# Modernizing the User Interface: a Smarter View with Rumba+

## INTRODUCTION

Organizations need to rapidly adapt in order to meet business demands. With a large percentage of business-critical IT functions running on hosts such as mainframes, iSeries, Wyse or HP/MPE, it is a considerable challenge to introduce new technologies and remain competitive. The question which perplexes many IT leaders is, "How do I leverage the investment in the existing core business system, while quickly introducing new technologies at low cost, low risk, and reduced time to market?"

With limited options, IT leaders are often forced to make tough decisions when faced with User Interface (UI) modernization projects, in order to reduce the gap between core business applications running on host systems and the modern distributed world. This paper introduces a unique alternative to UI modernization: one that will visually enhance the UI and extend its reach through the latest trends and technologies, enabling organizations to fully embrace innovation.

## BUILT-IN COMPETITIVE ADVANTAGE

The competitive business landscape is more aggressive than ever before. Organizations have to quickly adapt to the fast paced demand of change, concentrating priorities on the most effective way to provide a better, differentiated and contemporary customer experience. The modernization of core, or so-called "legacy" applications, is a must for many organizations in order to comply with such demands. Nevertheless, it is an easy goal to accomplish.
Some established core applications, developed using traditional programming languages, have been running for over 30 years. These unique applications give organizations their well-defined competitive advantage.

Over time these applications have developed rich functionality while maintaining the basic appearance of green screen[1] mainframe interfaces. The business logic is stable, secure and consistent. However, the UI is outdated and the functionally is limited, making it increasingly difficult for today's typical operator to use. As UI trends continue to evolve, the distance between green screen applications and the latest advances in UI and platform availability continues to grow.

## THE MODERNIZATION PARADIGM

For years organizations have been building and maintaining core mainframe applications, creating priceless value that is critical to the organization's success. However, to take these applications forward and prolong their value, they need to be adapted and modernized. A business application modernization project can easily become a very complex and lengthy operation, often involving unforeseen costs and risks. Whether organizations opt to rewrite applications, move them to a modern platform - virtualized or cloud environments - or even replace them with an off-the-shelf solution, the balance of cost, risk and speed of delivery often impacts the organization's business goals.

Disruptive technology such as mobile, cloud, big data and social networking, are adding even more pressure. Keeping a competitive advantage cannot be focused just on leveraging and maintaining core business applications anymore. It is also about adding agility and ensuring that existing applications can quickly adapt to the growing backlog of new business requirements.

In recent research, Gartner predicts that "By 2016, 25% of external application implementation spending will be on mobility, cloud, analytics and social computing services." The research also highlights that "more than 50% of application modernization efforts will address the demand for enhanced functionality to legacy applications." The research shows a clear trend where organizations will look at ways to bridge the technological platform gap while continuing to leverage existing applications.

The graphic from the same Gartner research shows percentage estimates of application modernization projects focused on enhancing functionality, and how the landscape has changed since 2010.
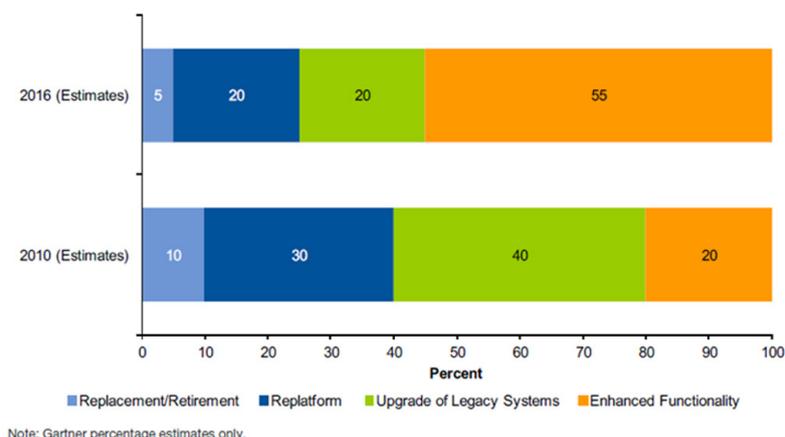


*Figure 1: Gartner estimates of primary focus of legacy application modernization projects*
*Source: Gartner ID: G00230299 – Predicts 2012: Business Impact of Technology Drives the Future Application Service Market, Author Allie Young, et. al.*

## THE TERMINAL EMULATION PARADIGM

Traditional 3270 or "green screen" applications, which were designed and built decades ago, are rarely, if ever, enhanced. These green screen applications are in many cases - to a contemporary end-user - outdated, difficult to navigate and learn, and lacking even in basic mouse operation. The function key interface seems old fashioned and the applications present a limited area to display data. These aspects not only frustrate the user, but can often affect customer service.

