

Press Release

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Bharti Airtel appoints Nokia Siemens Networks to supply, manage 4G network in Maharashtra #MWC12

Operator to launch TD-LTE services this year in India's fastest growing telecom circle

Bharti Airtel, a leading operator in India, has selected Nokia Siemens Networks to build and operate its [TD-LTE](#) (time division duplex long term evolution) network in Maharashtra, one of the country's largest telecom circles. TD-LTE is a 4G [mobile broadband](#) technology that delivers instant internet access and can support video streaming and high-definition video conferencing. The launch of commercial TD-LTE services later this year will offer Bharti Airtel subscribers in Maharashtra a much improved experience when using bandwidth-intensive applications, with more consistent network coverage and faster response times (low latency).

Bharti Airtel will deploy its TD-LTE network in the 2.3 GHz frequency band allocated by the Indian government for broadband wireless access (BWA) technologies.

Sanjay Kapoor, CEO Bharti Airtel (India & South Asia) said, "In the next five years, data will be the main thrust in India, riding on the waves of 3G or 4G technologies. As per industry estimates, mobile data traffic in the country will increase nearly 100-fold by 2015 and consumers will stream nearly 600 hours of video content - every second, thus paving way for the ensuing data revolution! LTE provides ultra high speed data access, in conjunction with 3G, this will lead the data revolution and drive fundamental changes in individual lifestyles, businesses and the society at large. We look forward to the advent of 4G technology which will be launched in India at the same time, as the rest of the world."

Being part of India's large-scale 4G commercial rollout, Nokia Siemens Networks will deliver the TD-LTE network and end-user data devices that can provide data speeds of upto 100 megabits per second (Mbps) as specified by 3GPP. The company will use its newly introduced and industry's first TD-LTE 6 pipes radio*. This integrated solution considerably reduces site space and the operator's total cost of ownership per site compared to the traditional approach of using one remote radio head per sector. Nokia Siemens Networks is widely deploying this TD-LTE solution to commercial customers in Russia, Brazil and Saudi Arabia.

Nokia Siemens Networks' NetAct operations support system will enable effective and consolidated monitoring, management and optimization of Bharti Airtel's GSM and TD-LTE networks. Nokia Siemens Networks will provide network design, integration, commissioning and optimization services to the operator for rapid roll-out of the network and full set of care services including hardware, software and competence development services. It will use its Global Network Solutions Center at Noida, India that is already supporting TD-LTE networks globally, to remotely deliver services for improved efficiency and network performance.

"From networks to devices, Nokia Siemens Networks offers a full range of LTE solutions," said **Ashish Chowdhary, head of Customer Operations Asia and Middle East at Nokia Siemens Networks.** "As Bharti Airtel's long-standing partner, we are glad to be chosen for the launch of 4G services. With our expertise and focus on mobile broadband, we hope to

assist the operator in taking mobile broadband experience to a completely new level for its customers.”

Nokia Siemens Networks was one of the first companies to successfully demonstrate TD-LTE on 2.3 GHz BWA spectrum in India using commercial hardware at its Bengaluru R&D facility in October 2010. The rapid strides in TD-LTE by India and China are helping drive its momentum, making it attractive for operators in other markets too. In India, where fixed broadband penetration is below 1%, operators are aiming to complement 3G with TD-LTE.

For more information on Nokia Siemens Networks’ mobile broadband capabilities, including a video overview, follow this [link](#). To share your thoughts on the topic, join the discussion on Twitter using #MWC12, #LTE, #MBBFuture and #mobilebroadband.

About Bharti Airtel Limited

Bharti Airtel Limited is a leading integrated telecommunications company with operations in 19 countries across Asia and Africa. Headquartered in New Delhi, India the company ranks amongst the top 5 mobile service providers globally in terms of subscribers. In India, the company's product offerings include 2G & 3G mobile services, fixed line, high speed broadband through DSL, IPTV, DTH, enterprise services including national & international long distance services to carriers. In the rest of the geographies, it offers 2G & 3G mobile services. Bharti Airtel had over 244 million customers across its operations at the end of January 2012. To know more please visit, www.airtel.com

About Nokia Siemens Networks

Nokia Siemens Networks is the world’s specialist in mobile broadband. From the first ever call on GSM, to the first call on LTE, we operate at the forefront of each generation of mobile technology. Our global experts invent the new capabilities our customers need in their networks. We provide the world’s most efficient mobile networks, the intelligence to maximize the value of those networks, and the services to make it all work seamlessly.

