

Modeling and Managing External Interfaces
in the
Criminal Justice System

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Abstract

The purpose of this study was to review and evaluate the status of the integration of automated systems used by the criminal justice agencies in Essex County and to outline an action plan. The resulting recommendations include: establishing a governing body; developing a strategic plan for information sharing; addressing funding issues and using the Justice Information Exchange Model (JIEM) to conduct an analysis of county exchanges and standards setting. Service Oriented Architecture (SOA) is discussed in this paper and proposed as the best architectural strategy for the Essex County criminal justice information sharing solution. SOA will transform many disparate information resources into a single, fully unified platform.

An extensive literature review of relevant books, articles, documentation on integration projects, human, business and technology aspects of information sharing in general and in criminal justice settings in particular was also conducted. Of particular importance was the information documented by the Abney Committee¹, which resulted from the litigation stemming from poor communication between the Superior Court and the jail. The suit was brought over 15 years ago and the problems which were identified at that time have not been fully resolved.

Additionally interviews of IT personnel and key managers provided information on the technology currently being used and the perception of IT personnel as to the impediments and opportunities posed by the prospect of “integration”. Case studies of the Colorado and Pennsylvania Criminal Justice Systems are likewise highlighted in this report to amplify the many possibilities and benefits of full integration. The Integrated Justice Information System (IJIS) Worksheet, developed by SEARCH, the National Consortium for Justice and Statistics,

¹ Abney Committee included representatives of the various criminal justice agencies to work towards implementation of needed change. See Report Of Special Master-An Analysis Of The Flow Of Information Used By Criminal Courts In Essex County, March 1, 1991.

was administered on the county and state level to gather background and requirements data regarding information sharing and integration initiatives.

The integration and management of external interfaces is necessary because the present manual process of information sharing slows down the case flow and often lead to significant delays which have resulted in unacceptable backlogs, processing errors and class action litigation. As a result of the problems encountered in the manual processes public trust and confidence of our trial courts has been put to the test. The existing technology itself is not the major factor contributing to sluggish improvement of information sharing process among criminal justice agencies in Essex County. The real problem is getting people together. It is an organizational and human problem. Personalities, turf and ownership, lack of understanding on the part of decision makers of the individual agencies, differing priorities of elected and appointed officials, the unknowns of the funding question, perception of high risk involved with the development and implementation of an integration initiative, and generally fear of change have hindered the integration of the different criminal justice agencies' automated systems. There are two leadership agencies in the criminal justice system – The Superior Court which oversees all court operations and the County Prosecutor, which has general oversight of all law enforcement agencies in the county. The real key to success in the endeavor to automate integration lies in the alliance between the court and the prosecutor to lead the way. Only they have the ability to bring together other partner agencies mainly: Police and Law Enforcement; Essex County Jail and Public Defender.

Introduction

The intention of this research is to explore Modeling and Managing the External Interfaces for the Criminal Justice System in Essex County, New Jersey. From the mid-1970's through the late 1980's, the Superior Court of New Jersey in Essex County was plagued by delay in disposing of criminal cases and was characterized as one of the worst and slowest among large metropolitan courts in the nation.² In 1989 problems with timely releases of Superior Court detainees from the jail became so untenable that the Public Defender's Office filed a class action law suit against the County of Essex in an attempt to compel changes in the management of incarcerated defendants.³ The Assignment Judge appointed a special master to investigate and report on possible solutions. The special master and a computer analyst prepared the initial report⁴ recommending sweeping changes in automation and the communication processes between the criminal justice agencies and the jail.

The Essex Vicinage criminal division files a large volume of criminal cases each year. With nearly 800,000 residents, Essex County is the second largest county in New Jersey, after Bergen County just north of Essex. During court year 2005 Essex had far more new criminal cases than any of the other twenty vicinages. The amounts to three times as many as Bergen County and almost twice as many as Hudson County (Jersey City – just to the east of Essex) the vicinage with the second highest total. To put it another way, over one-sixth (17%) of all Superior Court criminal cases in New Jersey are filed in Essex.⁵

² Barry Mahoney and Holly C. Bakke, *Criminal Caseflow Management Improvement in Essex County*(Newark New Jersey), 1990-1994, The Justice Management Institute, 1995, p. 1.

³ *Abney V. County of Essex*, docket number L-15332-89.

⁴ See note 1 *supra* and Interim Report Of Special Master-A Progress Report On The Implementation Of An Integrated Computerized Information System In The Criminal Courts In Essex County, October 27, 1994.

⁵ New Jersey Judiciary. AOC. *Court Management*, January 2006.

The master in the Abney case formed a committee to include representatives of the various criminal justice agencies to work towards implementation of needed change. Incremental changes have been made and communication between the agencies is markedly improved. However the process has been slow and the goal of computer system integration has been illusive. Some of the major criticisms discussed in the initial report remain valid today. The criticisms and recommendations have been enumerated throughout this research report.⁶

Between 1990 and 1994, the Court made dramatic improvements to reduce the size and age of its pending criminal case load. By 1995 the criminal process was functioning far more effectively and efficiently than before the Abney litigation. Among the reasons for improvement was that the court:

- emphasized compliance with time standards and other caseflow management goals;
- pushed for earlier prosecutorial screening of cases;
- made effective use of a Central Judicial Processing (CJP) Court located in the Superior Court building but attached to the Newark Municipal Court, where almost all defendants in the County make their initial court appearance;
- moved toward creation of a Drug Court and made better use of Pre-Indictment Disposition Court (PDC) and Remand Court where downgraded cases are sent back to municipal courts; and
- made extensive efforts to assure timely and reliable information on cases, partly in response to the class action lawsuit mentioned above – even though most information is still shared on paper.

⁶ See note 1 supra, page 10.

The Court continues to give priority attention to timely disposition of criminal cases, making it one of the faster vicinages in New Jersey, despite the heavy workload. According to criminal calendar status data from the New Jersey Administrative Office of the Courts (AOC) as of July 2003, the Court in Essex County had beat the state wide average for pre-indictment “backlog” criminal cases (those pending 60+ days) and post-indictment “backlog” cases (those pending 120+ days). The Essex percentages are better than all but 2 vicinages where the Superior Court has been most successful in reducing or avoiding criminal backlogs. Thus, while the Court has made great strides since 1990, there is room for further improvement through communication between automated systems of the various agencies.

The other factor is the statistical competition that is established by the reporting systems of the AOC. Monthly and annual report cards are issued which compare the vicinages in every detail of production. Backlog is one of the primary factors that is measured and reported. Lack of progress in backlog reduction brings negative attention to the assignment judge and consequently to the Criminal Division. Here is a snap shot of how Essex sits among the ten largest counties in the state:

**Table 1. Criminal Backlog Comparison – Ten Largest New Jersey Counties
As of December 31, 2005⁷**

Vicinage	Cases in Backlog	Percent in Backlog
Monmouth	368	34%
Middlesex	301	37%
Camden	552	38%
Essex	717	38%

⁷ See note 5 *supra*, page 11.

Hudson	481	43%
Bergen	420	45%
Union	418	48%
Passaic	685	52%
Mercer	435	53%
Morris	213	53%
State Total / Average	6,799	42%

Although progress has been made Essex County remains a long way from the vision encapsulated in the Abney report of fifteen years ago. Thus there still exists a need for further study and research.

As of today sharing of information and movement of data between criminal justice agencies in the county remains inefficient, archaic and for the most part manual. Existing information technology systems used by each agency do not communicate with each other. By contrast there has been significant progress at the state level between the judiciary and executive branch criminal justice agencies. The reason integration is important at the local level is to process and move cases faster and to provide decision makers with better and more reliable information. This allows the court and other agency's financial and human resources to be used more effectively. The resolution of charged crimes can be determined more quickly for the sake of victims, their families, defendants and the community.

There are several significant, negative consequences attributable to the lack of systems integration among police departments, the prosecutor, the sheriff's department, public defender,

Department of Corrections, municipal courts and the Superior Court which includes the criminal and probation divisions in Essex County. The more serious of these deficiencies include:

- Redundant data entry creating transposition errors;
- Referential integrity problems between all supporting computerized systems;
- Substantial manual effort and inflated staff requirements to link systems;
- The problem of moving documents between agencies – some getting lost or misdirected;
- Unnecessary transportation costs due to the inability of the supporting computer systems to share information between municipalities, the jail and courts; and
- Delayed detainee identification resulting in a multitude of problems, including delayed release from custody and readiness for initial appearance.

The balance of this report will outline the review of some very interesting and relevant literature on the topic of technology integration and management, the original research conducted during this project through surveys questionnaires and interviews involving personnel of the various agencies at both the management and staff levels. The research findings were somewhat of a surprise since the problem was originally approached from a “technical” perspective due to the author’s experience with court technology. Finding that the human and management issues are more of a problem than the actual technology to integrate systems is not totally shocking – but significant in the fact that there is so much education and consensus building to do before workable interfaces can be achieved.

Literature Review.

Most court information systems were originally designed to be autonomous, or stand alone within one agency or the court, and did not take account of the need to share information with other justice system agencies. When information associated with the justice process flows from one agency to another, the receiving agency system requires that every piece of information be re-entered — frequently from computer printouts. The disadvantages associated with conducting business in this fashion can be eliminated if the involved systems can be linked in a way that allows electronic data sharing. This eliminates redundant re-keying of data as it moves from one agency to another.

If such a straightforward step as linking systems can save a great deal of expense then why does the justice enterprise still maintain its “silo” approach to systems and system building? The simple answer is that the barriers to integrating older systems are significant. Not only is it difficult to enable complex systems that were designed in isolation to communicate with other systems, but the respective agencies may also be concerned about losing autonomy, and perhaps compromising the security of the information.

The concept of sharing criminal justice information is not a new one. For decades there have been significant efforts to share criminal justice information.

In the 1960s, many criminal justice organizations were managing and exchanging information using mainframe computers that, by the early 1970s, evolved into minicomputer systems. Advancements in the mid 1980s led to the rapid increase of personal computers and PC based networks. Data began to be stored on file servers, allowing individuals in an agency’s office to share files and communicate more efficiently with one another and, in some cases, with other agencies.

Integration of Criminal Justice System has been a high priority for local, state, and government agencies for some time. Gartner Research estimates that 40% of work done in software development is spent on interfaces between software systems.

A fully integrated justice information system⁸ provides to each participating agency the information it needs, at the time it is needed and in the form it is needed.

Features of fully integrated Criminal Justice System include:

- Identification of defendants is accurate and is accomplished quickly;
- Warrants, detainers, and restraining orders are available and accurate;
- Criminal histories are comprehensive, complete, accurate and available;
- Current status and location are accurate and available;
- Electronic information transfer cues workflow between agencies; and
- Information exchange takes place automatically as a function is performed.

In most cases integration will yield the tangible benefits like⁹:

- Cost savings;
- Improved performance and service delivery efficiency;
- Elimination of redundant data;
- Improved quality decisions;
- Improved public safety;
- Simultaneous access to electronic records from various locations;

⁸ See Center for Society, Law & Justice University of New Orleans, *Consequences of Inadequately integrated Systems*. A Project Report, 2002, p. 5.

⁹ See Bureau of Justice Assistance, *Report of the National Task Force on Court Automation and Integration*; July 1999, p. 29 and Kelly Harris and Larry Webster, *Integration of Justice Information Systems: Realizing the Future Today*, CTC7, 2004, p. 3.

- Removal of barriers of time and space;
- Improved public access to data; and
- Increased Public Trust and Confidence in the justice system.

“The desire to integrate systems also has been driven by increasing user needs, greater public expectations for the quality of government services, improved information and security technology, the move to e-government, expanding roles of justice organizations, and major federal initiatives”.¹⁰

The Colorado Integrated Criminal Justice System (CICJIS) lists the following reasons for integrating or sharing data:¹¹

- Improved public safety;
- Improved decision-making by increasing the availability of statistical measures for evaluating public policy;
- Increased productivity of existing staff by reducing redundant data collection and input efforts among the agencies and by reducing or eliminating paper based processing; and
- Access to timely, accurate, and complete information by both criminal justice agency staff and the public.

The Justice Network of Commonwealth of Pennsylvania (JNET) points out similar benefits resulting from sharing data among various criminal justice agencies:¹²

- Safer communities;
- Reduced costs associated with defendant and offender processing;
- Reduced delays in processing criminal cases;

¹⁰ See Kelly Harris and Larry Webster, *Integration of Justice Information Systems: Realizing the Future Today*, CTC7, 2004, p.1.

¹¹ See *Colorado Integrated Criminal Justice System. Benefits of CICJIS*, http://www.state.co.us/gov_dir/cicjis/Benefits.html, Retrieved December 2005, p.1.

¹² See *Commonwealth of Pennsylvania. Justice Network. Jnet benefits*, <http://www.pajnet.state.pa.us/pajnet/cwp/view.asp?a=213&q=159659>, Retrieved December 2005, p.1.

- Minimized risk of releasing offenders who could pose a public threat; and
- Prevention of innocent people from being arrested due to misidentification.

There are large payoffs stemming from information sharing. However the process of information sharing among Criminal Justice Agencies is improving slowly. The main reasons are the integration barriers which, in the most part, are non technological in nature.¹³ This is not a technology problem; it is an organizational problem and a human problem. It is critical that barriers to information sharing be understood in this way and dealt with accordingly. Most of the barriers have to do with the people aspect of managing change and collaborations among involved entities. Personalities, turf and ownership continue to be the most difficult information sharing issue to overcome. Although many people can get involved and participate in developing system integration initiatives, but then they become resistant to implementation of needed changes.

The fundamental power struggles that go on in government offices often make cooperation and collaboration difficult. One of the issues in managing projects for success is proper representation from business, management, operations, technology, and policy level leadership. As Geerken points out:

An effective design team requires a wide range of authority, knowledge, and skills, including:

1. Executive authority with complete commitment to change and to the design/implementation Process;
2. Management skill: what can be done and how to do it;
3. Knowledge—technical; and

¹³ See Dr. Michael Geerken, *Reengineering Justice Business Process: Identifying and Overcoming Barriers to Change*, Center for Society, Law & Justice, New Orleans, Louisiana, 2002, p.7.

4. Knowledge—criminal justice (business).¹⁴

In government bureaucracy there is a high level of motivation to promote status quo. So even though inter agency collaboration is desired government agencies can survive doing nothing and even be rewarded.¹⁵

The people, number of agencies involved in the system development as well as the number of information sharing processes varies from system to system. Table 2 lists participants involved in development of the integrated criminal justice systems in Colorado, Pennsylvania and New Jersey.

¹⁴ Ibid., see p. 8.

¹⁵ Panel interview with Dr. Peter Scharf, Executive Director, Center for Society, Law and Justice
Dr. Heidi Unter, Associate Director of Research, Center for Society, Law and Justice
Dr. Mike Geerken, Chief Information Officer, Attorney General's Office, State of Louisiana
Steve Prisoc, CIO and Director, Judicial Information Division, State of New Mexico
Mark Myrent, Assistant Director, Illinois Information Authority
Lt. Lon Ramlan, San Francisco Police Department,
Barriers to Re-engineering Justice Related Business Processes. Government Information Sharing : Calls to Action, Vol1:Justice, National Association of Chief Information Officers, 2005, p.34.

Table 2. Agencies Participating in the Development of Integrated Criminal Justice Systems in Colorado, Pennsylvania and New Jersey

Colorado	Pennsylvania	New Jersey
State Judicial Branch	Department of Corrections	Administrative Office of the Courts
Colorado Department of Human Services	PA State Police	Division of State Police
Division of Youth Corrections	Board of Probation and Parole	Department of Corrections
Colorado Department of Public Safety, Colorado Bureau of Investigation (CBI)	Board of Pardons	State Parole Board
Colorado Department of Corrections	Office of Attorney General	Victims of Crime Compensation Board
Colorado District Attorneys Council (CDAC)	Governor's Office of General Council	Juvenile Justice Commission
	Administrative Office of Pennsylvania Courts	New Jersey Office of Information Technology
	Juvenile Court Judges' Commission	New Jersey Office of Information Technology
	Department of Public Welfare	New Jersey Office of Information Technology
	Governor's Office of Administration	County Jail
	Department of Transportation	Division of Criminal Justice
	Office of Inspector General	Prosecutors Office
	Pennsylvania Commission on Crime and Delinquency	
	Office of the Budget	
	Governor's Policy Office	

Sources: http://www.state.co.us/gov_dir/cicjjs/AgencySystems.html, Retrieved December 2005 and http://www.pajnet.state.pa.us/pajnet/lib/pajnet/Public_Info/blueprint_DOCUMENTS/architecture_v3.pdf, Retrieved December 2005

Integration means different things to different people. Kelly Harris and Larry Webster identified eight integration models.¹⁶

Anarchy Model

- Lack of central planning and coordination of efforts to connect systems;
- Custom interfaces are developed incrementally between organizations; and
- Development and maintenance costs are highest under this model, since a great deal of work is repeated as each new interface is developed.

Network model

- The network model is a primitive form of integration;
- Focuses on the ability to inquire into systems maintained by organizations in other justice disciplines, rather than on data exchange between these entities; and
- Efforts to standardize the infrastructure.

