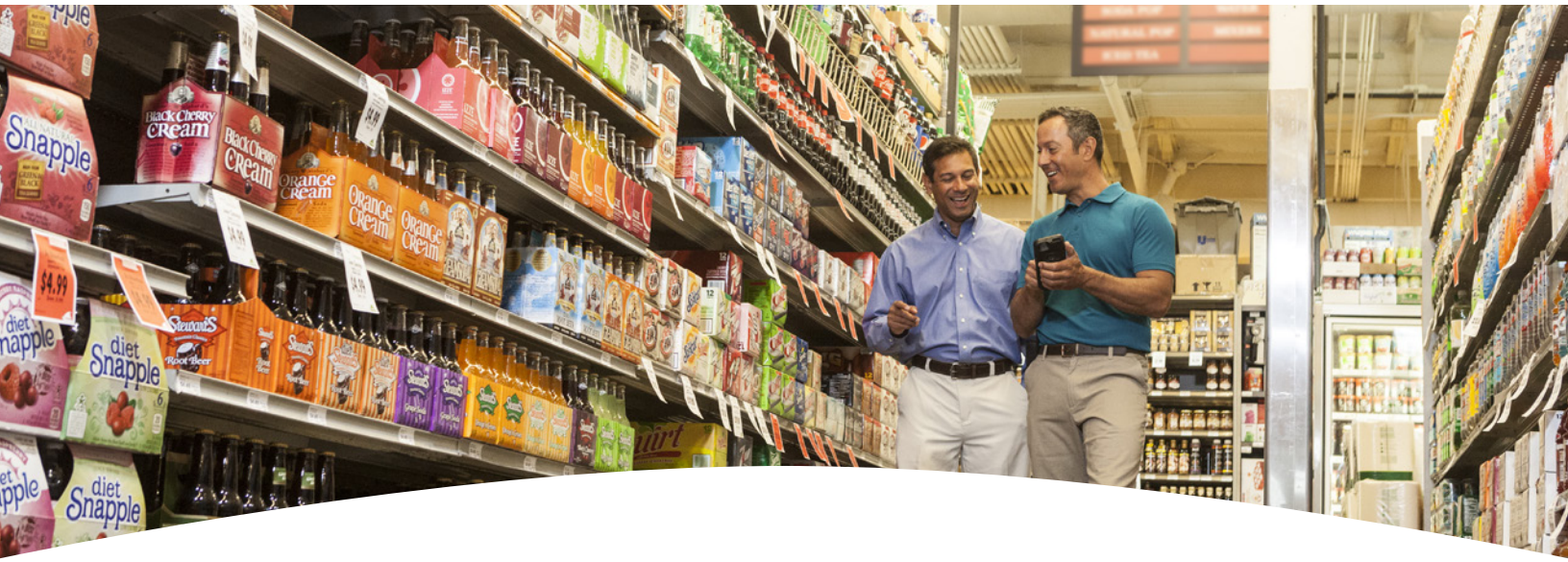

Things to Consider when Using Smartphones for Data Capture

PURPOSE-BUILT SCANNERS AND MOBILE COMPUTERS WITH INTEGRATED IMAGERS DELIVER FAST, ACCURATE SCANNING

SUMMARY

Industry

- Collection & Delivery
- Healthcare
- Field Workforce
- Ports & Intermodal
- Postal
- Retail
- Warehouse

Products

- Dolphin™ CT50 Mobile Computer
- Captuvo™ Enterprise Sleds for Apple® devices
- Voyager 1602g Area-Imaging Pocket Scanner

Typical Applications

- Barcode scanning and data collection

Customer Benefits

- Quick and accurate data capture
- Power that lasts the duration of a shift
- Ability to tailor a solution specific to your application
- Positive impact to productivity and ROI

Barcodes and data collection applications go hand-in-hand across industries. A valuable choice for businesses looking to improve efficiency and reduce overhead, barcodes are both cost effective, reliable and reduce the potential for human error.

Smartphones are also commonplace today. Equipped with low-cost, high-resolution digital cameras, these consumer devices are now increasingly used to scan and decode barcodes.

