

Mobile Commerce Limited

Microsoft® Visual Studio® .NET Rapidly Delivers Innovative Mobile Payment Service

Microsoft® Visual Studio® .NET allowed New Zealand's Mobile Commerce Limited to rapidly develop and bring to market the most innovative and secure way yet for businesses to accept mobile credit card payments. Built on Mobile Commerce's own platform Merzouga®, Mcredit™ allows merchants to use their mobile devices as credit card processing EFT terminals and to receive online, real time authorisation of fund availability and next day payments into their accounts. It offers businesses increased security and convenience over current payment options, and saves time and money.

Executive Summary

Bringing a new product first to the global marketplace is a rare achievement for any company, yet New Zealand's Mobile Commerce Limited has taken advantage of the latest Microsoft development tool, Microsoft Visual Studio .NET, to rapidly develop and launch a means for mobile merchants to accept credit card payments via mobile devices with real time authorisation.

Visual Studio .NET has been credited by Mobile Commerce as being the catalyst that enabled the company to deliver to market first this new and robust mobile payment option. With limited resources and potential competition, Mobile Commerce demanded a development tool that would enable them to deliver its application in the shortest possible timeframe and yet retain the desired elements of robustness, flexibility, ease-of-use and complexity.

Visual Studio .NET allowed the team to experience a 40 percent reduction in the estimated production time over similar products it had developed in the past, with major contributors being the C# language, garbage collection, built in distributed message processing via remoting and the ability to rapidly create sophisticated web applications with ASP.NET. The managed and safe runtime environment also ensured no memory or resource leaks or mystery exceptions.

A major New Zealand bank will be the first bank in the world to offer this service to its mobile business customers, who include providers of home services, transport, mechanical services, deliveries, photography, real estate and tourism. This mobile payment service offers a superior alternative to many of today's payment methods, saving businesses time and money in the processing and collection of payments, and chasing of bad cheques or debts. It is a secure method for both parties and ensures real time authorisation of fund availability and next day payment with no need for large and often expensive equipment.

Solution Overview

Customer Profile

Mobile Commerce Limited is a young, dynamic Auckland-based company focusing on the unique characteristics of mobility. Its mission is to find, develop and implement ways of bringing the world to people's fingertips, while individuals keep on the move.

Business Situation

Mobile Commerce recognised early the need for secure mobile transaction applications to deliver desired services to consumers and business users on their chosen mobile device. To bring these solutions first to market, the company needed a development tool that would deliver rapid and robust development. Microsoft's .NET Framework, and specifically Visual Studio .NET, delivered on these requirements and allowed Mobile Commerce to launch its multi-channel, transaction based application server and application suite, Merzouga, followed by MCredit.

Value to Business

Visual Studio .NET allowed Mobile Commerce to deliver a robust solution to market in a very short timeframe with limited resources. Internal predictions suggest that had Visual Studio .NET not been used, MCredit is unlikely to have been developed in the time it was and may not have been developed at all.

Value to IT

The rapid development capabilities of Visual Studio .NET allowed Mobile Commerce to experience a 40% reduction in production time over similar products developed in the past. The managed and 'safe' runtime environments have ensured no memory or resource leaks or 'mystery' exceptions from the solution.

Technology Enablers

Microsoft Visual Studio .NET
Microsoft .NET Framework
Microsoft SQL Server 2000
Microsoft Windows 2000

Microsoft®

Mobile Solutions Needed for Businesses on the Move

The proliferation of small businesses and franchise owners in New Zealand and around the world that fall into the 'mobile' category is growing by the hour. Consumers are demanding a more mobile and convenient delivery of service across an increasing range of industries from the more traditional home services of cleaning and plumbing to taxis, tourism and real estate valuations. Yet, the current methods of payment that these businesses offer their customers remains predominantly paper based with limited offerings of credit card payment through 'zip-zap' machines and mobile EFTPOS.

Consumers are, however, preferring to use credit cards in what is rapidly becoming an almost complete cashless society. Spurred by the convenience and security of not needing cash, consumers are also incentivised to use their credit cards by credit card companies and the loyalty programmes they offer.

Mobile Commerce recognised the need for a transition in the way mobile businesses sought payment in this increasingly mobile business world.

Adam Clark, Managing Director of Mobile Commerce believes that to be responsive in this mobile world, offering an extended service range or longer operating hours is not enough.

"We knew that consumers of these services desired modern, fast and convenient payment services. We also perceived that consumers and businesses first needed the reassurance that the system would be secure and robust."

Mobile Commerce saw the opportunity to use mobile devices, such as mobile phones and PDAs to transition payment transactions from paper-based or limited real time payments to online, real time payments.

"Such a payment offering would eliminate the need for companies to spend valuable time processing and chasing payments, dealing with bad cheques or unpaid debts and having cash lying around their vehicles or offices. It would also advise businesses in real time that the funds were available from the consumer and that the transactions would happen automatically within 24 hours."

Security Essential to Mobile Success

In considering the design parameters, Clark explains that they understood the importance of security in this new era of mobile commerce – not just for the consumer but also for the business using the payment service.

"We knew that our application needed to be 100 percent reliable, offering sound functionality to its users and the highest possible security options."

Mobile Commerce developed a multi-channel, transaction based application server and application suite. Merzouga is media and language independent.

Rapid Development of Application Essential to Success

Merzouga was the architecture that Mobile Commerce would use to develop its first mobile application. But to be truly successful, the application needed to be developed in tomorrow's technology not yesterday's.

"We knew that consumers of these services desired modern, fast and convenient payment services. We also perceived that consumers and businesses first needed the reassurance that the system would be secure and robust."

"We knew that our application needed to be 100 percent reliable, offering sound functionality to its users and the highest possible security options."

“We were adamant that our application would be state of the art. We reviewed the existing development tools in the marketplace, including an Oracle/Sun mix and Jade. Neither offered us the compelling evidence we were seeking that their tools would give us the cutting edge solution and rapid development time we were after.”

Clark explains that at the time Microsoft was launching its Beta 2 of Visual Studio .NET.

“The benefits that Microsoft were suggesting Visual Studio .NET offered were indeed compelling. However our development team was nervous about taking on a truly new tool to develop on.”

Clark describes how they used the prototype of the product to evaluate Visual Studio .NET and the .NET Framework.

“Our experience with creating the prototype over a five day period convinced us that Visual Studio .NET was the right tool for the job.

“Implementation from then on was relatively straightforward. Our development team has since said that learning C# was quite easy and the existence of garbage collection meant that testing for memory leaks and invalid pointer problems confirmed no errors and was a very efficient process.”

Using Visual Studio .NET to Expand the M-Com Application Range

Mobile Commerce is now working on multiple fronts to deliver further business solutions including custom solutions and partner-based solutions for individual customers using Merzouga and Visual Studio .NET.

“Microsoft’s Visual Studio .NET is tomorrow’s tool for today. It has enabled our small company to develop an application server platform that could have a huge impact on business performance and profitability and use of resources.”

“Microsoft’s Visual Studio .NET is tomorrow’s tool for today. It has enabled our small company to develop an application server platform that could have a huge impact on business performance and profitability and use of resources.”