



The Fibreoptic Industry Association

www.fia-online.co.uk

NEWSLETTER

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THE FIBREOPTIC INDUSTRY ASSOCIATION

Tel: +44 (0)1763 273039

Fax: +44 (0)1763 273255

Email: fia@fiasec.demon.co.uk

Head Office: The Manor House,
BUNTINGFORD, Hertfordshire SG9 9AB
United Kingdom

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A warm welcome to the following NEW MEMBERS

Corporate

- 586 - ENZCOM SOLUTIONS LIMITED
- 585 - FINEMARK SECURITY SYSTEMS
- 584 - AC NETWORKS
- 583 - INFINET DATACOMS LIMITED
- 582 - DMOptics

Overseas Corporate

- 579 - EXFO ELECTRO-OPTIC ENGINEERING

Honorary Personal

- 581- Peter Thompsett
- 580- Mike Phillips

FIA and ISO/IEC 14763-3

The testing of installed optical fibre cabling is given a push in the right direction this month with the publication of the FDIS 14763-3. The document has been produced in response to concerns expressed by the FIA regarding the repeatability of measurements made by different optical sources.

An FDIS has the force of a published standard since the only changes that can be made at the time of publication are very minor editorials. FIA members can access the document via the Standards Forum section of the FIA web-site (members-only so you will need your password). It has major implications for the industry as explained later in this Newsletter and will lead to the withdrawal of two FIA flagship Technical Support Documents: TSD-2000-4-2-1 and 4-2-2.

FIA Honorary Personal Membership

Mike Phillips, who has served as Chairman of the Fibreoptic Industry Association for as long as anyone can remember, stood down at the Annual General Meeting in December 2005. Peter Thompsett who had served the FIA in a number of roles over the past ten years also left the FIA Council. Their replacements were elected at the AGM and new roles were agreed at the subsequent FIA Council meeting (see overleaf for details).

In recognition of such long terms of service the FIA Council not only decided to provide them with small "going-away" gifts but also to award both of them Honorary Personal membership.

FIA-online.co.uk

Visit the site and familiarise yourselves with its content - to access member-only pages you will need your membership password.

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

- Paul Bateson - Chairman
(Optical Test and Calibration)
- Peter Lythgoe - Vice Chairman
(Lythgoes)
- John Marson - Commercial Director
(Twistnet Communications)
- Mike Gilmore - Technical Director and Treasurer
(The Cabling Partnership e-Ready Building Limited)

Industry Sector Directors

- Paul Bateson - Test & Measurement
(Optical Test and Calibration)
- John Colton - Training
(Lucid Optical Services Ltd.)
- Lee Funnell - Qualifications
(Astro Communications Limited)
- Sydney Hogg - Passive Components
(Schneider Electric UK Limited)
- Peter Lythgoe - Installation
(Lythgoes)
- Phil Whitehead - Certification Schemes
(Ortronics)

The End of an FIA Era

Mike Phillips and Peter Thompsett received the thanks of the FIA Council as they stepped down from the FIA Council at the December 2005 AGM.

As a gesture of thanks from all involved Mike was presented with a Waterford Crystal decanter (red wine "for the use of") and Peter received a pewter hip flask in the shape of a lifebelt - particularly appropriate given Peters nautical aspirations and enthusiasm for the "water of life".

We wish them well and have awarded them both Honorary Membership of the FIA so that they can still see what is going on in their absence.



FIA Christmas Seminars

The long-awaited FIA Commercial Awareness Seminars were delivered in London (December 2005) and Leeds (January 2006). The events were well attended – with a "roomful" in London and a very pleasing number in Leeds.

Mike Gilmore, presenting on behalf of the FIA, said that the attendance in Leeds was especially good since it was the first time that an FIA event had been held in Yorkshire. "Over 35% of FIA members are within 90 minutes travel of Leeds and it is important to host the events outside London". Mike went on to say that "All the topics were well received. However, **it is up to members to decide the topics – not the FIA Council** to impose them".

So if you have any other ideas for topics of interest then let us know and we can try to build future seminars around them - contact the Secretariat on 01763 273039 or by e-mail at jane@fiasec.demon.co.uk.



If you already receive **networking+** magazine you will already have seen that the FIA produces a half-page editorial in each issue. In order to save space in this Newsletter we have arranged for all recipients of this e-mail to also receive a free-copy of **networking+**. So - you can keep in touch with the FIA and the other contributors to this broad-based, well balanced networking magazine.

If you want to download the text of earlier **FIA** articles go to <http://www.fia-online.co.uk/earticles.htm>.



The award was presented at a ceremony held in the magnificent setting of the first class dining room of the SS Great Britain in Bristol docks. Pictured with the award is Richard Ednay, Technical Director of Optical Technology Training who provided technical support to the team, and Roy Treble, Tim Leaman and Eddie Purves of BAE Systems Naval Ships.

