

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

Region/Locale: [Japan](#)
 Global Technical Committee: [Information & Control](#)
 TC Chapter Cochairs: [Takayuki Nishimura/ SCREEN Semiconductor Solutions, Mitsuhiro Matsuda/ Hitachi Kokusai Electric](#)
 Standards staff: [Mizue Iwamura \(Ms.\)](#)

	Scheduled in Background Statement	Actual
Date	12/15/2017	12/15/2017
Location	SEMICON Japan, Tokyo Big Sight	SEMICON Japan, Tokyo Big Sight

[Document Information](#)

I. Document Number, Title, Lists of Line Items

Document Number 6287	Document Title Line Item Revision to: ‘SEMI E87-0312: SPECIFICATION FOR CARRIER MANAGEMENT (CMS)
List of Line Items	Line Item 1 Add reference/introduction/explanation statements of SEMI E171 Predictive Carrier Logistics (PCL)
	Line Item 2 Add RELATED INFORMATION about SEMI E171 Predictive Carrier Logistics (PCL)
	Line Item 3 XXXXX
	Line Item 4 XXXXX
	Line Item 5 XXXXX
	Line Item 6 XXXXX
	Line Item 7 XXXXX
	Line Item 8 XXXXX
	Line Item 9 XXXXX
	Line Item 10 XXXXX

Line Item 1 Adjudication

II. Tally (Standards staff to fill in)

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

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 ¶ 9.7.1.1)

Voting Tally (with example values):

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	71	÷	109	=	65.1%	≥60%
Intercommittee Ballot	28					
Voting Interest Reject(s)	3				Total Voters with Rejects	4
Voting Interest Accept(s)	44					

III. Rejects

Voting Interest Reject 1 (Voting Interest Name: Cimetrix Incorporated)

Voting Interest Reject 1- Voter Reject 1 (Voter: Brian Rubow, Cimetrix Incorporated)

Negative 1 of Voting Interest Reject 1- Voter Reject 1

Negative	Referenced Section/ Paragraph	*TF/TC Chapter to fill in including text in the ballot if necessary.		
	Negative Text	*Original complete Negative text (e.g., issue, justification, suggestion) should be copied. Line Item 1-2: Adding the definition of Carrier Exchange Window only for purpose of referencing E171 only adds confusion to the E87 readers.		
TF input (optional)				
Withdrawal (check one)	<input checked="" type="checkbox"/>	No Negative withdrawal made by Voter.	GO TO "Related" subsection	
	<input type="checkbox"/>	Withdrawal document received by Standards staff on MM/DD/YYYY.	GO TO "Final" subsection → (A)	
ed Relat	Motion and Reason (check one)	<input checked="" type="checkbox"/>	'Related' is mutually agreed upon. (Needs no Motion.)	GO TO "Persuasive" subsection
		<input type="checkbox"/>	Negative is not related. (Needs ≥2/3 votes to pass.)	

		Reason	XXXX			
	Motion by/2nd by	Name (Company)/Name (Company)				
	Discussion					
	Result of Vote (check one)	XX-XX; Motion passed/failed.				
		[Negative is not related.] <2/3	GO TO "Persuasive" subsection			
		2/3 ≤ [Negative is not related.]	GO TO "Final" subsection → (B)			
Persuasive	Motion and Reason (check one)	<input checked="" type="checkbox"/>	Negative is related and persuasive. (Needs >1/3 votes to pass.)			
		<input type="checkbox"/>	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)			
		Reason	'Carrier Exchange Window (CEW)' should not be defined in the 'Terminology' section as it is not used in the official part of E87 but is only used in 'NOTE:' and 'Related Information'.			
	Motion by/2nd by	Yuko Toyoshima (Hitachi High-Technologies)/ Masaya Nagata (TEL)				
	Discussion	None.				
		Result of Vote (check one)	14-0; Motion passed.			
	<input checked="" type="checkbox"/>		[Negative is related and persuasive.] >1/3	Is a Technical Change Recommended	Y	GO TO "Address by Technical Change Option" subsection
	<input type="checkbox"/>		[Negative is related and not persuasive.] <2/3	?	<input checked="" type="radio"/>	GO TO "Final" subsection → (E)
	<input type="checkbox"/>		2/3 ≤ [Negative is related and not persuasive.] <90%	GO TO "Final" subsection → (C)		
	<input type="checkbox"/>	90% ≤ [Negative is related and not persuasive.]	GO TO "Not Significant Finding Option" subsection			
Address by Technical Change Option	Technical Change Recommended by the TF					
	Note: Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.					
	1	FROM: Section/Paragraph XXX				
		TO: Section/Paragraph xxx				
		Justification (if necessary)				
2	FROM: Section/Paragraph XXX					
	TO: Section/Paragraph xxx					
	Justification (if necessary)					
Motion	Negative is addressed by the Technical Change.					

