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## 2007 - A YEAR OF CLOSURE or the beginning of a sea change?

by  
**Mike Gilmore, Technical Director of the FIA  
for Networking+ (January 2008)**

Before producing this article, I thought it worthwhile to have a look back to our Networking+ article at the same time last year. In my copy entitled "The Year Ahead" I focussed on the initiation of work on higher speed Ethernet networks by IEEE. Even though agreement on exactly what these networks were to be was not reached until December 2007 - leading to a formal project approved by IEEE - the FIA experienced, throughout the year, the leading edge of the "bow wave" of the decisions yet to be made.

Before I review the likely impact of higher speed Ethernet, it is useful to review the key developments of 2007. December saw the publication by BSI of the final standard in the BS EN 50173 series so we now have structured cabling standards for offices, industrial premises, homes and data centres supported by the "bible" - BS EN 50173-1. Although there may be future documents in the series, the completion of this quintet of standards represented a significant milestone for European industry - a model being followed, to some degree, by the USA.

The revision of the EN 50174 series, covering installation of telecommunications cabling, completed its first comment phase. This document has direct impact on segregation between mains power and data cabling. This work is also echoed in new work being done in the electrical standards bodies in Europe. It was fitting, therefore, to see the establishment of the Telecommunications Infrastructure Advisory Board (TIA-B) by the FIA and ECA-ITEC.

We now are pleased to report that the CMA is to join the TIA-B party as a co-host. The three-headed TIA-B should provide the long-awaited solution for the distribution of information produced by the FIA and ECA-ITEC to the user base via the CMA. Furthermore, the TIA-B looks forward to implementing the measures necessary to demonstrate the integration of BICSI qualifications with UK standards and regulations.

So 2007 marked the closure for some projects and the birth of others.

Many questions coming into the FIA Technical Directorate surrounded the choice between multimode and singlemode optical fibre. Leading-edge users have, quite naturally, been well aware of the discussions regarding 40Gb/s and 100Gb/s networking within IEEE and are voting with their feet - migrating their infrastructures towards singlemode optical fibre to guarantee next-generation evolution at minimal cost. However, even less experienced designers are asking the "multimode or singlemode" question. They are right to do so.

Various cost analyses have shown that, for installed lengths greater than approximately 200 metres, it is cheaper to install singlemode infrastructures than their multimode counterparts. This breakeven distance has fallen over the years due, in no small part, to the relative costs of singlemode optical fibre compared with the increasing cost of high specification multimode products. The problem has always been the high cost of singlemode transmission equipment that can completely reverse any cost benefit. In 2007, we have seen a trend towards entry-level design support for 10GBASE-F solutions, removing lower speed networks, coupled with the IEEE decision to develop 40Gb/s and 100Gb/s solutions - the multimode implementations of which are not particularly attractive and are potentially costly. It will be interesting to see how this trend develops during 2008.

Of course standardisation for copper cabling is not dead - December saw the publication of the final drafts of Augmented Category 6 in the USA and Class E<sub>A</sub> and F<sub>A</sub> at international level. So there is "life in the old dog" yet - but for how much longer?

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Further information is available via the FIA web-site at [www.fia-online.co.uk](http://www.fia-online.co.uk) or directly via the TIA-B section at [www.fia-online.co.uk/TIA-B](http://www.fia-online.co.uk/TIA-B). Enquiries can be e-mailed to [jane@fiasec.demon.co.uk](mailto:jane@fiasec.demon.co.uk) or, alternatively, you can contact the FIA Secretariat in 01763 273039.

## Biography

As the Technical and Standards Director of the UK Fibreoptic Industry Association, Mike is heavily involved in the development of training and competence standards for the fibre installation industry and sets down policy in this area. In addition he chairs the audit and arbitration committees for the FIA. His book "Fibre optic cabling; theory design and installation practice" published in 1991 remains a reference for both experts and entrants into this field.

Mike also initiated the establishment of the Telecommunications Infrastructure Advisory Board (TIA-B) along with the relevant directors of its other host organisations CMA and ECA-ITEC.

In the UK, Mike is Chairman of TCT/7, the BSI technical committee responsible for the three panels on telecommunication cabling. He also chairs two of these panels (TCT7/-/1 and TCT7/-/3). TCT7/-/1 acts to assist development of European and international standards for telecommunications cabling. TCT7/-/3 manages the implementation of European standards and others in the UK.

At the European level Mike is Convenor of CENELEC TC215 Working Group 1 and is Secretary of TC215 Working Group 2, the groups that control the development of European standards for the design and installation of telecommunications cabling.

At international level, Mike is Convenor of the Cabling Implementation Task Group (CITG) within ISO/IEC JTC1 SC25 WG3. This group is responsible for the strategic management of the international standards covering the specification, QA, installation, administration, operation, maintenance and repair of generic cabling. This work supports all the cabling design standards produced by ISO/IEC JTC1 SC25 WG3 including ISO/IEC 11801 and ISO/IEC 24702 for industrial premises produced by ISO/IEC JTC1 SC25 WG3 IPTG (also convened by Mike Gilmore).

Mike is a regular speaker at seminars and conferences in all five continents. He has provided the keynote address and opening presentation in many conferences in the UK, Germany and the Netherlands. His seminars, providing regular updates on the progression of cabling standards are particularly well attended and are operating in the UK and continental Europe.



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