Report on Implementation for Evolving Telecommunication Infrastructure for Developing Countries - Chapters and their References

2 - Objectives

2   Objectives

ITU-D SG Final Report	Q 7-3/1	Implementation of universal access to broadband services	2014	http://www.itu.int/pub/D-STG-SG01.07.3-2014
ITU-D SG Final Report	Q 7-3/1 Study	Comprehensive study on universal access to broadband services. Indian experience and international scenario	2013	https://www.itu.int/md/D10-SG01-INF-0057/en

3.1 - Mobile Broadband Access Networks

3.1.1   International Mobile Telecommunication (IMT)

ITU-R Recommendation	M.1034	Requirements for the radio interface(s) for International Mobile Telecommunications-2000 (IMT-2000)	1997	http://www.itu.int/rec/R-REC-M.1034
ITU-R Recommendation	M.1035	Framework for the radio interface(s) and radio sub-system functionality for International Mobile Telecommunications-2000 (IMT-2000)	1994	http://www.itu.int/rec/R-REC-M.1035
ITU-R Recommendation	M.1036	Frequency arrangements for implementation of the terrestrial component of International Mobile Telecommunications-2000 (IMT 2000) in the bands 806-960 MHz, 1 710-2 025 MHz, 2 110-2 200 MHz and 2 500-2 690 MHz	2012	http://www.itu.int/rec/R-REC-M.1036
ITU-R Recommendation	M.1078	Security principles for International Mobile Telecommunications-2000 (IMT-2000)	1994	http://www.itu.int/rec/R-REC-M.1078
ITU-R Recommendation	M.1079	Performance and quality of service requirements for International Mobile Telecommunications-2000 (IMT-2000) access networks	2003	http://www.itu.int/rec/R-REC-M.1079
ITU-R Recommendation	M.1168	Framework of International Mobile Telecommunications-2000 (IMT-2000)	1995	http://www.itu.int/rec/R-REC-M.1168
ITU-R Recommendation	M.1225	Guidelines for evaluation of radio transmission technologies for IMT-2000	1997	http://www.itu.int/rec/R-REC-M.1225
ITU-R Recommendation	M.1457	Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-2000	2013	http://www.itu.int/rec/R-REC-M.1457
ITU-R Recommendation	M.1579	Global circulation of IMT-2000 terrestrial terminals	2015	http://www.itu.int/rec/R-REC-M.1579
ITU-R Recommendation	M.1580	Generic unwanted emission characteristics of base stations using the terrestrial radio interfaces of IMT-2000	2014	http://www.itu.int/rec/R-REC-M.1580
ITU-R Recommendation	M.1581	Generic unwanted emission characteristics of mobile stations using the terrestrial radio interfaces of IMT-2000	2014	http://www.itu.int/rec/R-REC-M.1581
ITU-R Recommendation	M.1645	Framework and overall objectives of the future development of IMT-2000 and systems beyond IMT-2000	2013	http://www.itu.int/rec/R-REC-M.1645
ITU-R Recommendation	M.2012	Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications Advanced (IMT-Advanced)	2014	http://www.itu.int/rec/R-REC-M.2012
ITU-R Report	M.2134	Requirements related to technical performance for IMT-Advanced radio interface(s)	2008	http://www.itu.int/pub/R-REP-M.2134/en
ITU-R Recommendation	M.687	International Mobile Telecommunications-2000 (IMT-2000)	1997	http://www.itu.int/rec/R-REC-M.687
ITU-R Recommendation	M.816	Framework for services supported on International Mobile Telecommunications-2000 (IMT-2000)	1997	http://www.itu.int/rec/R-REC-M.816
ITU-R Recommendation	M.817	International Mobile Telecommunications-2000 (IMT-2000). Network architectures	1992	http://www.itu.int/rec/R-REC-M.817

