OpenLCB MTI Definitions

21/07/2012 01:38:48

		Full MTI Format											CAN						
		0	1	2	3	4 5	6 7 8 9 10	11	12	13	14 15		28	27	26 25 24	23 22 21 20 19 18 17 16 15 14 13 12	11 10 9 8 7 6 5 4 3 2 1 0		
		15	14	13	12	11 10	9 8 7 6 5	4	3	2	1 0		0	1	2 3 4	5 6 7 8 9 10 11 12 13 14 15 16	17 18 19 20 21 22 23 24 25 26 27 28		
		Reserved	**Reserved**	**Special**	**Stream or Datagram**	**Priority**	**Type within priority (decimal)**	**Simple Protocol**	**Address present**	**Event# present**	**Modifier within Priority/Type**	**Full MTI (Hex)**	**Priority**	**Frame-type**	**CAN Frame Type**	**Variable Part CAN-MTI or Destination-alias (hex)**	**Source-alias**	**CAN Header (hex)**	**Data-Part { } = optional**
	Number of bits in field	1	1	1	1	2	5	1	1	1	2	16	1	1	3	12	12	29	
Basic	Node number Allocate	0	0	1	0	0	0	0	0	0		2000	~~1~~	~~1~~	~~1~~	~~000~~	~~sss~~	~~19000sss~~	*not carried on CAN*
	No Filtering	0	0	1	0	0	1	0	0	0		2020	~~1~~	~~1~~	~~1~~	~~020~~	~~sss~~	~~19020sss~~	~~(Still under discussion)~~
	Initialization Complete	0	0	0	0	0	8	0	0	0		0100	1	1	1	100	sss	19100sss	Full Source Node ID
	Verify Node ID Number (addressed)	0	0	0	0	1	4	0	1	0		0488	1	1	1	488	sss	19488sss	fddd
	Verify Node ID Number	0	0	0	0	1	4	1	0	0		0490	1	1	1	490	sss	19490sss	
	Verified Node ID Number	0	0	0	0	0	11	1	0	0		0170	1	1	1	170	sss	19170sss	Full Source Node ID
	Optional Interaction Rejected	0	0	0	0	0	3	0	1	0		0068	1	1	1	068	sss	19068sss	fddd, error, optional info
	Terminate Due to Error	0	0	0	0	0	5	0	1	0		00A8	1	1	1	0A8	sss	190A8sss	fddd, error, optional info
Protocol Support	Protocol Support Inquiry	0	0	0	0	2	1	0	1	0		0828	1	1	1	828	sss	19828sss	fddd
	Protocol Support Reply	0	0	0	0	1	19	0	1	0		0668	1	1	1	668	sss	19668sss	fddd, Protocol flags
Event Exchange	Identify Consumer	0	0	0	0	2	7	1	0	1		08F4	1	1	1	8F4	sss	198F4sss	EventID
	Consumer Identify Range	0	0	0	0	1	5	0	0	1		04A4	1	1	1	4A4	sss	194A4sss	EventID with mask
	Consumer Identified w validity unknown	0	0	0	0	1	6	0	0	1	3	04C7	1	1	1	4C7	sss	194C7sss	EventID
	Consumer Identified as currently valid	0	0	0	0	1	6	0	0	1	0	04C4	1	1	1	4C4	sss	194C4sss	EventID
	Consumer Identified as currently invalid	0	0	0	0	1	6	0	0	1	1	04C5	1	1	1	4C5	sss	194C5sss	EventID
	Consumer Identified (reserved)	0	0	0	0	1	6	0	0	1	2	04C6	1	1	1	4C6	sss	194C6sss	EventID
	Identify Producer	0	0	0	0	2	8	1	0	1		0914	1	1	1	914	sss	19914sss	EventID
	Producer Identify Range	0	0	0	0	1	9	0	0	1		0524	1	1	1	524	sss	19524sss	EventID with mask
	Producer Identified w validity unknown	0	0	0	0	1	10	0	0	1	3	0547	1	1	1	547	sss	19547sss	EventID
	Producer Identified as currently valid	0	0	0	0	1	10	0	0	1	0	0544	1	1	1	544	sss	19544sss	EventID
	Producer Identified as currently invalid	0	0	0	0	1	10	0	0	1	1	0545	1	1	1	545	sss	19545sss	EventID
	Producer Identified (reserved)	0	0	0	0	1	10	0	0	1	2	0546	1	1	1	546	sss	19546sss	EventID
	Identify Events	0	0	0	0	2	11	0	1	0		0968	1	1	1	968	sss	19968sss	fddd
	Identify Events	0	0	0	0	2	11	1	0	0		0970	1	1	1	970	sss	19970sss	
	Learn Event	0	0	0	0	1	12	1	0	1		0594	1	1	1	594	sss	19594sss	EventID
	Producer/Consumer Event Report	0	0	0	0	1	13	1	0	1		05B4	1	1	1	5B4	sss	195B4sss	EventID
Other	Xpressnet	0	0	0	0	2	14	0	0	0		09C0	1	1	1	9C0	sss	199C0sss	Xpressnet packet
Ident	Simple Node Ident Info Request	0	0	0	0	3	15	0	1	0		0DE8	1	1	1	DE8	sss	19DE8sss	fddd
	Simple Node Ident Info Reply	0	0	0	0	2	16	0	1	0		0A08	1	1	1	A08	sss	19A08sss	fddd, data bytes
Datagram	Datagram Content (one frame)	0	0	0	1	3	2	0	1	0		1C48	1	1	2	ddd	sss	1Adddsss	Data (0-8 bytes)
	Datagram Content (first frame)	0	0	0	1	3	2	0	1	0		1C48	1	1	3	ddd	sss	1Bdddsss	Data (0-8 bytes)
	Datagram Content (middle frame)	0	0	0	1	3	2	0	1	0		1C48	1	1	4	ddd	sss	1Cdddsss	Data (0-8 bytes)
	Datagram Content (last frame)	0	0	0	1	3	2	0	1	0		1C48	1	1	5	ddd	sss	1Ddddsss	Data (0-8 bytes)
	Datagram Received OK	0	0	0	0	2	17	0	1	0		0A28	1	1	1	A28	sss	19A28sss	fddd
	Datagram Rejected	0	0	0	0	2	18	0	1	0		0A48	1	1	1	A48	sss	19A48sss	fddd, error code
Stream	Stream Initiate Request	0	0	0	0	3	6	0	1	0		0CC8	1	1	1	CC8	sss	19CC8sss	fddd, buffer size, srcSID
	Stream Initiate Reply	0	0	0	0	2	3	0	1	0		0868	1	1	1	868	sss	19868sss	fddd, buffer size, srcSID
	Stream Data Send	0	0	0	1	3	28	0	1	0		1F88	1	1	7	ddd	sss	1Fdddsss	Data (0-8 bytes)
	Stream Data Proceed	0	0	0	0	2	4	0	1	0		0888	1	1	1	888	sss	19888sss	fddd, srcSID, dstSID
	Stream Data Complete	0	0	0	0	2	5	0	1	0		08A8	1	1	1	8A8	sss	198A8sss	fddd, srcSID, dstSID, { len }

