



BRIDGE



BRIDGE

Level Four BRIDGE

Level Four BRIDGE is an integrated suite of open ATM software products that has been created to address the needs of ATM deployers seeking to maximise their investment in the ATM channel. The BRIDGE family consists of five interoperable product components, which can be used individually or combined together to meet various aspects of the business challenges facing ATM deployers.

BRIDGE is targeted at banks and ATM deployers who are running, or seeking to run, a modern ATM network based on the industry-wide CEN/XFS open standard. Components of the BRIDGE suite have already been selected by the deployers of some of the world's leading ATM networks in North America, Europe and the Middle East.

The key components within the BRIDGE product family are:



BRIDGE: author
ATM application design and creation



BRIDGE: test
Comprehensive, fully-automated testing of ATM software applications



BRIDGE: install
ATM application configuration builder and repository

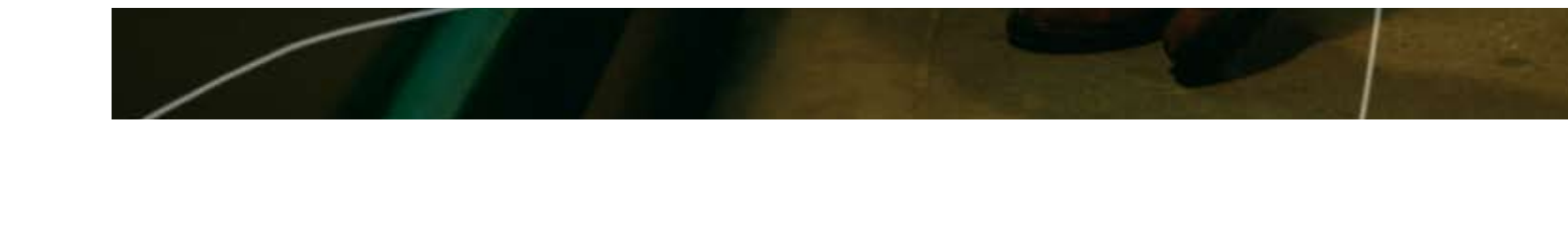


BRIDGE: deploy
Run-time execution environment for distributed ATM applications



BRIDGE: control
Independent monitoring and control of Windows-based ATM networks

The BRIDGE family has been designed in direct response to the needs of ATM deployers and the challenges they are facing. Level Four's unique componentised approach allows BRIDGE software to be either used alongside manufacturer-provided solutions or as a holistic solution for all your ATM software needs.



The ATM channel is on the brink of change

The humble automated teller machine (ATM) is entering a new era that will involve fundamental changes. While ATMs today offer some relatively new services such as balance checking and statement requests, the technology behind the ATM network has changed little in 25 years. New services have simply been peripheral value-adds that exploit, rather than advance, the software that has driven ATMs for so long.

Level Four has recognised that a fundamental rethink of the ATM network 'landscape' is required to bring new services to market faster and more efficiently. To date, the major ATM hardware manufacturers have simply repackaged their legacy software designs with modern tools, resulting in a static and untargeted service offering. However, recently introduced open standards now give banks the opportunity to seek alternative suppliers for their ATM software, whilst new distributed processing architectures provide a more flexible network of servers compared to the traditional single host system.

At present, to create a more dynamic promotion in your ATM channel requires a complete rebuild and replacement of the ATM software. But Level Four believes it should be possible to add a new service for a period of time and withdraw it quickly and easily. By doing so, ATM operators will be able to offer a tailored service that responds to each new change in the marketplace as it happens.

The introduction of dynamic service components delivered over distributed networks will give financial organisations more flexibility as to how their ATMs run and the services they offer. Deployment of new services will be faster and more efficient, with personalised presentation, customisation, and multiple services at a single point of access. It will be easy for products to be accessed and new services deployed and withdrawn.

So how can new services be introduced? – a production analogy

Getting to this point need not be as complicated as it seems. The approach to the problem can be illustrated by the one that the Japanese car manufacturing industry has perfected.

In the 1960s the UK produced quality cars that were respected worldwide. But to build one of these cars demanded several isolated phases of production that involved different groups of people. With each new design, a new production line and new parts were required. The time and cost that the UK manufacturers poured into making a single car meant that new models were slow to emerge and a lot of cars had to be sold before companies saw substantial returns.

