

|                                | Base Data for MTI  |              |                     |                      |      |                          |                    |                |       | Current Ethernet MTI | Proposed Ethernet MTI | CAN MTI     |  | CAN Data   |  | Previous Ethernet MTI | Previous CAN MTI | Previous CAN Data |
|--------------------------------|--------------------|--------------|---------------------|----------------------|------|--------------------------|--------------------|----------------|-------|----------------------|-----------------------|-------------|--|--|--|-----------------------|------------------|-------------------|
|                                | Has Destination ID | Has Event ID | Simple node message | Priority (0 highest) | Type | Simple / Priority / Type | Has Extended flags | Extended flags | Flags | MTI                  | Extended flag byte    | MTI + flags | Top 17 bits of CAN header, dddd refers to destination address. | Goes at start of CAN data, if present  |  |                       |                  |                   |
| Bits                           | 1                  | 1            | 1                   | 2                    | 5    | 8 hex                    | 1                  | 2              | 4 hex | 16 bits hex          | 8                     | 16 bits hex | 17 bits hex  | 8 hex  |  | 16 bits hex           | 17 bits hex      | 8 hex             |
| Base Messages                  |                    |              |                     |                      |      |                          |                    |                |       |                      |                       |             |  |  |  |                       |                  |                   |
| Node number Allocate           |                    |              |                     | 0                    | 0    | 00                       |                    |                | 7     | 1000                 |                       | F000        |  | Not available on CAN   |  | 3000                  |                  |                   |
| No Filtering                   |                    |              |                     | 0                    | 1    | 01                       |                    |                | 7     | 1010                 |                       | 0017        | 18017  | (Still under discussion)   |  | 3010                  | 19017            |                   |
| Initialization Complete        |                    |              |                     | 0                    | 8    | 08                       |                    |                | 7     | 1080                 |                       | 0087        | 18087  | Full Source Node ID  |  | 3080                  | 19087            |                   |
| Verify Node ID Number          | Y                  |              | Y                   | 0                    | 10   | 0A                       |                    |                |       | 10A4                 |                       | 10A0        | 1Eddd  | 0A   |  | 10A4                  | 1Eddd            | 0A                |
| Verified Node ID Number        |                    | Y            |                     | 0                    | 10   | 8A                       |                    |                | 7     | 18A0                 |                       | 08A7        | 188A7  |  |  | 10A0                  | 180A7            |                   |
| Verified Node ID Number        |                    | Y            |                     | 0                    | 11   | 8B                       |                    |                | 7     | 18B0                 |                       | 08B7        | 188B7  | Full Source Node ID  |  | 10B0                  | 180B7            |                   |
| Optional Interaction Rejected  | Y                  |              |                     | 0                    | 12   | 0C                       |                    |                |       | 10C4                 |                       | 10C0        | 1Eddd  | 0C MTI, error, optional information  |  | 10C4                  | 1Eddd            | 0C                |
| Terminate Due to Error         | Y                  |              |                     | 0                    | 13   | 0D                       |                    |                |       | 10D4                 |                       | 10D0        | 1Eddd  | 0D MTI, error, optional information  |  | 10D4                  | 1Eddd            | 0D                |
| Protocol Support Messages      |                    |              |                     |                      |      |                          |                    |                |       |                      |                       |             |  |  |  |                       |                  |                   |
| Protocol Support Inquiry       | Y                  |              |                     | 1                    | 14   | 2E                       |                    |                |       | 12E4                 |                       | 12E0        | 1Eddd  | 2E   |  | 12E4                  | 1Eddd            | 2E                |
| Protocol Support Reply         | Y                  |              |                     | 1                    | 15   | 2F                       |                    |                |       | 12F4                 |                       | 12F0        | 1Eddd  | 2F Protocol flags  |  | 12F4                  | 1Eddd            | 2F                |
| Event Exchange Messages        |                    |              |                     |                      |      |                          |                    |                |       |                      |                       |             |  |  |  |                       |                  |                   |
| Identify Consumer              | Y                  | Y            | Y                   | 1                    | 4    | A4                       |                    |                | F     | 1A42                 |                       | 0A4F        | 18A4F  | EventID (no room for DestID!)  |  | 1242                  | 1824F            |                   |
| Consumer Identify Range        | Y                  |              | Y                   | 1                    | 5    | 25                       |                    |                | F     | 1252                 |                       | 025F        | 1825F  | EventID w mask (no room for DestID!)   |  | 3252                  | 1925F            |                   |
| Consumer Identified            | Y                  |              | Y                   | 1                    | 6    | 26                       | Y                  | 3              | B     | 1263                 | 3                     | 026B        | 1826B  | EventID (no room for DestID!)  |  | 3263                  | 1926B            |                   |
| Identify Producer              | Y                  | Y            | Y                   | 1                    | 8    | A8                       |                    |                | F     | 1A82                 |                       | 0A8F        | 18A8F  | EventID (no room for DestID!)  |  | 1282                  | 1828F            |                   |
| Producer Identify Range        | Y                  |              | Y                   | 1                    | 9    | 29                       |                    |                | F     | 1292                 |                       | 029F        | 1829F  | EventID w mask (no room for DestID!)   |  | 3292                  | 1929F            |                   |
