

# Mobilising Windows<sup>TM</sup> Applications with AppServer<sup>TM</sup>

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An AppSwing<sup>TM</sup> White Paper

**AppSwing**   
Business where you want <sup>it</sup>

AppSwing Limited  
Atlantic House  
Imperial Way  
Reading  
RG2 0TD UK

[info@appswing.com](mailto:info@appswing.com)

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## Overview

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In 2001 the Butler Group<sup>1</sup> predicted that “By 2005, personal wireless devices will replace PCs as the universal client terminal” and since then there has been no slow down in the roll out of mobile solutions by enterprises.

Read this document if you need to:

- provide real-time access to business systems on mobile devices
- tailor the screens of your systems to meet the needs of individual groups of users
- provide a corporate branding to your systems externally.

## Applications on the move

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The introduction of mobile phones in the 80's brought with it the possibility to work away from the office and still be in contact. This revolution, which the humble mobile phone brought for voice communications, is now being repeated with personal digital assistants (PDAs) and data communications.

This new mode of working brings greater freedom to the office worker and greater efficiencies to the enterprise. The mobile worker now has to spend less time bound to their desk in the office and can now spend more time out with customers delivering products and services. This allows the enterprise to gain from faster response and more up-to-date information, keeping them ahead of their competitors.

Initially mobility for the remote worker meant accessing their email from a suitably communication-enabled laptop. However, there is now a rich choice of devices that can be selected from the latest range of super-lightweight laptops, to PDAs, to the latest range of high-powered smartphones.

Not only has the range of devices increased but also the possibilities of what can be achieved have expanded beyond simply picking up and responding to the all important emails. Now some applications have been extended beyond the boundaries of the wired corporate network.

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<sup>1</sup> 'Wireless Internet Revolution', Butler Group April 2001.

## The Problem: Mobilising the applications you want

It is undoubtedly true that mobilising workers and their key applications can bring with it a number of advantages, however, before any of these advantages can be realised a number of questions have to be answered:

- Which PDA is best for the business and what do you do about the PDAs that the business already has?
- How do you decide which communications method is best to use? Should it be GPRS, 3g, wifi or some other method?
- How do you ensure the security of your vital business data?

and the most challenging question of all:

- How do you mobilise your existing business applications without causing major disruption and prohibitive costs?

Faced with these challenges the business has a number of choices:

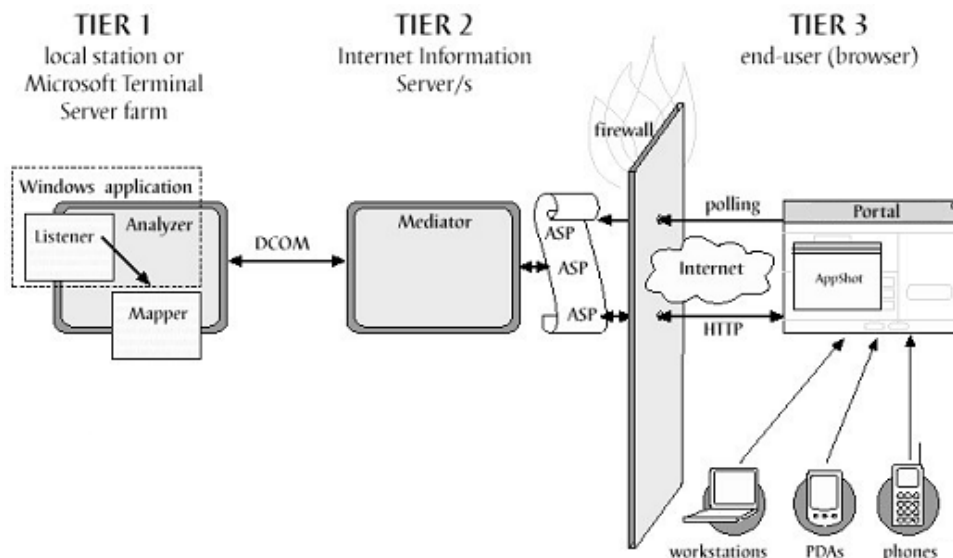
<b>Don't provide remote access</b>	Disadvantage vis-à-vis competitors due to absence of business agility.  Increased costs arising from inefficiencies.  Demotivated staff due to lack of flexibility and increased trips to the office.
<b>Pick an off-the-shelf mobile application</b>	Solution only delivers what the developer included, not necessarily what you want or need. May be limited to a specific device.  Does not cover all your front-line business applications.  May not replace business-specific applications.
<b>Completely redevelop legacy systems for the mobility</b>	May not be an option if a 3 <sup>rd</sup> party developed the application.  High cost option, often costlier than initially estimated.  Risky. The success of large development projects depends on many factors: personnel availability and skills, planning, management commitment, etc.  Time-to-market for a large-scale project is long, thus delaying crucial business benefits.

