



BUILDING GLOBAL COMMUNICATIONS

Approved by General Counsel

FO-4 Meeting Report

Date: 06/08/07

Location: Halifax, Canada

Approved: 7/26/07

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**Telecommunications Industries Association
Standards and Technology Department**

Closing Plenary Meeting Report

Organization: TIA FO-4 Engineering Committee on Fiber Optics

Chair: Bob Jensen – Fluke Networks (512) 514-7760

Date: Friday, June 8, 2007

Time: Convene at 8:00 AM; Adjourn approximately 11:00AM

Location: Citadel Halifax

1 ADMINISTRATIVE

1.1 Call, to order

The Closing Plenary was called to order at 8:00AM with a warm welcome to the attendees by FO-4 chair, Bob Jensen. Bob noted that the Closing Plenary is intended to summarize Subcommittee meeting activities and resolve any issues arising throughout the week of meetings. The Chair reminded those attending that attendance at the Closing Plenary constitutes the FO-4 membership and quorum. He also noted that continuity of membership is important in order to establish quorum and to take part in the FO-4 leadership decisions.

1.2 Attendance (quorum, introductions and roster)

A total of 13 attendees were present; quorum established. The attendees introduced themselves and an attendance roster was distributed for participants to sign.

Paul Kolesar	CommScope	pkolesar@systimax.com	972-792-3155
Tom Hanson	Corning Incorporated.	hansonta@corning.com	607-974-4530
David Leight	Defense Supply (DSCC-VAT)	David.leight@dla.mil	614-692-0521
Alan Whitebook	Diamond USA, Inc.	awhitebook@mindspring.com	661-702-9740
Halina Kosiorska Bodine	FiberSource Inc.	halina@fibersource.net	864-277-7200
Bob Jensen	Fluke Networks	robert.jensen@flukenetworks.com	512-514-7760
Dan Morris	KITCO Fiber Optics	dmorris@kitcofo.com	757-518-8100
Don Allard	Noyes Fiber Systems	donald.allard@afitele.com	603-528-7780
Mike Kinard	OFS	mkinard@ofsoptics.com	770-838-5307
David Mazzaresse	OFS		413-436-5052
Greg Sandels	OFS	gsandels@ofsoptics.com	770-798-4978
Allen Barkley	Superior Essex	allen.barkley@spsx.com	770-657-6613
Tom Robinson	Yazaki NA Inc, Y-Connect	trobenson@y-connect.com	717-930-1362

FO-4 company attendance history at Closing Plenary

	# of last 3 mtgs attended	Halifax, NS Jun-07	Houston Feb-07	Niagara Falls Jun-06	Las Vegas Jan-06
Company					
3M Com. Mkts Div	0				1
CommScope	3	1	1	1	1
Corning Incorporated	3	1	1	1	1
Defense Supply Center (DSCC-VAT)	3	1	1	1	1
Diamond USA, Inc.	3	1	1	1	1
Drake Comteq	1			1	1
Exfo	0				1
Experior Photonics, Inc.	2		1	1	1
Fiber Optic Association	1			1	1
Fiber Source	2	1	1		
Fluke Networks	3	1	1	1	
Greenlee Textron	2		1	1	1
Kitco Fiber Optics	3	1	1	1	1
National Technical Systems	1			1	1
Noyes Fiber Systems	2	1		1	
OFS	3	1	1	1	1
Panduit Corp.	1		1		1
Sumitomo Electric	0				1
Telcordia Technologies	1			1	1
Tyco Electronics	2		1	1	1
USConec LTD	0				1
US Department of Commerce (NIST)	2		1	1	1
US Navy	1			1	1
Yazaki NA Inc., Y-Connect Oper.	3	1	1	1	1

Note: The attendance roster is the sole basis for deriving meeting attendance, so it is important that you sign-in at the closing plenary meeting. The Chair will notify a company of their failure to meet minimum participation requirements and request their attendance at future meetings; enforcement of the membership continuation rules is necessary in order to maintain quorum at meetings.

1.3 Agenda review and approval

The Closing Plenary agenda was reviewed and approved.

1.4 Intellectual Property Rights statement

The chair brought to the attention of the membership the TIA policy regarding patents, the use of which may be essential to standards being considered. The full statement is contained in the fourth edition of the TIA Engineering Manual.

