

LEVELFOURNEWS

Getting more from your ATM network Spring/Summer 2005, Issue 9



WELCOME TO LEVEL FOUR NEWS



Welcome to the Spring/Summer 2005 edition of Level Four's newsletter. In this issue, we update you on our latest customer and product news. This edition also includes an article on open standards. The migration to open standards has been a topic of discussion in the ATM industry for some time. The article discusses where we are with the migration process and whether banks are getting closer to the 'utopia' that is integrated multi-channel banking. The newsletter also highlights Level Four's continued global expansion with a new partnership agreement in Eastern Europe. We will also share with you our latest awards success.

Martin Macmillan, CEO, Level Four Software
Email your comments to enquiries@levelfour.com

NCB SELECTS LEVELFOUR

Ahead of migration to the SPAN 2 national network and the Europay MasterCard Visa (EMV) mandate for chip cards, The National Commercial Bank (NCB) is upgrading its ATM infrastructure with help from Level Four.

The bank has licensed ATM Channel Development Suite,

including ATM Developer, EMV and 3DES FastTrack modules, and Bunch Note Acceptor.



With 960 ATMs throughout Saudi Arabia, ATM Network Stress Tester provides NCB with the ability to ensure its extensive ATM network is able to cope with high transaction volumes.

Mohammed Al Maghrabi, head of software quality assurance at NCB said, "With Level Four's technology, we will ensure a smooth migration to EMV compliance by improving our automated regression testing."

NCB is Level Four's fifth Middle East customer reaffirming the company's status as market leaders in the region.

AGREEMENT STRENGTHENS GLOBAL STATUS

Level Four has expanded its global outreach via a distribution agreement with



TietoEnator, giving financial institutions in the CIS and the Baltic Republics access to its market-leading ATM and POS testing and development software.

Banks in the region are migrating their ATM and POS networks to be compliant with the EMV

global chip card standard ahead of the January 2006 deadline.

TietoEnator will distribute and support key components of Level Four's ATM Channel Development suite, including ATM Simulator, ATM Reporter, ATM Developer and key plug-ins such as Triple-DES FastTrack.

Level Four's software is open standards-based and

technology agnostic, so interacts seamlessly with TietoEnator's switching solution.

Martin Macmillan, CEO of Level Four, said: "The partnership with TietoEnator is a significant step for Level Four as we rapidly move towards our goal of becoming the global leading provider of ATM and POS testing and development tools."

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AWARD WIN

Level Four has won the 2005 Fife Business Award for innovation and creativity from Scottish Enterprise.



Scottish Enterprise

ARE OPEN STANDARDS TAKING ROOT?

The migration to open standards has been a topic of discussion in the ATM industry for some time. Martin Macmillan, CEO, discusses where we are with the migration process and whether banks are getting closer to the 'utopia' that is integrated multi-channel banking.



The seeds for open standards were sown when IBM announced it was withdrawing support for its O/S2 platform. Keen to make a play for what had previously been a proprietary market, Microsoft began promoting Windows NT as the new operating system of choice for ATMs. It also promoted XFS, an open software layer that would run on its Windows platform, creating the opportunity for banks to use hardware and software from different vendors.

XFS evolved from a Banking Solutions Vendor Council initiated by Microsoft in 1991. The resultant software was referred to as Windows Open System Architecture/Extensions for Financial Services (WOSA/XFS). The aim was to provide multi-hardware support, without having to change application programming specifics to meet hardware requirements. Since 1998, the standard has been adopted and developed by the European Committee for Standardisation (CEN) and is now referred to as XFS.

Martin Macmillan, CEO of Level Four, said: "XFS is an open layer that runs on the Windows operating system that eliminates the old proprietary interfaces between software and hardware. Banks have been interested in this standardisation layer to reduce reliance on a single ATM vendor and save on maintenance of multiple software platforms in a multi-vendor network. The capabilities of Windows will enable banks to introduce new graphics and services at the ATM."

A thorn in the side

Until around 2001, the ATM hardware and software market was dominated by the ATM giants NCR, Wincor-Nixdorf and Diebold, with their respective hardware and proprietary software platforms holding the monopoly on ATMs.

Macmillan said: "The messaging interfaces such as NCR's NDC+ and Diebold's 912 that the software communicated

with the host systems were proprietary. These are now starting to look very outdated in comparison with more recent innovations such as XML."

With the migration to Windows, the shackles were broken for these proprietary hardware interfaces, creating a

market opportunity for new software suppliers to enter the market. The small software suppliers that did enter the market enjoyed limited success with major financial institutions, but have yet to break into the mass market.

