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## A warm welcome to the following NEW MEMBERS

### Corporate

548 - PC Cabling Limited  
550 - Network Engineering Team Limited  
553 - DP Cabling & Communications Limited

### Overseas Associate

549 - Eiresystems KK – Japan  
552 - Falcon Electronics (Pty) - S. Africa

### Personal

551 - Paul Knapman

## Roy Atterbury Steps Aside?

As we reported in the last Newsletter, Roy Atterbury has stepped down as the editor of the **FIA** Newsletter.

Roy started working as Secretary of FIA in December 1990 and provided service above and beyond the call of duty until he retired in December 1997 when the Secretariat function was transferred to Fleming Gibbons Ltd.

Roy began his duties as the editor of the **FIA** Newsletter with the production of Issue 22 in June 1993 and he completed his last copy in October 2003 with Issue 73.

**Thank you for all your hard work Roy and we wish you all the best for the future.**

As a post-script it is worth pointing out that Roy was instrumental in the promotion of BS 7718 when it was published by the by the FIA, as an interim step, in 1991. Roy retires at a time when BS 7718 has just been withdrawn and replaced by a much stronger standard - BS 6701:2004 (see inside for details)



## 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)*

### Installation Industry Sector Directors

John Cupitt - *(Dwellight)*  
Peter Lythgoe - *(Lythgoes)*

### Industry Sector Directors

Paul Bateson - Test & Measurement  
*(Optical Test and Calibration)*  
John Colton - Training  
*(Lucid Optical Services Ltd.)*  
Lee Funnell - Qualifications  
*(Active Communication Company Limited)*  
Ken Williams - Passive Components

## BS 6701: 2004 goes off to the printers

For almost as long as I can remember, professional installers together with their clients and consultants have been demanding "proper" standards for the installation of telecommunications cabling. Well, here you all are, you need complain no more - after almost two years of unparalleled activity by BSI experts, BS 6701:2004 has been approved for publication and is off to the printers at the end of April 2004. If everything proceeds according to plan the published document should "hit the streets" before the end of June 2004.



**Why is BS 6701:2004 so important?** The original BS 6701:1994 was a Code of Practice covering the rather vague subject of the "installation of apparatus intended for connection to certain telecommunications systems". The new BS 6701 is radically different and represents a vital part of quality assurance for the installation, operation and maintenance of telecommunications equipment and all types of telecommunications cabling.

**So what has changed?** Firstly, as can be seen in the inset, the title is different. BS 6701:2004 now clearly covers the installation, operation and maintenance of telecommunications equipment cabling. The term "telecommunications" means all forms of communication including processing, displaying or transferring information as numerical data, text, audio, still or moving images together with any combination of these. BS 6701:2004 requirements are independent of the standard used in the design of the cabling - the standard is equally applicable to building control systems, basic telephone wiring, cabling in support of ISDN and ADSL services and "structured cabling" in accordance with standards such as ISO/IEC 11801, BS EN 50173-1 and ANSI/TIA-568-B etc.

Secondly, BS 6701:2004 is no longer a Code of Practice, containing only recommendations, but a British Standard Specification which contains requirements both for installers and the owners of premises within which the installation is undertaken.

The third aspect of change is probably the most important one. Most standards (BS specifications, Codes of Practice and BS EN standards) are voluntary - they assist in the determination of quality assurance of a product or service only if conformance to the standard is a requirement of the contract governing the supply of that product or service. In certain special cases a standard is the "instrument" of a statute, act or other legislative tool. Such a standard applies to all products and services covered by the legislative tool independent of whether someone has remembered to include conformance to that standard in a supply contract.

A good example of this is BS 7671, better known as the IEE Wiring Regulations, which is the "instrument" of the Electricity at Work Regulations. BS 7671, in discussions of segregation of telecommunications circuits demands conformance with BS 6701 thereby bringing BS 6701 within the remit of the "instrument". As a result, conformance to certain aspects of BS 6701 is mandatory even if it is not explicitly referenced in documentation covering the supply of the installation service.

