



## Common Integrated Police Application (CIPA) (A Project of Ministry of Home Affairs)

### Objectives

- Significant reduction in manual records/register maintenance at Police Stations.
- Elimination of duplicate and inconsistent record keeping.
- Facilitate maintenance of details of Criminals.
- Keep track of the Status of Cases.
- Introducing element of transparency in the working of Police.
- Facilitating Investigating Officer with availability of Records.
- Facilitating supervision by the Senior Officers.
- Generate various reports required from time to time.
- Faster Response to Public.
- Open Source software tools for Rollout at Police Stations.
- Ownership of Application with Government for onwards support.

### Background

Availability of relevant and Timely information is of utmost necessity in conduct of business by Police, particularly in investigation of crime and detection of criminals. Police organizations everywhere have been handling a large amount of such Information and huge volume of records. Information Technology (IT) can play a very vital role in improving the functioning of the Police organizations, by facilitating easy recording, retrieval and analysis of the pile of Information. Quick and timely information availability about different facets of Police functions to the right functionaries can bring in a sea change both in Crime & Criminals handling and related Operations, as well as administrative processes.

Criminals too in today's world have become techno savvy; they make maximum use of all the modern technologies and methods in committing crimes. This has facilitated them in operating over the length and breadth of the country also. If we have to effectively meet out challenges of Crime Control and maintenance of public order, creation of databases on Crimes & Criminals in digital form for sharing by all, cannot be neglected anymore. So, **all the States need to be at par in the use of IT, especially for crime and criminal related functions.** This requires that the efforts in police modernization should give top priority to information gathering, organizing and its dissemination among various Police organizations to give an edge over the criminals.

A number of attempts have been made by various police organizations to induct IT in this specific area for the past more than a decade or so. A detailed examination indicates that there are three major problems in our existing efforts:

- The objective of efforts made so far has been to collect data as required for the monitoring agencies. The efforts are put to build a comprehensively complex System to handle a large number of functions simultaneously, resulting in a Design, which can deliver results only when all the components work simultaneously, or else it fails to deliver results, leading to a roll back to manual system.
- Expectations of the designer of the System, to collect maximal data for future use, puts extra burden on the operational staff. That too, without re-engineering of either some of the functions in the process or procedures of manual records keeping, leading to overwork thus making the IT functions as second priority.
- A dedicated person is assigned in data entry for all functions at Police Station. The person concerned, responsible for the information being put in the system, should himself operate the system. So that, the policeman is allowed to work in his main line activity rather than shifting to data entry operations full time, which is unacceptable to the policeman.

There is a need to re-look at the philosophy of data collection at a central level. It has to be tied up with the automation of the processes at the primary sources of Data Generation. Once the primary source of data viz. the **Police Stations**, are automated, the derived data required at different levels e.g. District, State and Central, will automatically flow.

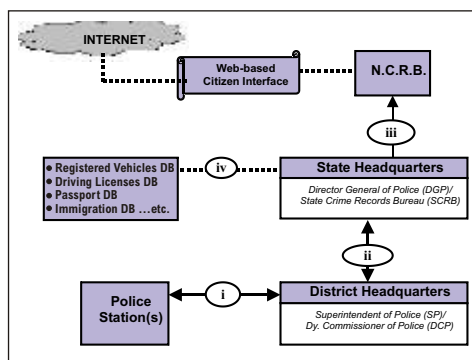
The strategy therefore was to 'Think big, Start small and Upscale as quickly as possible', rather than the old strategy of building big.

## The Developments

- The Ministry of Home Affairs constituted a Sub-Group (vide their order No.24021/25/2003-PM-I dated 22.03.2004), to develop Common Integrated Police Application (CIPA) Software on the police station level functioning from the point of view of provisions in the Cr.P.C., consisting of the DIG level officers from five States viz. Andhra Pradesh, Karnataka, Punjab, Delhi, and Arunachal Pradesh, with Dr. B.K. Gairola, Dy. Director General, NIC and Sh. Sharda Prasad, Director, LNJNI NICFS as Coordinator for the Sub-Group. The Sub-Group defined the scope, and identified the Functionalities, for the proposed CIPA Software (Version 0).
- A Technical Committee consisting of officers from NIC, NCRB and Delhi Police prepared Software Requirement Specifications (SRS), which was approved by the Sub-Group in June'04. The NIC was made the implementing agency vide MHA letter No.24021/25/2003-PM-I dated 14th June'04.
- The SRS was vetted by the Empowered Committee constituted by MHA, during its meeting held on 18th August'04, and approvals were given by the Empowered Committee for Development of the CIPA Software, and Piloting of this software in 6 nos. Police Stations of New Delhi district.

