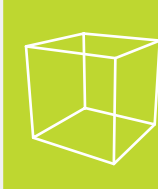


# Microsoft-based xTalk from ComputerTalk Gives Police Speech-Controlled Suspect ID via Wireless and Mobile Devices



## case study

### Challenge

Southwest Alabama's Integrated Criminal-Justice System (SAICS), reaches more than 7000 police officers and serves eight counties statewide. Its former suspect identification program was only accessible to officers who were physically at their desks and computers – not much use to those in the field.

After merging the counties' eight separate criminal databases into one master database, the question remained: how to best use the newly centralized information? Initially, limited access to the database significantly hindered officers' performance.

The goal was to provide key identification data to officers who were away from their desktops or cruiser computers. Undercover officers often needed to verify suspects' identities by checking driver's license, license plate, or Social Security number.

*"We get bogus ID information one-third of the time we interact with suspects," noted Jim Pritchett, SAICS executive director. "Having quick, easy access to accurate information is vital to an effective law enforcement organization."*

The goal: deliver suspect data to officers in the field. Speech recognition was ideal for this, and would also help with high volume issues and access problems.

The chosen platform needed to integrate seamlessly with the Microsoft SQL and .Net architecture that was being deployed for SAICS.

The chosen platform was xTalk from ComputerTalk and Microsoft.

### Solution

Officers now access the database from their mobiles and tell the system they need an ID confirmation. Driver's license, social security, and license plate data is transmitted instantly (verbally and visually) via direct voice query for devices that support multimodal applications. Hands-free, dispatcher-independent data access is essential for police to perform in an efficient, safe, and secure manner.

The solution is based on xTalk, from ComputerTalk and Microsoft, which delivers ComputerTalk's speech applications on Microsoft Speech Server. Building on Microsoft's .NET SALT-based platform, ComputerTalk's elegant human interface designs allow for seamless, natural interactions.

xTalk queries SAICS's master database of more than 3.5 million driver's license holders to provide fast, accurate information when probable cause is insufficient to immediately take a suspect into custody.

Protecting all parties involved in an officer's interaction with the public is an important goal of the voice solution.

*"Convenience and safety are top priorities for us," said Pritchett. "xTalk gets the right information to the street officers, protecting them, the suspect and the community in a much better way."*

The ability to handle the large daily volume of calls also benefits the dispatchers and field officers. Previously when officers called into live dispatchers, responses were often slow due to high call volumes.

*"We expect to see a significant drop in dispatcher call volumes with xTalk," noted Pritchett. "With more than 100,000 calls coming into hundreds of dispatchers daily throughout our statewide system, the amount of time freed up to handle the highest-priority calls should be significant."*

xTalk also provides robust support for regional speech differences such as a Southern drawl. Following a short eight-question script created by ComputerTalk, test users called into an 800 number to capture grammar samples to 'teach' the Microsoft Speech Server 2003 voice recognition engine.

ComputerTalk's speech experts worked in tandem with the Alabama's team to create the solution. Within days of the project's inception, ComputerTalk voice I/O team had created a first class Voice User Interface with speech 'tuning' to increase overall recognition accuracy. ComputerTalk also designed the multi-modal component, which allows images to be transmitted to voice-enabled wireless devices.

ComputerTalk deployed the application to the state quickly and efficiently. After a seamless installation, the server was fully connected, deployed, and functional within hours. Similar projects can take 3-6 months on average with costly integration and consulting fees; the SAICS speech-enabled its law enforcement database within 8 weeks.

xTalk leveraged the State's .Net infrastructure, Microsoft C# .Net 2003, Visual Studio .NET 2003 investments with a highly flexible enterprise-level solution using Microsoft Speech Server 2003.

Currently a text description of suspects is available. The project's next phase will use ComputerTalk's multimodal component to allow images to be transmitted to voice-enabled wireless devices, all supported by the powerful multimodal (speech and visual) capability of Microsoft Speech Server 2003.

COMPANY PROFILE



**Company:**  
Southwest Alabama's Integrated Criminal-Justice System (SAICS)

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Government

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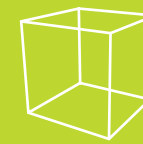
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### ComputerTalk's speech solution, built on Microsoft® Speech Server 2003:

- extends SAICS' existing investment in Microsoft .NET
  - provides critical flexibility
  - meets budgetary constraints
  - delivers a robust multimodal solution with an eye on future opportunities
- SAICS: Extends existing infrastructure, lowers development costs by 60% and provides for future multimodal applications.
  - SAICS: Suspect identification is faster, safer and more accurate.

*"We considered other systems, but their proprietary nature and the cost-per-port model made the price too high," said Jim Pritchett, executive director of SAICS. "We estimate that xTalk saved around 60% by allowing us to extend our existing infrastructure investment and fit long-term budget constraints while giving us the future flexibility we needed."*

Creating the application on the Microsoft Speech Server platform was surprisingly easy.

*"Our development team didn't have much speech technology experience when we started," noted Jim Pritchett, executive director, SAICS. "However, they were proficient with Visual Studio .NET. We estimate that the language familiarity combined with great development tools cut our design time from 12 to three months."*

"We saw three particular tools we thought were home runs," said Greg Blackett, Computer Talk's director of marketing. "Microsoft's extensive grammar library helps to rapidly deploy intelligent applications; the prompt function editor allows for dynamic prompts that incorporate sophisticated logic; and the grammar editor lets the true power behind Microsoft's speech recognition engine shine."

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