ITU-R Recommendation	M.819	International Mobile Telecommunications-2000 (IMT-2000) for developing countries	1997		http://www.itu.int/rec/R-REC-M.819
ITU-T Recommendation	Q.1703	Service and network capabilities framework of network aspects for systems beyond IMT-2000	2004	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1703
ITU-T Recommendation	Q.1704	Functional network architecture for IMT-Advanced	2008	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1704
ITU-T Recommendation	Q.3909	The framework and overview of NGN conformance and interoperability testing	2011	SG 11	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.3909
ITU-T Recommendation	Y.2011	General principles and general reference model for Next Generation Networks	2004	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2011
ITU-T Recommendation	Y.2012	Functional requirements and architecture of next generation networks	2006	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2012

3.1.2 Satellite Component of IMT

ITU-R Recommendation	M.1850	Detailed specifications of the radio interfaces for the satellite component of International Mobile Telecommunications-2000 (IMT-2000)	2014		http://www.itu.int/rec/R-REC-M.1850
ITU-R Recommendation	M.2014	Global circulation of IMT-2000 satellite terminals	2012		http://www.itu.int/rec/R-REC-M.2014
ITU-R Recommendation	M.2047	Detailed specifications of the satellite radio interfaces of International Mobile Telecommunications-Advanced (IMT-Advanced)	2013		http://www.itu.int/rec/R-REC-M.2047
ITU-R Report	M.2176	Vision and requirements for the satellite radio interface(s) of IMT-Advanced	2012		http://www.itu.int/pub/R-REP-M.2176
ITU-R Report	M.2279	Outcome of the evaluation, consensus building and decision of the IMT-Advanced satellite process (Steps 4 to 7), including characteristics of IMT-Advanced satellite radio interfaces	2013		http://www.itu.int/pub/R-REP-M.2279

3.1.4 Consideration for developing countries

ITU-R Handbook	ITU Handbook	Migration to IMT-2000 Systems - Supplement 1 (Revision 1) of the Handbook on Deployment of IMT-2000 Systems	2011		http://www.itu.int/pub/R-HDB-46-2011
ITU-R Recommendation	M.1645	Framework and overall objectives of the future development of IMT-2000 and systems beyond IMT-2000	2013		http://www.itu.int/rec/R-REC-M.1645
ITU-R Recommendation	M.1822	Framework for services supported by IMT	2007		http://www.itu.int/rec/R-REC-M.1822
ITU-D SG Final Report	Q 26/2	Migration from existing networks to next-generation networks for developing countries: technical, regulatory and policy aspect	2014		http://www.itu.int/pub/D-STG-SG02.26-2014
ITU-T Supplement	Q.1740-Series	Supplement on scenarios and requirements in terms of services and deployments for IMT and IMS in developing countries	2014		http://www.itu.int/md/T13-SG13-140707-TD-WP1-0247

3.2 - Fixed Broadband Access Networks

3.2.1 Overview

ITU-T Supplement	G Suppl. 50	Overview of digital subscriber line Recommendations	2011	SG 15	http://www.itu.int/ITU-T/recommendations/rec.aspx?id=11419

3.2.3 Hybrid Fiber/Copper Networks

ITU-T Recommendation	J.295	Functional requirements for a hybrid cable set top box	2012	SG 09	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=J.295
ITU-T Recommendation	L.47	Access Facilities using hybrid fibre/copper networks	2000	SG 15	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=L.47

3.2.4 Fixed-Mobile General Requirements

ITU-T Recommendation	H.323 v7	Packet-based multimedia communications systems	2009	SG 16	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=H.323 v7
ITU-T Recommendation	Q.1741.1	IMT-2000 references to release 1999 of GSM evolved UMTS core network with UTRAN access network	2002	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1741.1
ITU-T Recommendation	Q.1741.2	IMT-2000 references to release 4 of GSM evolved UMTS core network with UTRAN access network	2002	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1741.2
ITU-T Recommendation	Q.1741.3	IMT-2000 references to release 5 of GSM evolved UMTS core network	2003	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1741.3
ITU-T Recommendation	Q.1741.4	IMT-2000 references to release 6 of GSM evolved UMTS core network	2005	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1741.4

