With facilities managers driving the need for so called ‘open protocol’ fire safety systems, Martin Watson, business unit head for UK fire safety within the Siemens Building Technologies division, discusses the implications of such an approach and how the term ‘protocol’ can lead to confusion.

When asked about the need for an open protocol system, the question I often ask in response may seem dramatic, but has a very valid point to it: “Who would you prefer to carry out ‘brain surgery’ on your life safety system, a GP or a specialist surgeon?”

Many would argue that, on paper, open protocol should mean greater choice of suppliers and more competitive pricing. However, in practice it means that crucial fire systems designed to protect people and property are open to potentially untrained service providers.

The debate around open and closed protocol is largely tied up with people’s understanding of the term ‘protocol’. Most of today’s understanding of the word ‘protocol’ comes from its associations and use within the IT and communications industry. This means most people see the term ‘protocol’ used in respect to how easily equipment can be integrated with other hardware or software. However, when used in the context of fire safety, it should be approached from a different standpoint.

Firstly there is the legislative requirement in the form of the Regulatory Reform Order (Fire Safety) 2005 (FSO). This came into force in 2006, and replaced over 70 separate pieces of fire safety legislation. It gives responsibility to those who are best placed to understand, address and monitor fire safety risks - which necessarily change over time. Under the FSO a ‘responsible person’ (usually the owner, employer or occupier of business or industrial premises) must carry out and maintain this fire risk assessment. This also means that the responsible person needs to be certain that anyone working on their fire alarm system has the required skills, knowledge and experience.

An unregulated market

The UK fire industry is an unregulated market; anyone can profess to be proficient. Systems manufacturers need to enforce their own safeguards, by training and licensing competent organisations and persons, otherwise there are no real checks and measures. It is these safeguards that customers may see as restrictive from the point of view of the open protocol argument. But it is such processes that ensure a fire system is safe and fit for purpose – protecting people, property and assets.

British Standard BS5839 details all of the procedures necessary to maintain and service fire detection and alarm systems. There is no requirement under this BS standard for a service engineer to have access to the system protocol to carry out routine maintenance – this is only required for more complex works.

Points for consideration:

- Competence to make changes to the system architecture and Cause & Effect [e.g. what the system actually does in the event of an actual alarm or fire] requires a knowledge and skill-set over and above that needed to carry out routine system servicing. End-users know that they are required to employ competent personnel, but how do they recognise competence?

- Most systems, irrespective of the “protocol”, will allow devices to be changed on a like-for-like basis without need for system access.

- Software access to the system is only necessary when changes to the system architecture and cause/effect are needed.

Viewpoint: Dispelling the myths - open protocol

A view from the Siemens Building Technologies division

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• Any BS5839 competent organisation can carry out a system service, but for system safety it should only be possible for an authorised engineer to make changes to critical system programming.

To ensure the performance of systems is never compromised, it is essential that all elements not only integrate seamlessly, but that those who are maintaining the systems, as well as those carrying out alterations, have the skills and knowledge to do so effectively.

The competence needed to make changes to the architecture of a system, for example, its operation and inner workings, requires a completely different knowledge and skill set to those who inspect and routinely service the system. It is therefore important that commercial organisations understand their responsibility to ensure the competency of individuals working on their systems; this is something that can be confused by complex supply chain arrangements.

Potential for prosecution

At this point it is worth referring to the Corporate Manslaughter Act. The people ultimately responsible for the safety of staff in an organisation, such as CEOs and Managing Directors, could find themselves prosecuted under the Act along with Facilities Managers or anyone else in charge of maintenance of the fire system in the event of any failings. This makes it of the utmost importance that board members ensure fire safety systems are being maintained in the correct manner and/or changed by appropriately qualified personnel.

At Siemens, we strongly believe that only qualified service providers should be able to modify our fire safety systems. Therefore, we only grant software licenses to those who demonstrate expertise and undertake specific training to ensure the system works to its optimum level. This approach also ensures no additional costs are incurred through unnecessary downtime by faults caused by incorrect modifications or damage to systems by unqualified service providers.

Sophisticated fire safety systems need specialist knowledge to ensure they continue to operate in the manner they have been designed for and offer the maximum level of protection. It is therefore vital that the issues associated with open protocol are fully understood. To summarise: open protocol is not necessarily a guarantee of competence.

About the author:

Martin Watson is Business Unit Head - UK fire safety for the Siemens Building Technologies division.

Having joined Siemens over 20 years ago, Martin has built up significant industry expertise and knowledge.

He became Service Director of the fire safety business unit in 2006 and was appointed to his current position in December 2009.

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