



The Fibreoptic Industry Association

www.fia-online.co.uk

NEWSLETTER

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THE FIBREOPTIC INDUSTRY
ASSOCIATION

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A warm welcome to the following NEW MEMBERS

Corporate

- 641 - INTEGRAL NETWORK SOLUTIONS
- 640 - OPTICAL NETWORKS UK
- 639 - FINEVALLEY COMMUNICATIONS
- 638 - HELLERMANNTYTON DATA
- 637 - WACHTER NETWORK SERVICES
- 636 - LECTRIQUE
- 635 - A-TECH DATA SOLUTIONS

Hartwood Services join FIA AIS List

Hartwood Services Ltd of Basingstoke have joined Lightguide Technologies and Lynx Networks as Approved Installers under the Mk II AIS scheme. They have joined at the right moment giving themselves enough breathing space to get to know the existing system before it undergoes the massive upgrade to reflect the publication of the new EN 50174-1 and EN 50174-2 standards later this year (see overleaf). Full details of all the above companies can be found at: <http://www.fia-online.co.uk/eais02.htm>

Watch out for hoax calls

It has come to our attention that at least one individual has been contacting FIA members with the objective of selling products and services and has been introducing himself as being "from the FIA" - perhaps to obtain additional influence with potential customers. Please be assured that the FIA does not, and will not, employ or authorise individuals to make such sales calls and anyone claiming to be "from the FIA" (other than the FIA Secretariat or current directors) is acting fraudulently. If, on the other hand, the FIA have entered into an agreement with a third party you will already have been advised by e-mail as to the pertinent details. If you receive such calls it would be useful to obtain as much information as possible during the call and then immediately advise the FIA Secretariat.

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

Dave Madsen - Test & Measurement
(DMOptics)
John Colton - Training
(Lucid Optical Services Ltd.)
Lee Funnell - Qualifications
(The Siemon Company)
Peter Lythgoe - Installation
(Lythgoes)
Phil Whitehead
(ACCL)

FIA-online.co.uk

Visit the site and familiarise yourselves with its content - to access member-only pages you will need both your FIA membership number and the membership password as issued in January 2008. If you do not know these then contact your FIA Principal Contact - failing that contact the **FIA** Secretariat.

Newest members receive HSBC Start up award

Our most recent members, Integral Network Solutions of Barnsley, has been announced as one of just 20 regional finalists in the HSBC Start-Up Stars Award programme. The competition is aimed at new businesses under 3 years old and recognises and rewards the hard work that goes into starting up a new company.

The company was started just 15 months ago by Paul Taylor, whose passion for telecommunications stems from his chosen Army Career path in the telecommunications section. He has been joined by Admin Manager Arran Bradley and team members Lisa Garner and Georgina Diggins.

Mark Tilleray of HSBC (2nd left) presents Paul Taylor, Lisa Garner, Arran Bradley and Georgina Diggins of Integral Network Solutions with their regional finalists award.



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 Standards Forum

- documents available for download and comment NOW

The Standards Forum offers **FIA** Members the opportunity to comment on standards in development by the fibre optics and cabling committees in ISO/IEC, IEC, CENELEC and BSI. These standards cover a wide range of optical fibre products such as optical fibres, cables, connectors 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, go to Standards Forum and follow the instructions. Why not bookmark this page for easy access - it is always easier to influence standards in development than fix them later

FIA web-site data shows interesting trends

Google Analytics, the free web-site activity monitor, has thrown up some interesting results for the FIA site at fia-online.co.uk. As one might imagine, the UK comprises the lions share of visits to the site. The USA comes second with 7% of activity but over the last month the UAE has risen from zero to third place with 4% of the visits to the site. This increase is directly linked to the visit of Mike Gilmore, Technical Director of the FIA, to Dubai in early May where he presented a workshop and delivered a presentation at the recent BICSI Middle East conference.

