



Microsoft Windows Server 2003 Customer Solution Case Study



Overview

Country: Germany

Industry: Public Safety

Customer Profile

The Brandenburg State Police department maintains safety on the roads in the German Federal State of Brandenburg. It collects fees from more than 240,000 citations annually.

Business Situation

The department wanted to increase police presence on the streets by minimizing the time it took to do paperwork in the office.

Solution

SC-Mobil® from SOFTCON IT-Service GmbH records, tracks, analyzes, and collects fees for traffic offenses using field-based handheld systems wirelessly linked to a Microsoft® Windows Server™ 2003-based server.

Benefits

- Reduced paperwork increases street time by 10% daily
- Fee-collection time reduced by 90%
- Improved currency of legal information
- Eliminated U.S.\$20,000 in annual printing costs

Handheld Solution Improves State Police Services in Brandenburg

“SC-Mobil...reduces duplicating efforts significantly. Using it, our police officers can also spend more time being police officers, as they do not have to return early to the station to do paperwork.”

Olaf Schössow, Director of the Bureau of Central Fines, Brandenburg State Police

State Police officials in the German Federal State of Brandenburg wanted to increase the time its officers spent patrolling the streets. Too much time was spent doing paperwork or collecting fees, which was not keeping the streets safe. State Police officials turned to SOFTCON, whose SC-OWI® program tracks traffic ordinance violations for the force. SOFTCON's SC-Mobil® solution, using the Microsoft® Windows Server™ 2003 operating system, relies on handheld systems to link SC-OWI wirelessly to the field. With SC-Mobil, paper tickets and rekeying information at the day's end are eliminated. The handheld devices transmit violation information to SC-OWI without the officers having to return to the station. With this solution, officers can collect violation fees electronically, which dramatically reduces the time spent collecting fees and keeps the officers focused on maintaining road safety.



SC-Mobil enables Brandenburg's police officers to record offenses in the field using mobile devices that wirelessly upload ticket information to the SC-Mobil message server, running on the Microsoft Windows Server™ 2003 operating system.



Situation

The State Police in the German Federal State of Brandenburg enforce the laws and maintain safety on the public roadways—yet officers were spending a lot of time in places other than the street. The problem was in collecting fines from non-German citizens. If a field officer issued a traffic citation to a German citizen, the citizen could drive off and pay the fine later—and the officer could continue making rounds or monitoring the traffic on the highway. However, if the officer issued a ticket to someone who was not a German citizen, then the officer had to collect the fine immediately in case the offender might leave without paying the fine.

Immediately collecting the fine created different complications for the police force. Only cash was accepted for paying a fine on-site. If the offender had enough cash to pay the fine, the officer could simply collect the fine, and the person could leave. But if the person did not have enough cash, the officer might have to escort the individual to the nearest bank or automated teller machine (ATM) so that the person could get the funds to pay the fine.

If the individual had only foreign currency, instead of using the ATM, the officer would have to escort the individual to the foreign exchange office to change currencies. And if it was late at night and the exchange offices were closed, the officer would have to take something for collateral from the individual's car. This ensured that the individual would get funds during business hours, return to the police station, and pay the fine. Under these circumstances, Brandenburg State Police officers could spend hours trying to collect fees, and during that time, they could not patrol the roads and ensure public safety.

The paperwork for traffic citations also made it difficult for officers to be effective on the street. Even in the easy cases, where the

officer issued the ticket to a German citizen, the officer had to collect the paper tickets at the day's end and rekey all the information into the department's traffic ordinance tracking and workflow system, based on the SC-OWI® application from Munich-based SOFTCON. Entering information into SC-OWI might subtract another hour from the time the officer could spend on the streets in a day. It also increased the chance for error as officers might incorrectly key in information that they had hastily written on the paper ticket.

With more than 4,000 police officers at work in Brandenburg, the fee collecting and paperwork was cutting into productivity and sending the wrong message. Police officials wanted to reverse these trends by making it easier for police to collect fees quickly and by enabling officers to spend more time in public and less time in the station.

