| | Base Data for MTI | | | | | | | Ethernet MTI | CAN MTI | CAN Data | | Previous Ethernet MTI | Previous CAN MTI | Previous CAN Data |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Destination ID | Event ID | CAN flags in header? | Simple node message | Priority Group | Type | Priority/Type | | Top 17 bits of CAN header, ddd refers to destination address. | Goes at start of CAN data, if present | | | | |
| Bits | 1 | 1 | 1 | 1 | 2 | 5 | 8 hex | 16 bits hex | 17 bits hex | 8 hex | | 16 bits hex | 17 bits hex | 8 hex |
| **Base Messages** | | | | | | | | | | | | | | |
| Node number Allocate | | | | | 0 | 0 | 00 | 1000 | | | Not available on CAN | 3000 | | |
| No Filtering | | | | | 0 | 1 | 01 | 1010 | 18017 | | (Still under discussion) | 3010 | 19017 | |
| Initialization Complete | | | | | 0 | 8 | 08 | 1080 | 18087 | | Full Source Node ID | 3080 | 19087 | |
| Verify Node ID Number | Y | | | | 0 | 10 | 0A | 10A4 | 1Eddd | 0A | | 10A4 | 1Eddd | 0A |
| Verify Node ID Number | | | | Y | 0 | 10 | 0A | 18A0 | 188A7 | | | 10A0 | 180A7 | |
| Verified Node ID Number | | | | Y | 0 | 11 | 0B | 18B0 | 188B7 | | Full Source Node ID | 10B0 | 180B7 | |
| Optional Interaction Rejected | Y | | | | 0 | 12 | 0C | 10C4 | 1Eddd | 0C | MTI, error, optional information | 10C4 | 1Eddd | 0C |
| Terminate Due to Error | Y | | | | 0 | 13 | 0D | 10D4 | 1Eddd | 0D | MTI, error, optional information | 10D4 | 1Eddd | 0D |
| **Protocol Support Messages** | | | | | | | | | | | | | | |
| Protocol Support Inquiry | Y | | | | 1 | 14 | 2E | 12E4 | 1Eddd | 2E | | 12E4 | 1Eddd | 2E |
| Protocol Support Reply | Y | | | | 1 | 15 | 2F | 12F4 | 1Eddd | 2F | Protocol flags | 12F4 | 1Eddd | 2F |
| **Event Exchange Messages** | | | | | | | | | | | | | | |
| Identify Consumer | | Y | | Y | 1 | 4 | 24 | 1A42 | 18A4F | | EventID (no room for DestID!) | 1242 | 1824F | |
| Consumer Identify Range | | Y | | | 1 | 5 | 25 | 1252 | 1825F | | EventID w mask (no room for DestID!) | 3252 | 1925F | |
| Consumer Identified | | Y | Y | | 1 | 6 | 26 | 1263 | 1826B | | EventID (no room for DestID!) | 3263 | 1926B | |
| Identify Producer | | Y | | Y | 1 | 8 | 28 | 1A82 | 18A8F | | EventID (no room for DestID!) | 1282 | 1828F | |
| Producer Identify Range | | Y | | | 1 | 9 | 29 | 1292 | 1829F | | EventID w mask (no room for DestID!) | 3292 | 1929F | |
| Producer Identified | | Y | Y | | 1 | 10 | 2A | 12A3 | 182AB | | EventID (no room for DestID!) | 32A3 | 192AB | |
| Identify Events | Y | | | | 1 | 11 | 2B | 12B4 | 1Eddd | 2B | | 12B4 | 1Eddd | 2B |
| Identify Events | | | | Y | 1 | 11 | 2B | 1AB0 | 18AB7 | | | 12B0 | 182B7 | |
| Learn Event | | Y | | Y | 1 | 12 | 2C | 1AC2 | 18ACF | | EventID | 12C2 | 182CF | |
| Producer/Consumer Event Report | | Y | | Y | 1 | 13 | 2D | 1AD2 | 18ADF | | EventID | 12D2 | 182DF | |
| **Other Messages** | | | | | | | | | | | | | | |
| Xpressnet | | | | | 2 | 17 | 51 | 1510 | 18517 | | Xpressnet packet | 3510 | 19517 | |
| Simple Node Ident Info Request | Y | | | | 2 | 18 | 52 | 1524 | 1Eddd | 52 | | 1524 | 1Eddd | |
| Simple Node Ident Info Reply | Y | | | | 2 | 19 | 53 | 1534 | 1Eddd | 53 | | 1534 | 1Eddd | |
| **Datagram Messages** | | | | | | | | | | | | | | |
| Datagram (General) | Y | | | | 2 | 0 | 40 | 1404 | 1 A/B/C/D ddd | | Data (0-8 bytes) (1D in MTI is end of datagram) | 1404 | 1 C/D ddd | |
| Datagram Received OK | Y | | | | 2 | 12 | 4C | 14C4 | 1Eddd | 4C | MTI byte | 14C4 | 1Eddd | 4C |
| Datagram Rejected | Y | | | | 2 | 13 | 4D | 14D4 | 1Eddd | 4D | MTI byte, error code | 14D4 | 1Eddd | 4D |
| **Stream Messages** | | | | | | | | | | | | | | |
| Stream Initiate Request | Y | | | | 2 | 14 | 4E | 14E4 | 1Eddd | 4E | MTI byte, buffer size (2 bytes), Source Stream ID (1 byte), reserved byte, flags (tagged=0x80) | 14E4 | 1Eddd | 4E |
| Stream Initiate Reply | Y | | | | 2 | 15 | 4F | 14F4 | 1Eddd | 4F | MTI byte 0x4B,buffer size (2 bytes), Source Stream ID (1 byte), Dest Stream ID, flags (tagged=0x80; error info) | 14F4 | 1Eddd | 4F |
| Stream Data Send | Y | | | | 3 | 9 | 69 | 1694 | 1Fddd | | (stream IDs inferred on CAN); 8 bytes data | 1694 | 1Fddd | |
| Stream Data Proceed | Y | | | | 3 | 10 | 6A | 16A4 | 1Eddd | 6A | MTI byte, Stream IDs (2 bytes) | 16A4 | 1Eddd | 6A |
| Stream Data Complete | Y | | | | 3 | 11 | 6B | 16B4 | 1Eddd | 6B | MTI byte, Stream IDs (2 bytes); optional length (4 bytes) | 16B4 | 1Eddd | 6B |
| | | | Y means carries flags in CAN header | | 0 gets more priority | | | | | | | | | |

Places these appear in code:

prototypes/C/libraries/OlcbTestCAN/obj/test
prototypes/C/libraries/OlcbCommonCAN/OpenLcbCan.h
prototypes/C/libraries/OpenLCB/OLCB_CAN_Buffer.cpp

prototypes/Arduino/libraries/OpenLCB/OpenLcbCan.h
prototypes/CBUS-PIC/canlib/frametypes.c

prototypes/ObjectiveC/OpenLcbLib/OlcbMtiDefinitions.h
prototypes/ObjectiveC/OpenLcbLib/OlcbTestDefinitions.h
prototypes/ObjectiveC/OpenLcbLib/MtiReformat.c

prototypes/java/src/org/openlcb/can/MessageBuilder.java