

## Forensic Advantage<sup>®</sup> gives the Division of Forensic Science simple tools to help solve difficult crimes

The Division of Forensic Science (DFS), a division of the Commonwealth of Virginia's Department of Criminal Justice Services, wanted to replace its existing Forensic Automated Case Tracking System. The division selected Forensic Advantage Systems to replace the aging system with its Forensic Advantage Case & Evidence Management System. The new application provides examiners with a suite of tools aimed at improving their efficiency and effectiveness.

### Background

As a division of the Commonwealth of Virginia Department of Criminal Justice Services, the Division of Forensic Science (DFS) is a nationally accredited forensic laboratory system. DFS serves all state and local law enforcement agencies, medical examiners and Commonwealth's Attorneys. DFS examiners provide technical assistance and training, evaluate and analyze evidence, interpret results and provide expert testimony about physical evidence recovered from crime scenes. With nearly 300 employees, DFS supports its state-wide constituency from four regional labs located in Richmond, Fairfax, Norfolk and Roanoke.

Forensic laboratories rely heavily on lab-centric technologies to collect and analyze evidence. As a leader in its field, DFS is committed to leveraging technology to improve communication and enhance the productivity of its forensic examiners.

### Situation

In the past, DFS had been using an IBM application named FACTS. While functional, the system had difficulties scaling and was not flexible enough to support the agencies' growing requirements. In addition to delaying end-of-month reports, the performance of the existing AS/400 solution had degraded to a point of having a negative impact on the productivity of each and every system user. As a result, the agency set out to implement a suite of tools to support the organization's existing business processes while providing room for growth and adjustment.

DFS evaluated several products but chose Forensic Advantage Systems to develop the new solution. Forensic Advantage – Case & Evidence was selected by DFS based on its usability, cost effectiveness and data-driven design. In addition to supporting the agency's existing business model, the application provides a platform for future growth and business process changes.

### Overview

#### Background

The Division of Forensic Science (DFS) is a nationally accredited forensic laboratory system serving law enforcement agencies, medical examiners and Commonwealth's Attorneys throughout Virginia.

#### Situation

DFS wanted a tool that would support existing business processes but allow for growth and adjustment.

#### Solution

Forensic Advantage – Case & Evidence enables a forensic laboratory to offer quality and consistency while improving throughput and clarity.

#### Benefits

- Improved productivity
- Improved communication
- Reduced costs
- Risk mitigation
- Enhanced security

#### Associated Microsoft products

- Microsoft<sup>®</sup> Office System 2003
- Microsoft Windows<sup>®</sup> SharePoint<sup>™</sup> Services
- Microsoft Office SharePoint<sup>™</sup> Portal Server 2003
- Microsoft SQL Server<sup>™</sup> 2000
- Microsoft Exchange Server 2003
- Microsoft Windows<sup>®</sup> Server 2003



The familiar interface and tools of the solution improve the throughput of examiners while enhancing the quality, consistency and accuracy of their findings

### Solution

The application provided by Forensic Advantage Systems, Forensic Advantage – Case & Evidence, was specifically designed so that examiners could leverage simple tools to solve difficult crimes. The solution offers the flexibility, reliability and security necessary to ensure the smooth operation of a forensic laboratory. It automates communication with law enforcement agencies regarding the transfer of evidence, case status, analysis and findings. Integration with legacy systems is facilitated via Web Services.

Forensic Advantage ensures accountability for the evidence chain of custody, collects and associates scientific analysis for evidence submitted, provides query and statistical reporting, facilitates inter-lab connectivity and generates certificates of analysis for use in criminal proceedings. Leveraging Microsoft Office 2003, Forensic Advantage improves individual productivity by enabling forensic examiners to focus on delivering timely, accurate results without requiring extensive system training.

A familiar Outlook-like interface improves the throughput of examiners' work while enhancing the consistency and accuracy of their findings. A fully integrated document imaging system enables documents to flow between locations without the inefficiencies of paper records. As the application's long-term document repository, SharePoint Portal Server 2003 provides creative index, search and analysis functionality.

Microsoft Office InfoPath™ 2003 provides an easy-to-use interface for data entry and enables timely definition and capture of data sets from laboratory equipment. Microsoft Office Word 2003 is used to generate reports and for the standardization of approval and sign-off processes. Meanwhile, Microsoft Office Excel 2003 pivot tables are used for data analysis. Category programs such as Microsoft Office Visio® Professional 2003 may be used to map crime scenes, while Microsoft Office OneNote™ 2003 is used to capture notes from the forensic examiners. Windows SharePoint Services has been applied to manage case files and SharePoint Portal Server 2003 provides extensive search and index capabilities.

### Benefits

#### Communication and collaboration

The quantifiable benefits of Forensic Advantage revolve primarily around its communication and collaboration features. Tablet PCs, combined with OneNote 2003 and InfoPath 2003, enable examiners to prepare documentation while performing analysis in the lab. InfoPath 2003 also enables external entities to enter evidence information before it is delivered physically. Electronic notification of case results are secured via Microsoft Rights Management Server. Word automation and approval routing encourages collaboration while Windows SharePoint Services collects case information and notifies the primary examiner of updates and changes.

