

# Technology helping fight forest fires



## Southgate Software and Canadian Government Forest Fire-Fighting Organizations

### Organization

Southgate Software Limited

### Vertical Market

Government

### Key Challenges

- Meet the need for a faster mapping and resource tracking tool for the effective deployment of forest fire-fighting resources
- Deliver a fast, reliable, stable and mapping solution compatible with legacy systems

### Solution

A Java-based map server, leveraging Sun Fire servers, to deliver speed and stability for the resource tracking and deployment environment

### Why Sun?

- Java supports all existing legacy systems
- Sun solution is flexible, easily customized and easy for end-users
- Java-based map interface immediately renders real-time updates in resource database

### Southgate Software's mapping technology, employing Java-based real-time maps and Sun server technology, helps government fire-fighting organizations keep blazes under control

Even under the most favourable conditions, fighting fires is a serious matter that requires the coordinated effort of well-trained professionals. In Canada, this job often falls on the shoulders of designated provincial government organizations charged with the task of protecting the country's vast forest landscape. Whether from a lightning strike, a carelessly discarded cigarette or a spark from a passing vehicle, forest fires are a frequent occurrence. Canadian fire-fighters battled more than 6,000 forest fires in 2004. So, when the time comes for provincial agencies to launch an assault on one of the forest's worst threats, Southgate Software's mapping technology, built on Sun's Java technology and powered by Sun Fire servers plays, a major role.

Canadian provincial governments manage the millions of acres of public lands, forest, and rangelands as well as fish and wildlife resources across the country. Dedicated teams take the lead role in directing air and ground teams to combat wildfires. When notified of a wildfire, early response tactics are initiated. Historically, this involved sending locational information to fire-fighting crews by fax and radio. This was time consuming and when the information was finally received, it was often no longer accurate.

To accommodate the need for faster access to accurate information, Southgate Software Limited, a British Columbia-based developer of Java mapping solutions, has created a valuable tool used in the resource tracking industry, particularly for fire-fighting.

### Better resource coordination for more effective fire-fighting

One strategy for effectively tackling wildfires is to dispatch resources to the site before it reaches two hectares in size. Once a fire exceeds the two-hectare threshold, it not only grows in intensity but unpredictability as well. Southgate Software's flagship Map Server solution is tailored specifically to provide agencies with an improved means for coordinating and utilizing fire-fighting resources and is the right technology for helping agencies mobilize quickly and effectively.

Southgate Software's Trackware is a dispatch tool that allows forest fire-fighting agencies to monitor all of their fire-fighting resources. Trackware connects to a central database and presents information, such as the position of the fire and resources including ground team locations and air tanker flight coordinates, on a Java-based map interface. This interface immediately renders real-time updates on fire movements and the timing of water

drops for teams on the ground or back at headquarters. These information tools allow a faster, more efficient and accurate means of deploying the resources for putting out fires.

*"An early response requires careful resource planning and execution with high regard for safety. Using Southgate's Java-based application on Sun hardware allows fire-fighters to do their jobs more efficiently and safely."*

*- Wade Badenhorst,  
Southgate Software Limited*

### The Java advantage: flexibility, speed and security

Another benefit of the Southgate-developed system is its platform independence. By using Java technology, Southgate's Map Server is able to connect seamlessly with servers in other locations, delivering continuous updates without concern for compatibility issues.

"Java is the most widely deployed programming language in the world, so it is economically effective for us to write in Java," said Wade Badenhorst, project manager, Southgate Software Limited. "We understand the needs of forest fire fighting agencies and our solution gives clients the ability to run mapping applications without downloading any software, and the flexibility to connect with any data source. Forest fires aren't limited to North America or other English-speaking nations. Since Java

supports multiple languages and character sets this will open up other sales markets for Southgate in other countries."

Southgate Software also uses Java Web Start technology to make application deployment easier. Java Web Start combines the security and ease of use of Java applets with the power of Java applications, enabling users to quickly launch the full application with a simple click of a web page link. In addition to the strict built-in security features of Java Web Start, Southgate's application also employs a sophisticated user authorization scheme that ensures only authorized employees use the system.

"Information is of utmost importance in life and death situations such as fire-fighting," said Badenhorst. "Combining our Map Server application with the reliability of the Sun Fire V880 server and the stability of the Solaris operating system ensures that ground teams have fast access to information and provides all parties with the confidence that the system will not go down at a critical moment."

"Governments need solutions that are reliable, easy to use and compatible with existing systems," added Badenhorst. "An early response requires careful resource planning and execution with high regard for safety. Using Southgate's Java-based application on Sun hardware allows fire-fighting agencies to do their jobs more efficiently and safely."

*Southgate's solution is designed for optimal performance while running on Sun Fire servers*

#### *Sun Software*

- Sun Java J2EE
- Solaris 9 Operating System

#### *Sun Hardware*

- Sun Fire V880 1050Mhz 2 CPU 8GB RAM

#### *Southgate Application:*

- Southgate Trackware
- Southgate Map Server

#### *Other Software/Hardware*

- Intel Zeon 2.8 Ghz Dual CPU 4GB RAM
- Win2000 Server Operating System
- Oracle9i Enterprise Edition Release 9.2.0.4.0 - 64bit Production

Get the details.

For more information on Southgate Software Limited, visit [www.southgatesoftware.com](http://www.southgatesoftware.com).  
And for more information on Sun, please visit [ca.sun.com/](http://ca.sun.com/).

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