| Producer Identified            | Y                  | Y            |                     | 1                    | 10   | 2A                       | Y                  | 3              | B     | 12A3                 | 3                     | 02AB        | 182AB  | EventID (no room for DestID!)  |  | 32A3                  | 192AB            |                   |
| Identify Events                | Y                  |              |                     | 1                    | 11   | 2B                       |                    |                |       | 12B4                 |                       | 12B0        | 1Eddd  | 2B   |  | 12B4                  | 1Eddd            | 2B                |
| Identify Events                |                    | Y            | Y                   | 1                    | 11   | AB                       |                    |                | 7     | 1AB0                 |                       | 0AB7        | 18AB7  |  |  | 12B0                  | 182B7            |                   |
| Learn Event                    | Y                  | Y            | Y                   | 1                    | 12   | AC                       |                    |                | F     | 1AC2                 |                       | 0ACF        | 18ACF  | EventID  |  | 12C2                  | 182CF            |                   |
| Producer/Consumer Event Report | Y                  | Y            | Y                   | 1                    | 13   | AD                       |                    |                | F     | 1AD2                 |                       | 0ADF        | 18ADF  | EventID  |  | 12D2                  | 182DF            |                   |
| Other Messages                 |                    |              |                     |                      |      |                          |                    |                |       |                      |                       |             |  |  |  |                       |                  |                   |
| Xpressnet                      |                    |              |                     | 2                    | 17   | 51                       |                    |                | 7     | 1510                 |                       | 0517        | 18517  | Xpressnet packet   |  | 3510                  | 19517            |                   |
| Simple Node Ident Info Request | Y                  |              |                     | 2                    | 18   | 52                       |                    |                |       | 1524                 |                       | 1520        | 1Eddd  | 52   |  | 1524                  | 1Eddd            |                   |
| Simple Node Ident Info Reply   | Y                  |              |                     | 2                    | 19   | 53                       |                    |                |       | 1534                 |                       | 1530        | 1Eddd  | 53   |  | 1534                  | 1Eddd            |                   |
| Datagram Messages              |                    |              |                     |                      |      |                          |                    |                |       |                      |                       |             |  |  |  |                       |                  |                   |
| Short Datagram                 | Y                  |              |                     | 2                    | 0    | 40                       |                    |                |       | 1404                 |                       | 1400        | 1Addd  | Datagram protocol id, data   |  |                       |                  |                   |
| Start of long Datagram         | Y                  |              |                     | 2                    | 0    | 40                       |                    |                |       | 1404                 |                       | 1400        | 1Bddd  | Datagram protocol id, data   |  |                       |                  |                   |
| Middle of long Datagram        | Y                  |              |                     | 2                    | 0    | 40                       |                    |                |       |                      |                       |             | 1Cddd  | Data (0-8 bytes)   |  |                       |                  |                   |
| End of long Datagram           | Y                  |              |                     | 2                    | 0    | 40                       |                    |                |       |                      |                       |             | 1Dddd  | Data (0-8 bytes)   |  | 1404                  | 1 C/D ddd        |                   |
| Datagram Received OK           | Y                  |              |                     | 2                    | 12   | 4C                       |                    |                |       | 14C4                 |                       | 14C0        | 1Eddd  | 4C MTI byte  |  | 14C4                  | 1Eddd            | 4C                |
| Datagram Rejected              | Y                  |              |                     | 2                    | 13   | 4D                       |                    |                |       | 14D4                 |                       | 14D0        | 1Eddd  | 4D MTI byte, error code  |  | 14D4                  | 1Eddd            | 4D                |
| Stream Messages                |                    |              |                     |                      |      |                          |                    |                |       |                      |                       |             |  |  |  |                       |                  |                   |
| Stream Initiate Request        | Y                  |              |                     | 2                    | 14   | 4E                       |                    |                |       | 14E4                 |                       | 14E0        | 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                 |                       | 14F0        | 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                 |                       | 1690        | 1Fddd  | (stream IDs inferred on CAN); 8 bytes data   |  | 1694                  | 1Fddd            |                   |
| Stream Data Proceed            | Y                  |              |                     | 3                    | 10   | 6A                       |                    |                |       | 16A4                 |                       | 16A0        | 1Eddd  | 6A MTI byte, Stream IDs (2 bytes)  |  | 16A4                  | 1Eddd            | 6A                |
| Stream Data Complete           | Y                  |              |                     | 3                    | 11   | 6B                       |                    |                |       | 16B4                 |                       | 16B0        | 1Eddd  | 6B MTI byte, Stream IDs (2 bytes); optional length (4 bytes)   |  | 16B4                  | 1Eddd            | 6B                |

Places these appear in code:

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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-PI/C/CanLib/frames/types.c
prototypes/ObjectiveC/OpenLcbLib/OlcbMtiDefinitions.h
prototypes/ObjectiveC/OpenLcbLib/OlcbTestDefinitions.h
prototypes/ObjectiveC/OpenLcbLib/MtiReformat.c
prototypes/java/src/org/openlcb/can/MessageBuilder.java

```