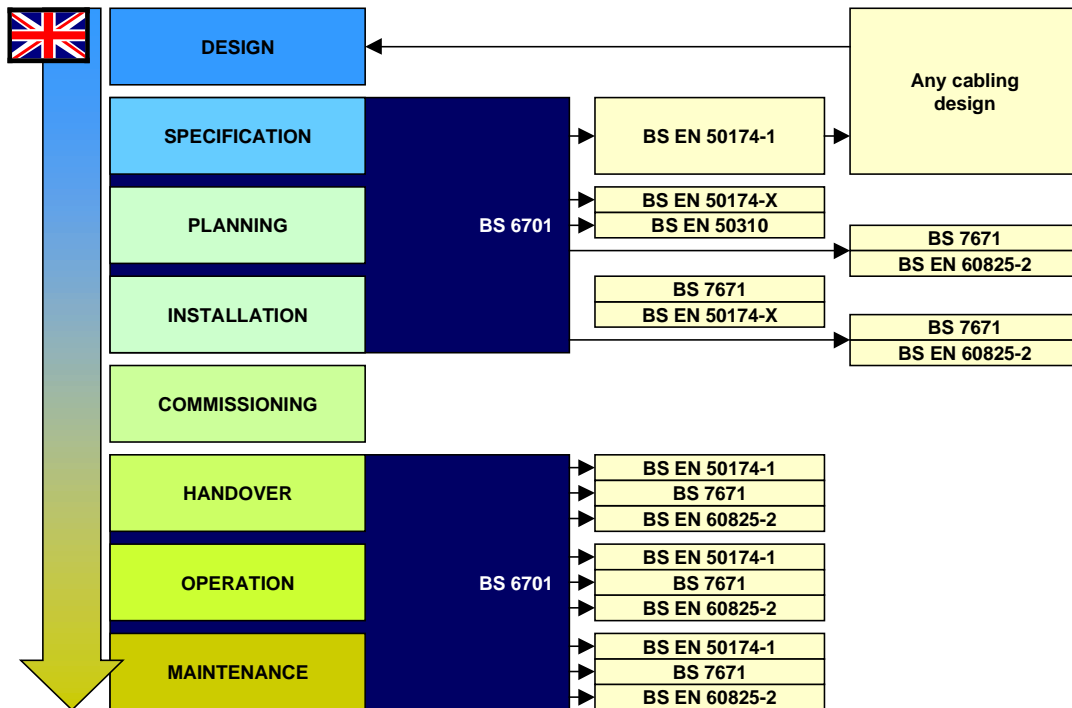
**What forced these changes?** The story involves the development and publication of EN 50174-1 and EN 50174-2 in 2001 and EN 50174-3 in 2004. Both BS 6701:1994 and BS 7718 were used in the development of these European standards. However, in order to comply with European agreements which require the removal of existing or conflicting standards text within member countries, the UK publication of the BS EN 50174 series of standards resulted in the revision of BS 6701 and withdrawal of BS 7718.

In order to match the BS EN 50174 documents, which are true standards rather than Codes of Practice, it was obvious that the status of the revised BS 6701 would have to be elevated from a Code of Practice. The transition to a BS Specification brought with it another key change - any requirements must be verifiable and the responsibility for meeting the requirements must be clearly allocated.

Finally, in order to lock-in the demands of the BS EN installation standards, to which it gave birth, conformance to BS 6701:2004 demands automatic conformance to BS EN 50174-1, BS EN 50174-2 and BS EN 50174-3. BS 6701 continues to draw attention to national regulations and contains normative references to other British Standards including BS 7671. For this reason BS 6701:2004 can truly be said to be "**The One-Stop Shop Installation Standard**" for telecommunications cabling. As a result, BS 6701:2004 is good news for consultants (who can now stop listing lots of different standards in their tender documentation) and good news for installers as it sets down minimum requirements.

**How to conform to BS 6701:2004.** The wording in BS 6701:2004 is very particular; requirements are denoted by the use of the word "shall" and the requirements have been written such that they can be verified. Conformance with BS 6701:2004 is assessed against compliance with all such requirements. The responsibilities for the installation, operation and maintenance of telecommunications cabling and equipment are divided between the owner of the premises and the installer.

- by "owner of the premises" we mean either the owner of the premises containing the telecommunications cabling and equipment or the authorised persons to which specific responsibilities have been delegated e.g. tenant, leaseholder, cabling design consultant, systems integrator etc.
- by "installer", BS 6701 means the competent person contracted to undertake the installation task. The installer does not, by means of the separation of responsibilities within BS 6701:2004, undertake other tasks such as infrastructure design, product selection etc. It is recognised that some installation organisations undertake both design and installation services. However, the design aspect is considered as being undertaken on behalf of the "owner of the premises".



