TEHNIČKE SPECIFIKACIJE SUČELJA JAVNE POKRETNE ELEKTRONIČKE KOMUNIKACIJSKE MREŽE HRVATSKOG TELEKOMA D.D. ZA KORIŠTENJE USLUGA PUTEM TELEKOMUNIKACIJSKE TERMINALNE OPREME

Ovaj dokument opisuje tehničke specifikacije sučelja javne pokretne elektroničke komunikacijske mreže Hrvatskog Telekoma d.d. (dalje u tekstu: mobilna mreža HT-a) za korištenje usluga putem telekomunikacijske terminalne opreme. Sukladno promjenama i razvoju u mobilnoj mreži HT-a dokument je podložan promjenama i dopunama. Hrvatski Telekom d.d., Roberta Frangeša Mihanovića 9, Zagreb (dalje u tekstu: HT), ne odgovora za bilo koju štetu radi korištenja stare verzije ovog dokumenta, eventualnih omaš ki u tekstu dokumenta ili radi neusklađenih podataka iz dokumenata.

Pozivamo sve korisnike dokumenta da se prije korištenja podataka iz ovog dokumenta kao i u slučaju bilo kakvih pitanja prilikom korištenja ovim dokumentom obrate HT-u.

Zagreb, travanj 2015. godine

1.   Opće odredbe

HT je izradio ovaj dokument temeljem članka 5. stavka 2. Pravilnika o radijskoj opremi i telekomunikacijskoj terminalnoj opremi („Narodne Novine", broj 25/2012).

Ovaj dokument koristi referentne dokumente međunarodnih normizacijskih institucija za opis sučelja mobilne mreže HT-a putem kojih se pružaju usluge krajnjim korisnicima.

Sučelje mobilne mreže HT-a na koje se odnosi ovaj dokument općenito se definira kao zračno sučelje (engl. air inteface).

U mobilnoj mreži HT-a, za priključivanje i korištenje telekomunikacijske terminalne opreme koriste se isključivo sučelja koja su definirana tehničkim specifikacijama relevantnih međunarodnih institucija ETSI, 3GPP i IEEE.

Svi relevantni podaci o navedenim organizacijama i način korištenja tehničkih specifikacija koje su navedene u ovom dokumentu, podliježu uvjetima korištenja o kojima se detalji mogu naći na sljedećim Internetskim stranicama:
www.etsi.org, www.3gpp.org, www.ieee.org

HT zadržava pravo izmjena specifikacija sučelja iz ovog dokumenta prateći razvoj tehnologija i usluga u svojoj pokretnoj elektroničkoj komunikacijskoj mreži, a sukladno međunarodnim normama.

2.   Frekvencijski spektar koji se koristi za pružanje javnih elektroničkih komunikacijskih usluga u mobilnoj mreži HT-a

GSM	GSM TDMA FDD (E-GSM):	930,3 – 932,7 MHz i 885,3 – 887,7 MHz
	GSM TDMA FDD (P-GSM):	941,1 – 953,1 MHz i 896,1 – 908,1 MHz
	GSM TDMA FDD (DCS):	1869,9 – 1879,9 MHz i 1774,9 – 1784,9MHz
UMTS	WCDMA FDD:	2110 – 2125 MHz i 1920 - 1935 MHz
		941,1 – 953,1 MHz i 896,1 – 908,1 MHz
	WCDMA TDD:	1900 - 1905 MHz
LTE	LTE FDD:	1825,1 – 1845,1 MHz i 1730,1 – 1750,1 MHz
		806 – 821 MHz i 847 – 862 MHz
WLAN		2400 - 2483.5 MHz

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34.122	Terminal conformance specification, Radio transmission and reception (TDD)
34.123-1	User Equipment (UE) conformance specification; Part 1: Protocol conformance specification
34.123-2	User Equipment (UE) conformance specification; Part 2: Implementation conformance statement (ICS) specification
34.123-3	User Equipment (UE) conformance specification; Part 3: Abstract test suites (ATSs)
34.124	Electromagnetic compatibility (EMC) requirements for Mobile terminals and ancillary equipment
34.901	Test Time Optimisation based on statistical approaches; Statistical theory applied and evaluation of statistical significance
34.907	Report on electrical safety requirements and regulations
34.925	Specific Absorption Rate (SAR) requirements and regulations in different regions
35.201	Specification of the 3GPP confidentiality and integrity algorithms; Document 1: f8 and f9 specifications
35.202	Specification of the 3GPP confidentiality and integrity algorithms; Document 2: Kasumi algorithm specification
35.203	Specification of the 3GPP confidentiality and integrity algorithms; Document 3: Implementors' test data
35.204	Specification of the 3GPP confidentiality and integrity algorithms; Document 4: Design conformance test data
36.101	Evolved Universal Terrestrial Radio Access (EUTRA); User Equipment (UE) radio transmission and reception
36.104	Evolved Universal Terrestrial Radio Access (EUTRA); Base Station (BS) radio transmission and reception
36.106	Evolved Universal Terrestrial Radio Access (EUTRA); FDD repeater radio transmission and reception
36.113	Evolved Universal Terrestrial Radio Access (EUTRA); Base Station (BS) and repeater ElectroMagnetic Compatibility (EMC)
36.116	Evolved Universal Terrestrial Radio Access (EUTRA); Relay radio transmission and reception
36.124	Evolved Universal Terrestrial Radio Access (EUTRA); Electromagnetic compatibility (EMC) requirements for mobile terminals and ancillary equipment
36.133	Evolved Universal Terrestrial Radio Access (EUTRA); Requirements for support of radio resource management
36.171	Evolved Universal Terrestrial Radio Access (EUTRA); Requirements for Support of Assisted Global Navigation Satellite System (A-GNSS)
36.201	Evolved Universal Terrestrial Radio Access (EUTRA); LTE physical layer; General description
36.211	Evolved Universal Terrestrial Radio Access (EUTRA); Physical channels and modulation
36.212	Evolved Universal Terrestrial Radio Access (EUTRA); Multiplexing and channel coding
36.213	Evolved Universal Terrestrial Radio Access (EUTRA); Physical layer procedures
36.214	Evolved Universal Terrestrial Radio Access (EUTRA); Physical layer; Measurements
36.216	Evolved Universal Terrestrial Radio Access (EUTRA); Physical layer for relaying operation
36.300	Evolved Universal Terrestrial Radio Access (EUTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Overall description; Stage 2
36.302	Evolved Universal Terrestrial Radio Access (EUTRA); Services provided by the physical layer
36.304	Evolved Universal Terrestrial Radio Access (EUTRA); User Equipment (UE) procedures in idle mode
36.305	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Stage 2 functional specification of User Equipment (UE) positioning in E-UTRAN
36.306	Evolved Universal Terrestrial Radio Access (EUTRA); User Equipment (UE) radio access capabilities
36.307	Evolved Universal Terrestrial Radio Access (EUTRA); Requirements on User Equipments (UEs) supporting a release-independent frequency band
36.314	Evolved Universal Terrestrial Radio Access (EUTRA); Layer 2 - Measurements
36.321	Evolved Universal Terrestrial Radio Access (EUTRA); Medium Access Control (MAC) protocol