Centralized Model

- Single application that supports the entire justice system in a jurisdiction;
- Centralized systems were the first integrated systems to be implemented;
- Works best at the local level in small or medium-sized counties; and
- Locally centralized systems lack a significant amount of vertical integration, i.e., to state systems.

Umbrella Model

- Consists of some type of master index connecting separate systems; and
- The master index is used to access information from the disparate systems

¹⁶ See note 6 *supra*, pp 4 – 12 and 17.

through a single inquiry.

Warehouse Model

- Information from legacy systems are downloaded to warehouse database that accessible to the justice community; and
- The warehouses are used for inquiry, and to push information to appropriate agencies when specific events occur.

Middleware Model

- The hub of the justice network translates information from one system to another;
- The advantage of this approach is that agencies can focus on building their applications to suit their needs; and
- Downside is that general information cannot be translated into more specific information.

Statewide Model

- Starts with integrating state-level applications first, then adding local agencies, as they are ready to participate.

Standardized Interface Model

- Data and technical specifications for system interfaces are developed by state;
- Each organization then is responsible to acquire or develop software according to the specification; and
- This approach provides maximum flexibility to individual organizations.

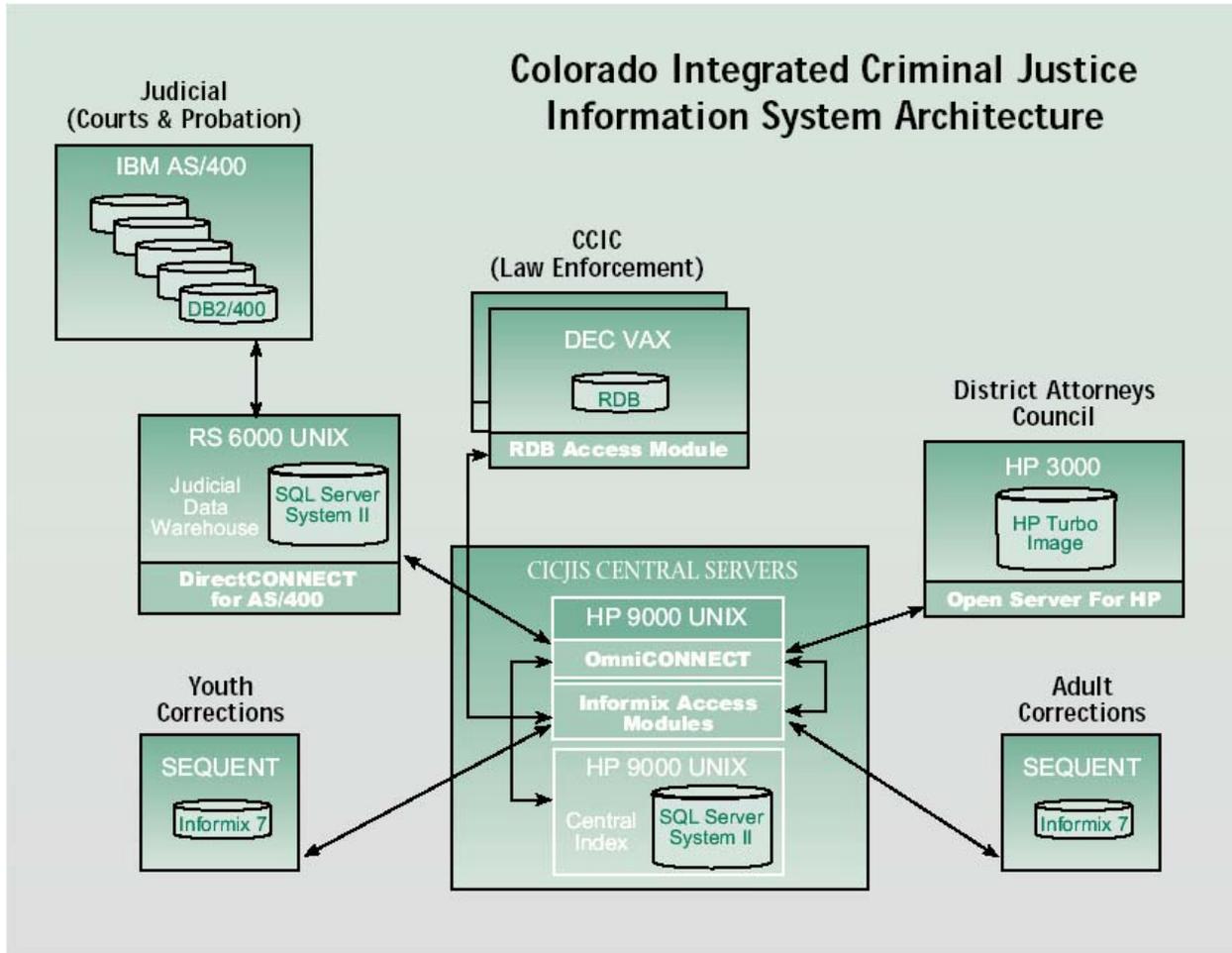
To illustrate different models in practice we will review in more detail two successful integration systems: Colorado's CICJIS and Pennsylvania's JNET.

The Colorado CICJIS¹⁷ operates by using a middleware solution. Each participating CIG maintains its own legacy system linked by a central index. (See Figure 1 The CICJIS Architecture.) Information collected by any agency that is needed by any other agency is automatically routed to the requesting agency according to "business rules" that define the circumstances for information to be accessed or provided, to whom, and for what purposes. CICJIS thus created a new criminal justice system from the five separate systems. According to the CICJIS Strategic Plan, CICJIS creates a virtual database of all five agencies, with each agency having the ability to call stored procedures, which move data through the system. CICJIS keeps track of the transactions and translates data between systems so users of the receiving agency see information as if they had entered it. A central index stores basic offender and case information as the cases move through the system. CICJIS is designed to handle event-driven transfers, queries between systems, and data extracts for decision support and public access. The system takes data entered by the originating agency and automatically updates the other relevant systems. Common data definitions were established by the entities for data items shared among the entities or queried by local law enforcement. These data items meet National Crime Information Center (NCIC) standards, where applicable. The data integrity is based on the real-time, automatic updating of various systems when an event occurs without user intervention.

The CICJIS network uses a private TCP/IP network among the five CIGs.

¹⁷ Search Group, Inc, A Report of the National Task Force on Court Automation and Integration. Colorado Integrated Criminal Justice Information System. *Project Overview and Recommendation*, 2001, p. 2.

Figure 1. CICJIS Architecture

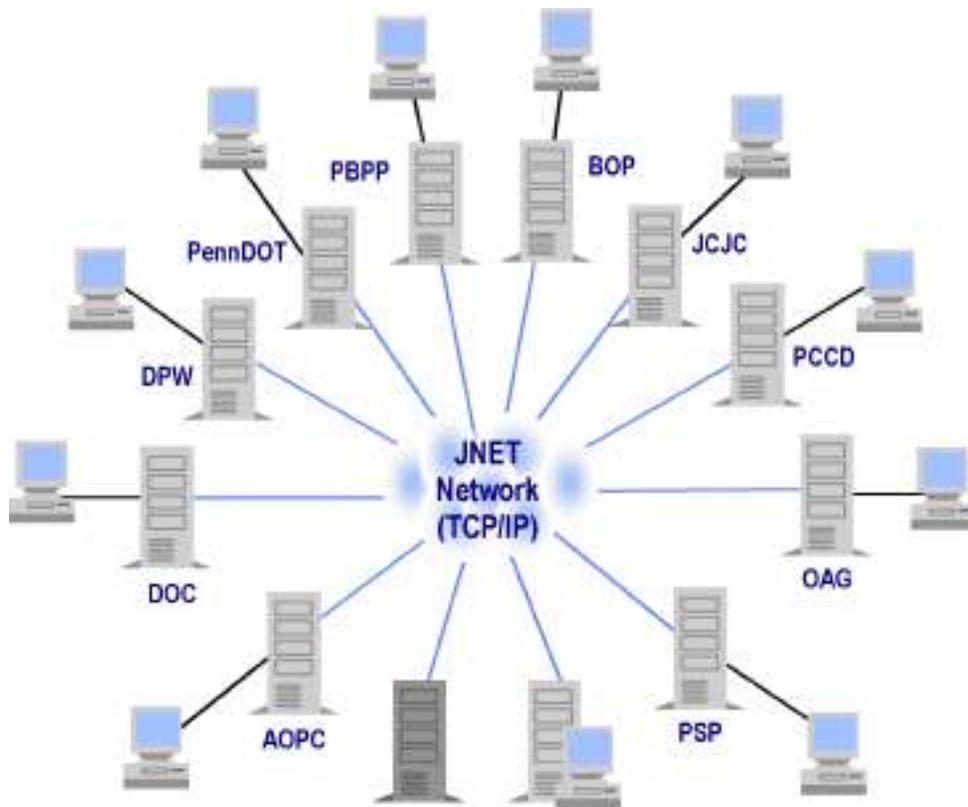


Source: Search Group Inc, *A Report of the National Task Force on Court Automation and Integration*. Colorado Integrated Criminal Justice Information System. Project Overview and Recommendation, 2001, p. 3.

The Pennsylvania JNET system architecture¹⁸ is based on the decentralized network connecting all involved agencies Extensible Markup Language (XML) and the Global Justice XML Data Model (Global JXDM) as depicted in Figure 2.

¹⁸ See Pennsylvania Justice Network Architecture, Project Blueprint Architecture – Draft Version 3. 06/29/01, http://www.pajnet.state.pa.us/pajnet/lib/pajnet/Public_Info/blueprint_documents/architecture_v3.pdf, Retrieved December 2005, p.1.

Figure 2. JNET System Architecture



Source: Pennsylvania Justice Network Architecture, Project Blueprint Architecture – Draft Version 3. 06/29/01 http://www.pajnet.state.pa.us/pajnet/lib/pajnet/Public_Info/blueprint_DOCUMENTS/architecture_v3.pdf, Retrieved December 2005, p. 5.

There are three key elements of the JENET architecture:

- Event Driven Data Transfer (EDDT) Between Agencies - These are data transfers between agencies that automatically take place based on an event happening at a particular agency;
- Queries Between Agencies - This is the ability for one agency (ex. CDAC) to be able to query information at another agency (ex. CBI) through their various applications; and

- Queries and Updates to the CICJIS Central Index - This is the ability to query and update a Central Index database containing a subset of information about all CICJIS agencies.

The New Jersey CJIS present architecture¹⁹ is based point to point interconnecting, in most cases mainframe based systems, on the state level. The agencies participating are: the Office of Information Technology, State Police / SBI, Administrative Office of the Courts, Department of Corrections, Juvenile Justice Commission, State Parole Board, and Violent Crimes Compensation Board.

Technology architectures have existed as long as computerized automation alternative solutions.²⁰ Standardization came to play an important role with the increase of multi-tier applications and rapid increase in the variations with which these applications could be delivered. IT departments started developing standardized, baseline definition of the application acting as a template for all other applications.

This definition was explaining technology boundaries, rules limitations and design characteristics that apply to all solutions. In a nutshell this constituted application architecture and served as a blueprint for the development team. In some organizations multiple application architecture exists. In this case, most likely, they accompany and align to enterprise architecture.

In larger IT environments, when numerous and disparate applications co-exist, the need for enterprise architecture is obvious. An enterprise architecture specification has the same meaning to an organization as an urban plan to a city. This scenario would definitely apply the criminal justice environment.

Enterprise Application Integration (EAI) is the preferred approach to Justice Integration.²¹

¹⁹ Interview with Pat Bucco, AOC Project Manager, 01/15/2006.

²⁰ Thomas Erl *Service Oriented Architecture*, NJ, Prentice Hall Professional Technical Reference, 2005, p. 86.

²¹ Fred Lengerich, *Why Acronyms Will Not Get You Integration The Integration Issues in Justice*, SAIC, 2005 pp. 8-15.

EAI was developed in the late 1990's and tested in the private sector. It is a set of software tools and design techniques that allow data to be shared between applications. Applications can update other applications when changes occur (based on business rules). New applications or application changes can be made and cause minimal to no impact to other systems. With data integrated, business process and workflow improvements can now be better and easier understood, analyzed and addressed. The negative side of EAI is that it takes a considerable amount of planning to implement.

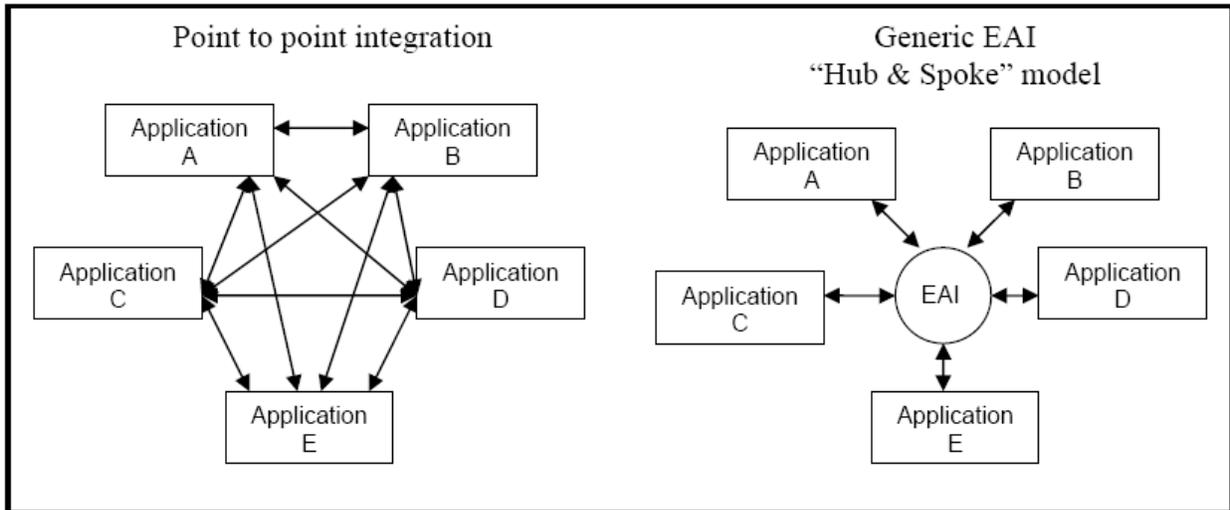
Carnegie Mellon Software Engineering Institute defines EAI as:

“Data architecture defines how data is stored, managed, and used in a system. It establishes common guidelines for data operations that make it possible to predict, model, gauge, and control the flow of data in the system. This is even more important when system components are developed by or acquired from different contractors or vendors.”²²

Figure 3 shows the difference between the old, point to point integration and the EAI approach. In contrast to the old architecture, where applications were directly interconnected with each other, the EAI approach introduces the central hub. The “middleware layer”, hub describes the data and the business rules about the data. Adapters provide access to the various applications. The transaction data is loaded from each application into the hub, a central data store. The hub consolidates, prepares and delivers data down each spoke as determined by each application. On each spoke, there will reside a database management system (DBMS) that loads the new data from the hub, performs view maintenance, and builds or rebuilds indices, as necessary.

²²Carnegie Mellon Software Engineering Institute, *An Enterprise Information System Data Architecture Guide* CMU/SEI-2001-TR-018 ESC-TR-2001-018, 2001, p. 13.

Figure 3. Point to Point and Generic EAI Model



Source: Fred Lengerich, *Why Acronyms Will Not Get You Integration: The Integration Issues in Justice*, SAIC, 2005, p. 11.

Service Oriented Architecture

Until recently, Enterprise Application Integration (EAI) technology has been viewed as the solution to the information sharing problem. EAI, although it initially solved significant coordination problems, has failed to address the complex integration issues, and it has often failed to deliver the expected business flexibility.

In addition to a focus on technology-derived solutions, there is the problem of language. There is a clear division between the language used by the justice community and the technical jargon of the IT community. This makes it difficult to relate IT issues to business management issues and to relate technical problems to justice issues. One of the most common problems of implementing software is not the complexity of creating a technology solution; instead, it is the problem of developing an understanding of the business needs and of what must be implemented to meet those needs.

While the EAI is data architecture the Service Oriented Architecture (SOA) is a system architecture.²³ In other words

“SOA is both concept of how information sharing should take place and a description how software should be developed”²⁴

SOA contains data architecture, security, infrastructure, etc. The concept of SOA offers a framework for better-integrated systems that meet business needs. This concept is a new rationalization of practices and techniques that already exist in process-driven methods of software integration. It has now come to reality with the evolution of technology and the true interoperability.

SOA envisions the implementation of a services reflecting elements of business processes. These services can be combined and recombined into different solutions and scenarios, as determined by business requirements. This capability to integrate and recombine services is what provides the less complex relationship between business and IT, as well as the flexibility to respond to new situations quicker.

The advantage of SOA services is that they can deliver essential business services in a flexible, easily assembled, and highly reusable fashion. It is essential that a justice enterprise adopts a global approach to building such a platform by providing focus on the lifecycle for business-driven services.

The need for an enterprise approach view has led to the creation of the service-oriented architecture, through which individual applications can be created, modified, and removed dynamically.

²³ See note 21 *supra*, p. 16.

²⁴ Thomas A. Henderson, *Information Sharing, Enterprise architecture, Service Oriented Architecture, and Other Wonders of the 21 Century*, 2003 Report on Trends in the State Courts, NCSC, 2003, p. 18.