1.5 Chair's report; general items; recognition

Bob reminded all attendees to use cover sheets on all contributions to meetings during the week and at the FO-4 Closing Plenary. He also noted that attendees should sign the roster as it is used to record attendance. Chairs were also reminded to send their meeting reports to TIA within two weeks of this meeting and that meeting agendas should be send at least one month prior to meetings.

Bob congratulated elected Subcommittee Chairs at this meeting. They include Paul Kolesar, CommScope, to Chair FO-4.1 and Greg Sandels, OFS, to Chair FO-4.3. All FO-4 applauded their elected positions.

FO-4 will co-locate with TR-42 in October.

1.6 Distribution of documents and contributions

Bob noted that all contributions to FO-4 were available on the FTP site.

Document #	Contributor	Company	Title
FO4-2007-02-013	Bob Jensen	Fluke Networks	Feb Meeting Report
FO4-2007-06-014	Bob Jensen	Fluke Networks	June 2007 Opening Plenary Agenda
FO4-2007-06-015	Bob Jensen	Fluke Networks	June 2007 Closing Plenary Agenda
FO4-2007-06-016	Bob Jensen	Fluke Networks	June 2007 meeting schedule
FO4-2007-06-016A	Bob Jensen	Fluke Networks	June 2007 meeting schedule (revision)
FO4-2007-06-017		TIA	June 2007 Meeting Notice
FO4-2007-06-018	Greg Sandels	OFS	FO-4.3 Opening Plenary
FO4-2007-06-019	Steve Swanson	Corning	SC86B Opening Liaison Report
FO4-2007-06-020	Paul Kolesar	CommScope	FO-4.1 Opening Plenary
FO4-2007-06-021	Tom Hanson	Corning	FO-4.2 Opening Plenary
FO4-2007-06-022	Tom Hanson	Corning	SC86A Opening Liaison Report
FO4-2007-06-023	Tom Hanson	Corning	SC86C WG1 Opening Liaison Report
FO4-2007-06-024	Paul Kolesar	CommScope	FO-4.1 Closing Plenary
FO4-2007-06-025	Tom Hanson	Corning	FO-4.2 Closing Plenary
FO4-2007-06-026	Greg Sandels	OFS	FO-4.3 Closing Plenary
FO4-2007-06-027	Bob Jensen	Fluke Networks	September Preliminary Schedule

1.7 Meeting report review and approval

The February 2007 meeting report was unanimously approved.

2 OLD BUSINESS

There was no old business.

3 PLENARY REPORTS

3.1 Opening Plenary reports

Bob Jensen noted that the Opening Plenary reports are posted to the ftp site.

3.2 Closing Plenary reports

3.2.1 FO-4.1, Optical Fiber Systems, Paul Kolesar

FO-4.1 met Tuesday afternoon, June 5 thru Wednesday morning June 6, 2007. Twenty four persons attended the meeting. Quorum was achieved with 8 of 9 member companies present. Three new companies achieved voting membership: JDSU, Mohawk, and Panduit.

Activities

Resolved comments on the first ballot of PN-3-0257 (to be published as TSB-172) on high data rate multimode transmission techniques. The ballot passed with:

73% (16 of 22) votes returned

25% (4 of 16) abstentions

0% (0 of 16) negative votes

The committee agreed to incorporate comments resolutions and publish.

Resolved comments on the first ballot of PN-3-0280 (to be published as TSB-178) on source launch condition guidelines for testing installed multimode cabling. The ballot results were:

68% (15 of 22) votes returned

27% (4 of 15) abstentions

20% (3 of 15) negative votes

The committee agreed to incorporate comment resolutions and re-ballot.

FO-4.1 received 4 contributions.

Gang He of EXFO contributed one item:

FO41_2007-06-004 Experimental results of MM loss with OTDR and LSPM

This material supported the target launch and showed good agreement between OTDR and LSPM over the target launch range.

Tom Hanson contributed two items:

FO-412_0702-007 EF boundary evaluation for 50 and 62.5um at 850 and 1300 nm

FO-412_0702-008 Field artifact for source preparation

The first showed that the target launch and EF templates provided the expected loss variation of $\sim\pm 10\%$ for all four cases.

