



The Fibreoptic Industry Association

www.fia-online.co.uk

FIA Secretariat Report – Council meeting Thursday 6th December 2007

Actions: Actions completed from previous meeting 2nd October 2007 –

Membership: At the previous meeting I reported the m/ship number of 194 - **Changes since then:**

05/10/07	1 x new – Corp A	Keymt Ltd.
05/10/07	1 x new - Corp A	PRB Fibre Optics
05/10/07	1 x new - temp – TIA-B member	Integrated Networked Solutions
15/10/07	1 x new - temp – TIA-B member	Nightlake Ltd.
22/10/07	1 x resign – Corp A	Ortronics (no longer required)
22/10/07	1 x new – Corp B	Transend UK Ltd.
29/10/07	1 x new - Corp B	Pinehall Comms Ltd.
09/11/07	1 x resign - Associate	BAA plc (new contact no longer requires)
09/11/07	1 x resign - Corp B	Global Comm UK Ltd. (June invoice unable to contact)
12/11/07	1 x new - temp – TIA-B member	Major Electrical
23/11/07	1 x new Corp A	Fibrelec Ltd.
03/12/07	1 x new – Corp C	Hartwood Services Ltd.
03/12/07	1 x resign Associate	Teamfibre – non payment of old sub

TOTAL –members 199

PLUS – 2 x new members pending– pro-forma invoices sent – awaiting payment – Linbrooke Services Ltd. (also pro-forma sent for ATP) & Database Communications Ltd.

FIA – TIA-B:

We have 13 TIA-B temporary members.

These temporary memberships expire on 31st December 2007. We need to write to them all during this month and enclose an invoice for Corp A? full membership (period 1st Jan 2008 – for 12 months).

FIA General Newsletter: October issue – this was circulated on 29th October. Presume next issue will appear in January/February 2008.

FIA Qualification scheme: Letters to chase P. Sanders and S. Wheatley (of PR Power Installations Ltd.) Learner No. 050005 and 050006 – re unit feedback forms and proof of CPD (awarded Oct 06)

And

M. Rawlinson, L. Lythgoe and A. Sturdy (of Lythgoes Ltd.) Learner No. 050007, 050008 and 050009 – re unit feedback forms and proof of CPD (awarded Oct 06) – were sent on 12th October.

To date no replies received. I understand that 2 of the 3 Lythgoes Learners are out of the country and not responding to any correspondence.

I was contacted by PR Power on 29th November who advise that they spoke to John Colton on 18th October and they hope to supply the info in coming weeks.

EXFO – Mike Harrop Certified Trainer badge awarded November 2005 – I have asked John if this is OK to renew for a further 2 years. Is there a cost for this? The web site states £15 + vat (we didn't charge the C Trainers recently renewed (Lucid, CNET Training etc.))

Linbrooke Services have applied for new Corp membership and to become Approved Training Providers. They have been sent pro-forma invoices for both. Once they have paid (as they are an approved C&G centre) they will be accepted as both members and ATP.

They also wish to apply for 4 trainers from their company to become Certified Trainers. These 4 will have to complete the application form and pay £75 + vat each and then take the examination. MG has already said that at this time he will be able to attend the Linbrooke premises to organise the exam.

As John Pywell (Linbrooke contact) was previously an FIA Certified Trainer he will be allowed to continue his status and we shall arrange for cert and badge to be sent to him.

FIA – UKCPO meeting – Tuesday 15th January 2008: A room has been booked at the Marriott Hotel Leeds. Contract has been signed. (min numbers for the room is 10)

FIA – TDF-2000-5-3: Two copies of this technical document were sold on 29th October.

Critchley's – auditors: Draft accounts circulated to all Council via email 04/12/07. MG has agreed the figures. Council to formally approve at Council meeting Thursday a.m..

AGM – Thursday 6th December:

The Agenda and related paperwork was sent out in hard copy to all members on 1st November.

AGM starts – 11.30

AGM ends – 12.00

Open discussions – 12.00 – 12.30

Lunch – 12.30

New Council re-convenes – 13.30

Buffet lunch has been booked.

Meeting dates & venues for 2008: We should aim to put these in place (inc. venue) for the year. Margaret asks that all Council members pre-book train tickets wherever possible to take advantage of cheaper fares.



John Marson, Commercial Director - Report to the FIA council AGM Meeting on 6th December 2006

Actions

Promote FIA membership – **In Progress**
Suggest ideas for future promo of FIA - **In Progress**

Promotion of membership in progress and completed actions

The FIA membership currently stands at around 200 members .Of these 200, 12 are FIA-TIA-B temporary members .These should migrate into full members next year when their temporary status ends . This means we are up on members from the same time last year.

Due to the demise of CITA and our new TIA-B we have been left in a very strong position for gaining new members this coming year. By summer next year I would hope to see our membership going up again to between 210 and 220 members. All members by then should be full paying members thus giving us the best membership numbers we have ever seen.

During the ensuing year I will continue my efforts to gain more members and to promote the FIA .

My mail shots and cold calling will continue each month .

Proposed new actions

Promote new membership

John Marson
Commercial Director.

For the attention of THE FIA COUNCIL



The IT cabling infrastructure
division of
e-Ready Building Limited

The IT cabling consultants

e-Ready Building Limited
Next generation IT infrastructures

Date: 1st December 2007
Our Reference: MG/MG/5161
Your Reference:

UPDATED REPORT FOR FIA COUNCIL MEETING 6th December 2007

ACTIONS

Completed

- Include in next NL info re newly formed TIA-B - **partial**
- AIS renewal form - **completed**
- October FIA NL + TIA-B news (ECA ITEC) to the press - **completed**
- Issue 2000 word (AIS) as an FIA document - **completed**
- Email FIA and ECA ITEC members with update re TIA-B - **completed**
- Meet with JC to discuss new qualification further: 5th **December**
- Email all Council logo pages and rules - **completed**
- Put qualification info from JC on web site - **completed**

Underway

GENERAL

- Include in next NL info re newly formed TIA-B - **partial**
- Organise press release and articles re TIA-B - **see below**
- Use JC QS text for p. releases, article and Newsletter - **action on John Colton**
- Work with PL and SH re selling new AIS to consultants

Ongoing

GENERAL

- Keep Council informed re progress of PSP
- Organise special Newsletter re PSP
- Finalise actions etc re PSP
- Promote FIA membership
- Re-edit FIA documents

Outstanding

None

FINANCIAL

Year 2006-2007

I distributed accounts for August 2007 on 17th September 2007. These show an annual profit of £1966.57 (before auditors fees and tax). At the same time last year our profit was £2915 (with the same caveats). Liquidity in August 2007 was £24102 c/f £22538 in 2006.

