

Taiwan FPD-Metrology Committee Meeting Summary and Minutes

28 June, 2013, 14:00-16:30
ITRI R223, HsinChu, Taiwan

Next Committee Meeting

20 September, 2013

FPD-Metrology Committee, ITRI, HsinChu, Taiwan

Committee Announcements (optional)

Table 1 Meeting Attendees (11 Attendees)

Chair: TY Lin (ITRI)

SEMI Staff: Cher Wu

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
ITRI	Lin	Tzeng-Yow	ITRI	Wang	Wen-Tung
ITRI	Wen	Bor-Jiunn	AUO	Chen	Chien-Wen
ITRI	Pong	Bao-Jen	AUO	Fang	Yen-Wen
ITRI	Su	Hallie	ITRI	Wu	Kuei-Neng
ITRI	Lai	Yueh-Yi	ITRI	Lee	Elisa
ITRI	Lan	Yu-Ping			

Table 2 Leadership Changes

None

Table 3 Ballot Results (or move to Section 4, Ballot Review)

Passed ballots and line items will be submitted to the ISC Audit & Review Subcommittee for procedural review.

Failed ballots and line items were returned to the originating task forces for re-work and re-balloting.

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
4765A	TEST METHOD OF FPD-BASED STEREOSCOPIC DISPLAY WITH PASSIVE GLASSES	Failed, Re-Ballot
5291B	Test Method of Ambient Color Gamut for FPD Under Indoor Environments, Failed	Failed, Re-Ballot

Table 4 Authorized Ballots (or move to Section 7, New Business)

<i>#</i>	<i>When</i>	<i>SC/TF/WG</i>	<i>Details</i>
5291C	Cycle 6, 2013	ACG TF	Test Method of Ambient Color Gamut for FPD Under Indoor Environments.
4764D	Cycle 5, 2013	3D Display Metrology	NEW STANDARD: TEST METHOD OF FPD-BASED STEREOSCOPIC DISPLAY WITH PASSIVE GLASSES.
4765B	Cycle 5, 2013	3D Display Metrology	NEW STANDARD: TEST METHOD OF FPD-BASED STEREOSCOPIC DISPLAY WITH ACTIVE GLASSES.

Table 5 Authorized Activities (or move to Section 7, New Business)

None

<i>#</i>	<i>Type</i>	<i>SC/TF/WG</i>	<i>Details</i>
None			

Note: SNARFs and TFOFs are available for review on the SEMI Web site at:
<http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF>

Table 6 New Action Items (or move to Section 8, Action Item Review)

1. Mura TF is waiting for Japan TF for D31. But Taiwan TF never received any draft documentation from Japan in the past time before D31 approved. Now Japan TF has published the D31-0213, so Taiwan Mura TF considers to disband. Mura TF leader, Lai Yueh-Yi was resigned from current company. Will double check with other leaders to explain more detailed information or plan in next TC meeting. SEMI Taiwan staff to collect the final draft of D31 from Japan staff.
2. #5550 & #5551 provided by which company, asked the possibility if can invite Taiwan TF join discussion. SEMI Taiwan staff to provide the company from SEMI Japan staff
3. Touch Screen TF provide 3 reject voters' contact information from leader, and then contact with Japan staff for further information before July 5.
4. SNARF voting cycle timing and deadline reminded by SEMI Staff to control the timing and process.

Table 7 Previous Meeting Actions Items (or move to Section 8, Action item Review)

1. SEMI Taiwan staff asks Japan staff to provide the #D31 contents and details.
2. SEMI Staff to check the timing for new standards, if need a revision or additional information on the new one, how long we can start working on it after new standards announcement.

1 Welcome, Reminders, and Introductions

Committee Chair Dr. TY Lin, (ITRI) called the meeting to order at 14:00. After welcoming all attendees, the SEMI meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

2 Review of Previous Meeting Minutes

The committee reviewed the minutes of the previous meeting.

- Motion:** Committee Chair Dr. TY Lin (ITIR) asked for all attendees to review and approve last committee meeting minutes.
- By / 2nd:** TY Lin(ITRI)/ Fang Yen-Wen(AUO)
- Discussion:**
1. Mura TF is waiting for Japan TF for D31. But Taiwan TF never received any draft documentation from Japan in the past time before D31 approved. Now Japan TF has published the D31-0213, so Taiwan Mura TF is considering to disband. Will double check with other leaders to explain more detailed information or plan in next TC meeting. SEMI Taiwan staff to collect the final draft of D31 from Japan staff.
 2. SEMI Staff to provide the standards review, 5 years and procedure
- Vote:** 6-0 in favor, Motion Passed.

