Real-Time Integrated Crime Information System Model

TREO Talk Paper

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Abstract

Adoption of Information Technology (IT) enables access to information necessary for effective performance of numerous life activities such as business, governance, crime control and prevention. Crime is a threat to economic, political and social security of any nation and a major factor associated with underdevelopment. Therefore, the prevalence of crime in the world today calls for serious attention and the degree of crime control and prevention of any society hinges on the efficiency of Law Enforcement agency (LEA)'s operations. LEA has the statutory responsibilities for providing public safety, protect public facilities and infrastructure, maintain order, and protect public officials.

Nigerian Government has adopted several strategies towards crime prevention and control such as establishment of security agencies, approval of vigilante groups as community crime control and prevention strategies and yet, crime is still on the incessant increase rate. Law Enforcement Agencies (LEAs) in most developing countries including Nigeria are confronted with some challenges that limit their crime fighting potentials. Some of these challenges include: delay in information dissemination, ineffective method of crime data capture (manual), lack of integrated systems for collaboration and lack of functional databases for proper crime information management. It should be noted that security of life, property, and welfare of the citizens are the most primary responsibilities of governments in modern society and therefore deserves topmost priority attention by the government in any country. Integration is defined as the electronic sharing of information at key decision point by two or more distinct justice entities without regard to time and location. Information available indicates that many disparate systems (banking system, educational system, criminal justice system, etc) have successfully embraced integration for resource sharing and collaboration leading to more productivity and improved decision making.

The motive of this work is for Nigeria and other developing countries to adopt this as a new strategies and innovations in the operations of LEAs to improve the security standard of the nation. This paper presents the design and development of a Model of Real-Time Integrated Crime Information System (ICIS) to enable LEAs and the public to collaborate in crime fighting. The specific objectives were to: design a conceptual model of a real-time ICIS; develop an ICIS that enables the public to instantly report crime electronically to LEAs, allows crime handling and agencies’ collaboration; build a hybrid of LEA’s centralized and distributed databases for effective crime data management and adopt a biometric technology to authenticate criminals. This ICIS is to be built based on the structure of Nigeria LEA and the Nigeria Police Force, National Drug Law Enforcement Agency, and Nigeria Custom services are participating agencies in the integrated system. The study will adopt quantitative research method. A hybrid database architecture (Centralised and distributed) will be used to design the model. A Middleware will be developed to integrate these agencies. A mobile phone emulator will be developed for crime reporting. HTTP and XML web services enables data exchange. One-time-password will be used as second level user authentication and biometric for criminal’s authentication. The ICIS will demonstrate how collaboration and instant flow of information will transforms LEAs’ activities and also improves public safety.