Red means this value is identical to another line.

f = Flags					Frame
r	r	0	0		Only
r	r	0	1		First
r	r	1	0		Last
r	r	1	1		Middle

Priority Classes

Description	Priority
Initialization; Error handling	**0**
Event transfer; Operation responses	**1**
Operation requests; Bulk data transfer responses	**2**
Bulk data transfer requests	**3**

CAN Message Types

Title		R	R	Type	Variable Part	Source-alias
Reserved		1	1	0	0bxxxx xxxx xxxx	sss
Global		1	1	1	0bmmmm mmmm 0mmm	sss
Addressed		1	1	1	0bmmmm mmmm 1mmm	sss
Datagram Only		1	1	2	0bdddd dddd dddd	sss
Datagram First		1	1	3	0bdddd dddd dddd	sss
Datagram Middle		1	1	4	0bdddd dddd dddd	sss
Datagram Last		1	1	5	0bdddd dddd dddd	sss
Reserved		1	1	6	0bxxxx xxxx xxxx	sss
Stream		1	1	7	0bdddd dddd dddd	sss

Bit Descriptions

Full-MTI bit	Description
14-15	Reserved
13	Special – Operationally special
12	Stream or Datagram – used by Gateways as indication to fragment.
10-11	Priority – indicates gross priority of message.
5-9	Type within priority
4	Simple protocol – (unaddressed) messages to be received by 'simple' nodes.
3	Address present – this message has an address.
2	Event present – this message has an event#.
0-1	Modifier within modifier type – message specific extra information