The relationship of BS 6701:2004 with other standards

**BIP0007 - providing guidance to the changes.** BS 6701:2004 demands conformance with the BS EN 50174 series of standards. Unfortunately, none of the current BS EN 50174 standards contain a simple conformance clause. Certainly, the word “shall” always defines a requirement.

**BIP0007**  
-  
**Telecommunication cabling and equipment installations**  
-  
**A guide to requirements and responsibilities**

However, other terms or phrases are also used in the BS EN 50174 series to define requirements including “it is essential that”, “under no circumstances”. The word “should” represents a recommendation or a statement of best practice. However, there are also other unfortunate phrases such as “it is vital that” which could either be requirements or recommendations depending on their context. Also, the boundaries of responsibility in the BS EN 50174 standards are blurred.

In order to clarify the situation, the BSI experts responsible for BS 6701:2004 have produced a Business Information Publication which maps the requirements of each of the BS EN 50174 standards on to the sub-clause headings of BS 6701:2004 and defines the party responsible for each particular requirement. In addition, BIP0007 provides information that is considered to be “best practice” where the BS EN 50174 series of standards are less than clear or not explicit.

BIP0007, to be published in parallel with BS 6701:2004, is jointly sponsored by the Electrical Contractors Association, the Fibreoptic Industry Association and the Telecommunications Industry Association. It will be available as a free download to FIA members from the members-only area of the FIA web-site from the date on which BS 6701:2004 is published.

**What happened to BS 7718?** BS 7718 was withdrawn in Q3, 2003. Some text of BS 7718 has been included within the revised BS 6701. Other text from BS 7718 that could not be included within a standard but which was thought to be useful information has been provided to other standards bodies and the Fibreoptic industry Association for consideration in their Technical Support Documents.

## Stolen Equipment – can we help?

As promised in the last Newsletter, the FIA has produced a page on its web-site dedicated to stolen equipment. Access to the page, called “Stolen Equipment Register” and containing equipment types and serial numbers, can be gained from the FIA home page at [www.fibreoptic.org.uk](http://www.fibreoptic.org.uk) or directly at [www.fibreoptic.org.uk/efiasvst.htm](http://www.fibreoptic.org.uk/efiasvst.htm). If you have any equipment stolen please contact the FIA Secretariat listing the equipment types and serial numbers along with any distinguishing features. We will immediately circulate the information to members (sparing your blushes by omitting your company details) and include it on the page.

If you can think of any other measures we can take to help you please do not hesitate to submit them.

## Government Grants for Small Business R & D

**Have you heard of the Small Business Service?  
Do you develop new innovative products?  
Are you short of funds?**

The FIA has done some investigation into grant and funding organisations that are focused on smaller “technology” businesses. One avenue that may have some prospects is the “Grant for Research and Development”, which is supported by the DTI. There are four “classifications” Micro projects, Research Projects, Development Projects and Exceptional Development Projects

- Micro Projects are simple, low-cost development projects lasting no longer than 12 months. The output should be a simple prototype of a novel or innovative product or process. A grant of up to £20,000 is available to businesses with fewer than 10 employees.
- Research Projects typically involve planned research or critical investigation lasting between 6 and 18 months. The result of the project could be new scientific or technical knowledge that may be useful in developing a new product or process. A grant of up to £75,000 is available to businesses with fewer than 50 employees.
- Development Projects involve the shaping of industrial research into a pre-production prototype of a technologically innovative product or industrial process. A grant of up to £200,000 is available for businesses with fewer than 250 employees.
- Exceptional Projects involve technology developments which have higher costs. These projects are likely to generate much wider economic benefits and must be recognised as strategically important for a technology or industrial sector. A grant of up to £500,000 is available to SMEs with a qualifying project.

With the aim of encouraging a more commercially minded approach, applicants are encouraged to prepare a project proposal outlining the proposed work as a business proposition.

A single type of application form is used for all classifications and can be completed and send via email. The application form has been simplified to allow project officers to quickly establish the basic eligibility of the applicants and verify the accuracy of the given information and to carry out an assessment of the project. More information can be found at [www.businesslink.org](http://www.businesslink.org) then via the “finance and grants” link. Applications forms can be found at [www.dti.gov.uk/r-d/](http://www.dti.gov.uk/r-d/).

