Project	**IEEE 802.20 Working Group on Mobile Broadband Wireless Access** **<http://grouper.ieee.org/groups/802/20/>**
Title	**PICS Proforma for BS and UT of 625k-MC Mode**
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Re:	The MBWA Minimum Performance project
Abstract	This contribution proposes a draft PICS Proforma for IEEE 802.20 625k-MC Mode.
Purpose	For consideration and approval of 802.20 WG
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1 INTRODUCTION

In this contribution, we present the PICS for BS (Base Station) and UT (Userterminal) of 625k-MC mode of IEEE 802.20 Specifications [1]. This document follows the template of IEEE C802.20-08/09.

A.5.4 PICS for BS in 625k-MC Mode

A.5.4.1 Slot and Frame Structure

Item	Name	Reference	Status	Support
1	RF channel and frame structure	19.2	m	
2	Burst formats	19.3	m	
3	Frequency synchronization	19.3.1	m	
4	Timing synchronization	19.3.2	m	
5	Broadcast burst	19.3.3	m	
6	Page burst	19.3.4	m	
7	Configuration request burst	19.3.5	m	
6	Standard Uplink Burst	19.3.6	m	
7	Standard Downlink Burst	19.3.7	m	

A.5.4.2 625k-MC modulation and channel coding

Item	Name	Reference	Status	Support
1	Standard modulation and coding	20.2	o.11	
2	Encryption	20.2.1	o.11	
3	Cyclic redundancy check	20.2.2	o.11	
4	Multiplexing	20.2.3	o.11	
5	Tail append	20.2.4	o.11	
6	Convolutional encoding	20.2.5	o.11	
7	Puncturing and repeating	20.2.6	o.11	

8	Block coding	20.2.7	o.11	
9	Extended Hamming code	20.2.7.1	o.11	
10	Parity check code	20.2.7.2	o.11	
11	Block shaper	20.2.8	o.11	
12	Symbol mapping	20.2.9	o.11	
11	Interleaving	20.2.10	o.11	
12	Scrambling	20.2.11	o.11	
13	π /2 Rotation and Scaling	20.2.12	o.11	

o.11 At least ModClass 0 and 1shall be supported.

A.5.4.3 Broadcast channel modulation and coding

Item	Name	Reference	Status	Support
1	Broadcast channel modulation and coding	20.3	m	

A.5.4.4 625k-MC base station radio transmission and reception

Item	Name	Reference	Status	Support
1	625k-MC base station radio transmission and reception	22	m	
2	625k-MC base station transmitter modulation accuracy	22.1	m	
3	625k-MC base station receiver reference sensitivity level	22.2	m	
4	625k-MC BS receiver SINR estimation accuracy	22.3	m	

A.5.4.5 625k-MC L2 MAC Protocol Sublayer Specification

Item	Name	Reference	Status	Support
1	625k-MC L2 MAC Protocol Sublayer Specification	23	m	
2	Logical channels	23.1	m	
3	Short Message Broadcast (SMB)	23.1.1	m	
4	Fast Associated Control Channel (FACCH)	23.1.2	m	
5	625k-MC minimized RMU header	23.2	m	

1

2 A.5.4.6 625k-MC L2 RLC Protocol Sublayer Specification

3

Item	Name	Reference	Status	Support
1	625k-MC L2 RLC Protocol Sublayer Specification	24	m	
2	625k-MC AM RMU	24.1	m	
3	625k-MC transmit procedure	24.2	m	
4	Receive procedure	24.3	m	

4

5 A.5.4.7 625k-MC L3 Protocol Specification

6

Item	Name	Reference	Status	Support
1	625k-MC L3 Protocol Specification	25	m	

7

8 A.5.4.8 625k-MC Protocol layer primitives

9

Item	Name	Reference	Status	Support
1	625k-MC Protocol layer primitives	26	m	

2	Interface list	26.1	m	
3	Individual interfaces	26.2	m	

A.5.4.9 625k-MC QoS Enhancements

Item	Name	Reference	Status	Support
1	Classes of services	27.1	m	
2	Session QoS information exchange procedures	27.2	m	
3	QoS priority	26.3	m	

A.5.4.10 625k-MC Broadcast and Multicast Service (BCMCS) Support

Enhancement

Item	Name	Reference	Status	Support
1	Broadcast service	28.2	m	
2	Multicast service	28.3	m	

