ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 10, 2022

INTER-OPERABLE CRIMINAL JUSTICE SYSTEM: A TOOL FOR FASTER DISPENSATION OF JUSTICE

Vismaya Bansal

Research Scholar, Faculty of Law, Shree Guru Gobind Singh Tricentenary University, Budhera, Gurugram

ABSTRACT

The Inter-operable Criminal Justice System is an initiative of the e-Committee of the Supreme Court of India, to enable the seamless transfer of data and information amongst the different pillars of criminal justice system, that include the courts, police, jails and the forensic science laboratories, from a single platform. This paper gives an overview of the ICJS project, its need, its objectives and analyses the status of implementation of the ICJS in the light of different geographical terrains, internet connectivity issues and interests of the individual stakeholder departments. The paper shall also outline the role of ICJS to resolve the technical and legal issues pertaining to transparency, absence of adequate investigation tools, and non-availability of factual data, delay in information flow amongst the pillars of Criminal Justice System in delivery of Justice and determine the scope of the project in future for better implementation within existing legal framework by suggesting recommendations for the same.

KEY WORDS – ICJS, e-courts, Prison, Forensic, Fingerprint and prosecution.

HYPOTHESIS

The implementation of the ICJS project, is only the first step towards providing a connectivity between the pillars of the criminal justice system. There is a need for a robust legal framework, required amendments in the procedural laws and consistent administration to check its compliance at every step at a pan India level to achieve the objective of faster dispensation of justice.

PURPOSE OF STUDY

- To study the overview of the ICJS project, its need, its objectives and analyse the status of implementation of the ICJS.
- To examine the role of ICJS to resolve the technical and legal issues pertaining to transparency, absence of adequate investigation tools, and non-availability of factual data

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timely, delay in information flow among the pillars of Criminal Justice System, and determine the scope for better implementation within existing legal framework.

METHODOLOGY

The research study, follows the doctrinal method technique in gathering, comprehension and systematization of the sources and material available.

The study is doctrinal and didn't rely upon expansive field reviews. Fundamental sources like Indian Statues, reports of the various committees constituted by the government, published sources of data have been taken as the sources of study.

The reports published by the Police Authorities and committees constituted by the Supreme court of India have furthermore been discussed.

I. INTRODUCTION

The Criminal Justice System in India is a composite of three important wings that comprises of the Police, Judiciary and Correctional Administration[1]. The system followed in our country for the dispensation of justice is the adversarial system of the common law which has been inherited by us from the British Era, in which the timely availability of bonafide and old information plays a very important role in the dispensation and delivery of justice. Under the Constitution of India, Police and Prison are the State subjects but the Supreme Court at Central level and High Courts at State level administer the judiciary. The organisational structure, administration and functioning of all the wings/departments of criminal justice system are governed by the Central laws such as Indian Penal Code, Criminal Procedure Code, and Indian Evidence Act [2]. It is pertinent to note that the Courts, Police and Prisons have realized the role and importance of Information Technology tools over the time in automating their internal processes and have developed and internalised their own software namely, Case Information System (CIS), Common Integrated Police Application (CIPA) / Core Application Software (CAS) of Crime and Criminal Tracking Network & System (CCTNS) and ePrisons[3].

[1] The Prison administration involves security and discipline. It involves enforcement of rules and regulations in the management of prison system.

[2] Supreme Court of India, *available at* http://supremecourtofindia.nic.in/courtnews/2012_ issue_4. (Last visited March 2, 2023)

[3] An integrated system for computerising all the activities related to prison and prisoner management in the jail and provides the information about the inmates in real time environment to all entities, involved in Criminal Justice System,https://www.nic.in/products/eprisons/#:~:text=ePrisons%20computerize%20and%20integrate%20all,involved%20in%20Criminal%20Justice%20System. (Last visited on March 11, 2023)

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, Iss 10, 2022

The Inter-operable Criminal Justice System (ICJS) is made up of two important words i.e., ***"inter operable"*** which means "able to use and exchange information" and ***"criminal justice"*** which is a generic terminology for "the procedure by which criminal conduct is investigated, and punishment is consequently carried out"[4].

