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NEWSLETTER

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THE FIBREOPTIC INDUSTRY ASSOCIATION

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A warm welcome to the following NEW MEMBERS

Corporate

- 484 - Computer Network Cabling
- 482 - Capital Technical Services Ltd
- 478 - Future Fibre Systems Ltd
- 479 - Phonelink Installations Ltd
- 477 - Comunica plc

Overseas Corporate

- 480 - FONS (Ireland) Ltd

Associate

- 483 - HBOS plc
- 476 - K-tel 2000 Ltd
- 475 - University of Birmingham

Student

- 481 - Mr. M. Mundell

New FIA Publications

The following documents were published on the FIA web site in December 2001:

- TSD-2000-5-1: Optical Power Safety Levels;
- TSD-2000-5-2: Optical Fibre - Handling of Processing Chemicals;
- TSD-2000-5-3: Optical Fibre - Disposal of Waste.

TSD-2000-5-1 is based upon the IEC 60825 series of standards and is the world's first document to clearly define the safe installation and operating practices for optical fibre cabling infrastructures - an area that is, unfortunately, not always fully comprehended by many in the industry.

In addition to the above, two further important Technical Support documents are being developed, both of which cover the measurement of attenuation of installed cabling. The first, **FIA-TSD- 2000-4-2-1**, covers the use of light source and power meter (LSPM) equipment. The documents defines the conventional test methods that have been standardised and harmonised for many years in the US, UK, Europe and international level and discusses the changes required following the introduction of duplex test systems and SFF connecting hardware. The document will then proceed to explain the true level of measurement error the impact of this error when short systems (more commonly seen within buildings) are tested. The second document, **FIA-TSD- 2000-4-2-2**, will be started upon completion of the first TSD and will address installed cabling installation using OTDR equipment.

It can also be announced that the **Cost Modelling Template** system is now available on the web-site.

FIBREOPTIC INDUSTRY ASSOCIATION

The FIA is a Company Limited by Guarantee

Management Council

- Mike Phillips - Chairman
(Fibre Optic Solutions)
- Andrew Watson - Vice Chairman and Commercial
(Molex Premise Networks)
- Mike Gilmore - Technical Director and Treasurer
(The Cabling Partnership)

Industry Sector Directors

- Paul Bateson - Test & Measurement
(Optical Test and Calibration)
- Stuart Smith - Training and Qualifications
(Cabling Science Ltd.)
Installation
- John Cupitt - *(Dwelllight)*
- Peter Thompsett - *(Ensign Communications)*
- Steve Strange *(Anixter International)*
- Paul Taylor - *(AEC)*

Work Starts on New Technical Support Documents

Further projects include a "What do I need to know about dark fibre" document and an amendment to the LAN ASG covering the latest developments in 10G Ethernet and the need for mode conditioning cords for certain implementations of 1G/10G Ethernet.

New R&D Facility for TRITEC

TRITEC Developments Ltd, a leading provider of fusion splicing equipment, has opened its new research and development facility as part of a £250,000 investment programme.

The opening of the laboratory at Bold Business Centre, St. Helens, is part of a long-term investment programme, providing new equipment and leading-edge R&D facilities for the company.

David Myers, a director of TRITEC Developments, comments: "The opening of this new facility indicates our on-going commitment to long-term research and product development. At TRITEC we pride ourselves on the innovative design and quality of our products and high levels of technical expertise. This investment will help us secure our position as a leading provider of fusion splicing technology." The new facility will house specialist design work stations and top of the range IT facilities for the company's design engineers and development team.

TRITEC has also appointed a qualified martial arts instructor, Chris Morris, as Production Manager. Chris, who spends his spare time teaching martial arts in his home town of Whiston, hopes to bring his considerable technical manufacturing experience to the fore as he heads up the production, quality and buying departments at TRITEC.

He joined the operation after gaining over seven year's experience in a technical manufacturing environment at electrical filter and suppressers manufacturer, MPE Ltd. He hopes to pass on some of this invaluable experience to his team: "I think it's very important that a manager is directly involved in training staff," he explains.

For further information about TRITEC Developments. visit their web site at www.tritec-dev.com or call +44 (0)1925 220466

AGM

The AGM of the FIA took place in Towcester on 5th December 2001.