Solution

To increase police productivity, make it easier for the force to write tickets and collect fees, and increase the time officers spend on the streets, the central services office for the Brandenburg State Police force deployed the SC-Mobil® solution from SOFTCON.

Written in Microsoft® Visual C#® development tool and developed using the Microsoft® Visual Studio® .NET 2003 development system, SC-Mobil is a client/server application for recording, tracking, and analyzing traffic offenses. It enables Brandenburg's police officers to record offenses in the field using mobile devices running an operating system such as the Microsoft Windows® CE operating system or Microsoft Windows Mobile™ 2003 software for Pocket PC. The mobile devices were fitted with a magnetic strip reader so that field officers collecting fees can charge the fees against an individual's bank or credit

SC-Mobil	
Parkverstoß	
Tatdatum	27.02.2004
Tatzeit von	13:08
Tatzeit bis	13:13
Tatstrasse	Aidenbachstraße
Hausnummer	Kistlerhofstraße
Zusatz	Hofmannstraße
Ergänzung	Gmunderstraße
Marke	Baierbrunner Straße
Fahrzeugfarbe	Boschetsrieder Straße
Land	...
Kennzeichen	schwarz
Ventilstand	Deutschland
Tatvorwurf	M-DC 8024
	keiner

Drop-down lists and field-level validation makes writing a ticket with SC-Mobil fast and easy.

card, eliminating the need for cash-only transactions.

Depending on where an officer is when writing a ticket, the mobile device uploads ticket and fine collection information immediately to the SC-Mobil message server, running on the Microsoft Windows Server 2003 operating system. The wireless communications between the mobile devices and the message server rely on a secure general packet radio service-based virtual private network (VPN) provided by SOFTCON partners T Mobile and T-Systems. If an officer cannot communicate wirelessly with the SC-Mobil message server—due to location or for any other reason—the information resides on the handheld until the officer can connect with the server (and if necessary, the offence and fine information can reside on the handheld device until the officer returns to the station at the day's end and then be uploaded to the message server in a batch mode).

Once the information about an offence has been uploaded to the SC-Mobil message server, that server passes it to the department's back-end SC-OWI-based workflow system.

Synchronizing Handsets

In addition to moving information about offences up to the Windows Server 2003-based SC Mobil message server from the handheld device, the SC-Mobil message server ensures that the information and application code residing on the handheld system is current. Brandenburg keeps the entire catalog of traffic offence codes updated on the SC-Mobil message server, and SC-Mobil pushes that catalog down to each mobile device. Field officers can select offence codes from drop-down lists on-screen instead of consulting a physical booklet listing all 3000 offence codes.

As new traffic laws are passed in the state, new codes are added to the catalog on the SC-Mobil message server. As soon as an officer synchronizes a mobile device, SC-Mobil pushes the updated code catalog down to the device. So the mobile devices always have the most current collection of traffic offense codes. Any patches or updates to the SC-Mobil client software are also installed on the mobile device during the synchronization process.

SOFTCON also made the SC-Mobil solution self-learning in that the server software automatically detects patterns and prompts the handheld system to present an officer with suggestions that facilitate completing a form. An officer patrolling a certain street might routinely write a citation for a car parked too close to a fire hydrant, for example. The SC-Mobil detection engine senses that citations at this address are frequently for this particular offence, so it can cause the mobile device to offer the appropriate offence code at the top of the drop-down list as soon as the officer enters the location of the offense.

Facilitating Complex Interactions

In developing all the capabilities of this client/server solution—from the wireless synchronization of offence information and software updates to the collection and settlement of fines in the field using credit cards—SOFTCON extensively used Microsoft .NET Compact Framework. The .NET Compact Framework is a strict subset of the Microsoft .NET Framework that gives developers a hardware-independent environment for running programs on resource-constrained computing devices. It inherits the full .NET Framework architecture of the common language run time, supports a subset of the .NET Framework class library, and contains classes exclusively for the .NET Compact Framework.

With a magnetic stripe reader connected to the handheld device through a *Bluetooth* wireless connection, police can now collect fees using credit or debit cards instead of cash only.