The audited accounts have been circulated and show a final agreed profit of £903.00

This financial performance represents a significant achievement at a time when membership has fallen and activity has increased. Although the YE membership figure was 190, 7 of these are TIA-B memberships contributing no revenue. The true YE membership was 183 (4 down on last year).

Analysing the turnover, total sales were up by ~£7400, almost all of which resulted from the UKCPO funding (£3750) and the first tranche of "standards sponsorship" (£3750). The commencement of the AIS contributed but was offset by lower membership fees, events and web-site advertising sales.

Direct costs were up by ~£9000, virtually all of which related to standards-based activities. Indirect costs were little changed.

This analysis justifies the "sweating of the standards asset" – by:

- obtaining sponsorship (already set to raise £11250-£15000 during 2007-2008);
- further work with the UKCPO (raising £5000 in 2007-2008);
- spreading our responsibilities to cover "copper" via TIA-B (remembering that even the 7 new members will contribute ~£2000 in January 2008).

We can look forward to a financially stable 2007-2008.

The monthly accounts have been prepared for both September and October. However, these have not been circulated as we were waiting for the "starting point" figures based on the audited accounts. The figures YTD are approximately breakeven and once the November figures are available the whole set will be circulated in the normal way.

WEB-SITE REPORT

fia-online.co.uk is now functional at a 100% level.

If Council Members find pages that require amendment let me know.

New levels of protection have been applied to allow "subscription" or "project-based activities" to be remain secure. These have been applied to the Corporate and Associate Members access pages and will be applied to AIS and TIA-B areas in due course.

For the information of Council Members:

- all Council Meeting Minutes, attachments and lists of actions can be found at **fia-online.co.uk/maa.htm**;
- it is no longer possible to access the FIA Members area without the correct password.

The TIA-B web-site is located at **fia-online.co.uk/TIA-B**

I have also added a dummy site for the UKCPO at **fia-online.co.uk/UKCPO**. This demo site was created following criticism of their existing site at the last UKCPO meeting.

I have also added a dummy site for the ISO/IEC JTC1 SC25 WG3 at **fia-online.co.uk/ISOIEC**. This is purely temporary.

TECHNICAL REPORT

TECHNICAL MATTERS

The long-awaited reworked decision regarding launch conditions for MMF testing seems to be nearing fruition. This will be promoted in a very technical standard probably published as a IEC PAS. This will be referenced from the new IEC 61280-4-1 (which in turn will be referenced from an amendment of ISO/IEC 14763-3).

Once this has been solidified a Newsletter will be issued (based on the article prepared for Networking+ on Testing Times Ahead together with the content of the presentation made the FIA Seminar on 1st December 2006 (<http://www.fia-online.co.uk/pdf/Presentation/L4757d.pdf>).

Action: Mike Gilmore

I have asked any members wishing to supply reference test cords to contact me. We will be producing a White Paper defining the requirements of a reference test cord with the help of the respondents.

Action: Mike Gilmore

The web-site has already been updated in readiness for links to:

- THE IMPACT OF ISO/IEC 14763-3
 - Topic-specific Newsletter
 - Reference Cord White Paper
 - Test Cord Suppliers
 - Mode Controller Cord Supply

We shall then:

- amend its testing documents TSD-200-4-2-1 and 4-2-2 to reference ISO/IEC 14763-3;
- promote the MCC from ICS.

Action: Mike Gilmore

Technical Support Guides

The re-edit of all documents is underway.

I am preparing a TSD-2000-2-3: OPTICAL FIBRE CABLING: COMPONENTS: CORDS as per the FIA Seminar presentation (September 2006) which can be found at (<http://www.fia-online.co.uk/pdf/Presentation/L4906a-1.pdf>).

Action: Mike Gilmore

UKCPO

I attended a meeting of the UKCPO October 10th at Technium Optic, St Asaph. The next meeting is January 15th at the Marriott Hotel Leeds (hosted by the FIA)

I have added all PKTN related events to the FIA web-site.

The management of the Photonics KTN requires the FIA to produce a Standards Digest twice per year. I prepared another one for the period to 09/07 in September (the 57 page Standards Digest is based on the old Standards Forum documents and is to be found on the Standards Forum section of the web-site - and is therefore available to our members as well).

I have produced six Standards Activity Update Reports. These are to be found on the Standards Forum section of the web-site - and are therefore available to our members as well. A further three such reports will be prepared by end of December 2007 which allow the second Standards Digest to be prepared.

These actions and other small matters will allow us to claim our £5000 funding per annum.

TIA-B

See Annex C.

SEMINARS

Further events require planning. The demise of CITA should spur the FIA to present a wider range of topics.

NEWSLETTER

General Newsletter Issue 86 prepared and circulated October 2007.

ARTICLES

Networking+

I have produced three more articles for Networking+. See Annex A. This package of articles completes the list for this year. I have no agreed deadlines for next year. If any Council members wish to input an article of 630 words please let me know.

I am not sure if it is worthwhile continuing to work with Networking+ as the magazine seems to be getting thinner. This should be discussed in Council.

NCN

AIS

I sent two documents to Rob Shepherd on 23rd October. See Annex B. No response as yet.

The 3 page flyer is on the web at www.fia-online.co.uk/pdf/AIS/L5172.pdf.

APPROVED INSTALLER SCHEME

All software fully functional.

FIA QUALIFICATIONS

To be updated after meeting with John Colton 5th December.

QUALIFICATION SCHEME

Web-site complete. The database for trainers, learners etc. has been developed and used to record the early data received.

