

ATM NETWORK ARCHITECTURE

Is a new business and technology model required for the ATM channel?

By Martin Macmillan, CEO Level Four

The ATM is a familiar and enduring sight to bank customers looking to access their cash 24 hours per day, seven days a week. In fact for the banks themselves, the business and technology model behind the ATM network has remained virtually unchanged for the last 25 years. Ever since 1967, when the very first cash dispenser was installed by Barclays Bank, the ATM's role has indeed primarily been to dispense cash. Of course, today's ATMs can offer various other services such as balance checks and statement requests, but these are little more than peripheral value-adds, exploiting, rather than advancing, the technology that has driven these machines for so long.

It can be argued that the reason ATM functionality has barely evolved over all this time is that the structure of the software which powers it has been allowed to stagnate.

Today's ATM systems are universally architected using a simplistic 'two box' model in which the ATM operates either as a dumb terminal connected to an intelligent host banking application, or as an intelligent client machine connected to a slave host server. Either way, inherent design inflexibilities in the implementation of these 'two box' architectural approaches have come to define the manner in which the ATM and bank communicate.

This makes any customisation of the ATM – be it aesthetically as regards the display, or more fundamentally, the services it provides – an extremely complex, time consuming and expensive proposition. The current 'two box' architectures mean that each unit has to be updated individually and in synchronisation to change the service.

Due to the timing and slow evolution of the ATM software market, it is today still dominated by a small number of incumbent suppliers – the ATM manufacturers – who typically supply both the hardware of the ATM and the software that controls it. These closed, proprietary legacy

systems have proven to be a major hurdle to the expansion of ATM usage.

A new wave of services and marketing opportunities

As banks focus on extracting revenue from untapped resources, the humble ATM is about to enter a new era of fundamental change. Recently introduced open standards are creating opportunities for banks to seek alternative suppliers for their ATM software. New applications are becoming available at the same time as new distributed processing architectures are unlocking the potential of the networks and increasing the opportunity to interact with other bank systems and third parties.

In this exciting new environment, customers can anticipate a wave of new opportunities when they insert their card into the 'hole in the wall'. Because applications can be created and controlled in network servers rather than individual ATMs, new content can be integrated into the network quickly and inexpensively. New services can be developed and deployed without the need for specialist staff and, because each machine can be configured dynamically, third party processing networks can present different screens and functions to the customer depending on which bank issued their card.

For banks and third party vendors alike, this equates to a huge chunk of as yet untapped marketing opportunity, while for the customer, everything from car hire to last minute travel insurance could be arranged via an ATM.

A vision of the future

For too long the potential of the ATM has gone overlooked and unexploited. By adopting a distributed software architecture, the many benefits highlighted in this article can be easily and inexpensively implemented across the board. Furthermore, the huge opportunities offered by the new wave of chip cards could also be seized upon.

The business and technology model behind the ATM network has remained virtually unchanged for the last 25 years

The closed, proprietary legacy systems have proven to be a major hurdle to the expansion of ATM usage

ATM network potential offered by distributed software architecture

Banks:

- The service at each machine can be created dynamically allowing the network to be fully exploited at any time;
- New content can be created and introduced into the network without the need for data or software updates at the ATM and complex retesting;
- Promotions and presentations can be customised for the individual user at the ATM rather than employing the 'one-size fits all' approach;
- Promotions can be activated at specific times of the day or at certain ATMs to target particular audiences;
- Real-time messages can be broadcast to improve customer loyalty, for example an immediate 'congratulations' message could be sent to ATMs near a winning football team stadium;
- Network performance data can be extracted at all levels to improve management information;
- Applications can be created and controlled in network servers rather than in each ATM.

Customers:

- ATM link to CRM data allows for personalised promotions;
- Personalised services can replace standard ATM displays, welcoming the customer by name for example;
- New card technologies allow the ATM to recognise individual customers and update them as to relevant new products and services;
- Customers can tailor the services on offer using their internet banking service.

Third party partners:

- Each machine can be configured for a bank dynamically when it is used rather than always presenting just one bank's branded screen or a generic interface and service;
- New technologies enable third party processing networks to 'share' their ATMs with multiple banks;
- Third party networks can offer their banking customers the same level of control and customer focus as an in-house network.

Banks now need only the commercial impetus to drive this change through

With the infrastructure in place to kick-start a new era of ATM usage, high street banks now need only the commercial impetus to drive this change through. A distributed hardware and software architecture, delivering a fully customisable service, linked through a bank's CRM system and providing detailed management reports, sounds too good to be true. And yet it can be made available, right now, and is ready to be implemented with minimal expense or disruption.

As we have seen, the benefits of this new approach can be many, ranging from a simple personalised greeting to instantaneous service downloads and online deployment of applications. Coupled with the recent technology advances made in the payment card industry, a network of dynamically configured ATMs will allow both banks and their customers to enjoy an unprecedented array of new ATM services. ■

This article is based on Level Four's white paper entitled "Is a New Business and Technology Model Required for the ATM Channel?". Please visit www.levelfour.com/rbr to download a full copy.

With the infrastructure in place to kick-start a new era of ATM usage, high street banks now need only the commercial impetus to drive this change through

A network of dynamically configured ATMs will allow both banks and their customers to enjoy an unprecedented array of new ATM services