The second showed that artifacts consisting of concatenations of offset splices could be used to check the launch condition of a source for compliance to the EF target.

Casey Shaar contributed one item in absentia:

FO-412_0702-009 Summary of launch condition teleconferences since the last plenary.

Progress has been made in balloting the PN-3-0280 and in resolving various aspects of the improvement topics for measuring EF which will result in a revision of FOTP-203.

Reports

Tom Hanson reported on activities of IEC 86A. MMF macrobending tests look to be good candidates for the new launch target.

Steve Swanson reported on 86B activities. An agreement has been reached to use EF as the metric for the MMF launch condition and progress has been made on converging to a launch condition that is slightly more filling than the present target.

Tom Hanson reported on activities of IEC 86C. A revision of IEC 61280-4-1, the installed MM cabling loss measurement, is in second CD. This will serve as the basis for modification of TIA OFSTP-14.

Paul Kolesar reported on IEEE 802.3 activities. The HSSG is bogged down with indecision regarding the inclusion of a 40Gb/s rate. OM3 fiber is included in the objectives for the 100G rate.

Other action items

Paul Kolesar to seek coordination of a round robin by FO4.5.1 to validate the EF template experimentally.

Actions requested of FO-4

None

3.2.2 FO-4.2, Optical Fibers and Cables, Tom Hanson

There were 19 persons representing 11 organizations at the meeting. Quorum was achieved with 5 of 7 member companies.

Progress

FO-4.2.5 and FO-4.2.6 are merged to form a new single working group:

FO-4.2.6: Optical fiber cable technical review -- the objective of this group is to provide a forum for cablers to discuss and agree on a diversity of technical issues as they arise.

The following new projects were authorized:

- Renew ITM-9, on ribbon stripping cleanliness
- New FOTP on Expressed tube attenuation change
- Revision of the Generic Specification, 472000, to be compatible with the ICEA specs under it.
- Revision of FOTP-56 on Fungus testing

Update on existing projects:

- The revision of FOTP-3, on temperature cycling, will go to ballot this June.
- The revision of FOTP-12, on fluid immersion, is on hold waiting for information from the DoD.
- The ballots to revise the MM specs, 492AAAA, 492AAAB, and 492AAAC, closed with some negative votes and technical comments. A resolution of these comments is expected to more completely align these documents with the IEC specs that have already been agreed. Following a resolution by correspondence, a default ballot with the changes was authorized.
- It seems that a compromise on SBS measurement could be agreed at the upcoming meeting of ITU-T SG15. Following this, a revision to the current draft ITM-26 is anticipated for the next meeting of FO-4.2.

Possible new future work

- There was interest in creating a product spec for domestic outdoor cable. The current ICEA adoptions are viewed as Sectional or Family Specifications.
- There is continued interest in creating a work stream to deal with a variety of combined cable and component requirements for the access network.

Issues

- There have been several adoptions of IEC Standards that have been blocked from public access due to some royalty issues. FO-4.2 continues to demand that these be unblocked. FO-4.2 does recognize that this may take till September due to the new personnel at TIA.
- There is a long list of reaffirmations or withdrawals on which decisions had been requested by TIA and which FO-4.2 approved. These decisions need to be implemented.
- The collocation of FO-4 with TR-42 is considered as a good thing. FO-4.2 members have mixed views on meeting three times a year. Some considered that this might stimulate more progress while others questioned the extra meeting from a cost/time perspective. While there will be a continuing overlap of ICEA and FO-4/TR-42 on the first week of June, some concluded that this could be worked around.

Requests of FO-4

- Allocate a single four hour time slot for FO-4.2.6 at the next meeting. The current schedule, with the fiber and cable related meetings within a single two day period, is very satisfactory.
- Allocate some time at the next meeting (maybe an hour) for a joint ad hoc meeting of the members of FO-4.2 and FO-4.3 for the purpose of identifying possible access network projects of mutual interest. Interested members are requested to initiate a correspondence activity using the reflectors to formulate an initial agenda and list.

3.2.3 FO-4.3, Passive Optical Devices and Components, Greg Sandels

A total of 20 attendees were present; quorum established with 9 of 15 voting members present.

