



www.fibreoptic.org.uk

Secretary: Jane Morrison

The Manor House  
BUNTINGFORD  
Hertfordshire SG9 9AB  
United Kingdom

Tel: +44 (0) 1763 273039 Fax: +44 (0) 1763 273255

e-mail: [jane@fiasec.demon.co.uk](mailto:jane@fiasec.demon.co.uk)

## BS 6701:2004 GOES OFF TO THE PRINTERS

by

Mike Gilmore, Technical Director

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.

**BS 6701: 2004**  
**Telecommunications equipment and**  
**telecommunications cabling**  
-  
**Specification for installation, operation and**  
**maintenance**

**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 cases a standard or Code of Practice is one, or even the only, way of complying with a statute, act or other legislative tool. A good example of this is BS 7671, better known as the IEE Wiring Regulations, through which one complies with the Electricity at Work Regulations. BS 7671 requires conformance with BS 6701 in relation to segregation of telecommunications circuits. As a result, conformance to certain aspects of BS 6701 is mandatory within premises conformant to the IEE Wiring Regulations.

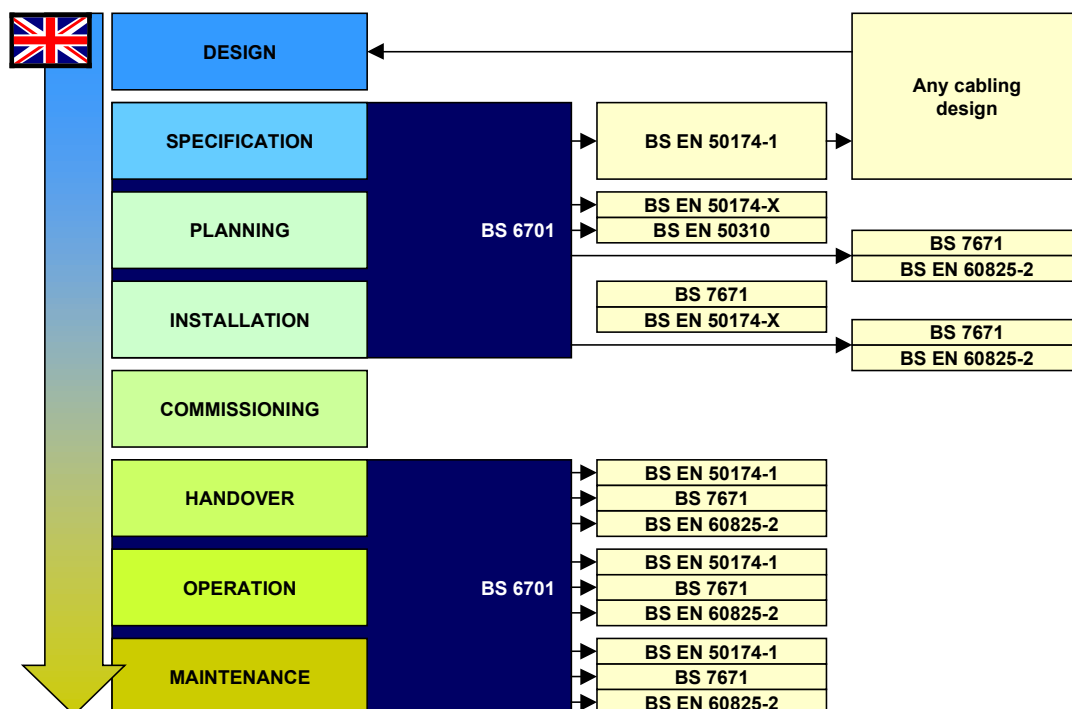
**What forced these changes?** The story involves the development and publication of EN 50174-1 and EN 50174-2 in 2001 and EN 50174-3 in 2004. Both BS 6701:1994 and BS 7718 were used in the development of these European standards. However, in order to comply with European agreements which require the 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”.

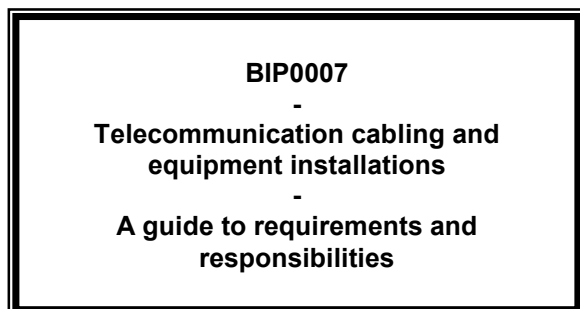


The relationship of BS 6701:2004 with other standards

**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.

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.

BIP 0007, 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.

**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.