## The Framework

The framework for 'Induction of IT in Police' has been built around 'Investigation of Crime and Detection of Criminals' to start with, as this happens to be the primary Police function. The present attempt is to build an infrastructure and mechanism to provide the basis for evolution of Crime & Criminal Information System based on CrPC, which is uniform across the country, in a planned manner from the Police Station level onwards.



The nature of interaction among the various levels in the above framework may be as follows:

- A majority of Crime & Criminal Information originates from the Police Station level with the Registration of Cases of various Offences, of Cases, search & seizure of Properties, arrests of accused etc. during the investigation. Police Stations also gather information by regular surveillance of known/suspected criminals, and from the law & order point of view, in the respective area. Such Information from all the Police Stations within district will be accumulated at the District hqrs., for possible sharing by other Police Stations and the higher levels.
- The Information, need to be shared by all the Police Stations in the State e.g. missing Persons, stolen Vehicles, unidentified Dead bodies, Criminal Dossiers etc., including the Information required for monitoring purposes by the higher levels, flows from Police Stations to Districts to State hqrs., accumulated there and broadcasted back upto the Police Station level.
- The above information, as relevant, also transmitted to NCRB and made available to the Public through a

Web-based Citizen Interface on Internet.

- The databases created in Applications developed & implemented by other Departments e.g. Registered Vehicles, Driving Licenses, Passports, Foreign Nationals visiting India etc. are accessed by all the concerned lower levels upto PS through the State hqrs..

## Software Functionalities

- **Registration:** This module facilitates the Duty Officers (DO) in Registering a Case by capturing the details of the Complainant, Accused, Properties stolen/involved, Victims, and place & time of occurrence etc..
- **Investigation:** This module allows the Investigating Officers (IO) to record the **Events** of developments/progress as and when taking place/made by the IO from time-to-time in the Case e.g. Arrest/Surrender of Accused, Seizure of Properties, Witness Statements recorded etc., and also facilitate entering the text of his Case Diary.
- **Prosecution:** This module allows the Investigating Officer (IO) to record the **Events** of developments/progresses as and when taking place from time-to-time relating to the Prosecution stage in the Case e.g. Hearing of the case, Summons/Warrants issued by the Court etc..
- **Information:** This module facilitates in maintaining the various details of the Criminals within the jurisdiction of the Police Station, and the Listed Organized Gangs, and updating it time to time based on the information received from various sources e.g. Modus Operandi, details of Knowns, History of Involvements etc..
- **State Specific Requirements:** Any additional Inputs and/or Outputs requirement developed by individual States are made available through this module.
- **General/Daily Station Diary:** This facilitates capturing the information recorded by the Police Stations in its Daily Station Diary.
- **Reports/Registers/Queries:** generates various outputs required by different levels.