WG FO-4.3.1 Reliability Standards – Chair: Osman Gebizlioglu

- Revised Document on Adhesives Application Guidelines

A brief overview of the draft document was presented by Gebizlioglu. He renewed his call for contributions. Volunteers were requested to write the document sections such as physical properties. He recommended the WG complete the document with its current scope and move to balloting.

- Draft FOTP on Adhesion Strength Test Methods
Gebizlioglu presented an overview of the document in the FOTP format. A discussion followed about sample supply and preparation. Action items, a schedule, and participants were identified for the effort.
- Plan for IEC/86B/WG5 documents
A draft of TSB-161 based on an informative revision of IEC 62005-2 part 2- Quantitative assessment of reliability based on accelerated aging tests was reviewed. Input for revisions to the section on informative references was provided by Gebizlioglu.

WG FO-4.3.2 Interconnecting Devices and Passive Components – Chair: Helmut Knehr

- Ballot Comment Resolution:
 - FOTP 1090-Connector Seal Under Load (PN-3-0228) – Luther/CCS. Awaiting ballot (ANSI delayed).
 - FOTP 219A MT Fiber Protrusion (PN-3-002-RV1) – Luther/CCS. The comments and editions were reviewed and approved by committee. The resulting request for an PN ballot was granted by FO-4.3.
 - FOTP 240 FO Cleaning System (PN-3-0149) – Hughes/USConec. The comments and editions were reviewed and approved by committee. The resulting request for an SP ballot was granted by FO-4.3

New Work Items

As a result of the discussions following the APC offset presentations, a round robin was proposed and approved by the Working Group. The round robin will compare keying angle errors measure on various systems by various participants. Greg Sandels will provide the samples for measurement. The samples will have the ferrules “locked” in position internal to the connector so internal float does not contribute to the error measurements. Lorenz Cartellieri will coordinate and report the effort.

ANSI documents Approved for Reaffirmation Ballot

The following documents were approved by committee (SC FO-4.3) for reaffirmation ballot during the Houston February Meeting. Administrative issues have delayed this effort but the ballot is forthcoming.

- 455-1B (SP-3-2716) Cable Flexing for Fiber Optic Interconnecting Devices
- 455-2C (SP-4-3822) Impact Test Measurements for Fiber Optic Devices
- 455-8 (SP3-2828) Measurement of Splice or Connector Loss and Reflectance
- 455-16A (SP-3-3806) Salt Spray (Corrosion) Test for Fiber Optic Components
- 455-32A (SP-3-3805) Fiber Optic Circuit Discontinuities
- 455-35A (SP-3-3347) Fiber Optic Component Dust (Fine Sand)
- 455-42A (SP-3-4656) Optical Crosstalk in Fiber Optic Components
- 455-71A (SP-3-3375-A) Procedure to Measure Temperature-Shock Effects on Fiber Optic Components
- 455-107A (SP-3-2961-A) Determination of Component Reflectance or Link/System Return Loss Using a Loss Test Set
- 455-157 (SP-3-4639) Measurement of Polarization Dependent Loss (PDL) of Single-Mode Fiber Optic Components
- 455-158 (SP-3-3197-RF1) Measurement of Breakaway Frictional Force in Fiber Optic Connector Alignment Sleeves
- 455-171A (SP-3-4581-1) Attenuation by Substitution Measurement for Short-Length Multimode Graded-Index and Single-Mode Optical Fiber Cable Assemblies
- 455-172 (SP-3-3750) Flame Resistance of Firewall Connector

