



AGILE BUILDINGS

At last – via **OBIX**

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Agile: having the faculty of quick motion; nimble, ready. Easily moved ... dexterity in motion.

Many different words and phrases have been used to describe different 'buildings for the future'. People use them to mean what they want them to mean.

- **Networked building** – wired in full or part with cables allowing computers and their resident software to communicate with each other, to file servers and if set up to do so, out of the building via the Internet
- **Integrated building** – where one or more software applications can exchange data within the building or if set up to do so, out of the building via the Internet
- **Intelligent building** – having a software programme that collates data from several sources (from other software or from control devices such as thermostats) with an inbuilt set of instructions such as 'if that, then do this' allowing it to react to messages received and logging its response for human operator information.
- **Flexible building** – able to be quickly and (hopefully) inexpensively altered as required by the occupiers as their work needs change. Usually means moving the wall partitions fairly easily. Every building service alteration turns into a nightmare.

Agile buildings

As the person with responsibility for the commercial success of the organisation, I know what I want. I want to buy and see installed with ease and a reasonable amount of cost, any piece of equipment I choose for the needs of the business. I do not want to pay for a programmer to spend time writing bespoke software 'driver' for me. If we must alter the use of room spaces or move the walls, I want it done without a 6 months hiatus and crippling charges. I want to know all that is going on everywhere in my buildings, where we are at risk and what that consists of, where energy is being consumed and to what level and why, who is working where and when and so on. I want a building for the future needs of my business. I want a building that has been conceived to allow future alterability. Its structure and all services, lighting, heating, computer provision, telephones etc. can be altered into almost any new formation. I want an agile building.

Is there an 'intelligent' building in existence? One that can absorb data from a number of messages and by reference to a data bank, perm through the variables to choose the one that best fits in solution? As computer artificial intelligence does? Improbable. Even if it can, the bricks and mortar shell in which it resides is unlikely to be structured, cabled and wired with protocols and devices that allow it to act as a really truly live, thinking building. We are still talking science fiction stuff here. True integration is still a dream. Open standards? Integratable software? You are joking. Companies such as Honeywell, Siemens and Johnson Controls claim to offer 'complete solutions'. This is an interesting claim because their solutions come from different

sources. You might imagine that these giants are single companies but they are in fact federations and have grown to the size they have through purchasing smaller companies whose products they thought might fit into their 'solution'. The people who made the purchasing decisions were not technically experienced and they did not ask those that were for advice. Therefore the 'new' (probably originated in the 1980's!) products came with different protocols. No financial director wishes to authorise the expenditure necessary to re-design software to facilitate true integration. It isn't any better when sometimes the divisions within a large company develop their own product. These tend to be based around a clever idea one techie may have, usually without reference to the market and technological forces in action outside his own small world. This isn't any better for the end user who ends up owning a 'kludge' that can only 'integrate' with another product from the company he has already bought from. And the icing on the cake is that he will have to foot the bill for any 'integration' he needs at his facility.

Hey! Guys, have you been watching?

Information Technology, that infamous IT, has risen, to reign supreme across the organisational network. IT standards have been agreed, accepted and implemented globally. Here the definition 'Open Standard' has reality. The battles decided. The deals are done. Just consider the huge size of the IT industry. IT sales dwarf the money spent in other industry sectors. Most manufacturers producing equipment seem unable to recognise that their kit must be subject to integration into building systems. And building systems are all about software. IT standards will inevitably invade other industry space, indeed, have already done so.

In the security industry, by which I mean access control, intruder alert, CCTV etc. understanding has only got so far as to use of the phrase 'TCP/IP' as a talisman against the dark force of a changing market. 'IP compatible' cameras exist and we saw several being promoted at the recent IFSEC show at Birmingham NEC. But manufacturers have not yet embraced the concept that their equipment must be able to connect to building networks and that to do so their hoary old proprietary protocols must be exposed to web services.

What is so special about Web Services?

- 1) They function by inter-changing XML-based messages. This XML is an existing, globally accepted truly open standard that exists now.
- 2) You don't have to fight with anyone about whose protocol is the best.
If you have software from whatever stable, you can put a web services 'wrapper' around it, keep on using it but take the output and via the 'wrapper' send it to communicate with any other bit of code wrapped in an XML wrapper. BACnet people don't seem to have understood this. People, you can go on