

IEEE ComSoc Standards: Background, and some specific examples of relevance/interest to TCCN

Oliver Holland, Advanced Wireless Technology Group, Ltd. (Vice-Chair, IEEE ComSoc Standards Development Board—COM/SDB)

22 May 2019
Shanghai, China

Structure of IEEE Standards

Hierarchy

- IEEE Standards Association (IEEE-SA)
 - Also Committees therein, e.g., NesCom, RevCom, PatCom, AudCom, ICCom, ProCom
- Standards Sponsoring Committees. Sponsored by a IEEE technical society or council, with the exception of Standards Coordinating Committees
 - IEEE 802—Computer Society
 - IEEE COM/SDB—Communications Society
- Working groups (develop standards)
 - Baseline standards
 - Amendments
 - Further standards in scope of WG (not built on baseline standard)
 - Recommended practices, corrigenda, etc.

IEEE ComSoc Standards

Name	Designator ▲	Contact
+ IEEE Aerospace and Electronic Systems Society	AES	
+ IEEE Antennas and Propagation Society	APS	
+ IEEE-SA Board of Governors	BOG	
+ IEEE Broadcast Technology Society	BTS	
+ IEEE Computer Society	C	
+ IEEE Consumer Electronics Society	CES	
+ IEEE Computational Intelligence Society	CIS	
+ IEEE Communications Society	COM	
+ <input type="checkbox"/> Access and Core Networks Standards Committee	COM/AccessCore-SC	Alexander Gelman
+ <input type="checkbox"/> Dynamic Spectrum Access Networks Standards Committee	COM/DySPAN-SC	Oliver Holland
+ <input type="checkbox"/> Edge, Fog, Cloud Communications with IOT and Big Data Standards Committee	COM/EdgeCloud-SC	Robert Fish
+ <input type="checkbox"/> Green ICT Standards Committee	COM/GreenICT-SC	Jaafar M.H. Elmirghani
+ <input type="checkbox"/> Mobile Communication Networks Standards Committee	COM/MobiNet-SC	Oliver Holland
+ <input type="checkbox"/> Virtualized and Software Defined Networks, and Services Standards Committee	COM/NetSoft-SC	Mehmet Ulema
+ <input type="checkbox"/> Power Line Communications	COM/PLC	Jean Philippe Faure
+ <input type="checkbox"/> Standards Development Board	COM/SDB	Tarek El-Bawab
+ IEEE Council on RFID	CRFID	

IEEE ComSoc Standards—Development of Hierarchy

SCs	WGs
COM/NetSoft	1903 - Next-Generation Service Overlay Network
	1913 - Software-Defined Quantum Communication
	1915 - Security for Virtualized Environments
	1916 - Performance for Virtualized Environments
	1917 - Reliability for Virtualized Environments
	1921 - Software-Defined Networking Bootstrapping Procedures
	1930 - SDN based Middleware for Control and Management of Networks
COM/GreenICT	1922 - GICT Emissions
	1923 - Energy Efficient Comm Hardware
	1925 - COM/SDB/Energy Efficient ICT
COM/MobiNet	1914 - Next Generation Fronthaul Interface
	1918 - Tactile Internet
	1920 - Aerial Communications and Networking Standards
	1931 - ROOF Computing
	1932 - Licensed/Unlicensed Spectrum Interoperability in wireless mobile networks
	1933 - Hybrid ARQ for High Throughput Applications
COM/EdgeCloud	2410 - Biometrics Open Protocol
	1912 - Privacy and Security
	P2413 (Co-Sponsor)
	NEW: 2061 - Architecture for Low Mobility Energy Efficient Network for Affordable Broadband Access (Frugal 5G)
COM/AccessCore	1904 - Access Networks Working Group
	1911 - HDBaseT 5Play Working Group
	1910 - Loop-Free Switching and Routing
COM/SDB	1652 - Working Group on Communication Electroacoustics
	1908 - Indic Virtual Keyboards
	1906 - Nanoscale and Molecular Communications

Of Relevance (my own personal opinion!)

Mobile Communication Networks Standards Committee

- Tactile Internet: AI to assist low latency comms
- Licensed/Unlicensed Spectrum Interoperability in wireless mobile networks
- + Generally of interest if wish to define (cognitive) mobile networking standards involving TCCN-related topics or not (this is a Sponsoring Committee)
- Frugal 5G: Discussed catering for the use of (among others) some TCCN-relevant access schemes, such as TV white space

Virtualized and Software Defined Networks, and Services Standards Committee. Many of potential interest, perhaps (examples)

- SDN based Middleware for Control/Management of Networks
- Software-Defined Networking Bootstrapping Procedures
- Security for Virtualized Environments

Of Relevance (my own personal opinion!)

Power Line Communications

- Perhaps the “smart grid” ones, dependent on how they progress and the nature/scope of the “smart” therein?

Communications Society Standards Development Board (COM/SDB)

- Network-Adaptive Quality of Experience (QoE) Management Scheme for Real-Time Mobile Video Communications
- Smart Cities Technology Framework
 - Guide for the Technology and Process Framework for Planning a Smart City
- COM/SDB/Energy Efficient ICT
 - Standard for a Functional Architecture of Distributed Energy Efficient Big Data Processing

And of course, DySPAN-SC/1900→leads to next presentation on IEEE DySPAN-SC/IEEE 1900

DySPAN-SC/1900 to follow...