



The Fibreoptic Industry Association

www.fia-online.co.uk

# NEWSLETTER

## Issue 78

### March 2005

THE FIBREOPTIC INDUSTRY ASSOCIATION

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Please note that this is a relatively short Newsletter. An additional April Newsletter will be dedicated exclusively to the announcement of the new FIA Qualifications Scheme.

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### A warm welcome to the following NEW MEMBERS

#### Corporate

- 570 - Customer Network Company Limited
- 569 - MIS Limited
- 568 - Albion Consultants
- 567 - Integrated Networked Solutions
- 566 - Electrastar
- 565 - Blue Helix
- 564 - Alpha Networked Solutions
- 563 - Pressac Communications Limited

### FIA-online.co.uk

Visitors to the old FIA web-site will find a re-direct page to our new web-site. The new site at [www.fia-online.co.uk](http://www.fia-online.co.uk) will provide both improved membership management and an opportunity for enhanced services via a series of Members Forums.

Members will be advised as new features become effective but an overview of the new site is provided on page 2 of this Newsletter.

Please take time out to visit the site and familiarise yourselves with its content. To access member-only services you will need your existing membership password.

### Has the LC won the SFF battle?

In January 2005, ISO/IEC SC25 WG3 selected the LC as the interface for telecommunications outlets in industrial premises. This decision effectively ends the debate over the "connector of choice" for duplex SFF interfaces. The standardisation work now underway, to ensure full interoperability for the LC for all the optical fibres used in industrial premises, represents an overwhelming obstacle for any future alternatives.

Mike Gilmore, Convenor of the Industrial Premises Task Group within WG3 and Technical Director of the **FIA** discusses this matter fully on page 3.

### FIA Polarity Maintenance TSD goes European

Our Technical Support Document 2000-3-3 covering polarity maintenance for simplex, duplex and array connections has been submitted to CENELEC for incorporation within a revision to EN 50174-1. When the revision process is complete in 2006, the methods adopted by the **FIA** will become mandatory – so if you don't know what they are download the TSD, free-of-charge to members, from [www.fia-online.co.uk](http://www.fia-online.co.uk).

**BSI and FIA**  
**BIP 0007:2004**

**Telecommunication cabling and equipment installations: A guide to requirements and responsibilities**

Don't forget – the FIA sponsored the BIP in support of BS 6701:2004 - it's a free download to members.

### FIBREOPTIC INDUSTRY ASSOCIATION

*The FIA is a Company Limited by Guarantee*

#### Management Council

Mike Phillips - Chairman  
(*Fibre Optic Solutions*)

Peter Thompsett - Vice Chairman and Commercial  
(*Ensign Communications*)

Mike Gilmore - Technical Director and Treasurer  
(*The Cabling Partnership e-Ready Building Limited*)

#### Installation Industry Sector Director

Peter Lythgoe - (*Lythgoes*)

#### Industry Sector Directors

Paul Bateson - Test & Measurement  
(*Optical Test and Calibration*)

Nick Channon - Test & Measurement  
(*Megger*)

John Colton - Training  
(*Lucid Optical Services Ltd.*)

Lee Funnell - Qualifications

(*Active Communication Company Limited*)





Sydney Hogg – Passive components  
(*Schneider Electric UK Limited*)

## The New FIA Site

The new FIA web-site went live on 1<sup>st</sup> March 2005. The whole site has been simplified with virtually all the pages available within two mouse clicks. From the homepage shown below, functional links are indicated by the ► or ◄ icons. Clicking on the icon gets you to the page you need. A ► or ◄ icon is a non-functional bullet and either indicates a future function or a simple listing.

At the moment access to the **FIA MEMBERS ONLY** part of the site is via a password-protected file - which you need your existing password to open. One of the key features that the FIA wanted to integrate into the new site was the facility for the FIA members to modify their password on-line coupled with the capacity for the FIA Secretariat to remove specific members services on the very day that membership lapses. This is currently on trial and will be fully functional next month - so be warned - if you have not paid your annual subscription services can be withdrawn at any time.

