

# Long Term Evolution with Gemalto

Opening up premium mobile Internet services for subscribers



## TELECOMMUNICATIONS > SOLUTION

### Context



Mobile network operators are facing exponential growth in data traffic due to the increase in mobile broadband usage. This correlates directly with market penetration by Smartphones, USB modems connected to PCs and mobile internet devices. With their superior Quality of Experience, these devices offer end-users browsing the internet the benefit of rich services including messaging, localization, interaction with social communities, publication/consumption of content ... and the list is growing!

As a result, major operators worldwide are planning to migrate to high bandwidth all-IP wireless networks capable of supporting this data traffic and also - in the medium term - featuring IMS (IP Multimedia Subsystem)-based voice and SMS.

These Long Term Evolution (LTE) networks represent a new era of connectivity for consumers and new opportunities for mobile operators and the mobile ecosystem.

LTE takes advantage of an enhanced radio interface and the scalability of the Internet architecture. It combines these with the security of the UICC card and associated networks based solutions and services.

### The LTE opportunity

With its high speed (100 Mb/s download) and low latency (network reactivity), LTE offers an excellent end-user experience for applications where data throughput is important – it means faster emails, file uploads, enhanced VPN connections, cloud computing and application-sharing when the users are on the move. It also opens up new application areas in the consumer or corporate user's digital life environment, like high definition video, live TV, multi-user gaming, faster social contacts synchronization and peer to peer application transfers.

Permanent connectivity also gives LTE great potential for vertical markets where instant and reliable reception of asynchronous messages is mandatory, for example the internet of things, M2M

applications where security and instantaneity are crucial, medical applications needing high network re-activity and high resolution imaging.

**LTE - named initially by standardization bodies thinking in terms of 'Long Term Evolution' is a reality today. LTE is developed and maintained by the 3rd Generation Partnership Project (3GPP) standards body. The network represents an advance on existing Universal Mobile Telecommunications System (UMTS or 3rd Generation, 3G) networks, and is also the commonly accepted evolution path for all currently deployed GSM, W-CDMA and CDMA networks.**

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## Gemalto Solutions for LTE

Gemalto offers operators a range of highly secure solutions for deploying premium Value Added Services which leverage the speed, low latency and IP connectivity of LTE.

Gemalto's LTE solutions include:

### > LTE Universal Subscriber Card Device (UICC)

The UICC is a mandatory secure element of the LTE environment, ensuring safe and protected access to mobile LTE and IMS networks. LTE's permanent connectivity transforms the UICC into an IP-connected multi-application platform, capable of exposing services and applications directly accessible from IP networks.

As a networked cryptographic computer, the UICC offers reliable and easy-to-use solutions for securing cloud-based services or applications executed in the LTE device and the user's other connected devices.

The benefits and possibilities for operators, subscribers and device manufacturers using LTE are considerable: the UICC, for example, can shelter operator-branded applications, downloaded, managed and upgraded Over The Air (OTA).

### > OTA Advanced platform for LTE

Gemalto's OTA Advanced platform enables mobile operators and their subscribers to get the benefits of faster, more flexible and more secure services over IP-based, high-speed LTE mobile networks.

Built for mission-critical services, the platform enables the automatic activation of subscribers; handles the management and personalization of UICC and LTE devices; and allows the optimization of data revenues. It lets you deploy applications and adapt global roaming policies efficiently and flexibly.

Based on the latest mobile and internet standards, Gemalto's platform also delivers unprecedented customer convenience and security to UMTS and CDMA operators keen to deploy LTE.

Designed to be fully scalable horizontally, it is adapted to both progressive and fast LTE deployment strategies. It also helps operators rationalize their investments by allowing them to manage devices that are not SMS-enabled. Gemalto's OTA Advanced platform – the industry's first for LTE – is commercially available and already being deployed in several leading LTE networks.

### > Innovative application solutions and services

Gemalto Global Software, Solutions and Services for LTE mobile internet applications range across numerous domains and many types of connected device, including PCs, note-books, tablets, handsets and MID's. Some examples are listed below:

- Management of personal and digital social life data, ensuring the protection, access and sharing of the end-user's personal data
- Availability of internet-based communications service tools on any user device, such as Instant Messaging, email and social networking
- Mobile Marketing and mobile operator portals for distributing, managing and promoting mobile services with interactive marketing campaign solutions
- Mobile and internet TV, securing premium TV content
- Steering roaming offers, to maximize operators' roaming revenues and profitability
- Strong authentication to secure Cloud Computing Services such as collaborative applications, CRM applications and Enterprise Resource Management

- Accessibility of Mobile Financial Services, enabling payment, self-banking and remittance on the move via the mobile phone
- NFC and contactless payment applications, where users pay by simply holding the device near a reader,
- M2M with UICC modules in different form factors, often integrated within a larger system where machines exchange information over the wireless network for automotive, fleet management, and emergency systems applications.

## Combined benefits

The combination of LTE and Gemalto's Value Added Solutions fully leverages the new benefits of LTE networks to support the uptake of operators' premium services. These solutions aim to restore the balance between the mobile operator's service and that offered by the pure internet players; in so doing, it permits a more direct correlation between the increase in data traffic and revenue growth.

By leveraging LTE opportunities in a world where people will have an «anytime, anywhere» access to mobile internet, operators will be able to offer their end-users the benefits of simple, reliable, innovative and secure services on the widest range of devices.

Devices can now be customized with no efforts as mobile operators take full benefit of a performant OTA & LTE network.

Gemalto, at the heart of our evolving digital society, allows the freedom to communicate, travel, shop, bank, entertain, and work in ways that are convenient, secure and enjoyable for everyone.