STANDARDS ACTIVITY

British

BSI STANDARDS MAKER FORUM

Last meeting: 11th September 2007 - M. Gilmore attended as TCT7 Chairman.
Next meeting: tba - M. Gilmore to attend as TCT7 Chairman.

BSI GEL 86: TECHNICAL MANAGEMENT COMMITTEE: FIBRE OPTICS

Last meeting: 26th September 2007 - M. Gilmore attended as TCT7 Chairman.
Next meeting: 12th March 2008 - M. Gilmore and S. Reeves to attend.

New "fibre optics" specifications continue to be produced at IEC level. The following Committee Drafts are already on the FIA Standards Forum web-page.

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BSI GEL 86/1: SUB-COMMITTEE: OPTICAL FIBRES/CABLES

Last meeting: 5th September 2007 - M. Gilmore did not attend due to travel conflicts.
Next meeting: 5th March 2008 - M. Gilmore.

New optical fibre and optical fibre cable specifications continue to be produced at IEC level. The following Committee Drafts are already on the FIA Standards Forum web-page.

IEC 60794-2-20 Ed 2.0	Optical fibre cables - Part 2-20: Indoor optical fibre cables - Family specification for multi-fibre optical distribution cables
IEC 60794-3-40	Optical fibre cables – Part 3-40: Outdoor optical fibre cables - Family specification for sewer cables and conduits for installation by blowing and/ or pulling in non-man accessible storm

	and sanitary sewers
IEC 60794-3-50	Optical fibre cables: Part 3-50: Outdoor optical fibre cables - Family specification for gas pipe cables and sub-ducts for installation by blowing and/or pulling/dragging in/into gas pipes
IEC 60794-3-60	Optical fibre cables: Part 3-60: Outdoor optical fibre cables - Family specification for drinking water pipe cables and sub-ducts for installation by blowing and/or pulling/dragging in/floating into drinking water pipes

BSI GEL 86/2: SUB-COMMITTEE: CONNECTING HARDWARE

This is a new membership for the FIA.

Last meeting: 18th September 2007 - M. Gilmore did not attend due to travel conflicts.

Next meeting: 18th December 2007 - M. Gilmore and S. Reeves to attend.

New specifications continue to be produced at IEC level. The following Committee Drafts are already on the FIA Standards Forum web-page.

IEC 61300-3-3 Ed 3.0	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-3: Examinations and measurements - Active monitoring of changes in attenuation and return loss
IEC 61300-3-6 Ed 3.0	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-6: Examinations and measurements - Return loss
IEC 61300-3-34 Ed 3.0	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-34: Examinations and measurements - Attenuation of random mated connectors

BSI GEL 86/3: SUB-COMMITTEE: SYSTEMS

Last meeting: 7th March 2007 - M. Gilmore did not attend due to travel conflicts.

Next meeting: 5th March 2008? - M. Gilmore to attend.

New optical fibre system level specifications continue to be produced at IEC level and are logged on the FIA Standards Forum web-page as appropriate.

IEC IEC 62148-16	Fiber optic active components and devices: Package and interface standards - Part 16: Transmitter and Receiver components for LC connector interface
IEC 61290-3-2 Ed 2.0	Optical amplifier test methods - Part 3-2: Noise figure parameters - Electrical spectrum analyzer method
IEC 61290-10-1 Ed 2.0	Optical amplifier test methods - Part 10-1: Multichannel parameters - Pulse method using an optical switch and optical spectrum analyzer

IEC SC86C has also produced a 2nd CD IEC 61280-4-1 document for the testing of optical fibre installations. This, once available, will be referred to from ISO/IEC 14763-3 (our base reference document). This work is fundamental to the ongoing delays to the PSP.

BSI TCT7

Last meeting: 5th December 2007 - M. Gilmore to chaired, L. Funnell did not attend.

Next meeting: 4th or 25th June 2008 - M. Gilmore to chair, L. Funnell to attend.

BSI TCT7/-1

Last meeting: 13th November 2007 - M. Gilmore chaired.

Next meeting: 8th January 2008 - M. Gilmore to chair.

BSI TCT7/-2

Last meeting: 13th November 2007 - M. Gilmore chaired joint meeting with TCT7/-1.

BSI TCT7/-3

Last meeting: 12th October 2007 - M. Gilmore to chair.

Next meeting: 19th December 2007 - M. Gilmore to chair.

Work is underway on "BS 8492: Telecommunication equipment and telecommunications cabling - A Code of Practice for fire performance, prevention and protection". Lee Funnell has already submitted information.

Experts are ready to revise both BS 6701 and BIP0007 when EN 50174-1 Ed.2 and EN 50174-2 Ed.2 are ready for publication.

European

CLC TC215 WG1

Next meeting: 9th April 2008, Brussels, Belgium - M. Gilmore to attend.

CLC TC215 WG1

Last meeting: 6th/7th November 2007, Montpellier, France - M. Gilmore chaired.

Next meeting: 28th/29th January 2008, Darmstadt, Germany - M. Gilmore to chair.

Following meeting: 7th/8th April 2008, Brussels, Belgium - M. Gilmore to chair.

CLC TC215 WG2

Last meeting: 8th/9th November 2007, Montpellier, France - M. Gilmore attended as Secretary.

Next meeting: 30th/31st January 2008, Darmstadt, Germany - M. Gilmore to act as Secretary.

Following meeting: 10th/11th April 2008, Brussels, Belgium - M. Gilmore to act as Secretary.

CLC SC64B WG218

Last meeting: 3rd/4th December 2007, Paris - M. Gilmore attended.

Next meeting: 26th/27th February 2008, Berlin - M. Gilmore to attend.

ETSI ATTM (ACCESS, TERMINALS, WG AT2)

Last meeting:

- 21st/22nd November 2007, Sophia Antipolis, France - M. Gilmore attended.

Next meetings:

- 7th February, 2008, Turin, Italy - M. Gilmore unable to attend.

