

Towards OM3, OM4 Modal Bandwidth Guidance for WDM

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Purpose

- Provide insights into to-be-proposed activities of MMF standards bodies
 - TIA TR-42.12
 - IEC 86A WG1

The Situation

- IEC and TIA both set fiber specifications
 - IEC 60793-2 series
 - TIA 492xxxx series
- IEC MMF spec is now in 1st revision ballot for edition 7
 - Can submit comments to add WDM modal bandwidth guidance for OM3 and OM4 fiber types
- TIA TR-42 has long planned to adapt IEC standards
 - for harmonization and reduced development effort
 - to update TIA's single-mode specs
 - adaption = adoption + regional differences, cross references
- TIA can adapt current IEC MMF detail spec edition 6
 - Adding WDM modal bandwidth guidance as a regional difference
 - Allows guidance to be developed in parallel and independently

The Plan

- Continue to collaborate to deduce worst-case modal bandwidth guidance over WDM wavelength range for OM3 and OM4
 - Utilize simulation approach and verify with measurements
 - OM5 specs already contains this guidance in equation form
- Propose to initiate project for adaption of IEC 60793-2 series
 - at TR-42.12 meeting 31 Jan 2018
 - Add WDM modal bandwidth guidance for OM3 and OM4 fiber types
- Submit national comments to add WDM modal bandwidth guidance to 1st IEC ballot of 60793-2-10 ed.7
 - Ballot closes 23 Feb 2018
 - Support those comments at next 86A meeting 23 April 2018

Summary & Closing Perspectives

- The detailed work of establishing modal bandwidth guidance for OM3 and OM4 fiber types can (and should) be carried out by the fiber standards bodies of TIA and IEC
- An official collaborative effort is planned
 - with timeline suitable for development of an amendment to IEEE 802.3 that may ensue from this IEEE Study Group
- Until these specs are established by TIA and/or IEC
 - The simulation-based approach curves of kolesar_NGMMF_01_0118, or similar can be used as reasonable lower bounds
- Request liaison letter to IEC 86A
 - Asking for establishment of OM3 and OM4 EMB information for WDM

Q & A