

# Preliminary Agenda 22 January 2008

PRELIMINARY MEETING AGENDA –  
CE-2.1 SUBCOMMITTEE ON TEST PROCEDURES  
31 March 2008 - 1 April 2008 (April Fools Day) in LOUISVILLE, KY

1. Approval of the 24 – 25 September 2007 minutes

2. TEST PROCEDURE PROJECTS (BY PROJECT NUMBER)

**"If any SP listed below receives insufficient votes for approval, the committee may approve the document for EDEC ballot at this meeting. It is the responsibility of the member to submit comments in writing prior to the meeting".**

A. SP-4942-B, EIA-364-60A, General Methods for Porosity Testing (John Healey)

Resent standard on 25 June 2007 for EDEC ballot to replace the file that Cecelia said was corrupted.

B. PN-4943, TP-65, MFG (Max Peel)  
Work on going.

C. SP-5083, TP- 5, 7, 8, 24, 25, 27, 37, 40, 44, 79, 85, 87, 88, 93, 94, 97, 98 (J. Toran)\*\*

Carl reported that he sent a letter to Max Peel (mpeel26) on behalf of Jeff Toran on 15 August 2006 acknowledging his comments, and sent a letter to EIA for EDEC ballot (mccwil267) on 15 August 2006 to reaffirm all listed standards, except TP-7, 25 and 87.  
The standards still have not been reaffirmed.

Carl Fritz reported that he notified EIA that there was no need to reaffirm TP-07 since it has been revised and published 19 July 2007.

D. SP-5089-A-1, TP-55A, Current Cycling (Max Peel)\*\*

Sent standard and cover memo (mccwil322) to EIA for a Short 30-day SP ballot on 5 October 2007. Sent letter acknowledging the favorable comments to Bob Druckenmiller (mdruckenmiller13).

Ballot issued 26 October with a ballot expiration date of 26 November 2007.

Ballot count received from Cecelia Yates on 14 January 2008 is: 5 favorable and 1 favorable with comment from Bob Druckenmiller.

Sent letter to Bob Druckenmiller (mdruckenmiller15) on behalf of Max Peel on 14 January 2008 acknowledging acceptance of his editorial comments. Sent standard and cover memo (mccwil335) to EIA for EDEC ballot 15 January 2008.

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E. SP-5107, EIA-364-1002, Test Methodology for Assessing the Performance of Compliant Contact Terminations Used as Free Standing Contacts or in Electrical Connectors and Sockets (Max Peel)

Sent the standard and cover memo (mccwil324) to EIA for EDEC ballot on 15 October 2007 on behalf of Max Peel.

F. SP-5108, TP- ~~2, 3, 9, 13, 14, 26, 28, 35, 38, 42, 50, 54, 95, 99, 100, 102 and 103~~ (C. Fritz)\*\*

Sent letter (mccwil231) to EIA for EDEC ballot to reaffirm all listed standards on 13 January 2006.

TP-13 published as **revised** (see SP-5157) 2 July 2007. No need to reaffirm. Received US Mail 23 July 2007.

The open standards remain to be reaffirmed.

G. SP-5126, TP-86, Polarizing/coding key overstress (Carl Fritz)

Carl Fritz reported that he sent letter (mccwil306) to EIA for EDEC ballot to reaffirm on 31 May 2007.

H. SP-5127, TP-92, Wire bending for insulation displacement contacts (Carl Fritz)

Carl Fritz reported that he sent letter (mccwil306) to EIA for EDEC ballot to reaffirm on 31 May 2007.

I. SP-5142, Standards due for 5-year review: TP-~~01, 21, 22, 39, 43, 45, 53~~, 66, 83, 90, 101, 106, 107 and 108 (Carl Fritz)

Sent letter (mccwil277) to EIA for EDEC ballot to reaffirm all listed standards on 29 October 2006.

The open standards remain to be reaffirmed.

J. SP-5143-1, EIA-364-1000, Environmental Test Methodology for Assessing the Performance of Electrical Connectors and Sockets Used in Controlled Environment Applications (John Healey)

Carl Fritz sent revised standard and new cover memo (mccwil326) to EIA for a short 30-day SP ballot on 15 October 2007.

