Record of Line-item Letter Ballot Review by TC Chapter for Procedural Review

Region/Locale: North America
Global Technical Committee: Information & Control
TC Chapter Cochairs: Brian Rubow (Cimetrix), Jack Ghiselli (Ghiselli Consulting), James Moyne (AMAT / University of Michigan)
Standards Staff: Michelle Sun

	Scheduled in Background Statement	Actual
Date	4/5/2023	4/5/2023
Location	Milpitas, CA	Milpitas, CA
Reason for Change of Date and/or Location (if changed)		

Note: See *Regulations* ¶ 9.5 Exceptions for allowable reason to change.

Document Information

I. Document Number, Title, Lists of Line Items

Document Number 7017		**Document Title** Line Item Revision to SEMI E120.2-0922, Specification for Protocol Buffers for Common Equipment Model (CEM)
List of Line Items	Line Item 1	**Line Item Title** Correct issues in SEMI E120.2 Protocol Buffer messages reported by Task Force Members
	Line Item 2	**Line Item Title** Fix spelling errors and clarify how .proto files are used.

Line Item 1 Adjudication

II. Tally

Standards staff to fill in.

Voting Tally: As-cast tally after close of voting period

Note: A minimum of 60% of the Voting Interests that have TC Members within the global technical committee that issued the Letter Ballot must return Votes. (*Regulations* ¶ 9.6.2.1.1)

Voting Tally (with example values):

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	90	÷	147	=	61.2%	≥60%
Intercommittee Ballot	44					
Voting Interest Reject(s)	0		Total Voters with Rejects		0	
Voting Interest Accept(s)	60					

Note: See *Regulations* § 3.2.1 for definition of Voting Interest.

III. Rejects

None

IV. Other Technical Issues

None

V. Comments

V- (i) Voters' Comments

Commenter 1 (Tadashi Mochizuki / TEL) - Comment 1

Comment	*TF/TC Chapter to fill in section/paragraph #, if necessary.	
	Comment Text: message ModuleType Comment: Module has no type.	
Action	**The TC Chapter agreed to do one of the following actions.**	
	*No motion is required in this step.	
		Already addressed by Commenter #, Comment #
	x	No further action was taken by the TC Chapter.
		Refer to the TF for more consideration.
		New Business
		Editorial Change

Commenter 2 (Mitch Sakamoto / Zama Consulting) - Comment 1

Comment	*TF/TC Chapter to fill in section/paragraph #, if necessary.
	Referenced Section/Paragraph: 9.2.1.1 Comment Text: Reference: 9.2.1.1 SEMI E120 defines the Nameable class as an abstract object. It generalizes the EquipmentElement, MaterialLocation and LogicalElement classes. Comment: In the second sentence, 'generalizes' should be changed to 'specialized' or something. That is, 'generalize' suggests modeling of the super-class.

Action		
	The TC Chapter agreed to do one of the following actions.	
	***No motion is required in this step.**	
		Already addressed by Commenter #, Comment #
		No further action was taken by the TC Chapter.
	x	Refer to the TF for more consideration.
		New Business
		Editorial Change

Commenter 2 (Mitch Sakamoto / Zama Consulting) - Comment 2

Comment	
	***TF/TC Chapter to fill in section/paragraph #, if necessary.**
	Referenced Section/Paragraph: 9.2.1.2 Comment Text: Reference: 9.2.1.2 Protocol Buffers do not support inheritance. There are Protocol Buffer messages for each of the derived classes (EquipmentElement, MaterialLocation and LogicalElement). There is no corresponding Protocol Buffer message defined for the Nameable class to avoid confusion and adding an unnecessary layer to the SEMI E120.2 Protocol Buffer messages. Implementations use the Protocol Message corresponding for the derived object directly (e.g., the EquipmentElementType Protocol Buffer message represents the EquipmentElement object.) Comment: The nameable in the metadata structure should be described in the structure of substantial components such as Equipment/Module/Subsystem/IO Device; for instance, Track01/Coater01/Dispence01/Pump01. The Equipment Element is still an abstract class of those components.

Action		
	The TC Chapter agreed to do one of the following actions.	
	***No motion is required in this step.**	
		Already addressed by Commenter #, Comment #
		No further action was taken by the TC Chapter.
	x	Refer to the TF for more consideration.
		New Business
		Editorial Change

V-(ii) Comments Created by Handling Negative

None

VII. Approval Conditions Check

VII. - (i). Approval Rate

APPROVAL CONDITION 1: All Negatives have been discussed and were withdrawn, found not related, found not persuasive, or addressed by a technical change. (*Regulations* ¶ 9.6.2.1.2)

APPROVAL CONDITION 2: At least 90% of the sum of valid Voting Interest Accept and Voting Interest Reject Votes must be Accept. (*Regulations* ¶ 9.6.2.1.3)

Note: If both approval conditions are not satisfied, the Document fails.

