

# THE VALUE OF CONVERGED VOICE AND DATA DEVICES IN THE ENTERPRISE: MINIMIZE COSTS AND MAXIMIZE BENEFITS

WHITE PAPER

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The convergence of voice and data has enabled the creation of a new generation of enterprise devices designed to meet the mobile voice and data communication needs for on-the-move employees inside and outside the four walls of your business. These new devices are constructed to endure the rigors of enterprise use in a wide variety of environments. But do the benefits of integrated devices merit the replacement of the mobile phones, personal digital assistants (PDAs) and mobile computers you have deployed today? This white paper examines the cost savings and business benefits of these new multi-function devices to help today's businesses answer that question.

## BACKGROUND

Historically, separate devices have been required for mobile voice and data communications — cell phones and mobile computers. The recent convergence of voice and data technologies has given birth to a new generation of devices that offer both voice and data connectivity. The early generations of these integrated devices were less than desirable. 'Integration' was often achieved by taking a device that had been primarily designed for either voice or data communications, and adapting and retrofitting as needed to accommodate the other.

As a result, the first generation of mobile computers with integrated voice typically offered less than optimal voice quality and performance, falling far short of the standard set by mobile phones.

On the other hand, first generation mobile phones with integrated data communications often offered slow data speeds and keyboards designed for dialing that translated into slow and tedious data entry; screens that were not optimal for viewing data applications; and consumer-style construction that was not designed to survive the level of use or the wide variety of environments required in the enterprise.

But the convergence of voice and data has continued to mature, giving rise to next-generation integrated devices that are designed from the ground up for both voice and data communications, with the rugged construction and environmental specifications required to endure the rigors of the enterprise. The result is a single robust device that replaces two and sometimes three devices per mobile employee — mobile phone, PDA-style device, and mobile computer.

In the following pages, we will explore the benefits of this next generation of converged devices, and how and where they reduce capital and operational expenditures as well as soft costs to deliver an outstanding return on investment (ROI) and total cost of ownership (TCO).

## BENEFITS

Integrated voice and data devices deliver cost-efficiencies by reducing capital and operational expenditures, as well as delivering strategic business benefits, including streamlined business processes that increase productivity and profitability.

### Reduced capital expenditures

Capital expenses are reduced in two areas — device and accessory costs:

- The ability to replace two to three devices (mobile phone, PDA and mobile computer) with a single unit dramatically reduces the capital expenditures associated with the purchase of devices for your employees as well as for a pool of 'spares.'
- Hard costs for accessories are also reduced — you no longer need to purchase batteries, battery chargers for desk and vehicle, holsters and more for multiple devices.

### Reduced operational expenditures

Converged voice and data devices reduce your operational expenses in a variety of areas, from a decrease in service fees and management time to a reduction in accounting requirements and general complexity of your mobility architecture.

#### • Service fees

Costs for service fees are reduced since only one monthly service fee is incurred per mobile employee. Further, the economies of scale gleaned from deploying one service across the enterprise can be leveraged to obtain pricing benefits from service providers.

- **Mobility architecture is simplified and more cost-effective**  
The ability to use a single device for voice and data communications eliminates the need for your IT department to support multiple hardware devices, platforms, and operating systems. Application development and support efforts are also reduced, sometimes eliminating duplicate application development on multiple platforms (for example, mobile email on cell phones as well as mobile computers). The result is a streamlined mobility architecture that reduces the time and cost associated with IT personnel supporting your mobility solutions, freeing IT personnel to focus on more strategic business initiatives.
- **Reduced management costs**  
Management costs can be reduced in two areas. First, there are simply fewer devices to manage and track. Second, available management solutions, such as Symbol Technologies' Mobility Services Platform (MSP), bring an unprecedented level of simplicity to the management of mobile devices. To date, management of mobile devices has been time consuming and expensive. But solutions such as MSP can be added to your solution to provide a centralized interface that enables IT personnel to quickly, easily and remotely provision, monitor and troubleshoot devices all over the world. The result is a new level of management simplicity and cost-savings for mobile devices.
- **More cost-effective in-building voice and data communications**  
Converged devices that offer wireless LAN connectivity with Voice over IP (VoIP)/Voice over WLAN (VoWLAN) support enable employees on your campus (or other wireless LAN-enabled location) to utilize a WLAN for cost-effective voice and data communications.
- **Accounting time and costs**  
Voice and data communications on a single device eliminate the need for your employees and your accounting department to process multiple bills from multiple providers.

### **Soft costs**

Though difficult to track and quantify, soft costs are often a major factor affecting overall TCO and ROI. Converged devices, by their nature, not only reduce soft costs, but also add to your bottom line in the form of increased productivity by:

- **Providing the processing power to run productivity-enhancing next generation applications.** Next generation converged devices offer technology platforms that provide desktop-level processing power with minimal power requirements. With these devices, enterprises can extend powerful business applications right to the point of work, streamlining and automating business processes that result in increased employee productivity and profitability.
- **Reducing the complexities associated with managing multiple devices.** The ability to provide a single device for mobile voice and data communications eliminates the time employees spend managing multiple devices — from charging of batteries and devices to training, learning how to use new/advanced functions, and tracking and reporting monthly expenses.

- **Reducing device malfunction and downtime.** Converged devices with rugged construction and industrial environmental specifications are built to endure enterprise demands and environments — from daily drops to wide temperature ranges, moisture, dust and more. Non-rugged counterparts — including traditional mobile phones and PDAs — can result in higher repair costs as well as reduced productivity, due to time spent managing malfunctioning devices and device downtime.