ITU-T Recommendation	Q.1741.5	IMT-2000 references to Release 7 of GSM-evolved UMTS core network	2008	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1741.5
ITU-T Recommendation	Q.1741.6	IMT-2000 references to Release 8 of GSM-evolved UMTS core network	2009	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1741.6
ITU-T Recommendation	Q.1741.7	IMT-2000 references to Release 9 of GSM-evolved UMTS core network	2011	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1741.7
ITU-T Recommendation	Q.1741.8	IMT-2000 references to Release 10 of GSM-evolved UMTS core network	2013	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1741.8
ITU-T Recommendation	Q.1742.1	IMT-2000 references to ANSI-41 evolved core network with cdma2000 access network	2002	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1742.1
ITU-T Recommendation	Q.1742.10	IMT-2000 references (approved as of 31 December 2011) to ANSI-41 evolved core network with cdma2000 access network	2013	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1742.10
ITU-T Recommendation	Q.1742.11	IMT 2000 references (approved as of 31 December 2012) to ANSI-41 evolved core network with cdma2000 access network	2014	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1742.11
ITU-T Recommendation	Q.1742.2	IMT-2000 references (approved as of 11 July 2002) to ANSI-41 evolved core network with cdma2000 access network	2003	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1742.2
ITU-T Recommendation	Q.1742.3	IMT-2000 references (approved as of 30 June 2003) to ANSI-41 evolved core network with cdma2000 access network	2004	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1742.3
ITU-T Recommendation	Q.1742.4	IMT-2000 references (approved as of 30 June 2004) to ANSI-41 evolved core network with cdma2000 access network	2005	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1742.4
ITU-T Recommendation	Q.1742.5	IMT-2000 references (approved as of 31 December 2005) to ANSI-41 evolved core network with cdma2000 access network	2006	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1742.5
ITU-T Recommendation	Q.1742.6	IMT-2000 references (approved as of 31 December 2006) to ANSI-41 evolved core network with cdma2000 access network	2007	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1742.6
ITU-T Recommendation	Q.1742.7	IMT 2000 References (approved as of 30 June 2008) to ANSI-41 evolved Core Network with cdma2000 Access Network	2007	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1742.7
ITU-T Recommendation	Q.1742.8	IMT-2000 references (approved as of 31 January 2010) to ANSI-41 evolved core network with cdma2000 access network	2008	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1742.8
ITU-T Recommendation	Q.1742.9	IMT-2000 references (approved as of 31 December 2010) to ANSI-41 evolved core network with cdma2000 access network	2011	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1742.9
ITU-T Recommendation	Q.1762/Y.2802	Fixed-mobile convergence general requirements	2007	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1762/Y.2802
ITU-T Recommendation	Y.2001	General Overview of NGN	2004	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2001

3.2.5 Required Capabilities for Broadband Access for Fixed Mobile Convergence

ITU-T Recommendation	Q.1762/Y.2802	Fixed-mobile convergence general requirements	2007	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1762/Y.2802
ITU-T Recommendation	Y.2808	Fixed mobile convergence with a common IMS session control domain	2009	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2808

3.2.6 Consideration sfor using legacy PSTN and ISDN

ITU-T Recommendation	Q.1763/Y.2803	FMC service using legacy PSTN or ISDN as the fixed access network for mobile network users	2007	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1763/Y.2803