## The Solution: AppServer

AppSwing's AppServer technology creates browser-based user-interfaces that are both device and communications agnostic. This technology allows businesses to quickly and easily build custom interfaces to their existing Windows applications that fit the real estate of devices as diverse as WAP enabled phones, Blackberry devices, Pocket PCs and Smartphones.

The ability to deploy applications to mobile devices in a form, which fits the available screen space, finally makes mobile application deployment an acceptable user experience.

AppServer implementations require no changes to the original application, which remains untouched, ensuring the minimum business impact for the maximum possible return. And, as the solution is browser based, requires no installation on the target client device.



For the enterprise, AppSwing provides the solution needed to mobilise "off-the-shelf" and "in-house" applications for the different user groups and devices that make up the extended enterprise community.

To Independent Software Vendors (ISVs), AppSwing offers a solution for mobilising existing applications in a low-risk, timely and cost-effective manner. Further, AppSwing lets the vendor keep the installed customer base satisfied by providing a backwards-compatible version without compromising the existing Windows versions. The resulting application interface can be customised to accommodate both image and functionality requirements of a specific client, thereby opening new sales opportunities with established products.

## Mobilising with AppServer

The AppServer product allows enterprises to take existing Windows based applications and create browser-based interfaces to suit a variety of mobile devices. This means that the interfaces can be produced that only contain the information that the mobile user requires and fits the device(s) in question. This is a huge improvement on Server Based Computing solutions that require an installation on the client device and the user to “pan and scan” around a window that doesn’t fit the mobile device’s screen.

It is not untypical for a Windows based application to have lots of fields and information on multiple screens, such as shown in figure 1.

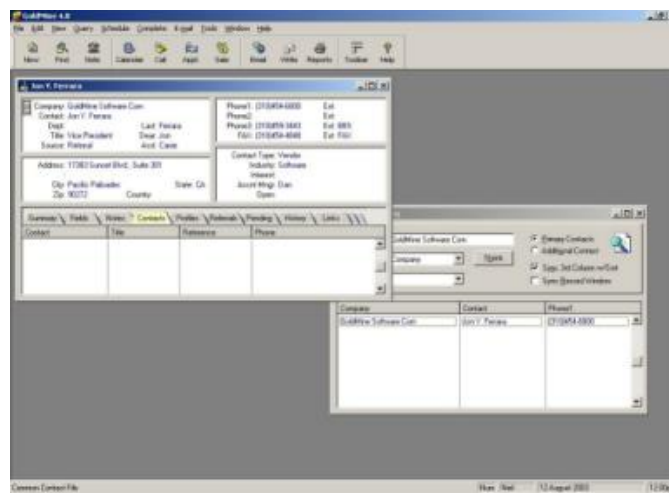


Figure 1: Typical Windows Application

Using AppServer to represent the interface information can be taken from the multiple screens and be reformatted for any device that has a browser. This includes devices such as those that are powered by Microsoft’s Windows Mobile edition and the more functional Blackberry, as shown in figure 2.



Figure 2: On a Mobile Device

All this is achieved using industry standard web development technologies including HTML and cascading style sheet (css). Implementation of a branded interface can be a simple process for any developer with currently available web skills.