### **DEPLOYMENT CHALLENGES**

One of the biggest implementation issues is the identification of the converged device that will best meet your needs. Assess the various areas of your business that can benefit from a converged voice and data device by identifying:

- Where voice and data devices are either already deployed or required
- Where business applications can be mobilized to streamline business processes for increased productivity and improved customer service
- Requirements for your specific applications (for example, wireless WAN for mobile workers outside your four walls, scanning and/or imaging capabilities, or a magnetic stripe reader to enable real-time on-site processing of sales)
- Requirements for your specific environments (for example, will the device be exposed to extreme heat and cold, rain and dust, and possible drops?)
- Requirements for wireless connectivity: WWAN for mobile workers outside your four walls, WLAN for mobile workers inside your facility, WPAN for a variety of personal productivity capabilities, from wireless headset use to wireless printing, or all three for the truly mobile task worker

Based upon your industry and specific applications, factors to consider when searching for the right converged device will vary, but may include:

- Is the device standards-based to enable easy integration into your existing infrastructure, as well as to provide economies of scale for application development?
- If you are considering multiple devices due to varying requirements for different functional business areas, do the devices offer a common architecture? A common architecture will translate into application development, training and support efficiencies.
- Is the device designed from the inside out for converged technologies, offering robust voice and data communications equivalent to its separate counterparts?

- Is the device compatible with wireless wide area networks that serve your business geographies?
- Does the device meet the needs of your vertical applications? For example, do you need bar code scanning, signature capture, image capture? Are processing power and memory adequate for the applications you plan to run today as well as tomorrow? Does the operating system providing the development environment best suited for your applications?
- Does the device offer the ergonomics you need?
  - Size: Small and compact or full size?
  - Keypad: Are the keys ample-sized for easy data entry?
  - Screen: Are the brightness and resolution adequate for easy viewing in the various environments where the device will be used?
- Is the device rugged enough to endure everyday use in your environments?
  - Will the device be exposed to the elements, such as rain and dust? If so, be sure to look for devices that offer the appropriate level of sealing.
  - What type of drop testing does the device offer? All drop tests are not created equal. Be sure to assess: how many drop tests it passed, how many times was it dropped and was it dropped at room temperature only or across the operating temperature range?
  - Does the device offer other construction benefits that contribute to continued use and minimal downtime?
- Does the device manufacturer offer the accessories you need to meet the needs of diverse functional areas – for example, a magnetic stripe reader for processing sales on the retail floor or on site at a customer location (for example, to accept on-the-spot real-time payment for repair service), holsters for applications that require devices to be worn, or handles to turn a device into a convenient and comfortable gun style?
- Does the device offer the most recent technology platform and capabilities? For example, does it offer the processing power to support the multimedia applications you may develop today and tomorrow? Does the operating system offer the ability to support the applications you need — whether they are ‘off-the-shelf’ or custom-developed?
- Does the device meet your wireless communications requirements for workers inside and outside your four walls (WWAN/WLAN)? Does it offer Voice over IP/Voice over WLAN support to enable cost-effective voice and data communications when mobile workers are inside your four walls?
- Does the device offer WPAN connectivity to enable the use of Bluetooth, for example, the use of wireless headsets and wireless printing?
- Does the device offer the data capture capabilities you need to streamline operations? For example:
  - Do you need bar code scanning? If so, what types of bar code symbologies do you need to support today and in the future?
  - What type of range is required — will you be scanning items a few inches or feet away?

- Do you need signature capture?
- Do you need image capture?

- Does the device offer the voice quality equivalent to the average mobile phone? Does it offer the voice functionality you need — such as headset, handset or speakerphone modes? Is the phone capable of being used on a global basis?

By creating a thorough list of your needs, you will be able to easily compare the features and functionality of converged devices to help ensure you select the device that can best meet your application and environmental needs.

## SUMMARY

The convergence of voice and data has sparked the creation of a new generation of rugged enterprise devices, designed to meet the mobile voice and data communication needs for on-the-move employees, as well as endure the rigors of enterprise use in a wide variety of environments. With a single device, companies can provide mobile workers with the capabilities needed to streamline operations as well as improve productivity and responsiveness.

A smart investment, converged devices often provide more functionality than their separate counterparts (mobile phone, PDA and mobile computer), yet reduce the capital and operational expenditures typically associated with mobile voice and data communications. The end result is real value — a lower total cost of ownership and rapid return on investment, as well as improved customer service and increased profitability — a real business advantage.

## FOR MORE INFORMATION

For more information on Symbol’s converged voice and data devices and mobility solutions, contact us at +1.800.722.6234 or +1.631.738.2400, or visit us on the web at [www.symbol.com/](http://www.symbol.com/)

## About Symbol Technologies

Symbol Technologies, Inc., The Enterprise Mobility Company™, is a recognized worldwide leader in enterprise mobility, delivering products and solutions that capture, move and manage information in real time to and from the point of business activity. Symbol enterprise mobility solutions integrate advanced data capture products, radio frequency identification technology, mobile computing platforms, wireless infrastructure, mobility software and world-class services programs under the Symbol Enterprise Mobility Services brand. Symbol enterprise mobility products and solutions are proven to increase workforce productivity, reduce operating costs, drive operational efficiencies and realize competitive advantages for the world's leading companies. For more information visit us at [www.symbol.com](http://www.symbol.com) or email us at [info@symbol.com](mailto:info@symbol.com)



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