The Inter-operable Criminal Justice System, was concept conceived by the e-Committee, of the Supreme Court of India[5] and has then been implemented as a project under the Ministry of Home Affairs, which is designed to enable the seamless transfer of data and information amongst the different pillars of criminal justice system, like the Courts, police, jails and forensic science laboratories, from single platform.[6] The ICJS is being made available vide a dedicated and secure cloud-based infrastructure having high-speed connectivity. The body responsible for the nationwide implementation of the project is National Crime Records Bureau (NCRB) in association with the National Informatics Centre (NIC). The project is being implemented on a pan India level in collaboration and consonance with the Governments of the States and the Union Territories.[7]

II. NEED OF IMPLEMENTATION OF ICJS

In India, the issue of delay in the process of justice delivery is the main cause for visualizing the ICJS, by ensuring a continuous connectivity in the related information from different domains. Different organisations within the Criminal Justice System have disparate roles and have significantly different uses for Information Technology but sharing of certain information with others enhances the efficiency of every organisation within the system. The major reason of concern in the judicial system is the huge backlog of the pending cases in the courts. This pendency has been increasing over the years and resulting in increase in litigation costs, loss, or decreased reliability of evidence by the time of trial and inconsistency in the verdicts that ultimately reach at the trial. The result of which is that conviction rates go down and law-abiding citizens start losing faith in the criminal justice system. If we go by the statistics then

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[4] R. Thilagaraj, "*Criminal Justice System in India", in* J. Liu et al. (eds.), *Ph.D. Handbook of Asian Criminology*, Page No.199-211(Springer Science Business Media New York, 2013)

5 e-Committee is the governing body charged with overseeing the e-Courts Project conceptualized under the "National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary-2005"

[6] Dr. Saurabh Gupta, Ajay Singh Chahal, Sandeep Sood, Vision to Reality of Faster Dispensation of Justice through Inter-Operable Criminal Justice System-A Case Study, *available at*, https://himachal.nic.in/assets/pdf/awards/PaperICJSHP_eGovConf_10Dec2013.pdf (Last visited on March 8, 2023)

[7] Available at, https://ncrb.gov.in/en/ncrb-conference-good-practices-cctns-and-icjs (Last visited March 10, 2023)

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 10, 2022

it is been noted that there was a total of 2.68 crore cases pending in the country in various Districts and Subordinates Courts, of which almost 70% (1.88 crore) were criminal cases, as on 30th September 2012.[8] A consequence of delay in disposal of cases results in large number of under-trials being lodged in the prisons for very long periods. Many times, they remain in prison for a period longer than the maximum term permissible under the section applicable on the crime committed, if convicted in the trial. In view of the above statistics, it is realised that there is an urgent need of the ICJS system for speedier justice, by using Information Technology tools for integration of existing databases.

III. OBJECTIVE OF THE ICJS PROJECT

The objective of the ICJS project is to focus on integration of CCTNS with e-Courts, e-Prisons, Forensic Labs, Fingerprints and Prosecution, which are the pillars of Criminal Justice System. Broadly the project targets to provide search and visual analytics over various data sets and capacity to achieve *"one data once entry"* across all the pillars. It aims to integrate the CCTNS project with the e-courts and e-prisons databases in the first instance and with the other pillars of the criminal justice system i.e., Forensics, Prosecution, Juvenile homes and also establish a nationwide Fingerprint data base of the criminals in a phased manner.[9] The integration will be achieved by providing access to the Judiciary, Police and Prisons through a desktop dashboard to facilitate expeditious investigations, robust search facility for efficient retrieval of the criminal data to the pillars of the justice delivery system.

a. The major objectives of ICJS project are:

- To establish an effective criminal justice system across the country, by ensuring that the data across all pillars of criminal justice is interoperable and accessible.
- To ensure that the data pertaining to criminals is available at a centralized/ national application for search across data from all pillars using key identifiable fields such as FIR, Case No, Prison ID, etc., which shall help in tracing a record right from the registration FIR against suspects to imprisonment of convicts till the imprisonment period involving court case details, trials/ judgments, prosecution & forensics information.
- To ensure that all sites are connected through a common, dedicated, & reliable network for seamless exchange & interoperability of data between all the pillars of ICJS such as

[8] Available at, https://njdg.ecourts.gov.in/njdgnew/index.php (Last visited March 10, 2023)
[9] Available at, https://districts.ecourts.gov.in, https://districts.ecourts.gov.in/sites/default/files/ICJS-About-Us.pdf (Last visited on March 10, 2023)

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 10, 2022

crime & criminal related data such as FIR information, case data with photographic/video-graphic & documentary evidences, video recordings of court proceedings, and for enabling court proceedings over video conferences for faster delivery of justice in the country.