	Motion by/2nd by	Name (Company)/Name (Company)	
	Discussion		
	Result of Vote one (check one)	XX-XX; Motion passed/failed.	
		<input type="checkbox"/> 2/3 ≤ [Negative is addressed by the Technical Change.]	GO TO "Incorporation of the Technical Change" subsection
		<input type="checkbox"/> [Negative is not addressed by the Technical Change.] < 2/3	GO TO "Final" subsection → (E)
	Incorporation of the Technical Change	Motion	To incorporate the Technical Change.
		Motion by/2nd by	Name (Company)/Name (Company)
		Discussion	
		Result of Vote (check one)	XX-XX; Motion passed/failed.
<input type="checkbox"/> 90% ≤ [Agree to incorporate.]	GO TO "Final" subsection → (F)		
	<input type="checkbox"/> [Disagree to incorporate.] > 10%	GO TO "Final" subsection → (E)	
Not Significant Finding Option	This option can only be used "if the TC Chapter finds a Negative not persuasive by a vote equal to or greater than 90% of the persons voting on the action". (Regulations ¶ 9.6.4.4.2)		
	Use of "Not significant finding option" (check one)	<input type="checkbox"/> It is mutually agreed upon to term the Negative "not significant".	GO TO "Final" subsection → (D)
		<input type="checkbox"/> It is mutually agreed upon to term the Negative "significant".	GO TO "Final" subsection → (C)
		<input type="checkbox"/> Whether or not the Negative is "not significant" is decided by a vote.	
	Motion	The Negative is "not significant".	
	Motion by/2nd by	Name (Company)/Name (Company)	
	Vote	<input type="checkbox"/> XX-XX; Motion passed with simple majority	GO TO "Final" subsection → (D)
<input type="checkbox"/> XX-XX; Motion failed with simple majority		GO TO "Final" subsection → (C)	
Final	(check if applicable)	<input type="checkbox"/> (A) withdrawn (counted under h in disposition)	
		<input type="checkbox"/> (B) not related (counted under i in disposition)	
		<input type="checkbox"/> (C) related and not persuasive (significant)	
		<input type="checkbox"/> (D) not significant (counted under j in disposition)	
		<input checked="" type="checkbox"/> (E) related and persuasive and not addressed by Technical Change	DOCUMENT FAILS
	<input type="checkbox"/> (F) addressed by Technical Change (counted under k disposition)		
(check if applicable)	<input type="checkbox"/> Comment generated. See Section V-(ii) Comment # X.		

Line Item 2 Adjudication

II. Tally (Standards staff to fill in)

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

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 ¶ 9.7.1.1*)

Voting Tally (with example values):

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	71	÷	109	=	65.1%	>=60%
Intercommittee Ballot	28					
Voting Interest Reject(s)	1		Total Voters with Rejects			1
Voting Interest Accept(s)	45					

III. Rejects

Voting Interest Reject 1 (Voting Interest Name: **Tokyo Electron Ltd.**)

Voting Interest Reject 1- Voter Reject 1 (Voter: **Tadashi Mochizuki, Tokyo Electron Ltd.**)

Negative 1 of Voting Interest Reject 1- Voter Reject 1

Negative	Referenced Section/ Paragraph	*TF/TC Chapter to fill in including text in the ballot if necessary.
	Negative Text	<p>*Original complete Negative text (e.g., issue, justification, suggestion) should be copied.</p> <p>Just like the Negative 1 of Line-Item 1, this addition does not supplement the specifications, contents and functions defined in SEMI E87 (CMS).</p> <p><For reference> Negative 1 of Line Item1:</p> <ul style="list-style-type: none"> This addition does not revise the specifications, contents and functions defined in SEMI E87 (CMS). Currently, SEMI E87 is referenced by many device makers and equipment suppliers. This addition may cause misunderstandings that require E171 compliance, and readers of E87 will be confused.