Attachment : SEMI Taiwan FPD Committee Meeting Minutes 20130325

3 Liaison Reports

- Japan FPD Metrology Committee Liaison Report in June 2013
 - ◆ Last Meeting
 - ✓ April 12, 2013 during Japan Standards Spring 2013 Meetings at SEMI Japan, Tokyo, Japan
 - * It was a joint meeting of the Japan FPD Metrology Committee and the Japan Materials & Components Committee
 - ◆ Next Meeting
 - ✓ October, 2013, during Japan Standards Fall 2013 Meetings at SEMI Japan, Tokyo, Japan (TBD)
 - * The meeting date will be decided soon.
 - ◆ D31 Revision Task Force
 - ✓ Doc.#4913A, Revision to SEMI D31-1102, with title change from "Definition of Measurement Index (SEMU) for Luminance Mura in FPD Image Quality Inspection" to

“Definition of Measurement Index (DSEMU) for Luminance Mura in FPD Image Quality Inspection, passed ISC A&R SC review.

- ✓ Published as SEMI S13-0213.
- ✓ TF will be disbanded after translation into Japanese.

◆ For question, contact Naoko Tejima, SEMI Japan Staff at email: ntejima@semi.org

Attachment: Japan FPD Met Committee Liaison Report2013June

- Japan FPD Material's & Components Committee Liaison Report in June, 2013
 - ◆ Last Meeting
 - ✓ April 12, 2013 during Japan Standards Spring 2013 Meetings at SEMI Japan, Tokyo, Japan
 - * It was a joint meeting of the Japan FPD Metrology Committee and the Japan Materials & Components Committee
 - ◆ Next Meeting
 - ✓ July 5, 2013 during Japan Standards Summer 2013 Meetings at SEMI Japan, Tokyo, Japan

◆ NEW SNARFs

- ✓ *Doc. #5550, New Standard: Guide for Dimensional Measurement of Plastic Films (Flexible Display TF)*
- ✓ *Doc. #5551, New Standard: Measurement Method of Water Vapor Transmission Rate for Plastic Films and Sheets with High Barrier Properties for Electronic Devices (Flexible Display TF)*
- ✓ *Doc. #5552, Reapproval of SEMI D13-0708, Terminology for FPD Color Filter Assemblies (FPD Color Filter TF)*
- ✓ *Doc. #5553, Reapproval of SEMI D29-1101, Test Method for Heat Resistance in Flat Panel Display (FPD) Color Filters (FPD Color Filter TF)*
- ✓ *Doc. #5554, Reapproval of SEMI D30-0707, Test Method for Light Resistance in Flat Panel Display (FPD) Color Filters (FPD Color Filter TF)*
- ✓ *Doc. #5555, Revision to SEMI D50-0707, Test Method for Surface Hardness of FPD Polarizing Film (Polarizing Film TF)*

◆ Upcoming Ballot for Review,

Cycle 3, 2013 – to be reviewed on July 5

- ✓ *Doc. #5552, Re-approval of SEMI D13-0708, Terminology for FPD Color Filter Assemblies*
- ✓ *Doc. #5553, Re-approval of SEMI D29-1101, Test Method for Heat Resistance in Flat Panel Display (FPD) Color Filters*
- ✓ *Doc. #5554, Re-approval of SEMI D30-0707, Test Method for Light Resistance in Flat Panel Display (FPD) Color Filters*

◆ Polarizing Film Task Force

- ✓ *Doc. #5425, Revision to SEMI D46-0706: Terminology for FPD Polarizing Films, passed ISC A&R SC review.*
- ✓ Published as SEMI S13-0213.
- ✓ Working for *Doc. #5555, Revision to SEMI D50-0707, Test Method for Surface Hardness of FPD Polarizing Film.*

◆ Backlight Task Force

- ✓ The Task Force currently has no activity.