OTT gets BAE Systems Chairman's Award

As part of the team behind the design of the fibre optic cabling system for the UK's new aircraft carriers, Richard Ednay, Technical Director of OTT has received a BAE Systems Chairman's award for innovation. The two new aircraft carriers will have ubiquitous fibre infrastructures based on EM3 laser-enhanced multimode fibre installed in blown fibre microduct.

By adopting OTT's design recommendations, there are projected cost savings in the order of £1Million per ship on datacomms equipment, and the material cost of the cabling infrastructure is half that of previous comparable systems. OTT's technical support contract also included a technical vendor appraisal process to identify a "lead candidate supplier" to work with the Aircraft Carrier Alliance to mature and refine the cabling system design. Julian Squire of Aircraft Carrier Alliance commented "Richard Ednay's in-depth technical knowledge of the latest developments in fibre optics and his professional, independent expertise have been invaluable in helping us to design this state-of-the-art network. We're very pleased that the excellent outcomes of the design phase have now been recognised by the BAE Systems Chairman's Award for Innovation."

ISO/IEC 14763-3 - what should it mean to you?

The imminent publication of ISO/IEC 14763-3 (presaged by its availability as an FDIS on the Standards Forum area of the FIA Members-Only section of the web-site) is a significant moment in our history.

Defining test methods of installed structured cabling (a la ISO/IEC 11801 or BS EN 50173-1), this new international standard was created in response to industry-demands for repeatable measurement solutions for short lengths of installed cabling. The contents of ISO/IEC 14763-3 do go a long way to meet these demands but there are some radical changes necessary in the way that we test our installations. Within the next month or two the FIA will issue an entire Newsletter solely dedicated to the impact of ISO/IEC 14763-3 but this article serves to highlight the key issues.

It has been found that testing the attenuation of identical multimode cabling links with different light sources can produce significant variations in measured results. Adding to these the impact of using incorrect, or failing to use, mandrel wraps in the launch leads can produce swings of measurement in excess of 1.0 dB. The basic measurement error using a light source-power meter combination can introduce further differences if we switch the test cord connections. Finally, we have the possibility that the person doing the testing may actually have used the wrong referencing method (there are currently three to choose from in each of the existing US, international and European standards). All in all the chances of obtaining a consistent result is quite small.

Of course none of this matters if only one test is carried out per installed link. Unfortunately, and in particular on short links, a "pass" under one test regime can become a "fail" under another. This undermines customer-confidence and can lead to requests for re-testing (for which no one wants to pay) - this can be disastrous in the low-profit margin installation environment that our members inhabit.

Problems for the existing LSPM test methods were initially raised in our Technical Support Document TSD-2000-4-2-1. It provided alternative methods of testing for the latest generation test equipment that had fixed detector heads rather than the older types with interchangeable adaptors. In 2003, the FIA document was submitted to the ISO/IEC structured cabling committee (JTC1 SC25 WG3) as a basis for the revision of their existing ISO/IEC 14763-3. At that time ISO/IEC 14763-3 was only a Technical Report "testing cookbook" that primarily referenced the test methods of other IEC standards. However, it was realised that the test equipment industry was in danger of undermining those published standards and it was decided to revise ISO/IEC 14763-3 as a "full standard".

It is fair to say that the ISO/IEC experts felt that the FIA document introduced too many complexities and a dramatic simplification of test methods was required. At the same time the impact of light source variations began to be understood - and fixing this would require further standardisation work. The early results of this exercise are to be found in the FDIS 14763-3 "Testing of installed optical fibre cabling".

ISO/IEC 14763-3 should therefore be seen to be a stepping stone which addresses many of the problems raised by the FIA and others - it is also a catalyst for other standards committees (specifically IEC SC86C) to undertake further work on its behalf. This is a natural process. The FIA will now have to withdraw its Technical Support Document TSD-2000-4-2-1 (and possibly its sister OTDR publication TSD-2000-4-2-2) and in due course ISO/IEC 14763-3 may well have to be revised again to reference the test methods produced on its behalf.

In the meantime it should be taken to be the "only show in town" - so what are the big changes?

There are three - the first two apply to both multimode and single-mode cabling.

With regard to LSPM testing the most obvious change is the stated preference (or default condition) **of a single test method to be applied to links or channels**. It involves a three-jumper reference technique. This is a simplification of the FIA approach but does **allow any combination of connecting hardware to be tested** i.e. same or different connectors at each end. It also **allows any commercially available test equipment to be used in the same way**.

The next significant change and the one which may not be immediately picked up by installers, is the requirement to use **reference terminations** on the test cords to be connected to the cabling under test. This change is required to reduce the overall measurement error - which additionally improves repeatability. Reference terminations are simply connections that have a defined tolerance for the position of the optical fibre core in relation to the connector ferrule. They can be prepared relatively easily but do have to be manufactured correctly. The FIA will be releasing a list of its members who are able to supply reference cords in the next few weeks.