During the event, It was agreed to allow the number of Council members to be increased to 9 in order to spread the rapidly increasing workload on the existing members.

Mike Phillips of Fibre Optic Solutions and **Andrew Watson** of Molex Premise Networks agreed to stand for re-election while **Paul Taylor** of AEC plc was nominated to fill the remaining place. All three were elected. Mr Phillips continues as the FIA Chairman while Mr Watson remains as Commercial Director.

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 Roy Atterbury via

roy@attassoc.demon.co.uk

OTT assists ex-Corning Professionals

Skipton-based Optical Technology Training has played a crucial part in helping to re-train a group of ex-Corning professionals following their recent redundancies from the Corning Optical Fibre Plant in Deeside, North Wales.

OTT designed a tailor-made Career Development Programme for the group that ran over a 3-week period. Funded by ELWa (Education and Learning Wales) it was designed to provide each student with the most up-to-date knowledge in installing and testing fibre optic cabling – thus enabling them to transfer their new skills to the marketplace.

Ruth Meadows, Media Relations Manager, ELWa comments: "It is key that all these people utilise and build upon their existing skills. As an organisation, ELWa is committed to providing funding for post-16 education and training in Wales and we are delighted to be able to help these professionals to re-train and find new jobs within the area."

At the end of the intensive 3-week programme, all members of the group gained the City & Guilds 3466 qualification that prepares them for roles working in either Telecomms or Datacomms applications. They also completed two of OTT's range of advanced fibre optic testing courses.

OTT is committed to helping all its mature students to find employment within the communications industry, and each course delegate has attended a special session focusing on finding employment opportunities, providing supporting information on recruitment agents, essential web sites, major employers and a CV Healthcheck.

Richard Ednay, Director of OTT, comments: "The practical course that we put together ensures that each student really understands every aspect of fibre optic cabling. The programme was designed to build competence and confidence, while working towards the most recognised qualification in the industry - City & Guilds 3466 series. "

For more information about ELWa, access the organisation's web site at www.elwa.org.uk. For further information about OTT visit www.ott.co.uk, email sales@ott.co.uk or call 01756 797155.

NOTE:

Optical Technology Training has just been accepted as an FIA Approved Training Provider at both Levels 1 and 2.

www.fibreoptic.org.uk

the fast route to obtaining the latest FIA news

City & Guilds 3466 scheme

The FIA has been reviewing qualifications in fibre optics as a basis for its approved installer scheme and as a basis for Skills Match – the online database of qualified professionals. It is apparent that the City & Guilds 3466 qualification is the only widely held qualification that provides any evidence of practical expertise in fibre optics and communications cabling. The FIA is therefore very keen to ensure that the quality of this qualification and the value associated with it are maintained. This is why the FIA is actively involved with City & Guilds in the current review and update of the qualification.

Although the leading providers of this qualification have updated their training programmes to keep up to date with new developments, there are some that have not. This update of the syllabus will also ensure that it reflects the requirements of the new IS 11801/EN 50173 cabling and associated testing standards that are being published this year. These new standards represent the culmination of many years of effort and will provide a relatively stable platform on which to base training programmes and skill sets.

Alarm bells

There is an increasing trend for training companies to attempt to deliver both of the current multimode (3466-02) and singlemode (3466-03) qualifications in just a one week course. In the past, each course has taken a week. This is of great concern to the FIA since it risks weakening the status of the qualifications. The reason for the FIA concern is that although both qualifications, when taken separately, are valuable in their own right it should be realised that they are designed for different skill sets in different work environments.

The multimode qualification 3466-02 is concerned with fibre optic data cabling for local area networks. At the time the qualification was last reviewed, then the predominant fibre type in use was multimode fibre - hence the title. Some of the confusion may have been caused by the fact that higher data rates in local area networks has led to increasing use of singlemode fibre. However the skills required to install singlemode optical fibre in a LAN environment are very closely aligned to those skills needed to install multimode fibre competently. These skills are adequately covered on the proposed new version of the scheme. There is no requirement for a separate qualification to install singlemode fibre in a LAN environment.