NOTE: it will be some time before all documents issued by the FIA can be amended to reflect the new web-site address - please bear with us

 <p>FIBROPTIC INDUSTRY ASSOCIATION</p>		<p><a href="http://www.fibreoptic.org.uk">www.fibreoptic.org.uk</a> has changed to <a href="http://www.FIA-online.co.uk">www.FIA-online.co.uk</a> CHANGE YOUR INTERNET SETTINGS NOW!!</p>		<p>HOME ◄</p>
<p>► HOME</p> <ul style="list-style-type: none"> <li>► Contact the FIA</li> <li>► About the FIA</li> <li>► Join the FIA</li> <li>► MEMBERS ONLY           <ul style="list-style-type: none"> <li>Note: FIA Password required</li> <li>► Members Only [Trial]</li> </ul> </li> <li>► LINKS</li> <li>► MEMBERSHIP SEARCH ENGINE           <ul style="list-style-type: none"> <li>► List and location</li> <li>► Products and Services</li> <li>► Approved Installers</li> <li>► Approved Training Providers</li> </ul> </li> <li>► FIA APPROVAL SCHEMES           <ul style="list-style-type: none"> <li>► Installers</li> <li>► Training Providers</li> <li>► Qualification Scheme</li> </ul> </li> <li>► FAQs</li> <li>► Advertising on this web-site</li> </ul>	<p>NEWS AND EVENTS</p> <ul style="list-style-type: none"> <li>► NEWSLETTERS</li> <li>► PRESS RELEASES</li> <li>► ARTICLES</li> <li>► EVENTS           <ul style="list-style-type: none"> <li>► FIA Events</li> <li>► FIA-supported Events</li> <li>► Notified Events</li> </ul> </li> </ul> <p><b>LATEST NEWS March 3, 2005</b></p> <ul style="list-style-type: none"> <li>► BS 6701:2004 and BIP0007</li> </ul> <p>BIP0007 has been updated (version 1.02). It is available free-of-charge to FIA members from our Documents download page - along with all the other FIA Technical Support Documents</p>	<p>SERVICES</p> <ul style="list-style-type: none"> <li>► TECHNICAL SUPPORT DOCUMENTS           <ul style="list-style-type: none"> <li>► Overview of TSDs</li> </ul> </li> <li>► ARBITRATION SCHEME</li> <li>► AUDIT SCHEME</li> <li>► e-SOLUTIONS</li> <li>► JOBS IN OUR INDUSTRY</li> <li>► PRODUCT REVIEWS</li> <li>► INSURANCE SCHEME</li> <li>► STOLEN EQUIPMENT REGISTER</li> <li>► SKILLSMATCH</li> <li>► STANDARDS FORUM</li> </ul>	<p>DOWNLOADS</p> <ul style="list-style-type: none"> <li>► MEMBERS e-GUIDE</li> <li>► TRAINING PROVIDERS LISTING</li> <li>► CSCS INFORMATION</li> <li>WHITE PAPERS           <ul style="list-style-type: none"> <li>► Technology and technology trends</li> <li>► Training and qualifications</li> <li>► Testing of installed cabling</li> <li>► Installation quality assurance</li> </ul> </li> <li>PRESENTATIONS           <ul style="list-style-type: none"> <li>► from past events</li> </ul> </li> <li>► UFO (Introduction to Fibre Optics)</li> </ul>	
<p>THE FIBROPTIC INDUSTRY ASSOCIATION The Manor House, BUNTINGFORD, Hertfordshire, SG9 9AB, UK. Tel: +44 (0)1763 273039 Fax: +44 (0)1763 273255</p>		<p>SITE SPONSORS</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>www.mayflex.com</p> </div> <div style="text-align: center;">  <p>The UK's largest range of Ex-Stock Fibre Optic products <a href="#">click here</a></p> </div> <div style="text-align: center;">  <p>Click here to view our full range of FIBRE OPTIC PATCH LEADS</p> </div> </div>		

## FIA Web-Site Advertising

As can be seen above, Mayflex and Cablelines (Cablenet TrackMaster) have sponsored the entire web-site until March 2006 and CTTs has taken the opportunity to sponsor the Approved Training Providers Scheme page. But there are plenty more opportunities for FIA members to "get their name in lights".

To sponsor a page until 1st March 2006 with a logo of up to 150(H) x 100 (V) pixels costs only £175 + VAT. Full details are shown at <http://www.fia-online.co.uk/esponsor.htm> but to summarise there are just two basic designs of web-page on the **FIA** site - which we call Template and List. The way in which your sponsorship logo is positioned on the page depends upon the page design. The list of available pages is shown on the right. If you want to advertise in this way please contact Jane Morrison at the FIA Secretariat on 01763 273039 or by e-mail at [jane@fiasec.demon.co.uk](mailto:jane@fiasec.demon.co.uk).