3.3 - Broadband Access for Rural Applications

3.3.2 Challenges for telecommunications/ICT/broadband development in rural and remote areas

ITU-D Recommendation	D 20	Policy and regulatory initiatives for developing telecommunications/ICTs/broadband in rural and remote areas	2014		http://www.itu.int/pub/D-TDC-WTDC-2014
ITU-D SG Final Report	Focus Group 7	New Technologies for Rurl Applications, Final Report of ITU-D Focus Group 7	2000		http://www.itu.int/ITU-D/fg7/pdf/FG_7-e.pdf
ITU-D SG Final Report	Q 10-2/2	Telecommunications for rural and remote areas	2010		Report http://www.itu.int/pub/D-STG-SG02.10.2-2010
ITU-D SG Final Report	Q 10-3/2	Telecommunications/ICTs for rural and remote areas	2014		http://www.itu.int/pub/D-STG-SG02.10.3-2014
ITU-DSG ToR	Q 5/1	Terms of Reference	2014		Reference http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ05.1&stg=1

3.3.3   ITU-D Case Study Library for Rural Applications

ITU-D Case Library	Study Group Case Study Library	Study Group Case Study Library	2015		http://www.itu.int/en/ITU-D/Study-Groups/Pages/case-study-library.aspx

3.4 - Core Networks

3.4.1   Overview

ITU-D Report	Q 19-1/2 (2010)	Strategy for migration from existing networks to next-generation (NGN) for developing countries	2010		http://www.itu.int/pub/D-STG-SG02.19.1-2010
ITU-D Report	Q 19-2/1 (2014)	Implementation of IP telecommunication services in developing countries	2014		http://www.itu.int/pub/D-STG-SG01.19.2-2014
ITU-T Recommendation	Y.2012	Functional requirements and architecture of next generation networks	2006	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2012

3.4.2   Required Capabilities for Core Networks

ITU-D SG Final Report	Q 26/2	Migration from existing networks to next-generation networks for developing countries: technical, regulatory and policy aspect	2014		http://www.itu.int/pub/D-STG-SG02.26-2014
ITU-T Recommendation	Y.2001	General Overview of NGN	2004	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2001

3.4.3   Technology and Deployment of Core Networks

ETSI	ETSI TS 123 228 (v10.5.0)	SIP	2011		
ITU-R Recommendation	M.1645	Framework and overall objectives of the future development of IMT-2000 and systems beyond IMT-2000	2013		http://www.itu.int/rec/R-REC-M.1645
ITU-R Report	M.2114	Key technical and operational characteristics for access technologies to support IP applications over land mobile systems	2007		http://www.itu.int/pub/R-REP-M.2114-2007/en
ITU-D SG Final Report	Q 26/2	Migration from existing networks to next-generation networks for developing countries: technical, regulatory and policy aspect	2014		http://www.itu.int/pub/D-STG-SG02.26-2014
ITU-T Recommendation	Q.1703	Service and network capabilities framework of network aspects for systems beyond IMT-2000	2004	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1703
ITU-T Recommendation	Q.1706/Y.2801	Mobility management requirements for NGN	2006	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Q.1706/Y.2801
TIA	TIA-873.002	SIP	2006		
ITU-T Recommendation	Y.1001	IP framework - A framework for convergence of telecommunication networks and IP network technologies	2000	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.1001
ITU-T Recommendation	Y.2001	General Overview of NGN	2004	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2001
ITU-T Recommendation	Y.2012	Functional requirements and architecture of next generation networks	2006	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2012
ITU-T Recommendation	Y.2021	IMS for Next Generation Networks	2010	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2021

3.4.4   NGN interoperability testing

ITU-D SG Final Report	Q 26/2	Migration from existing networks to next-generation networks for developing countries: technical, regulatory and policy aspect	2014		http://www.itu.int/pub/D-STG-SG02.26-2014

3.5 - Home Networks

3.5.1   Overview

ITU-T Recommendation	G.9971	Requirements of transport functions in IP home networks	2010	SG 15	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=G.9971

3.5.2   Required Capabilities for Core Networks (Y.2001)

ITU-T Recommendation	Y.2291	Architectural overview of next generation home networks	2011	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2291

