WHITE PAPER JUNE 2016

The Android Expectation

Considerations for Mobile Apps, Workers, and Host Systems

Contents

ivanti

Introduction

Your business has been running Windows Mobile or Windows CE for a device generation or two. From the introduction of PocketPC in the rugged device market in 2001, Microsoft delivered a stable platform that brought mobile productivity to manufacturers, retailers, and the entire supply chain in between.

However, the last five years have really forced a re-evaluation of where to look next. At first, there was the discussion of consumer devices moving into the hands of workers who traditionally carried rugged mobile computers. While the lines determining where consumer-grade fits and where it fails became more clear, the operating system landscape was significantly altered.

Since first introduced to the rugged mobile computing market in late 2011, Android has grown—in both the number of rugged devices shipped and the number of device form factors for which it's available. Since 2015, analyst firms such as VDC Research have pointed to statistics that prove Android is reaching "critical mass" in the market.

With industry experts recognizing Android as a viable candidate for your next mobility hardware refresh, your focus may be shifting to the remaining barriers to choosing this OS. Let's consider three areas of concern: 1) Implications for your mobile apps; 2) workers and the Android user experience; and 3) Android and your Supply Chain Management (SCM) systems.

App Migration Is Expensive

When the first Android-based rugged devices entered the market, the most common objection concerned the mobile apps: What am I supposed to do with my applications? Are there equivalent apps already available for Android? Will my application vendor build me an Android version? How much will all of this cost me?

It's a huge jump—probably not seen since the days of moving your applications away from DOS around the turn of the century. And just like then, a big benefit of making the leap is an application experience that's significantly more user-friendly. That's all nice—but at what cost?

Since the first rugged Android devices, many application providers, including Ivanti, have brought their apps to Android. Vendors have faced two choices: 1) bring the existing application, in its current form, over to Android, or 2) re-write the whole application for this new operating system. The first option was a relatively quick solution, but wouldn't fully take advantage of all that the Android OS offered. The second option—while it could allow developers to optimize the app for Android—was a much larger development effort (read: more expensive to create).

Ivanti brought Terminal Emulation (TE) to the Android operating system in late 2011—in time for the first rugged Android devices. With TE, early adopters of Android devices could stay with their trusted mobility client and begin to roll out new devices. TE has been a proven platform for decades, and the ability to adopt new hardware without the risk of new software at the same time has been a relief for many customers. However, with its "green screen" interface, TE left something to be desired by those looking for a more "Android experience".

Android—and fellow consumer operating system, iOS from Apple—really changed the mobile experience. Finger-tapping, swiping, pinching and panning are all new ways to navigate on a smartphone. Aside from the way we interface with apps, the devices offer bright, beautiful screens. Display technology advanced with incredible clarity. How does one take advantage of all of this—the full Android experience?

In the same way that application vendors were reluctant to fully re-write their apps for Android, companies around the globe discovered the same pains of cost, risk, and effort to migrate from their existing applications to new alternatives on Android. To solve this, Ivanti created the Velocity platform.

Velocity takes your existing telnet client or web application and modernizes it for a touchscreen experience. What does that mean? Your existing, trusted "green screen" client becomes an Android app—complete with screen-tapping navigation; a clean, intuitive user experience; and the ability to offer full color and graphics so workers can easily read and interpret task workflows.

You don't need to migrate to a new application when you can modernize with Velocity. Underneath that elegant interface is the tried-and-trusted telnet client performance you've relied on for years. You can continue to depend on your Android application with confidence. Only now, the user experience for your workers is much more intuitive and familiar, and it replaces multiple keypresses with single screen-taps.

Figure 1 "Green screen" telnet client.

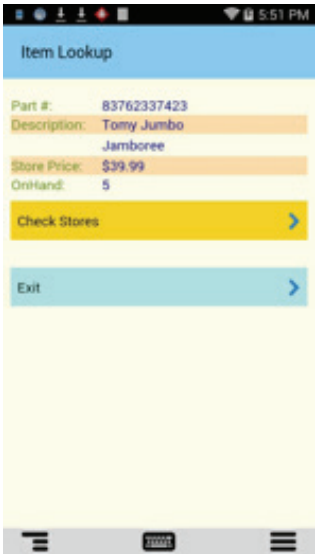

Figure 2 "Green screen" modernized with Velocity.

Users and a Changing Experience

As you consider the implications of introducing Android devices to your supply chain workers, you'll see two camps emerge that represent the majority of your team. One group has been using your telnet clients and is very familiar with how it works. The other group is generally your younger workers and new hires—many of whom have never seen a "green screen" app in their lives and have no idea how to use one.

Choosing Android mobile devices for your next mobility deployment—and modernizing your mobility clients with Velocity—helps you boost productivity from both of these groups. The more obvious group is the younger crowd that doesn't have to learn how to use a telnet application—which will save countless hours on its own. Remember, these workers (mostly late Gen X'ers through Millennials) have grown up around the rapid change in technology and don't fear diving into something new. For them, the only thing new will be your workflow.