However, giving a green screen application a face-lift takes more than a quick technical conversion. It involves taking into consideration all the key functions the application offers throughout a user cycle, identifying a better order perhaps, and pin-pointing the quick win changes that will not disrupt day-to-day business during implementation phases. Bringing the latest UI technology to these applications ensures greater agility through availability from many different platforms, easier maintenance of the interface function, faster deployment, and easier adoption of future usability features.

Organizations generally look at implementing one of two modernization options: re-writing entire green screen applications, or adopting a middleware solution that connects business logic on the mainframe to the user interface on distributed platforms. This middleware option has been adopted by many organizations due to the lower risk when compared to re-architecting and re-writing key functions on the mainframe applications. However, creating a grand scale architecture to buffer the mainframe in this way can take a significant amount of time. The time to market value is lost and other critical business requirements are delayed.

A simpler yet entirely realistic approach to the options presented above, is to directly modernize the green screen applications by mixing application intelligence with the screen data transmitted to the client. This approach is fast. It gives the end users the appropriate changes to modern screens at a pace that suits the business, and requires little or no specialist knowledge. It exposes the key application functions in an entirely modern way without the risks of re-writing.

## RUMBA+: A NEW ALTERNATIVE FOR MODERNIZATION

Micro Focus Rumba+ (hereafter called Rumba) introduces a new, innovative solution for modernizing core applications. The Rumba terminal emulator[2] now offers organizations the ability to quickly modernize mainframe applications by adding built-in or customized controls directly into the application interface. This instantly adds a contemporary look and feel to the application reducing the gap between these old views and the modern interfaces of Windows, the latest tablets and internet web browsers. Rumba is a quick, safe way to start the modernization journey with immediate benefits given to the end user.

Understanding and achieving modernization with Rumba is simple. It is designed to fit, from the most simple to the most complex green screen modernization requirements. Rumba terminal emulator is based on three core principles: **simplicity, efficiency** and **agility**.
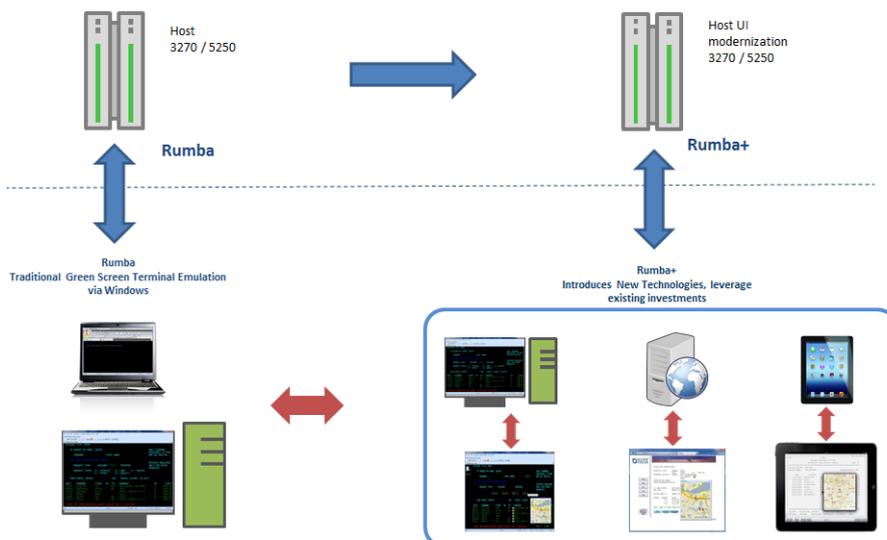


*Figure 2: Rumba and Rumba+ product solution capabilities*

## Simplicity

Simplicity is a term that doesn't usually fit well within the IT modernization journey, especially with all the nuances of the business requirements. However, Micro Focus Rumba achieves simplicity by offering organizations the following:

