

Enterprise Mobility

The challenge of turning on the tap of mobility throughout your organisation

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The development of the online economy is being accelerated by rapid innovation in the mobile space. Businesses that can significantly enhance their customer experiences through effective mobile engagement have an opportunity to increase their market share by being “active in their customer’s pocket”.

Likewise, organisations with field-based workers can dramatically improve and optimize their work processes by delivering their business systems straight to mobile phones and tablets, saving time and significant costs.

Establishing the software “plumbing” that can enable this, and turning on the tap of mobility across enterprises rapidly and effectively is a big challenge – more complex than just delivering a couple of apps here and there.

This paper looks at the major issues facing organisations planning to rapidly deliver a mix of mobility services across all mobile phone types, in concert with existing systems. It compares common approaches and discusses the pressing need for well defined software architectures and delivery platforms for mobility and why the Blink Mobility Platform is a particularly appropriate solution for Enterprise Mobility.

Mobility demands a different mindset.

If you’re an Enterprise thinking of just offering your existing website on mobile – beware!! The mobile device gives you an opportunity to offer a completely new range of services to your consumers in concert with your traditional offering. Just delivering your existing services without thinking about the very specific use cases of the mobile user could make you a “me too” company rather than a leader in service.

If you’re not thinking about “Environmental Integration” – using the location, time, weather at location, camera, RFID and other device capabilities (i.e. the environment) that a mobile device offers – as part of your ongoing service offering then someone else will. Your mobile strategy needs to compliment your “big screen” presence and it almost certainly shouldn’t be exactly the same. You’ll need to make sure that in the situations where your users want immediate access to a service it is just two clicks away.

You’ll need to allow them to personalise and shortcut. To reduce clutter just focus on giving them services that actually make sense on a mobile device rather than delivering your whole “big screen” website in a different format.

Profusion and confusion

There are a considerable number of technologies that can be used to deliver mobility. Deciding which one is right for a given application or service can be a confusing experience, especially when every mobility vendor’s website or brochures can legitimately show pictures of mobile phones with engaging user interfaces. How do you judge what’s best for your organisation?

Enterprise Mobility is about much more than purchasing or developing a single app. It’s a long term corporate strategy decision. Selecting the way in which a mobile capability will be developed and delivered needs to be viewed as an integral part of the overall information service delivery strategy.

It’s a decision that will also have ramifications for the number of staff and the type of skills required to deliver the service, application or site, the time to deliver and the cost of development and ownership.

“Technology trends that offer big productivity improvements and hefty business challenges don’t come much larger than mobility.

Touching everything from handsets and devices to networks & back-end systems, mobility permeates an organisation like few other things.

Those who manage to harness it stand to gain huge advantages.”

Ian Grayson, The Australian 10th August, 2010

Why don’t we just write our own app?

So many apps have become available in such a short time that you could be forgiven for thinking that writing a mobile app is easy. Appearances however, are deceptive. Most phone apps solve one specific, user-oriented need and are often limited to one specific device. They are a different class of solution to that required by an enterprise seeking to deliver a complex raft of services through mobiles.

Each major phone operating system (iOS, Android, BlackBerry, Windows 7 mobile, Bada, Symbian, MeeGo) has a set of development libraries that allow you to create applications for that phone. Writing “to the metal” gives you great control in terms of using all of the features of the target device, but it ties you specifically to that device. It might be understandable for organisations to write their absolutely mission-critical application this way, but they’ll still have the issue of more general deployment of mobility around their organisations.

Developing on multiple operating systems concurrently is a costly effort that requires a development team (or partner) and consideration of how you will continue to add functionality and services in the future.

There are higher-level application development builders for some phone Operating Systems and these may speed up the time to build and test, but an app just runs on its own specific operating system.

The alternative is to use a delivery framework that will enable development of applications for delivery on multiple phone operating systems. These “middleware” products can largely be classed into four groupings based on how “far” the products are away from the phone hardware and the levels of expertise needed to build and support software.

Comparison of mobile delivery middleware frameworks and platforms

Group 1: Cross-platform frameworks

One powerful tool for delivering device independent, cross-platform applications is **JavaScript**. It is supported by a variety of libraries such as **jQuery/jQuery Mobile**, **jQTouch**, **Sencha**, **Corona** and **Rhodes**. These provide programmers with higher-level features that enable more rapid development of web applications.

As these are programming tools, they will need specialist staff with a high level of skills. Projects typically take weeks or months to deliver and any extensions to functionality will need to be written into the program.

Group 2: Bridging frameworks

Another set of tools are bridging frameworks such as **Appcelerator**, **Titanium** and **PhoneGap**. These take your web application skills and “translate” them into native application code to offer direct, specific device feature support and potentially, enhanced performance.

These are also programming-level tools and therefore invoke the issues of skill sets and support.

Bridging frameworks can be used in conjunction with cross-platform libraries to deliver device-specific features unavailable through the more general libraries.

The Blink Mobility Platform, for example, uses jQuery and PhoneGap as part of its underlying infrastructure.

Group 3: High-level service delivery platforms and mobile solutions architectures

Above the application development products there is a class of platforms that aim to simplify and accelerate the delivery of mobile applications. These platforms are distinguished by high-level building tools, encapsulated services (such as video handling, location-based services, logging, reporting etc) and an integrated delivery architecture for a wide range of devices.

They offer an “instant” delivery environment by providing all of the infrastructure and administration that would normally need to be programmed. The results are generalised, commercial-grade services suitable for delivering a range of mobile solutions. The platforms are available as “platform-as-a-service” or through an in-house server.

Products in this market space include the **Blink Mobility Platform**, **PyxisAppStudio** and **Volantis Framework**.

Group 4: Point-and-Click building products

A different class of delivery products are the point-and-click builders such as **MoFuse**, **Mobify**, **Mobile Entrée**, **Formotus** and **MobiOne**.

These builders typically trade flexibility for ease-of-use. It is difficult to compare them with mobile solutions architectures since they aim to provide domain-specific functionality. Mobify may handle simple sites effectively but may have problems with more complex interactions. MoFuse and MobiOne are not necessarily designed for the corporate environment.

Mobile Entrée and Formotus are both point-and-click solutions for developing forms-oriented solutions around the Microsoft/Sharepoint platform. They would struggle to provide a comprehensive platform for wide-ranging mobile delivery.

Enterprise Mobility vs Building Apps

We believe the most effective way to approach mobile device offerings for any organisation is not to shoehorn an existing system into the smaller display format of mobiles, but to start from the user point of view.

You start by asking what “interactions” would the mobile user find valuable.

Our **Interaction-oriented architecture** gives you the power to describe how to satisfy these real-life user interactions **from your existing business systems** in a unique cloud-based service we call the Blink Mobility Platform.

It’s a new way of providing a mobile view of your existing services without the hassle of programming apps or jamming your website into a mobile format using CSS.

Compared to developing applications it's quicker to get operational, more manageable and offers enterprise-level services (such as security, offline operation, reporting, auditability and robust delivery infrastructure) as part of the platform. It supports all mobile devices and as new ones come out support for them is put into the platform as soon as possible. You don't have to buy, install and manage software and you pay for it as a service.

Why an "architecture" and a platform rather than just CSS and/or an app?

In any complex environment a software architecture provides a model for effective management and delivery. BlinkMobile's Interaction-oriented Architecture is a practical, robust and easily understandable model around which to manage the complexities of large-scale systems mobilisation. The Blink Mobility Platform is the service that delivers that architecture through a cloud infrastructure.

With a platform such as the Blink Mobility Platform much of the heavy lifting is already done in terms of delivering the enterprise-grade services. Delivery to different device types, disconnected mode operation, linkage to back-end systems, security, user handling – these can often take a long time to design and deliver. With the Blink Mobility Platform they come as part of the service.

Will it work on all devices?

Yes. Since BlinkMobile uses JavaScript frameworks and platform-specific bridges to provide the widest possible device coverage, we can address all existing and future devices. We even support SMS-only devices.

What sort of new services could I offer?

Many clients use BlinkMobile's location-based and personalisation services in conjunction with their own data to deliver enhanced user functionality.

Mobile phones can be used to scan Barcodes, QR-Codes and in the near future, Radio Frequency IDs (RFIDs) and Near Field Communication (NFC). With the Blink Mobility Platform, phones can be turned into a tracking device.

They are also ideal for creating context-based interactive engagement using systems such as polls, shoutboxes and dynamic surveys.

How is it going to access my internal applications? What about security and audit?

The Blink Mobility Platform is an application development environment. You can interface from any interaction into almost any existing web service or web-enabled interface. The Platform supports Secure Sockets Layers

(SSLs), token-based security and two-factor authentication. It also has inbuilt permissioning that can limit interactions to any user, group or groups of users. All interactions are logged with full audit reporting for compliance and analysis.

Why can't I just have a mobile version of my website?

A one-to-one mapping of your website into the mobile space is unlikely to be a good experience for your users unless you have a particularly simple site. Mobile users typically don't want to waste time navigating an entire site. They prefer to go straight to their desired service with the minimum number of clicks.

I have internal and customer facing needs for mobility – can I do them all from the one platform?

Yes. You can either have a single answerSpace with multiple categories that deal with different aspects of mobility, or you can implement multiple answerSpaces. For example, you may choose to adopt a public-facing site which draws data from your website, along with an internal site which sources from your intranet. If you choose to deliver multiple answerSpaces, they can be linked together for administrative purposes.

Do I pay more as I add users and applications?

No. When you buy a BlinkMobile service it can be deployed to as many users and across as many applications as you wish.

How is it going to grow? What sort of hardware do I need to run it?

The Blink Mobility Platform is provided as a service in the cloud, which means it is delivered over the Internet. There is no hardware required to run the platform but you will of course need mobile devices to access the mobile data.

There are a number of options regarding how you run your answerSpace domain. The right one for you will depend upon your location and/or your need for service level agreements. The computing platforms grow as your needs grow.

Are you storing any of my data?

BlinkMobile does not store any data other than the definitions of the Interactions, some intermediate objects, the answerSpace configuration details and prototyping data. All source information is read in real-time from its home location.

To achieve persistence when operating in disconnected mode some intermediate temporary data objects may be created, but this is a configurable option.

How does a typical BlinkMobile implementation work?

BlinkMobile and its partner networks are in the business of supported solutions. We provide the platform while our partners deliver the solution along with any training. After that, you can determine how self-sufficient you want to be.

How long is it going to take to deliver useful applications?

Following a two day training course, a developer can set up and deliver a new Blink interaction app in anything from a few minutes to a couple of hours.

What sort of team am I going to need or to contract to deliver my mobile applications?

You will not typically require a programming team. You will need an administrator who is familiar with scripting, knows some HTML/CSS and the structure of web sites. A website administrator would be more than capable, supported by a website designer to handle the look and feel. Integration into back-end systems will require the assistance of your IT department. BlinkMobile projects usually involve one of our partners helping with an initial roll-out of functionality, after which the client is more than capable of continuing to create and support the environment.

What sort of support am I going to need and receive?

Operational and development support during business hours is included in every standard BlinkMobile service contract. Our business partners provide the first level of support and BlinkMobile provides second level support. After hours support is available by arrangement. We believe that having access to a real person to deal with issues is important and we value our client relationships very highly.

Finally....

We're not the only ones to believe that the Blink Mobility Platform has the capability to be a long-term delivery platform for the creation and management of focused interactions to any device in a very flexible and agile manner. The Blink Mobility Platform has been recognised in eight national innovation and product awards during 2010/11 and our company received "Cool Company" recognition from Anthill Magazine.

Blink Mobility Platform Platform services