The Technical Committee (TC) ATTM is the "home" for Access, Terminals, Transmission and Multiplexing including all aspects within the ETSI scope covering cabling, installations, signal transmission, multiplexing and other forms of signal treatment up to digitalization in private and public domain. The Working Group AT2 (Infrastructure, Physical Networks & Communication Systems) in TC ATTM is responsible for the creation, development and maintenance of the Technical Report on the "Relationship between installations and cabling and communications systems" and directly related Work Items.

This is potentially interesting following three separate unrelated actions:

- the publication by CLC of CLC TR 50510 (Fibre optic access to end-user – A guideline to building of FTTX fibre optic network) and an action on M. Gilmore to provide a review of this document;
- my invitation as FIA TD to a FTTX seminar in Italy (with John Marson);
- my submission to ATTM AT2 (see Annex B).

International

ISO/IEC JTC1 SC25

Last meeting: 7th September 2007, Jeju Island, Korea.

Next meeting: 24th October 2008, France.

ISO/IEC JTC1 SC25 WG3

Last meeting: 3rd/6th September 2007, Jeju Island, Korea - M. Gilmore attended.

Next meeting: 18th/22nd February 2008, Spain - M. Gilmore to attend.

ISO/IEC JTC1 SC25 WG3 CITG

Last meeting:

- 27th/29th November 2007, Philadelphia, USA - M. Gilmore to chair.

Next meetings:

- 19th/21st February 2008, Spain - M. Gilmore to chair;
- 6th/8th May 2008, Philadelphia, USA - M. Gilmore to chair.

Mike Gilmore

Annex A: Articles for Networking+

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

by

Mike Gilmore, Technical Director of the FIA

for Networking+ (not used yet)

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”- FTTD but the two situations are fundamentally different. It is therefore worth comparing and contrasting FTTX and FTTD.

FTTD 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, FTTD 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 FTTD.

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⁻¹ and more realistically 50-100 Mbs⁻¹. 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 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.

TIA-B: THE FIA AND ECA-ITEC JOIN FORCES - AND WHO'S NEXT?

by

Mike Gilmore, Technical Director of the FIA

for Networking+ (October 2007)

In the September issue of Networking+, I outlined the FIA proposal to host an organisation called the "Telecommunications Infrastructure Advisory Board" (TIA-B). That initial proposal has now developed from a concept to a fully formed cross-technology industry association co-hosted by both the FIA and the ITEC (Information technology, electronics and controls) group of the ECA (Electrical Contractors Association) - we hope that other hosts will be announced imminently.

To refresh your memories, the TIA-B has been formed to fill the gap left by the demise of CITA that had primarily concentrated on the "copper" side of the telecommunications infrastructure business. The two other technical bodies in the infrastructure area were the FIA, obviously covering fibre optics, and the ECA-ITEC.

The FIA has had a historic commitment to international, European and UK standardisation and has provided substantial sponsorship of those activities via its Technical Directorate. These activities have inevitably spread far beyond its own cabling media and cover balanced cabling, wireless technologies and Power over Ethernet. Moreover, in a number of areas, such as segregation of telecommunications and mains power cabling, the wider interests of the FIA overlap with the electrotechnical aspects addressed by the ECA-ITEC. This provides an excellent foundation upon which to build the TIA-B as a technical body that benefits directly from this existing expertise thereby providing substantial benefits, at no extra cost, to the members of its co-hosts.

The inaugural TIA-B meeting was held at the IET on September 10th. Following a 90-minute presentation of the objectives and operation of the TIA-B, the meeting moved on to agree the initial projects to be handled by the TIA-B. Six projects were identified as being of either high and medium priority. High priority items were the development of an Infrastructure Advisory Note (IAN) entitled "Standards Usage Guide" and the development of Standard Interpretation Documents (SIDs) on "Segregation between mains power and telecommunications cabling" and "Earthing of cabinets/frames/racks". These are of significant value due to the expected changes to the requirements the European, and therefore UK, standards in 2008.

The production of the IAN on "Standards Usage" re-focussed attention on the perennial problem faced by telecommunications infrastructure installers everywhere - the lack of understanding in the consultant community of the standards that exist to help them correctly specify their needs. This caused us to consider who/what the TIA-B should consider as future co-hosts. The answer is obvious - trade/industry associations that represent users and their consultants. Work is now progressing in this area and we will bring you news of this as soon as possible.

In the medium priority area were three further IANs covering "Glossary of terms", "Wireless network installation practice and safety" and "Cabling infrastructures and carbon footprints". The latter created significant interest during the meeting so we look forward to seeing the scope of this most topical work.

Project leaders for most work packages were identified at the meeting and the work on all six projects will begin almost immediately. In addition, three other issues of considerable value were deferred pending decisions by co-hosts and the outcome of other standards activity. The complete information regarding the meeting is downloadable at www.fia-online.org/TIA-B/pdf/L5142.pdf.

The FIA is offering free membership for ex-CITA members until January 2008 at which point they will be offered membership of the FIA at the same fee structure as existing FIA members. We feel that this offer is appropriate since CITA members may have already paid their annual fees and a short waiver of trade association fees is fair and reasonable.

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.

CABLE MANAGEMENT SYSTEMS – A BIG “CON” OR JUST MISUNDERSTOOD

by

Mike Gilmore, Technical Director of the FIA

for Networking+ (November 2007)

As FIA Technical Director, I have received a growing number of negative comments on the operation of cabling administration tools. These are the software products used to record the connections within cabling infrastructures and manage works instructions for adds, moves and changes. They are commonly, but inaccurately, described as “cable management systems” and range from simple spreadsheets through to fully intelligent packages that automatically monitor the disconnection and reconnection of equipment/ patch cords.

The growth in the number of critical comments is not necessarily surprising because there are now more products on the market and there are more users. It is a competitive market and there are obviously going to be some users who are dissatisfied.

However, what is interesting is that the complaints do not focus on the operation of the software but tend to be about the failure of the organisations that have purchased the software to truly benefit from it. Users have the feeling that they have squandered the money invested. However, a deeper investigation of the problems frequently reveals that the underlying concern is that the customers feel that they cannot rely on the information that is recorded.

