
**Information technology —
Telecommunications and information
exchange between systems — MAC and
PHY for operation in TV white space**

*Technologies de l'information — Télécommunications et échange
d'information entre systèmes — MAC et PHY pour opération en espace
blanc TV*



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Contents

Page

Foreword	vii
Introduction.....	viii
1 Scope	1
2 Conformance	1
3 Normative references	1
4 Terms and definitions	1
5 Abbreviations and Acronyms	4
6 General description.....	7
6.1 Network components	7
6.2 Network formation	7
6.3 Protocol architecture	8
6.4 Addressing	9
6.5 PHY features	9
6.6 Overview of MAC service functionality	10
6.6.1 Logical groups	11
6.6.2 Control algorithms	11
6.6.3 Channel selection	11
6.6.4 The superframe.....	11
6.6.5 Beaconing	12
6.6.6 Medium access	13
6.6.7 Data communication between devices	13
6.6.8 MAC frame data rates.....	13
6.6.9 Security	13
6.6.10 Information discovery	14
6.6.11 Support for higher-layer timer synchronization.....	14
6.6.12 Protection of incumbent users	14
6.6.13 Self-coexistence	14
6.6.14 Rate adaptation.....	15
6.6.15 Power management.....	15
7 MAC common part sublayer.....	15
7.1 MAC Frame Format	15
7.1.1 Frame format conventions	16
7.1.2 General MAC frame format	16
7.1.3 Beacon frames	22
7.1.4 Control frames	24
7.1.5 Command frames	27
7.1.6 Data frames	35
7.1.7 Aggregated data frames	35
7.1.8 Information elements	35
7.2 Frame processing.....	63
7.2.1 Frame addresses	63
7.2.2 Frame reception.....	64
7.2.3 Frame transaction	64
7.2.4 Frame transfer	65
7.2.5 Frame retry	65
7.2.6 Inter-frame space (IFS).....	65
7.2.7 Duplicate detection	66
7.2.8 RTS/CTS use	66

7.2.9	MAC header fields.....	67
7.2.10	Information elements	69
7.3	MAC Structure and Beaconing.....	73
7.3.1	Beacon Period.....	74
7.3.2	Beacon slot state	74
7.3.3	BP length	74
7.3.4	Beacon transmission and reception.....	75
7.3.5	Beacon collision detection	76
7.3.6	BP contraction	76
7.3.7	Merger of multiple beacon groups.....	77
7.3.8	Signalling window.....	79
7.4	Device Synchronization	80
7.4.1	Clock accuracy.....	80
7.4.2	Synchronization for devices in hibernation mode	80
7.4.3	Guard times	80
7.5	Data Transfer Period	82
7.5.1	Prioritized Contention Access (PCA).....	83
7.5.2	Channel Reservation Access (CRA)	89
7.6	Fragmentation and Aggregation	96
7.6.1	Fragmentation and reassembly.....	96
7.6.2	Aggregation.....	97
7.7	ARQ, Multirate Support and Power Control	98
7.7.1	ARQ Policies	98
7.7.2	Multi-rate Support.....	100
7.7.3	Transmit Power Control	100
7.8	Dynamic Channel Selection.....	100
7.9	Power Management Mechanisms	101
7.9.1	Power management modes	101
7.9.2	Device power states	101
7.9.3	Power state transitions	101
7.9.4	Hibernation mode operation.....	103
7.9.5	Hibernation anchor operation	103
7.10	Probe	104
7.11	Protection of incumbents	104
7.11.1	Channel Measurement	104
7.11.2	Channel Classification	107
7.11.3	Channel Evacuation	108
7.12	Self-coexistence.....	109
7.12.1	Self-coexistence scenarios.....	109
7.12.2	Distributed self-coexistence mechanisms.....	109
7.12.3	Centralized self-coexistence mechanisms	110
7.13	Network Entry and Initialization	111
7.13.1	Initial Channel SCAN and Device Discovery.....	113
7.13.2	Master-Slave Association	114
7.13.3	Pair discovery	115
7.13.4	Create/join a beacon group	116
7.13.5	Pairing.....	116
7.13.6	Setup connections.....	117
7.14	MAC sublayer parameters	118
8	Security.....	120
8.1	Security mechanisms.....	120
8.1.1	Security operation	120
8.1.2	4-way handshake	121
8.1.3	Key transport.....	121
8.1.4	Freshness protection	121
8.1.5	Data encryption.....	121
8.1.6	Frame integrity protection	121
8.2	Security modes	121
8.2.1	Security mode 0	123