This proves two important points - first is that Google Analytics actually provides valid information: secondly that an effective web-site can provide a valuable service as a follow-up to direct contact. It would be great if we could obtain some UAE members in the near future.

Taking Google Analytics further we have been able to identify which areas of the FIA web-site get most hits and we take this opportunity to remind members that they are able to sponsor pages of the web-site - and indeed the entire web-site for twelve month periods.

Setting up Google Analytics for yourself is straightforward provided that your web-site is well-organised - for further information contact mike.gilmore@btinternet.com.

Sponsoring the FIA web-site and pages

We take this opportunity to thank the following members for sponsoring the **FIA** web-site - **Cablenet Trackmaster** and **Linbrooke Services** - and the following members for sponsoring specific pages - **CTTS**, **GCL**, **Optical Test and Calibration** and **Major Electrical**. There are plenty more pages available - for more information, please contact the Secretariat.



If you already receive **networking+** magazine you will 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>.

Agreement is reached on content of new installation standards

The final voting drafts of EN 50174-1 and EN 50174-2 have now been prepared and will be circulated in the next two months. These documents are a significant revision of the documents published in 2000. Based on the format of BS 6701:2004 the standards not only introduce a substantive change in the list of requirements and recommendations but also present them in a structured way - making it easy to define responsibilities for both installers and premises owners.

One of the most relevant changes in **EN 50174-1** is the development of a concept of infrastructure complexity as a means of defining the scale or coverage of specific activities. The most identifiable change is the inclusion of an Annex containing requirements and recommendations for polarity maintenance for multi-fibre installations. The recommendation for array connectivity (parallel optics solutions) differs from that in FIA-TSD-2000-3-3 and the FIA document will soon be amended to reference the new European standards.

EN 50174-1:2008	Information technology - Cabling installation - Installation Specification and quality assurance
EN 50174-2:2008	Information technology - Cabling installation - Installation planning and practices inside buildings

While most of the changes to EN 50174-1 are quite subtle, **EN 50174-2** has received a massive makeover. Often criticised, even by the standards-makers themselves, for a lack of clear requirements and apparent technical inconsistencies, the structure and content of EN 50174-2:2000 has been totally re-worked and re-engineered. **EN 50174-2:2008** now contains three principle clauses against which conformance is assessed. The first is entitled "**Requirements for planning installations**", the second: "**Requirements for installation**" and the third: "**Segregation of metallic information technology cabling and mains power cabling**". For the optical fibre community the first two contain the real changes but for the world of "copper" cabling the third has been the most hard fought. These three sections represent the general requirements for all installations but there will be additional clauses for "offices", "industrial premises", "homes" and "data centres" which contain modified requirements that are applicable to the particular premises types. The 2008 edition of EN 50174-2 will contain the "offices" and "industrial premises" clauses and a future amendment will contain the other two.

Following the successful voting of EN 50174-1 and -2, BSI will publish the UK versions - unchanged. The impact of these standards will be felt in a number of areas as detailed in the inset to the right.

The impact of BS EN 50174-1/-2:2008

As was mentioned above, EN 50174-1/-2 reflect the format and content of BS 6701:2004. Once the BS ENs are published the UK will have to revise the contents of BS 6701 to remove any elements duplicated in the ENs. Preliminary work is now underway within BSI to make these changes - these changes will also require the revision or withdrawal of BIP 0007.

For the **FIA**, the detailed changes to EN 50174-1 and EN 50174-2 will be reflected by amendments to the **FIA** Approved Installers Database (AID) that links directly to the **FIA** Approved installer Scheme. It is hoped to complete this work in Q3, 2008.

What should not be underestimated is the amount of effort that has been expended in the production of the new standards. This is primarily due to the fact that their use is mandatory from the (BS) EN 50173 series of structured cabling standards. As a result, the main cabling system suppliers have become heavily engaged to ensure that their own recommended practices are included (or dropped). This is expected to result in simplified training solutions and easier routes to supplier approval. That being said, it should be remembered that the EN 50174 series applies to all telecommunications/IT cabling - not just structured cabling.