- To provide a robust network connectivity solution to the CCTNS/ ICJS project, to enhance the effectiveness of the existing criminal justice system, which shall enable the ICJS to leverage seamless inter-operability of crime and criminal data, appearance by hard-core convicts, in the court proceedings through video-conferencing, speedy disposal of court cases, provision of a variety of citizen services, better law enforcement.
- To ensure the aggregation of searchable data sets in ICJS database from Court, Prison, Police and Finger prints for carrying out national search for persons of interest and property.

IV. ROLE OF ICJS IN ENSURING INTEROPERABILITY BETWEEN THE PILLARS OF CRIMINAL JUSTICE

The major pillars of criminal justice include, Police, Court, Prison, Forensic, Fingerprints and Prosecution.

- **Police:** The Crime and Criminal Tracking Network & System (CCTNS) has been implemented by all States, for day-to-day functioning of the policing system right from Police Station to the office of the Director General of Police. Presently the system has no feature to send and receive data from other pillars like Forensic, Prosecution, Court, Prison and Fingerprint. The ICJS aims to fill up these gaps which would increase the efficiency of the Police system.
- **Prison:** Presently the e-Prison developed by NIC is deployed at major prisons in 24 States and other states are using locally developed IT systems for day-to-day functioning of the Prison. It has enhanced the administrative capabilities of the Prisons, country-wide digitization of the prison administration, monitoring various activities of Interoperable Criminal Justice System improving the efficiency and productivity of the Prisons. The e-Prisons Suite is already integrated with Interoperable Criminal Justice

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 10, 2022

System where all stakeholders (Prison, Police, Court and Prosecution) can work in an integrated environment.

- **Court:** All district Courts have been using the Court Information System (CIS) for their day-to-day functioning. The major modules in CIS, include capturing FIR detail, case filing Module details, allocating the judge and first hearing date, updating the hearing dates, handling the issue related to judicial custody, police custody, bail, parole, surety details etc. and the entry details of the quantum of punishment. These steps have been taken in order to accelerate the progress of ICJS project and provide a link between the courts and other pillars of ICJS.
- **Forensic:** Most of the states in India have the Forensic Science Laboratories (FSL) while some of them have also established the Regional and District Forensic Science Laboratories. However, none of these offices have uniform central application to capture and share information with ICJS. Hence, development of FSL software application for CFSL/ RFSL/SFSL offices across the nation, along with software roll out is the part of the ICJS implementation.[10]
- **Prosecution:** A suitable generic software to address the requirement of the prosecution department is to be developed under ICJS project. The key features of the software include, Data availability from ICJS using webservices to pull details pertaining to FIR, Police station List, District Courts List, CNR, Court Case Details, online recording of Legal Opinion for FIR & General Diary cases, online availability of PP/APP Profile., online recording and scrutiny of Draft charge sheet, online updating of Case/ Trial Proceedings, for effective monitoring, online updating of Case Disposal Status with type of disposal for analysis, etc.
- **Fingerprint:** The Finger print biometrics continues to be the most accepted and reliable biometric tool for establishing identity of persons. Finger prints continue to be the strongest pillar of authenticity. Once the new AFIS is implemented, consequently, all digitized Finger prints of all States/UTs would be available in the National Database. Some States/UTs having AFIS[11] that are not NIST[12] compliant. Finger prints from such databases would be routed through a bridge software which convert these non-NIST

[10] Available at, https://forensic.mizoram.gov.in/news/5/details(Last visited March 8, 2023)
[11] Automated Fingerprint Identification System, (AFIS) is a computerized fingerprint identification system where the operator is capable of entering, searching, and establishing both ten-print and latent fingerprint identifications
[12] National Institute of Standards and Technology

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 10, 2022

standard finger prints into NIST compliant. NAFIS[13] and CCTNS/ICJS are being integrated for transferring the demographic data associated with fingerprint in CCTNS into NAFIS and to share National Fingerprint Number (NFN) to CCTNS for establishing unique identity of the criminal in CCTNS. This way, FP Experts can concentrate and focus on the fingerprint information instead of typing. These steps have been taken in order to accelerate the ICJS project.

