

Courts & Approaches for a long life span System Integration

Though it might not sound logical, 99 out of a 100 times, the most cost-efficient way to upgrade an existing control system is starting over with a new one.

According to Tim Skipper, president of MTI, many systems, when first installed, were not designed to be upgraded or integrated with other, newer systems.

"The challenges are that most providers of systems do not leave any means of integration," Skipper says. "Most of the time when we go into a building that has an existing system, it is more cost-efficient to replace the system than to try to figure out what they were doing and how they were doing it. Most of the systems built in the past were not made for long-term life expectancy. In the standards organization, they reference a building automation life expectancy of 10 years, while most public buildings, like courthouses, are designed for a much longer life span."

MTI is a systems integrator, working to control a building's systems. "We manufacture a PLC-based control system and we integrate systems into it," Skipper explains. "We control the locks, the

intercom, the closed circuit TV, alarms, anything that needs to be controlled—we build the controls that adequately manage the security of the system, the brains of the systems.

"We are unique in that our systems are built for the life of the building," he continues. "We build in backward compatibility, so we can continue to upgrade and adapt."

Original Flaws Are Now Surfacing

Back when systems integration had just begun, the industry was made up of a lot of small companies who were doing things their own way, often using pieces and parts that were proprietary to their company. Now that these companies are out of business and the systems need work, the problems are coming to the surface.

"A lot of facilities are left holding the bag, because these small companies did the work, had a proprietary system, then the company went out of business," Skipper points out. "We can sell replacement parts for systems of ours that are 21 years old today. We have incredible stability

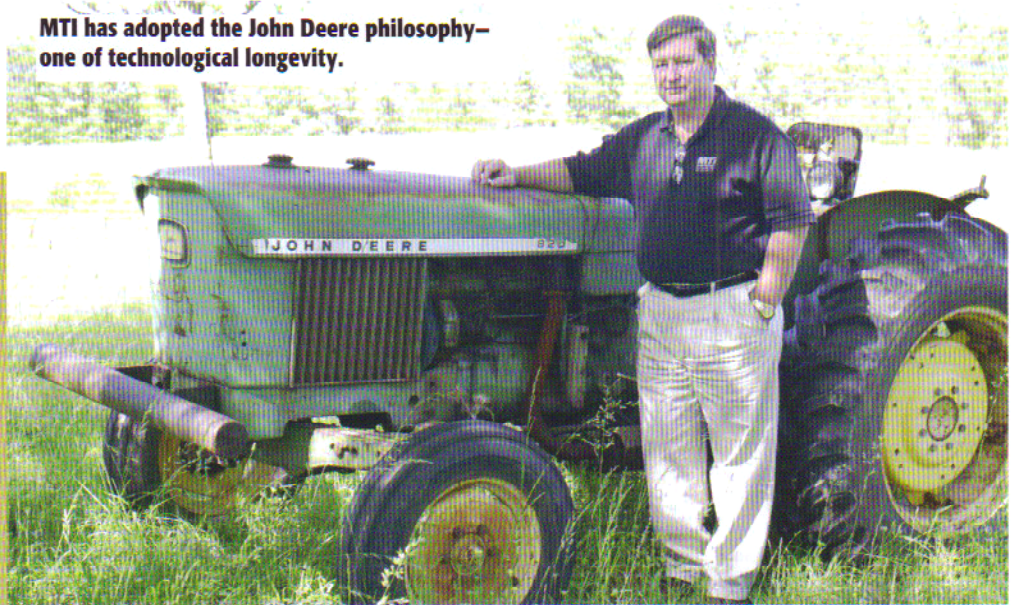
and have been building the same product line for 21 years.

"We have adopted the John Deere philosophy—when I was a boy I was driving a tractor that was 30 years old then, and it's still being used today," he continues. "Twenty years from now I can still buy parts for my tractor. It's the philosophy that we are going to build something to last the life of the building. As technology changes, we are going to make our systems to fit."

One facility in Massachusetts, Skipper remembers, was in such dire straits to make their system work, they were buying parts off eBay to try to keep their system running. Once a system goes obsolete, facilities have to get parts any way they can. When you have a security system you cannot maintain, it gets serious quickly.

It's not impossible to upgrade an existing system, but it's a question of cost. According to Skipper, if the system is less than 10 years old and there is adequate documentation, it can be done, but most of the time you are going to spend money updating a system that is close to its life expectancy. "Does that make sense?" he asks. "From a strictly

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engineering standpoint, it is possible. We have done over 1,500 facilities, but I have never upgraded an existing system. It's more economically feasible to replace."

Most of the time, the line of demarcation for systems integrators ends at the relay. Facilities can still have significant issues with the locks and peripheral systems, however. The lock industry has gone through a significant change over the last few years, with companies being bought and sold and product lines consolidated. Some of the big name lock manufacturers of 20 years ago don't exist today, so maintaining and replacing locks and other components is shaping up to be a big, challenging and very

expensive issue.

"Locks have a much longer life than most electronics systems," Skipper admits. "If a lock is maintained well, it is primarily a mechanical device, so it should last a very long time. The problem is the manufacturers have to be stable so you can continue to get spare parts when they do break. With the number of companies both in the lock business and electronics business, there has been a lot of changing and acquisition in the marketplace. It's very important to consider the company behind the products when you are picking out a system for a building that will be there for 50 years."

Retrofitting an existing building is much harder than designing a sys-

tem for a new building. In new buildings, you can run wire anywhere you want, but in an existing building, you have to fit into the physical space and keep in mind the way the building is used.

"Forty percent of our business is retrofit business, and we are very effective at it because our system is very flexible," Skipper says. "We can fit almost any system layout that was installed originally. However, we often encounter buildings that have no electronic locks, and that is very difficult. Getting the conduit and the locks cut into the walls is hard. Here in our home county of Alabama, we are building a new jail because the cost of putting a modern system into the old one was incredible—we would have had to torn it to pieces to get the system into place. The big issue is that you have to take all the door frames out and replace them, then anchor them securely into the existing wall. I also have to get conduit out of the door into the ceiling and the cost becomes prohibitive to get this stuff done, and in a manner that is secure. I can run exposed conduit, but that for an inmate is a weapon."