



## BORLAND CASE STUDY

# Australian Department of Immigration and Multicultural and Indigenous Affairs

### FAST FACTS

#### COMPANY

The Australian Department of Immigration and Multicultural and Indigenous Affairs (DIMIA) maintains the lawful and orderly entry and stay of people in Australia.

#### INDUSTRY

Government

#### GEOGRAPHY

Australia

#### CHALLENGES

- Simplify online visa application
- Integrate visa application process with other systems

#### SOLUTION

- Borland® Enterprise Server, AppServer™ Edition

#### RESULTS

- Successful system integration
- Substantial cost savings

#### COMPANY

The Australian Department of Immigration and Multicultural and Indigenous Affairs (DIMIA) is responsible, among other things, for maintaining the lawful and orderly entry and stay of people in Australia. This includes the management of migration, visitors, permanent residence, settlement services and citizenship.

DIMIA manages the issue and receipt of payment for all visas for Australia. DIMIA required an extensive eBusiness system that would allow people to apply for visas online. The Department wanted the online application to be simple for its clients to use while also interacting effectively with its other systems.

#### CHALLENGE

eVisa lets people apply for Australian visas over the Internet. In most cases it removes the need for people to visit or send a hard copy application to an Immigration office. Once people have lodged an application online, they are given a lodgement number so they can track the progress of their application via the Internet.

eVisa is a J2EE™-compliant eBusiness application running under Borland Enterprise Server, AppServer Edition™. eVisa collects information for visa applications which are then processed by DIMIA's internal core client processing system which resides on an IBM® mainframe.

On the surface, eVisa is simple-to-use and presents an intuitive user interface. However, the business logic necessary to capture all the data required for all the visa types offered online is very complex and was challenging to build.

eVisa is a distributed system; parts of eVisa reside on different servers in different locations. All the elements of the application need to operate in smooth concert with each other and with precise timing.

#### SOLUTION

DIMIA built an effective, easy-to-use eBusiness solution that saves time for DIMIA's customers and staff and integrates smoothly with other critical systems.

Borland Enterprise Server, AppServer™ Edition gave DIMIA a robust ebusiness infrastructure to support the deployment of its distributed J2EE-compliant, EJB-based application. As eVisa's workload increases over time, Borland Enterprise Server has the scalability to meet DIMIA's needs.

The system's cost will be offset by substantial savings in internal processes.

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### THE DIMIA SITUATION

Before eVisa, people wanting to apply for the visa categories now supported by eVisa had to get their visa forms from Immigration offices in person, by mail, or by downloading and printing hardcopy forms from the Web. Once a hardcopy form was completed, it had to be mailed or delivered in person to an Immigration office for processing. Payment was made in person at the Immigration office or by mailed check.

Elements of the information on the hard copy form were then keyed by DIMIA staff into a client processing system. To make the visa application process easier and faster for both customers and staff, DIMIA wanted to create an online system for form submission and payment.

Australia's visa legislation is comprehensive and, as a result, complex. To build an effective system for online visa applications requires a software application with very complex business logic working across a distributed system.

DIMIA already had a successful online visa project running with Australian universities since 2000 known as the Student Internet Project (SIP). Also built on Borland Enterprise Server, AppServer Edition, SIP is an eBusiness solution that allows universities to enter foreign student details using a series of Web forms, which are hosted on the DIMIA Web site.

SIP offered a limited selection of student visas only and was not as complex as the eVisa system that needed to be built for wider use, however, it was a successful value-add for universities wanting to attract foreign students. "In many ways SIP served as a proof-of-concept for eVisa," said Cheryl Hannah, CIO for DIMIA.

### THE BORLAND SOLUTION

eVisa is an interactive, J2EE-compliant, distributed eBusiness system. eVisa's primary function is to collect the right data for each visa application. The actual granting of a visa is done by other internal systems that eVisa interacts with.

Depending on the type of visa a person is applying for and the way they answer certain questions, eVisa presents a variety of different Web pages. The serving of Web pages is handled by DIMIA's Web server, which is hosted by an external IT

outsourcing company offsite. DIMIA's eBusiness applications hosted on the web server use the STRUTS framework, an open source Web application framework, to manage the serving of eVisa's web pages.

The primary user experience is between the visa applicant and the Web server. The 'logic' that determines which pages are served comes from eVisa. When the 'Lodge' button is hit, all the collected information is then transferred to the application server (Borland Enterprise Server) where an Enterprise Java Bean™ (EJB™) layer, applies complex business rules to the incoming data. If data is missing or conflicting, eVisa sends an alert back to the user via the Web server. If the form is acceptable, the application process continues.

From this point, the system interacts with DIMIA's secure payment gateway to transfer payment information to DIMIA's banking service provider. If payment is successful, the visa information is converted into a message and sent, via IBM WebSphere® MQ, to DIMIA's core client processing system and to DIMIA's ERP system (SAP®).

eVisa is a sophisticated online data collection point. However it is not responsible for visa finalization. The information collected in eVisa is passed on to DIMIA's core client processing, called ICSE — Integrated Client Services Environment — which resides on an IBM mainframe. It is ICSE that processes the information in visa applications and grants the visa.

Because eVisa is a distributed system, a major challenge for the project was ensuring the timing for each function was exact. The messages between distributed elements and the information flow had to be precisely timed and coordinated.

Cheryl Hannah says, "In terms of project management, getting all the different parts of the distributed system delivered at the same time was very important. On top of that, eVisa as a project had to be timed to match delivery dates of other related systems projects when there is interaction with eVisa."

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“Testing was challenging because of the complex business rules and distributed environment, therefore preparing the test cases was critical as the entire business process, from data collection in eVisa through to application finalisation in ICSE, needed to be understood. There is a strong dependency on our business analysts in the design of not only the application, but also in developing the test cases to verify the implementation.”

“With Borland JBuilder, DIMIA’s developers were able to build eVisa so that certain elements can be tested from a desktop in a stand-alone mode that mimics the other environments it has to interact with. This is a great time saver as potential problems can be detected earlier in the development cycle.”

### ABOUT BORLAND

Borland Software Corporation is the global leader in platform independent solutions for Software Delivery Optimization™. The company provides the software and services that align the people, process, and technology required to maximize the business value of software.



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