From a technical point of view, SOA defines software in terms of discrete services, which are implemented using components that can be called upon to perform a specified operation for a specific business task.

There are a number of ways to look at the concept of SOA. Gartner Group defines SOA as follows:

“A software architecture that starts with the interface definition and builds entire application topology as a topology of interfaces, interface implementations and interface calls. Services are software modules that are access by names via interface”²⁵.

In its most basic form, SOA is an approach to building software systems that is focused on how the software is actually implemented.²⁶

As explained by industry analyst firm Gartner, Inc,

"Service-oriented architecture is a key enabler for governments to create 'joined-up' or horizontal e-government. It allows governments to leverage common line-of-business opportunities as well as creating efficiencies for overall IT services."²⁷

This point of view is also represented by Thomas A. Henderson

“SOA is an approach to the design and implementation of information systems that is consistent with the decentralized, fragmented nature of our justice process”²⁸

Several technology initiatives have combined over the last decade to make SOA the recommended system architecture for integration. Those technologies are XML, web services, and EAI. WSDL is an XML document that describes what a service does and how to communicate with that service (typically the internet protocol, HTTP)²⁹

²⁵ Gartner Research, *Service Architecture Scenario*, AV-19—6751”, April 16, 2003.

²⁶ SOA is a synonym for solution architectures making use of Web service technologies such as Simple Object Access Protocol (SOAP), Web Services Description Language (WSDL), and Universal Directory Description Interface (UDDI). SOA is a framework for integrating business processes and supporting IT infrastructure as secure, standardized components and services.

²⁷ Gartner Group, *Guidelines for Implementing Service-Oriented Architectures in Government* (March 21, 2005)

²⁸ See note 24 *supra*, p. 18.

²⁹ *Ibid.*, p. 16.

XML is a generic model which became the basis for number of industry specific models.

GJXDM (Global Justice XML Data Model) is one of these industry specific XML models.

“The full business value of SOA is realized when the applications of the justice environment can start to be viewed and used as services. Instead of being concerned about the where and how to integrate applications, an SOA changes the view to the what and why of how applications (or parts of applications) can be combined (as services) to affect the business process. In an SOA environment, the focus is about what you want to do, not the how. If the need in a business process is to check for a valid SID, then that process (the SID service) can be virtually drag-and-dropped into the process chain to make it part of the business process.”³⁰

Choosing the right technology for information sharing in the Criminal Justice environment solves only one issue in the complex integration puzzle. As Kelly J. Harris pointed out in her Information Exchange Modeling: Understanding the Enterprise and “Creating a Blueprint for Success” paper, creating a blueprint for integration starts with understanding the enterprise and how it conducts business.³¹

The other critical ingredients of successful information sharing process as indicated by the author are:

Bringing People Together.

Justice system integration requires coordination across legislative, executive, and judicial branch agency lines and across federal, state, and local jurisdictional boundaries. Working on business analysis and information sharing it helps to understand how each agency operates and its responsibilities, challenges and obstacles, it also brings people together. Buy-in from all (or most) levels and organizational units is necessary for successful integration.

³⁰ Ibid., p. 18.

³¹ Kelly J. Harris, *Information Exchange Modeling: Understanding the Enterprise and Creating a Blueprint for Success*, SEARCH, Perspectives, Government Information Sharing: Calls to Action, Volume 1: Justice, National Association of Chief Information Officers, 2005, p. 12.

Funding Dilemma

Because each participating agency has its own goals and funding sources, integration requires nontraditional solutions to ensure that each agency's control over its domain and management of its own resources are undiminished. On the other hand there are no funding resources available for the entire justice enterprise. Instead funding resources are more readily available for individual partners.

Working together and understanding the justice enterprise will help to come to an agreement among partners so that when a funding resource becomes available to one partner, it may be shared to enhance the efforts of the enterprise. Also funding bodies must understand that money allocated to a coordinated project will yield greater returns than resources splintered among disconnected efforts.

System Security and Privacy

Security becomes even more important and difficult to address as users begin to link their systems, share information, or authorize the initiation of transactions within and between systems. When the arrest of an offender triggers the creation of prosecutor and court records, a system link is created that increases security risks.

Users must be aware and educated about security to prevent unauthorized users to access the system. Unauthorized users, or "hackers," often access systems through "social engineering"³² by leveraging systematic understanding of human behavior. They gain the confidence of an insider to learn passwords and then use these passwords to enter the system. Technology alone cannot protect systems from outside invasion. Education, monitoring and

³² Social engineering is often referred to as "science of persuasion".

awareness of internal operations is critical to guard against internal threats posed by irritated employees and external forces such as social engineering.

Integration of criminal justice requires trust, shared objectives, common enterprise values, strong internal and external security controls, ongoing training and systems monitoring.

Standards

Sharing information reliably and efficiently requires the use of standards to ensure that parties at either end can use and understand the information sent. The standard format for sharing information with other agencies electronically has become XML. XML is readily readable by both humans and computers. Additionally, several mechanisms exist to constrain XML documents to certain types of data. Over twenty states and local law enforcement and justice organizations have been used the GJXDM as a basis for developing integrated Criminal Justice Systems.³³ Below is a listing of those involved:

States of Pennsylvania, Arizona, New Mexico, Kentucky, Colorado, and Minnesota.

Counties including Maricopa County, Arizona, and Orange County, Florida; and over nine hundred police departments in the state of Ohio. The GJXDM has been proved to be very effective and helpful model for information sharing however it is a complicated and sophisticated, involving modern concepts such as object oriented modeling, and not too many IT experts in the public or private sector are presently prepared to work with this model.

The Global JXDM is an XML standard is designed specifically for criminal justice information exchanges. It provides law enforcement, public safety agencies, prosecutors, public defenders, and the judicial branch with a tool to effectively share data and information in a

³³ Paul Wormeli, *Justice Perspective .Developing Law Enforcement and Justice IT Standards for Information Exchange*, Perspectives, Government Information Sharing: Calls to Action, Volume 1: Justice, National Association of Chief Information Officers, 2005, p. 20.

timely manner. Information exchange and business process analysis also builds the foundation for successful standards implementation. It identifies what information is needed by participant agencies; determines when and under what circumstances to share information.

There are three levels of standards that have to be implemented to result in effective interoperability among computer systems.³⁴

- The technical standards which have been and are being developed around XML;
- The data standards which are being presented in the GJXDM; and
- The functional standards which use the technical and data standards in implementation of the system integration initiative.

It is generally recognized that the development of functional standards should come from the local agencies engaged in law enforcement and the administration of justice.

Justice Information Exchange Model (JIEM)

The Justice Information Exchange Model (JIEM) is a tool to:

- assist in analyzing and documenting existing information exchange;
- design new, improved electronic exchange processes; and
- adopt national business, data, and technology models.

The Justice information Exchange Model (JIEM) is comprised of four components:

1. A conceptual framework for understanding justice information exchange;
2. A methodology for analyzing current information sharing environment, and reengineering information exchange and future models;
3. The JIEM Modeling Tool, a Web-based software package to assist justice system practitioners in using JIEM; and

³⁴ Ibid., p. 21.

4. The JIEM Reference Model, a set of descriptions for information sharing that are common to most jurisdictions.³⁵

JIEM can be used in developing the strategic plan of an information sharing initiative, or designing specific interfaces between applications. The tangible benefits of Using JIEM can lead to the following:

- document existing business processes and information flow among partners;
- Analyze the effectiveness of existing interfaces and practices;
- Analyze existing data transfers and model the proposed information sharing;
- Use JIEM outputs to feed other developer tools to develop interfaces between systems;
- Interface with and extend national models, such as the JIEM Reference Model, the Global Justice XML Data Model, and reference exchange DOCUMENTS; and
- Register locally developed XML specifications in the national repository to share with others.³⁶

The success of the integrated systems depends on the level of planning that precedes the implementation. A strategic integration plan is a critical component to ensure the success. For that reason both the management structure and governing process must be established. The structure should include discrete committees responsible for policy, operational, and technical functions and may be facilitated by statutory mandate. The process must include executive sponsorship and allow for support from all stakeholders, including system agencies, funding agencies, the business community, and the public. In addition, the process must provide for

³⁵ Search Group Incorporated, *Justice Information Exchange Model. Conceptual Framework*, 2005, p. 1.

³⁶ See note 31 *supra*, p. 16.

ongoing program review and evaluation. At the project development stage, executive, operational, and technical committees should be established.³⁷

³⁷ See Bureau of Justice Assistance, *Report of the National Task Force on Court Automation and Integration*, 1999, p. 38.

Methodology

Research was conducted to assess the workflow and interaction of the criminal justice agencies in Essex County and the tools (computers, forms and documents) used to accomplish the needed collaborative work. The two components of the research design included review of relevant literature and available documentation on specific criminal justice integration projects in Colorado and Pennsylvania. Deductive reasoning was used to apply the focus of this research to Essex County and the concept of Service Oriented Architecture and its usage in integrating disparate criminal justice agency as the most promising approach.

The other component of the research consisted of information gathering from the courts, the prosecutor, local law enforcement agencies, corrections and the Public Defender. The State AOC was also called upon for information. The focus of this activity was to describe in Essex County the state of the current system as-is environment. In particular, the current hardware, software and general workflow as it presently exists. Another purpose was to assess the readiness for integration and identification of integration initiatives. This design helped to place into context the core problem being researched which focuses on managing external interfaces for the criminal justice system.

Instruments were designed to collect information on the factors bearing on the central question of this research.

1. What is the existing workflow in each of the agencies?
2. What specific information needs to be shared between agencies?
3. What are the automated systems maintained by various Criminal Justice Agencies?
4. What hardware and software platforms are used by various agencies?
5. What are the constraints and risks to adopting an integrated approach?

6. What is the current level of technological integration among Criminal Justice agencies in Essex County?
7. How to achieve a desirable level of technological integration among Criminal Justice Agencies in Essex County?

The specific instruments are included in the appendix as follows:

Workflow Survey – See Appendix B

Hardware and Software Survey – See Appendix C

Interview Questionnaire – See Appendix D

IJIS Worksheet – AOC - See Appendix E

IJIS Worksheet – Essex County Sheriff – See Appendix F

The Workflow Survey was targeted at a large cross section of criminal justice agencies and line personnel. Its purpose was to get a sense of the interaction among agencies and the methods use to transmit data. The survey assessed the type and volume of criminal case information received and by what means, including paper forms [via facsimile, interoffice or courier mail or USPS mail] and electronic data [e-mail, electronic files, and accessing automated systems of other agencies]. The survey also solicited information on the key data elements and whether or not certain information was re-entered into the automated system of the receiving agency. Respondents were asked to estimate the time it takes to data enter a single case and the amount of time daily. Finally the survey asked about photocopying – the types of documents, quantity and distribution, since this is a major means of transmitting information between agencies in Essex County.

The Computer Hardware and Software Survey was targeted at staff knowledgeable about their agencies systems since the average user would be confused by the questions about the

hardware platforms, operating systems, network systems and specific software applications for investigations and criminal case tracking. The survey also assessed the existence of maintenance contracts, IT staff and internet connections.

The Interview questionnaire was administered in person or telephonically to knowledgeable professional with a known reputation for their familiarity and leadership in information technology. The interviews asked for a brief description of the high level workflow in the respondent's agency for case initiation, case processing and case disposition. This was followed by the type of information needed from each of the other criminal justice agencies for effective case processing. [Law enforcement, prosecution, jail/corrections, public defender, Municipal Court, Superior Court or other]. A question was asked about the two most critical issues for integration and the integration initiative underway at the present time. The second section asked about the interviewees agency automated applications and strategic plan. Section III, delved into the perceived benefits of integration, Section IV, the risks attached to an integrated approach and Section V, System deficiencies at the present time.

The IJIS instrument was used for only two interviews due to its detailed and extensive nature – one person at the NJ AOC and the Chief Deputy Sheriff who is driving an integrated system for county agencies – not including the court.

The instruments were pre-tested through a review and critique by colleagues. Following the review and critique several of the questions in the Workflow Survey, the Hardware and Software Survey and the Interview Questionnaire were modified based on suggestions to clarify the questions and only collect information relevant to the scope of this research. At that time the IJIS Worksheet was added to the research design to include a more comprehensive set of questions assessing the current level of technological integration initiatives,

governance and strategic planning. This instrument was targeted at the two main levels State Judiciary and County law enforcement. On the state level Pat Bucco of the AOC Information Technology Office and a project participant in the state level integration initiatives and Chief John Dough of the Sheriff's Office were interviewed. Chief Dough is the champion of criminal justice systems integration in Essex County.

The sample for the surveys and questionnaire was drawn from representatives of each of the involved criminal justice agencies in Essex County

The sample targeted the following agencies:

Municipal police departments, the office of the prosecutor, the sheriff's department, Public defender, Department of Corrections (Jail), municipal courts and the Superior Court Criminal Division

Site of Data Collection: All data was collected in Essex County and Trenton, New Jersey

The workflow survey was returned by 21 people of 25 solicited – an 84% return rate.

The Hardware and Software Survey was distributed on a limited basis and returned by 18 people of the 20 who were sent the survey, a return rate of 90%.

The Interview questionnaire was individually administered to 6 people all of whom were cooperative and supportive of the research. The interviews resulted in a 100% response.

The Interview questionnaire was administered to a variety of agency representatives in person and by phone.

The data was collected in the fall and winter of 2005/2006 solely by the author. It took approximately one month to collect the data for this research project. Once the instruments were designed, tested and finalized the tasks included duplication, preparation and mailing, phone

calls, personal interviews, follow up with some respondents, to encourage their cooperation.

Finally this task involved the receipt, review and analysis of the survey instruments.

The information reported in the surveys and interview instruments was transferred to a spreadsheet for review and analysis. The researcher's observations are contained elsewhere in this report.

A statistical analysis of the responses was considered but upon reviewing the returned surveys it was determined that statistical manipulation of the data would be speculative at best since many of the respondents did not fill out the surveys completely. Either they did not know the answers to the questions being asked or did not keep track of the type of information being requested. This factor points up the need for additional study and quantification for an integration project to be able to project the volume of various types of information to be transmitted and to also identify the amount of paper that would cease flowing through the system if replace by electronic means. So, one of the major obstacles to collecting comprehensive and accurate data was the level of understanding on the part of some of the respondents as evidenced by questions being left blank. In some cases the responses were unclear or not understood and follow up phone calls were made to clarify the issues.

Findings

Overview of the New Jersey Criminal Justice System

In 1990, the state level Criminal Justice Information System (CJIS) Committee was established by the Attorney General under the direction of Data Processing to improve and facilitate the exchange of information and data between New Jersey's Criminal Justice agencies.

The CJIS Committee continues to meet monthly, providing executive direction and insight to aid state efforts to improve CJIS. New Jersey's CJIS is comprised of three separate statewide systems that feed into each agency's mainframe server (one judicial; Administrative Office of the Courts, and two executive branch mainframes; State Police and Corrections) located in Trenton. State agencies, all 21 counties and hundreds of municipal criminal justice agencies access information contained on these mainframes daily.

Information from each system's database populates three central databases (one judicial and two executive). The three central mainframes share information (they are connected). Judiciary users send information to the Administrative Office of the Courts (judicial mainframe). Information is then forwarded to the State Police (executive branch) mainframe via batch feed. Additionally, Corrections has an online updating capability to include inmate processing and locations. Networks are cross-domain between executive and judicial branches. Users in each branch can access data on other branch's computers (if they have proper access authority).

The Department of Human Services supports the Automated Child Support Enforcement System (ACSES), which is accessed via WAN by probation officers and the Family Divisions of the Superior Court. This is an example of judicial branch personnel (probation officers, court staff) accessing an executive branch system (ACSES). 20,000 executive branch workstations can access the judicial branch system. 50 LANs are in place and handle 1-2 million transactions per

day. Corrections staff (executive branch) access judicial information daily as part of reduced custody and parole release programs.

The Department of Corrections (DOC) single entry transaction (SET) accesses five state and Federal criminal justice systems with one fingerprint-based SBI number. Disposition data entered by courts into PROMIS/GAVEL is fed to the state police every night to be incorporated into the Criminal Case History System (CCH). Law Enforcement accesses the criminal and municipal court systems (ACS and ATS). For example, law enforcement personnel are able to query court databases online in order to check for warrants and detainers. Depending on the local jurisdiction, police officers may write parking tickets online and enter an arrest online into an Automated Complaint System (ATS and ACS). Prosecutors share a database with the courts via PROMIS/GAVEL. The system generates court orders to produce defendants in court; sheriffs .access the system in order to determine when and where to transport defendants in custody.

The County Correction Information System (CCIS), arrest booking, is integrated with local criminal court scheduling systems so that county jails are able to determine whether the person booked has pending court matters anywhere in the state. Within the very near future, another unique integrated software enhancement will be implemented which crosses state and county jurisdictions and executive/judicial organizational lines relative to county jail admissions notification to the state Department of Corrections (DOC).

The CCIS automatic jail admissions notification process electronically transmits an admission transaction on all state offenders (inmates, parolees, furloughs, etc.) to the NJDOC. This online transaction will ensure that no state offenders will be admitted to a county jail without the DOC being notified. The system allows for tracking of a defendant from arrest through prison commitment.