The fundamental problem is that, almost without exception, even the most intelligent management systems can be tricked either by using non-compliant cords or undertaking works instructions in a non-complaint sequence. These two problems are in fact, just one - the use of incompetent staff or the allowance of unauthorised personnel to make changes to the networked infrastructure.

At the heart of the problem is that, prior to the purchase of “cable management systems”, the customer has confused “administration systems” with “administration tools”. The software packages, simple or sophisticated, are just tools. Any subsequent problems result from the failure of the management systems employed using those tools - and not from the failure of the tools.

This is just a restatement of the old adage “you can take a horse to water”.

Infrastructure management is a serious business and its importance is growing as more general security concerns increase. The unauthorised and unrecorded diversion of networking connections can result from many reasons including an individual's desire to obtain a service to which they are not entitled, to correct a local breakdown in service and even sabotage. An organisation has to decide which, if any, of the possible reasons for such changes can be allowed, and supported, and which cannot - on “pain of death” for the culprit.

Systems need to be enacted to restrict such activities that are not acceptable and to make obvious the occasions on which the remaining unauthorised changes have been made. Obvious procedures would control the access of personnel to “comms rooms” while less obvious procedures would include the provision of clearly identifiable products to allow specific types of unauthorised changes to be made - i.e. supporting a recognised risk of administration failure.

Cabling administration standards have always differentiated “identifiers” from “labels”. People are only just realising that it may not be a good idea for a label to show networking information (e.g. where the other end of a cable is). Similarly, it has never been a good idea for a cable to be labelled with its end-points - even though the identifier relating to that label (only seen by the administrator) would do so.

Without the detailed consideration of administration systems, the purchase of an administration tool is always going to lead to an “empty feeling”. The FIA are going to publish a document on effective administration in early 2008.

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.

Annex B: Documents sent to NCN

FIA

The Fibreoptic Industry Association

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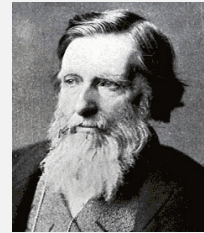
The Law of Business

John Ruskin 1819-1900

"There is hardly anything in the world that someone cannot make a little worse and sell a little cheaper, and the people who consider price alone are that person's lawful prey.

It is unwise to pay too much, but it is also unwise to pay too little. When you pay too much, you lose a little money, that is all. When you pay too little, you sometimes lose everything because the thing you bought is incapable of doing the thing you bought it to do.

The common law of business balance prohibits paying a little and getting a lot it can't be done. If you deal with the lowest bidder it is well to add something for the risk you run. And if you do that you will have enough to pay for something better."



THE MK. II FIA APPROVED INSTALLER SCHEME

Supplier selection

How do you differentiate between suppliers of services? How do you know, in advance, whether one supplier is going to provide you with a better service than another? Obviously one of the best ways is to base your judgement on experience - either your own or that of someone you trust. When it comes to the installation of cabling infrastructures that is not always possible. Unless you have an incumbent "small works" installer, you may only require the services of an installer once every three to five years. Three years is a long time in the installation business - staff may have changed, standards may have been revised - and past experience cannot always be relied upon. Even if you do have an incumbent installer, they may not be capable of taking on complete installations or refurbishment projects so you have to look elsewhere.

The options for the selection of installers for larger telecommunications cabling infrastructures are limited. If you want a "manufacturer's warranty" for the finished job, the cabling system supplier may require that you select one of their "approved" installers. These days a "supplier approval" is awarded based upon commercial performance (i.e. the volume of business delivered to the supplier by that installer) mixed with a variable requirement for product training. The examination of "reference" sites is frequently waived due to the contractual difficulties it creates. Nevertheless, no supplier wants to work with installers that cause problems so this system is, to some extent, self-regulating. But are problems always a bad thing? It rather depends who is on the receiving end of the problem - installers who cause "problems" by standing up for their customers in the face of poor supplier service may actually be just what the client actually needs.

An alternative is to consider selection from a more independent source such as an "approved installer" list from an industry association. The Fibreoptic Industry Association (FIA) has operated an Approved Installer Scheme for many years based upon the application of the relevant installation standard for fibre optic cabling (which at the time was BS 7718) and systems assurance in accordance with ISO 9000. The competence of personnel was also addressed by reference to City & Guilds 3466 qualification.

A number of substantive changes to these foundations have automatically forced a change to the scheme. Specifically, the withdrawal of BS 7718 in September 2003, the subsequent publication of BS 6701:2004 and its mandatory link to European standards (further reinforced this year) and the migration to City and Guilds 3666 qualifications all demanded a completely new "installer approval" approach. Two fundamental questions were posed to the FIA Council at the beginning of 2005 - "should be the FIA Approved Installer Scheme be replaced at all?" and if so "what with?"



The need for independent Installer Approval

Before answering these questions it is necessary to review the commercial changes that have occurred in the market. These have created something of a paradox for high performance balanced optical fibre cabling installations. On one hand, the business has become increasingly competitive and commoditisation has led to the envelopment of telecommunication cabling within general mechanical and electrical (M&E) contracts subsequently managed by non-specialists more used to plumbing, gas-fitting and electrical installations. On the other hand, the technical challenges faced by installers have not reduced - in fact some would say they have increased.

Faced with these market conditions, installers need to complete projects on time and cannot afford to be delayed by arguments over technical or contractual performance because they need to maximise the profit margins available. As always, clients demand operational, maintainable and repairable installations that are completed on time, with few contract variations and no need to litigate. Therefore, somewhat surprisingly, the objectives of the client are not in competition with the needs of the installer. The words of John Ruskin in his "Law of Business" are as pertinent today as when they were first penned.

It is the role of an Approved Installer Scheme to produce a match between the two parties based upon their stated needs.

The FIA Approved Installer Scheme - founded on risk aversion

The FIA decided that their Mk.II Approved Installer Scheme, launched late in 2006, should be based on the concept of "risk aversion". Some are surprised by this analysis - suggesting that "good" installers should undertake "high quality" installations - unfortunately "high quality" is a most elusive characteristic and is difficult to define - and if we cannot define "high quality" then we should not rely on it too much. Others have considered that "competence" should be the benchmark. Again, this is not so easily addressed - primarily because competence is a personal characteristic. There are plenty of competent people who can do their jobs very well indeed but they work for organisations that use their skills inappropriately or incorrectly and render them incompetent as a result. So the employment of competent people may not be the key criterion we might have initially imagined.

