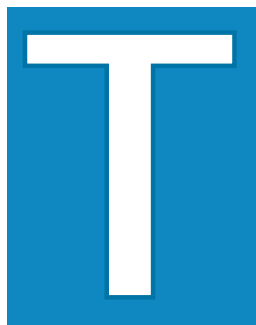




A Vision for Intelligent Information Delivery  
With WebFOCUS and iWay on his side, Larry  
Lueckenhoff's vision of dispatching a savvy information  
system for the Patrol soon became reality.

# Missouri State Highway Patrol

## TRANSFORMS ITS CRIMINAL JUSTICE INFORMATION SYSTEMS



The Missouri State Highway Patrol is one of only a few internationally accredited state law enforcement agencies. One of the ways the Patrol has earned its reputation is by adapting quickly to technological and business changes while providing ever-improving services. In fact, its criminal justice information system is transforming law enforcement.

As the state repository for all criminal history and traffic records in Missouri, the Patrol makes information available to the patrol, the general public, the Federal Highway Administration, state and local agencies in Missouri and elsewhere, and the Missouri state courts. To make these records easier and more cost-effective to access, update, and maintain, the Patrol envisions a fully automated system for

gathering and disseminating information throughout its extensive network of end users, including wireless communications with patrol cars.

Such a system requires coordination between federal, state, and local systems. That means it has to work with the diverse platforms and interfaces in legacy and partner systems – while still satisfying a wide range of end users and constantly changing governmental requirements.

Fortunately, the Patrol has built a flexible, scalable infrastructure for accessing and delivering information using Information Builders' solutions. As Larry Lueckenhoff, the Application Development

### SNAPSHOT

**Organization:** Missouri State Highway Patrol

**Profile:** State repository for all criminal history records and traffic records in Missouri

**Headquarters:** Jefferson City, Missouri

**Challenge:** To cut the costs of managing extensive record-keeping and information distribution services while creating new, easy-to-use Web-based services

**Strategy:** Implement end-to-end solution, not point solutions, moving data from the consolidated state mainframe to a local data warehouse that end users can access through Web browsers, and ultimately, wireless devices

**Results:** Improved effectiveness of the patrol and their responsiveness to the public and government agencies, while cutting costs

**Information Builders Solution:** WebFOCUS, iWay Software, Consulting

manager for the Patrol's Information Systems Division puts it, "Information Builders technology fits right into our vision. All of our new development efforts incorporate an Information Builders' product strategy for implementation of traditional, Web, and data warehouse reporting requirements. WebFOCUS and iWay both play an important role in this strategy."

#### Multiple Technologies, Multiple Challenges

Achieving its vision is a major undertaking for the Patrol, giving new meaning to the word "multi-tasking." Each project has its own set of challenges and requirements – and, they're all related to one another. The projects include:

##### Field Reporting

The Patrol is developing a system in which the patrol officer electronically submits a report at the time of an incident from the patrol car, using a wireless device. These include traffic accident, investigative, radio, traffic ticket, and other field reports. Not only does field reporting depend on emerging new platforms and technologies, but the end users – the troopers in the field – have strict requirements. They demand timely information, presented in the format they're used to receiving it.

##### Statewide Computer-Aided Dispatch

The system will handle officer scheduling with pre-watch availability to dispatch, and accommodates safety alarms, silent dispatch, and car-to-car messaging. Providing these services requires the ability to report off of multiple platforms and data structures and to remotely distribute reports.

##### Data Center Consolidation and Cross-Platform Reporting

The State of Missouri had six data centers operating on independent mainframes. To save costs, the State consolidated into one mainframe-based data center and began a charge-back system, charging state agencies for transactions conducted in the consolidated environment. The State has also consolidated other functions – including base financials, inventory, fixed assets, human resources and payroll processes – in its own enterprise system called SAM II. In this process, the Patrol lost its independent mainframe and a number of customized legacy applications and processes. The State has also standardized its information system technology in an effort to eliminate "islands" of technology. As a result, the Patrol also has to phase out technologies native to its custom environment.

To meet these challenges and cut costs and reduce demand on mainframe resources at the State of Missouri's consolidated data center, the Patrol is reengineering its legacy systems and implementing a data warehouse strategy that allows it to retain local control over its data while giving users the ability to report across multiple platforms

and disparate data sources.