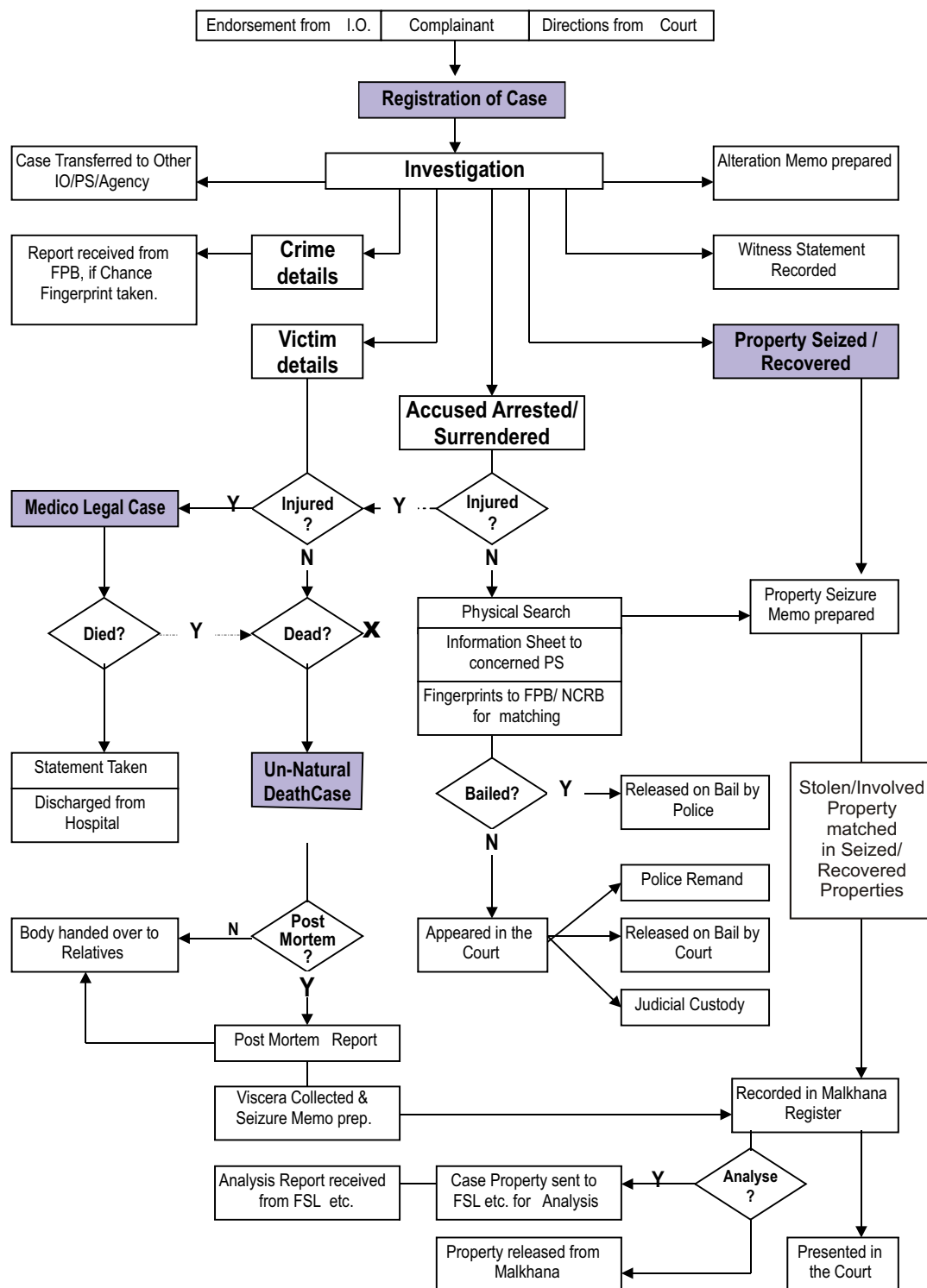


## The Workflow

Every Information relating to the commission of an offence, whether Cognizable or Non-Cognizable, as decided by the Station House Officer (SHO) by referring to the 1st Schedule of Criminal Procedure Code (CrPC) which lays down such distinction; if given in person orally, is reduced to writing, read over to the complainant, and a copy of the same is given to him/her. Every such information, whether given in writing or reduced to writing as aforesaid, shall be signed by the person giving it. The Information is then said to be Registered as Case at the Police Station.

After the registration of Case, the Investigating Officer (IO), to whom the Investigation of the Case has been entrusted, visits the scene of crime. He will record the statements of Victim(s), Witness(es); collect material evidence & exhibits and seize them by preparing Seizure Memo for each property seized; record the details of crime, modus operandi, methods, make sketch/drawing of scene of crime etc.; record the details of properties stolen, if any. Medico Legal Case (MLC) is made to get the necessary medical examination done, if the Victim is injured. In case of a dead body, necessary Inquest and/or Post Mortem are done. If the seized property requires expert opinion e.g. Firearm, explosive substance, bloodstains etc., the same is sealed and sent to Forensic Science Laboratory (FSL) for expert opinion. Fingerprints lifted from the scene of crime are sent for coordination to Finger Print Bureau (FPB).