The singlemode qualification 3466-03 was developed to provide a qualification for those working with fibre optics in an outside plant environment. Here the key skills are for cable jointing, typically high fibre count cables containing 48, 96, 120 or more fibres, working in an external environment. The Health & Safety issues and work environment is quite different from typical datacomms work. Also the testing requirements are quite different and often a good deal more complex than in a LAN environment.

Although there is some overlap between the two courses in terms of theoretical knowledge the practical aspects are quite different. The City & Guilds course, when properly delivered, is predominantly a practical course skills course. It is the practical sessions that allow a good skill level to be built up that provides the value in the qualification. Also there is a requirement for a practical skills assessment that is separate from the learning and candidates must demonstrate competence in each key task. It does not seem feasible to adequately cover all of the requirements for both courses in a single one week period.

The FIA Council recognises that, during an economic downturn, budgets for training are closely examined (and in many cases trimmed) but it appears to be a false economy if the training provided is too intense or not rigorous enough. The FIA Council is to discuss the situation and may consider withdrawing "Approved Training Provider" status from any training provider attempting to "do the double".

CableNet Gets Up Steam

December was a busy month for CableNet as, on top of its normal training routines, the FIA Approved Training Provider packed up and moved into its new training centre. The new address is as follows:

**CableNet Training Services Ltd
CableNet House, Kempson Way, Suffolk Business Park
Bury St. Edmunds, Suffolk IP32 7AR**

CableNet is also heavily involved in redundancy training, whereby companies that are making cut-backs offer training in new skills as part of their redundancy programme. To-date, the company has trained Rover, Dunlop and Goodyear employees and is currently conducting training for up to 100 Vauxhall employees. They are learning data, fibre and voice with all successful delegates receiving one of its BTEC qualifications (BTEC Intermediate Certificate in Telecommunications Cable Installation). These delegates are available for work from the end of March.

RW Data

RW Data has chosen CableNet Training to provide its Network Sciences Fibre Optic Training. The course has been designed as part of the Network Sciences programme and will allow installers to offer a Fibre Optic System Warranty.

Steve McNair, Business Development Manager for RW Data said: "We selected CableNet Training because of their flexibility in the design of the course and the extensive resources available in their new premises." The course becomes available from March

Flatman Seminar

CableNet's *Next Generation Cabling* one-day seminar is proving extremely popular. Dr. Alan Flatman presents a detailed appraisal of the latest developments in structured IT cabling with guidance on cable choice and planning. The seminar is running on the following days: 5th March, 9th April, 29th May and 2nd July 2002. The price is £275 + VAT.

New 5-day Courses

To meet the growing demand for qualified professionals to design, install and maintain technology-based security systems, CableNet has launched two new 5-day courses and a one-day specialist seminar.

Security Systems Cabling

Provides the skills and knowledge to undertake copper & fibre cabling for technology-based security systems.

Security Systems Installation

Theoretical & practical training on today's security systems equipment, covering access control, intruder alarms and CCTV.

Residential Cabling

In association with BRE Events in Watford, this one-day seminar provides an overview of the products and cabling infrastructure that supports the growing multi-media residential/household market. The seminar will run in Watford. If you are interested please telephone BRE directly on +44 (0) 1923 664800.

If you are interested in further details on any of the other areas, contact Hayley Smyth at hsmyth@cablenet-training.com

LAN Application Support Guide

Don't forget about the *FIA LAN Application Support Guide* (free to members, £150 to non-members) which introduces the concept of optical fibre cable categories in support of the international and European standards. The Guide is now available for members to [download free of charge](#) from the 'members' (password protected) area of the FIA web site.

FIA Breakfast Seminar Review

FIA Commercial Director Andrew Watson reports on the December events.

To conclude a busy seminar year for the FIA, the final Seminar was presented in December at both Bisham Abbey and Scotland and comprised **New singlemode technologies -presented by David Tanis, OFS Brightwave** together with **Dark Fibre - Do users know what they are getting? - presented by Mike Gilmore, Senior Partner of The Cabling Partnership and Technical Director of the FIA.**

David has considerable experience in the singlemode field, as OFS was previously Lucent Technologies. A very comprehensive and informative presentation was made which covered the development of singlemode fibres, applications and new cable constructions for multi-gigabit applications.