TF input (optional)					
Withdrawal (check one)	<input checked="" type="checkbox"/>	No Negative withdrawal made by Voter.		GO TO "Related" subsection	
	<input type="checkbox"/>	Withdrawal document received by Standards staff on MM/DD/YYYY.		GO TO "Final" subsection → (A)	
Related	Motion and Reason (check one)	<input checked="" type="checkbox"/>	'Related' is mutually agreed upon. (Needs no Motion.)		GO TO "Persuasive" subsection
		<input type="checkbox"/>	Negative is not related. (Needs ≥2/3 votes to pass.)		
		Reason	XXXX		
	Motion by/2nd by	Name (Company)/Name (Company)			
	Discussion				
	Result of Vote (check one)	<input type="checkbox"/>	XX-XX; Motion passed/failed.		
<input type="checkbox"/>		[Negative is not related.] <2/3		GO TO "Persuasive" subsection	
	<input type="checkbox"/>	2/3 ≤ [Negative is not related.]		GO TO "Final" subsection → (B)	
Persuasive	Motion and Reason (check one)	<input type="checkbox"/>	Negative is related and persuasive. (Needs >1/3 votes to pass.)		
		<input checked="" type="checkbox"/>	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)		
		Reason	<ul style="list-style-type: none"> Per Reg. 4.2.8 and 4.2.9, Related Information is a supplemental document which shall not revise the specifications, contents and functions defined in the official part of the document. This line item complies with them as it clearly supplements the section 18.3 Carrier Approaching Complete Event which is discussing the use of predictive information, but does not revise the official portion of E87. 		
	Motion by/2nd by	Yuko Toyoshima (Hitachi High-Technologies)/ Naoko Murata (TEL)			
	Discussion	None.			
	Result of Vote (check one)	<input type="checkbox"/>	[Negative is related and persuasive.] >1/3	Is a Technical Change Recommended	Y
<input type="checkbox"/>		[Negative is related and not persuasive.] <2/3	?	N	GO TO "Final" subsection → (E)
<input type="checkbox"/>		2/3 ≤ [Negative is related and not persuasive.] <90%	GO TO "Final" subsection → (C)		
<input checked="" type="checkbox"/>		90% ≤ [Negative is related and not persuasive.]	GO TO "Not Significant Finding Option" subsection		
Technical Change Recommended by the TF					
	Note: Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.				
FROM:	Section/Paragraph	XXX			

		TO: Section/Paragraph xxx		
		Justification (If necessary)		
	2	FROM: Section/Paragraph XXX		
		TO: Section/Paragraph xxx		
		Justification (If necessary)		
Motion		Negative is addressed by the Technical Change.		
Motion by/2nd by		Name (Company)/Name (Company)		
Discussion				
Result of Vote (check one)		XX-XX; Motion passed/failed.		
		<input type="checkbox"/>	2/3 ≤ [Negative is addressed by the Technical Change.]	GO TO "Incorporation of the Technical Change" subsection
		<input type="checkbox"/>	[Negative is not addressed by the Technical Change.] < 2/3	GO TO "Final" subsection → (E)
Incorporation of the Technical Change	Motion		To incorporate the Technical Change.	
	Motion by/2nd by		Name (Company)/Name (Company)	
	Discussion			
	Result of Vote (check one)		XX-XX; Motion passed/failed.	
<input type="checkbox"/>			90% ≤ [Agree to incorporate.]	GO TO "Final" subsection → (F)
		<input type="checkbox"/>	[Disagree to incorporate.] > 10%	GO TO "Final" subsection → (E)
Not Significant Finding Option	This option can only be used "if the TC Chapter finds a Negative not persuasive by a vote equal to or greater than 90% of the persons voting on the action". (Regulations ¶ 9.6.4.4.2)			
	Use of "Not significant finding option" (check one)	<input checked="" type="checkbox"/>	It is mutually agreed upon to term the Negative "not significant".	GO TO "Final" subsection → (D)
		<input type="checkbox"/>	It is mutually agreed upon to term the Negative "significant".	GO TO "Final" subsection → (C)
			Whether or not the Negative is "not significant" is decided by a vote.	
	Motion		The Negative is "not significant".	
	Motion by/2nd by		Name (Company)/Name (Company)	
Vote	<input type="checkbox"/>	XX-XX; Motion passed with simple majority	GO TO "Final" subsection → (D)	
	<input type="checkbox"/>	XX-XX; Motion failed with simple majority	GO TO "Final" subsection → (C)	
Final (check if applicable)	<input type="checkbox"/>	(A)	withdrawn (counted under h in disposition)	
	<input type="checkbox"/>	(B)	not related (counted under i in disposition)	
	<input type="checkbox"/>	(C)	related and not persuasive (significant)	

	X	(D)	not significant (counted under j in disposition)
		(E)	related and persuasive and not addressed by Technical Change
		(F)	addressed by Technical Change (counted under k disposition)
(check if applicable)		Comment generated. See Section V-(ii) Comment # X.	