## **Product highlights**

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AppServer benefits include:

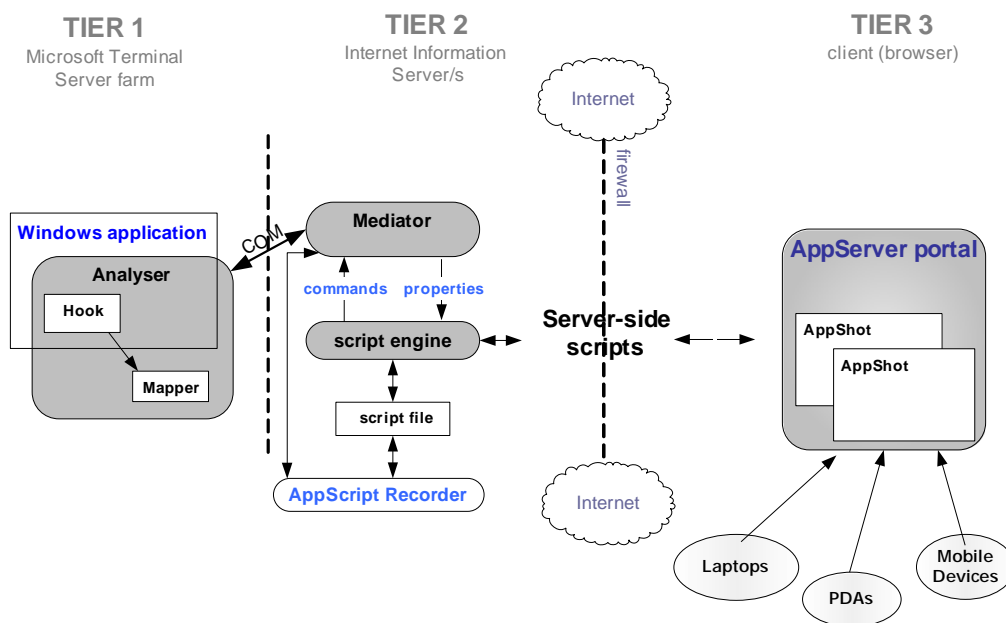
- Drive live business systems remotely
- User screens tailored to the needs of individual teams
- Only deliver the required parts of an application
- Improve service delivery and customer experience
- Reduce errors by avoiding duplication and delays
- Deliver multiple applications
- Do not interfere with existing system
- Save time and money
- Your data is secure as none is held on the client device.

# AppServer Architecture

AppServer is installed on the same Microsoft Terminal Server as the Windows application client. AppServer includes:

- Analyser, composed of the Listener and the Mapper
- Mediator
- AppScripts

See figure 3 below:



**Figure 3: AppServer architecture**

To start a mobile-enabled application, the user opens a browser and accesses the AppServer sign-on screen. At login, the system recognises the user's Windows username and password and opens the user's profiled portal page with links to the applications mobilised by AppServer (AppShot).

When the user selects the icon or link of the desired AppShot, a request to run the application is sent to the Mediator on the Web server. The Mediator, in turn, forwards the request to the AppManager database. Using a proprietary load-balancing algorithm, the Windows application is launched on the most appropriate Terminal Server. At this point, an Analyser starts to monitor the Windows application GUI, sending information to the Mapper.

Using a combination of AppScripts to drive the original application and a server side scripting language, HTML and XML to provide the user interface updates, screens are sent to the client device.

The AppServer architecture also brings with it the following cost and security benefits:

- As only a small amount of data is sent between the device and the server the communications costs are kept to a minimum, important on GPRS type connections.

- With no software or database installed on the client device all data remains safely behind your firewall so if the device is lost you can feel reassured that your data remains safe.

## Competitive Advantages

AppSwing offers a unique and unmatched solution to the problem of the mobile enterprise. AppServer provides a level of performance, customisation, security and user experience not available with any alternative product or method. This is achieved in a time-scale, and for a cost, that cannot be matched by integrators or developers, ensuring that the return on investment is secured far sooner.

The following table compares AppServer to alternative techniques for deploying Windows applications remotely:

Solution	Why AppServer?
Redevelopment	<p>AppServer requires no core product development, client software, business interruption or development resources.</p> <p>AppServer is therefore more cost effective, more time efficient, less interruptive and more flexible than redevelopment.</p>
Remote Deployment	<p>AppServer is able to present the user with a customised interface, designed to fit the real estate of the chosen remote device. This means no panning and scaling and the user can spend time driving the application, not searching for the area required. There is also no client software required.</p> <p>AppServer is therefore more flexible, easier to manage and is able to provide an unparalleled user experience when compared to the traditional “screen scraping” approach of remote deployment applications such as Citrix and GraphOn.</p>

## Conclusions

Implementing mobility solutions with AppServer gives the enterprise a single, cost-effective, solution for deploying their Windows systems to any mobile device. Deploying only the information that is required making the mobile user more productive.