3.5.3 Architectural Overview of Next Generation Home Networks

ITU-T Recommendation	Y.2291	Architectural overview of next generation home networks	2011	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2291

3.5.4 Architecture and Deployment of Femtocell

Small Cell Forum	Release One	Release One: Home overview (Version SCF101.04.03, Release 4)	2014		http://scf.io/en/documents/101_Release_One_Home_overview.php
TIA	TIA-873.002	SIP	2006		

3.6 - Network Operation and Management

3.6.1 Overview

ITU-T Recommendation	M.3400	TMN management functions	2000	SG 02	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=M.3400

3.6.2 Required Capabilities for Next Generation Home Networks

ITU-T Recommendation	M.3060/Y.2401	Principles for the Management of Next Generation Networks	2006	SG 02	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=M.3060/Y.2401

3.6.3 Management, Architectures and Technology

ITU-T Recommendation	M.3060/Y.2401	Principles for the Management of Next Generation Networks	2006	SG 02	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=M.3060/Y.2401

3.6.4 Accounting, charging and Billing

ITU-T Recommendation	Y.2012	Functional requirements and architecture of next generation networks	2006	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2012

3.7 - Economic Aspects

3.7.1 Overview

ITU-D Report	Q 12-3/1	Question 12-3/1: Tariff policies, tariff models and methods of determining the costs of services on national telecommunication networks, including next-generation networks	2014	http://www.itu.int/pub/D-STG-SG01.12.3-2014
ITU-D Report	Q 19-2/1 (2014)	Implementation of IP telecommunication services in developing countries	2014	http://www.itu.int/pub/D-STG-SG01.19.2-2014
ITU-D Report	Report RME	ITU Telecom Regulatory Report	2011	http://www.itu.int/pub/D-REG-TRH.01-2011

3.7.2 Effects for Network Operators and Service Providers

ITU-D Report	Q 12-3/1	Question 12-3/1: Tariff policies, tariff models and methods of determining the costs of services on national telecommunication networks, including next-generation networks	2014	http://www.itu.int/pub/D-STG-SG01.12.3-2014
ITU-D Report	Q 19-2/1 (2014)	Implementation of IP telecommunication services in developing countries	2014	http://www.itu.int/pub/D-STG-SG01.19.2-2014

3.8 - Policy Aspects

3.8.1 Background

ITU-D Report	Q 12-3/1	Question 12-3/1: Tariff policies, tariff models and methods of determining the costs of services on national telecommunication networks, including next-generation networks	2014	http://www.itu.int/pub/D-STG-SG01.12.3-2014
ITU-D Report	Q 19-2/1 (2014)	Implementation of IP telecommunication services in developing countries	2014	http://www.itu.int/pub/D-STG-SG01.19.2-2014

3.8.2 Policy and Regulation

ITU-D Report	Broadband Series	Regulating Broadband prices	2012	http://www.itu.int/ITU-D/treg/broadband/ITU-BB-Reports_RegulatingPrices.pdf

ITU-T Recommendation	E.800	Terms and definitions related to quality of service and network performance including dependability	2008	SG 12	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=E.800
ITU-D Report	Q 12-3/1	Question 12-3/1: Tariff policies, tariff models and methods of determining the costs of services on national telecommunication networks, including next-generation networks	2014		http://www.itu.int/pub/D-STG-SG01.12.3-2014
ITU-D Report	Q 18-1/1	Question 18-1/1 Domestic enforcement of telecommunication laws, rules, and regulations by national telecommunications regulatory authorities	2010		http://www.itu.int/pub/D-STG-SG01.18.1-2010

4.1 - Universal Access and Service

4.1 Universal Access and Service

ITU-D SG Final Report	Q 7-1/1	Universal access/service Report on innovative solutions for the management and financing of universal service and universal access policies	2006	http://www.itu.int/pub/D-STG-SG01.07.1-2006

