

**RADIO SPECTRUM AND TECHNICAL STANDARDS ADVISORY COMMITTEE**

**Update on Development of International/Regional Standards Organisations  
(October 2012 Issue)**

**Introduction**

This paper informs members about the recent development of telecommunications standards in international and regional organisations such as the International Telecommunication Union (ITU), European Telecommunications Standards Institute (ETSI) and Institute of Electrical and Electronics Engineers (IEEE).

**Medical device communications**

2. The ISO/IEEE 11073 family of standards defines standards to facilitate exchange of vital sign data between different medical devices and to remotely control the devices. Two new standards were recently announced: IEEE 11073-00103 which defines profiles for interoperable communications among personal tele-health devices and/or mobile applications including cell phones and personal computers; and IEEE 11073-10103 which defines discrete terms to be included when conveying a clinically relevant summary of the information obtained from implantable devices such as pacemakers, cardiac monitors, etc.

3. In addition to the two new standards, IEEE 11073-10417 was revised to support plug-and-play interoperability among personal tele-health glucose meter devices and compute engines.

Source:

<http://standards.ieee.org/news/2012/11073.html>

**Ethernet**

4. The IEEE 802.3 Ethernet standards issued in 1985 encompassed a number of wiring and signalling variants of the OSI physical layer in use with Ethernet. Systems communicating over Ethernet divide data streams into frames. Each frame

contains source and destination addresses and error detection data so that damaged data can be detected and re-transmitted. In accordance with the OSI model, Ethernet provides services up to and including the data link layer.

5. IEEE has recently approved IEEE 802.3™-2012 "Standard for Ethernet." The new IEEE 802.3 continues to define the physical (PHY) and media access control (MAC) layers of Ethernet transmission across wired connections of multiple media. However, the new IEEE 802.3 approved by the IEEE Standards Association (IEEE-SA) incorporates various technical updates and enhancements, addressing 10 Gbit/s Ethernet Passive Optical Networks (EPONs), energy efficiency, extension to 40 Gbit/s and 100 Gbit/s speeds while maintaining compatibility with previously installed IEEE 802.3 interfaces, enhanced support for loss-sensitive applications and time synchronization.

Source:

[http://standards.ieee.org/news/2012/802.3\\_12.html](http://standards.ieee.org/news/2012/802.3_12.html)

### **New SIM card format**

6. A subscriber identity module or subscriber identification module (SIM) was first made the same size as a credit card (85.60 mm x 53.98 mm x 0.76 mm). The development of physically smaller mobile devices prompted the development of smaller and smaller SIM cards. Over 25 billion SIM card and derivatives have been produced so far, and the industry continues to issue over 4.5 billion SIM cards each year.

7. ETSI has recently standardised a new form factor (4FF) for the SIM card which is 40% smaller than the current smallest design. At its 55th meeting held on end May 2012 in Osaka, ETSI's Smart Card Platform Technical Committee agreed a new form factor for the 4FF SIM card (12.3mm x 8.8mm x 0.67mm). It can be packaged and distributed in a way that is backwards compatible with existing SIM card designs and offer the same functionality as all current SIM cards. The standards for 4FF SIM card is published in ETSI's TS 102 221 specification freely available from the ETSI website.

Source:

[http://www.etsi.org/WebSite/NewsandEvents/2012\\_06\\_New\\_SIM\\_Card\\_Format.asp](http://www.etsi.org/WebSite/NewsandEvents/2012_06_New_SIM_Card_Format.asp)  
[X](#)

### **Voice over LTE**

8. Voice calls in GSM, UMTS and CDMA2000 are essentially based on circuit switching. With the adoption of LTE, carriers will have to conduct re-engineering of

their voice network. The Voice over LTE (VoLTE) approach is based on the IP Multimedia Subsystem (IMS) architecture, with specific profiles for control and media planes of voice service on LTE defined by GSMA. This approach allows the voice service being delivered as data flows within the LTE data bearer. As a consequence, there is no dependency on the legacy circuit switch voice network.

9. The MultiService Forum (MSF), ETSI and GSM Association (GSMA) recently announced the first ever RCS (Rich Communication Suite) and VoLTE (Voice over LTE) interoperability test event scheduled for 1-12 October 2012. The test event will take place in two labs, hosted by Telecom Slovenia Group and Sintesio, in Kranj, Slovenia, and China Mobile, at the China Mobile Research Institute Laboratory in Beijing, China. The RCS/VoLTE interoperability event will focus on core network interfaces needed to ensure multi-vendor deployment strategies for RCS /VoLTE technology. Single network, roaming and interconnect scenarios will be used. In addition, the GSMA technical recommendations and the test scenarios developed by MSF and ETSI will also be evaluated.

Source:

[http://www.etsi.org/WebSite/NewsandEvents/2012\\_04\\_ETSI\\_MSF\\_GSMA\\_RCS\\_VoLTE\\_Plugtests.aspx](http://www.etsi.org/WebSite/NewsandEvents/2012_04_ETSI_MSF_GSMA_RCS_VoLTE_Plugtests.aspx)

### **Advice sought**

10. Members are invited to note the content of this paper.

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