Mike Gilmore complemented David's presentation by covering, dark fibre link and channel specifications and – importantly - responsibility. The need for good record keeping was emphasised and a possible format presented.



As has now become the norm, delegates were able to ask and discuss key questions and gained a thorough insight to future installation implications.

At the conclusion of the seminars, delegates were given an overview of the considerable work completed by the FIA on documentation covering, design, and installation, safety and modelling tools.

FIA Members are encouraged to visit the FIA web site to download recent updates.

FIA Seminar Programme 2002

With the FIA Breakfast Seminar programme achieving considerable success in 2001, planning has started on the seminar programme for 2002. The events have become a regular feature of the FIA's services and will continue in the same format that has become so popular.

In addition, and to enable key topics to be covered in more depth, 1 day seminars are being considered and will take place provided there is sufficient support by the membership.

As an extension to our activities, meetings have been held with the Electrical Contractors Association (ECA) and principal companies in the industry to seek support for two "industry" forums covering several subjects that are of interest to all concerned with the ownership or installation of data networks. These seminars are planned for the second half of 2002.

Dates have been provisionally booked as follows:

FIA Breakfast Seminars: 20th March, 13th June, 10th September - all at Bisham Abbey, Marlow.

Costs for each Seminar are just £45 + vat for FIA members (£125 + vat non-members). Contact the FIA secretariat for full details.

FIA Full-day Seminars: 16th May and on a further date to be announced

Costs for each Seminar are just £75 + vat for FIA members (£200 + vat non-members). Contact the FIA secretariat for full details.

Industry Forums in conjunction with the ECA: Birmingham in September and repeated in London early December.

FIA Seminar: 20th March: To start this year's programme, a subject that is a "hot topic" for the industry is that of **Testing Installed Cabling and Network Support**. Many member companies have feedback the difficulty of understanding correct testing procedures while, at the same time, end users have raised concerns that test results are complying with latest standards. FIA Technical Director Mike Gilmore will be covering this subject with the aim of clarifying correct practices and illustrating a method of recording results. The FIA document FIA-2000-4-2-1 *Testing of Installed Cabling Attenuation Using LSPM Equipment* is soon to be released and will serve as the basis for the presentation. It will be a document that will be very useful in resolving many of the current issues.

New Members' Guide

The FIA is planning to print an update of its very popular publication, the *FIA Guide to Members' Products & Services*.

The Guide, a handy A5 booklet, promotes member companies and their range of activities. We are proposing to print **2,000** copies.

Once printed, the new Guide will be sent to each FIA member. The remaining copies will be used during the rest of the year for promoting the FIA in general, enquiries etc. via the Secretariat, and at a number of industry related exhibitions and seminars.

The aim is to sell advertising space within the Guide to cover all the printing costs that avoids the need to use FIA reserves for this project. It also ensures that funding will be available for all the new projects and publications projected for 2002. Members, of course, are given priority to advertise within the Guide and the advertising costs are as follows:

- **Centre spread - A4 landscape - full colour - £875**
- **Outside or Inside back page A5 - full colour £500**
- **A5 full colour (within the body of the Guide) £400 each**
- **A5 - B & W with spot colour £300 each**
- **A5 - B & W £250 each**

Please note that any advertising space must be pre-booked by **6th March**. The artwork copy deadline is **22nd March**.

If you would like to book space for your company advert then please ask the Secretariat for an order form as soon as possible. On receipt of space bookings you will be sent an invoice and full copy specifications etc.

Specialised Business Control Software

The FIA has been approached by a company called TCC Prima that supplies, installs and supports business control software into certain vertical markets including the Fibre Optics industry. The software, it says, saves companies huge amounts of time by controlling all areas of the business from one central database.

The software system is said to be the first truly 'enterprise wide' software solution available to the SME market, and it controls a company's entire business processes from prospect management to sales and purchase orders right through to Field Service Management. Software of this functionality has, it is claimed, only been available to larger corporate companies and costs many thousands.

Prima software recently won the Sunday Times and 3i national Technology catapult award, and received a £2 million investment from 3i to further develop the software.

The software is a perfect fit for the fibre optics industry and can help transform the efficiency and profitability of users. Prima is available on a monthly licence fee making the software affordable to all businesses.