The changing face of optical fibre infrastructure in data centres

(this is a slightly amended version of the text provided to Networking+ in May 2008 by Mike Gilmore, Technical Director of the FIA)

IEEE have now selected the initial solutions for the physical implementation of 40 Gigabit and 100 Gigabit Ethernet over multimode optical fibre. It is certain that array devices (i.e. multiple VCSEL sources and detectors within a single connector) will be involved. 40GBASE-SR4 will be a 850 nm 4x10Gb array to support 40 GbE and 1000GBASE-SR10 will require an equivalent 10 x10Gb array - it is probable that the installation of multimode optical fibre over short distances in data centres will be changed forever.

There will be other implementations of these applications using singlemode optical fibre but these are unlikely to be economic over short distances. The maximum supportable distances using multimode optical fibre are unknown at this time but it is unlikely that they will exceed 200 metres. For longer links singlemode transmission equipment will be the only solution - but at significant cost.

This leaves the region below 200 metres (and specifically below 100 metres) retaining a cost advantage for multimode optical fibre. However, transmission distance is not the key issue. Instead, the array transmission systems will place constraints on the installation of optical fibre which are only just beginning to be understood. The principal issue may be skew - the difference in time of transmission between the fastest route down the shortest optical fibre and the slowest route down the longest.

The concept of a delay skew limit is well-known to balanced cabling installers - every installed link is tested against the skew requirements. There are three important points: first, the delay skew limit is length-independent (it does not matter how long the link is); second, it applies across the four pairs of a cable and third, cable designs ensure that it is achieved.

In comparison, the concept of skew is alien to users/installers of optical fibre. Control of the differential lengths of optical fibre between two panels has never been a critical aspect of installation. It is recognised that basic techniques and yield factors for both field termination and splicing of pigtails produces different lengths - it may be that such variations become unacceptable in the future which forces us to consider the installation of pre-terminated cables with multi-fibre MPO or MTP interfaces. Many of the major systems suppliers predict this transition but most of the industry, including users, has not yet fully considered the implications of such systems.

The use of pre-terminated cables, primarily as a means to assist rapid installation, is not a new idea. Many system-suppliers have had solutions in place since the mid-1990s. However, a move towards an automatic introduction of such solutions as a day-to-day installation solution brings with it a number of challenges. Within data centres the primary design issues are cabinet cooling and overall energy efficiency. The presence of increased quantities of spare cables, as a result of inaccurate length allocation within pre-terminated cabling solutions, under floors and inside cabinets is in direct conflict with these aims.

So how are the technology demands for skew control in support of "next generation" applications going to be implemented? One approach is the significant integration of cabling, cabinets and cable management systems in order to allow accurate length determinations. Another involves the use of cabling "buffer" spaces which allow spare cables to be stored without impact on the energy efficiency of the overall data centre - but at the expense of cabinet real estate. The future appears not to be one of transmission technology but of systems design - but, have no doubt, we are all facing a change in installation approach and associated skills.

FIA becomes a BSi Affiliate

The FIA has been accepted onto the BSi Affiliate programme. In the next few weeks a link will appear on a number of the pages of the **FIA** web-site which provides a direct link to the BSi site allowing purchase of standards. This is a logical development from all the other standards activity undertaken by the **FIA**.

How about sponsoring a Newsletter?

The FIA Newsletter continues to develop and we are now offering the opportunity to sponsor each of our Newsletters. The sponsors details will appear on each page and be hyperlinked to their web-site and e-mails as appropriate. For more details contact Jane Morrison via jane@fiasec.demon.co.uk

As we have had enquiries from members regarding long-term sponsorship of the Newsletter, the **FIA** Council agreed that details of the fee structure should be announced both here and on the **FIA** web-site. Details are shown on the right.