Risk aversion is good for all parts of the supply chain. "Risk averse" installers will ask the pertinent questions of their suppliers in order to use their products correctly and from the supplier's perspective, installers that minimise risk will be more soundly-based from a commercial viewpoint. These same installers will employ competent persons in a professional manner - emphasising rather than undermining their competence. Installers committed to the "reduction of risk" will be very careful not to over-commit and will have a good understanding of the requirements of the various standards they are asked to work to - thereby reducing the risk not only for themselves but for their clients.

The FIA are pleased to offer Approved Installer status to organisations who are committed to being "risk averse". Do such paragons of virtue exist? Well yes they do - there are actually quite a few of them. They are frequently not the biggest players and they are not also always the lowest bidders but because they are averse to, and seek to manage, risk they may be the lowest cost option at the end of the day. The new FIA Approved Installers Scheme is targeted to provide "risk averse" installers with the recognition due to them.

Approval, a certificate, a badge and more so much more

It is a sad fact that most approved installer schemes are based upon strict acceptance criteria but with minimal, if any, audit regimes. Indeed, the Mk. I FIA AIS was founded in this tradition. In comparison, to operate a "risk averse" installation business an installer needs to do more than meet a set of externally-defined criteria and, equally, the approval agency needs to provide considerably more assistance on a day-to-day basis.



Approved Installers are obviously allowed to advertise their approved status. However, for the Mk. II AIS the FIA agreed that there was much more to be done than simply awarding approval, giving out a certificate and the all-important logo, and then leaving installers and clients to their own devices.

The FIA do not simply wish to approve companies that can already demonstrate risk aversion, we want to encourage new organisations to take up the mantle. To do so installers require a substantial input of information and management tools in a number of areas including design and planning, field supervision/management and overall quality assurance.


The responsibility for the accuracy and provision of these tools lies with the FIA Approved Installer Directorate.

The Approved Installer Database

Any worthwhile approval scheme has to emphasise quality assurance and installation practice in accordance with recognised standards.

The publication of BS 6701:2004 "locked-in" other primary installation standards including BS 7671, BS EN 60825 and the BS EN 50174 series of standards. This provided the FIA with a significant opportunity - embedding risk-managed and best installation practices into a single quality assurance tool - the FIA Approved Installer Database (AID).

The AID takes the form of an Access database that is supplied to each FIA Approved Installer that contains all the risk elements that the installer may encounter. There are four logical areas of risk - "design/specification", "construction", "installation" and "customer" - and each area comprises a number of sub-groups leading to a total of almost 300 individual elements. The Approved Installer records (as a "YES", a "NO" or "N/A") those risk assessments that apply to each installation at one or more stages of an installation.

Welcome to the APPROVED INSTALLER DATABASE	
	
COMPANY	<input type="text" value="ACME INSTALLATION COMPANY"/>
FIA MEMBERSHIP No.	<input type="text" value="765"/>
APPROVED INSTALLER No.	<input type="text" value="AI0001"/>
VIEW EXISTING RECORD	
Select PROJECT	<input type="text"/>
Select RECORD	<input type="text"/>
<input type="button" value="VIEW ALL PROJECTS/RECORDS"/>	
CREATE NEW DATA	
<input type="button" value="ADD NEW PROJECT"/>	
<input type="button" value="ADD NEW RECORD"/>	
<input type="button" value="EXIT"/>	

RISK ASSESSMENT MAIN MENU

PROJECT NAME	RECORD ID	START DATE	END DATE
UNIVERSAL DATA	1811	11/11/2006	25/11/2006

DESIGN/SPECIFICATION	CONSTRUCTION	INSTALLATION	CUSTOMER																																																																
D1: QA Overview	APPROVED INSTALLER No.	AI0001																																																																	
D2: Safety	PROJECT NAME/ID	UNIVERSAL DATA																																																																	
D3: Environment	DESIGN/SPECIFICATION CHECKLIST																																																																		
D4: Documentation	QA Overview																																																																		
D5: Survey	RECORD ID	1811																																																																	
D6: Customer service	<p>Click on highlighted index letters for typical table of responsibilities</p> <table border="1"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> <th>NA</th> </tr> </thead> <tbody> <tr><td>A</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>B</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>C</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>D</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td>E</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td>F</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>G</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>H</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>I</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>J</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>K</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>L</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>M</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>N</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td>O</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </tbody> </table>				Yes	No	NA	A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	C	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	D	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	E	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	F	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	H	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	J	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	K	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	M	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Site Operation of the scheme

Presented as a series of check sheets each sheet completed or partially completed will represent a snapshot of those activities being performed at the time the check was carried out. As sheets are submitted and the information subsequently loaded into the FIA Approved Installer Database (AID) a much wider picture of installer performance will accrue, possibly spread over a number of projects. Completed in this way the scheme does not place an onerous burden upon the installer.

Upon completion of each project, the Approved Installer is required to submit the record-keeping i.e. the contents of the AID for that project via e-mail to the FIA.

The FIA will undertake an audit of one or more of the installations recorded - against the contents of the database. Equally importantly, the FIA will use the statistical trends contained in the total dataset provided by all Approved Installers to address specific shortfalls in risk management.

On-line access to best "risk-managed" practice

On its own the AID would simply represent an added load for the installer so the FIA has provided an unparalleled degree of local and on-line assistance, hyperlinked from each risk element that explains in detail the relevant requirements of the current and future standards. In essence, this package brings the Approved Installer and the FIA into a partnership in support of risk-managed installations. This represents the most comprehensive support package provided with any approval system.

The format and the level of detail that is provided by the support package is not just useful to the installer. It can be used in conversations with clients and consultants to assist in the development of their requirements. It can also be used as a tool to promote the concept of "risk averse installation" and, of course, the Approved Installer to all those in the supply chain. Indeed, the presentations of the AIS already undertaken indicate that this is a very powerful selling point for the entire scheme.