**The FIA would be interested in hearing from members who are considering applying for grants as we may well be able to provided guidance and support.**

## FIA Splice Loss Specification - TSD-2000-4-1-1

Fusion splicing is a long-established and well-proven approach for the provision of low loss, high return loss and environmentally stable connections both internal and external to buildings. Over the years, the capability of fusion splicing equipment has improved substantially, as has the control over the tolerances of optical fibres themselves. This has resulted in a steady reduction in achievable splice loss to the point where further significant performance improvements can no longer be made without direct influence over the optical fibres.

Nevertheless, clients are ready to impose ever more stringent requirements on installers. The impact of specifying overly ambitious or incorrectly defined splice loss requirements must concern both the client and the installer. The installer may be faced with a considerable degree of rework that can have dramatic commercial consequences, while the client may be faced with considerable project delays, the resolution of which will add further costs.

The FIA Technical Directorate is pleased to announce the completion of work on our latest Technical Support Document which will be launched at the forthcoming seminars in May 2004. TSD-2000-4-1-1 establishes, in a commercially neutral manner, the most appropriate way in which to specify and verify the performance of optical fibre fusion splices; it also defines reasonable and commercially acceptable limits for the splices under specific conditions.

**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)**

## FIA Commercial Awareness Seminars - May 2004

The dates, locations and agenda for the FIA Commercial Awareness Seminars have been finalised for May 2004 (others are planned for September 2004). This year the FIA has decided to concentrate on key technical issues that have direct commercial implications and/or carry risks to those involved in specifying and installing cabling infrastructures for both short- and long-haul networks.

Where commercial factors are involved a detailed understanding and assessment of the underlying issues is not only desirable but absolutely vital. To that end the FIA have organised full-day seminars covering just three topics each. Each topic is discussed for 90 minutes - the FIA believe that shorter presentations are only capable of providing a "taster" and we want attendees to leave the session feeling that they have received enough information to enable and justify further study and analysis.

The first is in London on 25<sup>th</sup> May with the second in Manchester, two days later, on the 27<sup>th</sup> May. The agenda is shown below and is in perfect alignment with the latest developments in the standards for installation being published by BSI and the launch of TSD-20004-1-1 by the FIA.

Time	Item
0910 hrs	Registration
0925 hrs	FIA Introductions
0930 hrs	BS 6701:2004 and BIP0007 Rob Cardigan: Molex Premise Networks and Secretary of BSI TCT7/-/3
1100 hrs	Break
1115 hrs	The specification of fusion splice loss and FIA TSD-2000-4-1-1 Mike Gilmore: FIA Technical Director
1245 hrs	Questions
1300 hrs	Lunch
1400 hrs	High bandwidth multimode optical fibre Steve Banks: Consultant
1530 hrs	Questions
1545 hrs	Conclusions
1600 hrs	Close

Rob Cardigan of Molex Premise Networks is always a very entertaining speaker but is also one of the experts responsible for the new BS 6701:2004 (see page 2).

The FIA Technical Director, Mike Gilmore, will present the FIA work on Splice Loss Specification and there will be a "table-top" exhibition of fusion splicing equipment in support of this topic.

To end the day Steve Banks, a long-standing supporter of the FIA and now working as a consultant for one of the leading financial services organisations in the City of London, will present the latest work on high-bit rate multimode networks which offers users much more flexibility in cabling design than previously thought.

To learn by experience may cost considerably more than the seminar fee (£75 for members and their guests or £125 for non-members). Please consider inviting your clients along to these seminars. They can attend as your guests at the members rate and will benefit every bit as much as you will.

## FIA Members e-Guide

The well-established FIA Guide to Members Products and Services is due for an electronic makeover. From mid-June onwards the Guide will be available as an electronic document only. This allows more rapid updates to be produced and allows significantly more editorial content to be included together with additional advertising space at lower cost to members.

Jane Morrison, FIA Secretary, has already written to the principal contacts of each of our members to determine any requirements for advertising. If you want to advertise and have not received the information pack from Jane please contact her as soon as possible.



## OPTO 2004 Exhibition/Conference

Said to showcase all optical solutions for Industry, Networks and Telecommunications, the OPTO 2004 Exhibition/Conference will be held from 19<sup>th</sup>/21<sup>st</sup> October 2004 in Paris.

Information/Applications/Early registration: +33 (0)1 49 68 51 53  
E-mail: [optoexpo@exposium.fr](mailto:optoexpo@exposium.fr) Website: [www.optoexpo.com](http://www.optoexpo.com)