

## Case Study

## Latent Encoding Workstations

*Informax Data Systems/US Department of Justice,  
Federal Bureau of Investigation*

### solution areas

Enterprise Data Management Solutions

- » Client/Server Application Development
- » System Architecture and Database Design
- » System Development and Integration
- » Database Administration and Management
- » Data Conversion

Business Process and Knowledge Management

- » Training and Help Desk Services
- » Business Process Enhancement
- » Transaction Flow Analysis
- » Logic Process Modeling

### technology

- » C
- » Developer/2000
- » Fortran
- » UNIX

### Challenge

Create an interim fingerprinting solution for the Federal Bureau of Investigation (FBI) while they awaited their replacement system to go live. The existing Fortran Latent Encoding Workstations (LEWS) system was malfunctioning and outdated. At the time of contract award, less than 16 percent of the fingerprint encoding workstations were working and by the time the project was in process, less than 6 percent were being used. Due to this fact, there was a severe backlog of open cases.

### Solution

Working with Informax Data Systems, Visual Concepts designed and integrated a network of Sun workstations to support fingerprint specialists using scanners and image processing software to manipulate and encode fingerprint data. This interim solution allowed FBI latent fingerprint specialists to track, maintain and match fingerprints gathered from crime scenes with the FBI's Integrated Automated

Fingerprint Identification System (IAFIS).

The company designed and installed an Oracle database and developed Oracle forms in an X-Windows environment to facilitate the management of suspect data. The database built by Visual Concepts housed all cases which were used to run searches across the IAFIS. Visual Concepts' solution was created with standards-based UNIX and C. Using Media Cybernetics' software, the solution also allowed for minutia encoding, which drastically improved matching. The company was responsible for training operations staff, system administrators and fingerprint specialists and for maintenance of the new solution.

### Results

- » Total solution increased fingerprint-matching rate by 30 percent
- » Helped resolve many backlogged cases

*"Visual Concepts did an excellent job. If it wasn't for them we wouldn't have gotten the job done."*

- Informax Data Systems



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