Although consumer grade devices offer barcode scanning capabilities to look up prices, access data, or access content on a QR code with the simple download of a mobile app, they have limitations that make them unsuitable for many business applications.

Alternatively, Honeywell enterprise class scanners and mobile computers with integrated imagers offer distinct advantages that deliver significant productivity gains and attractive ROI when compared to consumer grade devices for data capture.

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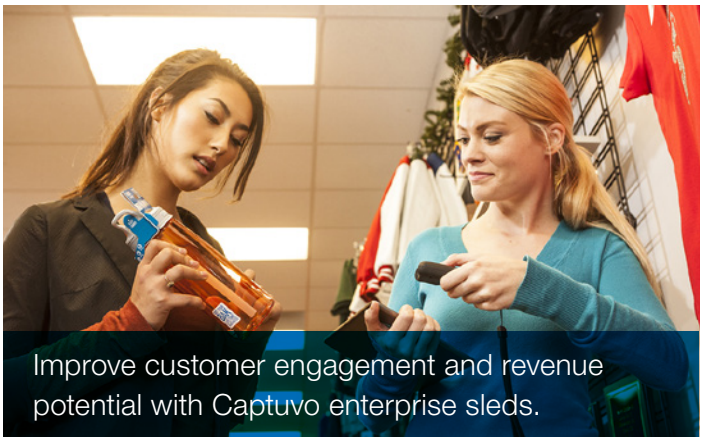

The limitations of using consumer smartphones for business-grade barcode scanning include:

- Lack of scanning speed and functionality, plus insufficient battery life
- Design is not rugged enough to withstand the harsh conditions of most data collection applications
- Not ergonomically designed for repetitive work
- Lack of options on radios, keypads, imagers, software, services and peripherals to tailor a solution specific to your application, user needs, and locations of barcodes
- No long-range scanning capabilities
- No omnidirectional scanning capabilities, which costs you valuable time in getting the exact aim and positioning to read the barcode

Simply put, using a consumer grade device for intensive scanning applications results in a cumbersome, inefficient scanning experience.

The advantages of enterprise devices and the limitations of consumer smartphones are described further in the sections that follow.

Smartphones vs. Enterprise Class Scanners for Data Capture

The success of smartphones is due in great part to the breadth of capabilities they provide. This is especially appealing to consumers that want to "stay connected" and be able to do many cursory tasks with a single device. However, smartphones lack the functional depth required for business-critical data collection applications.

Applications

Consumer devices are not designed for intensive scanning applications, nor are they equipped to scan damaged or poorly printed barcodes. By contrast, enterprise scanners are purpose-built for high volume, high-velocity scanning, including damaged or poorly printed barcodes, even under poor lighting conditions.

Enterprise class scanners:

- Can quickly and accurately focus, illuminate, and read hundreds of barcodes per shift.
  - As tested against a leading iPhone camera scanning application app, a mobile computer with integrated imager read 3.8 times faster,[1] reducing scan times and increasing productivity.
- Feature omnidirectional scanning capabilities, which eliminate the need for exact aim and positioning.
- Allow workers to easily, accurately and automatically capture information, regardless of the volume of scans required, and to read labels that are damaged, poorly printed, or displayed on a mobile screen.
  - A leading iPhone camera scanning app failed to read two symbologies: 6.7 mil PDF and 10 mil Data Matrix codes, which appear on drivers licenses, for example.[1]
- Provide fast, consistent, and easy capture of a wide range of barcodes, improving transaction accuracy and employee productivity.
- Feature high performance, motion tolerant 2D imagers with illumination and laser or imaging engines optimized for long-range barcode scanning in all common lighting conditions.
  - Mobile computers with integrated imagers have up to 14 times the motion tolerance of an iPhone camera using a leading scanning app.[1]
  - In relative terms, a person must be completely still to scan successfully with the camera scanning app, which is difficult and time-wasting.

