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Air Canada first in country with online ticketing, 7 million flock to site weekly.

In today's fast paced business world, people are often required to travel at a moment's notice. The stress of making travel arrangements can even diminish some of the excitement for holiday travelers. Such situations drive home the convenience of online reservations and ticketing services. That's why Air Canada, the largest Canadian airline connecting 545 destinations worldwide, introduced its Cyber Ticket Office (*www.aircanada.ca*) – a 24-hour-a-day, 7-day-a-week online reservations and ticketing service.

"The early returns show a very enthusiastic response. We've generated five times the revenue we had forecast for the entire first year of production."

– Grace Rankowicz, Manager, Information Technology Distribution Systems, Air Canada

Air Canada is the first Canadian carrier to make reservations and sell tickets online. Working with the travel and transportation experts at IBM Global Services, Air Canada was able to design and launch the Cyber Ticket Office. "IBM helped us achieve a faster time-to-market, which was key to our being the first to offer new, innovative Internet booking services in Canada and our sustained market presence," notes Grace Rankowicz, Air Canada's manager for information technology distribution systems.

Enabling customers to plan their itineraries and make reservations within minutes, any time, anywhere over the Internet, Air Canada is already realizing the enormous potential of the World Wide Web as a profitable sales and marketing channel.

"With the Cyber Ticket Office," says Rankowicz, "we are providing a widely accessible sales channel that compliments traditional channels, such as the call centers and travel agents, while significantly lowering distribution costs. By gaining greater efficiency here, we can relieve the pressures in our traditional channels and enable them to serve customers better." According to industry estimates, the cost of electronic ticketing is less than one-eighth that of many traditional ticketing methods, benefiting both the airlines and their customers.

Not only did Air Canada's Cyber Ticket Office get off to a flying start, but its popularity continues to soar. A year after the virtual doors to its online reservations and ticketing office

Application	Online airline reservation and ticketing system
Business Benefits	Global market reach; better customer service; lower distribution costs; rapid revenue generation
Software	IBM® TPF IBM MQSeries® IBM DB2® for AIX®
Hardware	IBM RS/6000® IBM ES/9000®
Services	IBM Global Services

were opened, more than seven million potential air travelers were visiting the airline's Web site every week. Each week nearly 1,500

Air Canada's Cyber Ticket Office is the first of its kind in Canada and is attracting customers by the millions.

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new members register for the online reservation and ticketing service. "The early returns show a very enthusiastic response, far beyond our expectations," Rankowicz says. "We've generated five times the revenue we had forecast for the entire first year of production."

Secure, efficient service for customers' convenience

Customers visiting the Cyber Ticket Office can create their own travel profile, view product offerings and flight information, make reservations and purchase tickets online. Once a customer's profile is registered with the Cyber Ticket Office, it is encrypted and stored in a customer profile database and automatically called up in subsequent visits, so flight arrangements can be completed in less than five minutes. Personal information, including credit card details, can be transmitted securely from Web browsers that support 40-bit Secure Sockets Layer (SSL) encryption. Alternatively, customers can fax or phone in their credit card details to Air Canada's help desk.

Drawing on global experience for a scalable solution

Air Canada outsourced its information technology needs to IBM Global Services four years ago. Rankowicz notes, "They've launched us on a solid foundation, bringing in their global experience. We're continuing to build on it. That's why we chose IBM for the Cyber Ticket Office project."

Hosted at IBM's data center in Winnipeg, the online service is based on a combination of IBM hardware and software developed by IBM Global Services. Two application modules are responsible for making service fast and efficient. The *UserProf* module gathers customer information transmitted by the Web server and stores it in the customer profile database in DB2 for AIX. The *ResServe* module translates messages from the Web server into a format that is readable by Air Canada's ResIII reservation system running on an IBM ES/9000 server.

ResIII is based on IBM's Transaction Processing Facility (TPF). Designed for high-volume transaction processing, TPF is the backbone of most airline reservations systems worldwide. The main source and repository for the airline's flight schedules, seat assignments, reservations and customer account information, ResIII can process thousands of queries per second and guarantees 99.9 percent availability. The fact that the Cyber Ticket Office was able to leverage Air Canada's existing ResIII TPF as its host meant that it was up and running on schedule. "We didn't have to make many modifications to ResIII, and IBM experts wrote the additional code very easily," says Rankowicz.

The hardware includes an RS/6000 Model F50 Web server and an RS/6000 J40 symmetric multiprocessing (SMP) server that supports the Cyber Ticket Office application. To accommodate the growing traffic on its Web site, Air Canada will soon convert its application server to an RS/6000 J50, an even more powerful SMP server. "With the RS/6000, we've built a modular and scalable structure that gives us the processing capabilities we need," Rankowicz notes.

IBM MQSeries commercial messaging technology, through which application programs communicate using messages and queues, enables efficient routing of messages between software modules on the application server and the Web server. "MQSeries enables asynchronous, transaction-based communication, which is more efficient for us than session-based communication," explains Rankowicz. "It frees up the application to process other tasks rather than wait for a session to be completed."

Pushing the e-business envelope with IBM

Among the new services being developed is an online booking capability for the airline's Websaver service — a "push" e-mail service that delivers special sales offers, such as weekend discounted destinations, to a list of registered customers. "We can rapidly develop new Internet services because we already have a powerful, scalable infrastructure in place," Rankowicz points out. Keen on exploring new mediums, she adds, "IBM has supported our foray into new environments such as e-business. That's why we now have an online service we can be proud of. Unlike many others who've had to retract and make changes later, we did it right the first time with IBM."

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