Washington's Justice Information Data Exchange Program

Executive Summary

Criminal justice information -- such as warrants and convictions -- must be shared among separate law enforcement agencies across the state. Sharing this information is an involved process when data is stored in various formats and among multiple agencies, such as city police departments, County Superior courts, and state information centers. Limited access to statewide criminal justice information in Washington State leads to time-consuming searches of the information needed to make enforcement decisions in the field, press charges, or determine sentences. In addition to lost time, collecting information from multiple sources can lead to inaccuracy, incompleteness, or other significant errors that affect the public safety.

To better assist state and local law personnel and the public, the Washington State Department of Information Services (DIS) collaborated with state and local agencies to address these information gaps. The Justice Information Data Exchange (JINDEX) is a result of this collaboration. The JINDEX is a shared integration platform designed to increase public safety by allowing for the exchange and transfer of data and information in a timely, complete, and accurate way throughout the statewide justice community.

The development of the JINDEX resulted in the state's successful deployment of two applications that support this objective:

1. The first is the *Statewide Electronic Collision & Ticket Online Records* (SECTOR) application, a system that automates the ticketing and collision reporting process. SECTOR reduces processing time and eliminates the inaccuracies, corrections, and modifications normally associated with the paper based process. Preliminary feedback indicates a reduction in traffic stop times, thereby improving officers' and violators' safety.

 2. The second application is the *Possible Criminal History and Case and Criminal History* (PCH/CACH) application, which provides authorized law enforcement professionals with quick and seamless access to a person's criminal and court case history. With PCH/CACH, information from multiple criminal justice agencies is returned through a single query -- simplifying investigations, charging decisions, and sentence determinations.

In summary, the JINDEX integration platform improves public safety by providing the transport for criminal justice practitioners to exchange and transfer information and data in an accurate, complete, and timely way throughout the state using the PCH/CACH and SECTOR applications. In the long term, JINDEX will provide the transport allowing jurisdictions to deploy additional applications, like PCH/CACH and SECTOR, that improve operations through the effective, timely and accurate sharing of data throughout the state.

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The Challenge
Criminal justice information is highly dispersed among specific state and local agencies responsible for gathering information relating to each step of the law enforcement and adjudication process. Law and justice activities such as investigations, arrests, charges, sentencing, incarceration, and community supervision require the sharing of information to be efficient and effective. Local, county, state, tribal, and federal agencies are responsible for different roles in this process and have utilized technology tailored to their individual functions and needs. This resulted in the development of information systems that do not easily communicate with each other, isolate the information they contain, and make data sharing incomplete, cumbersome, and untimely.

A means to share data was needed that could move isolated information to where it is needed, when it was needed, and enable efficient processing of interdependent data among agencies. Successful deployment of this infrastructure would reduce redundancy, and improve the timeliness, accuracy, and availability of critical justice-related information.

The Solution
The Department of Information Services' Justice Information Network (JIN) Program collaboratively developed and deployed an integration platform called the JINDEX. The objective of the JINDEX is to leverage the significant investments in the existing technology and systems within state and local justice agencies. The JINDEX uses the principles of Service Oriented Architecture (SOA), and the Global Justice XML Data Model (GJXDM) which eliminate the need for participating agencies to modify their existing business processes.

The SECTOR and PCH/CACH applications used the JINDEX to deploy solutions that provide for the exchange of critical justice-related information in a timely and accurate way which increases public safety and results in operating efficiencies among criminal justice agencies across the state.

The ***Statewide Electronic Collision & Ticket Online Records*** application creates a seamless, electronic document flow across multiple state agencies for traffic citations and collision reports. State and local law enforcement officers are able to generate electronic traffic and collision reports in their patrol cars using a scanner and laptop computer. These electronic documents are uploaded to the central Washington State Patrol (WSP) SECTOR server and sent to the JINDEX. Once received by the JINDEX, these records are routed to the Washington State Department of Transportation (WSDOT), the Department of Licensing (DOL), and the Administrative Office of the Courts (AOC) for processing and disposition. The JINDEX eliminated the need for agencies to develop expensive, proprietary interagency exchanges. This process ultimately allows electronic tickets to be delivered to local courts of jurisdiction without ever having been placed on paper or touched by human hands. As a result, processes that once took days can be accomplished in seconds.

Each year, nearly 160,000 collision reports and more than one million traffic tickets are processed in Washington. The WSDOT estimates and a national study found, that approximately 10 percent of all tickets and collision reports contain errors. The SECTOR program is specifically designed to eliminate errors by eliminating the need for multiple agencies to re-enter information

SECTOR will result in better data being delivered faster. The information is important because it helps organizations make decisions on roadway improvements and collision and fatality reduction -- in addition to improving licensing records and expediting court cases. Time-savings within agencies can be used on other needed services for the public.