The New Jersey Office of Information Technology (OIT) plays a supporting role to many of the CJIS agencies including the State Police, Department of Corrections and the Department of Law and Public Safety. OIT is responsible for hosting the State's centralized infrastructure as well as managing one logical data center. OIT, as a partner with the State Police, is supporting the interface processes to many of the CJIS agencies at the State level. The Department of Corrections has also combined resources with OIT to share in the responsibility of managing and supporting the DOC systems.

AOC Network.

The applications supported by AOC include ACS, ATC, CABS, CAPS, CCIS, FACTS, FAMJAIL, PG/JAIL and PROMIS/Gavel (See Appendix G, Glossary of Technology Terms.). The interface processes supported by the Courts are also defined in the interface summary and listed under AOC interfaces. The platform supporting the technical environment for this agency is primarily a mainframe infrastructure. The file structures supported are IDMS (currently being migrated to DB2) utilizing LU6.2 and MQ Series as the technologies supporting the interface processes. The batch processing includes NDM files and FTP file transfer.

Table 3. State of New Jersey: Criminal Justice Agencies Hardware and Software.

State Agency	Hardware and Operating Systems	Database and Technologies Supporting Interfaces	Criminal Justice Applications and Interfaces Supported	Comments
1. New Jersey Office of Information Technology (OIT) State Police	IBM OS390 mainframes, UNIX AIX, Sun Solaris Servers	Oracle 8i, DataCom, VSAM CICS, LU6.2, MQ Series. Batch Reports; FTP File Transfer, CICS	CCH, AFIS, CAD/RMS, CJIS, FIFIS, IAFIS, FBI III, Live Scan, NCHIP, NCIC 2000, NICS, NJLETS, NSOR, NJWPS, and NLETS.	Partners with State Police, Department of Corrections and Department of Law and Public Safety.
2. New Jersey Office of Information Technology (OIT) Department of Corrections	IBM OS390 mainframes, Sun Solaris Servers	Oracle 8i, VSAM, FTP File Transfer	OBCIS, iTAG, CAPS, Logician and PRIM	Partners with Department of Corrections
3. Information Technology Office (ITO) Administrative office of the Courts	IBM OS390 mainframes Servers		ACS, ATC, CABS, CAPS, CCIS, FACTS, FAMJAIL, PG/JAIL and PROMIS/Gavel	
4. State Parole Board	Windows NT Infrastructure	Oracle 8i, Oracle Script, FTP File Transfer	PBIS Connectivity to: OBCIS, iTAG, CAPS	
5. Violent Crimes Compensation Board	Windows NT Infrastructure	Oracle 8i, Oracle Script, FTP File Transfer	CPS (Case Processing System) Connectivity to: PROMIS/Gavel, CAPS, ACS and FACTS	
6. Juvenile Justice Commission	Windows NT Infrastructure CITRIX winframe	SQL Server 2000, SQL Server Script FTP File Transfer	Juvenile Information Management System (JIMS)	

Source: Hardware and Software Questionnaire. See Appendix C for a copy of the Hardware/Software Questionnaire and Appendix H for the tallied results.

Despite ongoing efforts and initiatives for Criminal Justice information sharing there are a number of integration issues on the state level and local level.

Examples of the New Jersey Criminal Justice System Integration Issues:³⁸

- The Remand Court is unique to Essex County³⁹. Currently this court processes approximately 325 cases a month. The final dispositions rendered by the Essex Remand Court are not entered into the Automated Complaint System (ACS). Therefore, the Computerized Criminal History (CCH) is never updated with the final disposition of over 3,800 cases a year;
- Municipal Court staff currently enters complaints from forms filled out by local law enforcement agencies. The county jail's CCIS system can obtain the ACS complaint information at the time of booking electronically, but many times the complaint has not yet been entered into ACS, so the information physically brought to the jail must be entered into CCIS manually. A new project will be underway shortly to web-enable the complaint and alleviate this problem;
- There is no interface between the Superior Court's Probation system (CAPS) and cTAG and the Juvenile Justice Commission (JJC). When a probationer who owes fines is moved into another agency, the fines are not automatically entered. The balance sheet must be manually entered into CAPS;
- CCH does not accurately state whether someone is on probation;
- It is important to identify parole and probation violators at the time of admission so that they are denied bail. This is not being done systematically;

³⁸Mathtech , *Criminal Justice Information System. Assessment and Recommendation Final Report Draft*, 2004, p. 6. and

Interview with the AOC Project Manager, Pat Bucco, 1/16/2006.

³⁹ Interview with the Municipal Division Manager, Al Restaino, 1/10/2006. See Appendix G.

- The Probation Division sends a flat file once per month to the Parole Board. It contains data on offenders who are under Community Supervision for Life (CSL) and Parole Supervision for Life (PSL). This data is not received in a timely manner;
- The NJ Parole Board provides for parole officers to visit county jails to access sentenced County inmates' information and statuses rather than receiving the information electronically; and
- For 40% of all arrests, fingerprinting is done by the ink-and-roll method. The prints are then sent via mail to the State Police for processing. This manual process prevents the proper identification of the arrestee for an extended period of time.

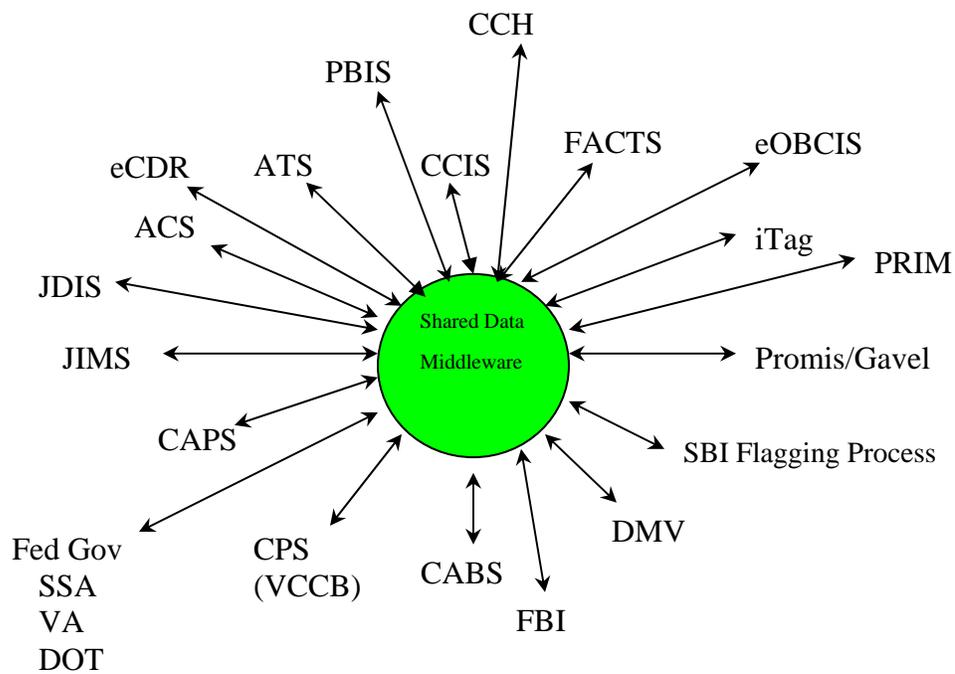
In late December 2003, the State hired Mathtech to make recommendations for projects to be implemented over the next five years which will move the State to “an integrated CJIS”. The objective of the Mathtech work effort is to identify opportunities for improved data integration and information flow between the various CJIS agencies and to document existing interfaces. The initial Draft Report was delivered on April 23, 2004. It was not finalized or adopted as of February 2006.⁴⁰

As indicated by the Project Manager of the Judiciary’s ITO, during an interview, the State currently has approximately 60 - 70% of all required interfaces. Nevertheless an improved method of delivering timely, complete and accurate data is required. The Mathtech recommendations propose a single comprehensive integration architecture or “hub and spoke” model of “pushing” and “pulling” data to and from the enterprise systems supported by the CJIS community. It is an open standards solution such as the J2EE architecture and justice XML based communication protocols. The business rules are stored in a middleware layer. This integration

⁴⁰ See note 38 supra.

solution provides the ability to communicate with any of the current CJIS applications. Later implementations of this architecture could include a data warehouse or multiple warehouses providing accessibility to all Criminal Justice Agencies. Pictorial representation of recommended IT architecture for the state-level integration of the Criminal Justice System, as proposed by Mathtech, is shown in Figure 4.

Figure 4. Recommended IT Architecture Strategy



Source: Mathtech, *Criminal Justice Information System. Assessment and Recommendation Final Report Draft*, 2004, p 5.

Overview of the Essex County Criminal Justice System.

Criminal justice information sharing occurs at both the state and local level, and there are characteristic differences between them. State information sharing is primarily focused on maintaining statewide information on subject identification, status and history that are used by all

agencies making decisions during critical events, such as a traffic violations, arrest, pre-trial release, disposition, or placement on probation, etc.

Local information sharing focuses on efficiently manage the everyday workflow between local entities, as well as, response to, and prevention of, crimes and incidents, and case processing. Problems include reducing redundant data entry, carefully scheduling staff (arresting officers, attorneys, judges, etc.) to prevent wasted time, reviewing law enforcement incident reports to determine probable cause, etc.

State and local entities have different roles to play, and different interests, in information sharing. What is the compelling state interest in the local workflow? It is not in the information exchanges that are controlling the local business process. Rather, the state's interest is in those relatively few key business events that cause exchanges that initiate or change the subjects statewide identification, status and history. In contrast, there are actual physical defendants at the local level that need to be processed for court events and incarceration.

There is very limited electronic information sharing among criminal justice agencies in Essex County now. The workflow between the Essex County Sheriff's Office, the Essex County Prosecutor's Office, Newark Police Department and other Municipalities, the Essex County Correction Department, Public Defender's Office and Courts is mostly manual and paper based. There is a huge number of paper documents shared among the agencies, reproduced many times in the workflow cycle.

The present county criminal justice paper based system can be characterized by unavoidable deficiencies. The more serious of these deficiencies are;

- Redundant data entry causing transposition errors;
- Referential integrity problems between all supporting computerized systems;

- Substantial manual effort and inflated staff requirements to link systems; and
- Delayed detainee identification, resulting in a multitude of problems.

Negative consequences resulting from the existing status quo are present. These factors were confirmed during the survey and interview process as a part of this research. For example:

Improper Release or Failure to Hold

- Unknown Warrant or Detainer;
- Status Unknown to Judge/Prosecutor;
- Event Unknown to Probation;
- Incomplete Criminal History Available; and
- Court Action Not Received or Misinterpreted by Jail.

Improper Arrest or Confinement

- Misidentification on Warrant;
- Recalled/Satisfied Warrant;
- Order of Release not Received; and
- Incarceration Status Unknown.

The research summary of the Essex County Criminal Justice “as-is” environment is presented below. The main functions, workflow, data and information utilized by each criminal justice agency in Essex County are described in tables 4, 5 and 6. Figure 5 depicts the overall workflow process of the Essex County Criminal Justice System. The summary section of “as-is” model ends with the description of hardware and software, including customized applications.

Table 4. Essex County Criminal Justice Agencies

Agency Name	Functions
Essex County Prosecutor's Office	Interfaces with local municipal law enforcement, incident/event witnesses, judicial services and correctional services. The Prosecutor's primary function is to evaluate and prosecute cases from Incident/Event reports, statements, Arrest Reports, and other information gathered through investigation.
Essex County Sheriff's Office	<p>Interfaces with local municipalities, judicial organizations, and correctional services. The primary function is to support the Essex County Courts with reliable identification, and transportation of prisoners to and from various detention facilities to/from Essex County Courts.</p> <p>The overall responsibility for law enforcement information/data creation, collection, and archiving pertaining to Booking & Criminal Identification (BCI) Processing resides with the Essex County Sheriff's Office</p>
Essex County Correction Department	<p>All arrestee processed by municipalities and the Sheriff's Office are brought to the Essex County Correction Facility (ECCF) at Doremus Avenue. The Essex County Correction Department gets involved when an arrestee is brought to and held in the ECCF holding cells.</p> <p>Currently, the hand-off of an arrestee is supported by a sealed plastic bag which contains all of the pertinent Incident/Event Report, Arrest Report, CDR Report, and other pertinent BCI Processing information that may have been completed by the local municipality. In addition, the Personal Belongings of the arrestee are typically enclosed with the sealed plastic bag.</p>
Newark Police Department	<p>NPD is the largest law enforcement municipality in Essex County given the size of the Department and quantity of Arrests that are made by NPD. The significant volume of arrests requires NPD and Essex County Sheriff and Prosecutor to work together cooperatively and productively. The NPD is responsible and accountable for handling all incidents/events that occur within the City of Newark, New Jersey. This responsibility and accountability includes proper handling of the Incident/Event and the Arrest/ ID/Court Process. In particular, the information/data that is critical to the proper arrest and identification process. All information/data pertinent to the incident/event leading up to the "Prosecute" or "Downgrade" decision must be captured and archived appropriately for the ECPO to make the determination whether or not to move forward with a case.</p> <p>The NPD like any other municipality is the first law enforcement organization to be dispatched to the scene of an incident/event when called into the local police departments via a 9-1-1 call or other method of communication.</p>
Local Municipalities(22)	Local Police Departments currently operate as a local municipality police department just like the NPD in regards to responding to locally called in and dispatched Incidents/Events. Under this arrangement, each local municipality must conduct and perform their own Arrest/ID/Court Process with the IT systems that are currently in place a that particular police department. Each municipality is under the same State of New Jersey mandate to conduct the first hearings within 72 hours from the time of arrest.

Municipal Court	<p>The main functions for the Municipal Courts are to set most initial bails, and perform arraignments, and trials on Disorderly Person offenses (Misdemeanors). In those municipalities where the municipal police do not create initial complaints, municipal court employees handle this function. Agencies with countywide arrest authority either file at Municipal Court or at times with the Superior Court. The County Sheriff has ACS access to the Newark City ACS database only and enters complaint data directly into the system. All other sheriff-generated complaints are filed in the municipal or superior courts. On DP or indictable charges (felony) not excluded from municipal authority by court rule, the Municipal Court sets bail. On indictable charges where the municipal court may not set bail, the Superior Court sets bail through its Speedy Bail program. This Speedy Bail process is initiated by local police through the Sheriff's Department during the night. The complaint and bail amounts are entered into the ACS system. If indictable, the case in ACS is disposed as transferred to the prosecutor. In the event the defendant cannot pay the bail amount on the spot, the detainee is transported to county jail and incarcerated until disposition of the charges or subsequent posting of bail. If bail is paid the detainee is released at the municipal police department.</p>
Central Judicial Processing Court	<p>The CJP court is the point of entry for all indictable offenses into the superior court system. Bailed and incarcerated defendants charged with indictable offenses will appear in the CJP Court during the next court session. Bailed defendants are instructed by police to appear at CJP court the next business day.</p> <p>There are two CJP court sessions each business day: at approximately 11:00 AM and 3:00 PM. If a defendant with indictable charges is transported and booked into the jail outside of court hours, the defendant appears at CJP the next morning. If a defendant with indictable charges is transported during court hours he is delivered to the sheriff's holding facility floor in the superior court building for direct appearance at CJP. These defendants are booked into the jail after CJP if they fail to post bail. The CJP Court does not merely arraign defendants. It is the point where the key criminal justice agencies in Essex County open their respective files in preparation for investigation and appearance at all subsequent court hearings.</p>
Pre-indictment Disposition Court	<p>The Pre-indictment Disposition Court is an early disposition court. It handles defendants willing to consider a prosecutor's plea offer without Grand Jury review of their charges. In addition to defendants referred by the assistant prosecutors in CJP Court and their post CJP Pre-indictment Squads, the prosecutor will consider requests for early plea offers from representing private attorneys or Public Defenders. The prosecutor then determines whether or not a plea offer is possible at that time. In all instances, cases are selected by the prosecutor's office as part of their screening process. The PDC court is not a forum for all pre-indictment cases passing through the system.</p> <p>Both jail and bail defendants are referred to this court. Bail defendants are notified to appear using Promis/Gavel. Jail defendants are identified on a hand written list and ordered over to court through OTP. If a defendant is Pre-trial Intervention (PTI) eligible, a PTI report is prepared by case management and forwarded to the prosecutor and PDC court for approval. For all other defendants and those not accepted into the PTI program, if a plea offer is not accepted, the matter is referred to the Grand Jury. If the plea offer is accepted the defendant pleads guilty to an</p>