◆ Flexible Display Task Force

- ✓ Task Force starts to work on the document with regards to gas barrier.
- ✓ Working for 2 New Standards as below;
 - *Doc. #5550, New Standard: Guide for Dimensional Measurement of Plastic Films*
 - *Doc. #5551, New Standard: Measurement Method of Water Vapor Transmission Rate for Plastic Films and Sheets with High Barrier Properties for Electronic Devices*

◆ FPD Color Filter Task Force

- ✓ The following documents will be balloted for Cycle 3 and reviewed in July.
- ✓ *Doc. #5552, Reapproval of SEMI D13-0708, Terminology for FPD Color Filter Assemblies*
- ✓ *Doc. #5553, Reapproval of SEMI D29-1101, Test Method for Heat Resistance in Flat Panel Display (FPD) Color Filters*
- ✓ *Doc. #5554, Reapproval of SEMI D30-0707, Test Method for Light Resistance in Flat Panel Display (FPD) Color Filters*

◆ For question, contact Naoko Tejima, SEMI Japan Staff at email: ntejima@semi.org

Attachment: Japan FPD M+C Committee Liaison Report 2013 June

● Korea FPD Metrology Committee Liaison Report in June, 2013

◆ Previous Meeting

- ✓ April 25, 2013 at SEMI Korea office, Seoul

◆ Next Meeting

- ✓ July 25, 2013 at SEMI Korea office, Seoul

◆ Ballot Results

- ✓ #4571H, New Standard, Test method of PDP Tone and Color Reproduction, Fail and rework

◆ Upcoming Ballots

- ✓ Cycle 4, 2013
- ✓ 4571I, New Standard, Test method of PDP Tone and Color Reproduction

◆ Backlight Unit TF

- ✓ The task force is disbanded and all open SNARFs in below have been deactivated because the activities are out of date.
- ✓ 4313: Specification for Reliability Backlight Unit for LCD
- ✓ 4859: Revision to SEMI D33, Measuring Method of Optical Characteristics for Backlight Unit
- ✓ 5379: Revision to D36-0306, Terminology for LED Backlight Unit"

◆ Optical Characteristic Measurement TF

- ✓ Drafting Doc. 5336 (New standard, Test Method for Optical Characteristics of LCD panel). Target ballot schedule is 2H, 2013

◆ Tone and Color TF

- ✓ Reviewed 4571I (New Standard, Test Method of PDP Tone and Color Reproduction) is on balloting.

◆ Color Assessment

- ✓ The task force is newly approved under OLED Sub-committee
- ✓ Charter:

To develop the technical standards for measuring color characteristic of OLED displays

✓ Scope:

○ The Task Force will focus on developing test methods for color characteristics of:

- View Angle
- Color Gamut

◆ For question, contact Natalie Shim, Korea Staff at email : eshim@semi.org

Attachment: Korea FPD Met Committee Liaison Report 2013 June

4. SEMI Staff Report

Provide the schedule about critical dates about Ballot.

5. Old Business

◆ **e-Paper TF Report by Bor-Jiunn Wen (ITRI)** Will focus on reflectance measurements for Electronic Paper Displays: Terminology & Measuring methods, including Incident illumination and measurement geometry. Plan to submit the draft for Cycle 7 (2013.10) SEMI standard ballot

◆ **ACG TF Report by Yu-Ping Lan (ITRI)**

✓ Ballot Results: 2 rejects with 3 comments+2 abstains with 3 comments

1) The definition of an integrating sphere is needed. Measured value is dependent on the characteristics of an integrating sphere.

2) It is necessary to specify the LMD.

3) u^*v^* colour diagram should be used instead of $u'v'$. The colour diagram $u'v'$ cannot express the colour gamut including Y, M, C correctly. If you use $u'v'$, only R, G, B is sufficient and Y, M, C is not necessary. As a conclusion, you have two options;

Option A: Use u^*v^*

Option B: Use $u'v'$ and delete Y, M, C

Motion: Failed 5291B, because of reject voters' comment is not clear, we need to collect more information from reject voter, and will revise the ballot according to the comment from abstain, by Yu-Ping Lan (ITRI)

By / 2nd: Yu-Ping Lan(ITRI) /Chien-Wen Chen(AUO)

Discussion: None

Voted: 8 -0-0, Motion passed

Motion: Get the approval for 5291C for ballot @ Cycle 6, 2013 by Yu-Ping Lan (ITRI)

By / 2nd: Yu-Ping Lan (ITRI)/ Chien-Wen Chen(AUO)

Discussion: TC meeting might schedule in Nov. 19, 2013

Voted: 6 -0-0, Motion passed

◆ **Touch Screen Panel TF Report by Yen-Wen Fang (AUO)** Discussion on ballot #5293a results and revised document.

Motion: Voting for join ballot @ 2013 Cycle 5 by Yen-Wen Fang

By / 2nd: Yueh-Yi Lai(ITRI)

Discussion: TF leader requested to collect Japan reject voters contact information, SEMI Taiwan and Japan staff (Naoko) to support arrangement further communication with reject voters. Already sent #5293a to Japan for discussion and approval by July 5.