If you would like any more information on Prima, please view the online brochure at www.tcc-prima.co.uk or contact Rob Hoath, Commercial Director, TCC Prima Ltd, Tel: 01234 348682 Fax: 01234 358342

Fibre Testing Basics

By Paul Bateson, FIA Test & Measurement Director

(One of a series of articles for the less well informed. Based on a some tips for readers of the *Professional Electrician*)

“....

For those who have never been trained or involved in the testing of fibre optic networks and installations, the task might seem like a black art. However, by taking some simple precautions we can make reasonably accurate measurements of the optical losses throughout the system.

The attenuation of a fibre link can be easily measured by using either an optical loss test set or an optical time domain reflectometer (OTDR).

The optical loss test set comprises a transmitter/source to launch a DC or continuous light output at the required wavelength into one end of the link under test and a calibrated optical power meter to measure and display the received power detected at the other end. The optical power meter has a receiver which reacts to the incident LED or laser light, converts the optical energy into an electronic signal and displays the measured value for the selected wavelength.

A typical loss or attenuation measurement is made by referencing the output from the optical source into the optical power meter with a reference patch cord, removing the cord from the power meter and connecting to the input of the link under test, reconnecting the power meter to the output of the link under test and recording the difference in readings (usually in dBs). The detector's response is wavelength dependent, so it is important that the meter is properly calibrated.

The OTDR usually requires access to only one end of the fibre system; it launches a short pulse (or set of pulses) into the link. The launch power is internally referenced in the OTDR and the pulses are accurately timed as they leave. The fibre continually reflects very small amounts of light back along its length due to scattering and tiny imperfections, and larger amounts of light are reflected back to the OTDR from faults and connectors. These reflected signals are captured and used to 'draw' a map of the fibre.

The amount of light received back provides the attenuation data and the time taken gives an indication of distance. This data is processed and displayed as a linear plot showing the gradual decay of the signal along the fibre length and pinpoints the discontinuities: connectors, splices, bad bends and fibre breaks can all be individually identified. This is both a useful installation and maintenance tool.

The main sources of measurement errors are launch conditions, cleanliness and calibration. Cleanliness is vital; dirt on the connector ferrules and in the connector adapters can lead to misalignment of the fibre cores, and dirt on the end faces of the polished connectors can lead to light scattering and absorption. Regular calibration will also highlight any drift in detector response. The FIA provides further information on testing, published guidance notes and international standards, as well as links to find training resources for the theory and practise, installation and design of fibre optic networks.

.....”

3M Selects Optical Technology Training

Optical Technology Training has been selected as the preferred training partner to support the 3M Volition Network Solution. This is the latest in a series of new partnership agreements for OTT.

3M selected OTT as their new training provider due to its professional approach to training design and delivery. The key objectives of the 'Volition Certified Installer Cable Installation Training programme' are for attendees to be able to terminate Volition systems efficiently and test them correctly. It has been developed specifically for installation personnel who wish to attain the '3M Authorised Volition Installer' status. OTT have worked closely with 3M to refine the training programme and have provided supplementary training materials to assist the learning process. This professional training approach has allowed the course duration to be reduced, resulting in a more efficient use of time for course delegates.

The 3M Volition Network Solution is a unique end-to-end networking solution utilising “ferruleless” small form factor duplex fibre optic connectors. The system offers many benefits to the end user including its small size and rapid termination time that reduces installed cost.

OTT's capability to deliver the Volition course at venues around the UK and overseas also played an important factor in 3M's decision to work with OTT. The course programme is run over two days, for groups of six delegates, and will be held at 3M's Technical Centre in Bracknell, OTT's training facilities in Skipton, Yorkshire, and on customers' premises at other European locations.

For further information about OTT visit www.ott.co.uk, email sales@ott.co.uk or call 01756 797155.

Structured Cabling Suffering Say BSRIA

According to BSRIA, the threat of recession in the US at the beginning of 2001 became particularly evident after the terrorist attacks in September. The total structured cabling market in the United States is currently down by almost 25% compared to 2000. The Canadian market, which accounts for 5% of the North American market, is not effected to the same extent and is down by 13%.