Ballot issued 1 November 2007 with a ballot expiration date of 3 December 2007.

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K. SP-5148, TP-71B, Solder Wicking (Wave Solder Technique) (Bob Druckenmiller)

Carl Fritz reported that he sent the standard and cover memo (mccwil313) to EIA for EDEC ballot on 7 June 2007 on behalf of Bob Druckenmiller. Sent letter acknowledging the favorable editorial comments to Max Peel (mpeel28).

L. PN-5150, EIA-364-31B, Humidity Test Procedure for Electrical Connectors and Sockets (Max Peel)

Max Peel is reviewing the comments he received on the letter ballot.

M. SP-5158, TP-56D, Resistance to Soldering Heat Test Procedure for Electrical Connectors and Sockets (Carl Fritz)

Carl Fritz reported that he sent the standard and cover memo (mccwil308) to EIA for EDEC ballot on 4 June 2007. Sent letter acknowledging the favorable editorial comment to Max Peel (mpeel27).

N. SP-5160, TP-20D, Withstanding Voltage Test Procedure for Electrical Connectors, Sockets, and Coaxial Contacts (Max Peel)

Carl Fritz reported that he sent the standard and cover memo (mccwil309) to EIA for EDEC ballot on 4 June 2007. Sent letter acknowledging the favorable editorial comments to Bill Peverill (mpeverill).

O. SP-5161, TP-21D, Insulation Resistance Test Procedure for Electrical Connectors, Sockets, and Coaxial Contacts (Max Peel)

Carl Fritz reported that he sent the standard and cover memo (mccwil310) to EIA for EDEC ballot on 4 June 2007. Sent letter acknowledging the favorable editorial comments to Bill Peverill (mpeverill).

P. SP-5163, TP-105A, Altitude - Low Temperature Test Procedure for Electrical Connectors (Max Peel)

Requested ballot count update 18 October 2007. Final ballot count now 7 approvals and no comments or rejections per EIA on 18 October 2007.

Sent standard and cover memo (mccwil330) to EIA for EDEC ballot on 18 October 2007 on behalf of Max Peel.

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Q. PN-5164, TP-111, Ionic contamination (John Healey)

Sent standard, background data sheet, and cover memo (mccwil323) to EIA for a Letter ballot on 5 October 2007 on behalf of John Healey.

Ballot issued 26 October 2007 with a ballot expiration date of 26 November 2007.

R. SP-5166, TP-10E, Fluid Immersion Test Procedure for Electrical Connectors and Sockets (Ralph Antonelli)

Sent standard, background data sheet, and cover memo (mccwil327) to EIA for a SP ballot on 17 October 2007 on behalf of Ralph Antonelli.

Ballot issued 7 November 2007 with a ballot expiration date of 7 January 2008.

Ballot count received from Cecelia Yates on 14 January 2008 is: 7 favorable.

Sent standard and cover memo (mccwil336) to EIA for EDEC ballot on 15 January 2008.

S. SP-5167, Standards Due for 5-Year Review, EIA-364 (separate project), TP-19, 47, 68, and 104 (Carl Fritz)

Verification with EIA on 18 October 2007 confirmed that the final ballot count, after the 6 October 2007 ballot expiration date, had not changed and there were no comments or rejections.

Sent cover memo (mccwil331) to EIA for EDEC ballot for reaffirmation on 19 October 2007.

T. SP-5168, TP-32E, Thermal Shock (Temperature Cycling) Test Procedures for Electrical Connectors and Sockets (Carl Fritz)

Carl Fritz sent standard and cover memo (mccwil328) to EIA for EDEC ballot on 16 October 2007.

U. SP-5169, TP-38C, Cable Pull-Out Test Procedures for Electrical Connectors (Carl Fritz)

Comment from Max on his approved ballot. Purely editorial. Par 6.7 seems to have been stretch out. Should be corrected.

Carl Fritz sent standard, cover memo (mccwil329) and memo to Max Peel (mpeel29) on his approved ballot with editorial comment to EIA for EDEC ballot on 16 October 2007.

