

THE COMPUTERWORLD HONORS PROGRAM

CASE STUDY



LOCATION:
*Mellville, New York,
United States*

YEAR:
2006

STATUS:
Laureate

CATEGORY:
Business and Related Services

NOMINATING COMPANY:
Sybase

ORGANIZATION:

Avaya

PROJECT NAME:

Technician Work Bench

Summary

One of the most critical elements to any company's field service organization is the accurate, immediate, and secure transfer of information from the enterprise systems to the Field Technician. Current contract information, outage severity, parts and Technician availability are some of the data points that need to be constantly synchronized between the Technician and back-office. Avaya, a leading global provider of business communications applications, systems and services, has long used wireless mobility technologies to deliver world-class customer service. This year, a completely new platform called Technician Work Bench 3rd Generation was launched. Developed in-house, TWB3G is a wireless, web based, dispatch and reporting tool utilizing Treo smartphones and iAnywhere's M-Business Anywhere middleware/browser solution.

In this compact handheld device, TWB3G frees the Technician from the need to constantly connect his laptop or call the office for information and status updates, delivers the days work activities with supporting documentation wirelessly, and helps eliminate the need for a physical office completely.

Introductory Overview

Avaya has a history of innovation in applying mobility technologies to field service applications. Since 1993, in-house-developed, wireless-enabled applications have given field technicians the ability to deliver world-class service to Avaya's customers.

The Technician Work Bench platform is the Avaya field service dispatch and reporting tool enabling Field Technicians to receive their work, provide immediate status and time reporting information and order parts wirelessly through a hand-held device. When the proprietary wireless infrastructure used by the existing platform was near the end of its life, Avaya decided to take advantage of near-ubiquitous wireless data coverage now available from 3rd generation (3G) cellular networks.



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Along with the 3G network technology, newly available smartphones provided a mechanism to combine current voice, data, and pager functions into a single compact device, improving technician efficiency and reducing operating costs. Also, Java-enabled smartphones coupled with new middleware move software “intelligence” from the back-end server out to the hand-held. A feature-rich color user interface with touch screen and local database interaction guide the user through the work-flow process. Immediate error checking and on-device feedback reduce administrative time and improve reporting and billing accuracy. Not having to wait for device-to-server interactions also reduces end user frustration. Device capabilities include Bluetooth personal area networking, and with a Bluetooth scanner allowed automation of a previously labor intensive monthly parts inventory procedure. Other new features include supply chain (parts) return tracking enhancements, electronic signature capture and customer work receipt delivered by email, and automated billing of maintenance activities through backend systems.

Benefits

The benefits TWB3G provide apply to three groups: the Avaya end customer, technician, and company, and build upon each other providing benefits even greater than the sum of its parts.

First, because of the speed and accuracy of information transfer between the Technician and company, the customer’s experience is improved. Urgent customer outages requiring dispatch are transferred immediately and in great detail to the Technician, including symptoms, recommended replacement parts and even the ability to get driving directions and maps. Customer’s entitlements are all available to the Technician, and customers can get current status information through an on-line portal.

Improvements to the Technician work-flow are also significant, and not just in reducing the number of appliances being toted around. Java enabled smartphones allow local databases to be accessed via the M-Business browser on the device, enabling data entry and information retrieval even while out of wireless coverage. The data is synchronized when coverage is resumed. Avaya, like many companies, has complex offer portfolios and was able to build “intelligence” into the



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hand-held platform, automatically applying the correct billing scenario based on the customer's entitlements and billing policy. These triggers are initiated simply by the user entering appropriate cause and resolution information. This greatly reduces the amount of paper and look-up's the Technician needs to perform, removing any guesswork and speeding up the work activity close-out process. The improved accuracy also improves customer satisfaction and has a positive impact on accounts receivable.

Some company benefits have already been mentioned – improved billing, faster payments, and higher productivity due to reduced administrative time. In addition, direct costs were reduced by deploying current, main-stream technologies in devices and wireless networks. Multiple wireless carriers as well as multiple hand-held devices and operating systems are supported under the iAnywhere platform. Also, uniform nationwide wireless carrier contracts eliminated more expensive locally managed cell phone policies.

The same technology used here in the very complex service arena can easily be adapted to other remote applications such as sales and sales product configuration, inventory, and any other web-enabled application within the enterprise.

The Importance of Technology

Technology was a major driver of this product. The accelerated nationwide availability of wireless carriers supporting data transmission is a leap forward, enabling the extension of enterprise data securely into the field. Previous wireless data networks, although effective, did not provide the near-ubiquitous coverage we have today, or at the prices we are now able to secure.

Multi-function, inexpensive hand-held devices also helped secure the projects financial balance sheet. Older, unsupported devices were becoming increasingly difficult to repair or replace. Having an "all-in-one" voice/data/pager device reduced unit costs and allowed for all inclusive, cheaper wireless contracts.

Security, always an important consideration in any initiative, is also effective due to multiple data encryption schemes, device password protection, and even the ability to remotely wipe a device clean if lost or stolen

Originality

Avaya has been on the leading edge of wireless field service applications for 13 years (first at AT&T, then Lucent, and now Avaya). The simple philosophy of providing the person closest to the customer, the Technician, with the tools and information necessary to exceed that customer's expectations has driven the technology year after year.

This latest iteration of the platform, Technician Work Bench 3G, is one of the most sophisticated enterprise extension platforms in use today. Although the concept is no longer unique, this application incorporates all of the latest technologies available in an efficient package created to support Avaya's unique service offer structures.

1. Worldwide wireless coverage
2. Multifunction hand-held devices



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3. Device and network independence
4. Industry standard protocols & interfaces
5. Secure wireless Intranet/Internet access
6. Device store-and-forward capability
7. Off-line browsing/local database capability
8. Unsolicited push capability
9. Touch screen color user interface & signature capture
10. Bluetooth wireless barcode scanning

But just as important as the individual features are the back-end functions associated with the platform. Interfaces to multiple Avaya systems enable a host of automated responses to the Technicians input. Work scheduling/rescheduling is largely automated with interfaces to our SERVICEPower platform. Move-and-change requests and smaller installation orders come from SAP, and uploads of billable activity is processed and billed automatically through SAP. Customer incident reports are received from our custom ticketing system with progressive status sent back and available directly to customers. Replacement part requests are processed through the system (Servigistics), and Technician time reporting is entered and sent to payroll.

Success

Mary Klein, Senior Manager - Field Technical Service Process and Tools said "TWB 3G is a leading edge field service platform. It has revolutionized the way we distribute work and collect status and time from technicians. We have been able to improve the platform and reduce costs at the same time. This has been a tremendous success for the business."

All of our U.S. Field Service Technicians have been upgraded to the new TWB3G platform. Because this field force has been wirelessly enabled for years, the deployment was fast and smooth. However, a formal training course was necessary to explain the many advanced features of the iAnywhere browser, device, and application. Expected hardware and platform savings are now being realized, with longer term billing accuracy benefits being measured.

Difficulty

This project, because of its strong ROI, obvious benefits, and the life-cycle concerns of the existing platform, was not a difficult sell. However, as in many IT projects of significant duration, requirements changes over the development lifecycle posed the largest difficulty. Fortunately, cooperation and close coordination between the IT team and Business owner, along with a stringent change control process, enabled flexibility in project deliverables.

Also, as in any leading edge project, minor upgrades to devices and middleware were incorporated as the project progressed.