Enter IFX

So what is happening now? A number of vendors including switch vendors like ACI Worldwide are advancing an XML-based messaging standard called IFX (Interactive Financial eXchange). Many of the host vendors and ATM manufacturers have joined the IFX Forum, a non-profit standards-developing organisation working to develop a robust framework for the electronic business-to-business exchange of data among financial services institutions around the world.

Switch vendors are the driving force behind the adoption of IFX because, increasingly, they are focusing on their core transaction

processing business and IFX appeals to their multi-channel vision. Previously, large amounts of capital were committed to supporting a plethora of customised ATM handlers dating back to the era of the proprietary protocols such as NDC+ and 912. Many of the switch vendors have a vision of a

single message format to communicate with different types of financial terminals (ie: ATMs, Point of Sale terminals, branches) and to process a transaction regardless of its origin.

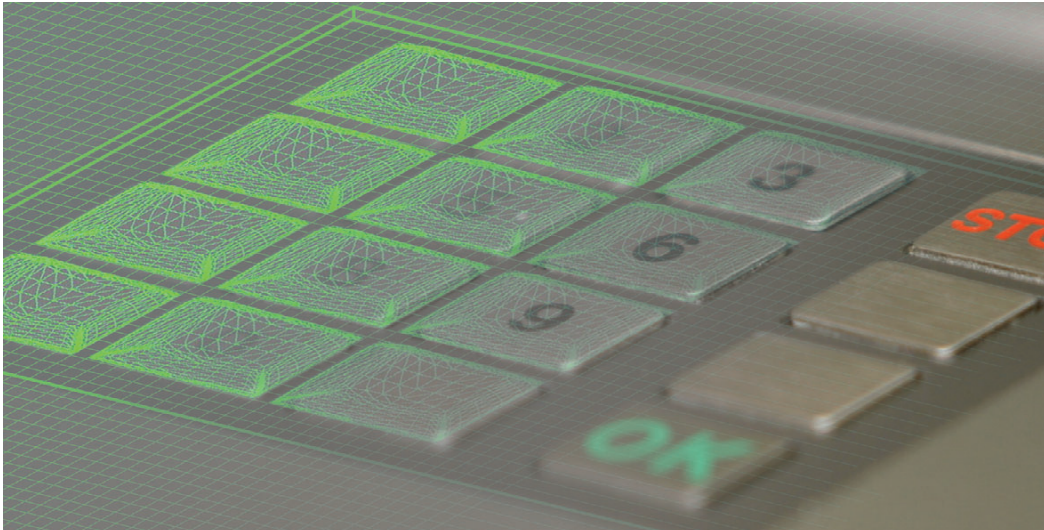
The benefits of IFX to banks are obvious. "IFX is more than a messaging specification; IFX is a targeted financial solution," said Macmillan. "Banks will benefit from a standard messaging protocol and IFX will help them bring multiple channels together. 'Channel Unification' is very cost effective from a back office viewpoint, where banks can save substantial amounts of money by consolidating back-end systems. Moreover, the IFX standard means banks will not be tied to one vendor."

Once banks have made the move to Windows as an operating system, IFX will be a smaller leap of technology. If the IFX standard continues to evolve rapidly and to attract the banks' interest, the days of legacy protocols are numbered. Some forward-looking financial institutions have already adopted IFX. Fidelity National Financial, Inc. announced in April this year that it has adopted the IFX messaging standard as the default Web services language within its banking application suite that supports mid-tier and large financial institutions.¹

Taking root

With open standards slowly taking root, end-to-end testing is ever more important.

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With open standards slowly taking root, end-to-end testing is ever more important

Macmillan said: "With the move to Windows and the increase in test scenarios, a new approach to testing is required. Not only must the bank perform thorough regression and stress testing against the host system, but they must thoroughly test the ATM application itself. With OS/2-based applications, little time was spent on testing the software releases."

Using Level Four's XFS extension to the ATM Channel Development Suite, a bank can use a live ATM application loaded into a windows partition alongside the simulator to automate the testing process. By loading a standard installation CD on top of the XFS device simulators instead of on a real ATM, the simulator can exercise the real software by simulating all interaction with the application through the XFS layer. Tests can be set up over long periods of time to test for

Windows memory leaks and other Windows-based fault conditions.

Some of Level Four's key customers have already taken advantage of XFS, enabling them to run ATM hardware and software from different suppliers. With Level Four's XFS testing software, they can automate the testing of their ATM application in isolation and also when connected up to the host system. Level Four is also supporting these customers' migration path to the global EMV chip standard. Using Level Four's ATM Simulator and EMV FastTrack products, the banks can more rapidly achieve EMV compliance in their ATM networks.

