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## FIBRE-TO-THE-HOME – SACRIFICED IN THE NAME OF COMPETITION?

by

Mike Gilmore, Technical Director of the FIA  
for Networking+ (November 2007)

Fibre-to-the-home (FTTH) and more generally FTTX, where X represents a variety of possible end-points between the “exchange”, now called the central office, and the home, just seems to be one more “Holy Grail” for many telecommunications operators. People in the UK often dismiss it as they do “fibre-to-the-desk”- FTDD but the two situations are fundamentally different. It is therefore worth comparing and contrasting FTTX and FTDD.

FTDD has been heralded for almost thirty years as the future of private telecommunications infrastructures but it has never really happened - in this case, the solitary exceptions do not prove the rule. Today, FTDD seems as far away as it ever did since copper technology is both able to deliver higher bit rates than ever conceived of with the added bonus of the delivery of d.c. power through standardisation activities in IEEE (i.e. 802.3af and the future 802.3at).

In comparison, there are countries that operate FTTX systems providing service to thousands and even millions of homes. Indeed BSI have just published PD CLC TR 50510, announced as a “guideline to building FTTX networks”. ETSI, the European standardisation body representing “public” operators and ITU, its international counterpart, expend considerable resource to produce system and component specifications to allow the deployment of FTTX. There are none of the technical challenges that face the implementation of FTDD.

So what prevents the wide scale deployment of FTTX - the answer is simple “REGULATION”.

“Broadband for all” is term frequently used by governments but the delivery of true broadband is, in many cases, hampered by the legislation and regulation introduced by those same governments. Of course, many users are extremely pleased with the ADSL services they now receive (especially when they are forced to temporarily return to ISDN or dial-up access). However, rapid downloads of e-mails and web pages are not the hallmarks of true broadband. True broadband begins with the delivery of HDTV “on demand” and will require the delivery of at least 25 Mbs<sup>-1</sup> and more realistically 50-100 Mbs<sup>-1</sup>. That small but rapidly increasing number of users who already have experience of HDTV on satellite or cable will not wish to purchase lower grade services from broadband providers. These data rates virtually mandate the use of FTTX.

The delivery of true broadband by implementing FTTX represents a massive investment for operators. The revenue stream enabled by the infrastructure will obviously depend upon the quality and uptake of the services provided but is certainly going to take time to provide a return on the initial investment. The infrastructure required raises issues for potential operators faced with the risk of unbundling - imposed by national regulation.

In Europe the majority of successful, albeit small scale, implementations of FTTX appear to have been built under some type of monopolistic regime. There are clearly different business models that can provide security for those making the investment. One example requires the provision of a time-limited monopoly for the infrastructure investor - where that investor is also an operator. Another example involves the separation of the infrastructure investor, once again with monopolistic attributes, from the operator i.e. by making the infrastructure investor the supplier to multiple operators.

It is therefore the legislation and regulations developed by the governments that trumpet “Broadband for all” that actually prevents us, the customers, from obtaining “True broadband for all”. The standards for systems and components do not promote the use of FTTX - they are “enablers” not “accelerants” - and are of secondary importance if the business models enforced by the national regulation prevent their use.

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-](http://www.fia-)

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## 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.

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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