The final change, possibly the most controversial but certainly the most important in the long-term, is the decision to **define the launch conditions from multimode test cords** in a very new way. It has long been known that measurements of multimode optical fibre cabling and components are sensitive to the distribution of the power in the different mode groups injected into the test object under test. It is well documented that laser and VCSEL sources tend to produce low measurements of attenuation while large LEDs produce high measurements.

ISO/IEC 14763-3 - what should it mean to you? Continued

The use of mandrels was understood to be an attempt to control how much of the available power was concentrated in which mode groups. ISO/IEC 14763-3 has moved away from dowels and curly bits of plastic and taken a technical view of the requirement.

ISO/IEC 14763-3 has defined a modal power distribution (MPD) template that can be either delivered straight from the light sources or via special "MPD stabilisation" cords. Few installers will want to purchase new test equipment - even when manufacturers catch up and start taking the matter of MPD seriously - so the "special cord" option will be very attractive.

Work by the FIA has already shown the impact of such cords and the excellent results produced by them has been replicated by the standards groups involved in the development of the template. This information has been passed on to FIA members that have attended the FIA Seminars during 2004 and 2005.

It was quickly recognised that the development of test cord technology that could stabilise test results, independent of the light source, would be of great value. In 2004, the FIA Council sponsored a project to develop just such a concept and now that the FDIS 14763-3 has been published, the FIA intends to let its members reap the reward of their latent investment. For a limited period during 2006, FIA members will be able to purchase this type of cord, complete with reference terminations, at a generous commercial discount. Once more, detailed information of this scheme will be released in the near future.

So testing is undergoing a serious shake-up. If you can wait for the special FIA Newsletter then please do so. If you feel that you need information more urgently, contact either the FIA Secretariat or the FIA Technical Director (mike.gilmore@btinternet.com) who will be able to assist you more rapidly. In the meantime download the FDIS and have a good read - this article only covers a portion - albeit a significant portion of the topics covered by the standard.

CBI Chief Urges Business Continuity Planning

CBI Director General Sir Digby Jones has urged firms (2nd January 2006) to put a re-assessment of business risk at the top of their list of New Year resolutions. Sir Digby said: "In a year that has seen mainland terrorism, a major incident at the UK's fifth largest oil and petrol distribution depot and natural disasters too numerous to mention across the globe, everyone in business needs to spend some time re-assessing their business risk."

"In the immediate aftermath of any form of incident, continuity planning becomes something of a buzzword but it is increasingly clear that many firms still don't have the necessary plans in place. As New Year resolutions go, few things can be more important than ensuring your business has a future, whatever happens outside your door."

"Consider Buncefield, it was a miracle that no-one was killed, but more than anything it showed that the unexpected can happen at any time. Please - take a long, hard look at how you safeguard your workplace and employees. Make a conscious decision about what is right for the assets in your company. The preparations you make now could help your business survive a catastrophic event be it natural or man-made, continuity is vital and your customers will expect no less."

The CBI has produced some new tips on continuity and security planning covering "Business Survival", "Protecting Intellectual Property", "Validation of Staff", "Controlling Entries & Exits" and "Physical Security".

Sir Digby concluded: "Having the right plan and the right people in the right places can ensure that your business survives no matter what. It is a vital self-help insurance policy that everyone in business must have."

Business Continuity Plans - a service provider

For a relatively small investment, you and your stakeholders could benefit from a Business Continuity plan that will be externally tested and benchmarked, together with a permanent on-line training facility for your employees.

MSD have been advising organisations for some years in all elements of Business Continuity, from creating plans, to testing them and training staff to implement them. Their approach rapidly identifies the key issues, and through realistic simulations will ensure that for any event you are totally prepared, and can get your business up and running with the minimum of downtime and loss of business.

This is something which both your customers and suppliers may also rightly demand from you to ensure their businesses do not suffer due to failure to maintain continuity at your end.

Contact geoff.daplyn@msdinternational.com for more details.

Are you an FIA member? Have you got any NEWS?

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

FIA Council - 2005/2006

As Mike Phillips and Peter Thompsett stood down as **FIA** Council Members, new personnel were elected to replace them. John Marson of Twistnet Communications and Phil Whitehead of Ortonics were elected at the Annual General Meeting on 8th December 2005. At the FIA Council Meeting that immediately followed the AGM, the members were allocated their official responsibilities for the coming year.