		Accepts		(Accepts + Valid Rejects)				
Approval Rate	=	60	/	60	=	100.0%		≥90%

VII. – (ii) Approval Level (check one)

Note: See *Regulations* § 9.6.2 for further information.

X	**Globally Approved (No Ratification Ballot needed):** Line Item 1 meets the Letter Ballot approval conditions for the global technical committee.
	Need a Ratification Ballot: Line Item 1 meets the Letter Ballot approval conditions for the TC Chapter and a Ratification Ballot will be issued to validate technical changes.

Line Item 2 Adjudication

II. Tally

Standards staff to fill in.

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	90	÷	147	=	61.2%	≥60%
Intercommittee Ballot	44					
Voting Interest Reject(s)	0		Total Voters with Rejects			0
Voting Interest Accept(s)	59					

III. Rejects

None

IV. Other Technical Issues

None

V. Comments

None

VI. Editorial Changes Other than Those Voted on in § V

None

VII. Approval Conditions Check

VII. - (i). Approval Rate

APPROVAL CONDITION 1: All Negatives have been discussed and were withdrawn, found not related, found not persuasive, or addressed by a technical change. (*Regulations* ¶ 9.6.2.1.2)

APPROVAL CONDITION 2: At least 90% of the sum of valid Voting Interest Accept and Voting Interest Reject Votes must be Accept. (*Regulations* ¶ 9.6.2.1.3)

Note: If both approval conditions are not satisfied, the Document fails.

		Accepts		(Accepts + Valid Rejects)				
Approval Rate	=	59	/	59	=	100.0%		≥90%

VII. – (ii) Approval Level (check one)

Note: See *Regulations* § 9.6.2 for further information.

X	**Globally Approved (No Ratification Ballot needed):** **Line Item 2 meets the Letter Ballot approval conditions for the global technical committee.**
	Need a Ratification Ballot: **Line Item 2 meets the Letter Ballot approval conditions for the TC Chapter and a Ratification Ballot will be issued to validate technical changes.**

Checks for Entire Document Including All Approved Line Items

VIII. Safety Check

Note: This Safety check applies to the entire Standard or Safety Guideline including all the approved Line Items. See § 15 of the *Regulations* for further information.

Motion		
	x	**This is not a Safety Document**, when all safety-related information is removed, the Document is still technically sound and complete. (*Regulations* ¶ 8.7.1)
		This is a Safety Document, when all safety-related information is removed, the Document is not technically sound and complete. (*Regulations* ¶ 8.7.2)
		Safety Checklist (*Regulations* ¶ 15.3) is complete and has been included with the Document throughout the balloting process. (*Regulations* ¶ 15.1.2)

Motion by/2nd by	By: Albert Fuchigami / PEER Group Inc. Second: Brian Rubow / Cimetrix Incorporated
Discussion	None
Vote	12 **Y**-0 **N**; Motion passed

IX. Intellectual Property (IP) Check

Note: This Letter Ballot may cover all or part of a Standard or Safety Guideline. Regardless of the coverage, this IP check applies to the entire Standard or Safety Guideline including all the approved Line Items*. See *Regulations* § 16 for further information.

x	The TC Chapter meeting chair asked those participating, if they were aware of any patented technology that might be relevant (see *Regulations* ¶ 16.3.1.1) to the Standard or Safety Guideline; or, any copyrighted items or trademarks that are used/reproduced (see *Regulations* ¶ 16.4.1.2) in the Standard or Safety Guideline. (Also see, *Regulations* § 8.8)					
		The question is NOT answered in affirmative (No potentially material patented technology or use/reproduction of copyrighted items/trademarks is known.)	**GO TO SECTION X.**			
	x	The question is answered in affirmative	Is any of the known IPs a patented technology?	**x**	**Yes, at least one of them is a patented technology**	**GO TO IX (a) "Patented Technology" subsection**
					No	**GO TO IX (b) "Copyright items" subsection**

IX(a) Patented Technologies subsection

IX(a1) Total numbers of Patented Technologies to be dealt with

1 **Fill number**	**(l)** Known Patented Technology that might be relevant to	**0** **Fill number**	**(m)** Number of patented technologies first became known to the TC Chapter on or after the day of the issuance of this Letter Ballot	**Postpone assessment of such patented technologies to be performed at the next scheduled TC Chapter meeting.**

	the Standard/Safety Guideline	**1 Fill number**	**(n)** Number of patented technologies first became known to the TC Chapter before the day of the issuance of this Letter Ballot	**GO TO IX (a2)**

IX(a2) Assessment of disclosed patented technologies

Disclosed patented technology #1 Asyst Patent Application Mutli-protocol multi-client equipment server Automation Job Management Automated tool management in a multi-protocol environment Apparatus and method for web-based tool management NON-ASSERTION AGREEMENT (LOA) between SEMI and Asyst Technologies has been signed with for US Patents #11/340101, #11/107508, #09/899833, and 09/496009, in 2008.			**Date of Assessment (If different from the date of Letter Ballot adjudication)** 12/1/2007			
Is disclosed patented technology #1 found to be "might be material" to the Standard/Safety Guideline?	**x**	YES (It is a PMPT)	Is the use of this PMPT technically justified?	**x**	**YES**	**PROCEED to assess NEXT one, or if this is the last one, GO TO IX(a3)**
					NO	**The Document is failed and returned to the TF**
		NO	No further action is needed for patented technology #1			

This table is needed for each disclosed patented technology.