Using AppServer the business has:

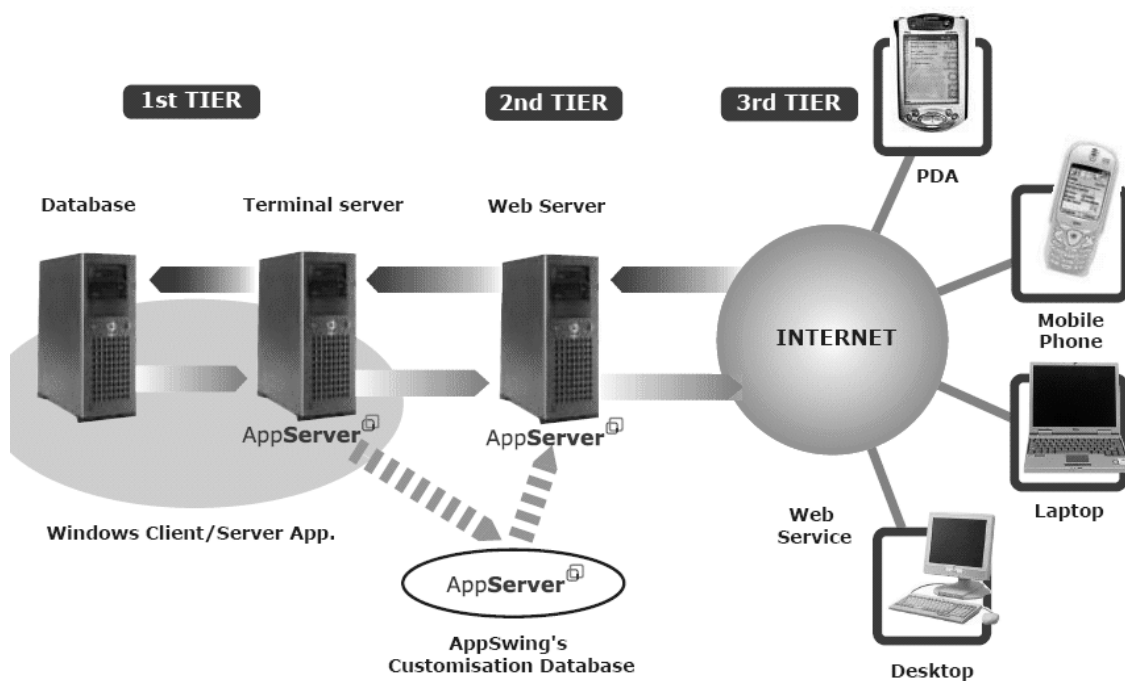
- Only one solution to implement and work with
- Chance of greater return-on-investment with the rollout of other applications
- Opportunity to deliver only elements of original system it requires

## Furthering the AppServer ROI

Introducing AppServer to the enterprise not only allows Windows applications to be seamlessly extended to corporate portals but also extends the reach and value of existing business applications to the web and mobile devices.

With AppServer there is:

- No development overhead
- No client software to install, works with any web browser
- No interruption to the business
- No additional retraining costs for support and service teams



## AppServer solutions

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### Web-Enablement

Deliver an HTML translation of existing Windows applications to a desktop browser without changing a single line of code.

- § Provide remote workers with a truly web-enabled experience through the desktop browser on their home PC.
- § Deliver sliced versions of complete applications to broaden market opportunities or control access.

### Application Mobility

Rearrange the Windows application interface to fit the screen of any mobile phone or PDA and drive backend applications securely without installing any client software or any synchronisation.

- § Connect mobile teams to existing office-based applications
- § Choose the tablet, PDA or phone to suit your requirements.

### Application Integration

Pass data from Windows applications as XML or as a web service for integration into a portal or a third party application.

- § Enable staff, customers and partners to read and update core business data on-line through the company portal or web site.
- § Integrate data from multiple applications for delivery in a single user interface.