Only one sponsor is allowed per issue so if you are interested please contact Jane Morrison via jane@fiasec.demon.co.uk

Sponsorship rates for 2008/2009:

- Long-term sponsorship - limited to 3 issues per annum - £500 plus VAT
- Single issue - £200 plus VAT

New cost structure for **FIA** Qualification Scheme

The cost structure for registration and ongoing maintenance of your award under the **FIA** Qualification Scheme has been dramatically simplified. The admittedly rather complex structure has been replaced by a simple once-only fee as follows. The once-only Enrolment Fee of £49+VAT covers the establishment of the Learner Record and a hard-copy certificate detailing the Award achieved. The FIA uses this fee for administration costs to monitor and cross-check trainee progress. This fee is waived for FIA Personal Members. Also the ongoing charges have been dispensed with as detailed below.

- **ANNUAL FEE:** There is **NO** annual fee for learners, but there is a commitment to do at least one unit per year.
- **NO ADDITIONAL UNIT FEES:** After achieving a Unit award with a training provider as part of a Level II-IV Award, the learner will need to register this Unit with the FIA by submitting a Unit Feedback Form. There is **NO** fee for this.
- **NO ADDITIONAL AWARD FEES (- LEVEL IV):** After achieving the next Award level a new hard-copy certificate will be issued. There is **NO** fee for this.

For details for the Qualification Scheme go to <http://www.fia-online.co.uk/equals01.htm>. To download the FIA Newsletter dedicated to the **FIA** Qualification Scheme go to <http://www.fia-online.co.uk/pdf/NL/QSNewsletter-L4692.pdf>.

FIA exhibits at Telecoms '08

For the first time in many years, the **FIA** is to exhibit in its own right at an exhibition. We have booked stand 117 at the Telecoms '08 exhibition on 24th/25th September at Olympia 2.

We hope to see many of our members during the two day event.

FIA AGM - a date for your diary

The next **FIA** AGM is Thursday, December 4th 2008. This year we hope to co-locate a half-day seminar covering a series of techno-commercial topics. We will keep you informed of the exact details of both the AGM and the seminar in due course - both by e-mail and in the next edition of this Newsletter.

Check out your details in the **FIA** Members e-Guide

The latest (March 2008) version of the Members e-Guide takes pride of place on the default page of the FIA web-site. It contains details of all members, their products and services and any approval they have. We urge all members to take a look to make sure we have the latest information regarding their company. Have you changed address, telephone, fax numbers or have a new web site? If so please advise us as soon as possible.

Advertising in the e-guide has been running from 1st August 2007 and will expire on 31st July 2008 and in the next few weeks we shall be giving members the opportunity to take advertisements in the new guide. Advertising rates are just £240 + vat (Colour ads) and £150 + vat (B&W ads).

Do you make use of the **FIA** White Papers?

FIA White Papers cover a range of topics within the world of fibre optic technology and are strongly promoted on the default page of the **FIA** web-site. They are available to all, members and non-members alike, and are both continually expanded and kept-up-to-date. The Google Analytics tool mentioned above indicates that the White Papers index page received plenty of hits but, in contradiction of this, the **FIA** Technical Directorate receives many queries from members that would be easily resolved by reading the published White Papers.

A new **FIA** service - 3rd Party White Paper Pages

The **FIA** Council have received requests to establish a series of web-pages for specific members to insert their own White Papers. This is going to be supported on a trial basis over the next twelve months. The **FIA** White Papers page will be modified to allow access to a series of 3rd Party pages allowing members to both sponsor their own pages and to list, on those pages, a limited number of their own White Papers. Each of these 3rd Party pages will include a disclaimer on each page to clearly differentiate them from the **FIA** White Papers.

The fee for such a page is to be set at £250 plus VAT per annum for up to 5 White Papers. This covers the cost of page sponsorship and the management fee for uploading and maintenance of the White Papers and other information on the page. If you are interested please contact Jane Morrison via jane@fiasec.demon.co.uk