With headquarters in Espoo, Finland, we operate in over 150 countries and had net sales of over 14 billion euros in 2011. <http://www.nokiasiemensnetworks.com>

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Notes:

*[Nokia Siemens Networks launches industry’s first TD-LTE ‘6 pipes’ remote radio head](#)

Nokia Siemens Networks supports both LTE standards – time division duplex (TDD) for single spectrum bands and frequency division duplex (FDD) for paired spectrum bands. Each offers similar capacity, user experience and coverage.

LTE: Nokia Siemens Networks is leading the commercialization of Long Term Evolution (LTE) in terms of commercial references and live network performance. LTE is the next-generation mobile broadband technology and the evolutionary step from GSM, WCDMA/HSPA/HSPA+, TD-SCDMA, CDMA and WiMAX networks. It delivers the best broadband user experience and smart device services in an efficient way due to increased data rates, reduced latency and scalable flat all-IP network architecture. Nokia Siemens Networks has shipped its LTE ready Flexi Multiradio Base Station to over 200 operators. In addition, it was the first to make an LTE call using commercial hardware and standards-compliant software in 2009.

Among Nokia Siemens Networks' 52 commercial LTE deals are Azerfon in Azerbaijan (radio); Bell Canada (radio); Deutsche Telekom in Germany (radio); Du in UAE (radio); Elisa Finland, Elisa Estonia (radio, EPC); KDDI in Japan (radio); KT in Korea (radio); LG U+ in Korea (radio); LightSquared in USA (EPC); Mobily (Etisalat) in Saudi Arabia (TD-LTE radio, EPC); Mosaic Telecom in USA (radio, EPC); NTT DOCOMO in Japan (radio, EPC); Sky Brazil (TD-LTE radio, EPC); SK Telecom in Korea (radio); STC (Saudi Telecom Company) in Saudi Arabia (TD-LTE radio); Tele2 in Sweden (EPC); Telecom Italia (radio); Telefónica O2 in Germany (radio); Telenor Denmark (radio); Telia in Sweden; TeliaSonera in Denmark and Finland, EMT (TeliaSonera) Estonia (radio), and LMT (TeliaSonera) Latvia (radio, EPC); Telus in Canada (radio); TMN Portugal (radio, EPC); Verizon in USA (IMS for LTE) and Zain Bahrain (radio, EPC).

According to the latest information available, 50 operators worldwide have already commercially launched LTE. 22 of these 50 operators use Nokia Siemens Networks LTE networks including Bell Canada; Deutsche Telekom in Germany; Elisa in Finland; KT in Korea; LG U+ in Korea; Mobily (Etisalat) in Saudi Arabia; NTT DOCOMO in Japan; Sky Brazil (TD-LTE radio and EPC); SK Telecom in Korea; STC (Saudi Telecom Company) in Saudi Arabia; Tele2 in Sweden; Telia in Sweden, TeliaSonera in Denmark and Finland, EMT (TeliaSonera) in Estonia, LMT (TeliaSonera) in Latvia; Telefónica O2 in Germany; Telus in Canada (radio) and Verizon Wireless in USA.

In addition, Nokia Siemens Networks is involved in half of the TD-LTE trials that are currently ongoing around the world: over 16 major field trials in China, Taiwan, Russia and other areas of the world. The company has commercial deals with five TD-LTE network operators including STC, Mobily and Sky Brazil. Sky Brazil has deployed the first commercial 4G network in Latin America using Nokia Siemens Networks' end-to-end TD-LTE products and services.

An LTE performance drive test by Signals Research Group on a Swedish commercial live LTE network confirmed that the overall results achieved in the Gothenburg network (supplied by Nokia Siemens Networks) were better than those achieved in the Stockholm network (supplied by another vendor). For more information about the performance of Nokia Siemens Networks' LTE offering, please refer to an independent report from Signals Research called 'Signals Ahead LTE Drive Test Revisited - Part 1', which is available [here](#).

Nokia Siemens Networks' Single RAN including the Flexi Multiradio Base Station provides a future-proof, easy and cost-efficient path to LTE in both FDD and TDD spectrum bands via a simple software upgrade. Besides the Single RAN that supports GSM, 3G, FDD-LTE and TD-LTE, the company's LTE telecom infrastructure offering also features the Evolved Packet Core, including Flexi NS (Network Server) and Flexi NG (Network Gateway), transport solutions, network management system, Self Organizing Networks (SON), the award-winning Voice over LTE (VoLTE), provisioning and charging solutions and a range of professional services to plan, install, maintain and operate networks. For more information, click [here](#).