It is also worth noting that the content of the AID and its support package is not specific to optical fibre - but covers the installation of all telecommunications cabling addressed by BS 6701:2004. The provision of software tools and on-line assistance that can be applied not only to optical fibre but also to other telecommunications cabling projects will be of benefit to a number of our members.

Involvement of all

Whilst the above has concentrated mainly on the installer the scheme is designed and supports use by Consultants, Designers, even the Customer, in fact all those that may be involved in a Telecoms Project. The scheme includes a "paper-trail" matrix highlighting which skill party needs to receive what and includes the customer. In fact the AIS enable the customer to carry out a basic audit on the installation during its progress and/or on completion.

Finally, it has to be pointed out that the AID is not a static system. The elements of risk aversion and the corresponding data in the support packages may change as standards change and as a result of input from Approved Installers and other FIA Directorates.

The future

Clearly, the Mk. II FIA Approval Scheme is substantially more sophisticated than its predecessor. The reaction from all parts of the market has been very positive. The risk-management systems operated by the Approved Installers provide confidence to both their clients and the FIA. So much so in fact that Approved Installers and their customers have automatic free access to the FIA Arbitration Scheme, created to provide technical advice and support where there is a dispute relating to the work or services provided by a Member.

Peter Lythgoe, FIA Installation Director and author of the new Approved Installer Scheme along with his fellow FIA Directors, especially Mike Gilmore, Technical Director, firmly believe that the adoption of the scheme by installers and recognition by consultants and communications managers will bring significant enhancements to installations by delivering the requirements of the relevant standards directly into projects.



The Fibreoptic Industry Association

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FIA APPROVED INSTALLER SCHEME

How do you know, in advance, whether one supplier is going to provide you with a better service than another? One solution is to consider an independent selection from an "approved installer" list.

The new FIA Approved Installer Scheme is based on "risk aversion". Risk-averse installers use products correctly, have a good understanding of the standards they are asked to work to and employ competent persons in a professional manner - bringing tangible benefits to themselves, their suppliers and clients.

The publication of BS 6701:2004 "locked-in" other primary installation standards including BS 7671, BS EN 60825 and the BS EN 50174 series of standards. This provided the FIA with a significant opportunity - embedding risk-managed and best installation practices into a single quality assurance tool - the FIA Approved Installer Database (AID).

The AID addresses risk elements that the installer may encounter and provides an unparalleled degree of local and on-line assistance, hyperlinked from each risk element, explaining the requirements of both current and future standards. This brings the Approved Installer and the FIA into a partnership and represents the most comprehensive support package provided with any approval system. It is worth noting that the content of the AID and its support package is not specific to optical fibre - but covers the installation of all forms of telecommunications cabling.

Furthermore, the AID is not a static system - the elements of risk aversion and the support packages will change as standards change and as a result of input from Approved Installers and other FIA Directorates.

Peter Lythgoe, FIA Installation Director and author of the scheme said that "reaction from all parts of the market has been very positive, giving confidence to both all involved - this is reflected in the fact that Approved Installers and their customers have automatic free access to the FIA Arbitration Scheme".

Further information is available on-line at www.fia-online.co.uk.



Annex C: TIA-B

The inaugural meeting of TIA-B took place on 10th September. ECA ITEC agreed on 18th September to co-host TIA-B with the FIA. On the 15th October a meeting took place with Glenn Powell, Chief Exec of CMA. Five weeks ago he gave me verbal confirmation that CMA would also like to host the TIA-B but I still have nothing in writing.

We now have completed Introductions and Scope for 4 of the 6 initial projects and these are to be emailed out to members to obtain additional support for the Project Leaders. These are shown below.



TELECOMMUNICATIONS INFRASTRUCTURE ADVISORY BOARD

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Key links

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Co-hosted by
The Fibreoptic Industry Association
Electrical Contractors Association - ITECHosts:
FIA
ECA-ITEC

Standards Interpretation Documents

"Clarification of the current requirements and recommendations concerning the segregation of telecommunications and mains power cabling"

📧 Project Team Leader: Lee Funnell

(SIDs)

Introduction

The segregation of mains power cabling and telecommunications cabling containing metallic structural and/or signalling elements requires the consideration of safety, protection and electromagnetic interference. These aspects are addressed by different national standards and this document seeks to consolidate the requirements and recommendations of those standards within a simple reference document.

It is not uncommon for aspects of the segregation requirements to be in conflict with the needs of the building infrastructure due to lack of space or competing demands for the available space. As a result the installer of the telecommunications and/or mains power cabling is unable to comply with the published standards, despite those standards being a contractual and/or legal requirement.

This Telecommunications Infrastructure Advisory Board SID contains interpretation of published standards covering the planning and installation of telecommunication cabling infrastructures, explains the consolidated requirements and recommendations in relation to segregation of telecommunications and mains power cabling and provides:

- users with guidance in relation to sizing of pathways and spaces and long-term management of cabling within them;
- consultants with guidance in relation to the location and construction of pathways and pathway (cable management) systems;
- installers with the ability to identify any potential or actual non-compliance with the published standards and act accordingly.

The specific standards subject to interpretation within the document are BS 6701:2004 and BS EN 50174-2:2001 in combination with BIP 0007 (published by BSI and available free-of-charge to FIA and ECA members).

This document provides interpretation of published standards which is intended to be submitted to checking and endorsement by the BSI Technical Committee, or equivalent, responsible for the production of the standards that are subject to TIA-B interpretation."

Scope

This Telecommunications Infrastructure Advisory Board SID contains interpretation of the following published standards covering segregation of mains power cabling and telecommunications cabling containing metallic structural and/or signalling elements:

- BS 6701:2004;
- BS EN 50174-2;
- BS BIP 0007.

Introduction

The earthing of telecommunications infrastructures is handled in a number of standards, all of which are applicable in the United Kingdom, but most of these address the topic from a specific viewpoint and can appear contradictory.