The mid-60s saw the arrival of Japanese-built cars, which, at first, seemed to offer little in comparison with the British cars. But what the UK industry didn't see was that the Japanese manufacturers had approached the manufacture of these cars in a completely different way.

They adopted a holistic approach to building cars, linking all their processes together. Each time a new car was built, the manufacturers reused the production line, the parts, the proven systems and approaches, and integrated all phases of the production cycle, to ensure a single, seamless process every time. These manufacturers not only sold a lot of cars, they were able to reduce the timescales to produce any new model, dramatically cut costs, and deliver a range of vehicles to meet market demand.

Not only that, but they were able to improve the reliability of their vehicles incrementally because instead of reinventing each new stage in the cycle – which introduces new problems each time – they used the same approach as a basis for further refinement.

Applying the vehicle manufacturing methodology to ATM development

There is a lot that can be learnt from this approach that is relevant to the ATM industry. A fractured development process does not currently allow new ATM services to be prototyped, implemented, tested and deployed in an effective manner. Deployment involves the complete development of an entire system, before the whole network is upgraded and retested.

By taking the same approach as the Japanese car companies, ATM deployers should be able to view a problem from end to end. Graphical tools can be used to build 'production lines' that can be re-used. New concepts can be taken from prototype to reality quickly. Testing or reconfiguring a service simply involves taking a process back to an earlier stage in the production cycle, instead of rebuilding it from scratch. New services can be deployed onto the network, without taking the network down. By following this model, ATMs will stay in service when they are being upgraded and a new service will simply appear on the menu when it is introduced.

As well as the efficiency gains and wider range of revenue-generating services the ATM deployer is able to offer, the cost savings could also be substantial. Having better operational efficiency throughout the network as less downtime occurs to maintain software releases, less reliance on third party vendors, and using industry standard open interfaces to other applications will help reduce overall cost of operation of the network.





Componentised services

The idea of an ATM network containing encapsulated services is quickly becoming seen as the future of ATM software infrastructure. It is a model that needs to be adopted to improve the development of ATMs and offer flexible, manageable services to their financial institution clients.

Rather than try to integrate lots of software components that work and communicate in different ways, which inevitably becomes complex and unreliable, everything inside this design philosophy looks the same. Services are contained in identical “bundles” that can be created and tested using a production line approach. The tools that install the components are the same – to the point where the process can be automated, no matter what the service is that is being added or removed. This network is more predictable and can be easily queried and modified.

The bundle, optimally sized for the target environment, contains the data and the code of a complete service. When a new service is injected into the network, all other services remain stable. These bundles can be managed easily, but are still sufficiently self-contained to ensure that a technical professional does not need to retest the infrastructure around it once it has been deployed. Time to deliver new services is reduced,

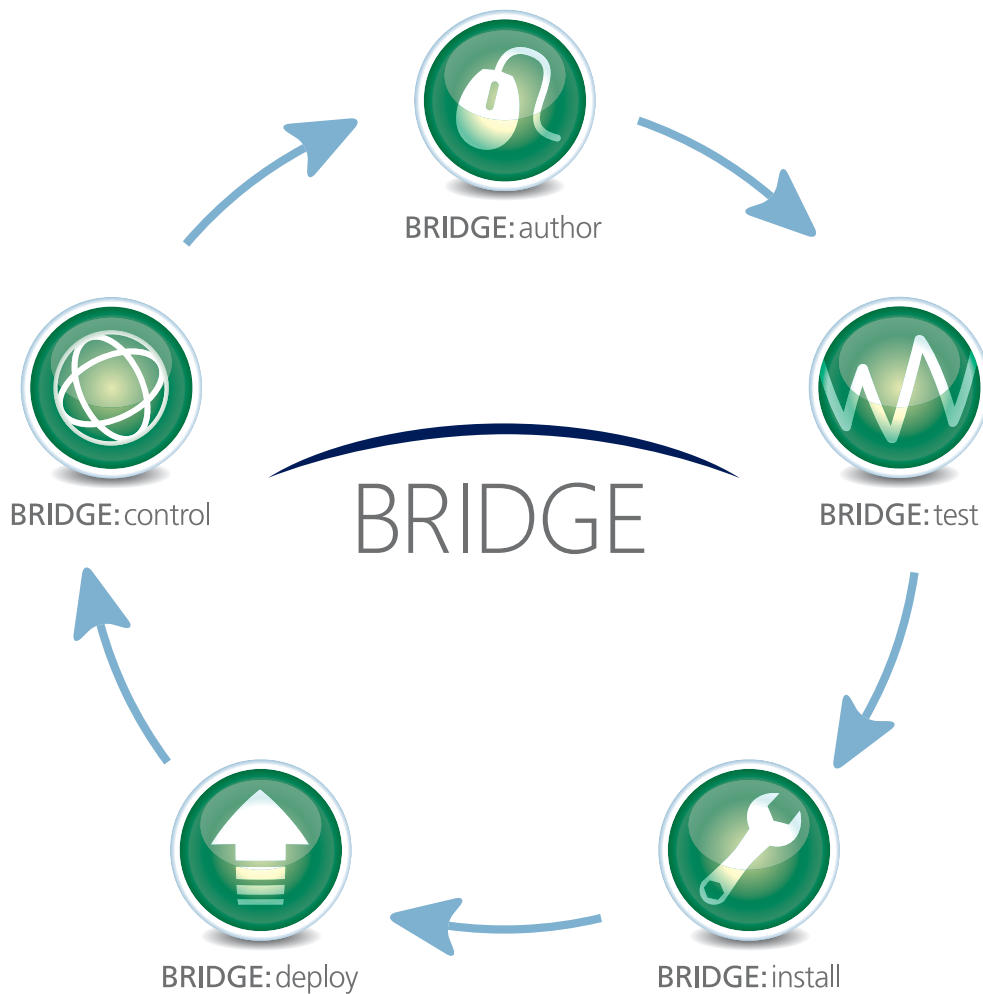
market demands can be adhered to, and production time cut.

