

Automatic Fingerprint Identification System (AFIS) based Criminal Tracking System (CTS) for Police Departments

Malawi Police improves justice delivery process through speedy detection of criminals & precise crime investigation with AFIS based Criminal Tracking System



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Customer Profile

Malawi Police Service (MPS) is a Malawi Government organ currently under Ministry of Internal Affairs & Public Security. Its operations are provided for under the laws of Malawi, notably in the Constitution of the Republic of Malawi & Malawi Police Service Act (MPS Act). Major functions of MPS are Prevention, investigation & detection of crime; Apprehension & prosecution of offenders; Maintenance of law & order; Protection of property, life, fundamental freedoms & rights of individuals and Enforcement of all laws & regulations under which they are directly charged.

Business Situation

Malawi Police Service department aimed at improving its justice delivery process through speedy and precise investigation of crime and detection of criminals. MPS's fingerprint bureau was collecting fingerprints & other important information of all criminals and storing them in records manually. MPS was using the same manual procedure for detecting & analyzing criminal information which was not only outdated but also did not meet the critical requirements of criminal investigation department.

As part of their initiative to enhance crime fighting capabilities and create a safe and secure Malawi, MPS wished to implement a system that would enable them to share real-time criminal information across police departments at both local as well as international level, thereby resulting in improved investigation procedure, crime prevention, better tracking & detecting of criminals, suspects, accused & repeat offenders and reduce the rate of errors caused due to manual information entry into the records.

Solution

MPS was facing challenges like delay in fingerprint search, piling up of criminal records in paper format, poor filing of results & duplicate records, more workforce requirement to eliminate outdated records, loss of records and human judgment prone to mistakes and errors.

Techno Brain made a thorough study of MPS's requirements and implemented criminal investigation system (CTS) built on automatic fingerprint identification system (AFIS) at their Lilongwe headquarter. Techno Brain's CTS solution is an automated application that stores fingerprints & demographic data of the criminals in a centralized database. Role based access allows the officials from various police stations across Malawi to search for criminal data like fingerprints in times of crime and verify against the information stored in centralized database. This helps the fingerprint bureau of investigation department to reduce the average time taken to search, match & verify fingerprint of the accused within high volumes of database and concentrate more on speedy investigation and delivery of justice. Modules implemented in CTS include windows based

Customer:

Malawi Police Service (MPS) is a government department under Ministry of Internal Affairs and Public Security. MPS's main objective is to create a safe and secure Malawi.

Industry:

Public

Business Situation:

MPS was looking to implement automated fingerprint identification system (AFIS) to track criminals for improving its justice delivery process through speedy investigation of crime.

Solution:

Techno Brain implemented AFIS based Criminal Tracking System facilitating MPS to track & detect criminals at a faster rate and improve crime prevention & investigation rate.

Benefits:

- Improved investigation and crime prevention rate
- Fast identification of fingerprints by reducing the average time taken to search
- Minimized risk associated with manual procedure of fingerprint identification
- Improved services & efficiency

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Booking Station & Fingerprint Analysis & Latent Examiner applications and web based application to manage User Administration module. Other modules include Configuration Master, Report, Criminal & Private Inquiry, Assign Task, View Details, Searchers, Verifiers, Scene of Crime, Latent Examiner, Publications and Fingerprints Modules.

Major features of Criminal Tracking System:

- Enables collection, storage, retrieval, analysis and ensured timely sharing of criminal information from headquarter to investigation & police departments across the country and as well as internationally
- CTS is designed in such a way that it facilitates departments to handle large volumes of fingerprint search requests with stringent response times with high accuracy, minimal errors and faster results
- High powered servers, work station & barcode scanners for capturing, verifying & matching the fingerprints against the existing fingerprint database
- Latent Examiner application marks the minutia points in latent fingerprints and submit them for searching in fingerprint identification system
- Booking Station & Fingerprint Analysis application facilitates the official / user to capture demographic & biometric (fingerprints) data of the criminals allowing for search & analysis of fingerprint against data stored in centralized database

Technologies

MS .Net, MS SQL Server 2008, IE using IIS Web Server, Visual Studio 2010

Benifits

Techno Brain's AFIS based Criminal Tracking System helped Malawi Police to reduce human rights violations through quick & correct identification of criminals there by speeding the justice delivery process, increased public confidence and overall security of the country.

Key benefits of Criminal Tracking System:

- Reduced the average time taken for searching a fingerprint against the data stored in centralized database
- Enabled fast identification of fingerprints resulting in increased crime detection rates
- Increased operation efficiency of the fingerprints bureau & investigation department by:
 - o Reducing the necessity to manually perform fingerprint search and verification
 - o Improve the communication system across police stations
- Improved coordination & information sharing within law enforcement agencies
- Helped MPS in better management of criminal records and their internal operations
- Facilitated better tracking of criminals, suspects, accused and repeat offenders
- Improved efficiency and effectiveness of criminal investigations at Malawi Police