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T-Mobile USA, Nokia Siemens Networks drive evolution of HSPA

Mobile leaders promote standardization of Long Term HSPA Evolution to unleash speeds of more than 650 Mbps

Operators would be able to achieve peak data rates of more than 650 megabits per second (Mbps), thanks to an HSPA standard being driven by T-Mobile USA and Nokia Siemens Networks. Long Term HSPA Evolution would improve mobile broadband with speeds matching those promised by LTE Advanced. T-Mobile USA and Nokia Siemens Networks are driving the technology's standardization aiming to make it available for commercial deployment by 2013.

The proposed key features of Long Term HSPA Evolution were accepted during the plenary meeting of 3GPP RAN held on 7-10 December, 2010*.

"We strongly believe in continued HSPA evolution in parallel to the further development of LTE and LTE Advanced," said Neville Ray, chief technology officer, T-Mobile USA. "Long Term HSPA Evolution will allow us to enhance our 4G mobile broadband network beyond its current and planned near term capabilities, and provide room for considerable growth and speed enhancements. As customer demand for wireless data increases, we are well positioned to compete based on the speed, breadth and evolution path of our mobile broadband service."

"The demand for higher data rates and mobile broadband growth continues to push the need for advances in both HSPA and LTE technologies," added Keith Sutton, head of the WCDMA business line for Nokia Siemens Networks. "We are thus equally committed to both technologies. As a leader in HSPA evolution, we have already demonstrated data rates exceeding 100 Mbps at the Mobile World Congress earlier this year. Today, we also have the largest number of HSPA customers with nearly 200 operators worldwide. Driving the standardization of the new technology is a natural extension of our efforts to realize the full potential of HSPA."

Nokia Siemens Networks' Single Radio Access Network (RAN) platform is already prepared for Long Term HSPA Evolution. Operators would have a smooth evolution path to handle increased network traffic along with controlling costs with the introduction of the new technology.

In addition, all Long Term HSPA Evolution features are backwards compatible and can be used together with existing WCDMA and HSPA mobiles on the same carriers.

About T-Mobile USA

Based in Bellevue, Wash., T-Mobile USA, Inc. is the U.S. wireless operation of Deutsche Telekom AG. By the end of the third quarter of 2010, approximately 130 million mobile customers were served by the mobile communication segments of the Deutsche Telekom group - 33.6 million by T-Mobile USA - all via a common technology platform based on GSM and UMTS, the world's most widely used digital wireless standards. T-Mobile USA's innovative wireless products and services help empower people to connect to those who



matter most. Multiple independent research studies continue to rank T-Mobile among the highest in numerous regions throughout the U.S. in wireless customer care and call quality. For more information, please visit <u>http://www.T-Mobile.com</u>. T-Mobile is a federally registered trademark of Deutsche Telekom AG.

About Nokia Siemens Networks

Nokia Siemens Networks is a leading global enabler of telecommunications services. With its focus on innovation and sustainability, the company provides a complete portfolio of mobile, fixed and converged network technology, as well as professional services including consultancy and systems integration, deployment, maintenance and managed services. It is one of the largest telecommunications hardware, software and professional services companies in the world. Operating in 150 countries, its headquarters are in Espoo, Finland. <u>www.nokiasiemensnetworks.com</u>

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Notes to editors:

* The plenary meeting of 3GPP RAN, held on 7-10 December, 2010, initiated technical work and study items on the following features for Long Term HSPA Evolution:

- **HSDPA Multicarrier evolution:** Combines up to eight carriers and provides peak data rates of up to 672 Mbps along with improving spectrum utilization. To overcome operators' spectrum fragmentation constraints, HSDPA carrier aggregation enables carriers from more than one frequency band to be combined.
- **HSDPA Multipoint transmission:** Significantly increases the cell edge data rate by coordinating and combining signals from multiple antennas.
- **Dual antenna beamforming and MIMO in uplink:** Improves the uplink performance with dualantenna transmission, doubling the uplink peak data rate and improving the user average data rate by 30% with 2x2 MIMO/ beam forming. With 2x4 MIMO, over 100% increase in average user data rates can be achieved due to beam forming gain and four receive antennas in the base station.

The detailed specification work to deliver these features will take place in RAN working groups. Other Long Term HSPA Evolution features are expected to be considered in subsequent 3GPP meetings.

For further information on Long Term HSPA Evolution, please refer to the white paper titled 'Long Term HSPA Evolution - Mobile Broadband Evolution Beyond 3GPP Release 10'.