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36.322	Evolved Universal Terrestrial Radio Access (EUTRA); Radio Link Control (RLC) protocol specification
36.323	Evolved Universal Terrestrial Radio Access (EUTRA); Packet Data Convergence Protocol (PDCP) specification
36.331	Evolved Universal Terrestrial Radio Access (EUTRA); Radio Resource Control (RRC); Protocol specification
36.355	Evolved Universal Terrestrial Radio Access (EUTRA); LTE Positioning Protocol (LPP)
44.001	Mobile Station - Base Station System (MS - BSS) Interface General Aspects and Principles
44.003	Mobile Station - Base Station System (MS - BSS) Interface Channel Structures and Access Capabilities
44.004	Layer 1 - General Requirements
44.005	Data Link (DL) Layer General Aspects
44.006	Mobile Station - Base Stations System (MS - BSS) Interface Data Link (DL) Layer Specification
44.012	Short Message Service Cell Broadcast (SMSCB) Support on the Mobile Radio Interface
44.013	Performance Requirements on Mobile Radio Interface
44.014	Individual equipment type requirements and interworking; Special conformance testing functions
44.018	Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol
44.021	Rate Adaption on the Mobile Station - Base Station System (MS-BSS) Interface
44.031	Location Services (LCS); Mobile Station (MS) - Serving Mobile Location Centre (SMLC) Radio Resource LCS Protocol (RRLP)
44.035	Location Services (LCS); Broadcast network assistance for Enhanced Observed Time Difference (E-OTD) and Global Positioning System (GPS) positioning methods
44.060	General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/ Medium Access Control (RLC/MAC) protocol
44.064	Mobile Station - Serving GPRS Support Node (MS-SGSN) Logical Link Control (LLC) Layer Specification
44.065	Mobile Station (MS) - Serving GPRS Support Node (SGSN); Subnetwork Dependent Convergence Protocol (SNDCP)
44.071	Location Services (LCS); Mobile radio interface layer 3 LCS specification
44.901	External network assisted cell change (NACC)

3.3. IEEE serija 802.11 WLAN specifikacija

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IEEE 802.11, 1999 Edition (ISO/IEC 8802-11: 1999)	IEEE Standards for Information Technology – Telecommunications and Information Exchange between Systems – Local and Metropolitan Area Network – Specific Requirements – Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications
IEEE 802.11b-1999 Supplement to 802.11-1999	Wireless LAN MAC and PHY specifications: Higher speed Physical Layer (PHY) extension in the 2.4 GHz band
802.11b-1999/Cor1-2001	IEEE Standard for Information technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements—Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications—Amendment 2: Higher-speed Physical Layer (PHY) extension in the 2.4 GHz band—Corrigendum1

IEEE 802.11d-2001, Amendment to IEEE 802.11-1999, (ISO/IEC 8802-11)	Information technology–Telecommunications and information exchange between systems–Local and metropolitan area networks–Specific requirements–Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Specification for Operation in Additional Regulartory Domains
IEEE 802.11e-2005	IEEE Standard for Information technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications: Amendment 8: Medium Access Control (MAC) Quality of Service Enhancements
IEEE 802.11F-2003	IEEE Recommended Practice for Multi-Vendor Access Point Interoperability via an Inter-Access Point Protocol Across Distribution Systems Supporting IEEE 802.11 Operation
IEEE 802.11g-2003	IEEE Standard for Information technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements—Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications—Amendment 4: Further Higher-Speed Physical Layer Extension in the 2.4 GHz Band
IEEE 802.11i-2004 Amendment to IEEE Std 802.11, 1999 Edition (Reaff 2003)	IEEE Standard for Information technology–Telecommunications and information exchange between system–Local and metropolitan area networks - Specific requirements–Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications–Amendment 6: Medium Access Control (MAC) Security Enhancements Interpretation