A.5.4.11 625k-MC Privacy and Authentication Enhancement

Item	Name	Reference	Status	Support
1	625k-MC Handshake and BS Authentication Protocol, i-HAP	29.2	m	
2	625k-MC Terminal Authentication Protocol, i-TAP	29.3	m	
3	625k-MC Secure Communications Protocol, i-SEC	29.4	o.12	

o.12 At least one encryption: AES or RC4 shall be supported

A.5.4.12 625k-MC Sleep Mode Control Protocol

Item	Name	Reference	Status	Support
1	625k-MC Sleep Mode Control Protocol	29	o.13	

o.13 Optional

A.5.5 PICS for UT in 625k-MC Mode

A.5.5.1 Slot and Frame Structure

Item	Name	Reference	Status	Support
1	RF channel and frame structure	19.2	m	
2	Burst formats	19.3	m	
3	Frequency synchronization	19.3.1	m	
4	Timing synchronization	19.3.2	m	
5	Broadcast burst	19.3.3	m	
6	Page burst	19.3.4	m	
7	Configuration request burst	19.3.5	m	
6	Standard Uplink Burst	19.3.6	m	
7	Standard Downlink Burst	19.3.7	m	

A.5.5.2 625k-MC modulation and channel coding

Item	Name	Reference	Status	Support
1	Standard modulation and coding	20.2	o.14	
2	Encryption	20.2.1	o.14	
3	Cyclic redundancy check	20.2.2	o.14	
4	Multiplexing	20.2.3	o.14	
5	Tail append	20.2.4	o.14	
6	Convolutional encoding	20.2.5	o.14	

7	Puncturing and repeating	20.2.6	o.14	
8	Block coding	20.2.7	o.14	
9	Extended Hamming code	20.2.7.1	o.14	
10	Parity check code	20.2.7.2	o.14	
11	Block shaper	20.2.8	o.14	
12	Symbol mapping	20.2.9	o.14	
11	Interleaving	20.2.10	o.14	
12	Scrambling	20.2.11	o.14	
13	$\pi/2$ Rotation and Scaling	20.2.12	o.14	

o.14 Atleast ModClass 0 and 1shall be supported.

A.5.5.3 Broadcast channel modulation and coding

Item	Name	Reference	Status	Support
1	Broadcast channel modulation and coding	20.3	m	

A.5.5.4 625k-MC user terminal radio transmission and reception

Item	Name	Reference	Status	Support
1	625k-MC user terminal radio transmission and reception	21	m	
2	625k-MC user terminal nominal output power for modulation formats	21.1	m	
3	625k-MC UT modulation accuracy for modulation formats	21.2	m	

A.5.5.5 625k-MC L2 MAC Protocol Sublayer Specification

Item	Name	Reference	Status	Support
1	625k-MC L2 MAC	23	m	

	Protocol Sublayer Specification			
2	Logical channels	23.1	m	
3	Short Message Broadcast (SMB)	23.1.1	m	
4	Fast Associated Control Channel (FACCH)	23.1.2	m	
5	625k-MC minimized RMU header	23.2	m	

1

2 A.5.5.6 625k-MC L2 RLC Protocol Sublayer Specification

3

Item	Name	Reference	Status	Support
1	625k-MC L2 RLC Protocol Sublayer Specification	24	m	
2	625k-MC AM RMU	24.1	m	
3	625k-MC transmit procedure	24.2	m	
4	Receive procedure	24.3	m	

4

5 A.5.5.7 625k-MC L3 Protocol Specification

6

Item	Name	Reference	Status	Support
1	625k-MC L3 Protocol Specification	25	m	

7

8 A.5.5.8 625k-MC Protocol layer primitives

9

Item	Name	Reference	Status	Support
1	625k-MC Protocol layer primitives	26	Informative	
2	Interface list	26.1	Informative	
3	Individual interfaces	26.2	Informative	

A.5.5.9 625k-MC QoS Enhancements

Item	Name	Reference	Status	Support
1	Classes of services	27.1	m	
2	Session QoS information exchange procedures	27.2	m	
3	QoS priority	26.3	m	

A.5.5.10 625k-MC Broadcast and Multicast Service (BCMCS) Support

Enhancement

Item	Name	Reference	Status	Support
1	Broadcast service	28.2	o.15	
2	Multicast service	28.3	o.16	

o15 & o16 optional

A.5.5.11 625k-MC Privacy and Authentication Enhancement

Item	Name	Reference	Status	Support
1	625k-MC Handshake and BS Authentication Protocol, i-HAP	29.2	m	
2	625k-MC Terminal Authentication Protocol, i-TAP	29.3	m	
3	625k-MC Secure Communications Protocol, i-SEC	29.4	o.17	

o.17 At least one encryption : AES or RC4 shall be supported

A.5.5.12 625k-MC Sleep Mode Control Protocol

Item	Name	Reference	Status	Support
1	625k-MC Sleep Mode Control Protocol	29	o.18	

o.18 Optional Power saving mode

REFERENCES

[1] IEEE 802.20™ "The Standard for Local and Metropolitan Area Networks – Standard Air Interface for Mobile Broadband Wireless Access Systems Supporting Vehicular Mobility – Physical and Media Access Control Layer Specification"

[2] ATIS-0700004.2005, High Capacity-Spatial Division Multiple Access (HC-SDMA) Radio Interface Standard, September 2005

[3] IEEE C802.20-08/09 Proposed Text for 802.20 PICS Proforma – Wideband Mode