



## Electronic Prescription Exchange Boosts Productivity and Reduces Medication Errors

### Overview

**Country or Region:** Australia  
**Industry:** Healthcare – Healthcare, Healthcare Providers

### Partner Profile

Fred IT Group is the largest dedicated business solution provider to the pharmacy industry in Australia.

### Business Situation

With a number of issues associated with the use of paper-based prescriptions, Fred IT Group wanted to provide an electronic prescriptions solution to improve communication between GPs and pharmacists.

### Solution

Fred IT Group engaged Microsoft Gold Certified Partner, Simpl, to develop eRx Script Exchange, an electronic prescription solution built on Microsoft BizTalk Server and the Microsoft Health Connection Engine.

### Benefits

- Improving healthcare quality
- Faster processing times
- Easily accessible information
- Highly scalable solution

“eRx has the potential to save an estimated 1.5 million hours per year for the pharmacy industry. This time can be better spent by the pharmacist on improving the level of care provided to patients.”

David Freemantle, Project Director, eRx Script Exchange

Fred IT Group is Australia's largest IT solution provider to the pharmacy industry. General Practitioners (GPs), otherwise known as Family Physicians, and specialists in Australia predominantly use a prescribing system which generates paper-based prescriptions. Due to issues associated with the paper-based system, such as the inability to track whether prescriptions are filled, a lack of communication between GPs, specialists and pharmacies, and transcription error rates, Fred IT Group sought a solution that could send prescriptions electronically to reduce errors and improve patient care. Fred IT Group engaged Microsoft® Gold Certified Partner, Simpl, to develop eRx Script Exchange, an electronic prescription solution built on the Microsoft Health Connection Engine, including Microsoft® BizTalk® Server 2006 R2. With eRx, GPs can send prescriptions electronically through a secure gateway for retrieval by a patient's pharmacy of choice anywhere in Australia.

**FRED**

**simpl**

**Microsoft®**

## Situation

Fred IT Group is Australia's largest dedicated provider of IT solutions to the pharmacy industry. Headquartered in Abbotsford, Melbourne, Fred IT Group has offices in Sydney, Brisbane, Adelaide, Perth and Ballarat. Fred IT Group is a Microsoft® Gold Certified Partner with more than 130 employees.

General Practitioners (GPs), otherwise known as Family Physicians, and specialists in Australia have traditionally provided patients with paper-based scripts, where the patient brings a printed or hand-written prescription to the pharmacy to collect their medication. However, issues arise with the transcription of information from the paper script into the dispense systems through simple operator error. David Freemantle, Project Director, eRx Script Exchange, says "Many medication dispensing errors arise from simple transcription mistakes which occur at the point of transcribing prescription details from a paper script into a dispense system; these errors are a major healthcare cost in Australia. We wanted a solution that could send prescriptions electronically to reduce errors; improving patient care and safety."

Fred IT Group decided to move towards the development of an electronic prescription platform to be rolled out across the country. "The concept of electronic transmission of prescriptions has been around for years. With the advancement of technology, we now have close to 90 percent of doctors using computers in their clinics and 98 percent of pharmacies are computerized, and so the time was right to implement an electronic prescription exchange across the country," says Freemantle.

## Solution

Fred IT Group worked with Microsoft and Simpl, a Microsoft Gold Certified Partner, on the solution concept, and then engaged Simpl to deliver the technology platform for the prescription exchange.

eRx was built using Microsoft® BizTalk® Server 2006 R2, Microsoft® SQL Server® 2008 Enterprise, and the Microsoft® .NET Framework, and leverages the Microsoft Health Connection Engine (HCE). The HCE facilitates interoperability between multiple health systems by abstracting the interfaces used to connect them and by providing an extensible adapter framework that provides health applications with a more rapid implementation and an easier way to interoperate and communicate with each other.

Through contracted relationships with 14 competing medical and pharmacy software vendors, eRx has been able to deliver an interoperable network for the benefit of the Australian healthcare system.

eRx does not interfere with the workflows currently used by clinicians and pharmacists, rather it augments the existing paper prescription system to be more efficient. A prescriber prints a paper prescription containing a unique eRx barcode. Linked to the unique barcode, the electronic prescription is encrypted and sent securely to the eRx Script Exchange gateway. The patient then takes their paper prescription to the pharmacy of their choice where the pharmacist scans the barcode. The pharmacy's dispensing software downloads the electronic prescription from eRx Script Exchange, and the patient's prescription will quickly appear on the pharmacist's screen.

"eRx required prescription information to be presented at the pharmacy within

three seconds of scanning the barcode. The eRx solution surpassed this requirement with outstanding performance results," comments Jodi Mitchell, General Manager, Global Services, at Simpl.

