

LTE – fastest developing mobile system ever; commercial services launched on 100+ networks

Industry update from GSA for the Futurecom 2012 Show Daily
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105 commercial networks in 48 countries

351 operators investing in LTE in 104 countries

- 299 operator commitments in 93 countries
- 52 pre-commitment trials in 11 more countries

GSA forecasts 159 commercial LTE networks in 68 countries by end 2012

GSA forecasts 195 commercial LTE networks in 72 countries by end 2013

MVNOs are excluded

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Mobile operators globally confirm mobile broadband as the main driver of service revenue, traffic and subscription growth. HSPA was the first evolution of 3G/WCDMA and the catalyst for mobile broadband seven years ago, when the first system was launched. Now every WCDMA operator has deployed HSPA. According to GSA's research (July 27, 2012) 472 HSPA networks, 15% higher than a year ago, are commercially launched in 183 countries, supporting over 1 billion subscribers. Operators are investing heavily in HSPA networks to ensure coverage is available where needed, and capacity to meet the data explosion coming from PC, smartphone and tablet users who have embraced and highly appreciate the benefits of 24/7 high-speed connectivity in their working and social lives. The devices ecosystem is massive; GSA has in its database around 4,000 HSPA-capable user devices introduced by almost 300 manufacturers. Around half of HSPA operators have introduced HSPA+ (21 Mbps and above peak downlink, 11.5 Mbps peak uplink) to leverage performance gains and greater efficiencies, which the customer experiences as faster downlink/uplink speeds, lower latency, and other usability aspects. The rapid evolution of network capabilities to 42 Mbps DC-HSPA+ is a strong trend. Over 90 DC-HSPA+ networks are commercially launched, representing 130% year on year growth. GSA forecasts 115 DC-HSPA+ networks or more will be in commercial service by end 2012. Investments in HSPA networks will continue, and the coming evolutionary steps will introduce yet more performance and efficiency gains.

The next step in the mobile broadband experience comes with LTE. Despite the huge success of HSPA, LTE is the fastest developing mobile communications system ever. The primary drive towards LTE by operators comes from the need for network capacity, performance management and efficiency. Deploying LTE is critical to maintain the user experience of mobile broadband, and for business growth. LTE enables operators to support future mobile data demand and is essential to address the mass market and achieve the potential of a fully connected world. GSA's Evolution to LTE report (October 1, 2012) confirmed 351 operators are investing in LTE, 41% more than a year ago. 105 operators have launched commercial LTE networks in 48 countries. Another 194 network deployments are in progress. 52 additional operators in 11 more countries are at a pre-commitment stage, engaged in technology trials, tests or studies, etc. GSA forecasts that 159 networks will be commercially launched in 68 countries by end 2012. This figure should rise to at least 195 live networks in 72 countries by end 2013. The ecosystem of LTE user devices is rapidly developing; over 400 products confirmed by GSA on July 3, 2012. *(Article update: GSA is updating its database of LTE user devices which have been officially announced. Another 50 products were added on October 2, 2012, taking the total up to 467 products i.e. over 11% higher than the total confirmed by GSA on July 3, 2012)*

There were over 27 million LTE subscriptions worldwide by June 30, 2012. The majority of connections are in the USA, but the balance is shifting, driven by strong growth in South Korea and Japan. Over the next 3-6 months Asia will move ahead.

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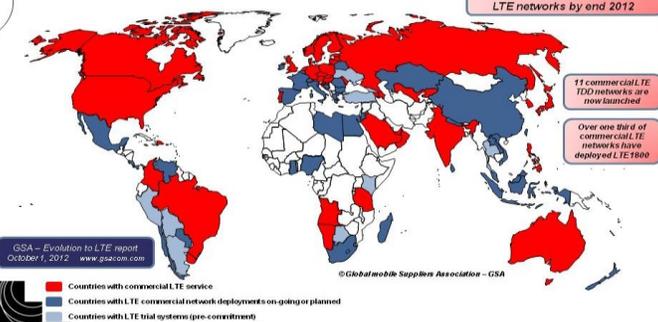


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GSA forecasts 159 commercial LTE networks by end 2012

11 commercial LTE TD-LTE networks are now launched

Over one third of commercial LTE networks have deployed LTE FDD



GSA – Evolution to LTE report
October 1, 2012 www.gsacom.com

■ Countries with commercial LTE service
■ Countries with LTE commercial network deployments on-going or planned
■ Countries with LTE trial systems (pre-commitment)

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Global mobile Suppliers Association (GSA)
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LTE systems are deployed in several frequency bands with most using the FDD mode. Some prime bands for deployments are clearly identified. In North America, most networks use 700 MHz, freed up as digital dividend from the analog to digital TV transition. But the situation is not straightforward because the 700 MHz range is fragmented; the main carriers use frequency sub bands unique to them, so their devices cannot operate on other LTE networks. In Europe and most of APAC, the main spectrum allocations for LTE are 2.6 GHz and 800 MHz (digital dividend). Re-farming of the 1800 MHz band for mobile broadband services has created a strong momentum and become a main trend. Dozens of operators have commercially launched or committed to LTE1800 deployments, either as a single band strategy, or part of a multiband strategy since many operators will eventually deploy LTE in 800/1800/2600 MHz according to frequency availability in their markets. Since 1800 MHz is allocated for mobile services in large bandwidths throughout most of the world, including parts of Latin America, and is relatively easy to refarm, 1800 MHz is an important enabler for roaming. The number of LTE1800 user devices doubled to around 100 products during 1H 2012. The iPhone 5 will further accelerate LTE1800 momentum since 1800 MHz is one of the LTE bands supported, while also pushing forward LTE generally since iPhone 5 also supports the bands generally used by operators in North America and the leading Japanese operators (2100 MHz).

The announcement by COFETEL (Mexico) to adopt the Asia Pacific Telecommunity (APT) band plan for 700 MHz spectrum for mobile services is significant and clearly shows how critical regulators view international harmonization and spectrum efficiency as being. These are essential elements for generating the greatest economies of scale and efficiencies for network technology and devices, which reduces cost and accelerates investments. GSA hopes that other countries in the region will move forward in a concerted and harmonized way, and this could mean 700 MHz becoming the most globally harmonized band.

11 operators have launched commercial service using the TDD mode in unpaired spectrum, which is also part of the LTE standard, with 16 more commercial network deployments in progress, and several more operators engaged in trials and studies. The LTE TDD mode is the perfect choice for providing high speed mobile broadband access in unpaired spectrum. The largest contiguous bands are at 2.3 GHz (100 MHz) and within the 2.6 GHz band (50 MHz) and these are the main bands for LTE TDD deployments in most regions. LTE TDD and FDD are complementary and may help with international roaming as some devices will support both LTE FDD and TDD.

While some operators in Latin America and the Caribbean have already commercially launched LTE services, many more are preparing for its introduction in the coming weeks and months.

Key GSA reports

- Evolution to LTE report
- Status of the Global LTE TDD Market report
- Status of the Global LTE1800 Market report
- Status of the LTE Ecosystem report
- HSPA Operator Commitments report
- Global HSPA+ Operator Commitments report

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