"Electronic ticketing is a common-sense program that will improve accuracy and accountability," said Governor Chris Gregoire. "It allows law enforcement officers to spend more time protecting the public, and less time filling out paperwork."

"Prior to testing the electronic system, I timed a number of my traffic stops," said Officer David Johansen of the Lacey Police Department. "Electronic ticketing has cut these times by about half, allowing drivers to get back on the road faster."

The *Possible Criminal History and Case and Criminal History* application utilizes the translation and information-gathering capabilities of the JINDEX to provide law enforcement officials with information from multiple data sources with a single query. This highly integrated cross-boundary application was developed through the partnership of two local government county agencies, two executive branch state agencies, and one judicial branch state agency. Through the use of SOA and legacy-to-XML translation, the JINDEX allows for local control over data ownership and service applications. Law enforcement officials only need to sign on to their 'home' application to gain access to information contained in state and federal systems. The user's interaction with familiar interfaces eliminates additional training and learning curves, and yields a critical business result - improving public safety by getting better, faster information to law enforcement officers in the field.

PCH/CACH provides efficient access to criminal history information contained by the Washington State Patrol and court case information contained by the AOC. The application is being used by law enforcement agencies in King and Yakima Counties.

Timing
The JINDEX was placed into operation on January 26, 2007 and has successfully conducted over 9,000 transactions. PCH/CACH and SECTOR will be available to other local agencies in July, 2007 and will continue to expand to every county over the next two years.

Additional Benefits and Results
The JINDEX improves government operations in three ways. First, the JINDEX has transformed the way intergovernmental IT collaboration takes place. The SOA approach lets agencies achieve the benefits of collaboration without changing the way their own, familiar applications operate – and without adding more applications that staff must learn how to use. This is characterized by the lack of disruptive impacts that application users and technology support staff would otherwise endure using more traditional system integration approaches. Second, it facilitates the seamless integration of paper based exchanges that drastically improves the timeliness and accuracy of information which translates into significant cost savings. Lastly, it eliminates the need to repeatedly query multiple databases for crime-fighting information. Quick access to relevant information allows law enforcers to concentrate on addressing incidents and crimes rather than tedious information gathering.

Hardware and Software
The design of the JINDEX infrastructure provides an integrated justice application platform that is:
•cost-effective
•high-performance
•scalable
•reliable
•open

The JINDEX environment currently consists of four HP servers and two Cisco local directors. Two of the servers are designated as application servers; two as database servers. The application

servers are network load-balanced using the local directors. The two database servers are set up in an active/passive cluster.

Microsoft BizTalk was selected as the integration broker and SQL Server as the database management system. The requirement for being as open as possible led to the adoption of the web services (WS-*) standards for communication between the JINDEX and client agencies. This requirement also led to the GJXDM as a standard for data exchanges.

As application demands grow, this design gives the DIS the flexibility to scale by either replacing the existing servers with more powerful servers; or adding additional servers to the environment; or both. The design also allows DIS to make infrastructure changes without causing an outage to customers and partners.

Outreach
The JIN Program is actively promoting the benefits of the JINDEX applications across the state. The two JINDEX applications were the subject of numerous positive stories in the print, on the radio, and on television. As use of the JINDEX expands over the next two years, JINDEX partners and program staff are participating in numerous stakeholder conferences, local law and justice consortium focus groups, and national conferences. All of these efforts are aimed at increasing the level of awareness of the JINDEX and its applications, the benefits of SOA, and the GJXDM. In order to increase the utilization of its applications, DIS developed informational and instructional multimedia available via the web and will host technical implementation training sessions over the summer.

PCH/CACH Overview

In-vehicle Computer with non-SECTOR Software

In-vehicle Computer with SECTOR Software

Law Enforcement Agency

Office workstation with non-SECTOR Software

Back office Database

Web Services

Data Collection

Data Dissemination

Law Enforcement Agency

Web Services

Back office Database

Office workstation with SECTOR

Collision Data

Citation Data

Collision Data

Citation Data

JINDEX Message Broker

Citation Data

Web Services

Administrative Office of the Courts

Citation/ Adjudication Data

Web Services

Judicial Information System

Collision Data

Collision Data

Citation/ Adjudication Data

Department of Transportation

Web Services

Web Services

Department of Licensing

Statewide Collision Database

Driver License Database