	<p>Accusation (an indictable offense). A pre-sentence report is ordered and prepared by the courts Criminal Division for the subsequent sentence day. Case management report writers use stand-alone PC form systems to prepare the reports. Information from the various existing systems and paper documents must be keyed into this systems due to the lack of system integration and dependence on paper documents. Once created the reports are not easily shared amongst report writers and they must be reduced to paper for use by the courts and other agencies.</p>
Drug Court	<p>Drug Court is a specialized court for certain non-violent drug addicted offenders. The Drug Court will consider carefully screened defendants who plead guilty to indictable charges and are willing to enter the Drug Court program. The CJP Court, Public Defender, or Prosecutor may identify candidates for the Drug Court. CJP Court will forward a copy of the police reports and UDIR with 5A (application for Public Defender) to the Drug Court for screening. The Public Defender will forward a copy of the UDIR to Drug Court staff for consideration. The Prosecutor's Office will send a recommendation report to the Drug Court. Drug Court staff will then request a T.A.S.C. Evaluation (drug treatment need and amenability). The results of the evaluation are then returned to the Drug Court. If the evaluation is favorable and all participants agree, the defendant will be placed into an intensive rehabilitation program with probation and judge supervision. If denied entry into the program, the defendant's case is returned to the normal course of prosecution.</p>
Remand Court	<p>The Remand Court hears indictable matters that are downgraded to disorderly person (DP) offenses and some of which would have been indicted except for the existence of this court. The County Prosecutor refers cases to Remand Court and retains jurisdiction in these matters assuring prosecution in conformance with its office policies. Defendants are represented by public defenders. The court hears about two hundred cases per month and issues about twenty bench warrants a month. Because Promis/Gavel was not intended to track DP cases, the cases are disposed and re-entered into a PC based stand-alone local system called 'REDOK'.</p>
Grand Jury	<p>The Grand Jury receives their case files from the prosecutor's Pre-indictment squads. The needed information is data entered into the Grand Jury PC system. This case inventory database replaced the manual Docket book a few years ago. Utilizing Promis/Gavel, Grand Jury staff assigns a Grand Jury Docket number to each charge in the "comment" field. Then utilizing ad hoc reports this data is sorted into a calendar format acceptable for Grand Juries use. Promis/Gavel has a version of a Grand Jury calendar but it is not generated in the appropriate sort order, therefore, it is not utilized. Promis/Gavel is also used to generate certain reports, schedule hearings, to record hearing results, and print subpoenas. The subpoenas for law enforcement witnesses are hand delivered. This process is managed by the prosecutor's office. Other witnesses are notified to appear .. The Grand Jury sends the municipalities' lists of subpoenas for law enforcement officers needed for testimony. The municipal police departments update the Grand Jury on witness availability.</p>
Post Indictment Criminal Courts	<p>The superior criminal courts handle all indicted criminal matters in Essex County. Offenses vary from theft through homicide and involve serious consequences for</p>

	convicted defendants. Consequently these courts order the most jailed defendants for appearance, as numerous appearances may be necessary to dispose of a case.
Public Defender	<p>A Public Defender Staff attorney temporarily represents most defendants at the CJP Court but only after they are interviewed by public defender’s investigators and have received copies of documents with a 5A from the CJP Team. Attorney’s confer briefly with defendants and then represent at the CJP hearing. After CJP, the paperwork is sent to the Public Defender’s main office in Newark. There a staff trial attorney is assigned to all defendants and co-defendants. If a co-defendant case is indicted later, all defendants but one are reassigned to “pool” attorneys to avoid conflict of interest. Besides conflicts, assignments often must be changed at indictment for a variety of reasons including multiple cases, errors, and receipt of better defendant identification information. The changing in assignment often delays disposition of matters, both bail and incarcerated, because of the time required to make the change and the additional time required for the attorney to see the defendant and become familiar with the case. Nevertheless an attempt is made at that early stage to assign the same attorney to a repeat offender using the Public Defender database system and Promis/Gavel. The defendant database is searched for matches and then Promis/Gavel is searched for inconsistencies that need to be resolved. All cases for a single defendant must be verified as belonging to a single defendant (i.e., where aliases are used), and that a single attorney is assigned to represent a defendant on all cases. In many situations this is not possible due to the lack of proper identification of many of the defendants. A paper file is also opened which is then forwarded to the assigned attorney. The public defender enters case assignments on Promis/Gavel. A bail defendant who does not appear at CJP may apply for public defender representation at any time at the superior court in Newark. The office assigns two attorneys to each criminal court plus “pool” attorneys on multi-defendant and other cases that present a conflict of interest for the office. In all, the public defender represents approximately ninety percent of all criminal defendants in Essex County.</p> <p>It is the perception of other agencies within the system that some attorneys avoid traveling to the jail because of perceived delays in seeing their clients; overall concern about the way in which they are treated when at jail sites, and lack of time. Failure to see defendants causes delay in dispositions of cases and increased days of care at the jail.</p>

A high level ‘as-is’ workflow is outlined within each criminal justice agency in Essex County in Table 5.

Table 5. Agency and Business Processes

Agency Name	Business Process
Essex County Prosecutor's Office	<p>From the time an arrest is made, is it the goal of the ECPO to conduct the first preliminary hearing within 72 hours from the time of the recording of the arrest. The current Case Flow requires access to the same information/data that was obtained and documented throughout the Arrest/ID/Court Process.</p> <ol style="list-style-type: none"> 1. The Arrestee is taken into custody, 2. Assistant Prosecutor enters the data into PROMIS GAVEL and a Prosecutor's Case Number is generated. 3. The Assistant Prosecutor makes the initial prosecutorial decision whether to continue prosecution as an indictable offense or to downgrade the offense and refer the case to a municipal court for prosecution. All cases that are screened and access by the CJP staff will lead to a prosecutorial decision. 4. A bail hearing is conducted with a CJP court. 5. After the bail hearing the case and accompanying information is forwarded to Case Operations 6. Case Operations then forward the case to ECPO Trial Team for processing through the trial courts
Essex County Sheriff's Office	<p>Incident / Event Process</p> <p>The ECSO utilizes hardcopy forms for information/data documentation and/or direct entry into the Sheriff's Record System for incident or event reporting. There are many different hardcopy forms currently utilized by the ECSO depending upon the particular incident/event that occurs.</p> <p>The following describes the steps for handling an incident/event and how information/data is captured:</p> <ol style="list-style-type: none"> 1. When an incident happens and is occurs into the Essex County Dispatcher (either citizen initiated, officer initiated, or citizen flags an officer), an officer is dispatched to the scene 2. Upon arrival to the scene, an ECSO officer performs the investigation and then continues with proper data collection pertinent to the investigating the incident 3. An ECSO officer fills out a hardcopy incident form and takes notes pertinent to the incident 4. The incident form is later manually entered into the CJIS System's Incident database on the AS/400. Each ECSO officer is responsible for inputting their own incident information into the Sheriffs Record System 5. Upon creation of a new entry, either the Computer Aided Dispatch system (CAD) Sheriff's Record System during data entry can generate an Incident Number. During data entry, the unique Incident Number creation triggers

	<p>additional information to be entered depending upon the type of incident. Once data is entered, the Incident information/data is electronically stored and archived in the AS/400 system</p> <p>If the incident is determined to be an arrest-able offense, a Court Deposition Report (CDR) will be completed. If the incident is not an arrest-able offense, the incident is recorded and closed. An example of such an incident/event might be violation of a noise ordinance.</p> <p>Booking and Criminal Investigation (BCI) Process.</p> <ol style="list-style-type: none"> 1. Check for Warrants Criminal History 2. Interview /data collection 3. LiveScan/AFIS 3. Mugshot 4. Wristband generation 5. Holding
Essex County Correction Department	<p>Arrestees processed by municipal police departments and the Sheriff's Office are brought to the Essex County Correction Facility (ECCF) at Doremus Avenue.</p> <p>The hand-off of an arrestee is supported by a sealed plastic bag which contains all of the pertinent paperwork (Incident/Event Report, Arrest Report, CDR Report, and other pertinent BCI Processing information). In addition, the personal belongings of the arrestee are typically enclosed within the sealed plastic bag.</p>
Newark Police Department	<ol style="list-style-type: none"> 1. NPD officer gathers information about the incident. If an arrest is required, the officer makes the arrest based on the charges or outstanding warrants on this individual and gathers information for the Arrest Report. An arrest number is created for each individual arrest. 2. NPD police officer gathers information/data pertinent to the creation of an Arrest Report and prepares the individual for single finger Live Scan entry, Creates Arrest number, and CDR number for new Arrestee's (Note: existing Arrestee's may have a pre-existing CDR criminal history) 3. NPD officer prepares Arrest Process Sheet with the above data (used for Arrest Report). 4. NPD will transport the individual to the ECCF where that individual and the entire Arrest Packet is forwarded to the ECSO and then handed off to the ECCD for incarceration. In this case, the ECSO must reconfirm and validate the Arrest ID/ ourt information/data that is contained in the Arrest Packet.
Local Municipalities(22)	<ol style="list-style-type: none"> 1. Local municipality police officer gathers information about the incident/event. If an arrest is required, the officer makes the arrest based on the charges or outstanding warrants on this individual and gathers information for the Arrest Report. Arrest # is created for each individual arrest that is made. 2. Local municipality police officer gathers information/data pertinent to the creation of an Arrest Report and prepares individual for single finger Live Scan entry, Creates Arrest #, and CDR # for new Arrestee's (Note: existing Arrestee's may have a pre-existing CDR criminal history)

	<p>3. Local municipality officer prepares Arrest Process Sheet with the above data (used for Arrest Report) and puts individual into local holding cell at police department until first hearing with local municipal court</p> <p>4. For serious crimes or situations where Speedy Bail and/or Bail is not met by the local Municipal Court, the local police department will transport the individual to the ECCF where that individual and the entire Arrest Packet is forwarded to the ECSO and then handed off to the ECCD for incarceration. In this case, the ECSO must reconfirm and validate the Arrest / m I Court information/data that is contained in the Arrest Packet.</p>
Municipal Court	<p>1. Set most initial bails</p> <p>2. Perform arraignments,</p> <p>3. Perform trials on Disorderly Person offenses (DP)</p>

Information needed for criminal case processing by each of Essex County Criminal Justice Agency is summarized in Table 6.

Table 6. Essex County Criminal Justice Information Sharing Requirements.

Agency	Information Sharing Requirements
Essex County Prosecutor's Office	Interfaces with all municipalities within Essex County in law enforcement and judicial matters. Information requirements originate from the point an incident occurs. The entire information, dataflow from the incident/event must be readily available to the Essex County Prosecutor's Office.
Essex County Sheriff's Office	<p>ECSO interfaces with other municipalities within Essex County in law enforcement and judicial matters on a daily basis and provides primary support to the Essex County Courts regarding reliable identification, transportation and incarceration of prisoners to/from various detention facilities to/from Essex County. ECSO also has the overall responsibility for law enforcement information/data creation, collection, and archiving pertaining to the county Booking & Criminal Identification (BCI) Process.</p> <p>ECSO IT systems and information must be shared with many different organizations given its responsibility to book and identify all individuals under indictment, housed by ECCF, arrested by a county LEO. All captured data is available to be shared with other law enforcement or judicial agencies.</p>
Essex County Correction Department	Accurate and timely information by Municipal and Superior Courts, identification of defendants

Newark Police Department	Same as Local Municipalities below.
Local Municipalities(22)	Information/data sharing requirements of the local municipalities originate from the point that an Incident/Event occurs. The entire information Incident/Event must be readily available to the Local Municipality Prosecutor in order to make a decision on how to handle the particular Incident/Event.
Municipal Court	Status of cases transferred to Superior Court, when case is downgraded, original documents, if defendant in jail, status of any arrest and release, restraining orders, drug restraining orders.
Central Judicial Processing Court	CJP package, jail status, arrest record, complaint, codefendant info, bail status, domestic violence.
Pre-indictment Disposition Court	If defendant represented by Public Defender, complaint, plea offer, whereabouts of defendant, jail status, bail status
Drug Court	If defendant represented by Public Defender, complaint, plea offer, whereabouts of defendant, jail status, bail status, task evaluation, case history, prosecutor's decision and offer, bed availability, probation status
Remand Court	Status of cases transferred to Superior Court, when case is downgraded, original documents, if defendant in jail, status of any arrest and release, restraining orders, drug restraining orders, Prosecutor's plea offer
Grand Jury	Prosecutor's file, complaints, plea record
Post Indictment Criminal Courts	Attorney info, Grand Jury results, indictment, jail status, bail info, domestic violence information
Criminal Case Management	Criminal package, full discovery, package, access to criminal automated system and family automated system, jail status, pending charges, criminal history

The overall workflow process of the Essex County criminal justice system is depicted in a flow chart format in Figure 5.

Figure 5. High Level Workflow Of the Essex County Criminal Justice System

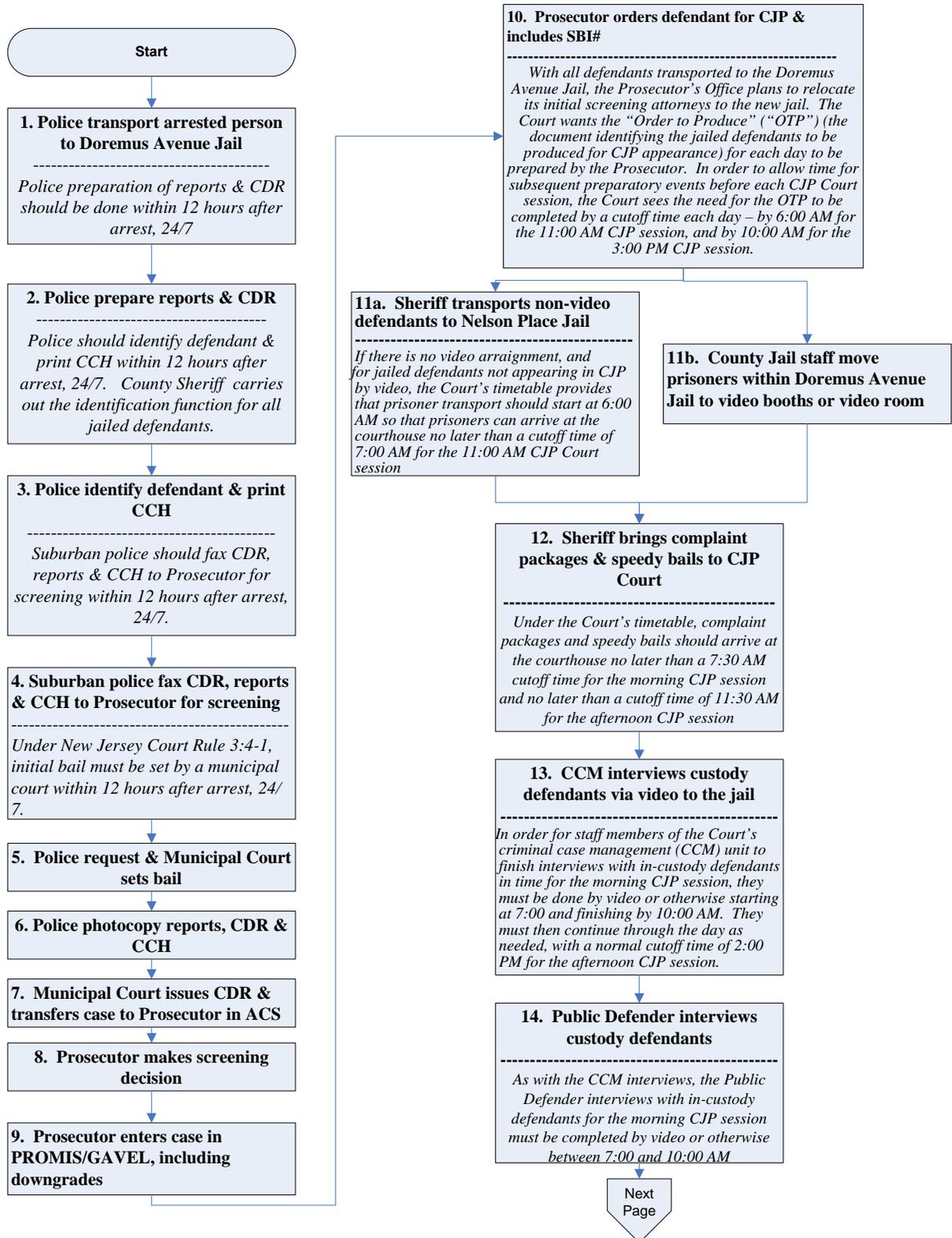
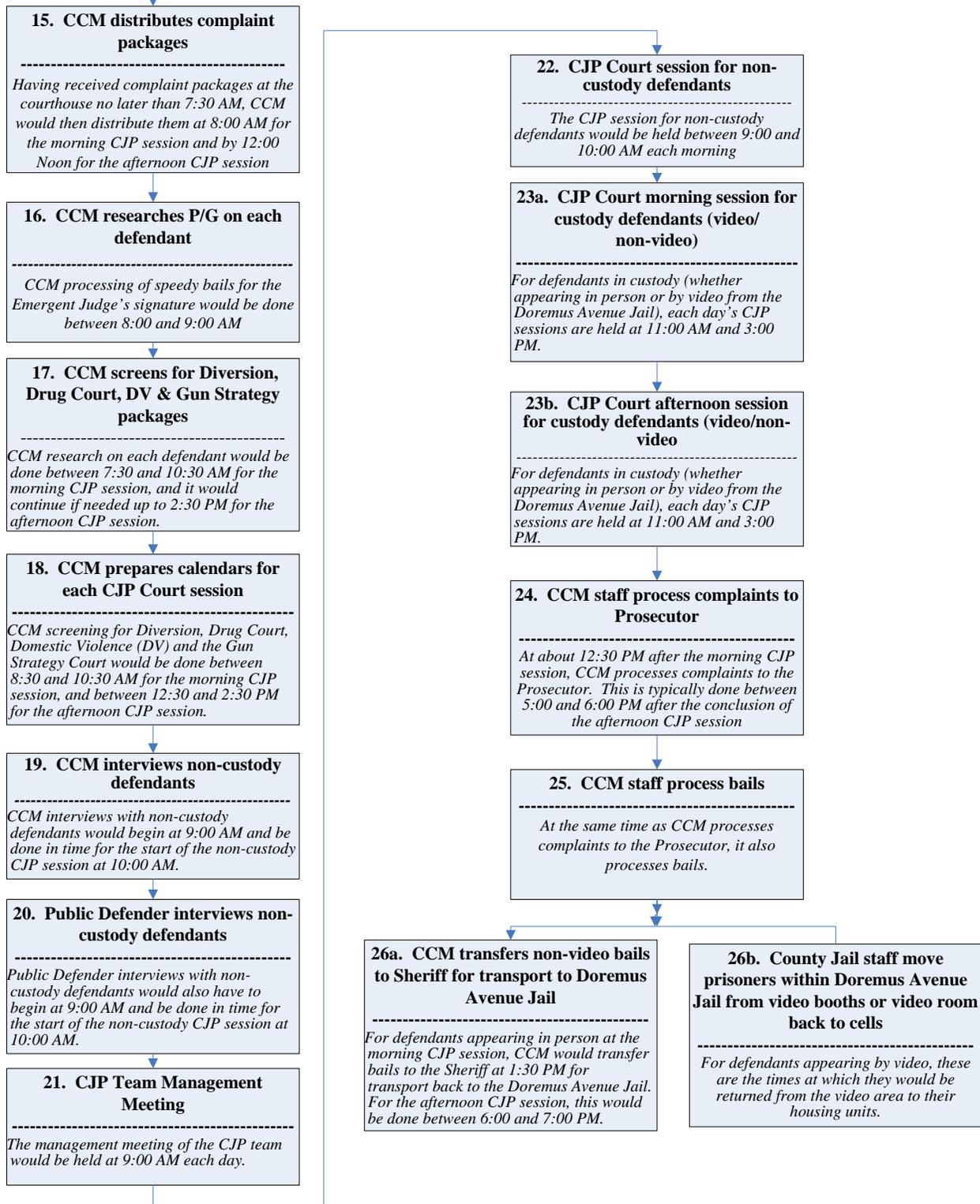


Figure 5
Continue



A summary of existing software and hardware configurations in Essex County criminal justice agencies is described below.

