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A CapWIN-Win Solution

Spanning the Potomac River just south of Washington, D.C., the Woodrow Wilson Bridge handles tens of thousands of vehicles every day. The bridge is part of the I-95 corridor that carries traffic along the East Coast from Maine to Florida and part of the Capital Beltway that carries commuters between their homes and their jobs in Virginia, Maryland, and the District of Columbia.

In 1998, a man threatening to jump from the bridge into the Potomac River closed the bridge for more than 5 hours, bringing traffic in the region to a standstill. Incompatible communications equipment prevented emergency personnel from different jurisdictions on the scene from being able to communicate with each other. This communications gap resulted in confusion and unnecessary delay in resolving the incident and the resulting traffic problems.

Unfortunately, this was not a singular incident. In the Washington, D.C., metropolitan region, public safety personnel responding to a critical incident involving multiple jurisdictions are often hampered by an inability to communicate directly with other agencies.

To address this communications gap, officials from Maryland, Virginia, and the District of Columbia launched the Capital Wireless Integrated Network (CapWIN) in 1999 with initial funding from the U.S. Department of Transportation and the National Institute of Justice's (NIJ's) AGILE Program, which helps local and State public safety agencies address interoperability issues.

The goal of the CapWIN project is to create the first integrated multi-State transportation and public safety information wireless network in the United States. Once completed, CapWIN will allow police officers, firefighters, transportation officials, and other emergency personnel to communicate directly with each other during a critical incident using standard laptops. As a result, personnel from different agencies will be able to develop a coordinated response to an incident.

The idea behind the program "is to allow different [public safety and transportation] agencies to communicate and to set up a logical means of doing it," says John Binks, the CapWIN Training Manager at the University of Maryland's Center for Advanced Transportation Technology.

IBM, the primary integrator on the project, will build the network with off-the-shelf components and provide an open standard interface to allow participating agencies to communicate with each other using their existing equipment. "It's much better than trying to get three States to throw away all of their equipment and [then] spend more money on the same type of equipment," Binks says. CapWIN also will provide mobile computing capabilities for agencies that currently have none.

Using a standard laptop mounted in a police cruiser or a fire truck, users will be able to log on to the CapWIN system using a Web browser. Once logged on to the network, they will be able to see which other agencies are logged on using a global directory, instant-message those other users, or enter chat rooms set up for a specific incident to find out the latest information.

Law enforcement users will be able to use CapWIN to access crime databases in all three jurisdictions, which, Binks says, is "groundbreaking . . . It's a big deal to have three different States working together" and sharing sensitive information. Typically, when a police officer pulls over a car and runs a check on the driver's identification, the officer is able to obtain information only from the National Crime Information Center, which is a national crime database, and the crime database in his or her jurisdiction. The officer may find no outstanding warrants for the person in that State. CapWIN will allow the officer to view the crime databases in all three jurisdictions, potentially alerting the officer that the person is wanted in another State. Binks says the agencies determine how much information they want to share from their databases and who can access it. According to NIJ program manager Tom Coty, agencies will be sharing "even hot files with each other like warrants and criminal records, and other information they normally wouldn't share." As a result, CapWIN "will provide much more powerful information for any participating agency in the D.C. area," which will make police officers "safer and more informed," Coty says.

To date, CapWIN has already proved on a small scale that it can do what it was designed to do. In 2001, project staff conducted a pilot project in which 22 laptops were

mounted in police, transportation, and fire vehicles in the 3 jurisdictions to determine if messaging between the vehicles was possible. Says Binks, "The idea was to see if we could get some limited technology to communicate back and forth." With the use of the Alexandria (Virginia) Police Department's messaging switch, the vehicles were able to interface and transfer information from one agency to another.

The next step in the process, according to Binks, is to conduct beta testing to learn which aspects of the network are working well and which need to be modified. In fall 2003, personnel from 16 agencies in the region received training at the CapWIN Training Center on how to use the CapWIN network interface. Next, Binks says CapWIN plans to put 56 laptops in vehicles in target areas for about 3 months of testing. After testing is completed, Binks says the project will be ready to go into full production.

In addition to beta testing, Binks says CapWIN and IBM are working on an interface for PDAs (personal digital assistants). This interface will allow motorcycle police, police on foot patrols and horseback, and police in helicopters to use PDAs as officers in patrol cars will use laptops—to access criminal databases and run background checks or send instant-messages to personnel from another agency. Binks says local agencies have already been asking about the PDA interface "pretty aggressively."

Currently, he says about 35 agencies in the D.C. metropolitan region are involved with CapWIN. He expects that number to grow because CapWIN receives daily inquiries about the project and staff are invited to appear at conferences across the Nation to speak about the project. For agencies in the D.C. metropolitan area that are

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interested in becoming involved with CapWIN, Binks says, "All they have to do is call us."

NIJ's Coty predicts that, if successful, CapWIN will have national implications. "What we will get out of this is a model that can be replicated, that details how to develop the partnerships and cooperation among the many different agencies, and that leverages as much of the existing technology as possible."

Binks adds that a requirement of the CapWIN project is to develop a national model that other States can adopt. To that end, a full-time standards manager is responsible for providing documentation on everything the project has done so it can be easily replicated. Says Binks, "That's the unique aspect of coming through a university and being grant funded. People can learn from what we've done." He adds, "We're not selling anything, we're trying to solve a problem."

For more information about the Capital Wireless Integrated Network project, call 301-614-3700 or visit the CapWIN website at www.capwin.org. Or, contact Tom Coty at the National Institute of Justice, 202-514-7683; coty@ojp.usdoj.gov.



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