	reference only, and the definitive of	defi	nitic	ns	are	e in th										CAN		03/06/2014
(03/06/14 05:04 AM	Full MTI Format 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0											CAN 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 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					
r			D		Stream or Datagram	Priority	Type within priority (decimal)	Simple Protocol		Modifier within Priority/Type	F: M (H	ull ITI ex)	Priority	CAN Frame Type	CAN-MTI or Destination-alias ("Variable Part") (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	1 3	12	12	29	64
H	Initialization Complete			0		0	8		0 0		01		1 1		100	SSS	[19100sss]	Full Source Node ID
-	Verify Node ID Number Addressed Verify Node ID Number Global			0		1	4 4	-	1 0 0 0			188 190	1 1		488 490	SSS SSS	[19488sss] [19490sss]	fddd
Basic	Verified Node ID Number			0		0	 11		0 0				1 1		170	SSS	[19170sss]	{Full Source Node ID}
O	Optional Interaction Rejected	-	-	0	_	0	3		1 0				1 ′	1 1	068	sss	[19068sss]	fddd, error, optional info
	Terminate Due to Error		_	0	_	0	5	_	1 0	_	_		1 1		0A8	SSS	[190A8sss]	fddd, error, optional info
⊢	Protocol Support Inquiry Protocol Support Reply		_	0	_	2	1 19	+-+	1 0 1 0				1 1		828 668	SSS SSS	[19828sss] [19668sss]	fddd fddd, Protocol flags
- ' '	Identify Consumer		_	0			7	+ +	0 1		_		1 1		8F4	SSS	[198F4sss]	EventID
_	Consumer Range Identified		$\overline{}$	0	_	1	5		0 1		04		1 1		4A4	SSS	[194A4sss]	EventID with mask
_	Consumer Identified w validity unknown		-	0		1	6		0 1		04		1 ′		4C7	sss	[194C7sss]	EventID
F	Consumer Identified as currently valid	-	-	0	_	1	6		0 1		04		1 1		4C4	SSS	[194C4sss]	EventID
F	Consumer Identified as currently invalid Consumer Identified (reserved)			0		1	6		0 1		04		1 '		4C5 4C6	SSS SSS	[194C5sss] [194C6sss]	EventID EventID
	Identify Producer			0		2	8	_	0 1			914	1 1		914	SSS	[19914sss]	EventID
	Producer Range Identified	0	0	0	0	1	9	0	0 1		05	524	1 1		524	SSS	[19524sss]	EventID with mask
F	Producer Identified w validity unknown	-	-	0	-	1	10	-	0 1		05		1 1		547	SSS	[19547sss]	EventID
-	Producer Identified as currently valid Producer Identified as currently invalid	-	-	0		1 1	10 10	-	0 1				1 1		544 545	SSS SSS	[19544sss] [19545sss]	EventID EventID
-	Producer Identified (reserved)		-	0	_	1	10		0 1				1 1		546	SSS	[19546sss]	EventID
Ī	Identify Events Addressed	-	-	0		2	11		1 0				1 ′		968	sss	[19968sss]	fddd
F	Identify Events Global	-	-	0		2	11		0 0				1 1		970	SSS	[19970sss]	
-	Learn Event			0		1 1	12 13		0 1		05		1 1		594 5B4	SSS	[19594sss]	EventID
	Producer/Consumer Event Report Traction Control Command					1	15	-		2			1 ′		5FA	SSS	[195B4sss]	EventID fddd, data bytes
	Traction Proxy Command			0			15	-	1 0			FA	1 '		1FA	SSS	[191FAsss]	fddd, data bytes
	Traction Control Reply	_	_	0	_		15	-	1 0			F8	1 ′	1 1	5F8	sss	[195F8sss]	fddd, data bytes
	Traction Proxy Reply	-	_	0	_		15	-	1 0		+ +		1 ′		1F8	SSS	[191F8sss]	fddd, data bytes
	Xpressnet Remote Button Request	جـــــــــــــــــــــــــــــــــــــ	_	0			1 10	\rightarrow	0 0	0	08		1 1		820 948	\$88	[19820sss] [19948sss]	Xpressnet packet fddd, data bytes
–	Remote Button Reply		_	0	_	_	10	-	1 0	+	09		1 ′		949	SSS SSS	[19949sss]	fddd, data bytes
	Simple Train Node Ident Info Request		_	0	_		13	-	1 0		OD	==	1 1		DA8	SSS	[19DA8sss]	fddd
Ident	Simple Train Node Ident Info Reply		$\overline{}$	0	_	_	14	_	1 0	_	09		1 ′		9C8	sss	[199C8sss]	fddd, data bytes
ode ident 🕆	Simple Node Ident Info Request		-	0			15	-	1 0		+	——	1 1	_	DE8	SSS	[19DE8sss]	fddd
	Simple Node Ident Info Reply Datagram			0		3	16 2	0	1 0		1C		1 1	1 1	A08	SSS	[19A08sss]	fddd, data bytes