Essex County criminal justice agencies are for the most part operating on an Intel based hardware platform. In addition to PC Based Local Area Networks (LAN) operating in each agency, the Sheriff's Office utilizes an IBM AS400 and the Superior Court an IBM RISC – AIX. Each municipality participating in the Hardware Software Survey also have LANs installed and operational. Each of the surveyed agencies has access to the Internet through their network. The majority of the Municipal Police Departments are running on the MS Windows 2000 desktop operating system and Windows 2000 Server network operating systems. The County Corrections Department has a mixture of Windows XP and 2000 on desktops and Windows 2003 servers. The Essex County Sheriff's Office is running on Windows 2000 on both desktops and the server. The Essex County Prosecutor's Office has Windows XP installed on the majority of desktop computers and a Windows 2000 Server.

Each of the Essex County criminal justice agencies uses the MS Office Suite software, mostly MS Word and Excel. Municipal Police Departments type their forms, for example arrest reports in Microsoft Word, but do not transmit the reports electronically. Municipal Police Departments also have access to Internet based email.

The Essex County Sheriff's Office, Essex County Prosecutor, Correction Department and the Public Defender use also use specialized local and state-wide systems including the Sheriff's Record Keeping System, Mugshot System, Livescan, Promis/Gavel, CCIS, ACS, ATC, CABS, CAPS, CCIS, FACTS, FAMJAIL, PG/JAIL. (For definition see Appendix G)

Professional IT support varies from one agency to another. Except for the Courts and the Essex County Prosecutor's Office none of the remaining county and municipal justice agency in Essex County have in-house professional IT staff to support their technology. In most cases the

support responsibility rests on the local staff without IT training or experience. The county Department of Corrections relies entirely on vendor support.

The Essex County Integration Initiative.

The initiative to integrate municipal law enforcement, prosecutorial and correctional services is currently being championed under the leadership of the Sheriff's Office. They plan to apply for a Federal Grant in FY 2006 for \$1.2 Million. The initial assessment, functional requirements, and proposed integration platform analysis was performed but not approved. The documentation is confidential and was not available to the researcher.

This initiative represents a positive step in recognizing the importance of information sharing among criminal justice agencies in Essex County, and putting it into action by through the leadership of the Sheriff Office. However the integration proposal raises key concerns:

- **Courts are not included** in the plan although the vast number of the interfaces are between courts and executive branch criminal justice agencies. SEARCH has found in its development of reference exchanges on the Justice Information Exchange Modeling Tool (JIEM)¹¹ project that over 55% of all exchanges are to or from the courts and that in three quarters of the total court exchanges the court is the supplier of data. Whether it is warrant data, release conditions, disposition and conviction data, probation conditions, no contact and domestic abuse restraining orders, all originate in the courts and the information is of vital interest to other agencies.

Turf War – Essex County is not unique as a local political environment where there is a lack of communication, different priorities and goals, the commitment level of the top managers and leadership, knowledge of business processes and technology, perception of high risk involved with the development and implementation of integration initiative, fear

of change and security concerns. These issues emerged during the interviews. The majority of respondents agreed that integration is necessary to move the system forwards in order to:

- increase the public’s trust and confidence in the justice system and
 - reduce the cost of operations and improve efficiency.
- **Lack of Strategic Plan** – Although a vision for integration exist in the county as described above – it has not developed into an approved strategic plan and does not include either municipal courts or the Superior Court of New Jersey. Due to these factors there is no realistic cost estimate and no settled list of priorities for an integrated system.
- **Funding Based on Federal Grants:** Essex County has perennial fiscal problems and “extra” money to fund an integrated criminal justice system does not exist. Therefore the county is hoping for federal funding to assist this effort. The \$1.2 million being sought is a small percentage of what it would really cost to gain the functionality hoped for in an integrated system
- **No Technology Standards** – Another major obstacle to moving forward is that no technology standards exist for all involved agencies except the courts. Standards are critical in designing an integrated system for connecting disparate computer systems which exist in each agency.

Conclusions and Recommendations

From a technical perspective the researcher can clearly see a solution to the dilemma of automated systems integration and managing external interfaces in the criminal justice system in Essex County. Factoring in all of the “human” factors and the reality of how to accomplish the ultimate goal, my conclusions are:

- A governing board needs to be established with a representative from each of the major players in the system. This representative needs to be empowered to speak for the agency and to make decisions with the other board members;
- A comprehensive plan must be developed to document the strategy and articulate the ultimate goals of the integration initiative;
- A JIEM analysis is essential since it will detail the requirements of the eventual integrated system;
- Standards must be set and adhered to, to ensure sustainability of the system and a level of integrity that will stand up to scrutiny over the long run; and
- The technology introduced should support an SOA approach to the challenge of integration of the disparate automated systems.

Modeling and Managing Criminal Justice Interfaces is a complex task which requires a multidimensional approach. Nevertheless the very first step in this process for Essex County should be to:

1. Establish a Governing Body

This oversight, advisory group should be comprised of representatives of the Superior Court and Municipal Courts and all County Criminal Justice agencies including the prosecutor and all levels of law enforcement to set priorities and guide the development and implementation

of the electronic justice information sharing initiatives. Membership of the governing body and their roles should be clearly defined. The present integration initiative excludes the courts for very peculiar reasons. Interviews conducted in this project reveal that the executive agencies believe that the process would be faster without the courts participation and stated that the courts requirements could be added and implemented at a later date. It will take strong judicial leadership to overcome the current mindset in the county.

1. Develop Strategic Plan for the Essex County Integrated Criminal Justice Initiative

Successful integration requires leadership and intensive management and planning. The following broad goals should be considered in such plan:

- Justice information should be collected electronically at its source, shared appropriately, and made available for repeated use within the system;
- Establish security guidelines that serve justice and public safety needs while protecting privacy, preventing unauthorized disclosures of information, and allowing appropriate public access;
- Coordinate and acquire sufficient funding and other resources for integration;
- Establish standards and regulations for data exchange and infrastructure development;
- and
- Establish a secure, reliable, effective, and efficient IT infrastructure that facilitates information sharing.

2. Secure Funding:

Funding for current and future initiatives is critical to the support of an Essex County Law Enforcement Integration Initiative. The county reliance on a ‘potential’ federal grant may be “wishful thinking”. Without substantial supplemental funding from the county itself,

federal funds will not go very far. This researcher believes that a federal agency will be more likely to underwrite a criminal justice integration initiative that includes participation of the courts. If the county's priority was for a modern integrated criminal justice system funding could potentially be allocated in the regular budget. Accordingly, the integration initiative committee should be looking to expand and secure additional funding for the integration project.

3. Conduct a JEIM Analysis of the County Exchanges

The Essex County project team should consider using JEIM since it would prevent starting the process from scratch and provide the following benefits:

- Using the Web-based user interface, professional documentation of the information flow and business rules in the criminal justice enterprise will be established;
- Tabular and graphical reports should be generated to help criminal justice leaders understand how their system works at a high level of detail;
- The JEIM tool has been designed to interface with the Global Justice XML Data Dictionary (GJXDD) by providing input information; and
- Information developed with the JEIM tools can be also used to identify redundancy, bottlenecks, and provide an opportunity to improve justice system work flow.

4. Standards Setting

One role of the project governing body should be to provide direction on a variety of standards, models, or consistent county-wide programs in the technology, architecture and security as follows:

- **Technology**

The technical plan should define a strategy for technology when sharing both within and across jurisdictions. An important part of a technical plan is a strategy for the system architecture. My recommendation is that the Service Oriented Architecture should be given serious attention. SOA is a good fit for integration of criminal justice information sharing systems and offers a number of potential benefits including:

- New applications can almost be “plugged in”;
- New interfaces do not need to be written, (coded) to other applications or data sources, because they are all ready done and are part of the integration scheme;
- Business processes and workflows can be easily analyzed, modified and measured because SOA catalogs the business processes and business rules;
- With easy access to process and workflows, the need for changes, can be more simple explained and processed; and
- Security and access authorization can be monitored at the business process level, not just at the data level.

- **Security Standards**

Security standards are critical in overcoming resistance to integration and cooperation due to the fear that information will be compromised. A good security and access scheme will provide a basis to adopt security requirements that will benefit the sharing of appropriate justice records both within the justice community and with the public.

- **Standards Policy and Different Levels of Standards**

An enterprise, county-wide, architecture that builds upon existing standards offers the best opportunity to take advantage of the accumulated experience of others. However, optimizing the utilization of standards also means that standardization comes at a cost. To

minimize these costs and maximize the benefits, standards should only be established at the point at which they become relevant.

Different levels of standards include:

- **Industry Standards**

Industry standards tend to be established and utilized across domains. For example, XML is a standard that has been developed to assist in the transfer of information between systems. The World Wide Web Consortium (W3C) developed XML as a way to expedite the exchange of information over a network.

- **Domain specific standards**

Domain standards extend the functionality provided by the industry standards by addressing the issues found within a particular industry such as justice. The Global Justice XML Data Model (GJXDM) is a good example of extending an industry standard (XML) and applying it to the needs of the justice community in order to create a domain-specific standard for the representation of data both as a data dictionary and a data model. The GJXDM model defines and organizes data elements that are commonly used in justice for the purpose of enabling criminal justice enterprise in New Jersey and County of Essex standards. An enterprise standard builds upon the efforts of the domain and industry standards.

- **Local standards**

Local standards which are built upon Enterprise standards further refine process, data and architectural standards to meet specific business needs.

- **Impact of Standards**

First, a full understanding of the types and importance of and investment in standards should permeate the project's planning and development. The decision makers at all levels should be educated on the need for compliance with standards for the health and strength of the initiative to be sustained over the long haul and for effective communication with the outside world. For connection with state agencies compliance with recognized standards is essential.

These are the major issues and concerns that need to be considered and resolved with the county justice enterprise. The correct architecture, governing body, funding, standards and strategic planning are critical to achieving criminal justice integration. The challenge in integrating the automated systems of the criminal justice agencies will seem overwhelming unless those who assume the leadership of the project can translate the tasks and benefits into terms that will rally the support of the politicians, law enforcement's top managers and the public. This highly sophisticated application of modern technology will first require leadership and a workable management strategy.

Institute for Court Management

Court Executive Development Program – Phase III

Appendix A

Survey Letters

Kaz Lobaza, Information Technology Division
Superior Court of New Jersey, Essex Vicinage
50 West Market Street, Room 169
Newark, NJ 07102
973 693-5757

<date>

< Name
< Title
< Agency
< Address 1
< Address 2

Dear _____ :

Essex County has reached a critical crossroads concerning the integration of its criminal justice information technology systems. Progress has been made over the past few years but there is a long way to go to achieve the benefits available through present day technology.

To add to the effort I am conducting a research project for the Court Executive Development Program concerning Criminal Justice Technology Integration for Essex County. My hope is to develop a picture of the present situation and develop tangible recommendations for a course to follow to achieve the objective of a fully functional system that works for the court and all agencies that are part of our large and complex criminal justice system.

Your assistance in submitting to a brief interview or filling out and returning the questionnaire will be very much appreciated and will enhance the credibility of this project.

I would be pleased to answer any questions that you have about the study or the questionnaire.

Sincerely,

Kaz Lobaza

Institute for Court Management
Court Executive Development Program – Phase III

Appendix B

Workflow Questionnaire

Court Executive Development Program Workflow Survey

Your assistance in completing this survey will be much appreciated as a contribution to my research project on Criminal Justice Technology Integration.

Name and Title	Agency	Phone Number

1. From what agencies do you receive criminal case information?

- | | | |
|---|---|---|
| <input type="checkbox"/> Office of the Prosecutor | <input type="checkbox"/> Attorney General | <input type="checkbox"/> Courts |
| <input type="checkbox"/> Municipal Police | <input type="checkbox"/> State Police | <input type="checkbox"/> County (Sheriff) |
| <input type="checkbox"/> Public Defender | <input type="checkbox"/> Other Specify: _____ | |

2. Types and volume of criminal case information you receive

- A. **Paper forms** via Interoffice or courier mail Fax Postal Mail

List Names of document and daily average volume

Name of document	Mail	Fax	Daily Volume

- B. Electronic Data: E-Mail Electronic File: Sender: _____

- Accessing Automated Systems of Other Agencies: Name of system: _____

- Other, specify: _____

Name of document	E-mail	Electronic File	Accessing Other Agency Systems	Daily Volume

3. What specific information do you receive in order to continue processing the case (list the key data elements).
4. Do you input the received information into your own automated system.
 Yes No

If yes – Name of the System: _____

List the major data elements of inputted information

5. Estimate the time required for the data entry per case and daily
 Time per Case _____ Amount of time daily _____

6. For paper forms. Do you make copies? If yes How many copies and where do they go?
 Yes No

Name of Form	Number of Copies	Distribution

Thank you for your assistance. If you have any questions please call me.
Kaz Lobaza, 908 693-5757

Please return in the enclosed envelope to:
 Kaz Lobaza, Information Technology Division
 Superior Court of New Jersey, Essex Vicinage
 50 West Market Street, Room 169
 Newark, NJ 07102

Institute for Court Management
Court Executive Development Program – Phase III

Appendix C

Computer Hardware-Software Questionnaire

Institute for Court Management
Court Executive Development Program – Phase III

Court Executive Development Program Computer Hardware / Software Questionnaire

Your assistance in completing this survey will be much appreciated as a contribution to my research project on Criminal Justice Technology Integration.

Name and Title	Agency	Phone Number

1. List the computer hardware used for investigation and Criminal case tracking:

- Personal Computers Yes No
- Mini Computers Yes No
- Mainframe Yes No

2. What Operating Systems are used by your office / agency?

- MS Windows: Version: _____
- Linux Version _____
- AS 400 Version: _____
- Mainframe _____
- Other _____

3. If networked – What network operating system is used?

--

4. Software applications for investigation and / or criminal case tracking::

Software application	Version	Off the Shelf	Developed

5. What Database software is used. _____

6. Do you have local (staff) IT support? Yes No

7. Do you have internet connections? Yes No

Thank you for your assistance. If you have any questions please call me.

Kaz Lobaza, 908 693-5757

Please return in the enclosed envelope to:

Kaz Lobaza, Information Technology Division
Superior Court of New Jersey, Essex Vicinage
50 West Market Street, Room 169
Newark, NJ 07102

Institute for Court Management
Court Executive Development Program – Phase III

Appendix D

Interview Questionnaire

Institute for Court Management
Court Executive Development Program – Phase III

Court Executive Development Program Interview Questionnaire

I am conducting a research project for the Court Executive Development Program concerning Criminal Justice Technology Integration for Essex County. I appreciate a few moments of your time for this interview.

