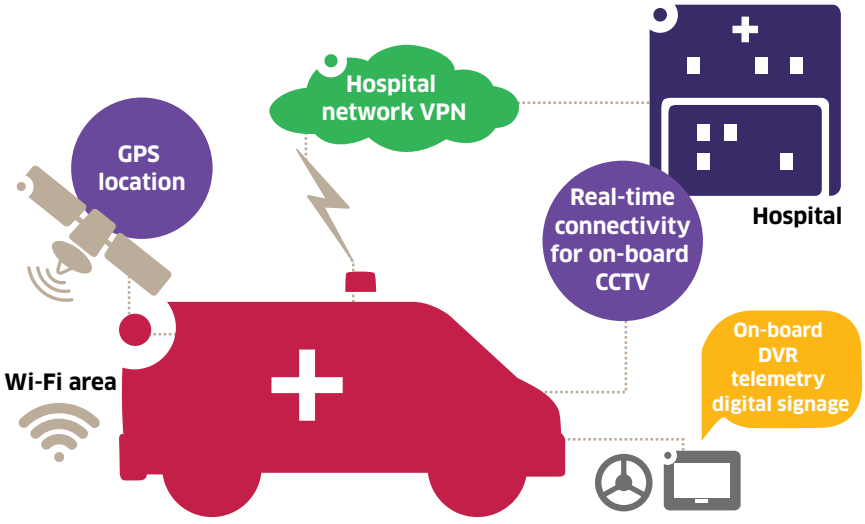


Improve safety and extend teaching applications:

- On-board secured Wi-Fi connectivity for students
- On-board security cameras with on-demand streaming video
- Private, secure instructional video services for efficient use of time
- Digital signage on board to keep students informed
- Student journey tracking with RFID ridership logging
- Temporary classroom MiFi®: housing of students during extreme circumstances with access to school network and applications

USE CASE: CONNECTED AMBULANCE

Internet connectivity over LAN or Wi-Fi, GPS, digital video recording (DVR), telemetry, and CCTV monitoring on an ambulance enables more efficient emergency management and healthcare delivery.

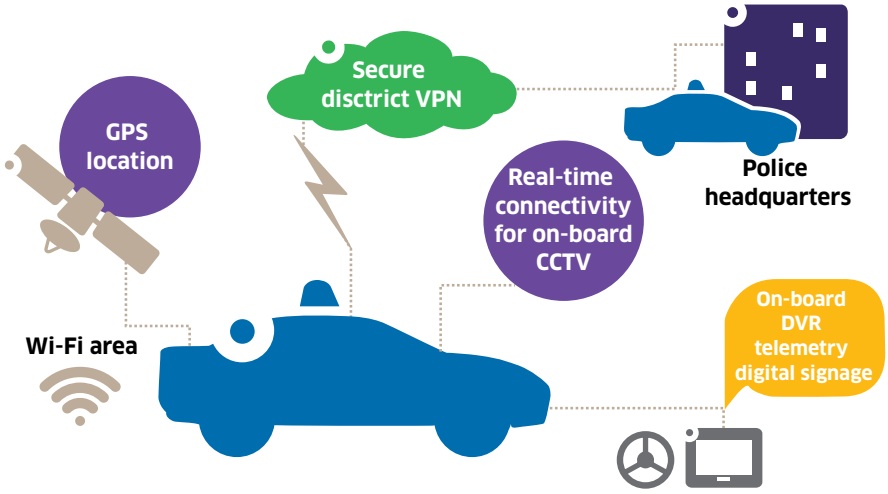


Improve fleet management and patient care:

- Automatic dispatching of the nearest connected ambulance in case of emergency
- Real-time map visualization, traffic congestions and optimized best route for break-out
- Effective personal care: clinical patient data can be downloaded and accessed from the hospital. Vital constants from the patient can be transmitted to the hospital to prepare for the patient's arrival.
- Real-time video access between the doctor and patient to provide precise instructions to the ambulance personnel

USE CASE: CONNECTED POLICE VEHICLE

Police officers spend a significant amount of their time inside a vehicle during patrol. The challenging tasks of the officers include investigating crimes, making arrests, patrolling communities to make them safer, working with the community to solve problems, mediating disputes, investigating traffic collisions, and providing general police services.



Improve safety and response times:

- Automatic warning to the nearest connected police cars in case of emergency
- Live video feeds from crime scene relayed to the headquarters for effective monitoring and real-time instructions
- Secure automatic number plate recognition
- Possibility to monitor nearby public commuter vehicles through Wi-Fi and CCTV feed

BENEFIT FROM A FLEXIBLE AND ROBUST COMMUNICATION PLATFORM

There are several technologies available today for on-board connectivity, such as 4G/LTE, Wi-Fi, LAN, firewall, VPN security, GPS and VoIP. Alcatel-Lucent Enterprise provides an economical solution that helps bundle these technologies to connect commuters, transport enterprises and public services.

Alcatel-Lucent OmniAccess™ 5725A Enterprise Services Router platform is the core of the solution. It is a highly integrated, rugged, advanced IP and communications platform that enables high availability, reliability, and secure broadband cellular connectivity with the vehicle. OmniAccess 5710 ESR combines a robust mechanical design and versatile broadband wireless (cellular WAN and Wi-Fi) and wired (Ethernet) communications interfaces.

Benefits of OmniAccess 5725A ESR	
Versatile	A high-performance IP router with multiple communications interfaces including dual cellular support.
Secure	Advanced security features, such as virtual routing, firewall, access list, DMVPN, IPSEC and GRE.
Rugged	Exceeds extreme environmental requirements for in-vehicle connectivity, such as high temperature range, anti-shock and anti-vibration.
Responsive	Highly available hardware and software architecture; location-aware responsive services through geo-fencing, 802.11n access points and client mode capabilities.

This platform can be integrated easily into your existing communication environment. With our defined focus on the needs of specific verticals, best-of-breed products and flexible solutions, Alcatel-Lucent Enterprise is the vendor of choice for next generation infrastructure and communication needs.

For more information on these and other advanced capabilities of the OmniAccess Enterprise Service Router, see enterprise.alcatel-lucent.com/ESR.

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