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The IT cabling infrastructure
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Next generation IT infrastructures

QUALITY ASSURANCE VS. INSTALLER QUALIFICATIONS

by
**Mike Gilmore, Technical Director of the FIA
for Networking+ (September 2007)**

One of the aims of the Fibreoptic Industry Association is to ensure that the delivery of optical fibre cabling solutions is as seamless and trouble-free as possible for their users. However, one topic that has recently become of interest is the balance that is struck between quality assurance and installers qualifications. In two recent cases, problems have occurred due to an installers reliance on the paper qualifications of their personnel - assuming that this provides quality assurance - rather than taking steps to apply quality assurance techniques to define the practices of the qualified operator.

This has "flagged up" the role of an individuals qualifications and how they relate to specific practices undertaken in the field.

The recognised UK standard for the installation of telecommunications cabling is BS 6701:2004. This requires the preparation of a quality plan, by the installer, in response to a client specification. Many installers do not like to be reminded of this because they feel it imposes as an increased workload. However, this is because they do not clearly understand the role and construction of a quality plan.

A quality plan is essentially a register of existing Method Statements to be applied to the specific installation, tailored to reflect the applicable contractual responsibilities and interfaces, together with information detailing the competence of the personnel to undertake the tasks outlined in the Method Statements. The Method Statements define exactly what to do and define how the competence of the person undertaking the task is matched to that task. The misunderstanding that many installers have, with dramatic and costly results, is that an individuals qualifications, as a competence indicator, replace the need for a Method Statement.

Method Statements should reflect the requirements of current standards whereas qualifications do not seek to do so. Qualifications rarely keep pace with technical standards and this problem is exacerbated in fast moving areas such as telecommunications.

One of the most obvious examples is that of test methods. The test standards for installed optical fibre cabling using either light source/power meter or OTDR equipment have changed considerably in recent years. The specific measurement process is dictated both by what is to be measured and the configuration of the cabling being measured. An OTDR can be used to characterise an optical fibre from one end (i.e. without any connection at the other). However, the relevant standards state that an OTDR only measures continuity if a tail lead is attached at the remote connection. A person that has been trained and obtained a City & Guilds qualification such as 3666-02 should be expected to know how to use an OTDR in all circumstances. However, unless the Method Statement states that a tail lead is to be used then it cannot be assumed that continuity has been confirmed by the use of an OTDR. Simply stating that the testing will be undertaken by a qualified person is therefore not a guarantee of installation quality assurance.

The FIA strives to put in place control systems such as our Approved installer Scheme and Qualifications Scheme to increase the general level of quality assurance in order to provide commercial benefits to both installers and their customers. The FIA Approved Installer Scheme monitors the application of UK and European installation standards and provides detailed information to the Approved Installers in respect of risk management. The FIA Qualification Scheme recognises individuals qualifications and records their advancement by ongoing education.

However, these are two separate schemes and are not interchangeable - installers and clients should also not confuse quality assurance with personal competence.

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Further information is available via the FIA web-site at www.fia-online.co.uk or directly via the TIA-B section at www.fia-online.co.uk/TIA-B. Enquiries can be e-mailed to 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.

In the UK, Mike is Chairman of TCT7, 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.

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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