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SPRING

Canadian firm generates digital fire safety plans

By Steve Fraser, P. Eng

Imagine a fire in the future. A call comes in to the local fire hall and the dispatcher keys in the address and, before the truck leaves the station, electronically retrieves pre-defined, critical information from the building's fire safety plan such as connections to the sprinkler system, people requiring special assistance, hazardous materials, etc. All this is wirelessly sent to the truck, which is on its way, and when the firefighters arrive at the site they are armed with a lot more than their gear and hoses. They are armed with information that can save lives, reduce property damage and improve firefighter safety.

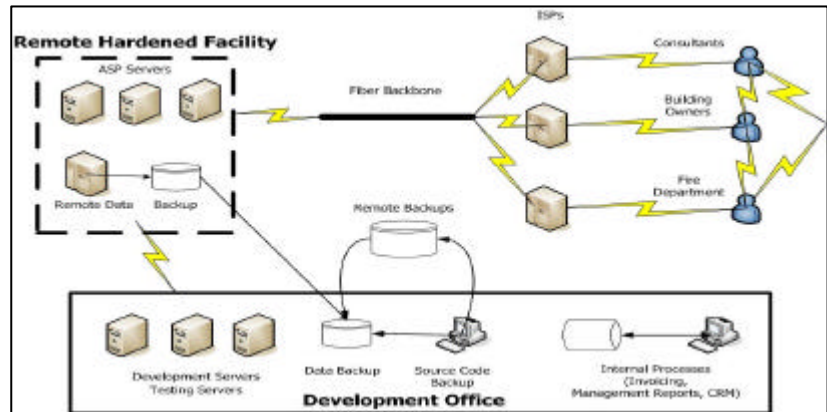
This technology is available now. The problem is those paper-based fire safety plans which contain all this information. Six to eight million buildings in North America legally require them because national, provincial and state fire codes demand it. However, with three or four fire inspectors typically serving a city of 100,000 people, there is no way every building gets checked. The result? Our research indicates that only half of those buildings have a fire safety plan and, of those, only 10% are up to date.

Under many fire codes, churches are assembly buildings and require a fire safety plan. However, they have one of the lowest compliance rates, likely because they are run by volunteers who are not aware of the law. Hospitals and schools are generally in good shape, but for most everyone else – office, industrial and residential buildings – property owners likely either have no fire safety plan or the plan isn't current.

With the increasing emphasis on safety and security across North America, fire departments are stepping up enforcement. In December, 2005, the province of Ontario doubled the fine to \$50,000 for building owners who fail to comply with the Ontario Fire Code. Canada's Criminal Code also calls for sentences up to five years for building owners found negligent in terms of fire safety.

Four years ago First Sentinel Technologies' market research identified the need for a Web-enabled solution to the problems faced by all stakeholders in fire and life safety. Incredibly, there wasn't one. Our Waterloo, Ontario-based firm has since developed a system which generates digital documents and drawings for fire safety plans.

Building owner/managers, fire departments and engineering firms in the fire-services industry are obvious



beneficiaries. The fire department would have wireless access to extract critical emergency information, and we're talking about a real-time, emergency-response tool supporting your current or wireless communication methods. Likewise, the building owner/manager would have an interactive data-management tool for fire safety and emergency planning. And the fire services providers and consulting engineering firms – would have a productivity tool for fire plan development, document management, and the generation of drawings.

One of our products, called eZfireplan, is for consulting engineers while eZfirePak and eZPre-plan is for fire departments. All three network with each other and are interactive, Internet-based software applications for the development, electronic submission and maintenance of fire safety plans and related documents and forms. The software is used by consulting engineers and fire services providers to generate complete fire plan documents for commercial, industrial and multi-unit residential buildings. Users can import their own AutoCAD drawings, use our CAD view/mark-up tools or use the system's drop-and-drag drawing software. A portal for consultants in the fire service market can be branded with the firm's own logo and graphics. This allows seamless access to the system for the firm's employees and customers. What's more, the software provides fire-planning, data management and maintenance modules which can reduce costs and provide a value-added service.

The Town of Minto, Ont. wanted complete fire safety plans for all 16 of its buildings – arenas, town halls and offices – but the municipality's staff didn't have time to do the job. After an online product demo for Minto, eZfireplan became the town's answer for fire planning and emergency-response planning. It offers easy online

collaboration for the fire inspector, the Minto Fire Department, and the individual building managers. The eZfireplan provider sold and completed the fire plans and also sold the software license to the Town.

The software includes a secure fire department interface which lets the fire inspector electronically review, make comments to, and approve the plans. The fire department also has computer access to pre-defined critical information to assist in an emergency response. Such details as shutoff locations, data about hazardous materials, and information on people who require special assistance are automatically inserted into the customizable Minto Pre-Incident plan.

eZfireplan, eZPre-plan and eZfirePak are Canadian-developed technology and the only Web-enabled applications like this in the world. For the fire service provider/consultant, the benefits are significant:

- Reduces the frustration and time to develop and manage documents, layout drawings and evacuation drawings for fire safety plans;
- Provides an integrated system that stores all required documents;
- Provides dynamic documents which can modify themselves based on jurisdiction, usage and building type.

On the commercial side, having an up-to-date fire safety plan reduces the risk of personal injury, not to mention property damage, legal liability and business disruption. It also ensures compliance with both legislation and requirements of local fire departments.

Today, almost 900 fire safety plans are on our system, and 41 fire services providers and consultants are using the product across Canada.

**Steve Fraser is president of First Sentinel
Technologies Inc., Waterloo, Ont.
519-886-5366; www.ezfireplan.com
Engineering Business March/April 2007**