# Errata for "Universal Serial Bus CDC Subclass Specification for Wireless Mobile Communications Devices Revision 1.1 February 9, 2007" as of July, 2012 Draft 2

## Issue A.

Related to: 1.2 Scope

Issue: MBIM are missing in the list of subclasses

Resolution: Add MBIM

This document specifies new device subclasses intended for use with Wireless Mobile Communications devices, based on [USBCDC1.2], [USBPSTN1.2], [USBECM1.2] and , [USBNCM1.0] and [USBMBIM1.0]

## Issue B.

Related to: 1.3 related documents

Issue: MBIM is missing in list of related documents.

Resolution: Correction as follows.

| Reference | Description |
|---|---|
| [3GPP27.007] | AT command set for User Equipment (UE), 3rd Generation Partnership Project; Technical Specification Group Terminals, Document 27.007,Version 3.9.0 (June 2001). Available on-line at http://www.3gpp.org/ftp/Specs/2001-06/R1999/27_series/27007-390.zip. |
| [Bluetooth Reserved Numbers] | The reserved numbers section of official Bluetooth website **www.bluetooth.org**. |
| [C-S0017-0] | 3GPP2 TSG.C Specification C-S0017-0. Specifies AT command sets to be used for cmda2000 mobile terminals. Available on-line from http://www.3gpp2.org/public_html/specs/tsgc.cfm . |
| [GSM07.07] | ETSI GTS GSM 07.07 V5.0.0 (1996-07) Digital cellular telecommunications system (Phase 2+); AT command set for GSM Mobile Equipment (ME) (GSM 07.07), ETSI. Available on-line at http://www.etsi.org/. |
| [INTTD] | *USB Telephony Devices: Interfaces for Value-Add Feature Set,* Version 1.00, June 19,2000, Intel Corporation. |
| [LEACH1998] | *UUIDs and GUIDs,* Paul J. Leach et al, IETF draft draft-leach-uuids-guids-01.txt., February 4, 1998. |
| [MICBUS] | *Guidelines for Bus and Device Specifications* , Version 1.0a, March 29, 2000, Microsoft Corporation. This specification is available online from Microsoft, http://www.microsoft.com/whdc/archive/specguide.mspx |
| [MICMFD] | *Designing Multifunction Devices for Windows Operating Systems*, Version 1.0, April 25, 2000, Microsoft Corporation. This specification is available online from Microsoft, http://www.microsoft.com/whdc/device/mf/mfdesin.mspx. |
| [OBEX1.2] | *IrDA Object Exchange Protocol IrOBEX*, V1.3. This specification is available online from the website **http://www.irda.org**. |
| [OPENC309] | DCE: Remote Procedure Call, Open Group CAE Specification C309 ISBN 1-85912-041-5 28cm. 674p. pbk. 1,655g. 8/94 |
| [PCCA101] | PCCA STD-101, Data Transmission Systems and Equipment - Serial Asynchronous Automatic Dialing and Control for Character Mode DCE on Wireless Data Services, Portable Computer and Communications Association. Available on-line at |