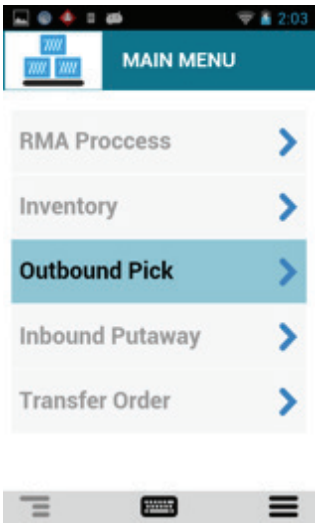

Figure 3 Choosing a task was once a key sequence of "Func", "Shift", "3". Now it's a single screen tap.

They've grown up with Android over the last several years and will tend to embrace your modernized application because it works just like the smartphone they carry.

The more experienced camp of users will embrace your Velocity-modernized app on an Android mobile device for very different reasons. First off, while they're very familiar and comfortable with their telnet client app, they're not unfamiliar with the Android user experience. While change can be scary, delivering their familiar workflow in a modernized application is what this crowd has been hoping for. They look at the smartphones in their pockets and have recognized opportunity. They want to be able to work faster. While they know your current telnet-based workflow with their eyes closed, giving them the Android experience is a win for personal productivity. These are your more mature workers who realize that the current devices and apps may be limiting all they can accomplish before their shift ends.

In both cases, the user experience offered through a modernized app is an opportunity to increase productivity for all your workers. It's an unusual opportunity where the question isn't who will resist, but rather which group will embrace the experience faster.

Beyond the familiarity of the experience, and the productivity that it can unlock, there is more you can do to influence the intuitiveness of your workflow directly. The Velocity administrative console gives you control over how those modernized screens are presented to the user.

One common practice that companies are embracing is color-coded visual cues. Users of a text-based client like telnet would key in a "Y" for "yes" and key in an "N" for "no". Now, however, these two responses are now tap-able responses on the application screen. To help address speed and even language challenges, color coding responses such as these (the "yes" box is green, the "no" box is red) can make it even easier for workers to accurately choose their response. Others have taken to color-coding entire task navigation—making each type of task workflow a different color. In this scenario, all the screens in your Picking workflow may have a green background, while Receiving screens would be presented on a blue background.

Figure 4 Each task (and subsequent screens) can be customized, including color coding for visual cues.

Adding elements such as color-coding make at-a-glance navigation even faster for workers, can accelerate the training of new workers, and more.

One additional customization element that can improve worker productivity significantly is custom keyboards. Many Android rugged devices, like their consumer-grade cousins, are designed with few

physical buttons or keys. While standard keypads for QWERTY and numeric data entry are useful, you can create custom keyboards that present users with only the on-screen keys they would need for a specific data field. This reduces the potential for typographical errors that can impact data accuracy.

My Host Application Is Off Limits

Perhaps the greatest concern when doing any sort of upgrade or tech refresh is: "What will this do to the systems I've already invested in and have optimized?" Your supply chain management systems—whether your WMS, ERP, etc.—are serious investments, and the resources (dollars, man-hours, and more) spent perfecting them make you hesitant to touch them unless you absolutely must.

It's even worse when you must allow a third-party vendor to get in and touch those systems. You worry about what they're touching, and then you worry about how much it will cost you in the long run. A third party making changes to your system means multiple expenses (and risks). The first concern is about what their initial changes will do. Next (and often a larger expense) is the cost to bring the vendor back in to re-test its software every time you want to make a change to your system. Even if your changes are for a completely unrelated reason, you're paying that vendor to come back and retest, just to be sure.

We've witnessed this type of business model from many vendors over the years. It can be painful. Choosing an Android device—and modernizing your telnet or web application with Velocity—means you can make the leap to Android without having to touch your host apps. Velocity modernizes the mobility clients you already have installed and that are already working with your host.

Even if you choose to voice-enable your Velocity-based applications with the Ivanti Speakeasy[1] solution, the same promise holds true. Speakeasy runs completely on the mobile device, meaning that everything that takes the spoken phrases and turns them into text for fields within your application is handled within the mobile device. As far as your host application is concerned, there's no difference between data entered via voice and data scanned from a barcode, or keyed in by the user.

You've made a significant investment in your host applications. There's no need to compromise that investment to get the latest mobile tech for your workers.

The Next Generation Platform

Palm OS, and PocketPC/WindowsCE/Windows Mobile—right through today's leading operating systems. The touchscreen experience is bringing mobility into its next generation. With the mass-market accessibility of smartphones, your workers are more ready than ever to willingly (and possibly, thankfully) adopt a new mobility platform. Best of all, when you choose Velocity as your platform for Android applications, you can make the transition easy while preserving the investments you've already made. Let Ivanti help you boost worker productivity to the next level.

1. Velocity support: Summer 2016

Words only go so far.
Request a Velocity demo today.

Let us demonstrate what Velocity can do.
You'll find our contact information below.
We look forward to hearing from you.

About Ivanti

Ivanti accelerates mobile productivity with solutions that enable supply chain operations. Global organizations across industries such as manufacturing, retail, warehousing, and field force automation rely on Ivanti enterprise mobility management, host-connectivity applications, and voice-enablement solutions to connect mobile devices to supply chain management systems. Ivanti products help ensure worker productivity in mission-critical mobile deployments, resulting in reduced costs that can contribute directly to operating margin. Visit: **www.Ivanti.com**

Ivanti Corporation
USA and Canada: 1-888-697-WAVE (9283)
Outside USA and Canada:
+800 Ivanti (9283-5465)
sales@Ivanti.com
www.Ivanti.com

ivanti