| Benefit | Capability | Outcome |
|---|---|---|
| Unified Terminal Emulation and UI modernization solution | Supports 3270 and 5250 terminal emulation \ UI modernization | Industry standard, with proven mature technology that brings the flexibility and agility of the workstation to the IBM mainframe, or iSeries environment |
| No need for specialized knowledge | Advanced development tooling to modernize green screens:<br><br>❯ Green screen multi-page list scroll down<br><br>❯ Field and column manipulation<br><br>❯ Automatic chart control<br><br>❯ Automatic interface to other apps such as Google Maps, VOIP, etc | No need to train or hire new resources:<br><br>❯ Allocate existing IT\developers resources<br><br>❯ Quickly modernize host applications by adding simple but familiar usability controls<br><br>Fast, secure and risk free green screen modernization<br><br>❯ No down time<br><br>❯ No additional requirements |
| Manageable Application changes | Customization of business function display and manipulation can be ad hoc per user, groups of users or entire organizations. Allowing a mix of user capability for the same basic application depending on the business needs. | Changes can be implemented at a pace that suits. No "big bang" approach necessary. Therefore no disruption to day-to-day business. |
| Access Anywhere | Rumba clients support the latest user interfaces. Web browsers, Native tablet operating systems (iPad, Android and Surface), and Windows. | Users can become more productive with the introduction of mobility, and the merging of business data across multiple platforms. |
| Integration with third party applications | Ready built library of Drag and Drop controls gives choice to use the latest familiar supporting functions from the world of Google, SaaS, VOIP etc. | Focused on productivity, easily integrates with applications such as:<br><br>❯ Google Maps, for quick display of maps based on addresses returned from host apps<br><br>❯ Skype or any VOIP, to call phone numbers with just a click<br><br>❯ SaaS CRM solutions, to query data based on content returned by host apps.<br><br>This is just a sample of the many integration paths that can be added to host applications. |

## Efficiency

Efficiency is one of the core goals of Rumba. It increases efficiency dramatically before, during and after the modernization journey. This is how:

| Before | During | After |
|---|---|---|
| Efficiency is enabled by eliminating assessment and decision efforts for entire core applications. With Rumba terminal emulation, modernization is achieved directly within the green screen interfaces. The application itself does not need to be altered. | Because modernization is undertaken at the screen level, no specialized knowledge is required. Modernizing green screens can be done quickly and incrementally with no risk, reducing costs and expediting time to market. | End users will be able to enjoy the latest trends and technologies including Windows, tablets, mobility and access anywhere from internet browsers, at the end user and business requirement's own pace. |

Using Rumba terminal emulation, efficiency improvements remain constant. The before, during and after concept will continue its evolutionary path to ensure core mainframe applications adapt easily to new trends and technologies required by the business for many years to come.

## Agility

A major part of the Rumba terminal emulator solution is that it offers a seamless connection between host applications and the latest trends and technologies required by business changes. With the introduction of Rumba+ clients, organizations have the ability to select Windows, mobile devices and tablets or internet browsers, as clients. From the deployment of a single Rumba+ client, to the many possible configurations, Rumba+ clients can share the same performance, stability and modernization customizations.

| Rumba+ Clients | Benefit |
|---|---|
| Windows | Applications can quickly be modernized to take advantage of the look and feel of Windows applications. Drop-down menus, pick lists, action buttons, integration with other applications including Microsoft Office, Google, VOIP, etc. |
| Mobility on iPad | Mobility is offered through iPads, transforming legacy application interfaces to take advantage of the productivity and reach of the tablets such as gestures, skins, and much more. |
| Internet Browsers | Provide legacy applications with the reach of internet browsers. Whether with pure green screen interface or taking advantage of the usability and popularity of the internet browsers, legacy applications can now reach further than ever before. |

Agility is a continuous and relevant item for all organizations. Rumba supports the agile IT discipline by providing coverage to all devices that are critical to business today. By supporting applications to be  available in future platforms, extending its reach across new native mobile clients, integrating legacy applications through SOA, and offering organizations the ability to take advantage of the cloud platform, Rumba is set to remain current into the future.

## CONCLUSION

Micro Focus Rumba offers a new but highly effective approach to the core business application modernization journey. It is an alternative that offers organizations the ability to quickly embark on their modernization project, while cutting out risks and eliminating the need for specialized knowledge. Rumba modernizes green screens dynamically, making applications available on a wider range of platforms, adding new user controls where it makes sense, and ultimately providing a level of service delivery to the business which is not achievable with any other form of modernization.

Rumba gives users freedom, enhances customer satisfaction, and delivers a rapid solution for embracing innovation: in days and weeks, not years.

**References**

[1] "Green screen" refers to host applications that were designed to interact with end users via terminals. The display colour on the terminal of these host applications was typically green on black, thus the denomination of green screen applications.

[2] Terminal emulator is a software program that enables access to host systems, emulating the display of 3270 / 5250 terminals via other display architecture, Windows being the predominant one.

**About Micro Focus**

Micro Focus, a member of the FTSE 250, provides innovative software that allows companies to dramatically improve the business value of their enterprise applications. Micro Focus Enterprise Application Modernization, Testing and Management software enables customers' business applications to respond rapidly to market changes and embrace modern architectures with reduced cost and risk.

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