	CAN-Datagram Content (one frame)	╁	0	0	'	<u> </u>	<u>"</u>	101	1 0	1			1 1	1 2	ddd	sss	[1Adddsss]	Data (0-8 bytes)
	CAN-Datagram Content (first frame)						и						1 1		ddd	SSS	[1Bdddsss]	Data (0-8 bytes)
atagram	→ CAN-Datagram Content (middle frame						и						1 1	1 4	ddd	SSS	[1Cdddsss]	Data (0-8 bytes)
	CAN-Datagram Content (last frame)		0	0	0	0	47		4 0		OA	00	1 1		ddd	SSS	[1Ddddsss]	Data (0-8 bytes)
Г	Datagram Received OK Datagram Rejected			0			17 18		1 0 1 0		0A 0A		1 1		A28 A48	SSS SSS	[19A28sss] [19A48sss]	fddd fddd, error code
	Stream Initiate Request	==	_	0	_		6	_	1 0	+			1 ′		CC8	sss	[19CC8sss]	fddd, buffer size, srcSID
;	Stream Initiate Reply	-	_	0	_	2	3	0	1 0		08	368	1 ′	1 1	868	sss	[19868sss]	fddd, buffer size, srcSID
	Stream Data Send	-	_	0	_	3	28	_	1 0			88	1 1		ddd	SSS	[1Fdddsss]	Data (0-8 bytes)
	Stream Data Proceed Stream Data Complete	-	-	0	_	2	<u>4</u> 5	_	1 0 1 0		+	888 8A8	1 1		888 8A8	SSS SSS	[19888sss] [198A8sss]	fddd, srcSID, dstSID fddd, srcSID, dstSID, { len
_	Node number Allocate	-	=	1	_		0	+	0 0				1 4 4		000	\$55 \$ \$\$	[190A0SSS]	not carried on CAN
	No Filtering			1		0	1		0 0			H	4 -		020	SSS	[19020sss]	(Still under discussion)
	Reserved for MTI Expansion		1	I	1	0	0											
	Reserved for MTI Expansion Reserved for MTI Expansion					1	0										/	
-	Reserved for MTI Expansion Reserved for MTI Expansion					3	0											
						•	-											
neral Data	grams need to be fragmented and	1										7	, _			f = Flags	Frame	7
ragmented	l into multiple CAN frames.				*	1	1								umns means that it is	r r 0 0 r r 0 1	Only First	= - -
Priority Classes Description						identica					al to another value, and should be checked.			r r 1 0 r r 1 1	Last Middle	- - -		
						AN MA	6630	יו פר	lynes			r = Send 0, c	ion't check.					
					Jode			R Type	Variable Part (binary)	Source-alias (hex)								
II I	Bulk data transfer requests	12.011				3	*			eserve	t		1 1		Obxxxx xxxx xxxx	SSS		
II							A		G	lobal			1 1		0bmmmm mmmm 0 mmm	SSS		
(5													-					
t Descript									Α	ddresse			1 ′	1 1	Obmmmm mmmm 1mmm	SSS		
t Descript	tions Description Reserved								A D		n Onl	у	-	1 1 1 2	Obmmmm mmmm 1mmm Obdddd dddd dddd Obdddd dddd dddd	SSS SSS SSS		

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	OpenLCB MTI Definitions This is for reference only, and the definitive definitions are in the Standards								
	3 ,								
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								

Datagram Last	1	1	5	Obdddd dddd dddd	sss
Reserved	1	1	6	0bxxxx xxxx xxxx	sss
Stream	1	1	7	Obdddd dddd dddd	sss

r, R – reserved KEY s, sss, ssss ssss – source alias d, ddd, dddd dddd – destination alias x, xxx, xxxx xxxx xxxx – undefinied field

OpenLCB MTI Definitions
This is for reference only, and the definitive definitions are in the Standards
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	Ger	neral		CAN			
		Full MTI (Hex)	Data		CAN Header (hex)	Data-Part { } = optional	
	Number of bits in field:	16	many		29	64	
	Initialization Complete	0100	Course	Initialization Complete	[10100000]	Full Source Node ID	
	Initialization Complete Verify Node ID Number Addressed	0488	Source Source	Initialization Complete Verify Node ID Number Addressed	[19100sss] [19488sss]	fddd	
	— •	0490	Destination, Source Source	Verify Node ID Number Addressed Verify Node ID Number Global	[19490sss]	lada	
Basic	Verify Node ID Number Global Verified Node ID Number	0170	Source	Verified Node ID Number		{Full Source Node ID}	
	Optional Interaction Rejected	0068	Destination, Source, error, optional		[19170sss]	fddd, error, optional info	