V. IMPLEMENTATION OF THE ICJS PROJECT

The geographical scope of ICJS Project spans in 37 States and Union Territories within the territory of India and covers all Police Stations and all Higher Police Offices in the Country. This vast network has created a comprehensive database about crime, criminals and related properties facilitating sharing of information in real-time and also assist in providing efficient public services to the citizens.[14]

The status of implementation of ICJS in few of the states has been briefly discussed below, in view of difference in terrain, demography and technological advancements:

- ***Telangana:*** It is the first State in the Country to integrate the CCTNS (EeCOPS application) with Interoperable Criminal Justice System (ICJS) and to have Live Electronic Exchange of data between ICJS pillars.
- ***Himachal Pradesh:*** It is a hilly State and has difficult geographical terrain. Thus, it is very strenuous to maintain smooth and consistent network connectivity to run the CAS online application 24X7 at all Police Stations especially in rural areas and syncing data to SDC. Therefore, CAS application in Himachal Pradesh has been made to be functional in offline as well as online mode. By the implementation of the 'CRON Job' utility[15], the ICJS project has overcome the problem of data syncing. Now hundred percent data syncing is being done from Police Station offline CAS server to SDC automatically between the time slots set into this service. Moreover, the replication of hundred percent data from SDC to NDC/DRC[16] with the help of this utility, has also

[13] National Automated Fingerprint Identification System, NAFIS is developed by the National Crime Records Bureau (NCRB) at the Central Fingerprint Bureau (CFPB) in New Delhi. The project is a country-wide searchable database of crime- and criminal-related fingerprints.
[14] Available at, https://ncrb.gov.in, https://ncrb.gov.in/en/data-centre-technical-branch-dct (Last visited on March 9, 2023)
[15] It is a builton Linux utility that runs processes on your system at a scheduled time. By using a specific syntax, HP State has configured a CRON Job to schedule scripts or other commands to run automatically offline data syncing service resulting in hundred percent syncing of data from Police Stations to SDC
[16] State Data Centre (SDC)/ National Data Centre (NDC)

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 10, 2022

been achieved. Thus, the steps taken under the ICJS project, have been able to solve the problem of data syncing in the hilly state of Himachal Pradesh to a great extent.

- ***Karnataka:*** The Police IT ERP System was implemented in the year 2010 and the system is operational across the state and supporting the day-today police functions. In order to achieve scalability and adaptability, the solution developers should be able to identify where and how new layers are added from the architecture. Failing to do so may lead to software architectures that require a considerable modification when the system evolves or changes due to new or added requirements. The current Citizen Services version of the Police IT ERP software implemented under the ICJS project has catered to the problem of developing scalable software architecture that is able to accommodate new and/or modified requirements without the need for re-developing the architecture from basics.
- ***Delhi:*** The Integrated Complaint Monitoring System (ICMS) facilitates, online registration of complaints and helps in tracking their status, provides a gateway to Citizens in order to register and track their complaint along with SMS alerts at their phones and provides the Delhi Police with a tool to monitor the effectiveness of the complaint management system. ICMS application provides facility to register online complaints through CCTNS Citizen Portal. It has option to make entry of complaints received from all possible internal and external sources, which is a significant step taken under the ICJS project to ensure easy complaint registration mechanism for the citizens and an effective tracking mechanism for the police.
- ***Kerala:*** Kerala Police is the first State/ UT in the country to implement, Software Defined Wide Area Network (SD-WAN) in the Police force as the total network, security and connectivity solution, which is step under the ICJS project to provide for the connectivity solution. In the period of increasing demand for more bandwidth, dynamic provision of network resources, protection from internet threats, encrypted secure data traffic etc., Kerala Police has been able to revamp the existing Police networks with the secure SD-WAN to ensure the protection of confidential data over the networks. This has come across as a huge milestone achieved by the state government under the project to aid the police force.

VI. MAJOR OUTCOMES OF IMPLEMENTATION OF THE ICJS PROJECT

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 10, 2022

The implementation of the project shall lead to the justice delivery system becoming speedier, transparent, and accountable. Further, the Investigating Officer can carry out the search across the pillars of criminal justice, that is even if the entries are wrong in one pillar, other pillars may assist the Investigating Officer to achieve the desired results. Its implementation shall also reduce the redundant data entry across the pillars and the possibility of data entry errors would be nullified.

Since the courts fixes the hearing dates after examining the availability of Forensic experts and Prosecutors online, the possibility of frequently postponing the hearing dates would be drastically reduced. Additionally, the alerts at one pillar would help the other pillar to make appropriate preparation well in advance, for an efficient trial.

VII. ROLE OF ICJS TO RESOLVE THE TECHNICAL AND LEGAL CHALLENGES

The ICJS system integrates the existing Information Technology systems in Police, Prison, Court, and proposed systems for Prosecution, Forensic and Fingerprints. The integration of existing solo Information Technology systems built for multiple stakeholders under the administrative control of different departments is challenging and raises several issues. It faces several technical and legal challenges.