ATM services that are based on this model become quicker, cheaper, and more reliable. Banks can choose where new services are deployed and when. Processes and services can be refined continually making a bank’s software investment more worthwhile than ever before. Customised services can be created dynamically, and can be introduced to ATMs seamlessly, appearing instantly on the menu being viewed by the customer as they insert their card.

High availability of ATMs has become even more critical as customers are used to 24-hour service. With this model, new services can be removed as effortlessly as they arrived – simply unplugged from the network and deregistered without downtime or affecting the existing services on the machine.

Above all, security is ensured. Each component is signed, verified and secured properly, and has to undergo thorough tests each time it is introduced by the network. This kind of system is more transparent and technical professionals know exactly what is in each component, whereas the traditional approach can potentially harbour hidden problems.





BRIDGE – unlocking the potential of the ATM channel

BRIDGE is Level Four's solution that enables the building and deployment of open ATM solutions in a modern, holistic fashion. BRIDGE unlocks the potential of the ATM channel, increasing the opportunity to interact with other bank systems and third parties. BRIDGE enables banks and other ATM network deployers to reduce their costs whilst at the same time increasing service levels, generating new revenue streams and increasing network uptime.

With BRIDGE it becomes possible to:

- Establish a clear brand image and product consistency across all channels
- Introduce individual customer-focused promotions
- Exploit targeted advertising possibilities
- Target services on particular groups of machines/customers
- Thoroughly test applications before deployment
- Create a responsive customer-focused service
- Exploit a true multi-vendor strategy for cost optimisation
- Maximise network uptime through efficient ATM monitoring
- Introduce access to third party products and services
- Deliver new products with EMV card technology
- Enable ATM channel content to be business-led and controlled





Bridging the need for change

Level Four BRIDGE meets the needs of ATM deployers operating in the fast-evolving device marketplace. Designed from the ground up to meet customers' current and future business requirements, Level Four BRIDGE is a componentised suite of products designed to address business requirements rather than to fit within technological constraints. The result is a flexible, holistic ATM solution that reduces costs and protects existing revenue streams whilst creating opportunities for new ones to be deployed.

A holistic approach

BRIDGE provides a solution for the management of the complete lifecycle of software in the ATM and self-service channel, addressing the business problem from the customer's perspective. All phases, including specification, design, prototype, development, testing, documentation, deployment and network monitoring, are provided in one integrated package – shortening time to market and improving the quality of the final product.

Realise the true value of a multi-vendor ATM network

BRIDGE utilises a componentised approach, allowing components to be used within any open standards ATM network. By adopting a truly open approach to ATM software, and the processes surrounding it such as

installation and monitoring, BRIDGE enables ATM deployers to achieve a true separation of hardware and software in their networks, helping to drive down the cost of ATM hardware.

