

Author

Mike Gilmore, Senior Partner of The Cabling Partnership, is involved at the highest level in UK and European cabling standardisation. Mike is Chairman of the BSI Premises Cabling Experts Panels (TCT7/-/1 and TCT7/-/3) and Convenor of CENELEC TC215 Working Group 1 (its European partner). The two groups control the development of UK and European standards for the design and installation of telecommunications cabling. Mike also acts as the Technical Director of the UK Fibreoptic Industry Association. He can be contacted at mike.gilmore@btinternet.com.



The IT cabling infrastructure
division of
e-Ready Building Limited

The IT cabling consultants

e-Ready Building Limited
Next generation IT infrastructures

FDIS status of ISO/IEC 11801 2nd Edition - and matching changes to installation standards

The standardization of IT cabling infrastructures took a significant step forward in March when ISO/IEC agreed to publish the second edition of ISO/IEC 11801 as a Final Draft International Standard. This will be followed by a similar procedure for the European equivalent (EN 50173) in April. The importance of these standards is that they can be referenced in contracts with the knowledge that there will be no further technical changes before final publication.

So what exactly do these standards define? ISO/IEC 11801 Ed.2 and EN 50173 Ed.2 contain the performance specifications for cabling installations using Category 5e, Category 6 and Category 7 components. In addition, they define new requirements for optical fibre cabling installations. The standards cover design of the cabling and essentially define the market place for components. Their publication is certainly good news for property developers, tenants and installers but is not so good for the cabling component and system suppliers. For the suppliers, the end of the standardization process represents a "dumbing down" that leads to commodity markets that bring with them an associated downturn in profit margins. Historically, this has not been much of a problem because there were always new performance Categories of components coming along behind - but not this time.

Technical stagnation will produce some interesting effects in the IT infrastructure market. The most obvious of these will be the reduction in component costs. However, there are other aspects to consider. Low cost and technically stable infrastructure technology will begin to allow longer-term decisions to be made by property developers with the advent of e-ready buildings (more of which later). At the same time, cabling system suppliers will have to "get smart" by building in new features to their products - the most obvious of which is intelligent patching. A combination of these two trends suggests that effective integration of building management systems with IT systems is closer than we think and remote management of such services may not be a pipedream after all.

However, the standards such as ISO/IEC 11801 Ed.2, EN 50173 Ed.2 and ANSI/TIA/EIA-568B focus only on design. They are obviously important to supplier and specifiers but we also need standards for the installation and the commissioning of the cabling infrastructures. I frequently read articles by industry professionals in which the absence of installation standards for IT cabling is blamed for all our ills. I find this strange since the UK has had more installation standards in place, and for longer, than almost anywhere else in the world.

For example, BS 6701 (applicable to structured cabling), BS 7718 (applicable to optical fibre cabling) and BS 7671 (applicable to the electrical aspects of both) have been around for years. Early last year (2001), BS EN 50174-1 and -2 were published. These two standards define the requirements of specification and quality assurance of installations together with the installation practices within buildings. Next year will see the publication of BS EN 50174-3 that covers installation practices outside buildings. The existence of the 50174 series of standards requires BS 6701 and BS 7718 to be reviewed and this is already taking place.

Faced with this list of installation standards it is indeed difficult to understand why there are continuing complaints about installation standards. Perhaps it is not the absence of standards that is the problem. It may be the lack of their adoption by both clients and installers alike within the contractual context. It is certainly true that the escalation in cabling performance has put ever more pressure on practices but the implementation of correct practices that apply to Category 3 components would deliver the desired results for Category 6. It is a sad fact that most installation problems occur because the basic practices have not been observed.

The Cabling Partnership
P. O. Box MT 65, LEEDS, West Yorkshire, LS17 8YD, England
Telephone: +44 (0) 113 232 3721 Fax: +44 (0) 113 293 2632

The Cabling Partnership is a division of e-Ready Building Limited
Company Registration No. 4432595 Registered Office - Emery House, 192 Heaton Moor Road, Stockport, Cheshire, SK4 4DU.

Another area of recorded problems has been that of testing. The evolution of test equipment and practices used to verify the installed the ever-increasing performance of both copper and optical fibre cabling has been breathtaking. It is hoped that the technical stabilization of the market will allow installers to "catch their breath" and establish quality plans (defined in EN 50174-1) that enable trouble-free testing in the future.

Clearly all the standards necessary for the design, installation and commissioning of IT infrastructures are, or soon will be, in place and they seem to be offering a stable future from a technical standpoint. So what opportunities does this offer? There are as many definitions of intelligent buildings as there are experts in the field. However, one thing is sure - a stable IT infrastructure that can also be used for building management services offers a distinct advantage. The "commoditization" of IT cabling components will encourage such integrated solutions without perceptions of "hi-tech" IT versus "lo-tech" BEMS to get in the way.

Another opportunity area is that of e-ready buildings - campus or single building premises aimed at supporting SMEs in a multi-tenant environment within which the IT services are provided by the landlord or his nominee. The dominance of Ethernet technologies combined with the promise of low cost delivery systems offers far-sighted property developers the opportunity to obtain added value from their premises while allowing their tenants to concentrate on their core business instead of having to learn network management skills.

One of the key elements of both intelligent and e-ready building concepts is the development of effective remote facilities management. A number of cabling system suppliers are providing intelligent patch schemes which, when interfaced with high quality connectivity management software, offer unrivalled levels of service delivery reliability and control.

In conclusion, 2002 will bring significant technical maturity to the IT cabling market. That maturity will be underpinned by standardization at international and European level covering all aspects of design and installation and will allow installers to take a fresh look at their procedures and may encourage increased levels of building services integration. Finally, the market maturity will force installers to become more professional, not only in the detailed installation and commissioning practice that they employ, but also in the innovations they can introduce within documentation and administration.

The Cabling Partnership
P. O. Box MT 65, LEEDS, West Yorkshire, LS17 8YD, England
Telephone: +44 (0) 113 232 3721 Fax: +44 (0) 113 293 2632

The Cabling Partnership is a division of e-Ready Building Limited
Company Registration No. 4432595 Registered Office - Emery House, 192 Heaton Moor Road, Stockport, Cheshire, SK4 4DU.