The .NET Compact Framework made it easy for SOFTCON to create client-side software packages that run on different handheld systems, which ensures that Brandenburg has a choice of devices to suit its needs. Certain devices run on Microsoft Windows CE; others run on Microsoft Windows Mobile 2003 software for Handheld PC. Because SOFTCON used the .NET Compact Framework in developing its client-side software, developers quickly developed versions of the software that have been optimized for different operating systems and devices—but that deliver the same core functionality.

Benefits

Brandenburg's ultimate goal was straightforward: enable the police force to spend more time policing the streets and less time doing paperwork or collecting fees. SOFTCON's SC-Mobil solution is playing an important role in helping Brandenburg achieve its goal.

More Time on the Streets

Officers using SC-Mobil are finding that they

can spend 10 percent more time on the streets than they could before using the client/server system. "The devices that the police officers use are connected wirelessly to the central computer," says Olaf Schössow, Director of the Bureau of Central Fines for the Brandenburg State Police. "This enables police officers to enter the required information directly into the handheld device, which SC-Mobil then pushes up to our central workflow system. This reduces duplicating effort significantly. It also lets our police officers spend more time being police officers, because they do not have to return early to the station to do paperwork."

Indeed, each officer using SC-Mobil can gain nearly one more hour on the street each day. As SC-Mobil is rolled out to as many as 4,000 officers, that may mean thousands of extra hours of police protection each day—and that's a significant increase for the state.

Less Time Spent Collecting Fees

Brandenburg's police officers gain even more time using the SC-Mobil features that let them collect fees more effectively. With a magnetic stripe reader connected to the handheld device through a *Bluetooth* wireless connection, police can now accept credit or debit cards instead of cash only. That gives officers the flexibility to collect violation fees immediately and eliminates the lengthy trips to the ATM, bank, or foreign exchange office. The ability to accept electronic payments for traffic violations may reduce the time it takes to collect fees by as much as 90 percent per violation.

Improving Information, Reducing Costs

SC-Mobil maintains an easily updated copy of the states laws and traffic violation codes on the Windows Server 2003-based message server. As a result, both the currency and accuracy of the information available to each police officer has improved. It has also enabled the department to cut its operational



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costs. Prior to deploying SC-Mobil, the state's 3,000 traffic regulations were printed in a small, easy-to-carry booklet that an officer could consult when completing a citation. The expense of printing 4,000 copies of this booklet four times each year—to the laws and violation codes enacted at different times of the year—was considerable. And the booklet was also often out of date. If a new law passed just days after the booklet was printed, it would not appear in the booklet for another three months.

SC-Mobil has changed all that. Because the catalog now resides on the handheld device, there are no printing costs for disseminating these codes to the handheld devices. Also, there is no delay in getting new codes out to the field. As soon as a new law is on the books, SC-Mobil administrators can update the catalog on the server and that updated catalog is pushed down to all the handheld devices the next time they synchronize with the server. As the SC-Mobil system is rolled out to all the field officers, Brandenburg expects to eliminate the physical booklet, which will cut operational costs by U.S.\$20,000 annually.

The bottom line? SC-Mobil on Windows Server 2003, Windows CE, and Windows Mobile 2003 for the Handheld PC is putting Brandenburg's State Police just where they need to be: on the street and ensuring public safety—quickly and more effectively than ever.

Windows Server 2003

The Microsoft Windows Server 2003 family helps organizations do more with less. Now you can: Run your IT infrastructure more efficiently; Build better applications faster; Deliver the best infrastructure for enhancing user productivity. And you can do all this faster, more securely, and at lower cost.

For more information about Windows Server 2003, please visit: www.microsoft.com/windowsserver2003

Software and Services

■ Products

- Microsoft Visual C# .NET
- Microsoft Visual Studio .NET 2003
- Microsoft SQL Server 2000
- Microsoft Windows Mobile 2003 software for Pocket PCs

■ Technologies

- C#

- Microsoft .NET Compact Framework
- Microsoft ASP.NET
- Microsoft Handheld PC
- Microsoft Internet Information Services

Hardware

- Intel-based servers

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