4.1.1 Overview

ITU-D Report	BDT	Telecommunication Regulation Handbook	2011	http://www.itu.int/dms_pub/itu-d/opb/reg/D-REG-TRH.01-2011-PDF-E.pdf
ITU-D Discussion Paper	BDT - GSR 09 - Discussion Paper	Trends in Universal Access and Service Policies: Changing Policies to Accodmodate Competition and Convergence, Sofie Maddens	2009	http://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR09/doc/USPolicy_ITUEC.pdf
OECD	OCED-Report	Universal service policies in the context of national broadband plans	2012	http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/ICCP/CISP%282011%2910/FINAL&docLanguage=En

4.1.2 Technological, Economic and Policy Aspects

ITU-D Report	BDT	Telecommunication Regulation Handbook	2011	http://www.itu.int/dms_pub/itu-d/opb/reg/D-REG-TRH.01-2011-PDF-E.pdf
ITU-D Report	Q 12-3/1	Question 12-3/1: Tariff policies, tariff models and methods of determining the costs of services on national telecommunication networks, including next-generation networks	2014	http://www.itu.int/pub/D-STG-SG01.12.3-2014
ITU-D SG Final Report	Q 7-2/1	Regulatory policies on universal access to broadband services	2010	http://www.itu.int/pub/D-STG-SG01.07.2-2010
ITU-D SG Final Report	Q 7-3/1	Implementation of universal access to broadband services	2014	http://www.itu.int/pub/D-STG-SG01.07.3-2014

4.1.3 Guidelines on the Implementation of Universal Access

ITU-D SG Final Report	Q 7-3/1 Study	Comprehensive study on universal access to broadband services. Indian experience and international scenario	2013	https://www.itu.int/md/D10-SG01-INF-0057/en

4.1.4 Standardization for Universal Access and Service

ITU-D SG Final Report	Q 7/1	Universal access/service	2002	http://www.itu.int/pub/D-STG-SG01.07-2002
ITU-D Report	BDT	Telecommunication Regulation Handbook	2011	http://www.itu.int/dms_pub/itu-d/opb/reg/D-REG-TRH.01-2011-PDF-E.pdf
ITU-D SG Final Report	Q 20/1	Access to Telecommunication Services for People with Disabilities	2014	http://www.itu.int/pub/D-STG-SG01.20-2010
ITU-D SG Final Report	Q 20-1/1	Access to telecommunication/ICT services by persons with disabilities and with special needs	2014	http://www.itu.int/pub/D-STG-SG01.20.1-2014
ITU-D SG Final Report	Q 7-1/1	Universal access/service Report on innovative solutions for the management and financing of universal service and universal access policies	2006	http://www.itu.int/pub/D-STG-SG01.07.1-2006
ITU-D SG Final Report	Q 7-2/1	Regulatory policies on universal access to broadband services	2010	http://www.itu.int/pub/D-STG-SG01.07.2-2010
ITU-D SG Final Report	Q 7-3/1	Implementation of universal access to broadband services	2014	http://www.itu.int/pub/D-STG-SG01.07.3-2014

4.2 - Emergency Telecommunications

4.2.1 Overview

ITU-D SG Final Report	SSDM	Smart Sustainable Development Model (SSDM) Initiative	2014	http://www.itu.int/en/ITU-D/Initiatives/SSDM/Pages/default.aspx

ITU-T Recommendation	Y.1271	Framework(s) on network requirements and capabilities to support emergency telecommunications over evolving circuit-switched and packet-switched networks	2014	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.1271
ITU-T Recommendation	Y.2205	Next Generation Networks – Emergency telecommunications – Technical consideration	2011	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2205