8.2.2	Security mode 1	123
8.2.3	Security mode 2	123
8.3	Temporal keys	123
8.3.1	Mutual authentication and PTK derivation	124
8.3.2	GTK exchange	125
8.3.3	Pseudo-random function (PRF) definition	126
8.3.4	PTK and KCK derivation	127
8.3.5	PTK MIC generation	127
8.3.6	Random number generation	128
8.4	Frame reception steps and replay prevention measures	128
8.4.1	Frame reception	128
8.4.2	Replay prevention	129
8.4.3	Implications on GTKs	129
8.5	AES-128 CCM Inputs	129
8.5.1	Overview	129
8.5.2	Nonce	130
8.5.3	CCM blocks	130
9	PHY	132
9.1	Introduction	132
9.2	Symbol description	132
9.2.1	OFDM symbol description	132
9.2.2	Symbol parameters	134
9.3	PPDU	134
9.3.1	PLCP preamble	135
9.3.2	PLCP header	137
9.3.3	PSDU	142
9.4	Constellation mapping and modulation	148
9.4.1	Data modulation	148
9.4.2	Pilot modulation	150
9.5	OFDM modulation	150
9.5.1	Data subcarriers	151
9.5.2	Pilot subcarriers	151
9.5.3	Null subcarriers	153
9.5.4	Implementation of Fourier transform	153
9.6	General block diagram for the OFDM PHY	154
9.7	General requirements	154
9.7.1	Operating frequency range	154
9.7.2	Channel bandwidth and numbering	155
9.7.3	PHY layer timing	155
9.8	Transmitter requirements	155
9.8.1	Transmit center frequency tolerance	155
9.8.2	Symbol clock frequency tolerance	155
9.8.3	Clock synchronization	155
9.8.4	Transmitter constellation error	156
9.9	Receiver requirements	157
9.9.1	Receiver sensitivity	157
9.9.2	Maximum received signal level	158
9.9.3	Center frequency and symbol clock frequency tolerance	158
9.9.4	Link quality estimate	158
9.10	Control mechanisms	159
9.10.1	Device synchronization	159
9.10.2	Transmit power control	159
9.11	Multiple antennae (optional)	160
9.11.1	Multiple antennae normal preamble and burst preamble specification	160
9.11.2	Multiple antennae PLCP header specification	161
9.11.3	Pilot subcarriers for all multiple antennae modes	163
9.11.4	Frequency interleaved transmit diversity (FITD)	163
9.11.5	Alamouti space time block coding (STBC)	163
9.11.6	Spatial multiplexing (SM) mode	164

Annex A (normative) MUX sublayer	165
Annex B (normative) OFDM parameters for 7 MHz and 8 MHz channel bandwidths	167
Annex C (normative) Data rates for 7 MHz and 8 MHz channel bandwidths	169
Annex D (normative) MAC policies	170
Annex E (informative) FFT-based pilot sensing algorithms	173
Annex F (informative) An example of TPC algorithm	175
Bibliography	178

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

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Introduction

Analogue broadcasting systems have been or are being upgraded to digital technology, which frees up channels in the TV frequency bands. This International Standard specifies a physical layer and a medium access sub-layer for wireless devices to operate in the TV frequency bands.

Applications include high speed video streaming and internet access on personal/portable electronics, home electronics equipment, and computers and peripherals.

Information technology — Telecommunications and information exchange between systems — MAC and PHY for operation in TV white space

1 Scope

This International Standard specifies a medium access control (MAC) sub-layer and a physical (PHY) layer for personal/portable cognitive wireless networks operating in TV bands. This International Standard also specifies a MUX sublayer for higher layer protocols.

This International Standard specifies a number of incumbent protection mechanisms which may be used to meet regulatory requirements.

2 Conformance

Conforming devices implement the MUX sub-layer, MAC sub-layer and the PHY layer as specified herein and support at least one of the device types (master, peer, or slave) and at least one of bandwidths (6 MHz, 7 MHz, 8 MHz), and may support multiple antennae modes.

3 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 10646:2003, *Information technology — Universal Multiple-Octet Coded Character Set (UCS)*

ISO/IEC 18033-3:2005, *Information technology — Security techniques — Encryption algorithms — Part 3: Block ciphers*