- 455-180A (SP-3-4536) Measurement of Optical Transfer Coefficients of a Passive Branching Device (Coupler)
- 455-184 (SP-3-3803) Coupling Proof Overload Test for Fiber Optic Interconnecting Devices
- 455-185 (SP-3-3802) Strength of Coupling Mechanism for Fiber Optic Interconnecting Devices
- 455-186 (SP-3-3748) Gauge Retention Force Measurement for Fiber Optic Components
- 455-187 (SP-3-3749) Engagement and Separation Force Measurement of Fiber Optic Connector Sets
- 455-188 (SP-3-2350-RF1) Low Temperature Testing of Fiber Optic Components
- 455-194 (SP-3-3882) Measurement of Fiber Pushback in Optical Connectors
- 455-196 (SP-3-4355-A) Guidelines for Polarization-Mode Measurement in Single-Mode Fiber Optic Components and Devices
- 455-197 (SP-3-4591) Differential Group Delay Measurement of Single-Mode Components and Devices by the Differential Phase Shift Method
- 455-200 (SP-3-4245) Insertion Loss of Connectorized Polarization-Maintaining Fiber or Polarizing Fiber Pigtail Devices or Cable Assemblies
- 455-201 (SP-3-4246) Return Loss of Connectorized Polarization-Maintaining Fiber or Polarizing Fiber Pigtail Devices or Cable Assemblies

Other Business

Tom Hanson made a request at the FO-4 closing plenary to schedule an hour at the next meeting for an adhoc meeting of members from FO-4.2 and FO-4.3 to discuss the formation of a joint working group to address "Access" cables and terminations. FO-4.3 is in agreement with this request.

4 NEW BUSINESS

Discussion was held regarding the joint meeting with TR-42. Comments were positive as we continue the journey of merging with TR-42.

Discussion was held on allowing more than one person in a company to vote on TIA's WEB site. Bob Jensen will pursue this with TIA.

4.1 Schedule review

A schedule for the next meeting was presented, discussed and altered. The schedule will be further developed with TR-42 between this meeting and the September 2007 meeting.

4.2 Future meetings

September 24-28, 2007

Hotel TDB (likely in Palm Springs, CA being discussed)

5 ADJOURNMENT

The Chair thanked all the participants for their contributions during the week and the TIA Staff for their support.

The closing plenary meeting adjourned at 10:30 AM on June 8, 2007.

This meeting was conducted in accordance with the TIA Legal Guide and the TIA Engineering Manual.

FO-4 Chair
Bob Jensen

AVAILABILITY OF MEETING DOCUMENTS:

All meeting attendees are instructed to download contributions and other meeting documents from the TIA FO-4 FTP site (<http://ftp.tiaonline.org/FO-4/>) before the meeting. For information on how to access the FTP site, contact TIA (Marianna Kramarikova: mkramarikova@tiaonline.org).

NEW CONTRIBUTIONS:

Contributions shall use the approved templates and specific wording provided by TIA. Contributions affecting a document are to include a TIA cover sheet, proposed text to be included in the document, and the rationale/substantiation for the contribution. File templates are available on the FO-4 FTP site for download. All contributions shall be submitted to the electronic document coordinator (EDC). All electronic files shall be provided in either Adobe Acrobat (*.PDF); Microsoft Word (*.DOC); Microsoft PowerPoint (*.PPT); or in Microsoft Excel(*.XLS). Compressed files shall be accessible using PKUNZIP or WINZIP (*.ZIP).

Early submittal and posting of contributions for consideration in meetings is highly encouraged. Contributions shall be submitted to the EDC as soon as possible and then posted to the FTP folders by the EDC as soon after receipt as possible, preferably within one business day. Notification of the posting shall be made to the group's email reflector list by the EDC within one working day of the posting. All contributions shall be posted to the appropriate location on the TIA FTP site no later than 12:00 noon EST on the Monday preceding the week of the meeting in which the contribution is to be considered (example: if the meeting will be held on Thursday the 20th, the contributions shall be posted by noon on Monday the 10th).

LATE CONTRIBUTIONS:

Contributions not posted as described in the timing above shall be classified as "late contributions." They may be considered in the meeting to which they are addressed provided that an appropriate motion receives 50% or greater of a vote.

All late contributions shall be provided to the EDC and to the committee members on a memory stick or CD-ROM along with sufficient paper copies for those members without a PC.

All late contributions shall be posted to the TIA FTP site no later than one week following the meeting in which they are considered. Notification of the posting shall be made to the group's email reflector list by the EDC.

DOCUMENT NUMBERS:

All contributions to FO-4 are assigned a document number. To obtain a document number before the meeting, provide your name, affiliation, contribution title and corresponding agenda item to the FO-4 EDC.

Questions and Comments should be submitted to:

Chair, EDC & Secretary:
Bob Jensen

Ph: 512-514-7760

bjensen@swbell.net