Some Level Four customers are also using its XFS-based testing tools to benchmark ATM applications from different suppliers. Banks can gain

accurate performance statistics when comparing the speed and reliability of market offerings. The benchmarking approach also serves as a reference implementation of XFS. This ensures that software provided from manufacturers adheres to the published standard and that any deviations from the standard are highlighted.

"Open standards are taking root but it will be a while before we see them bear the fruits of multi-channel banking," said Macmillan. "It's not a matter of if; it's a matter of when. With the financial services channels growing in their own siloes, it has taken open standards longer to mature than many expected but it has now reached a tipping point. Open standards, especially IFX, are the glue that will make multi-channel banking take off and happen."



Trade Up programme

Level Four has launched a Trade Up programme for new customers in North America, the Caribbean and Latin America. Companies who have already invested in ATM testing and development software can trade in their existing software for Level Four's more advanced products.

"We have invested heavily in the development of our product suite and have proven, with seamless installations into many of the leading ATM networks in Europe and the Middle East, that we provide the most sophisticated and easily integrated testing tools," said Jorge Fernandez, CEO of Level Four Americas.

"With Trade Up, network managers can discover how our products can improve efficiency and customer service. A faster and safer time to market for new functionality is critical to competitive advantage."

Implementations will be negotiated on a case-by-case basis. Level Four's Miami office will provide local support and training for Trade Up customers. For more information, email tradeup@levelfour.com.

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SCOTTISH AWARDS SUCCESS

Level Four has won the 2005 Fife Business Award for innovation and creativity from Scottish Enterprise for its Bunch Note Acceptor (BNA) and Cheque Processing Module (CPM) solutions. The solutions were developed in response to the banking industry's move towards branch automation where banks are introducing more self-service capabilities at the ATM.

"Prior to new services being deployed at the ATM, thorough testing is imperative because banks cannot afford to test on their customers," said Martin Macmillan, CEO at Level Four.

The Fife Business Awards highlight the achievements of Fife-based businesses during the past year. Level Four was one of nine companies to pick up a £5,000 prize package and trophy at the ceremony in Fife on 1 April 2005. The winners automatically qualified for the Enterprising Scotland Awards in June 2005. Level Four came runner up in the innovation and creativity category.



Arthur Morrison, CTO of Level Four, accepts the award

ATM TRUETEST LAUNCH



Level Four has launched ATM TrueTest, a standalone harness to test Windows-based ATM applications.

ATM TrueTest tests the actual NDC or 912 applications - not simulations of applications. Banks benefit from testing at a desktop PC, reduced testing cycles and improved breadth and quality of ATM application testing.

Most banks use pre-packaged ATM application software, rather than developing

programs in-house. As with all packaged software, vendors frequently introduce upgrades, add-ins and software patches. Banks therefore need the capability for rapid and repeatable testing of the ATM applications for quality assurance prior to deployment.

Martin Macmillan, CEO of Level Four, said: "We have evolved our product suite to meet market demand. Level Four's experience and expertise in ATM testing and development ensures that ATM TrueTest is a targeted solution for banks running NDC and 912 ATM applications."

RELEASE 2.7 OF PRODUCT SUITE

Level Four has launched Release 2.7 of its ATM Channel Development Suite with an enhanced regression testing capability being a key component.

Regression testing is essential when deploying new ATM services, as it checks that existing ATM capabilities are not compromised or 'regressed' by the addition of new ones.

With Release 2.7, Level Four's customers will have better quality control when developing and introducing new services to the ATM channel.

Release 2.7 also enables customers worldwide to comply with updated specifications from the leading ATM manufacturers and incorporates the latest updates to the EMV standard. It contains an improved user interface and additional support for foreign languages.

"Through ongoing R&D and valuable feedback from customers, we are delivering new functionality and product enhancements that give our customers a competitive edge," said Martin Macmillan, CEO of Level Four Software.

Recent events

EBUG (European BASE24 User Group)
10-13 May 2005, Malta



Level Four exhibited its ATM Channel Development Suite and showcased ATM TrueTest. Martin Macmillan, CEO of Level Four, participated in a customer forum focussed on ATM testing.

SMi ATMs and Kiosks,
25-26 May 2005, London
Martin Macmillan, CEO of Level Four, gave a presentation entitled 'Managing the migration to open standards'.

Upcoming events

ACE - ACI Customer Exchange, 18-21 September 2005, Charleston, SC (USA)



S1 Postillion User Conference, 11-14 October 2005, Arundel (UK)



BAI Retail Delivery Conference & Expo, 15-18 November, Orlando, FL (USA)



MEBUG (Middle East BASE24 User Group)
4-7 December 2005, Manama, Bahrain

For details on events that Level Four will attend, please visit: www.levelfour.com/events.htm.

For more company information, please visit www.levelfour.com or call +44 (0) 20 7661 9322