Name and Title	Agency and Location	Phone Number
Date of Interview		Email address

Section I. Agency Overview

1. Describe main functions of your agency as related to criminal justice.

- Law Enforcement
 Prosecution
 Jail/Corrections
 Public Defender
 Municipal Court
 Superior Court
 State Agency _____
 Other _____

2. Describe the high level workflow within your agency (If available please provide relevant documentation):

Case Initiation:

Case Processing:

Case Disposition:

3. Describe type of information needed from other agency(s) for effective criminal case processing:

Type of Information needed from:

Law Enforcement

Prosecution

Jail/Corrections

Public Defender

Municipal Court

Superior Court

Other:

4. Identify the two most critical issue for integration. (Identification of Defendants, Easily available for all participants, etc.)

5. List Important Integration Initiatives Underway.

Section II: IT Integration

1. List your applications/automated systems which are part of criminal justice information sharing:

2. Is the strategic plan for Criminal Justice Integration developed?

Yes No

3. Is it adopted?

Yes No

Section III: Assess benefits of the integration projects:

1. Impact on: Defendant Identification High Low

2. Case Status: High Low

3. Criminal Case History: High Low

4. System Scope:

Geographical

Jurisdiction

- | | |
|---|--|
| <input type="checkbox"/> Statewide | <input type="checkbox"/> Criminal Justice System |
| <input type="checkbox"/> County Wide | <input type="checkbox"/> Civil Justice System |
| <input type="checkbox"/> Citywide | <input type="checkbox"/> Juvenile Justice System |
| <input type="checkbox"/> Regional | |
| <input type="checkbox"/> Other: (Please Describe) _____ | |

5. Does the project take on the most critical issue of the criminal justice workflow/process? Yes No
 [If yes describe the key issues, if no – what is missing?]

Section IV: Assess the risks:

- | | | |
|---|-----------------------------------|--------------------------------|
| 1. How big is the change required to meet business needs? | <input type="checkbox"/> Big | <input type="checkbox"/> Small |
| 2. Complexity of the project: | <input type="checkbox"/> High | <input type="checkbox"/> Low |
| 3. Cost and funding resource availability: | <input type="checkbox"/> High | <input type="checkbox"/> Low |
| 4. Performance requirements? | <input type="checkbox"/> High | <input type="checkbox"/> Low |
| 5. Does the project conform to standards? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | <input type="checkbox"/> Somewhat | |
| 6. Skills of the personnel involved with project? | <input type="checkbox"/> High | <input type="checkbox"/> Low |

Section IV: Assess the system deficiencies:

- | | | |
|---------------------------------------|------------------------------|-----------------------------|
| 1. Unknown warrant or detainer | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Status unknown to Judge/Prosecutor | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

- | | | |
|--|------------------------------|-----------------------------|
| 3. Event unknown to Probation | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Incomplete Criminal History available | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Court action not received or misinterpreted by Jail | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 6. Misidentification on Warrant | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 7. Recalled/satisfied warrant | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 8. Order of release not received | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 9. Incarceration status unknown | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 10. Manual Data Entry of the same info into more
then one computer system | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 11. Missing Data | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 12. Untimely Data | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Kaz Lobaza, Information Technology Division
 Superior Court of New Jersey, Essex Vicinage
 50 West Market Street, Room 169
 Newark, NJ 07102
 973 693-5757

Institute for Court Management
Court Executive Development Program – Phase III

Appendix E

IJIS Worksheet - AOC

SECTION I: SYSTEM OVERVIEW

System Name: Criminal Justice System

System / Project Website Address: None

System Description and Scope (please provide brief description):

Implementation Status (please provide brief description):

On Going

Phase of Development (check all that apply):

- | | |
|--|---|
| <input type="checkbox"/> Initial Organization | <input type="checkbox"/> Operational. Date: |
| <input checked="" type="checkbox"/> Planning | <input checked="" type="checkbox"/> Upgrading / Enhancing |
| <input checked="" type="checkbox"/> Implementing | <input type="checkbox"/> Other |

If you chose "Other" or more than one option, please describe here:

Future Plans (please provide brief description):

5 Year Master Plan

System Scope (both geographical and jurisdiction):

- | <i>Geographical</i> | <i>Jurisdiction</i> |
|---|---|
| <input checked="" type="checkbox"/> Statewide | <input checked="" type="checkbox"/> Criminal Justice System |
| <input type="checkbox"/> Countywide | <input type="checkbox"/> Civil Justice System |
| <input type="checkbox"/> Citywide | <input checked="" type="checkbox"/> Juvenile Justice System |
| <input type="checkbox"/> Regional | |
| <input type="checkbox"/> Other (please describe): | |

Agencies Involved (please check all that apply and provide names of agencies involved in rectangle text boxes):

- State Law Enforcement:
- Local Law Enforcement:
- State Courts:
- Local Courts:
- State Court Administrator's Office:
- Local Court Administrator's Office:
- Clerk of Court:
- Local Prosecution:
- State Prosecution:
- Local Public Defense:
- State Public Defense:
- Probation:
- Parole:
- Corrections:
- Jail:
- Department of Motor Vehicles:
- Department of Public Safety:
- Administrative Services:
- State Repository:
- Juvenile Justice:
- Criminal Justice Planning Agencies:
- Social Services:
- Information Services:
- Other (please list all other agencies involved):

SECTION II: PLANNING AND GOVERNANCE

Strategic Plan (Please provide brief description. If available, provide electronic link to document or include as an email attachment along with this Worksheet):

None

Mission Statement:

The State of New Jersey is committed to timely, accurate and secure sharing of information across the continuum of its criminal information systems. Appropriate and regulated user access to data about offenders and criminal justice processes will expedite the flow of offenders through the courts and improve all agencies' information-based performance and efficiency, and thereby increasing public safety

Vision Statement:

The State of New Jersey is committed to timely, accurate and secure sharing of information across the continuum of its criminal information systems. Appropriate and regulated user access to data about offenders and criminal justice processes will expedite the flow of offenders through the courts and improve all agencies' information-based performance and efficiency, and thereby increasing public safety

Integration Objectives:

1. Ensure the integration of criminal justice data across diverse platforms, systems and applications.
2. Provide timely entry of vital information and timely and accurate data sharing.
3. Ensure security of sensitive information. Increase security of data storage, transfer and access.
4. Track an offender from arrest to sentencing to incarceration to parole.
5. Eliminate redundant data entry.
6. Provide an automated exchange of information between agencies at critical decision points.
7. Integrate data across law enforcement, prosecutors, courts, probation, corrections, post incarceration supervision and victim services.

8. Generate automatic notifications regarding the transmission of interagency notifications of offenders' dispositions, transfers of custody, transfers of balance sheet information, escapes, new admissions, new cases, re-arrests and closed cases. For example, an improvement would have the jail intake process notify parole, probation or corrections when an offender is arrested, or have custodial agencies sends notifications to community-based agencies prior to an offender's release.
9. Increase completeness and accuracy of data.
10. Increase flexibility and ease of access to data.

Realized Benefits (cost and operational):

- Easy access to shared data
- Security – Rules define access to data down to the data element level. Again, sharing data and enforcing security rules is relatively easy to implement.
- Real-time access to data
- Ad hoc analysis – Analysis may be performed across data sources from different agencies

Governance Structure:

Advisory Policy Committee

Governing Body:

Division of State Police, Administrative Office of the Courts, Department of Corrections, Parole Board, Juvenile Justice Commission, Division of Criminal Justice, Victims of Crime Compensation Board, Prosecutors Office, New Jersey Office of Information Technology, County Jail Wardens and the Office of the Attorney General

Board Authority:

Advisory

Policymaking

Agencies Represented (please check all that apply and provide names of agencies represented on governing body in rectangle text boxes):

- Governor's Office
- State Supreme Court
- State Law Enforcement:
- Local Law Enforcement:
- State Courts:
- Local Courts:
- State Court Administrator's Office:
- Local Court Administrator's Office:
- Clerk of Court:
- Local Prosecution:
- State Prosecution:
- Local Public Defense:
- State Public Defense:
- Probation:
- Parole:
- Corrections:
- Jail:
- Department of Motor Vehicles:
- Department of Public Safety:
- Administrative Services:
- State Repository:
- Juvenile Justice:
- Criminal Justice Planning Agencies:
- Social Services:
- Information Services:
- Other (please list all other agencies represented):

Established By (Please provide email attachment of document or link to legislation that established the governing body. If no link is available, please provide statute/executive order number or other relevant information in rectangle text boxes):

- Statute:
- Executive Order:
- Appointment:
- Memorandum of Understanding: Memorandum of Understanding
- Other (please describe):

Year Established: 1990

Subcommittees (for each subcommittee, please provide a brief description of its assigned tasks):

Subcommittee Name	Primary Tasks

SECTION III: STAFFING AND FUNDING

Staff Support (please check all that apply and provide a brief description of their role):

- A project manager provides oversight and administrative support:
Nick Delucka
- Staff of a specific agency oversees project development (please include name of agency):
- Agencies pool personnel, which are assigned to oversee project development (please list participating agencies):
- Other:

Funding

Approximate Cost of Implementation: Multi Million

Total Funding Attained (to date):

Funding Sources

► **Grants** (for each of the following that apply, please provide grant name, amount, system component funded, and year grant received):

Federal: Federal

State:

► **Budget** (for each of the following that apply, please provide amount, system component funded, and year funding was secured):

City/County:

State:

► **Private Industry** (for each of the following that apply, please provide amount, system component funded, and year funding was secured):

Donations:

Partnerships:

User Fees:

Other:

SECTION IV: TECHNICAL

Technical Overview (please provide brief description):

In 1990, the Criminal Justice Information System Committee was established by the Attorney General under direction of Data Processing to improve and facilitate the exchange of information and data between the agencies of the New Jersey's Criminal Justice System.

The CJIS Committee continues to meet monthly, providing the executive direction and insight to aid state efforts to improve CJIS. New Jersey's CJIS is comprised of three separate statewide systems that feed into each agency's mainframes (one judicial --Administrative Office of the Courts, and two executive branch mainframes --State Police and Corrections) located in Trenton, New Jersey. State agencies, all 21 counties and hundreds of municipal criminal justice agencies access information contained on these mainframes

Information from each system's database populates three central databases (one judicial and two executive). The three central mainframes share information (they are connected). County users send information to Administrative Office of the Courts (judicial mainframe). Information is then forwarded to State Police (executive branch) mainframe via batch feed. Additionally, Corrections has an online updating capability to include inmate processing and locations. Networks are cross-domain between executive and judicial branches. Users in each branch can access data on other branch's computers (if they have proper access).

Department of Human Services supports the Automated Child Support Enforcement System, which is accessed via WAN by probation officers. This is an example of judicial branch personnel (probation officers) accessing executive branch system (child support system). 20,000 executive branch workstations can access judicial branch system. 50 LANs are in place in order to handle 1-2 million transactions per day. Corrections staff (executive branch) access judicial information daily as part of reduced custody and parole release consideration.

The Department of Corrections (DOC) single entry transaction (SET) accesses five state and Federal criminal justice systems with one fingerprint-based SBI number. Disposition data captured on PROMIS/GAVEL is fed to state police every night to be incorporated into Criminal Case History System. Law Enforcement accesses criminal and municipal court systems. For example, law enforcement personnel are able to query court databases online in order to check for wants/warrants.

Depending on the local jurisdiction, police officers may write parking tickets online and enter arrest online into an Automated Complaint System. Prosecutors share database with the courts via PROMIS/GAVEL. System generates court orders to produce defendants in court; sheriffs .access the system in order to determine when and where to transport these defendants.

The County Correction Information System (CCIS (arrest booking) is integrated with local criminal court scheduling system so that jail is able to determine

whether person booked has pending court matters anywhere in the state. Within the very near future, another unique integrated software enhancement will be implemented which crosses state and county jurisdictions and executive/judicial organizational lines relative to county jail admissions notification to state corrections admissions.

The County Correction Information System (CCIS) automatic jail admissions notification process electronically transmits an admission transaction on all state

offenders (inmates, parolees, furloughs, etc.) to the state Department of Correction

(DOC). This online transaction will ensure no state offenders will be admitted to a county

jail without the DOC being notified. The system allows for tracking of a defendant from arrest through prison commitment.

Models and Schematics (Such as data model, process model, architectural model, information flow/case processing diagrams, etc. If available, please provide electronic links to DOCuments or include as email attachments along with this Worksheet):

Attached.

The Integrated Solution Incorporates Key Technologies, Including (please check all that apply):

Middleware

Mainframe

Central Database

Distributed Databases

Data Warehousing

Client / Server Technology

- Internet
- Electronic Data Interchange
- Online Data Transfer
- Web Browser Interface
- Other (please specify):

Vendors/Consultants (please provide names of vendors and consultants along with a brief description of their contribution to your project):

Mathtech, Inc.
Suite 301
101 Interchange Plaza
Cranbury, New Jersey 08512
609-495-2500

Technology Standards (Please check standards that you have adopted / developed to facilitate your system. In addition, please provide descriptions of the specific standard, where appropriate. For example, a database management standard may be Oracle or a network standard may be TCP/IP):

- Application:
- Data Element:
- Database Management:
- Performance:
- Communications:
- Network:
- Messaging:
- Hardware:
- Software:
- Other:

System Security (please provide brief description of your system's security):

Security Components (check all that apply):

- | | |
|---|--|
| <input checked="" type="checkbox"/> Password Management | <input checked="" type="checkbox"/> Administrative Security |
| <input checked="" type="checkbox"/> Encryption | <input checked="" type="checkbox"/> Security Policy document (Please provide electronic link or email attachment of document along with this Worksheet, if possible) |
| <input checked="" type="checkbox"/> Network Security | |
| <input checked="" type="checkbox"/> Personnel Security | |
| <input checked="" type="checkbox"/> Physical Security | <input type="checkbox"/> Other (please describe): |

Lessons Learned (please provide brief details):

Links Provided (please check the following items that you will make available to us via email or electronic link):

- | | |
|---|--|
| <input type="checkbox"/> Project Home Page | <input type="checkbox"/> Other (Needs Assessment, RFPs, etc. Please describe): |
| <input type="checkbox"/> Strategic Plan | |
| <input type="checkbox"/> Governing Body Legislation | |
| <input type="checkbox"/> Models and Schematics | |
| <input type="checkbox"/> Technology Standards | |
| <input type="checkbox"/> Security Policy document | |

SECTION V: CONTACT INFORMATION

Contact (please limit to one contact person):

Name: Job Title: Project Manager

Organization: AOC

Address:

City/State/ZIP:

Phone: Fax:

Email:

Organization Website Address:

Worksheet Respondent (if same as above, please enter “same” in Name field and leave the remaining fields blank):

Name: Same Job Title:

Organization:

Address:

City/State/ZIP:

Phone: Fax:

Email:

Organization Website Address:

Is this the first time your jurisdiction has completed this Worksheet?:

Yes, first time

No, this is a resubmission with updated information

Institute for Court Management
Court Executive Development Program – Phase III

Appendix F

IJIS Worksheet – Essex County Sheriff's Office

SECTION I: SYSTEM OVERVIEW

System Name: Essex County Integrated Law Enforcement Initiative

System / Project Website Address:

System Description and Scope (please provide brief description):

The integration initiative is count-wide and includes the following agencies:

Essex County Sheriff's Office

Essex County Prosecutor's Office

Essex County Corrections

Newark Police Department

Local Municipalities

Implementation Status (please provide brief description):

Initial Planning

Phase of Development (check all that apply):

Initial Organization

Operational. Date:

Planning

Upgrading / Enhancing

Implementing

Other

If you chose "Other" or more than one option, please describe here:

Future Plans (please provide brief description):

System Scope (both geographical and jurisdiction):

Geographical

Regional

Statewide

Other (please describe):

Countywide

Citywide

Jurisdiction

Criminal Justice System

Civil Justice System

Juvenile Justice System

Agencies Involved (please check all that apply and provide names of agencies involved in rectangle text boxes):

- State Law Enforcement:
- Local Law Enforcement:
- State Courts:
- Local Courts:
- State Court Administrator's Office:
- Local Court Administrator's Office:
- Clerk of Court:
- Local Prosecution:
- State Prosecution:
- Local Public Defense:
- State Public Defense:
- Probation:
- Parole:
- Corrections:
- Jail:
- Department of Motor Vehicles:
- Department of Public Safety:
- Administrative Services:
- State Repository:
- Juvenile Justice:
- Criminal Justice Planning Agencies:
- Social Services:

Information Services:

Other (please list all other agencies involved):

SECTION II: PLANNING AND GOVERNANCE

Strategic Plan (Please provide brief description. If available, provide electronic link to document or include as an email attachment along with this Worksheet):

None

Mission Statement:

Vision Statement:

Integration Objectives:

Facilitate Data Sharing

Streamline Process

Establish Standards

Improve Accuracy and Timeliness

Ensure Security and Control

Realized Benefits (cost and operational):

Automation of exchange of Criminal History Records, Incident Reports, Prosecutor's Decisions and Requests, Court Decisions Orders and Schedules.