After many years of work in the area of Test and Measurement, Paul Bateson of Optical Test and Calibration agreed to be come Chairman and will be ably supported by Peter Lythgoe (Vice-Chairman). The new "boys" John Marson and Phil Whitehead agreed to act as Commercial and Industry Sector Directors respectively. The specific role for Phil was not immediately allocated but it is now hoped that he will become the FIA "guru" covering the seemingly endless list of "certification" schemes that now operate and control the installation industry.

FIA Web-Site Advertising

The annual contracts covering the sponsorship of the **FIA** web-site end on 28th February 2006. We are therefore pleased to report that Cablelines (Cablenet Trackmaster Ltd) has continued its sponsorship of the site and CTTS has, once more, 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 2007 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.

Template Pages

Open Pages

About the FIA
Approved Installer Scheme
Audit Scheme
Arbitration Scheme
e-solutions
Insurance Scheme
Jobs in our Industry
Links
Product Reviews
Qualification Scheme
Skillsmatch
Standards Forum

List Pages

Open Pages

Approved Installers
Approved Training Providers
Articles
Events
FAQs
Newsletters
Presentations of past events
Press Releases
Stolen Equipment Register
Technical Support Documents
White Papers

Members Only Pages

Cost Modelling
Skillsmatch
Standards Forum
Technical Support Documents

**Are you an FIA member?
Have you got any NEWS?**

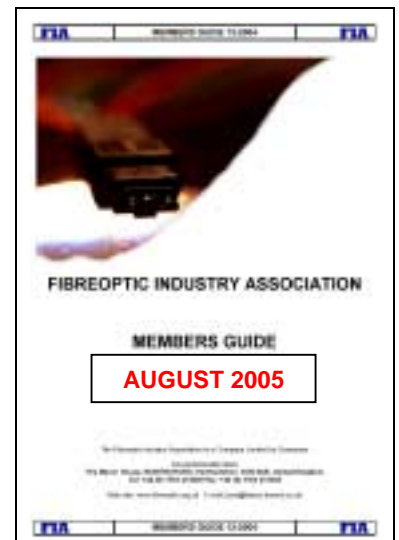
This Newsletter is provided as a means of maintaining communication between and with our Members.
It can, therefore, promote the activities of Members to other Members.
Articles, product information, news items etc. are always welcome.
Please send the information via email (jpg illustrations) to Jane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

FIA Members e-Guide

The third electronic version of the **FIA** Members Guide is available for download via the hyperlink on the home page at 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 e-Guide. 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.

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.



Version 1.02 of BIP0007 now available
for download
from
www.fia-online.co.uk
MEMBERS ONLY

Telecommunication cabling and equipment installations

A guide to requirements and responsibilities



FIA Qualification Scheme - Approved Course Units

The FIA Qualification Scheme announced last year is up and running with Approved Training Providers and Certified Trainers appointed and, most importantly, the first of the Approved Course Units are now listed for Level II and III qualifications.

FIA Qualification Scheme - Certified Fibre Expert

Mike Gilmore, Technical Director of the FIA, is to be the first "guinea-pig" to be assessed under the Level V Certified (Optical) Fibre Expert qualification.

Mike has already submitted his 8000 word thesis on the subject of "Multimode fibre bandwidth – its' true value for high bit rate networks within plug-and-play data centre infrastructures" and he will be examined on the subject by Professor Ian White from Cambridge University together with other recognised industry experts.

If successful, the paper submitted will be published as an **FIA** Technical White Paper – thereby not only providing Mike with a brand-new qualification but allowing the FIA membership with free access to the material.

Mike Gilmore may be the first – but lets have more submissions. Contact the **FIA** Secretariat for details or visit the **FIA Qualification Scheme** area on the FIA web-site at www.fia-online.co.uk/equals01.htm.

FIA Standards Forum – documents available for download and comment

The Standards Forum now offers **FIA** Members the opportunity to comment the standards in development by the fibre optics and cabling committees in ISO/IEC, IEC, CENELEC and BSI. These cover a range of optical fibre products such as optical fibres, cables and system components together with the design, installation and commissioning standards for cabling. To get involved - go to the members-only area of the **FIA** site area, type in your password, go to Standards Forum and follow the instructions.

Forthcoming Events

opto
OPTO
Le seul salon européen dédié à toutes les solutions optiques

cabling systems europe
CABLING SYSTEMS EUROPE
Le salon de l'infrastructure des réseaux câblés et sans fil

forum de l'électronique
FORUM DE L'ÉLECTRONIQUE
Le rendez-vous annuel de toute la filière électronique

mesurexpo
Mesurexpo
Le salon de l'instrumentation pour la recherche, les essais et l'industrie

In association with our French colleagues Club Optique we take this opportunity to draw your attention to the four-exhibitions-in-one event in Paris (17th-19th October 2006) at the Paris-Expo, Porte de Versailles.

www.cablingexpo.com
www.forum-electronique.com
www.mesurexpo.com
www.optoexpo.com

Watch this space for further information.