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|---|---|
| | http://www.pcca.org/standards.₁ Annexes to this document are: |
| [PCCA101-A] | common commands, in main document (== TIA/EIA-678 Annex A) |
| [PCCA101-D] | *Pad Control*, http://www.pcca.org/standards/Annex_d.doc, (== TIA/EIA-678 Annex D) |
| [PCCA101-F] | *Commands for wireless networks*, http://www.pcca.org/standards/Annex_f.doc (== TIA/EIA-678 Annex B) |
| [PCCA101-I] | *Commands for Analog Cell Phones*, http://www.pcca.org/standards/Annex_i.doc (== TIA/EIA-678 Annex C) |
| [PCCA101-L] | *Commands for CDPD modems*, http://www.pcca.org/standards/Annexl20.PDF (not in TIA/EIA-678) |
| [PCCA101-O] | *Commands for Wakeup control*, http://www.pcca.org/standards/Annex_o_ballot_version.doc (not in TIA/EIA-678) |
| [USB2.0] | *Universal Serial Bus Specification*, revision 2.0 (also referred to as the *USB Specification*). This specification is available on the World Wide Web site **http://www.usb.org**. |
| [USBAUD1.0] | *Universal Serial Bus Device Class Definition for Audio Devices,* Release 1.0. This specification is available on the World Wide Web site **http://www.usb.org**. |
| [USBCDC1.2] | *Universal Serial Bus Class Definitions for Communications Devices*, Version 1.2. This specification is available on the World Wide Web site **http://www.usb.org**. |
| [USBDFU1.0] | *Universal Serial Bus Device Class Specification for Device Firmware Upgrade,* Release 1.0. This specification is available on the World Wide Web site **http://www.usb.org**. |
| [USBHID1.1] | *Universal Serial Bus Device Class Definition for Human Interface Devices,* Version 1.1. This specification is available on the World Wide Web site **http://www.usb.org**. |
| [USBECM1.2] | Universal Serial Bus USB CDC Subclass Specification for Ethernet Control Model Devices, Release 1.2. This specification is available on the World Wide Web site **http://www.usb.org**. |
| [USBMASS1.1] | *Universal Serial Bus Mass Storage Class Specification Overview,* Release 1.1. This specification is available on the World Wide Web site **http://www.usb.org**. |
| [USBPSTN1.2] | Universal Serial Bus USB CDC Subclass Specification for PSTN Devices, Release 1.2. This specification is available on the World Wide Web site **http://www.usb.org**. |
| [USBNCM1.0] | Universal Serial Bus Communications Class Subclass Specifications for Network Control Model Devices, Release 1.0. This specification is available on the World Wide Web site **http://www.usb.org**. |
| [USBMBIM1.0] | Universal Serial Bus Communications Class Subclass Specifications for Mobile Broadband Interface Model, Release 1.0. This specification is available on the World Wide Web site **http://www.usb.org**. |

**Field Code Changed**

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## Issue C.

Related to: Table 2-1 Sample Function Representation

Issue: Missing MBIM in sample functions.

Resolution: Correction as follows.

**Table 2-1: Sample Function Representation**

| Function | Representation | Endpoints |
|---|---|---|
| voice (AT-command call control) | Telephone Control Model (TCM) with AT commands (02-03-*pp*) + Audio | Interrupt IN + audio stream ISO OUT + audio stream ISO IN |
| voice (AT-command call control, plus ability to use handset's keypad in host, and to use | Telephone Control Model (TCM) with AT commands (02-03-*pp*) + Audio + HID | TCM Interrupt IN + audio stream ISO OUT (to network) + audio stream ISO IN (from network) + audio stream ISO OUT (to |

| handset's speaker and microphone as host peripherals) | | headset earpiece) + audio stream ISO IN (from headset microphone + HID Interrupt IN |
|---|---|---|
| fax/modem | ACM (02-02-*pp*) + Data | Interrupt IN + Data Class Bulk OUT & Bulk IN |
| OBEX | OBEX (02-0Bh0B-00), + Data Class | Data Class Bulk OUT & Bulk IN |
| Ethernet Frame (fixed service) | CDC Ethernet Networking Control Model (ECM) (02-06-00) + Data | Interrupt IN + Data Class Bulk OUT & Bulk IN |
| Device Management | Device Management (02-09h09-*pp*) | Interrupt IN |
| Network Control Model | NCM (02-0D-pp) | Interrupt IN + Data Class Bulk OUT & Bulk IN |
| Mobile Broadband Interface Model | MBIM (02-0E-pp) | Interrupt IN + Data Class Bulk OUT & Bulk IN |

## Issue D.

Related to: 4.1 Device Organization

Issue: Lan should also describe MBIM.

Resolution: Correction as follows.

**LAN**: a Communications Class interface (with subclass "Ethernet Networking Control Model" or "Networking Control Model") and a Data Class interface, connected by a Union Functional descriptor that follows the Communications Class interface. Described in [USBECM1.2] and, [USBNCM1.0] and [USBMBIM1.0], with additional details as given in section 6.4 and 6.8 of this document.

## Issue E.

Related to: 4.3 Function Models

Issue: Lan should also describe NCM.

Resolution: Correction as follows.

This document extends or reuses CDC based control models defined by [USBPSTN1.2], [USBECM1.2] and, [USBNCM1.0] and [USBMBIM1.0] for specific kinds of WMC functions: