
Evaluating Mobile Email Solutions

One size doesn't fit all

Dale Vile, September 2007

Now that mobile email is moving into the mainstream, with technology and services widely available to businesses of all sizes, organisations looking to either invest for the first time or review their current arrangements are presented with a range of approaches and options for moving forward. But how do you make sense of these and figure out the best option for your business?

KEY POINTS

Mobile email remains front and centre on wireless handhelds

While interest in mobile access to a range of corporate systems such as CRM and ERP is steadily growing, messaging is still the primary driver for investment in handheld technology for business professionals, and according to 756 business and IT professionals participating in a recent online study, it's going to remain this way for at least the next couple of years.

If your course isn't yet set, you are likely to be faced with some decisions

The debate about whether email on the move is going to be an integral part of business life into the future is now pretty much over. If you are not yet convinced, you are probably in the minority. Some organisations have already set their direction in this area in terms of technology choices, but if you have yet to take the plunge, or need to review an informal, limited or piecemeal capability that's currently in place, then decisions need to be made and it is you that this report is designed to help.

Understanding the options and evaluating them objectively is critical

All mobile email solutions have one thing in common – they allow a user to send and receive messages via a handheld device. Where they differ significantly is in the way they do this, which in turn determines which underlying mail servers and services they will work with effectively, the experience delivered to the user, and the ease with which they can be set up and administered. Solutions designed to work with large scale Microsoft Exchange or Lotus Domino systems are not necessarily going to help the large number of small businesses relying on ISP hosted POP3 mailboxes, and vice versa. And from a user perspective, solutions conceived for occasional low volume access will be inadequate for road warriors, while fully comprehensive mailbox mirroring and attachment handling may be overkill or difficult to cost justify for relatively light requirements.

Check out the main players, but look beyond these too before making a decision

Research in Motion (RIM) is the current market leader with its BlackBerry Enterprise Server middleware and the BlackBerry Internet Service delivered through mobile operators. The challenger to the crown is Microsoft, with its mobile email capability embedded natively into Exchange. It is worth investigating other options, however, that sometimes provide greater freedom in terms of device support and/or systems integration. Mobile operator branded relay services and total hosted email offerings with a mobile access option particularly address the needs of smaller businesses, so there is nothing practical or technical now standing in the way of any organisation moving forwards with email on the move, regardless of its size and requirements.



This research and discussion report, which was commissioned by Orange, is based largely on the output from an online survey and a series of associated workshops conducted independently by Freeform Dynamics Ltd in the second quarter of 2007, drawing on occasions from previously executed research where indicated.

Introduction

The technology to allow mobile access to email on a handheld device has been available for a number of years now. Not all organisations have tried it, but many have, particularly in the large enterprise space where most have either piloted or rolled out solutions to one degree or another. It has also been relatively common to see individuals making their own arrangements for email on the move in the absence of their organisation putting something more formal in place. Indeed vendors and service providers have encouraged such activity through so called “prosumer” offerings – solutions sold to professionals for business use through consumer channels.

The upshot is that today, mobile email is rapidly becoming a common mainstream requirement, with more and more organisations that would typically not be regarded as early adopters now beginning to consider or use it. Furthermore, many that are already taking advantage of mobile email, but perhaps in a less formal, limited or piecemeal manner, are looking to settle on a more consistent and robust way forward as messaging on the move becomes an integral part of the way they work.

Against this background of significant evaluation, re-evaluation and adoption activity, we consider options and approaches as organisations look to either embrace mobile email for the first time, or to consolidate and/or strengthen their current capability.

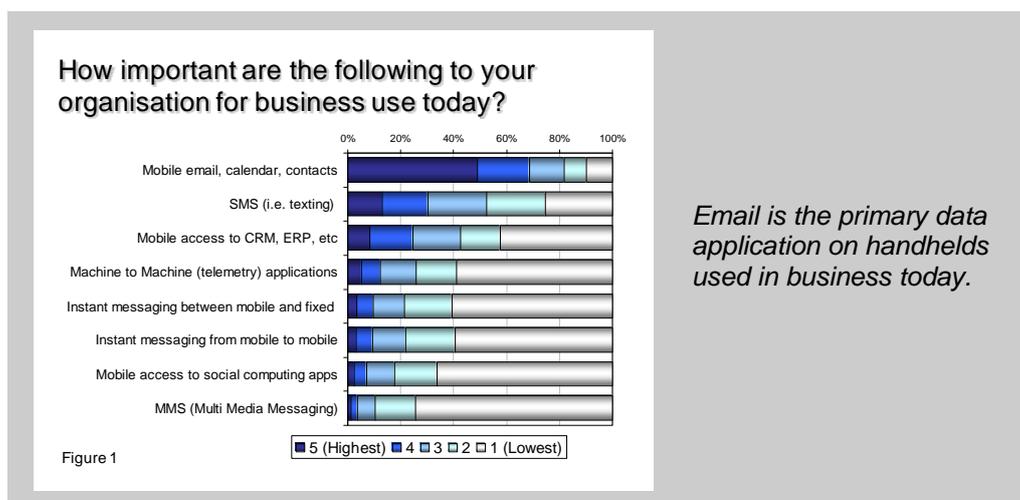
Foundation for this report

Individuals within the analyst team at Freeform Dynamics have been researching and monitoring the evolution of workforce mobility in the business sector since the year 2000. This considerable experience has been brought together with the results of a recent online research study in which 756 business and IT professionals from the UK provided feedback on various aspects of mobile working. A summary of the research sample is presented in Appendix A.

Caveat: Percentages on the charts presented in this report relate to the study sample. When reviewing these, it should be noted that the self selecting nature of online research means those with an interest in or knowledge of mobility are likely to be proportionally overrepresented. This is immaterial to the discussion in this report, but can be misleading if results are taken out of context.

Email remains front and centre

There is clearly significant potential for mobile technology to be applied in many parts of the business. Whenever we look at the relative importance and breadth of appeal of different types of application and service, however, mobile email, coupled with contact and calendar management, consistently comes top of the list, just as it has in this current study (Figure 1).



Email is still, therefore, the primary application for handhelds, so it makes sense for organisations with a significantly mobile professional workforce to be sure of their capability in this area.

First things first - the right mindset

Mobile email initiatives in the past have started in many different ways. Sometimes, they have come about as a result of users pestering the IT department, leading to tactical solutions that were regarded as simply a necessary evil from an IT perspective, rather than a fully fledged part of the IT strategy and infrastructure. On other occasions, cellular operators and their partners have sold a "proof of concept" pilot project into the organisation, which solidified over time into a permanent installation, but without necessarily having been "bolstered" to deal with the broader needs of scalability and manageability. Then we have all of the "under the radar" activity in which individuals and departments have used prosumer products and services to solve their personal and local needs, sometimes with the blessing of IT, sometimes not.

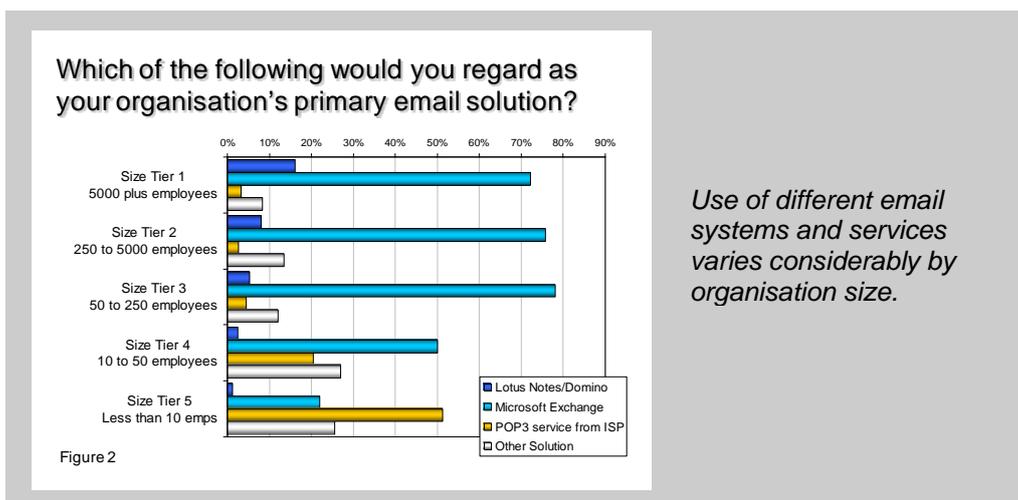
Of course there are organisations that have implemented mobile email as one or more properly supported IT initiatives, but for whatever reason, wish to revisit things. This might be due to the maturing of user needs, a wish to review past and future investments in light of technology evolution, or a desire to consolidate multiple solutions for cost, support or manageability reasons.

Whatever the situation, and you may be able to relate to at least one of those described, it is important to think of mobile email as an integral part of your operational infrastructure moving forwards. The mindset has to be one of extending out from the existing servers or services used to manage business email in general (Microsoft Exchange, IBM Lotus Domino, Novell GroupWise, ISP mailboxes, etc) in order to provide mobile access, rather than implementing mobile email as a discrete application that is somehow separate from the rest of IT. If mobile email is managed and supported according to a completely different set of expectations, rules and policies, then it will not only be more costly to operate and maintain, but riskier from a security perspective and less likely to meet the demands of the business.

With this in mind, our review of approaches and options for moving forward with mobile email in an appropriate manner must start with a discussion of the core email servers and services in use today that provide messaging capability in the fixed office environment.

One size doesn't fit all

While there can be little doubt about the overall dominance of Microsoft with its Exchange solution among mid-sized and large organisations, the mix of different email servers and services varies considerably by organisation size (Figure 2).



As we can see, IBM is a significant player with its Lotus Notes/Domino solution at the high end but its presence diminishes rapidly with organisation size. Conversely, smaller organisations are much more likely to be using POP3 services from ISPs than any individual on premise solution. The popularity of ISP hosted mailboxes is, in fact, probably greater than indicated on the chart, as the sample participating in the study was made up predominantly of IT professionals, so would naturally be biased towards organisations with an IT function. Clearly, many small businesses do not have an

in-house IT capability at all, and we could reasonably expect the majority of these to be relying on their ISP to deliver an email service.

Apart from providing some interesting context, the above picture illustrates the heterogeneity of the email solution landscape, and highlights the fact that when it comes to providing mobile access, it is not a case of "one size fits all". While one approach or offering may work well with a given underlying email environment, it is unlikely to be the best for everyone. Indeed, when we bring user requirements, budget constraints and the availability of in-house expertise into the equation, it becomes impossible to generalise on what is the "best solution" in relation to mobile email options.

With this in mind, we need to think about how to evaluate the suitability of the options that are available, but before getting into evaluation criteria, it is worth making sure we understand the general nature of the beast.

What's in a name?

So far, we have been using the term "mobile email solution" without being very precise about what we actually mean by this, which in an industry littered with jargon and acronyms is a dangerous thing to do. The reality is that there are a number of approaches to providing mobile email access to users on the move, one of the most obvious being to allow them to simply hook up their notebook PC remotely over some kind of wireless connection to the network back at the ranch. They may then run up their Outlook, Lotus Notes or some other email client, just as they would if they were sitting at their desk or in their home office, and thus we will have provided them with mobile email.

Actually, what we have really provided them with is notebook PC connectivity, and while this allows them to access their inbox, we are more concerned in this report with providing mobile email capability via handheld devices.

So what's the difference in terms of business value? Surely they both achieve the same thing?

The answer is that both research and anecdotal feedback has confirmed time and time again that business professionals regard access to their inbox from a handheld device as a boost to both their efficiency and effectiveness. The reason for this is not rocket science, it is simply about the convenience and immediacy of communication, something that, whichever way you cut it, is inhibited by both the form factor and the boot cycle of full blown computers such as PCs and Macs, no matter how "ultra portable" they become or how much battery life has improved.

Don't believe us? Well take the average mobile email sceptic who declares that their notebook with WiFi hotspot access is all they will ever need, give them a properly configured and supported handheld which provides continuous and immediate access to their email inbox, then try taking it away from them after a month of routine use. While business cases for handheld mobile data access are notoriously difficult to construct in terms of financial ROI, few business professionals who have first-hand experience of the technology doubt its business value.

In practical terms, handheld access to email, particularly in a properly controlled business environment, requires some additional elements to be in place over and above simple wireless connectivity and handheld equipment.

The basic components that need to be in place for effective delivery of a mobile email service, whether managed "in house" or via a service provider, are as follows:

- Server functionality to relay messages to and from the user's mobile device
- The mobile devices themselves (with appropriate wireless connectivity)
- Facilities to provision, manage and de-provision users and devices
- Mechanisms to define and implement security and other policies

In addition to email message relay capability identified in the first bullet point above, more comprehensive solutions will also incorporate the ability to handle related functions such as contact, diary and task management, and the ability to view and possibly edit email attachments.

Some solutions also double up as a platform for deploying other mobile applications beyond email, and while email functionality is typically the driving motivation for initial investment, thinking about broader requirements is not a bad idea, which is something we pick up on later.

Getting down to specifics

Evaluating a mobile email solution is really about looking at how well it delivers the elements introduced above. More precisely, it's about how well it does this within the context of your environment and needs.

Given this as a starting point, let's take a look at the considerations in more detail:

Level of functionality offered to users

The most fundamental requirement under this heading is the relaying of messages to and from the mobile device. It sounds simple enough, but there are some specific considerations to bear in mind.

Firstly, there are two main mechanisms for implementing the relay process - push and pull. The pull model relies on the mobile device requesting messages to be transferred from the server. Such requests may be initiated manually by the user, similar in concept to the traditional PC dial-up approach. Alternatively, the device may poll the server automatically on a regular basis, e.g. every 15 or 30 minutes, then pull back any messages that are waiting. The push model (that has led to the frequently used phrase "push email") works differently and much more efficiently. It is based on the server proactively relaying incoming messages to the mobile device without any prompting, and generally leads to a significantly better user experience.

The second big consideration is mailbox reconciliation. If the user opens a new message on the handheld then later accesses their mailbox on the PC, will the message on the PC be marked as "read"? There is a similar question in relation to messages that have been deleted, filed, categorised and so on. This may not be a significant requirement for users with a low volume of email that are mobile by exception, but for those who receive a large number of messages while on the move, mailbox reconciliation in both directions, from the handheld to the PC and the other way around, has a major impact on usability and usefulness. There is nothing more frustrating than staying on top of your email traffic during the course of a busy working day on the road, then getting back to the office and finding you have to go through the same messages all over again.

An advanced requirement that is important for some users, but probably overestimated in terms of its true value for most, is the ability to open and manipulate email attachments. Most seasoned road warriors tell us that being able to read attachments can be useful from time to time, but editing them is much less of a requirement - that's what notebook PCs are for.

Beyond mobile email itself, the ability to manage contacts, calendars and task lists while out and about can be extremely useful, though this only makes sense if it is possible to synchronise and/or reconcile changes with the master copies held on the PC or server, ideally on a continuous basis over the air.

Level of integration with the underlying email system

Much of the above-mentioned user functionality is dependent on the level of integration with the underlying email system.

The lowest common denominator here is an approach which utilises industry standard POP3 or IMAP interfaces. Depending on how it is implemented, this kind of approach can provide a degree of mailbox reconciliation to replicate deletions and read flags, but many email management facilities that are taken for granted on a PC, such as the automatic recording of outgoing messages in the "Sent Items" folder of the main mailbox, folder management and message filing, message categorisation, and so on, cannot typically be handled. Neither, of course, can access to calendars, contacts and task lists.

As a word of warning, some mobile email solutions, particularly those based on relays hosted by mobile operators, work on the basis of replicating messages into a second intermediate mailbox (separate to the user's main mailbox) before relaying them to and from the mobile device. In such cases, the level of mailbox reconciliation is typically very limited.

More complete functionality is usually dependent on explicitly designed mobile email capability embedded in the core email server itself, as in the case of Microsoft Exchange, or specialist middleware that integrates tightly with that server. Many such solutions exist, but the most well known example is the BlackBerry Enterprise Server (BES) from Research in Motion (RIM).

Nature and level of integration with mobile devices

The nature and completeness of the integration with mobile devices can have a big impact on the user experience. Some argue that the ultimate in terms of efficiency, usability and overall effectiveness is when the server technology and handheld operating system are delivered by the same vendor. This kind of approach is illustrated by Microsoft with its end to end combination of Exchange and Windows Mobile devices. The original end-to-end solution in this space is from RIM, however, with its BES and BlackBerry handhelds.

But there is another school of thought. Players like Good Technology (now owned by Motorola), Visto and iAnywhere would argue that the device independence of any mobile access platform, whether email centric or otherwise, is a critical requirement when user needs and preferences vary so much and the shelf life of the average handheld is measured in months rather than years. The typical architecture for those that advocate the device independent route involves the installation of a small piece of client software on the mobile device that interacts natively with the relevant middleware.

Some of these clients then enable the local applications that come as standard on the device so that the standard look and feel of the device is not disrupted – e.g. they sit invisibly behind the familiar “Inbox” on a Windows Mobile device. Other solutions present their own user interfaces which are consistent across all devices, on the basis that users do not need to re-familiarise themselves with the application interface if they are given a different type of device at some point in the future.

Standing back a little, something that works in our favour here is that the line between the total end-to-end solution approach and device independent propositions has actually become quite fuzzy as the market has matured, so today, the two are not mutually exclusive. Both Microsoft and RIM, for example, make their client connectivity components (ActiveSync and BlackBerry Connect respectively) available on other device operating systems, so it is possible to manage an estate of both “native” and other devices reasonably effectively with what might have been traditionally considered an end-to-end solution at the core.

The imperative in this area is to understand the degree of flexibility and openness a solution offers and strike the right balance between complete device independence on the one hand, and the convenience and other potential benefits of end-to-end solutions on the other.

Operational “friendliness” of the overall solution

Regardless of the size of your mobile user base and whether the technology to enable mobile email access is managed in house or by a service provider, there are a number of operational requirements that need to be considered.

Firstly, there is the whole process of provisioning users and devices then subsequently dealing with employees changing roles, leaving the company, and so on. Being able to allocate and de-allocate devices to/from users and hook them into or disconnect them from specific mailboxes is a pretty obvious requirement, and while some solutions and services allow this to be handled very well, others require a lot of manual configuration and administration, or in the case of hosted services, a call to the service provider. It is worth making sure facilities in this area are properly understood and appropriate for the scale and frequency of change you anticipate.

Related to this is the ability to deal with lost and stolen devices. There is clearly the exact same provisioning and de-provisioning requirement here, but we also need to think about security. The majority of mobile email solutions work on the basis of keeping a local copy of the user’s inbox and other data on the handheld itself, so we need to make sure that proprietary and sensitive information is properly protected should the device fall into the wrong hands. The capabilities that are relevant here include the ability to force policy onto handhelds to ensure that they are always password or pin protected, the ability to encrypt device resident data, and facilities to disable and wipe all data from lost or stolen handhelds remotely when they next attempt to connect. While such measures can be overkill in many environments, it is again worth being aware of what’s possible and thinking through your requirements.

Of course security is as much about policy and human behaviour as technology, which is discussed in more detail in the report “Secure Mobile Working” (Feb 2007) available from our website.

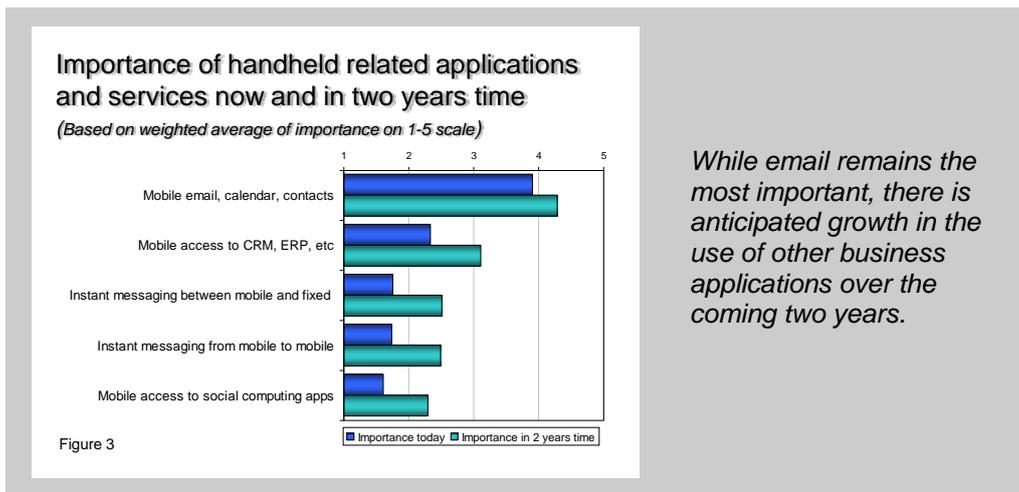
Beyond provisioning and security, all of the basic IT operational requirements associated with any important business system are potentially relevant, depending on the scale, complexity and criticality of the set up in place. This includes performance monitoring to pre-empt issues and manage services levels effectively, fault tolerance and fail-over recovery to assure continuity of service, and auditing and asset management, e.g. to allow device configurations to be managed through interrogation and reconfiguration over the air.

Having highlighted the potential importance of these operational capabilities, it is worth highlighting that it is not strictly necessary to look for a single solution that delivers all of them. Wherever possible, in fact, it is much better, for example, to extend the reach of existing systems management solutions that are already part of the operational infrastructure to take care of the mobile email element. If new capability is required, then separate management solutions designed specifically for mobile deployments are available.

Finally on the operational front, if mobile middleware and devices are also used to deliver a broader mix of applications, the question of software distribution and management also becomes important, which leads us onto the next consideration quite nicely.

Extendibility of mobile email platform

When we look at the needs of many mobile professionals, we can see that while the initial emphasis is on mobile email, access to other applications and messaging services is also on the agenda and destined to become more important over time (Figure 3).



With this in mind, it is useful to consider future requirements when evaluating mobile email solutions. While there is a strong case for dedicated mobile platforms and solutions in areas such as field service automation and logistics, there is more of a case for looking at combined platforms or services when targeting professional “white collar” users. Adopting a platform that is capable of dealing with not only with email, calendaring and contact management, but can be extended to provide access into CRM and other core business systems may have advantages.

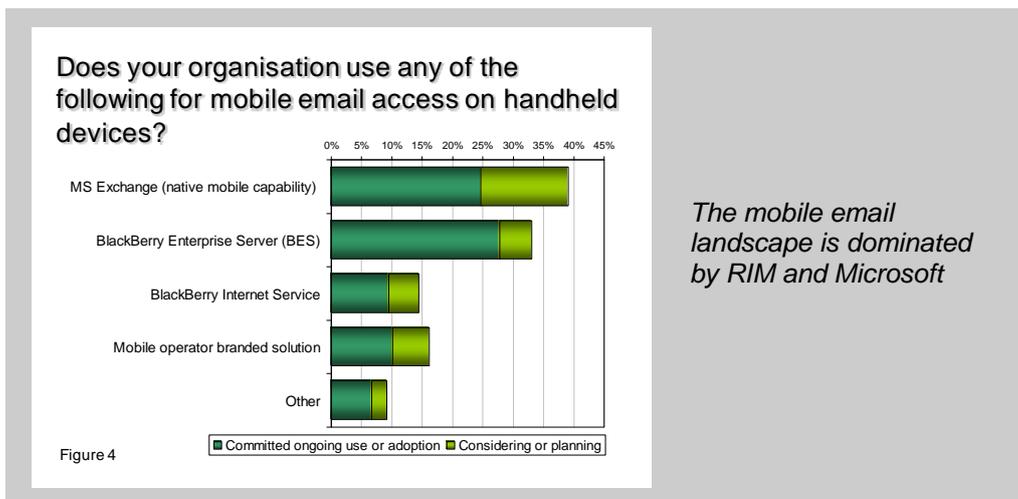
If you decide that extendibility of this kind is likely to be important, then there are some attributes and capabilities that are likely to be relevant. The first is support for standards based integration of the middleware component into “back end” systems, which nowadays translates to Web Services capability and perhaps off the shelf “adaptors” or “plug-ins” for your CRM or ERP system. It is then necessary to consider the requirements for software development and integration, wherever possible trying to reuse existing toolsets, skills and resources. If your skills are largely in the Microsoft development environment, for example, then it doesn’t make much sense to select a mobile application and messaging platform that is purely Java based, and vice versa.

Lastly, it is worthwhile looking at the availability of compatible third party solutions and services, particularly if you don’t have an extensive in house development capability.

So what are the options?

If you search for mobile email solutions either on the internet or through some other mechanism, you will quickly discover a large number of offerings, some in the form of technology that can be acquired and installed as part of your IT infrastructure, and some as hosted services that can be subscribed to through mobile operators and other service providers. It is beyond the scope of this report to identify all of these, and such a list would probably be out of date by the time it was published anyway. As you investigate options, however, we encourage you to bear in mind the considerations we have been discussing that are relevant to your environment.

Meanwhile, our research study tells us that there are some very dominant options that are worth pulling out and specifically highlighting. When we look at the solutions being used or considered within the general business community in the UK (which is not that different to other Western markets), it is clear that two players, Microsoft and RIM, dominate most of the action (Figure 4).



We have already said a few words about some of these solutions when we used them as examples in our discussion of considerations, but let's quickly summarise the nature of them here:

Native Microsoft Exchange

During the last few major release cycles, Microsoft has introduced wireless email capability into its Exchange server offering as native embedded capability. This means that Windows Mobile devices can connect into the server over the air via ActiveSync, which is itself embedded in Microsoft's handheld operating system, as well as other types of device through OEM agreements signed with other handset OS vendors.

Until relatively recently, native Microsoft connectivity has been based on the "pull" model, though current releases of both the client and server software now support "push email" if this option is enabled.

In terms of pros and cons, we heard two perceived advantages of the native Exchange approach coming across from our research within freeform feedback. The first, assuming that the client is a Windows Mobile device, is the faithfulness of mailbox reconciliation. Just like an Outlook client on the PC, what you see on the device is a pretty accurate mirror of what's on the server.

The second perceived advantage is avoidance of the need for an additional middleware layer for relaying messages, though those managing larger installations highlight the limited management and control capability delivered natively as part of the solution and the need to look at third party tools to deal with this requirement.

Of course the other significant limitation of the native Exchange approach is that it doesn't really help you much if you use Lotus Domino, Novell GroupWise, hosted ISP mailboxes or some other underlying email server or service.

BlackBerry Enterprise Server (BES)

The BES from RIM was arguably the first enterprise class mobile email proposition on the market, certainly the first to gain any serious traction. In many circles, in fact, the terms BlackBerry and mobile email are synonymous; such has it become part of the corporate furniture.

In architecture terms, the BES can be described as middleware, though RIM prefers to call it a “platform” on the basis that it can be used as a foundation for developing and deploying any type of mobile application. In the context of email, however, the BES is a piece of software that sits alongside the core email server and relays messages, calendar and contact information back and forth with very good mailbox reconciliation. The “push email” model is the approach used from the outset, and was for many years a differentiator for the RIM offering against competitive solutions.

In terms of advantages, the BES is delivered with full management and control capability, with the ability to define and implement provisioning, security and software distribution policy to a fine level of granularity. Feedback during our research from administrators with experience of managing both the BES and native Exchange based deployments left us in no doubt about the superiority of the RIM offering in this area.

Another advantage of the BES for many people is that it provides a good “does what it says on the tin” user experience for those using Lotus Domino and Novell GroupWise, as well as for Microsoft Exchange users. Some criticise the bland and restricted range of devices, but others point out that RIM’s latest generation of BlackBerry handhelds provides a lot of diversity and choice in terms of form factor, features and function. Similar to Microsoft, RIM has also entered into OEM agreements with other handset manufacturers to enable the “BlackBerry experience” on other types of device.

The perceived downside most commonly articulated in relation to the BES is concerned with complexity and cost. The BES represents an additional component in the network that attracts licence fees and needs to be managed and administered in itself. These factors need to be weighed against the advantages offered in other areas.

BlackBerry Internet Service (BIS)

The BIS was created to serve three primary types of customer – consumers (BlackBerry option for personal use), prosumers (BlackBerries personally acquired but for business use) and smaller businesses, who wish to deploy BlackBerries, but either can’t or don’t want to install and run mobile middleware software themselves.

The BIS offering itself is typically made available by mobile operators as a service that is offered as an option on airtime agreements. The approach generally assumes self-provisioning on the part of the user, who simply logs into a Web interface, declares their BlackBerry device, and provides details of the mailbox to which they wish to connect. It is quite a painless process that can easily be centralised by a small business, though management is on a user by user basis and there is no real concept of group level administration tools, so managing larger installations could become tedious.

Other than avoiding the need for on-premise middleware, the big advantage of the BIS is that it will work with pretty much any mailbox, including those provided by ISPs that are only accessible via POP3. In terms of mechanics, the BIS polls the user’s mailbox at a frequency determined by the traffic flowing through it, then pushes messages out to the handheld device in the normal BlackBerry manner. In the strictest sense, this is not a full push email model, but for a user with a busy mailbox, the frequency of BIS polling automatically increases so the end result is pretty close to a genuine push architecture.

From a mailbox reconciliation perspective, the experience can vary depending on the way in which the BIS connects to the user’s mailbox, though basic synchronisation of read flags and deletions is often possible. Beyond this, there are tricks that can be played with automatic BCCs to handle the synchronisation of Sent Items if the main mailbox supports rules for automatic email filing, but contacts and calendars rely on synchronisation via desktop connection to the user’s PC.

Mobile operator branded solutions

While the BlackBerry Internet Service has traditionally been the main hosted email service offered by mobile operators, there are many small businesses with whom it hasn't resonated particularly well. This is partially because of the limited choice in terms of handsets – while the BlackBerry software can in theory be run on other devices, you don't get the “full BlackBerry experience” so there is little motivation to do this unless you are a larger organisation committed to a core BlackBerry infrastructure. There is then the obvious cost consideration of the BlackBerry premium, which can make mobile email through this route look relatively expensive in a thrifty small business environment.

Yet with POP3 based ISP services dominating the email landscape in the small business arena (as we saw in Figure 2), and over a quarter of small and medium organisations using “other” (i.e. non-Microsoft and IBM) email servers, there is a real need for hosted offerings in the same vein as the BlackBerry Internet Service, but without the perceived drawbacks. Furthermore, both mobile operators and their customers are interested in increased choice.

Operators have therefore been investing in alternatives to the BlackBerry hosted relay solution and delivering “own brand” push email services that typically come in at a lower price point and support a wider range of devices, including more commodity level handsets without all of the bells and whistles of a BlackBerry or Windows Mobile device. It is difficult to generalise on the capability of these platforms as the experience depends on the underlying technology adopted by the operator to facilitate message relay and service/device management. When considering such options, it is therefore necessary to bear in mind the considerations we outlined earlier.

Other options

The specific options outlined above are by no means the only ones available as we said earlier, but together they account for over 90% of the current activity. Furthermore, in the 10% or so of businesses using or considering “other” options, many of them will be simply connecting devices into their email server through the POP3 interface that most mail systems support. While this doesn't provide push functionality, it is easy to set up and costs nothing to implement (apart from network fees) as the majority of high end business handsets now come with an embedded email client. Such an approach will be perfectly adequate for relatively light or occasional use, and we suspect that more people are using it than is reflected in our study, which was designed to investigate formally implemented solutions.

Given the fragmented nature of the mobile middleware market beyond this, we will avoid the temptation of discussing other solutions, as the choice of which ones to highlight would be relatively arbitrary.

It is, however, worth highlighting a variation on the hosted services we discussed from mobile operators. We at Freeform Dynamics, for example, take advantage of a total hosted email service from a specialist service provider. This provides us with full corporate email capability based on Microsoft Exchange, including push email access for our analyst team via either the native Microsoft route to a Windows Mobile device, or a hosted BES infrastructure delivering full BlackBerry functionality (as opposed to the limited BIS experience), for a fixed fee per user per month. While this kind of solution only represents a relatively small part of the overall email market at the moment, activity in this hosted email space is growing extremely rapidly. With players like Google also offering a fully hosted and mobile enabled email service, this kind of offering is likely to entice many small businesses in particular over time.

The area we haven't discussed that much in relation to specific options is the question of extensibility. This is a topic we have previously covered in the Freeform Dynamics report entitled “Mobile Platforms and Devices” (Feb 2007) again available for download from our Website.

As a final word on the options available, we must make it clear that we are not recommending or otherwise the specific options we have mentioned, our intention is simply to provide a head start when evaluating the suitability of the most popular offerings in the market. Conversely, failure to mention a specific product or service should not be construed as it not being recommended.

Discussion

Many discussions about mobile email have traditionally revolved around the question of whether or not people and businesses need it, want it, can afford it, and so on. Interesting though such discussions have been over the past few years as they have played out in the media, analyst reports and within individual organisations, it is now time to move on. If you are not convinced that messaging on the move has a place in business communications either now or in the future, then you are the exception rather than the rule, so let's just assume that solutions and services in this space are becoming mainstream if they haven't become so already.

The real question then becomes how best to fulfil the mobile messaging needs of your users into the future, and this isn't only relevant to those that have not yet moved down the mobile email route. With projects in this area typically starting with "toe in the water" pilots or limited rollouts, the pace of technology evolution over the past two years, and larger organisations commonly going through the BlackBerry versus Microsoft debate, the topic of which system, architecture or services to adopt or consolidate on has never been more relevant.

If you rejected BlackBerry because of boring single function devices and a closed architecture a couple of years ago, then think again. If you rejected the native Microsoft Exchange solution because it was immature, relied on flaky devices, and didn't support the push delivery model, perhaps it's time to re-examine. And if you dismissed hosted services because mobile operators didn't understand the IT service principles necessary to deliver a safe and effective solution, then it may be useful to take another look.

But, when evaluating or re-evaluating options, the golden rule is to understand that all mobile email solutions are not equal. While they fundamentally all do the same thing, allow access to a user's mailbox from a mobile device, the devil is in the detail and there are pros, cons and trade-offs to be considered. You cannot even, for example, generalise on the topic of the market leading brand in this space, the BlackBerry. The user experience and operational practicalities are massively different between a BlackBerry Enterprise Server running against Microsoft Exchange, for example and the BlackBerry Internet Service used to provide access to ISP hosted POP3 email boxes. By the same token, there is a world of difference between a properly configured Microsoft Exchange server delivering a full push email service via the latest generation of Windows mobile devices, and the experience of a user that has simply entered POP3 settings they received from the IT department to hook their mid-range Symbian device into Exchange 2000.

So, it is important to understand the practicalities and make sure you have identified what's important to you and your users. Whether we are talking about user experience and functionality, or systems management, security and control, what's overkill for some may be critical for others, what's irrelevant in some scenarios, may be show-stoppers in others.

We cannot advise you on the best solution out there, or even the products or services most likely to meet your needs – that's for you to work out. We hope, however, that the insights presented in this report will help you in your assessments and deliberations, and would like to finish by thanking the people who took part in our study and helped us to figure out what's important and why.

References and Further Reading

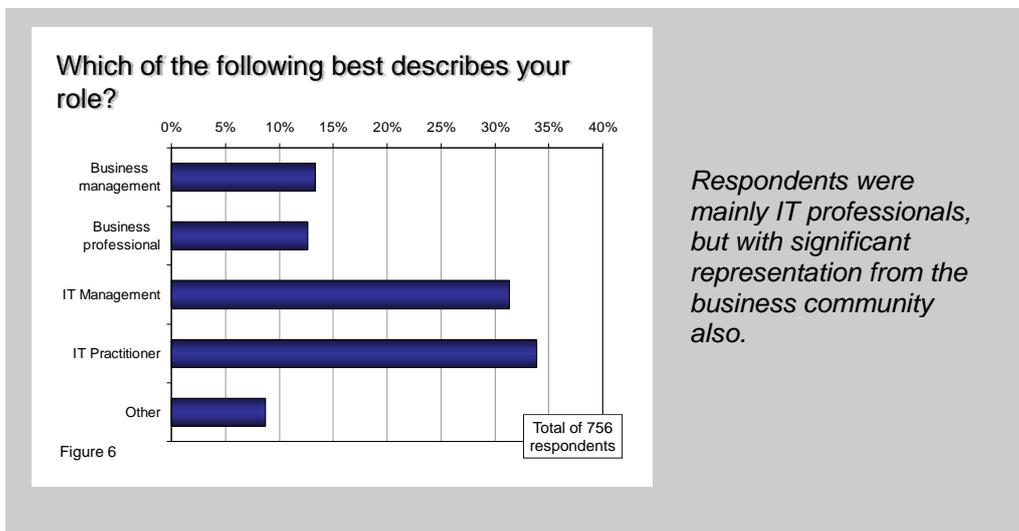
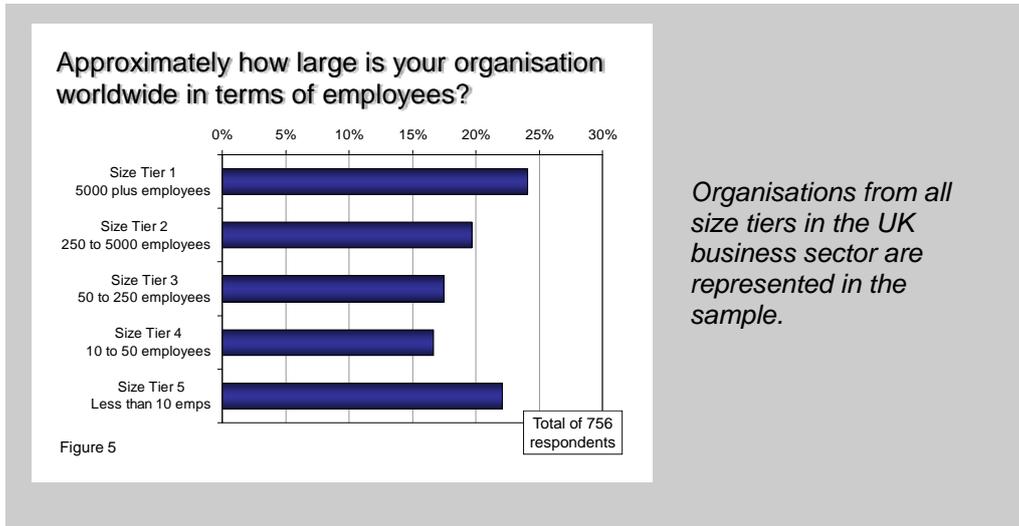
1. Secure Mobile Working, Freeform Dynamics, February 2007
2. Mobile Platforms and Devices, Freeform Dynamics, February 2007

Copies of these reports may be downloaded free of charge from www.freeformdynamics.com.

APPENDIX A

Study Sample

This research and discussion report is based largely on the output from an online survey and series of associated workshops conducted independently by Freeform Dynamics Ltd in the second quarter of 2007. The make-up of the sample in the survey element of this was as follows:



About Freeform Dynamics



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