The Patrol's challenge is to cut costs while providing growing numbers of users with wider access to data and still providing legacy reports end users are used to. Their solution – transition of legacy systems to current technologies that facilitate data warehouse reporting – requires that the Patrol develop cross-platform reporting that spans data structures and data centers.

##### National Interfaces and a Central Repository

To comply with NCIC, UCR, and NIBRS regulations, the Patrol has to meet diverse federal, state, and local require-

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-Larry Lueckenhoff,  
Application Development Manager,  
Missouri State Highway Patrol

ments for interfaces, data submission, and reporting. The State is conforming to federal requirements and guidelines set by the National Crime Information Center (NCIC), in its push to get criminal rap sheets, photographs, and other critical information to the officer in the field. This enhanced architecture also facilitates the move of criminal justice information to the Internet.

The Patrol is also building a central repository to meet federal reporting requirements. This system will accommodate statewide Web-based Uniform Crime Reporting (UCR), and ultimately a statewide system compliant with National Incident-Based Reporting System (NIBRS) guidelines.

##### New Internet Services

The patrol has numerous public service plans for the Internet, including posting statewide road conditions, establishing a sex offender registry, and conducting criminal background checks. To expand their services on the Internet, the Patrol faces more challenges: network and security issues, legal issues, and resistance within the law enforcement community.

An Integrated Business Intelligence Solution  
To meet these challenges, the Patrol is building its infrastructure with Information Builders' comprehensive, integrated product line, rather than implementing point solutions.

The Patrol is using Information Builders' business intelligence technology – WebFOCUS and FOCUS – to perform reporting across all its systems and turn data into information. And they are using Information Builders' integration technology – from iWay Software – to integrate and move data across platforms for cost-effective access.

By using a common technology, the Patrol can reengineer legacy applications with minimal coding. "All we have to



change is the copy procedures and the data access structures to move the data to a different database on a different platform," says Lueckenhoff.

Specifically, the Patrol is using software from iWay Software, an Information Builders company, to move data from its operational DB2 databases running on MVS on the mainframe to a DB2 warehouse structure. Information Builders Consulting is working with the Patrol to analyze the data structures, design the data marts, build the metadata and report procedures, and enable the application for the Internet.

As the environment grows, the Patrol has plans to move the MVS DB2 warehoused data structures to UDB on its RS6000 platform, where, Lueckenhoff explains, "we have local control over it, our users have controlled access to it, and we don't have to pay for it."

This infrastructure makes it possible for the Patrol to make numerous changes...

- Redesign legacy applications with new GUI interfaces, including the Missouri Uniform Law Enforcement System

(MULES 3), that interface with the Fed's NCIC system

- Phase out MSHP specific "islands" of technology
- Write its own reports from the State's ERP system (SAM II)
- Roll out Web applications quickly and cost-effectively across the whole organization
- Implement a managed reporting environment for Web-based business intelligence so administrators can control the performance and security of the system

#### Partnering for Long-Term Growth

"Because we've stuck with a common technology that's portable across platforms, we had the infrastructure there to do a lot of things we're doing now," Lueckenhoff explains.

The Patrol began working with Information Builders in 1989, building a PC-based criminal case management system that's still running today. "We've stayed with Information Builders because of the consistency across platforms, scalability across platforms, consistency across technologies," says Lueckenhoff. "We experienced relatively high turnover, and I can train users in one standard source for reporting and when we move into a different platform, they can still be operational and functional. I don't have to change code. I can change the data drivers. So it's portable and flexible, and it's consistent across all platforms. It's stable and steady."

Information Builders has helped the Patrol make the transition from mainframe-based legacy system reporting to enterprise-wide, cross-platform, multi-technology reporting. And now it's helping the Patrol make the transition to a fully automated Web-based system for gathering and exchanging information with all its constituents.

The Patrol's end users – from the public to troopers in the field – will have timely access to critical information through a simple interface that isolates them from complex back-end technologies. Its system administrators will have local control of the warehoused data and be able to manage the distribution of information while still enabling users to do more on their own. The Patrol and the State will reduce their cost of operation, while having flexible design options that support future growth.

The Patrol expects big gains in productivity – for the Patrol's administrators and troopers, the State, and the public. State, local, and federal organizations can coordinate with one another more efficiently. The Patrol can spend less time on paperwork, get better information faster, and deliver more effective protection of the public. And the government as a whole can be more accountable to the public, fulfilling the public's need to know and being more fiscally responsible. 🌐

Eberly Mareci is head writer and manager of Information Builders' Creative Team.