4.2.2   Required Capabilities for Emergency Services

ITU-T Recommendation	Y.1271	Framework(s) on network requirements and capabilities to support emergency telecommunications over evolving circuit-switched and packet-switched networks	2014	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.1271
ITU-T Recommendation	Y.2205	Next Generation Networks – Emergency telecommunications – Technical consideration	2011	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2205
ITU-T Recommendation	Y.2701	Security requirements for NGN release 1	2007	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2701
ITU-T Recommendation	Y.2702	Recommendation ITU-T Y.2702 specifies authentication and authorization requirements for next generation networks (NGNs)	2008	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2702
ITU-T Recommendation	Y.2704	Security mechanisms and procedures for NGN	2010	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2704
ITU-T Recommendation	Y.2720	NGN identity management framework	2009	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2720
ITU-T Recommendation	Y.2721	NGN identity management requirements and use cases	2010	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2721
ITU-T Recommendation	Y.2722	NGN identity management mechanisms	2011	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2722

4.2.3   Technical Solutions for Emergency Services

ITU-T Recommendation	G.808.1	Generic protection switching – Linear trail and subnetwork protection	2014	SG 15	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=G.808.1
ITU-D Guidelines	Q 22/2	Guidelines on the Common Alerting Protocol (CAP) - Utilization of ICT for disaster management, resources, and active and passive space-based sensing systems as they apply to disaster and emergency relief situations	2009		http://www.itu.int/dms_pub/itu-d/opb/stg/D-STG-SG02.22-2010-PDF-E.pdf
ITU-T Recommendation	X.1303	Common alerting protocol (CAP 1.1)	2007	SG 17	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=X.1303
ITU-T Recommendation	X.1303 bis	Common alerting protocol (CAP 1.2)	2014	SG 17	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=X.1303 bis
ITU-T Recommendation	Y.2172	Service restoration priority levels in Next Generation Networks	2007	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2172
ITU-T Recommendation	Y.2205	Next Generation Networks – Emergency telecommunications – Technical consideration	2011	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2205

4.2.5   Standardization for Emergency Services

ITU Report	Compendium Emergency Communications	Compendium of ITU`s Work on Emergency Telecommunications	2007		http://www.itu.int/pub/D-HDB-WET-2007
ITU-T Recommendation	E.107	Emergency Telecommunications Service (ETS) and interconnection framework for national implementations of ETS	2007	SG 02	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=E.107
ITU-T Recommendation	E.161.1	Guidelines to select Emergency Number for public telecommunications networks	2009	SG 02	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=E.161.1
ITU-T Technical Report	FG-DR&NRR	Focus Group on Disaster Relief Systems, Network Resilience and Recovery (FG -DR&NRR) - Deliverables	2014		http://www.itu.int/en/ITU-T/focusgroups/drnrr/Pages/default.aspx
ITU-T Report	JTF - Green Cable 2014 Report	ITU/WMO/UNESCO IOC Joint Task Force on Green Cable	2014		http://www.itu.int/en/ITU-T/climatechange/task-force-sc/Documents/JTF_2014_Annual_Report.pdf
ITU-T Recommendation	M.3350	TMN service management requirements for information interchange across the TMN X-interface to support provisioning of Emergency Telecommunication Service (ETS)	2004	SG 02	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=M.3350
ITU-T Recommendation	Y.1271	Framework(s) on network requirements and capabilities to support emergency telecommunications over evolving circuit-switched and packet-switched networks	2014	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.1271
ITU-T Recommendation	Y.2205	Next Generation Networks – Emergency telecommunications – Technical consideration	2011	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2205

ITU-T Recommendation	Y.2705	Minimum security requirements for the interconnection of the Emergency Telecommunications Service (ETS)	2013	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2705

4.3 - Environmental Issues

4.3.1 Overview

ITU-T Recommendation	L.1500	Framework for information and communication technologies and adaptation to the effects of climate change	2014	SG 05	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=L.1500
ITU-T Report	Report	Information and communication technologies (ICTs) and climate change adaptation and mitigation: The case of Ghana	2012		http://www.itu.int/dms_pub/itu-t/oth/4B/01/T4B010000020001PDFE.pdf
ITU-T Supplement	Y.Suppl.22	Greenhouse gas monitoring services provided over NGN	2013	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?id=11975&lang=en

