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|  | **STANDARDS NEW ACTIVITY REPORT FORM (SNARF)** |

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| *Date Prepared: 2015/07/21* |  | *Revised (if Applicable):* |

**SNARF for:** **New Standard: Methods of Flicker Measurement for Flexible Displays**

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| ***Originating Global Technical Committee:* Flat Panel Display (FPD) - Metrology** |
| ***Originating TC Chapter:* *Taiwan*** |
| ***Task Force (TF) in which work is to be carried out: Flexible Display Task Force*** |

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Refer to *Procedure Manual* § 2.2.4.2 for more information on properly filling out the SNARF. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1. Rationale:**

**a: Describe the need or problem addressed by this activity.**

*(Indicate the customer, what benefits they will receive, and if possible, quantify the impact on the return on investment [ROI] if the Document is implemented.)*

A flexible display is a display which is flexible or freeform surface essentially. Recently, there has been a growing interest from consumer electronics manufacturers included e-readers, smart phones, wearable electronic devices and other consumer electronics. Many of paper-like electronic display devices are based on electrophoretic, electrowetting or OLED technologies. It is found that Implementation of OLED flexible displays saw significant growth in the last few years.

According to the report of OLED display forecast 2015-2025 by IDTechEx, the next evolution is plastic and flexible displays and the market for plastic and flexible AMOLED displays will rise to $16bn by 2020. In contrast to the level of flicker visibility is well defined in flat-panel-displays, flexible display makers are in an urgent need of the methods of flicker measurement for the freeform surface in terms of flicker-free displays. Hereby, new methods of measuring overall flicker and local flicker are proposed to quantify the flicker visibility of the flexible displays.

**b: Estimate effect on industry.**

**Check one of the following:**

**□ 1: Major effect on entire industry or on multiple important industry sectors - identify the relevant sectors**

**■ 2: Major effect on an industry sector - identify the relevant sector**

**□ 3: Major effect on a few companies - identify the relevant companies**

**□ 4: Slight effect or effect not determinable**

**c: Estimate technical difficulty of the activity.**

**Check one of the following:**

**□ I: No Difficulty – Proven concepts and techniques exist or quick agreement is anticipated**

**■ II: Some Difficulty – Disagreements on known requirements exist, but developing consensus is possible**

**□ III: Difficult – Limited expertise and resources exist and/or achieving consensus is difficult**

**□ IV: Extremely Difficult – Expertise and resources are scarce and/or achieving consensus is very difficult**

**2. Scope:**

**a: Describe the technical areas to be covered or addressed by this Document development activity. For Subordinate Standards, list common concepts or criteria that the Subordinate Standard inherits from the Primary Standard, as well as differences from the Primary Standard:**

To standardize the test methods for measuring the flicker visibility of flexible electronic displays.

Current main methods of flicker measurement for flat-panel displays are listed as follows:

1. EIAJ ED-2522 Methods for matrix liquid crystal display modules (1995).

2. ISO 9241-305:2008 Ergonomics of human-system interaction. Optical laboratory test methods for electronic visual displays (2008).

3. ICDM IDMS version 1.03 (Chapter 4.5; Chapter 10.5; Chapter 10.6 and Chapter 12.6) (2012).

**b: Expected result of activity**

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| **■** New Standard or Safety Guideline (including replacement of an existing Standard or Safety Guideline)  □ New Subordinate Standard to an existing Standard or to a new Primary Standard to be developed concurrently with this new Subordinate Standard | □ Reapproval of a Standard or Safety Guideline  □ Removal of a Standard or Safety Guideline  □ Withdrawal of a Standard or Safety Guideline  □ Reinstatement of a Standard or Safety Guideline |
| □ New Preliminary Standard |  |
| □ Major revision to an existing Standard or Safety Guideline | □ New Auxiliary Information  □ Modification of existing Auxiliary Information |
| □ Line-item revision to an existing Standard or Safety Guideline |  |
| □ Line-item revision to two or more existing Standards or Safety Guidelines | □ Publication of an existing Standard or Safety Guideline as an American National Standard |

For a new Subordinate Standard, identify the Primary Standard here: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

For revision of existing Standard(s) or Safety Guideline(s), identify the Standard(s) or Safety Guideline(s) that are to be revised here: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and identify which parts of the Standard(s) or Safety Guideline(s) that are to be revised. (Check all that apply.)