1. Based on comparative testing following DoF Test Procedure 500009893 of Dolphin 70e Black Enterprise Hybrid Device and Apple(R) iPhone 5s using RedLaser application

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- Offer broad compatibility with software, communications, peripherals and accessories, enabling a comprehensive enterprise business solution tailored to meet the unique needs of your application, end users, and barcode scanning needs.
- Optional software plug-ins like Honeywell's TotalFreedom™ further improve scanning of direct mark barcodes and other standard 2D barcodes, including AAMVA North American driver's licenses and documents.

Battery Life

Barcode scanning places an additional burden on batteries. The typical consumer device battery will not last a full shift, especially if the device is in constant use during the shift.

Long-lasting battery power is a critical success factor in any mobile computing application. Mobile devices purpose-built for barcode scanning have high-capacity batteries and power management advantages that can provide enough power for a full shift and beyond, even when the devices are heavily used.

Recharge time is also an important consideration. High-volume operations may not provide the opportunity to recharge batteries during the day. In this situation, a battery that can be replaced quickly would prevent productivity losses from dead batteries – a great advantage. And enterprise class devices also offer a broad selection of charging options, including multi-slot battery chargers, ensuring a fully charged battery is always at hand, minimizing downtime.

Ruggedization

Enterprise class devices with integrated imagers are designed to withstand the harsh conditions of most data collection applications.

- Rugged specifications expand device lifecycle and eliminate the more frequent replacement required for consumer devices.
  - Failure rates for non-ruggedized devices can run as high as 38%, which is 3.5 times higher than the average 11% rate for ruggedized devices, according to a VDC Research study.[2]
  - Mobile workers lose an average of 75 minutes each time their mobile devices fail according to a VDC Research study.[2] This leads to lost revenue in field sales and service operations, production delays and potentially missed shipments in plants and distribution centers, shelf replenishment and customer service problems in retail, and potential overtime in all environments to make up for the lost work time.
- Enterprise class imagers are covered by glass that is exceptionally resistant to damage, and the lens can usually be replaced, if needed.
  - If a consumer smartphone camera cover is scratched, the mobile worker may not be able to read barcodes with the device. As a result, the smartphone will need to be replaced in many cases.

Ergonomics

Purpose-built enterprise solutions offer another distinct advantage over consumer grade devices: they're designed with repetitive work in mind. Enterprise devices are optimized for entering data (via keypad, touchscreen, barcode scanning, imaging or other peripherals) repeatedly and over time to improve comfort and usability.

And unlike consumer accessories, enterprise devices offer a broad portfolio of accessories built to business-grade specifications. As a result, your operations benefit from increased flexibility to maximize productivity and reduce user fatigue based on the needs of different types of workers.

The Voyager 1602g is the ideal pocket scanner for revenue-generating mobile marketing initiatives.

2. "Total Cost of Ownership (TCO) Models for Mobile Computing and Communications Platforms," VDC Research, 2014.

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With consumer smartphones, pressing the screen activates the scan trigger. That means either using two hands or forcing the thumb into position to activate the scanning application on the screen. Purpose-built enterprise devices offer a more ergonomic solution: trigger by index finger or thumb, right or left side – all of which minimizes user fatigue.

Conclusion

Although smartphones are capable of scanning and decoding barcodes, they are not designed for use in high-volume, high-velocity scanning applications, or when poor lighting or poorly printed barcodes are involved. Smartphones are not ergonomically designed for worker comfort and ease of use in these types of applications. And their lack of motion tolerance makes scanning even more cumbersome and time consuming.

Honeywell purpose-built barcode scanners and mobile computers with integrated imagers, in contrast, can quickly and accurately read virtually all barcodes. They are ergonomically designed with repetitive workflows in mind and offer protection from the demands of data collection applications with enough battery power to last a full shift and beyond.

For More Information

To learn more about Honeywell enterprise class scanners, mobile computers with integrated imagers, and other workflow solutions, call us at 800-582-4263 or visit **www.honeywellaidc.com**.

The Dolphin CT50 enables workers to respond faster to customers and drive higher productivity from the field.

For more information:
www.honeywellaidc.com

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