Disposition of Voting Interest Reject 1

1	Original number of Negatives	(g)	
0	# of Negatives withdrawn	(h)	
0	# of Negatives found not related	(i)	
1	# of Negatives found not significant	(j)	
0	# of Negatives addressed by Technical Change (Negative becomes not significant)	(k)	
Final	X	$g - (h + i + j + k) = 0$	Reject is Not Valid and is not included in the denominator of § VII. <i>Approval Conditions Check</i>
		$g - (h + i + j + k) > 0$	Reject is included in the denominator of § VII. <i>Approval Conditions Check</i>
		Reject without a Negative	Not Valid

Note: If all of the Negatives included with a Reject Vote are withdrawn, determined to be not related, or determined to be not significant, the Reject Vote is not valid. (*Regulations ¶ 9.4.3.3*)

Note: A Negative addressed by a technical change is automatically considered to be not significant. (*Regulations ¶ 9.6.4.4.2*)

IV. Other Technical Issues

None

V. Comments

V- (i) Voters' Comments

Commenter 1 (Albert Fuchigami/ The PEER Group Inc.) - Comment 1

Comment	*TF/TC Chapter to fill in, if necessary.	
	Are the events listed in Line Item #1-4 captured in Section R2-4 Equipment Originated Carrier Logistics Scheduling Events? The ones in the Related Information seem simpler and if they cover all the ones listed in LI #1-4, that's fine.	
Action	The TC Chapter agreed to do one of the following actions.	
	*No motion is required in this step.	
		Already addressed by Commenter #, Comment #

	<input checked="" type="checkbox"/>	No further action was taken by the TC Chapter.
	<input type="checkbox"/>	Refer to the TF for more consideration.
	<input type="checkbox"/>	New Business
	<input type="checkbox"/>	Editorial Change
	Options for Editorial Change (check one)	Case 1: No vote in this section : To be included and voted on in § VI. Summary of Editorial Changes.
		Case 2: Voted in this section : Original section number and at least one full sentence are required in "FROM" and "TO" fields.
	1	FROM: Section/Paragraph xxx
		TO: Section/Paragraph xxx
Justification (If necessary)		
2	FROM: Section/Paragraph xxx	
	TO: Section/Paragraph xxx	
	Justification (If necessary)	
Motion		To approve above editorial change(s)
Motion by/2nd by		Name (Company)/Name (Company)
Discussion		XXXX
Vote		XX-XX; Motion passed/failed.

Commenter 1 (Albert Fuchigami/ The PEER Group Inc.) - Comment 2

Comment	*TF/TC Chapter to fill in, if necessary.	
	Is a Related Information the correct mechanism? I thought it was to describe things to help people understand how implement the standard. The proposed Related Information describes how E171 relates to E87, high-level description and events, but doesn't describe anything to an SEMI E87 implementer. Would this be better as an Appendix or Auxiliary information?	
	● TF Response	➤ See Regulations 4.2.8
1	The TC Chapter agreed to do one of the following actions.	

		*No motion is required in this step.	
		<input type="checkbox"/>	Already addressed by Commenter #, Comment #
		<input checked="" type="checkbox"/>	No further action was taken by the TC Chapter.
		<input type="checkbox"/>	Refer to the TF for more consideration.
		<input type="checkbox"/>	New Business
		<input type="checkbox"/>	Editorial Change
		<input type="checkbox"/>	Case 1: No vote in this section :
			To be included and voted on in <u>§ VI. Summary of Editorial Changes.</u>
		<input type="checkbox"/>	Case 2: Voted in this section :
			Original section number and at least one full sentence are required in "FROM" and "TO" fields.
Editorial Change	1	FROM: Section/Paragraph xxx	
		TO: Section/Paragraph xxx	
		Justification (If necessary)	
	2	FROM: Section/Paragraph xxx	
		TO: Section/Paragraph xxx	
		Justification (If necessary)	
Motion		To approve above editorial change(s)	
Motion by/2nd by		Name (Company)/Name (Company)	
Discussion		XXXX	
Vote		XX-XX; Motion passed/failed.	