# FORENSIC ADVANTAGE™ SYSTEMS

## Business Intelligence

Business Intelligence solutions provide accurate information to the right people at the right time. As a result, agencies make better decisions, faster. Forensic Advantage ensures that examiners have access to evidence and lab results at the earliest possible moment. With information close at hand, examiners can publish their findings in a timely manner, enabling law enforcement officers to respond quickly and decisively. Finally, instant access to case history allows any employee to respond to requests for case status and/or information

## Work Management

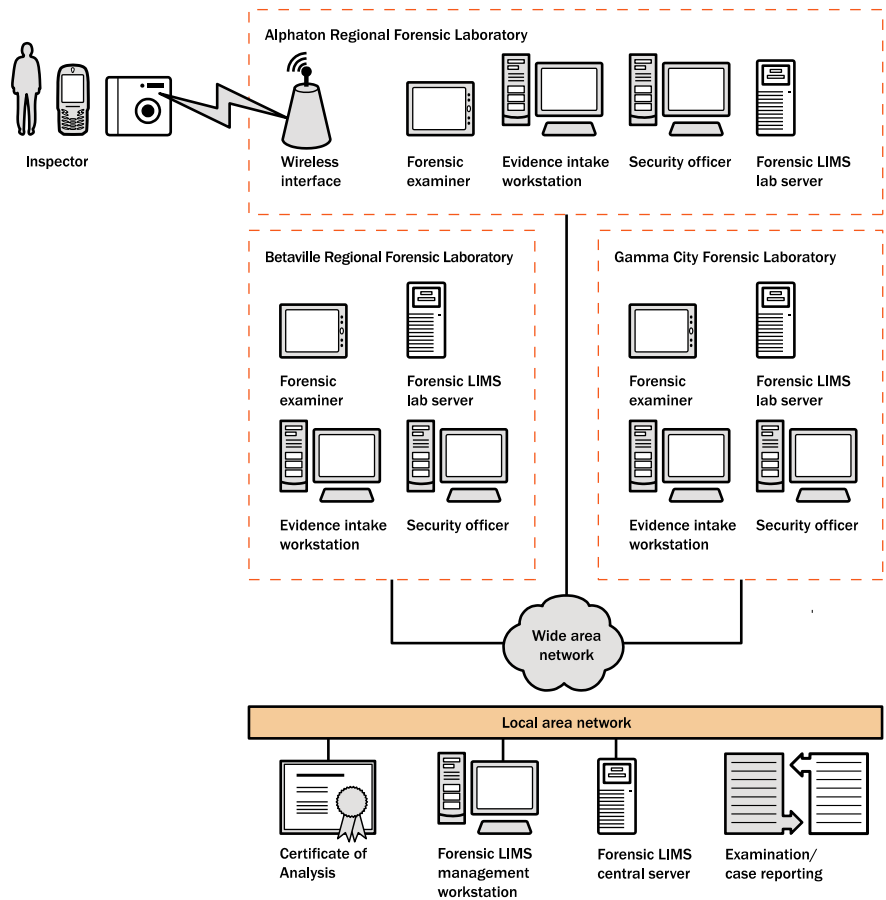
A real-time status for each case enables section supervisors to effectively distribute workloads. Because the solution is based on a multi-master database model, accuracy and reliability are maximized in each location. The application also tracks case throughput so that management can accurately predict staffing requirements and case turnaround. Examiner court appearance schedules are generated and tracked using Outlook 2003.

## Ease of use

The success of any solution is measured by the benefits generated for the organization. DFS is already enjoying time savings as a result of allowing remote data entry during the evidence receiving process. In addition, online case histories enhance customer service and constituent communication. The use of Tablet PCs will increase examiner

productivity by focusing their efforts on evidence analysis rather than system manipulation. Standardized worksheets enforce consistency during evidence examination and analysis.

Forensic Advantage LIMS integrates with the 2003 release of Microsoft Office



Automated deliverables allow DFS to ensure quality while improving throughput. The scalability of the application enables the organization to grow without concerns about system limitations. Cross-case analysis and search functionality also provide staff with additional methods for matching seemingly unrelated crimes. At the same time, training requirements are minimal. The system's data-driven design enables DFS to change business models without modifying the system. Finally, the system's reporting tools enhance manageability and predictability.

Above all, Forensic Advantage allows DFS to serve its clients in a manner that ensures quality and consistency while improving throughput and clarity.

### **Forensic Advantage Systems (a division of The Computer Solution Company)**

Forensic Advantage was created to address the unique needs of forensic laboratories that recognize the benefits of conducting their collection and case management activities electronically. The Forensic Advantage Suite of modules delivers the ability to improve Case and Evidence, DNA and DUI data management while leveraging Microsoft Office platform. The Suite improves individual productivity by enabling forensic examiners to focus on delivering timely, accurate results.

As a Microsoft Gold Certified Partner, TCSC specializes in providing results-oriented business productivity solutions. The solution provider's motto 'Business Solutions, Not Just Computers', clearly states its goal of creatively leveraging proven technologies to address customer needs. While Microsoft-centric, TCSC recognizes that legacy systems must be incorporated as part of the overall solution to maximize its clients' investments in technology, both old and new.

TCSC serves the commercial and government sectors by developing applications in Microsoft Visual Studio® .NET that can be integrated with Microsoft SQL Server™ and the Microsoft Office System. TCSC also provides Internet and portal solutions that leverage Microsoft Windows SharePoint™ Services, Microsoft SharePoint Portal Server and Microsoft Content Management Server.

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