V. SP-5170, TP-41D, Cable Flexing Test Procedure for Electrical Connectors (Carl Fritz)

Carl Fritz sent standard and cover memo (mccwil333) to EIA for EDEC ballot on 26 October 2007.

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W. SP-5171-1, EIA-364E, Electrical Connector / Socket Test Procedures Including Environmental Classifications (Max Peel)

Updated standard and requested final ballot count from EIA on 17 October 2007.

Verification with EIA on 17 October 2007 confirmed that the final ballot count, after the 1 October 2007 ballot expiration date, had not changed from what was reported in the September 2007 EIA CE-2.1 meeting minutes.

Verification with EIA on 17 October 2007 indicated that the final ballot count, after the 1 October 2007 ballot expiration date had not changed from what was reported in the September 2007 EIA CE-2.1 meeting minutes.

Sent revised standard and cover memo (mccwil332) to EIA for a short 30-day SP ballot on 25 October 2007, as well as memos to John Healey (mhealey18) and Bob Druckenmiller (mdruckenmiller14) acknowledging their approved ballots with comments..

Ballot issued 7 November 2007 with a ballot expiration date of 7 December 2007.

Ballot count received from Cecelia Yates on 14 January 2008 is: 7 favorable.

Sent standard and cover memo (mccwil336) to EIA for EDEC ballot on 15 January 2008.

X. SP-5174 (previous designation PN-3787), EIA-364-1004, Environmental Test Methodology for Verifying the Current Rating of Free-Standing Power Contacts or Electrical Connectors and Sockets (Max Peel)

Sent standard and cover memo (mccwil334) and new PINS form to EIA for a SP ballot on 27 November 2007. NOTE: EIA requested that a new project number (PN-5174) be issued since they have no record of the old project number (PN-3787).

Ballot issued 28 November 2007 with a ballot expiration date of 28 January 2008.

\*\* Past due for 5-year review

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## 3. TEST PROCEDURES AWAITING PROJECT NUMBERS (BY TP NUMBER)

### 4. OTHER BUSINESS

#### A. TP-87A, Nanosecond Event Detection (Max Peel)

Work is on going.

#### B. TP-52, Solderability (Max Peel)

Awaiting release of J-STD-002C.

Carl Fritz reported that Max Peel recommends superseding TP-52 by the J standard when released.

### 6. NEW BUSINESS

#### A. TP-41E, Cable Flexing (Max Peel)

Sent marked up copy to Max to review on 31 October 2007.

#### B. New TP-XXX, Effective Resistance of Parallel Circuits Test Procedure for Electrical Connectors and Sockets (Frank Ruffino)

Frank Ruffino requested that a new project be initiated on determining the effective resistance of parallel circuits in a connector. This request is being initiated on behalf of the JEDEC JC-11 committee. Frank Ruffino has agreed to serve as project leader. It was moved by Bob Druckenmiller and seconded by Kevin Rickard to obtain a project number and send to EIA for SP ballot. The motion was unanimously approved.

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## C. TP-14, Ozone Test Procedure for Electrical Connectors and Sockets

Kevin Rickard indicated that he has determined that there is a conflict between the exposure concentration expressed in TP-14 and the ASTM procedure. The concentration in TP-14 is expressed in ppm (parts per million) and in the ASTM procedure as pphm (parts per hundred million). Members are requested to check within their respective organization to see if they can determine the justification for the differences. It was moved by Kevin Rickard and seconded by Frank Ruffino that a project be initiated if it is determined that action is justified. The motion was unanimously approved.

- Sent the following e-mail to Kevin Rickard on 17 October 2007:

Kevin, Just had a few minutes and did some investigation into the ozone concentration in the subject standard that you brought up under new business at the September EIA meeting. I went back to EIA-364-14A dated 1983, and MIL-STD-1344, method 1007.1 dated 1 September 1977. The current EIA-364-14B is a result of the harmonization activity that took place the later part of the 1990's. All references clearly state that the **ozone concentration unless otherwise specified shall be 100 ppm to 150 ppm by volume for 2 hours**. Everything is clearly parts per million NOT parts per hundred million. As of now it appears that the ASTM procedure may be in error.

It appears that both the EIA method and MIL-STD-1344 method have agreed for 30 years. Unfortunately I do not have access to ASTM documents to verify the information.