In spite of this, North America has by far the largest market for structured cabling products in the world. But all the main suppliers are suffering hardship as a result of many planned projects having been postponed. And at the same time, price cuts of up to 30% on some copper during the fourth quarter of 2001 have added further to the decrease in value.

In terms of value, the US market is expected to remain stable in 2002 and recover in 2003. The average price erosion is not anticipated to be significant due to the increasing sales of Category 6 products.

The penetration of Category 6 in the US did not greatly increase in 2001, but reached 25% by volume. The corresponding figure for Canada is 12% in 2001. The uptake by value, however, is significantly higher due to a high price premium of some 30-50% on proposed Category 6 products.

BSRIA's new study of US and Canada cabling markets is now available. Visit its web site to find out more about BSRIA at www.bsira.co.uk or via Tel: +44 (0)1344 426511 Fax: +44 (0) 1344 487575 email: wmi@bsria.co.uk

Club Optique

The FIA maintains a close co-operation with its sister association in France, the Club Optique, and part of the contents of this *Newsletter* are circulated to the Club's members. It is a very active organisation and arranges many meetings, visits and other events for its members. A brief review of its main projects for 2002 are given below:

On the **14th February**, there was a dedicated meeting on the subject of Fibre to the Home (FTTH) which dealt with the technology involved, the progress that has been made, and the problems that relate to the area.

On the **9th April**, members will be able to travel to Marceille to see the activities of POPsud (Pôle optique et photonique de la région PACA - Provence-Alpes-Côte d'Azur) which represents companies associated with the optical and photonic fields of activity.

A meeting on **25th June** will deal with the techniques and equipment employed for optical measurement while, on the **5th September**, members can visit OCS in Annecy for a presentation on plastic optical fibre. Alcatel will also make a presentation during the visit.

From the 22nd to 24th October, the Club Optique will be exhibiting at the **Opto 2002** show in Paris.

The final meeting will be on the **12th December** when the subject will be the use of long distance fibre optic networks.. Presentations will be made by Frédérick Courtot de Colt Télécoms, Jérôme Marc de LD Com, and others to be announced..

The Club can be contacted at the following email address: jm.mur@tycoelectronics.com

The FIA want your "industry snaps"

We are having a few problems in locating suitable industry related pictures to accompany FIA articles etc. Our PR contact has suggested that some of the FIA Corporate members may be able to provide a small selection of photographs that we can keep on file for this purpose. Any fibre related photos, product shots, on-site shots or installation shots would be gratefully received. Any picture used will obviously be credited to the particular company.

If you able to assist the following format is required: jpeg files (300 dpi) (via email) or preferably on a CD - in tiff or eps format (300 dpi). Please contact Nigel May - Nigel_May@parkfield.co.uk

Guide to Forthcoming Shows and Conferences

Online Conferences for the European Telecoms Industry. Vision in Business has introduced a new initiative that allows users to access conferences of their choice via their computer. Speakers and presentations from many areas of the sector are available featuring both presentations and slides. Virtually every topic is covered. For a free demonstration, visit www.onlineconferences.net (or see below)

Fibreoptic Industry Association: Breakfast Seminar, Bisham Abbey 20th March 2002

Public Access WLAN London 21-22 March 2002 An IBC event. Call +44 (0)1932 893855 for information

Reducing Manufacturing Costs in Telecoms Brussels 17-18 April 2002 A Vision in Business event (see below)

ARABCOM 2002 Qatar 21-23 April 2002 Visit www.arabcom.com for further information

Fibreoptic Industry Association: Full day Seminar, Bisham Abbey 16th May 2002

How Telecoms Technology Works – Training Course Run by Optical Technology Training London 28 May 2002. Contact Vision in Business (see below)

CeBIT Satellite, Broadcast, Cable & Networks – International Trade Fair Shanghai 29-31 May 2002. Contact Annette.Levy@messe.de for more information

Fibercomm An International Trade Fair and Congress for Optical Information and Technology Munich 4-6 June 2002 Contact Pattern Ltd, Tel: 0208 940 4625 Email: info@pattern.prestel.co.uk

NOTE Vision in Business can be contacted on 020 7256 5188 Email: bookings@visioninbusiness.com or visit www.visioninbusiness.com