"With eRx, the prescriber and pharmacist can be assured that what the GP or specialist prescribes is presented electronically to the dispense system," says David Freemantle, Project Director, eRx Script Exchange. "

BizTalk Server 2006 provides an open standards-based set of Web services that enable health point of service applications to connect with other applications, which means Fred IT Group can work with other vendors that provide dispensing software to pharmacies to integrate their systems to the eRx platform.

The Pharmacy Guild of Australia, which represents the majority of Australia's community pharmacy owners, has endorsed the system and funded the first 10.6 million eRx transactions for its members. There are over 5,000 pharmacies across Australia.

eRx Script Exchange is the first national platform for e-scripts, allowing GPs to send prescriptions electronically with the confidence that patients can have their scripts dispensed safely and securely anywhere in Australia. In the four months since launch in April 2009, 99 percent of pharmacies and over 90 percent of GPs and specialists have been guaranteed access to the platform as a result of the commitment of all major pharmacy and medical software vendors to deliver eRx to their users. GPs, specialists and pharmacies have already sent more than 600,000 transactions using eRx, while 3,000 additional GPs and pharmacists are

registered to start using eRx in the coming months.

The software vendors enrolled in eRx who provide solutions for both GP prescribing and pharmacy dispensing now cover some 90 percent of the Australian primary care market, making eRx the first truly national platform for an electronic prescription exchange.

## Benefits

By leveraging Microsoft technology, Simpl was able to achieve rapid delivery of the required solution. "The use of the Health Connection Engine allowed Simpl to deliver the solution in only six months, which has enabled Fred to go to market in record time," says Mitchell. The eRx solution is already bringing benefits to patients, pharmacies and GPs and specialists in Australia.

### **Improving the Quality of Healthcare**

eRx improves patient safety by helping to eliminate transcription errors when entering prescriptions. By scanning an eRx barcode, a pharmacist can access a patient's prescription electronically, reducing the number of transcription errors made. "GPs and pharmacists can use eRx to better coordinate patient care and medication. The solution will also reduce the risks associated with prescribing and administering drugs," says Freemantle.

### **Faster Prescription Processing**

eRx will result in greater efficiencies for Australian health professionals through high speed receipt of accurate prescription information. Prescriptions now appear within three seconds upon scanning the eRx barcode and will present exactly what was prescribed by the GP or specialist.

## For More Information

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234 in the United States or (905) 568-9641 in Canada. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to:

[www.microsoft.com](http://www.microsoft.com)

For more information about Simpl products and services, call +64 9 526 0420 or visit the Web site at:

<http://www.simpl.co.nz/>

For more information about Fred IT Group products and services, call +61 3 9418 1800 or visit the Web site at:

<https://www.fred.com.au/>

For more information about eRx, visit the Web site at:

<http://www.erp.com.au/>

Freemantle notes, "eRx allows pharmacists to continue with their existing workflow and processes, but more efficiently and safely. eRx has the potential to save an estimated 1.5 million hours per year for the pharmacy industry through increased efficiency. This time can be better spent by the pharmacist on improving the level of care provided to patients."

### Easily Accessible Information

A major clinical benefit for GPs and specialists using the eRx solution is being informed by the system when a script has been filled. This means doctors can monitor their patients more closely. For example, during patient reviews, a doctor can identify whether the patient has been having their medication dispensed as expected. A doctor can also make informed decisions on dosage adjustments in situations where the medication does not appear to be achieving the desired results.

### Highly Scalable Solution

The open standards-based, Microsoft BizTalk Server supports healthcare industry messaging standards such as HL7 and the upcoming Web services, and is scalable to support the objectives and aims of eRx. "There are over 220 million prescriptions dispensed in Australia annually. The Microsoft platform stood out with its robust scalability, and could cater to the entire script volume for the country," concludes Freemantle.

## Microsoft Solutions for the Healthcare Industry

Healthcare and life sciences organizations are under tremendous pressure to meet regulatory requirements, improve patient care, and reduce the time it takes to develop drugs and take them to market. To meet this challenge, Microsoft and its partners have developed cost-effective solutions that enable healthcare organizations to streamline and automate daily processes that improve productivity and deliver information whenever and wherever it is needed. The result is enhanced productivity, safety, and quality.

For more information about Microsoft solutions for the healthcare industry, go to:

[www.microsoft.com/healthcare](http://www.microsoft.com/healthcare)

### Software and Services

- Microsoft Server Product Portfolio
  - Microsoft BizTalk Server 2006 R2
  - Microsoft SQL Server 2008 Enterprise

- Technologies
  - Microsoft .NET Framework