Regards Carl Fritz

- Sent the following e-mail to Al Davis 2 January 2008:

EIA Special Meeting #6  
364/1344 Comparison  
October 28-29, 1998  
Myrtle Beach, SC

10) EIA 364-14 / Mil Std 1344-1007.1 Ozone exposure

Clause 1.1. Recommendation to remove the word Aspecimen@ and exchange with the word Ashall@. Agreed

Clause 2.1.1.2. The 4 cubic feet should be changed to 5 cubic feet as the proper translation of cubic meters to cubic feet. Agreed.

Recommend removing AIf the ozone generating source is a silent arc discharge,@ from the beginning of the 4<sup>th</sup> sentence. Not agreed as this implies that all air must be pre-dried to B55 degrees C and this may not be necessary with the equipment available today.

Clause 4.1. A question was raised by committee members about the 100-150 ppm or whether it should be 100-150 pphm (parts per hundred million), as the chamber supplier said the chamber can supply ozone from 15-750 pphm. Agreed to not change the values in the test procedure, but first to test reports to see what values have been used and to identify other test procedures that may be available (ASTM-D-1149-64 which is referenced in the text) to see what levels are specified. If we can get a quick answer the test procedure will be modified and reballoted.

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## D. Lightning Strike

- Sent e-mail to Dave Bouzek 13 December 2007.

Your e-mail on Lightning strike could not have come at a more appropriate time. The other night I was watching the weather channel and they were doing a segment on disasters. Then they got into lightning strikes on aircraft. It tweaked my interest so I was riveted to the screen. Then they mentioned a company that does lightning strike testing and developed a product to harmlessly conduct a strike through the aircraft and out the tail. The name of the company was DTB Company. I looked them up on the web when I got home this morning. Their e-mail address is: <http://www.dtbtest.com>. Maybe it would be worthwhile contacting them and asking if they would be willing to participate in developing a test standard for us on connectors, contacts and sockets, etc. They appear to be quite capable on what I saw. Has anyone else heard of this company?

## E. TP-03, Altitude Immersion (Harmonized Meeting #5)

- Received the following e-mail from Vince Pascucci (Tyco Electronics) on 22 January 2008.

I am requesting a change to EIA364-03 - Altitude Immersion. Currently there is a sentence on page 2, section 4.1 under the title Mounting which is part of the Test Procedure section of the document that reads as follows:

**"The wires of the test specimen shall be bent at approximately 90° on 63.5 mm (2.5 in) bend radius, and brought out of the solution within 76.2 mm (3 inches) from each end of the connector assembly."**

I would like to request the removal of this sentence.

### Rationale:

Until recently, the majority of the altitude immersion testing was performed in accordance with MIL-STD-1344, method 1004 which does not specify a bend radius or distance in which the wires are to be brought out of the salt water. On October 22, 2004 MIL-STD-1344 was cancelled and superseded by the EIA364 document series. It was to my understanding that the EIA documents were to be revised to mirror MIL-STD-1344 test methods. This issue with the bend radius and exit distance apparently was left in EIA364-03. The problem this creates is since the bend radius and distance are specific dimensions, in order to comply with the EIA version, we essentially would need to build fixturing for every product type to be tested to the EIA version. The wire configurations and connector sizes can vary greatly between product lines thereby making it impossible to make a 1 size fits all type of fixture. Furthermore, the distance and bend radius are irrelevant as long as the wires are straight when they exit the connector before they are bent, so whether you bend them at 3 inches or 10 inches should not matter. Removing the statement would allow the flexibility to test with or without fixturing and thereby allow those who already have fixtures built for a specific product in order to comply with EIA364-03 may continue to test in this manner.

Another option as opposed to totally removing the sentence for those in the industry that are concerned about not specifying anything would be to re-word the sentence. The most detailed the mounting instructions would need to be regarding the wire would be to re-word the statement similar to the following: "The wires of the test specimens shall be gradually bent and brought out of the solution and unless otherwise specified, the wires shall be as straight as possible out of each end of the connector."

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Respectfully submitted,

Carl Fritz, Chairman CE-2.1