Template Pages	List Pages
<p><b>Open Pages</b></p> <ul style="list-style-type: none"> <li>About the FIA</li> <li>Approved Installer Scheme</li> <li>Audit Scheme</li> <li>Arbitration Scheme</li> <li>e-solutions</li> <li>Insurance Scheme</li> <li>Jobs in our Industry</li> <li>Links</li> <li>Product Reviews</li> <li>Qualification Scheme</li> <li>Skillsmatch</li> <li>Standards Forum</li> </ul>	<p><b>Open Pages</b></p> <ul style="list-style-type: none"> <li>Approved Installers</li> <li>Approved Training Providers</li> <li>Articles</li> <li>Events</li> <li>FAQs</li> <li>Newsletters</li> <li>Presentations of past events</li> <li>Press Releases</li> <li>Stolen Equipment Register</li> <li>Technical Support Documents</li> <li>White Papers</li> <li><b>Members Only Pages</b></li> <li>Cost Modelling</li> <li>Skillsmatch</li> <li>Standards Forum</li> <li>Technical Support Documents</li> </ul>

**Are you an FIA member?  
Are you a Training  
Provider?**

If so, please ensure that you update your details in the  
"Training Providers Guide",  
held on the FIA Web Site,  
as regularly as possible by contacting the FIA Secretariat.

It is a valuable resource on the site that is accessed many times each day.  
Both Approved and Non-Approved Training Providers are featured.

**LC Connector Interface Gets The Vote**

by Mike Gilmore, FIA Technical Director

A future ISO/IEC 24702 (and EN 50173-3) will specify cabling for use in generic cabling systems for industrial premises. In addition to the conventional OM1, OM2, OM3 and OS1 cabled optical fibre specifications, these standards will support a new singlemode option OS2 for longer channels (up to 10000 metres) and may support a range of other optical fibre types. Hard clad silica and plastic optical fibres have been used in industrial applications for some time and a new high bandwidth, low loss graded index plastic optical fibre also looks set to make an impact in this and other applications. The problem with trying to support all these different optical fibre types is the selection of a connector interface - do we have a different interface for each one or a common interface for all. Taking the former decision would have the potential for an endless series of connector wars and, as true interoperability is guaranteed at international level for SC and ST connecting hardware, would present IEC connector standardisation committees with a never-ending programme of work. Selecting a single interface would mean that the connector would have to support everything from singlemode to 1mm diameter plastic optical fibres - a tall order when small physical interface dimensions are the "order of the day".

This seemingly complex problem was resolved amazingly quickly by ISO/IEC JTC1 SC25 WG3 in Mexico, January 2005. An LC interface for all optical fibres had been discounted because, not surprisingly, its 1.25mm diameter ferrule was deemed to be too fragile to support a 1mm hole. However, a ferrule-less version of the LC was shown which allows large diameter plastic optical fibres to be joined with acceptable performance. This tipped the balance of the argument and massive support was registered for the use of the LC as the TO interface for all optical fibres specified within a future ISO/IEC 24702.

This decision may have far-reaching consequences. The focus on industrial premises should not be confused with hostile environments in all cases. Some premises will present extreme climatic and ingress protection environments and will require the LC connector to be used in a suitable housing and a selection process for such housings is now underway. However, there are many areas within industrial premises in which the environment is benign - no different from a typical office - and no housing will be required. In such a situation, the TO interface will be a LC Duplex whereas in office premises the same TO would be an SC Duplex. This situation is unlikely to continue for long and the LC connector may well have won the SFF war - and not only in industrial situations.

Make no mistake - there is still a significant standardisation task ahead. Deciding on an interface is politically difficult but technically simple. However, making sure that all the supporting standards are in place to allow **FIA** members to purchase that interface from different suppliers, interoperating to a given specification, is politically easy but technically complex. So is the agreement of test procedures to conform that interoperability. This is now underway.

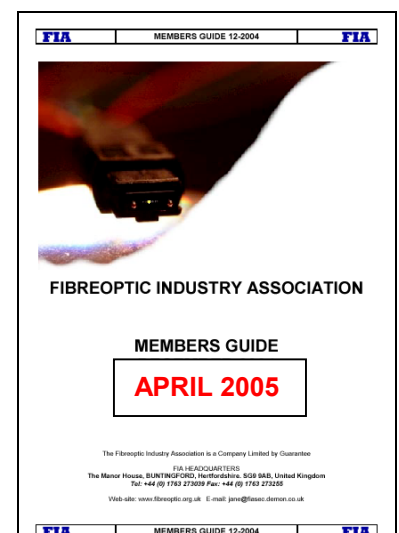
For more information contact Mike Gilmore at [mike.gilmore@btinternet.com](mailto:mike.gilmore@btinternet.com)

**FIA Members e-Guide**

The third electronic version of the **FIA** Members Guide is soon to be available for download via the hyperlink on the home page at [www.fia-online.co.uk](http://www.fia-online.co.uk). The e-Guide contains a listing of our member's products and services together with separate sections for FIA Approved Installers and Training Providers. The document is updated on a regular basis, to keep pace with changes in membership and member's details. Please make sure you update your information by advising the FIA Secretariat.