	Terminate Due to Error	0008 00A8	Destination, Source, error, optional	<u>'</u>	[19068sss] [190A8sss]	fddd, error, optional info	
Dueteesl	Protocol Support Inquiry	0828	Destination, Source, error, optional	Protocol Support Inquiry	[19828sss]	fddd	
Protocol Support	Protocol Support Reply	0668	Destination, Source, Protocol flags		[196268sss]	fddd, Protocol flags	
Cappoit	Identify Consumer		EventID, Source	Identify Consumer	[198F4sss]	EventID	
			EventID with Mask, Source			EventID with mask	
	Consumer Identify Range Consumer Identified w validity unknown		· ·	Consumer Identify Range Consumer Identified w validity unknown	[194A4sss]	EventID with mask	
	, , , , , , , , , , , , , , , , , , , ,		EventID, Source	,	[194C7sss]		
	Consumer Identified as currently valid		EventID, Source	Consumer Identified as currently valid	[194C4sss]	EventID	
	Consumer Identified as currently invalid		EventID, Source	Consumer Identified as currently invalid	[194C5sss]	EventID	
	Consumer Identified (reserved)		EventID, Source	Consumer Identified (reserved)	[194C6sss]	EventID	
	Identify Producer		EventID, Source	Identify Producer	[19914sss]	EventID	
Event	Producer Identify Range		EventID with Mask, Source	Producer Identify Range	[19524sss]	EventID with mask	
Exchange		0547	EventID, Source	Producer Identified w validity unknown	[19547sss]	EventID	
	Producer Identified as currently valid	0544	EventID, Source	Producer Identified as currently valid	[19544sss]	EventID	
	Producer Identified as currently invalid	0545	EventID, Source	Producer Identified as currently invalid	[19545sss]	EventID	
	Producer Identified (reserved)		EventID, Source	Producer Identified (reserved)	[19546sss]	EventID	
	Identify Events Addressed	0968	Destination, Source	Identify Events Addressed	[19968sss]	fddd	
	Identify Events Global	0970	Source	Identify Events Global	[19970sss]		
	Learn Event	0594	EventID, Source	Learn Event	[19594sss]	EventID	
	Producer/Consumer Event Report	05B4	EventID, Source	Producer/Consumer Event Report	[195B4sss]	EventID	
Other	Xpressnet	0820	Source, Xpressnet packet	Xpressnet	[19820sss]	Xpressnet packet	
Ident	Simple Node Ident Info Request	0DE8	Destination, Source	Simple Node Ident Info Request	[19DE8sss]	fddd	
140110	Simple Node Ident Info Reply	0A08	Destination, Source, Data bytes	Simple Node Ident Info Reply	[19A08sss]	fddd, data bytes	
				CAN-Datagram Content (one frame)	[1Adddsss]	Data (0-8 bytes)	
	Datagram Content	1048	Destination, Source, Data bytes	CAN-Datagram Content (first frame)	[1Bdddsss]	Data (0-8 bytes)	
Datagram	Butagram Content	1040	Decimation, Cource, Data Syles	CAN-Datagram Content (middle frame	[1Cdddsss]	Data (0-8 bytes)	
Datagram				CAN-Datagram Content (last frame)	[1Ddddsss]	Data (0-8 bytes)	
	Datagram Received OK	0A28	Destination, Source	Datagram Received OK	[19A28sss]	fddd	
	Datagram Rejected	0A48	Destination, Source, Error code	Datagram Rejected	[19A48sss]	fddd, error code	
	Stream Initiate Request	0CC8	Destination, Source, Buffer size	Stream Initiate Request	[19CC8sss]	fddd, buffer size, srcSID	
	Stream Initiate Reply	0868	Destination, Source, Buffer size	Stream Initiate Reply	[19868sss]	fddd, buffer size, srcSID	
Stream	Stream Data Send	1F88	Destination, Source, Data bytes	Stream Data Send	[1Fdddsss]	Data (0-8 bytes)	
	Stream Data Proceed	0888	Destination, Source, ID	Stream Data Proceed	[19888sss]	fddd, srcSID, dstSID	
	Stream Data Complete	08A8	Destination, Source, ID, {len}	Stream Data Complete	[198A8sss]	fddd, srcSID, dstSID, { len	
Evtro	Node number Allocate	2000	Source				
Extra	No Filtering		Source				