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## STANDARDS - JUST LIKE BUSES! GET IN THE QUEUE

by

Mike Gilmore, Technical Director of the FIA  
for Networking+ (September 2006)

I think we all know the saying which is applied to many situations ....“They’re like buses, you wait for hours and then three come all at once”. It appears to be like that with standards for the design of structured telecommunications cabling. The last major publications in the USA, Europe and internationally were released in 2002. EN 50173-1:2002, published in the UK as BS EN 50173-1, covered the general requirements for structured telecommunications cabling along with the specific requirements for office type premises. This scope hid, to some extent, the developments of design standards for other types of premises that were being considered as part of a complete series of standards.

From January 2007 (although it might be dated 2006 if it squeaks in to this year), we will have four standards in the EN 50173-X series. The current EN 50173-1 will be divided in two: EN 50173-1:2007 will contain general requirements and EN 50173-2 will cover the “office premises”-specific elements. These two documents will contain no specific technical changes as compared to the existing EN 50173-1 - so one might ask why make the split at all - is it simply to make sure that interested parties have to buy two standards rather than one? The short answer is NO – but more of this later.

At the same time two other standards will be published: EN 50173-4 (structured cabling within homes) and EN 50173-5 (structured cabling within data centres). A little later in 2007 we will also see EN 50173-3 for industrial premises. As a result there will be a total of five standards in the EN 50173-X series.

One of the questions that is often asked, even by the standards-writers themselves, is “which standard will I reference”. The answer is simple. If you wish to define the design for structured cabling in offices then you simply refer to EN 50173-2: for data centres you refer to EN 50173-5. So what is EN 50173-1 for then? Put simply, it is an underpinning document that contains a lot of the detailed technical stuff that applies to all premises and which most people do not want to read. For example, the requirement that balanced cabling permanent links shall meet “Class D” performance levels is often quoted in tender documents but few, if any, consultants or their clients actually know (or care about) all the requirements of a Class D link. Installers don’t either - they plug a piece of test equipment into the cabling and run a test. The test equipment has the limits inside and the limits will come from - yes, you guessed it EN 50173-1. Alternatively, someone may ask for a Category 6 cable - that is enough, most people do not want or need to know about the attenuation, NEXT, PSNEXT etc. etc., specifications of such a cable - but if they do they can find it referenced from the new EN 50173-1.

However, EN 50173-1:2007 will contain a great deal of new information relevant to the other premises in the series. For example we will have a new grade of singlemode optical fibre cable (OS2) specified to carry 1 and 10 Gigabit Ethernet over the distances seen in industrial premises - up to 10000 metres compared to those of office sites (2000 metres). Industrial premises have also demanded the inclusion of plastic and plastic clad silica optical fibres within EN 50173-1:2007 - although they are not required for other premises. Homes also have thrown up their own requirements for coaxial cable, connectors and cords which are included in the new EN 50173-1.

So EN 50173-1:2007 should be seen as a cookbook from which the other standards in the series select cabling and component performance levels. This means that EN 50173-1 gets to be a thick tome whereas the premises-specific documents remain tightly focussed. This is certainly good from the readers and specifiers’ perspective.

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However, EN 50173-1 has one more trick up its sleeve. It will enable the installation and operational environment of the premises (or cable routes within the premises) to be specified in a way that will allow components to be purchased that are known to operate in that environment. The MICE system (standing for **M**echanical, **I**ngress protection, **C**hemical/Climatic and **E**lectromagnetic) defines the local environment of such areas. This system is applied to all type of premises.

This short article is inadequate to do more scratch the surface of, and cannot hope to detail any of the features of, the new standards - in fact they only real way to understand what is really going on is to obtain the final draft standards and read them. FIA members are fortunate in that, as FIA members, they are able to view (free of charge) and comment on these, and other, standards and submit their comments to their national body (BSI) via the FIA Technical and Standards Directorate. In this way the FIA membership is able to influence standards in development in a way that few other trade associations can claim to do. As non-FIA members, customers and their consultants are recommended to contact BSI for their copies of the final drafts of EN 50173-1, -2, -4 and -5.

Don't wait for the bus – get ahead of the game.

### 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.

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, the group that controls the development of European standards for the design and installation of telecommunications cabling. In the international arena Mike is Convenor of ISO/IEC JTC1 SC25 WG3 IPTG, a standards committee working on generic cabling for industrial premises (ISO/IEC 24702).

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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