The FIA Secretariat takes this opportunity to thank all those advertisers who have taken space in the April 2005 issue. Advertising space in the e-Guide is available at any time. The advertising contract lasts for twelve months, independent of how many revisions are published during that time. If you to advertise in this way please contact Jane Morrison at the FIA Secretariat on 01763 273039 or by e-mail at [jane@fiasec.demon.co.uk](mailto:jane@fiasec.demon.co.uk).

The pdf download from the FIA web-site is a print-quality file and contains hyperlinks to all companies that have advertised. It is proposed that electronic copies of the e-Guide will be made available at exhibitions and upon request from the Secretariat.



<b>FIA</b> <b>Skillsmatch</b> <b>Update</b>	<b>The Skillsmatch application form has been updated with C&amp;G 3666 series qualifications</b>
	<b>FIA TRAINING PROVIDERS – DOWNLOAD THE APPLICATION FORM FROM</b> <a href="http://www.fia-online.co.uk/efiasvrq.htm">www.fia-online.co.uk/efiasvrq.htm</a>

## FIA Technical Support Document Update

Work has started on two new Technical Support Guides.

The first is TSD-2000-4-5, entitled "User Guide Template", and is being developed in response to the requirement in BS 6701:2004 for detailed operational and maintenance instructions to be provided for each completed installation. On the face of it such a demand appears to mean lots of work for installers but the FIA User Guide Template will help to simplify this to the bare minimum.

The second is TSD-2000-2-3 covering "Cords". The term "cords" covers pigtailed, patch cords and equipment cords (not forgetting mode conditioning cords) and defines how to specify them, document them and label them in order that installation, operation and maintenance is optimised. It will also cover connector end-face inspection and cleaning.

If you wish to be involved in this work contact Mike Gilmore at [mike.gilmore@btinternet.com](mailto:mike.gilmore@btinternet.com)

This Newsletter is provided as a means of maintaining communication between and with our Members. It can, therefore, promote the activities of Members to other Members. Articles, product information, news items etc. are always welcome. Please send the information via email (jpg illustrations) to Jane Morrison via [jane@fiasec.demon.co.uk](mailto:jane@fiasec.demon.co.uk)

## Modal Power Distribution

Testing of installed multimode optical fibre cabling has been beset with difficulties and uncertainties for many years. The use of the wrong test methods has been a real problem despite total agreement on these methods at international European and US level. However, the latest discoveries of relatively large variations in measured results solely due to differences in test equipment serve to put the other problems in the shade.

Using light source and power meter equipment, work undertaken in summer 2004 showed that an identical system under test presented results varying by as much as 1.0dB, depending upon the light source, the presence of mandrels, the diameters of the mandrels etc. The variation due to the light sources alone was up to 0.5dB. This degree of variation is clearly unacceptable when measurements on 5.0dB or less are being made and work is now underway to standardise the "modal power distribution" at the point where the launch cord connects to the cabling under test. The cry of "what the \*\*\*\* is modal power distribution" will no doubt be going up across the land as FIA members read this. MPD, for short, defines how much power exists in which mode group of a multimode optical fibre. If the MPD is on the "high side" the measured result is high, if it is on the "low side" you get a low measurement. The big question is what is the correct MPD - watch this space to get the answer in the coming months but in the mean time **if you want repeatable results use exactly the same test system** and document it carefully.

For further information contact Mike Gilmore at [mike.gilmore@btinternet.com](mailto:mike.gilmore@btinternet.com)

## Photonics Focus Conference 2005

This year's Photonics Focus Conference will be held on **Wednesday 22 June 2005**. The exciting event is being staged at the CBI Conference Centre, in central London.

The Photonics Focus Conference 2005 is sponsored by the DTI through the LINK ISD and LINK OSDA programmes. The conference has been organised as a key networking event to engage the photonics, displays and information storage communities in the discussion of areas of common interest and to highlight the latest developments in these fields.

The day will focus on the following key topics:

- Biophotonics in healthcare
- Lasers and LEDs
- Flexible electronics and displays
- Networks and future direction

To find out more information, or to register, please email:

[emily@photonics.org.uk](mailto:emily@photonics.org.uk)

**Version 1.02 of BIP0007 now available for download from [www.fia-online.co.uk](http://www.fia-online.co.uk) MEMBERS ONLY**

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**Telecommunication cabling and equipment installations**

A guide to requirements and responsibilities