4.3.4 Green Data Centres

ITU-T Recommendation	L.1300	Best practices for green data centres	2014	SG 05	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=L.1300

4.3.5 Energy saving for future networks

ITU-T Technical Report	FG-SSC	Focus Group on Smart Sustainable Cities - Deliverables	2014		http://www.itu.int/en/ITU-T/focusgroups/ssc/Pages/default.aspx
ITU-T Recommendation	Y.2064	Energy saving using smart objects in home networks	2014	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2064
ITU-T Recommendation	Y.2070	Requirements and architecture of the home energy management system and home network services	2015	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.2070
ITU-T Recommendation	Y.3001	Future networks: Objectives and design goals	2011	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.3001
ITU-T Recommendation	Y.3021	Framework of energy saving for future networks	2012	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.3021
ITU-T Recommendation	Y.3022	Measuring energy in networks	2014	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.3022
ITU-T Draft	Y.energyECN	Energy efficiency class of networks	Under		http://www.itu.int/ITU-T/workprog/wp_item.aspx?isn=10033
ITU-T Draft	Y.energy-plataform	framework of energy sharing and trading platform	Under		https://www.itu.int/md/choice_md.asp?id=T13-SG13-141121-TD-WP3-0273!!MSW-E&lang=en&type=mitems
ITU-T Draft	Y.meg	Framework of micro energy grid	Under		http://www.itu.int/ITU-T/workprog/wp_item.aspx?isn=9772
ITU-T Draft	Y.sfem-WoO	Service framework of Web of Objects for energy efficiency mangement	Under		http://www.itu.int/ITU-T/workprog/wp_item.aspx?isn=9770

5.1 - IPTV

5.1.1 Overview

ITU-T Recommendation	Y.1910	IPTV functional architecture	2008	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.1910

5.1.2 Required Capabilities for IPTV

ITU-T Recommendation	Y.1901	Requirements for the support of IPTV services	2009	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.1901

5.1.3 Role and Key Areas of ICT infrastructure for IPTV

ITU-T Recommendation	Y.1910	IPTV functional architecture	2008	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.1910

5.1.4 IPTV Architectural Overview

ITU-T Recommendation	Y.1910	IPTV functional architecture	2008	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.1910

5.2 - Cloud Computing

5.2 Cloud Computing

ITU-T Draft	M.mivrcc	Requirements and analysis for management interface of virtual resource in cloud computing	Under		
ITU-T Draft	M.occm	Overview of Cloud Computing Management	Under		
ITU-T Draft	M.rcsm	Requirements for cloud service management	Under		

5.2.1 Overview

ITU-D SG Final Report	Q 26/2	Migration from existing networks to next-generation networks for developing countries: technical, regulatory and policy aspect	2014		http://www.itu.int/pub/D-STG-SG02.26-2014

5.2.2 Required Capabilities for Cloud Computing

ITU-T Recommendation	Y.3501	Cloud computing framework and high-level requirements	2013	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.3501

5.2.3 Role and Key Areas of ICT infrastructure for Cloud Computing

ITU-T Recommendation	Y.3501	Cloud computing framework and high-level requirements	2013	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.3501

5.2.4 Architectural Overview for Cloud Computing

ITU-T Recommendation	Y.3502	Information Technology - Cloud Computing - Reference Architecture	2014	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.3502
ITU-T Recommendation	Y.3510	Cloud computing infrastructure requirements	2013	SG 13	http://www.itu.int/ITU-T/recommendations/rec.aspx?rec=Y.3510

5.2.5 Standardization for Cloud Computing

ITU-T Report	ITU-T Tech Watch Report	Distributed Computing: Utilities, Grids & Clouds	2009		http://www.itu.int/dms_pub/itu-t/oth/23/01/T23010000090001PDFE.pdf