Some of the challenges, faced and addressed in the implementation of ICJS are as following:

- Even though, the CCTNS is a centrally developed software rolled out across the country, it is observed that there is a considerable version/ structural differences among the States, particularly, in the advance States like Gujarat, Karnataka, Andhra Pradesh, Telangana, Tamil Nadu etc. Further, different States are generally handled by different system integrators. This makes the integration of CCTNS with ICJS more time consuming. Using Symmetric DS technology, data integration is being achieved and a new central software interface was developed for ICJS MIS purposes.[17]
- There has been a continuous resistance for doing complete data entry related to other domains. For example, the court officials have not been following the standard format of an FIR while entering case information during filing stage, which has

[17] Available at, https://ncrb.gov.in, https://ncrb.gov.in/en/crime-and-criminal-tracking-network-systems-cctns (Last visited on March 8, 2023)

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, Iss 10, 2022

created the problem of accessing the correct FIR details from police database because of incorrect FIR format in CIS SW[18]. Such issue has been resolved by demonstrating the concerned officers, that such data would eventually be useful to all stakeholders, which is a part of the capacity building programs undertaken training division.

- The number of employees to be trained was large and was achieved by involving the NIC District Centres and creating a pool of master trainers, for the mentorship of the employees regarding the needs and requirements of the project.
- It has been observed that the coordination among stakeholders has been the greatest challenge as different stakeholders had varying objectives in using domain specific applications. As the law and order are essentially the States subjects, it is difficult to enforce the State to share the data with ICJS and hence, the progress of the project may be slow. Time and again the involvement of the top leadership is required to achieve synergy in order to maintain the pace of the project.
- The Evidence Act does not allow recording of witness statement taken by police; thus, police is using the recording of witness statement in section 164, CrPC in heinous crimes as backup only to present to the court, which is why the recording of statements is now done under the surveillance.
- The Information Technology Act 2008, does not provide the provision of using digital signature for submitting the police challan to court, thus using employee ID, providing various roles and privileges is, for sharing information among various wings.

VIII. CONCLUSION

There is no doubt that an Inter-operable Criminal Justice System is the need of the hour in today's scenario where delay in delivery of justice is affecting millions of persons and access to the right information at the right time is critical for the effective operation of law enforcement agencies. The Government of India has recognized the seriousness of the situation and has proposed a standard ICJS for the country as a whole and an expert Group has been constituted to study and finalize the Software solution. It is to be appreciated that such an attempt to integrate the swings of criminal justice system has been taken up by the government, so as to resolve the interorganisational issues and conflicts. Further, it cannot be denied that there is a

[18] Case Information System

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Iss 10, 2022

lot more scope for enhancement and inclusion of additional modules, within the project. Some of the new processes may require changes in the existing Acts/Rules, for a better implementation of the systems.

IX. SUGGESTIONS FOR BETTER IMPLEMENTATION OF ICJS

i. As opposed to information sharing, data consumption, directly in relevant SW (Software) modules, must be a precondition, for which all stakeholders must agree.

ii. All reports being used or generated through the ICJS must be electronically signed.

iii. Process changes requiring updating of existing laws/ acts/ rules must be carried out beforehand, in accordance with the provisions of the Information Technology Act 2008, as amended.

iv. Extensive capacity building is required at all levels on the finer aspects of using Information Technology tools and software for collection of meaningful data and its utility.

v. Establishment of Video Conferencing facility in forensic laboratories will ensure that scientists can give evidence from their labs in court cases, saving time and money.

vi. Security of data, during transfer from one domain to another and safeguarding it from hackers during investigation process, needs to undertaken on regular basis.

vii. Prosecution functions must be addressed in a better manner, and existing modules which are not being fully used, should be made functional.

viii. Further, a robust legal framework needs to put in place for adherence and compliance of all these procedures so as to not just correct the administration lacunas but also make its implementation a rule.

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ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, Iss 10, 2022

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XI. INDEX OF ABBREVIATIONS

CIS: Case Information System
CIPA: Common Integrated Police Application
CAS: Core Application Software
CCTNS: Crime and Criminal Tracking Network & System
FIR: First Information Report
ICMS: Integrated Complaint Monitoring System
ICJS: Inter-operable criminal justice system
NIC: National Informatics Centre
SD-WAN: Software Defined Wide Area Network