**V-(ii) Comments Created by handling Negative
None**

**VI. Editorial Changes other than those dealt with in Section 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 ¶ 9.7.1.2*)

APPROVAL CONDITION 2: At least 90% of the sum of valid Voting Interest Accept and Voting Interest Reject Votes must be Accept. (*Regulations ¶ 9.7.1.3*)

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

		Accepts		(Accepts + Valid Rejects)			
Approval Rate	=	45	/	45	=	100.0%	>=90%

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

See § 9.7.2 of the *Regulations* for further information

- Line Item 2 meets the Letter Ballot Approval Conditions for the global technical committee
- Line Item 2 meets the Letter Ballot Approval Conditions for the TC Chapter and a Ratification Ballot will be issued to verify Technical Changes

Checks for Entire Document Including All Approved Line Items

VIII. Safety Check

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. (<i>Regulations ¶ 8.7.1</i>)
		This is a Safety Document , when all safety-related information is removed, the Document is not technically sound and complete. (<i>Regulations ¶ 8.7.2</i>)
		Safety Checklist (<i>Regulations ¶ 15.3</i>) is complete and has been included with the Document throughout the balloting process. (<i>Regulations ¶¶ 15.1.2</i>)
Motion by/2nd by		Yuko Toyoshima (Hitachi High-Technologies)/ Naoko Murata (TEL)
Discussion		None.
Vote		14-0; Motion passed

IX. Intellectual Property (IP) Check

Note: This IP check applies to the entire Standard or Safety Guideline including all the approved Line Items. See § 16 of the Regulations for further information.

X	The TC Chapter meeting chair asked those participating, if they were aware of any potentially material patented technology or copyrighted items* in the Standard or Guideline. (<i>Regulations ¶ 8.8.1</i>)	
	X	No potentially material patented technology or reproduction of copyrighted items are known. GO TO SECTION X
		Potentially material patented technology or reproduction of copyrighted items are known, but a Letter of Assurance (LOA) or copyright release letter for such items has been obtained or presented to the TC Chapter. GO TO SECTION X
		Potentially material patented technology or reproduction of copyrighted items are known and use of such materials is technically justified by the TC Chapter, but an LOA or copyright release letter for some of the item(s) has NOT been obtained or presented to the TC Chapter.
MOTION		Ask ISC for special permission to publish.
		Quit activity.
		Wait for LOA for patented technology or release of copyrighted items.
Motion by/2nd by		Name (Company)/Name (Company)
Discussion		XXXX
Vote		XX-XX
Final Action		

* Note: Such potentially material patented technology or copyrighted items might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this Letter Ballot.

X. Action for this document

Motion (Check all applicable items)	<input checked="" type="checkbox"/>	Line item(s) [2] passed TC Chapter review as balloted and will be forwarded to the A&R for procedural review.
	<input type="checkbox"/>	Line item(s) [X], [X] and [X] passed TC Chapter review with editorial changes and will be forwarded to the A&R for procedural review.
	<input type="checkbox"/>	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 A&R SC for procedural review. A Ratification Ballot will be issued to verify the Technical Changes.
	<input checked="" type="checkbox"/>	Line item(s) [1] failed TC Chapter review and will be returned to the task force for rework.
	<input type="checkbox"/>	Line item(s) [X], [X] and [X] failed TC Chapter review and work will be discontinued.
Motion by/ 2nd by	Yuko Toyoshima (Hitachi High-Technologies)/ Naoko Murata (TEL)	
Discussion	None	
Vote	13-0	
Final Action	<input checked="" type="checkbox"/>	Motion passed
	<input type="checkbox"/>	Motion failed

Standards staff to record the result of the A&R procedural review here:

A&R	<input type="checkbox"/>	Line item(s) [X], [X] and [X] are approved for publication
	<input type="checkbox"/>	Line item(s) [X], [X] and [X] are approved pending for acceptance of the Ratification Ballot
	<input type="checkbox"/>	Line item(s) [X], [X] and [X] are Not approved
	Reason:	