The IO effects any arrest at the time of visiting the scene of crime or later during investigation, by filling the Arrest Form (I.I.F.-III) giving details of the accused, and recording the articles found in his personal search. In suitable cases, the fingerprints and photographs of the accused are taken, and the fingerprints are sent to the Finger Print Bureau (FPB) for comparison. In bailable cases, as per the guidelines laid down in 1st Schedule of CrPC, the arrested person is released by the IO after taking necessary Bail Bond. In non-bailable cases, the accused is presented before the Court. An entry is also made in the History Sheet/Personal Dossier of the accused to this effect, or an Information Sheet is sent to the concerned Police Station, if the accused belongs to some other Police Station any where in the country.



On completing the Investigation, the IO prepares his Police Report/ Final Report/Charge Sheet of the Case u/s 173 CrPC, and submits it in the Court for initiating the Prosecution proceedings, along with a notice to the complainant.

During the trials (Prosecution) in the Court, the Court Case Diary (CCD) is maintained to keep the details like Witness(es) examined, date of next hearing, Summons/Warrants issued to the accused/witness etc. The details of the Judgment given by the Court are recorded after the disposal of the Case by the Court, which include the Conviction details, type of disposal etc.

## Hardware/Software at Police Stations

- Client Computer Systems  
- 3 to 5 nos.
- Laser Printers  
- 1no. Duplex  
- 1 Multi Function Product (Print/Scan/Copy)
- UPS 2KVA Online  
- 1 no.
- 8-Port Switch  
-1 no.
- Systems Software (Linux OS, PostGreSQL RDBMS)



CIPA Computer Centre at Police Station

## The CIPA Software Development and Rollout in States

1. The CIPA Software is developed in JAVA, and implemented under Open Source environment viz. LINUX (OS), PostGreSQL (RDBMS). The Design Consultant hired from SUN Microsystems, the creator of JAVA. The development is undertaken at NIC. The Development Centre is established with necessary Hardware, Software, Networking, and Furniture etc., at the NIC Headquarters, New Delhi. A "Central Development Team" is constituted, consisting of the professionals taken from NIC, officers/officials from NCRB and Delhi Police, and the SUN-Certified JAVA Programmers hired from the market.
2. The Software developed put to Pilot Run at 6 nos. Police Stations in New Delhi district, since April'05. Necessary modifications carried out based on the feedbacks collected during Pilot Run.
3. "State Development Teams" constituted by the State Govts., consisting of the personnel from NIC State Units, SCRxB, and Police Deptts., take charge of the centrally developed CIPA Software, and carry out the development for the local requirements within the existing Software framework, and under strict version control and instruction from the "Central Development Team". State Development Teams also provided with hired JAVA Programmers for limited period for carrying out software development.
4. Rollout of CIPA Software in States taken up at 10% selected Police Stations to start with. One technical person placed full-time at each of the selected Police Stations for a period of six months for on the job training and handholding support. One senior technical person provided at

district hqrs. (@1 per 10 PSs) for trouble shooting on demand. The Supply of the Hardware/Software, Training and the CIPA Software implementation & handholding support etc., would be entrusted to a single Agency for all the Police Stations in a State.

5. State-level CIPA Implementation Committee under the chairmanship of the IG/DIG In-charge of Police Modernization in the State/Head of the SCRb, with SIO NIC State Unit as one of the members. District-level CIPA Implementation Committee under the chairmanship of the police Head of the District, with DIO NIC District Centre as one of the members.
6. The "Central Development Team" imparts training on CIPA Software to the State level "CIPA Development Teams". The Supervisor level persons, placed from Agency at District level, imparted training by the "State Development Team" on CIPA Software, who in-turn imparts training at District hqrs. to the Handholding Persons. The Handholding Persons placed at each Police Station then be responsible for imparting necessary on-job training both on Office Automation Software and the CIPA Software to the identified operational staff and the supervisory officers of the Police Stations.