* Modification of an existing part of Standard(s) or Safety Guideline(s) including Appendices, Complementary Files, and Supplementary Materials
* Addition of one or more Appendices or Complementary Files to an existing Standard or Safety Guideline
* Addition of one or more Related Information sections or Various Materials to an existing Standard or Safety Guideline
* Revision or addition of one or more Subordinate Standards to an existing Primary Standard

For Standards, identify the Standard Subtype below:

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| □ Classification | □ Guide |
| □ Practice | □ Specification |
| **■** Test Method | □ Terminology |
| □ Miscellaneous (describe below) |  |

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**3. Projected Timetable for Completion:**

**a: General Milestones**

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| a. Activity Start: 2015/09/22 | b. 1st Draft by: 2016/06/30 |
| c. (Optional) Informational Ballot by: | d. Letter Ballot by: 2016/09/30 |
| e: TC Chapter Approval By: 2017/03/31 |  |

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**4. Liaisons with other Global Technical Committees/TC Chapters/Subcommittees/TFs:**

**a: List global technical committees, TC Chapters, subcommittees, or task forces in your or other Regions/Locales that should be kept informed regarding the progress of this activity. (Refer to SEMI Standards organization charts and global technical committee charters as needed.)**

Japan FPD Metrology Committee  
Korea FPD Metrology Committee

**b: Intercommittee Ballots (check one):**

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| □ **will be issued – identify the recipient global technical committee(s):**  **■ will not be issued** |

**5. Safety Considerations:**

**The resulting Document is expected (Check one):**

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| **□ to be a Safety Guideline**  **■ NOT to be a Safety Guideline** |
| **NOTE FOR** ‘to be a Safety Guideline‘: When all safety-related information is removed from the Document, the Document is NOT technically sound and complete – Refer to § 15.1 of the *Regulations* for special procedures to be followed.  **NOTE FOR** ’NOT to be a Safety Guideline‘: When all safety-related information is removed from the Document, the Document is still technically sound and complete. |

**6. Intellectual Property Considerations:**

**a: For a new Standard or Safety Guideline and for any part to be modified or added in a Revision of published Standards and Safety Guidelines:**

**■ the use of patented technology is NOT required.**

**□ patented technology is intended to be included in the proposed Standard(s) or Safety Guideline(s).**

**(If the second box is checked, check one):**

**□ Letter of Intent received**

**□ Letter of Intent not received**

**b: For Revision, Reapproval, Reinstatement, or Withdrawal of existing Standard(s) and Safety Guideline(s):**

**□ there is no known material patented technology necessary to use or implement the Standard(s) and Safety Guideline(s)**

**□ there is previously known material patented technology necessary to use or implement the Standard(s) and Safety Guideline(s)**

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**c: The body of the Document and any Appendices, Complementary Files, Related Information sections, or Various Materials that may or may not be a part of the Document by reference (Check one):**

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| **□ will include reproduced copyrighted material**  **■ will NOT include reproduced copyrighted material** |
| **NOTE FOR** ‘the use of patented technology or a copyrighted item(s) is NOT required’: If in the course of developing the Document, it is determined that patented technology or copyrighted item(s) must be used to comply with the Document, the provisions of *Regulations* § 16 must  be followed.  **NOTE FOR** ’will include reproduced copyrighted material’: A copyright release letter must be obtained from the copyright owner. |

**7. Comments, Special Circumstances:**

**8. TC Member Review (Check one):**

**■took place between (*put dates here:* MM/DD/YYYY and MM/DD/YYYY) before approval at the TC Chapter Meeting, or**

**□took place between (*put dates here:* MM/DD/YYYY and MM/DD/YYYY) before approval by the GCS, or**

**□ is not required for this SNARF.**

**NOTE FOR** ‘TC Member Review’: A TC Member Review is required by the *Regulations* for a period of at least two weeks

before approval of a new, or a major revision of an existing, Standard or Safety Guideline. (See *Regulations* ¶ 8.2.1)

**9. Approval Dates:**

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| TC Chapter or GCS: |  |
| Recorded in TC Chapter Minutes: |  |
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If you do not have email capability, you may fax this form to the nearest SEMI office:

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