Voted: 6 -0-0, Motion passed

◆ **CBU TF Report by Yueh-Yi Lai(ITRI)**

Motion: Disband CBU TF by Yueh-Yi Lai (ITRI)

By / 2nd: Yen-Wen Fang (AUO)

Discussion: no more activities since 2011/10/04: D65-1011 due to business concerns.

Voted: 8 -0-0, Motion passed

◆ **MURA TF Report by**

Motion: Disband CBU TF by Yueh-Yi Lai(ITRI)

By / 2nd: Yen-Wen Fang (AUO)

Discussion: Mission completed. No more activities.

Voted: 8 -0-0, Motion passed

◆ **Flexible TF Report by Wen-Tong Wang (ITRI)** After 4 TF meeting in 2013, completed TF the survey result of interested standards items for future work. Top 6 interested items are as below chart:

Item	Survey Result, Prioritized by # from member' s interest	IEC	
Bending	1	62715-6	
Optical	2	62715-5	Optical in bending
			Visual inspection
撞擊	3		
掉落	4		
Rolling	5	62715-6	
Environmental	6	62715-6	

Discussion: Member double checked the #62715-6 status. How about the connection with China group? Taiwan group might focus on Taiwan interests and consider China market

◆ **3D Display Metrology TF Report by Bao-Jen Pong(ITRI)**, achieved 60% voting, but was not adjudicated

✓ **4764D Revision details**

- Add some texts in paragraph 6.3.6

Make sure that the synchronization between the display and active glasses works well. (For example, the display should switch about 120 Hz between left and right images and **the synchronization requirement follow manufacturers rules**).

- Modify the text in 9.1

Warm up the measuring equipment for a specified period of time **and** stabilize the display luminance

✓ **4765B Revision details**

- Modify the text in 5.4.3 It is recommended to set the distance between passive glasses and LMD as close as possible.

- Modify the text in 7.1

Send the interlaced pattern to the stereoscopic display. These patterns are full screen signals and the input signal levels are 100 % for White, Red, Green and Blue, while the input signal level is 0% for Black, on left and right channels (see Table 1).

- Modify the text in 8.1

Warm up the measuring equipment for a specified period of time **and** stabilize the display luminance.

Review the 4765A Ballot with comment and votes on negative comment. (Could refer the attached document.)

Motion: Get the approval for 4764D/4765B and balloting Cycle 5, 2013

By / 2nd: Chien-Wen Chen(AUO)/Yen-Wen Fang(AUO)

Discussion: Suggest SEMI to revise/modify the balloting cycle to extend the timing for TC committee meeting approve

Vote: 7-0-0, Pass

6. New Business

None

7. Action Item Review

1. Collect #D31 draft final version for Taiwan members reference.
2. Provide the SNARF#5551, #5550 scope information for reference
3. Touch Screen TF provide 3 reject voters' contact information from leader, and then contact with Japan staff for further information before July 5.
4. SNARF voting cycle timing and deadline reminded by SEMI Staff to control the timing and process.

8. Next Meeting and Adjournment

20 September, 2013

Respectfully submitted by:
Cher Wu
SEMI Taiwan
Phone: + 886 3 560 1777 +802
Email: cwu@semi.org

Minutes approved by:

T. Y. Lin, Chair	<Date approved> July 17, 2013
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Table 8 Index of Available Attachments #1

#	Title	#	Title
0	<u>SEMI Taiwan FPD Committee Meeting Minutes 20130325</u>	8	<u>5293A Ballot Review</u>
1	<u>Japan FPD Met Committee Liaison Report 2013 June</u>	9	<u>CBU TF Report</u>
2	<u>Japan FPD M+C Committee Liaison Report 2013 June</u>	10	<u>Flexible TF Report</u>
3	<u>Korea FPD Met Committee Liaison Report 2013 June</u>	11	<u>3D Display Metrology TF</u>
4	<u>e-Paper TF</u>	12	<u>4765A Procedure Voting Review Sheet Documentation</u>
5	<u>ACG TF Report</u>	13	<u>SEMI Taiwan FPD Committee Meeting Minutes 20130628</u>
6	<u>Touch Screen Panel TF</u>	14	<u>3D Display TF 4765B (final Version) 20130624</u>
7	<u>5291B Ballot Review (Provided by Dr. Yu-Ping Lan)</u>		

#1 Due to file size and delivery issues, attachments must be downloaded separately. A .zip file containing all attachments for these minutes is available at www.semi.org. For additional information or to obtain individual attachments, please contact [SEMI Staff Name] at the contact information above.