With regard to the earthing of cabinets/frames/racks containing, or intended to contain, telecommunications equipment and cabling, installers need to have clear guidance based on accurate interpretation of these standards which is endorsed by the relevant standard bodies.

This Telecommunications Infrastructure Advisory Board SID contains interpretation of published standards covering the earthing arrangements for cabinets/frames/racks containing, or intended to contain, telecommunications equipment and cabling:

- explains the circumstances under which earthing is required;
- provides guidance to the minimum requirements for protective earth conductors;
- allows users, consultants and installers to identify any potential or actual non-compliance with the published standards and act accordingly.

The specific standards subject to interpretation within the document are BS 6701:2004, BS EN 50174-1:2001 and BS EN 50174-2 in combination with BIP 0007 (published by BSI and available free-of-charge to FIA and ECA members) together with electrical system standards HD 60364-5-54 and BS 7671.

This document provides interpretation of published standards which is intended to be submitted to checking and endorsement by the BSI Technical Committee, or equivalent, responsible for the production of the standards that are subject to TIA-B interpretation."

Scope

This Telecommunications Infrastructure Advisory Board SID contains interpretation of published standards covering the earthing arrangements for telecommunication cabling infrastructures,

This Telecommunications Infrastructure Advisory Board SID contains interpretation of the following published standards covering earthing arrangements of cabinets/frames/racks containing, or intended to contain, telecommunications equipment and cabling:

- BS 6701:2004;
- BS EN 50174-1;
- BS EN 50174-2;
- BS EN 50310:2006
- HD 60364-5-54;
- BS 7671:2001;
- BS BIP 0007.

Introduction

Wireless network installations are prevalent with WiFi 'zones' in almost every public space. Corporate and public sector organisations are growing increasingly dependent on their wireless networks to support and enhance their operation and/or to provide services to their customers and clients by providing a range of services including Internet access, Voice over IP services, manufacturing process monitoring, IP CCTV and alarms. Radio frequency identification (RFID) tags are also being used via wireless networks to track stock, assets, vital medical equipment in hospitals, and even children within the confines of a campus.

With personal safety and business operation at risk it is vitally important for wireless networks to be stable and reliable. In contrast, many potential users deem wireless networks to be too unreliable and insecure - often the result of past bad experience. Also, recent controversy regarding exposure to radio frequency emissions has caused concern for some, and in some instances has led to networks being shut down as a safety precaution. How can the same wireless networks deployed to protect human life and enhance many businesses cause such fear and concern regarding safety, security and reliability for others?

Wireless network problems are generally due to a combination of lack of planning, inadequate or non-existent RF survey and poor installation - factors that also affect the safety of the installation. Wireless networks are

"Earthing of cabinets/frames/racks"

📧 Project Team Leader: Tim Oldershaw

"Wireless network installation practice and safety"

📧 Project Team Leader: Steve Smith

inherently more complex than fixed media networks, so care and attention to detail is essential to achieve a stable and reliable installation.

This Telecommunications Infrastructure Advisory Board SID contains interpretation of published standards covering best and safe practice for wireless network installation in the 2.4 GHz and 5 GHz frequency bands. Aspects of wireless installation to be addressed include planning, survey, physical installation, configuration, power management, channel allocation, security and maintenance.

The SID takes account of the European Directive 2004/40/EC and provides:

- users with the confidence to know when their installation has been installed effectively;
- consultants with the information required to specify a wireless installation and to verify the installation against the relevant standards;
- installers with a guide through the relevant standards to enable them to install wireless networks safely, effectively and efficiently and to protect them from potential future litigation.

The specific standards subject to interpretation within the document are:

- BS 6701:2004;
- EN 300 328, 301 893 and 300 440;
- IEEE 802.11 standards family;
- ISO/IEC TR 24704.

This document provides interpretation of published standards which is intended to be submitted to checking and endorsement by the BSI Technical Committee, or equivalent, responsible for the production of the standards that are subject to TIA-B interpretation."

Scope

This Telecommunications Infrastructure Advisory Board SID contains interpretation of the following published standards:

- BS6701:2004;
- EN 300 328, 301 893 and 300 440;
- IEEE 802.11 standards family;
- ISO/IEC TR 24704.

The SID will cover best and safe practice for wireless network installation in the 2.4GHz and 5GHz frequency bands including the following topics:

- planning - applicable standards and key parameters for surveys and installation;
- surveying - strategies to meet design objectives and standards compliance including selection of antennae for internal and external networks;
- physical installation - access points, antennae, inter-building bridge links, mesh radio installations, antennae poles, masts and guying;
- configuration - safe working and standards compliance in the following areas:
 - power management;
 - channel allocation;
 - security;
- maintenance - techniques for initial benchmarking, operational monitoring and preventive maintenance procedures.

Infrastructure Advisory Notes "Guidance in the usage of standards"

 **Project Team Leader: Mike Gilmore**

(IANs)

Introduction

Three bodies are primarily responsible for the production of standards for the design and implementation of telecommunications infrastructure. These bodies operate to serve the needs of European, international and North American industry but the geographical usage of the standards they produce is not restricted. It is not uncommon to see North American standards referenced in infrastructure contracts in the UK and European standards are often referenced in Africa and Asia.

The role of telecommunications infrastructure standards within contracts is to ensure that minimum requirements are met. However, technical, commercial and even legal problems result from injudicious application of standards including:

- the referencing of multiple standards that cover the same topic;
- the mixing of regional standards for different aspects of infrastructure implementation process (e.g. design, installation and testing);
- the risk of conflict with national and local regulations;
- a lack of understanding of conformance to the standards.

This Infrastructure Advisory Note (IAN) contains guidance relating to the application of standards within telecommunications infrastructure contracts for the United Kingdom and provides:

- specifiers with templates for viable alternative routes of specification which allow the widest range of standards-based implementations within a national standards/regulatory framework;
- installers with tools to minimise risk in the face of poorly defined requirements.

This IAN is targeted at implementations of telecommunications infrastructure within the United Kingdom but provides information relevant in other countries.

Extensions to this IAN, or additional IANs, may be produced to provide guidance to specific market sectors such as healthcare and education.

Scope

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