Consistent Graphical foundation

BRIDGE's focus on intuitive graphical tools provides a consistent and flexible design environment for the specification and review of business process flow and content, as well as testing and network monitoring. This use of graphical tools and an intuitive user interface enables easy use by both technicians and business users. It enables the user to select the focus-level and granularity detail, based on their organisational role or current enquiry interest.

Dynamic, targeted content

A key tenet of the BRIDGE software philosophy is to allow content to be deployed dynamically and targeted to a specific group when a card is inserted in the ATM. The group may be an individual cardholder, an individual device or a group of devices defined by the organisation. Services can then be targeted according to the specific group, time of day and location. The content may be local to the device or on remote servers located in-branch or elsewhere in the network.

Personalised cardholder services

BRIDGE enables services to be customised to suit each cardholder's personal preference given the supporting host systems. The cardholder can therefore define how he or she wishes to have services presented at the device, and CRM data and personal profiles can be used to store this data. This enables organisations to integrate delivery channel services accessed by a cardholder.



Why Level Four?

Level Four is a specialist provider of ATM software solutions that dynamically provision the self-service banking channel, enabling banks to deliver a comprehensively personalised ATM and self-service experience to their customers.

As a dynamic, innovative and future-looking organisation, Level Four has embraced the challenge of deriving value from the ATM channel and has identified how to transform it into a profitable but customer-friendly revenue stream.

Level Four's ATM solutions respond to today's cost-conscious world where return on investment must be both quick and measurable. By providing demonstrable value from its software solutions and with a proven ability to deliver world-class support, Level Four has developed a blue-chip client base across the globe. Please visit our website to look at our ever-expanding customer base.

Our products enable customers to deliver high quality business services at the ATM in a timely way, using graphical development tools and automating the labour-intensive testing process. As such, Level Four has led the market with the introduction of open standards and EMV support in its testing and development products.

Level Four combines more than 12 years of ATM technology development expertise with a senior management team of industry experts who have been hand-picked for their extensive experience in the delivery of mission-critical banking solutions. Together, our software architects, developers, QA experts and product managers form the most experienced open standards ATM software development team in the world.

Level Four has achieved significant revenue growth year-on-year since its inception in 1995. With the backing of Quester Capital Management Ltd, one of the leading UK venture capital houses, Level Four is now delivering on its vision for the ATM channel, leveraging the introduction of new web-based technologies and distributed architectures.

Level Four's award-winning ATM technology has received industry recognition for promoting the adoption of open standards in the global ATM industry.

Level Four BRIDGE

- Level Four BRIDGE is a flexible suite of open standards-based ATM software components. Each component addresses a discrete business challenge faced by today's ATM deployers.
- Level Four BRIDGE provides a complete business solution to the ATM and self-service terminal software needs of retail banks and third party ATM processors.
- Level Four BRIDGE protects existing revenue streams and creates opportunities for new ones to be developed through the creation of dynamic content that can increase cross-selling and new product sales opportunities, as well as enhancing customer loyalty.
- For banks, Level Four BRIDGE transforms the ATM channel into a CRM and business development opportunity, eliminating the dependency on IT resource availability, leaving control in the hands of the business.
- Level Four BRIDGE addresses all the processes surrounding ATM software such as installation, testing and network monitoring, to provide a open and holistic solution to the needs of today's modern ATM deployer.
- With Level Four BRIDGE, ATM deployers can run and control their ATM applications from network servers rather than on individual ATMs, so new content can be integrated into the network quickly and inexpensively.
- With the adoption of IFX, banks are moving from the historical host/terminal architecture to a distributed server-based architecture. In this environment, Level Four BRIDGE enables banks to fully utilise the power that is made available to them through the new technological paradigm, whilst ensuring security is not compromised.
- Level Four BRIDGE changes the business model for third party processors through its distributed software architecture. Solutions can either be highly packaged to deliver a cost-effective modern replacement to existing proprietary manufacturers software, or Level Four's holistic approach can empower customers to build completely bespoke services to differentiate their business. The flexibility is provided to enable customers to choose how they create and manage their ATM and self service networks.

BRIDGE:control is based on KIXOperator supplied by Salzburger Banken Software





BRIDGE

Contact us

www.levelfour.com

enquiries@levelfour.com

© Copyright Level Four Software Ltd 2007. All rights reserved.
All product names are trademarks or registered trademarks of their respective companies.