IX(a3) LOA status check of PMPT of which inclusion assessed to be justified

LOA Status of PMPT #1						
Has an LOA for this patented technology been received from every owner ?	**x**	YES	**PROCEED to check NEXT one, or if this is the last one, GO TO IX(b)**			
		NO	MOTION		Ask ISC for special permission to publish.	
					Quit activity.	**The Document is failed and returned to the TF**
					Wait for LOA	**PROCEED to check NEXT one, or if this is the last one, GO TO IX(b1)**
			Motion by/ 2nd by		Name (Company)/Name (Company)	
			Discussion		XXXX	
			Vote		XX **Y**-XX **N**; Motion passed (or failed)	

This table is needed for each PMPT of which inclusion assessed to be justified.

IX(b1) Total numbers of copyrighted items to be dealt with

0 **Fill number**	**(o)** Known copyrighted items that are used or reproduced to the Standard/Safety Guideline		**o > 0** There is at least one known copy righted items that might be relevant to the Standard/Safety Guideline	**GO TO IX (b2)**
		x	**o = 0** There is no disclosed copyrighted item	**GO TO IX (c)**

IX(b2) Assessment of disclosed copyrighted items

Disclosed copyrighted item #1 (***Brief description of its use in the Document***):						
Is disclosed copyrighted item #1 used or reproduced in the Standard/Safety Guideline?		YES	Is the use/reproduction of this copyrighted item technically justified?		YES	**PROCEED to assess NEXT one, or if this is the last one, GO TO IX(b3)**
					NO	**The Document is failed and returned to the TF**
		NO	No further action is needed for copyrighted item #1			

This table is needed for each disclosed copyrighted item.

IX(b3) Copyright release status check of copyrighted item of which inclusion assessed to be justified

Copyright release Status of copyrighted item #1						
Has the copyright release been received from its owner ?.		YES	**PROCEED to assess NEXT one, or if this is the last one, GO TO IX(c)**			
		NO	MOTION		Ask ISC for special permission to publish.	
					Quit activity.	**The Document is failed and returned to the TF**
					Wait for copyright release letter	**PROCEED to check NEXT one, or if this is the last one, GO TO IX(c)**
			Motion by/ 2nd by			Name (Company)/Name (Company)
			Discussion			XXXX
			Vote			XX **Y**-XX **N**; Motion passed (or failed)

This table is needed for each copyrighted item of which use/reproduction assessed to be justified.

IX(c) Assessment of disclosed (identified) trademark

Is there any trademark in the Standard/Safety Guideline?	**x**	YES	Is every instance of trademark use technically justified?	**x**	YES	**GO TO** IX(d)
					NO	**The Document is failed and returned to the TF**
		NO	**GO TO IX(d)**			

IX(d) IP check completion condition check

The co-chair checks if any Patented Technologies first become known to the TC Chapter on or after the day of the issuance of this Letter Ballot? i.e., m>0 in IX(a1)		YES	**Sections IX(a2) and IX(a3) shall be completed and recorded for such patented technologies at next scheduled meeting of the TC Chapter. Until then, the TC Chapter shall NOT go to X** (making motion to pass/fail this Document) **(see *Regulations* ¶ 16.4.1.2)** **Until then this Letter Ballot Review is on hold.**
	x	NO	**GO TO X**

X. Action for This Document

Motion (Check all applicable items)	x	Line item(s) [1], [2] passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
		Line item(s) [X], [X] and [X] passed TC Chapter review with editorial changes and will be forwarded to the ISC A&R SC for procedural review.
		Line item(s) [X], [X] and [X] passed TC Chapter review with technical changes and with or without editorial changes and will be forwarded to the ISC A&R SC for procedural review. A Ratification Ballot will be issued to verify the technical changes.
		Line item(s) [X], [X] and [X] failed TC Chapter review and will be returned to the TF for rework.
		Line item(s) [X], [X] and [X] failed TC Chapter review and work will be discontinued.

Motion by/ 2nd by	By: Albert Fuchigami / PEER Group Inc. Second: Brian Rubow / Cimetrix Incorporated	
Discussion	None	
Vote	12 **Y**-0 **N**	
Final Action	x	Motion passed
		Motion failed

Note: If the use of PMPT or copyrighted item is justified by the TC Chapter, LOA or release form must be received before publication can proceed.