TIA Standards Committees

TR-8 Mobile and Personal Private Radio Standards
Engineering Committee TR-8 formulates and maintains standards for two-way voice and data radio communications, including all technical matters for analog and digital radio systems and services, such as definitions, interoperability, compatibility and compliance requirements. The types of systems addressed by these standards include business and industrial Land Mobile Radio applications, as well as public safety (such as police, ambulance and firefighting) applications specified by APCO 25/P25. The committee is currently working with ATIS on a Land Mobile Radio system interface with LTE networks.

TR-45 Mobile and Personal Communications Systems Standards
Engineering Committee TR-45 develops standards for mobile cellular and personal communications systems, specifically those that support the cdma2000 mobile network and devices. Standards address key industry areas, including mobile transport standards that meet the needs of M2M connectivity, utilizing current commercial mobile phone functions in emergency situations, e.g. SMS to 9-1-1, interoperability and connectivity between cdma2000 and LTE networks, and the performance and interoperability of femtocells.

TR-47 Terrestrial Mobile Multimedia Multicast
Engineering Committee TR-47 is responsible for the development and maintenance of voluntary downlink standards for terrestrial and non-terrestrial multimedia multicast systems. These standards are intended to be employed by users and supplier to promote compatible and interoperable systems to support multicast audio, video and data requirements for a wide range of commercial and public services.

TR-30 Multi-Media Access, Protocols and Interfaces
Engineering Committee TR-30 develops standards related to the functional, electrical and mechanical characteristics of interfaces between data circuit terminating equipment (DCE), data terminal equipment (DTE) and multimedia gateways, telephone and voice-over-Internet protocol (VoIP) networks, and other DCE and facsimile systems. TR-30 also develops standards for the measurement of the quality of transmission over Internet and analog networks. Subcommittee TR-30.5, Data Communications Equipment Evaluation and Network, addresses the consumer demand for the broadband delivery of video and audio, such as third-party Over-the-Top (OTT) content from sources such as Netflix or Pandora.

TR-48 Vehicular Telematics
Engineering Committee TR-48 is responsible for the development and maintenance of voluntary standards relating to vehicular telematics equipment, services and intelligent transportation systems (ITS). The committee is currently exploring standards for both the adoption of the U.S. Department of Transportation’s 5.9GHz Dedicated Short Range Communications (DSRC) network for intelligent transportation systems as well as the feasibility of commercial mobile service systems, including LTE, for North American ITS/Infotainment use.

TR-49 Healthcare ICT
Engineering Committee TR-49 is responsible for development and maintenance of standards for healthcare ICT applications which involve medical devices, network infrastructure, applications, and operations support. This committee is capable of hosting standards projects that address electronic health record management, health information exchange networks, mobile applications, wireless life sciences, and security.

TR-50 M2M - Smart Device Communications
Engineering Committee TR-50 M2M - Smart Device Communications is responsible for the development and maintenance of access-agnostic interface standards for the monitoring and bi-directional communication of events and information between smart devices and other devices, applications, or networks. The committee is developing a multi-part machine-to-machine (M2M) framework that can operate over different underlying transport networks (wireless, wired, etc.) and can be adapted to a given transport network by means of an adaptation/convergence layer. The committee works with other TIA Engineering Committees (TR-42, TR-45, TR-48), non-TIA standards forums (GSC MSTF, ETSI, OPC Foundation), and academia (Georgia Tech Research Institute and Florida Atlantic University) to ensure end-to-end functionality and interoperability and to foster collaboration and coordination among organizations addressing various components of M2M communications.

TR-51 Smart Utility Networks
Engineering Committee TR-51 Smart Utility Networks focuses on efficient access technology with a mesh network topography optimized for Smart Grid applications. The Smart Utility Network standards series is intended to provide electric utility companies with another tool to improve services for their customers. The committee works to incorporate the best of the applicable existing standards in order to develop an integrated multi-layer standard (covering layers 1 through 4).

TR-41 User Premises Telecommunications Requirements
Engineering Committee TR-41 develops and maintains voluntary standards for telecommunications cabling infrastructure in user-owned buildings such as commercial, residential and industrial buildings; educational, healthcare and large facilities (e.g. stadiums and airports) and data centers. The committee’s standards work covers requirements for copper and optical fiber cabling components (such as cables, connectors and cable assemblies), installation, and field testing in addition to the administration of pathways and spaces that support the cabling.

TR-42 Telecommunications Cabling Systems
Engineering Committee TR-42 develops and maintains voluntary standards for telecommunications cabling infrastructure in user-owned buildings such as commercial, residential and industrial buildings; educational, healthcare and large facilities (e.g. stadiums and airports) and data centers. The committee’s standards work covers requirements for copper and optical fiber cabling components (such as cables, connectors and cable assemblies), installation, and field testing in addition to the administration of pathways and spaces that support the cabling.

TR-14 Structural Standards for Communication and Small Wind Turbine Support Structures
Engineering Committee TR-14 – Structural Standards for Communication and Small Wind Turbine Support Structures – is responsible for standards and recommended practices related to the design, fabrication and production of broadcast and wireless towers (cell towers) and systems. The committee supports the continued maintenance of TIA Standard 222-G, Structural Standards for Steel Antenna Towers and Supporting Structures. An updated 222-H revision currently being developed, which will incorporate the latest version of the ASCE standard, 7-10 Minimum Design Loads of Buildings and Other Structures as well as ratings for antenna mounts, safety anchorages for pole climbing, and how to address the corrosion of anchor bolts. The committee is also addressing how wind turbines may be affixed to antenna towers.

TR-51 Smart Utility Networks
Engineering Committee TR-51 Smart Utility Networks focuses on efficient access technology with a mesh network topography optimized for Smart Grid applications. The committee works to incorporate the best of the applicable existing standards in order to develop an integrated multi-layer standard (covering layers 1 through 4).
Spectrum

allocations.

Sustainability

TR-42.11 Data Center Fabrics Task Group is the author of TIA-942-A, Telecommunications Infrastructure Standard for Data Centers, which addresses the design, installation and maintenance of telecommunications cabling/topography within data centers.

The recent addendum to TIA-942-A addresses the design, construction and administration of flat, or multi-switch, data center topology which reduces the complexity of the traditional three-tier data center networks and is more suitable for virtualization, e.g. software defined data centers.

Standard document TIA 568-C.0 defines the overall premises infrastructure, including horizontal cabling, backbone cabling, and distribution facilities, for 40G/100G networks within commercial building spaces such as data centers and business campuses.

Smart Buildings / Smart Grid

Smart Device Communications: Security Aspects provides guidance on the management of cyber security related risks derived from ICT systems. The document considers the overall security of the M2M architecture.

TR-51’s multi-part wireless point-to-multipoint network and conformance standard in support of smart grid applications is intended to provide electric utility providers with a standardized and industry-proven blueprint to intelligent two-way data transmission between smart meters, smart home appliances and a utility’s back-office system.

TR-42 currently collaborates with TIA’s TR-50, Smart Device – M2M engineering committee on building automation systems in support of TR-42’s standard TIA-862, Building Automation Systems Cabling. The committee is currently revising the 862 document to include new technologies and systems related to “intelligent buildings.”

Vehicular Telematics

TR-48 is currently working in conjunction with IEEE 802.3 to develop testing and installation specifications for Category 8 next-generation twisted-pair cabling.