Governance Structure:

Essex County Sheriff's Office

Essex County Prosecutor's Office

Essex County Corrections

Newark Police Department

Local Municipalities

Governing Body:

Board Authority:

Advisory

Policymaking

Agencies Represented (please check all that apply and provide names of agencies represented on governing body in rectangle text boxes):

Governor's Office

State Supreme Court

State Law Enforcement:

Local Law Enforcement:

State Courts:

Local Courts:

State Court Administrator's Office:

Local Court Administrator's Office:

Clerk of Court:

Local Prosecution:

State Prosecution:

Local Public Defense:

State Public Defense:

Probation:

Parole:

Corrections:

Jail:

Department of Motor Vehicles:

Department of Public Safety:

Administrative Services:

State Repository:

SECTION III: STAFFING AND FUNDING

Staff Support (please check all that apply and provide a brief description of their role):

- A project manager provides oversight and administrative support:
No
- Staff of a specific agency oversees project development (please include name of agency): No
- Agencies pool personnel, which are assigned to oversee project development (please list participating agencies):
- Other:

Funding

Approximate Cost of Implementation: 1.2 Million

Total Funding Attained (to date):

Funding Sources

► **Grants** (for each of the following that apply, please provide grant name, amount, system component funded, and year grant received):

- Federal:
- State:

► **Budget** (for each of the following that apply, please provide amount, system component funded, and year funding was secured):

- City/County:
- State:

► **Private Industry** (for each of the following that apply, please provide amount, system component funded, and year funding was secured):

- Donations:
- Partnerships:
- User Fees:
- Other:

SECTION IV: TECHNICAL

Technical Overview (please provide brief description):

Models and Schematics (Such as data model, process model, architectural model, information flow/case processing diagrams, etc. If available, please provide electronic links to documents or include as email attachments along with this Worksheet):

The Integrated Solution Incorporates Key Technologies, Including (please check all that apply):

- | | |
|---|---|
| <input checked="" type="checkbox"/> Middleware | <input checked="" type="checkbox"/> Internet |
| <input type="checkbox"/> Central Database | <input checked="" type="checkbox"/> Electronic Data Interchange |
| <input type="checkbox"/> Data Warehousing | <input type="checkbox"/> Online Data Transfer |
| <input type="checkbox"/> Client / Server Technology | <input checked="" type="checkbox"/> Web Browser Interface |
| <input type="checkbox"/> Mainframe | <input type="checkbox"/> Other (please specify): |
| <input type="checkbox"/> Distributed Databases | |

Vendors/Consultants (please provide names of vendors and consultants along with a brief description of their contribution to your project):

Technology Standards (Please check standards that you have adopted / developed to facilitate your system. In addition, please provide descriptions of the specific standard, where appropriate. For example, a database management standard may be Oracle or a network standard may be TCP/IP):

- Application:
- Data Element:
- Database Management:
- Performance:
- Communications:
- Network:

Messaging:

Hardware:

Software:

Other:

System Security (please provide brief description of your system's security):

Security Components (check all that apply):

Password Management

Encryption

Network Security

Personnel Security

Physical Security

Administrative Security

Security Policy document (Please provide electronic link or email attachment of DOCUMENT along with this Worksheet, if possible)

Other (please describe):

Lessons Learned (please provide brief details):

Links Provided (please check the following items that you will make available to us via email or electronic link):

Project Home Page

Strategic Plan

Governing Body Legislation

Models and Schematics

Technology Standards

Security Policy DOCUMENT

Other (Needs Assessment, RFPs, etc. Please describe):

SECTION V: CONTACT INFORMATION

Contact (please limit to one contact person):

Name: _____ Job Title: _____

Organization: Sheriff's Office

Address:

City/State/ZIP:

Phone: _____ Fax: _____

Email:

Organization Website Address:

Worksheet Respondent (if same as above, please enter "same" in Name field and leave the remaining fields blank):

Name: _____ Job Title: _____

Organization: Essex County Sheriff's Office

Address:

City/State/ZIP:

Phone: _____ Fax: _____

Email:

Organization Website Address:

Is this the first time your jurisdiction has completed this Worksheet?:

Yes, first time

No, this is a resubmission with updated information

Institute for Court Management
Court Executive Development Program – Phase III

Appendix G

Glossary of Technology Terms

10. Glossary of Technology Terms

ACS – *Automated Complaint Systems* - The Automated Complaint System (ACS) is the Judiciary's centralized criminal case management system currently used by the State's 537 municipal courts. ACS manages and tracks all indictable, disorderly persons, petty disorderly persons, penalty enforcement and local ordinance complaints issued in the State of New Jersey. The ACS system also contains all outstanding non-indictable warrant information arising out of the State's municipal courts.

AFIS - *Automated Fingerprint Identification System* - The Automated Fingerprint Identification System (AFIS) is a series of computers designed to assist in the rapid search and identification of fingerprints. The system is designed to search millions of fingerprints in a matter of minutes. The primary purpose of the AFIS is to store, search and match fingerprints. The NJSP implemented the AFIS during May 1990.

AOC - *Administrative Office of the Courts* - The State of New Jersey Administrative Office of the Courts.

ATS - *Automated Traffic System* - The Automated Traffic System (ATS) is the Judiciary's centralized traffic case management system currently used by the State's municipal courts. All DWI, moving and parking complaints issued in the State are processed and tracked in ATS. The ATS system is integrated with the Judiciary's Automated Complaint System and contains all outstanding traffic warrants issued by the State's municipal courts.

Brady Act – *The Brady Handgun Violence Prevention Act (Public Law 103-159)* – signed into law November 30, 1993.

CABS - *Central Automated Bail System* - The Central Automation Bail System in Judiciary is a Statewide mainframe bail/financial processing system.

CAD/RMS - *Computer Aided Dispatch/Records Management System* - The NJ Division of State Police Computer Aided Dispatch/Records Management System is actually two systems seamlessly interfaced to provide continuity of entered information:

CAD - The Computer-Aided Dispatched portion that has automated the NJ Division of State Police dispatching processes.

RMS - The Records Management System, which automates the NJ Division of State Police report writing processes and provides immediate access to information and statistical analysis.

CAPS - *Comprehensive Automated Probation System* - The Comprehensive Automated Probation System in Judiciary is a Statewide mainframe probation case tracking and fee processing system.

CCH -*Computerized Criminal History* - The Computerized Criminal History System is a State repository of criminal history record information made accessible to the criminal justice

community via the NJCJIS. It is a fingerprint-based system administered by the NJSP that tracks criminal case history from initial arrest to disposition of said arrest. OBCIS programming automatically updates CCH to include current DOC status. A CCH report is commonly called an arrest history or "RAP Sheet".

CCIS - *County Correctional Information System* - The County Correctional Information System is a mainframe offender-based system accessed through AOC-TELE. It is a county administered data collection system that tracks inmates during their contact with the county jails. Data collected by CCIS includes offender identifiers, arrivals and departures, charges, bail and the detainees information as well as commitment data, discharge data and sentencing information. All 21 of the State's county jails are using CCIS.

CJIS - *New Jersey Criminal Justice Information System* - is a computerized message switching system which provides the criminal justice community with telecommunication functionality and access to a variety of mainframe applications developed by agencies within the State, national and international law enforcement communities. State applications accessed through this network include database files (CCH, New Jersey Master Name Index, NJWPS, NJDMV, NCIC) and telecommunications (NJLETS, NLETS).

CMIS – *Corrections Management Information System* – The NJ Department of Corrections' suite of application for Inmate Management, which utilizes state of the art technology including digitized mugshots and live scan fingerprint imaging; Inmate Electronic Medical Records; Custody Officer Scheduling; Human Resources; and Training Administration. The Inmate Management system is considered the system of record relating to inmate management. This application includes functionality for inmate intake, release and internal movements, classification, legal orders, offenses in custody, payroll, collection of fines, penalties and restitution, and calculation of parole eligibility dates.

DOC - The State of New Jersey Department Of Corrections.

FACTS - *Family Automated Case Tracking System* - Family Automated Case Tracking System in Judiciary is a case tracking/management system for all family court-related matters which also includes juvenile cases.

FAMJAIL - *Family Automated Case Tracking System/County Correctional Information System Interface* - is an integration of *FACTS* and CCIS.

FIFIS - *Fully Integrated Fingerprint Identification System* - The FIFIS takes the AFIS and CCH to a new level. The FIFIS automates the three critical areas involving fingerprints. The first step is to electronically capture the fingerprint images. This is accomplished through live scan machines. Live scan machines ensure quality fingerprint images and accurate demographic data. This information is electronically transmitted to the NJSP. The second step is the processing of fingerprints through AFIS. During the third step the AFIS results are passed on to the CCH database where a new criminal history is built or an existing record is updated. The NJSP processes and responds to all FIFIS submissions within one hour. FIFIS is available 24 hours a day, 365 days a year. New Jersey State Police is in the final test stage of extending this

processing to provide similar 'real-time' processing of Applicant Fingerprints that will automate much of the processing from Live Scan by the State contractor through the State and Federal Background Response to the submitting agency. Turnaround time on the processing of Applicant fingerprints will be reduced from weeks to hours.

IAFIS -*Integrated Automated Fingerprint Identification System* - The FBI has a national AFIS which contains all of the FBI's fingerprint cards in an automated database. IAFIS gives the NJSP the ability to send, search, and receive all of this information electronically.

III - *The Interstate Identification Index (or III)* - is an NCIC application which is accessed through CJIS. It provides indexed identifiers and criminal history records of over 20 million serious criminal offenders on-line to state, national and international users. Through III, records can be obtained directly from the state identification bureaus holding the actual records. The FBI maintains records on behalf of the non-participating states.

Live Scan - A fingerprint image-based computer system, which electronically captures and transmits an offender's (or his/her) fingerprint information to a state repository. The NJSP is currently using the Identix Touchprint 600. Crossmatch and ILSS machines by Morpho. These units electronically capture high quality fingerprint images. The quality control software also ensures that the images are in the proper sequence. This important feature eliminates a very common error. Almost all of the demographic information is reviewed for accuracy at the workstation prior to transmission to the NJSP. This high level of quality images, editing as well as rapid transmission is the foundation for FIFIS. Currently in New Jersey there are 96 Live Scan workstations transmitting 60 percent of the criminal arrests to the NJSP and Applicant Fingerprint submissions are being phased into the Live Scan/AFIS/FIFIS process as part of a vendor implementation which will automate fingerprinting of all applicant related background submissions.

NCHIP - *National Criminal History Improvement Program* - This federal grant provides resources to establish the infrastructure for improving criminal history records and related systems within a state, and enhancing the quality, completeness and accessibility of the nation's criminal history records system. Federal formula grant funding provides direct awards and technical assistance to states to improve the quality and accessibility of the nation's criminal history records and records of protective orders involving domestic violence and stalking, to support the development and enhancement of state sex offender registries, and to facilitate the interstate exchange of such records through national systems.

NCIC 2000 - *National Crime Information Center 2000* - is a mainframe offender-based system that is accessed through CJIS. It is a computerized index of DOCUMENTED criminal justice information available to state, national and international law enforcement professionals. The Federal Bureau of Investigation provides the host-computer systems and telecommunications lines to 50 states and 3 districts. They in turn operate their own computer systems providing access to local criminal justice agencies and regional networks. NCIC has 18 files of information, including: wanted persons, missing persons, unidentified person, foreign fugitives,

U.S. Secret Service Protective, vehicles, license plates, securities, guns, boats, articles, Ill and ATF Violent Felons.

NICS – *National Instant Criminal Background Check System* – An automated system which a Federal Firearm Licensee (FFL) may contact via the Federal Bureau of Investigation or a State Point of Contact (POC) for information on whether receipt of a firearm by a person who is not licensed would violate Title 18, Section 922 (g) or (n) or state law. The purpose of NICS is to immediately provide firearms dealer with information they need to determine whether to allow or deny a firearm transfer.

NJLETS - *The New Jersey Law Enforcement Telecommunications System* - is accessed through the Criminal Justice Information System (CJIS). It is a computer-supported communications network linking state law enforcement telecommunications systems.

NSOR - *National Sexual Offender Registry* – The NSOR provides the capability for the computer equipment and the development of the capability of computerized storage and transmittal of mug shots and registration information of sexual offenders who are required to register. Additionally, it is used to develop the electronic transmission of sex offender fingerprint data to Federal Bureau of Investigation database. NSOR was called for first by Presidential Directive on June 25, 1996, and subsequently legislatively mandated as part of the Pam Lychner Sexual Offender Tracking and Identification Act of 1996. Its implementation by the FBI; began in February 1997 as an interim system, made provisions that allow a state to submit sexual offender registration data for inclusion in a subject's criminal history record. The permanent file was included among the files on NCIC 2000 as the Convicted Sexual Offender Registry File, (CSORF).

NJWPS - *New Jersey Wanted Persons System* - is a Statewide wanted persons file established to assist the criminal justice community perform its duties. The NJWPS provides a computerized file of accurate and timely criminal justice information on wanted persons within the State (that will not be extradited from outside of New Jersey). The NJSP operate the system and provide access to federal, state, county and local criminal justice agencies through NJCJIS.

NJSP – New Jersey State Police

NLETS - *National Law Enforcement Telecommunications System* - is a nation-wide computer supported communication network linking state, national and international law enforcement telecommunication systems.

OBCIS - *Offender Based Correctional Information System* - combines basic offender information from distributed DOC sources. OBCIS provides information to DOC, NJ State Parole Board, AOC, Public Defenders' Offices as well as other county, state and federal agencies. It provides on-line access to Indexed offenders (YOBN) including location and commitment status, a set of Action History (YOBA) reports for a variety of DOC purposes, (including Parole Warrant and Offender Records Unit file tracking), and a single entry transaction (YOBM) to access a multi-system report set for Objective Classification. Originally designed to locate offenders and track their histories, OBCIS also provides data through several

downloads for research, budget and policy projections, analysis billing and reporting purposes. In addition, it provides summary, exception and special reports for management

OIT - The State of New Jersey's Office of Information Technology.

OJC - *Objective Jail Classification* - A method of determining the custody supervision level of offenders based on non-biased validated criteria (i.e., an offender's prior criminal history, various social factors and institutional adjustment).

PG/JAIL - *PROMIS/GAVEL/Jail* - An integration of PROMIS/GAVEL and CCIS

PATS - *Parking Authority Ticketing System* - is the Judiciary's wireless, hand-held computer system currently in use by the State's largest Parking Authorities. PATS is fully integrated with ATS (the Judiciary's Automated Traffic System) and provides parking enforcement officers with on-line access to the Statewide ATS warrant system.

PBIS – *Parole Board Information System* – is an in-house developed, ORACLE based information system that provides information germane to ascertaining the parole eligibility status and location of every state adjudicated inmate and parolee in or having passed through the New Jersey State Correctional System. The application consists of an automated tracking system that makes available to the user information detailing where each inmate or parolee is in the parole process.

PROMIS/GAVEL - An automated prosecutor and criminal court management and information system, administered by AOC and accessed through AOC-TELE.

SBI - *State Bureau of Identification* - The State Bureau of Identification functions as the central repository for the receiving, verifying, coding, and processing of all criminal history record information, applicant submissions, and sex offender registrations received pursuant to State statutes. The State Bureau of Identification also maintains a central drug registry for law enforcement employment pursuant to drug screening guidelines. Dissemination of criminal history record information is utilized by criminal justice agencies for criminal justice purposes and non-criminal justice agencies for licensing/employment purposes.

TCP/IP - *Transmission Control Protocol/Internet Protocol* -The suite of protocols originally was designed for the UNIX operating system. TCP/IP software is now available for every major kind of computer operating system including the Internet.

Unified Law Enforcement Inquiry – Driver inquiries by Drivers License (DL) have been expanded as the first phase of an automated inquiry to provide inquiry results from multiple systems. The existing DL check performed at a stop in the mobile environment provides returns from the State's Motor Vehicle repository, the State and federal Wanted Persons repositories and the AOC Automated Traffic System.

VTC - *Video Tele-Conferencing* - Live communication between individuals from remote sites that provides users with a synchronized, real-time audio and visual transmission.

VAWA – *Violence Against Woman Act* – A federally funded program administered in New Jersey by the Victim Witness Advocacy Unit. Each state is provided with funding to administer programs to assist women in domestic violence situations, such as providing funding to law enforcement agencies to establish domestic violence response teams.

VCCB - *Violent Crimes Compensation Board* - Oversees the development of a uniform system for recording all information necessary to ensure proper identification, tracking, collection, and disposition of money owed with regard to all assessments, restitution, and fines.

YOBA – *Is an OBCIS Action History Inquiry* - The use of this YOBA inquiry produces an offenders complete history within the OBCIS system.

YOBM - A transaction within OBCIS that permits the user to access the Single Entry Transaction (SET) screen. Once the screen is completed with the offender's identifying data, five criminal history reports are generated (OBCIS, CCH, Triple I, NCIC Wanted Person and PROMIS/GAVEL).

YOBN – A transaction within OBCIS that permits the user to inquire upon an offender's name. An exact name match will list the offender name along with his/her corresponding identifiers.

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Appendix H

Workflow Survey Tally

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		1. From what agencies . . ?								2. Types and Volume of Criminal info . .				3. Specific Info Rec'd		4. Do you input rec'd info?		5. Time per case and daily		6. Copies of Paper Forms								
										A. Paper Forms				B. Electronic Data														
7	Criminal Division	X	X	X	X	X	X	X	X	X	X	X	Police Reports	X	X	ACS	Prison History	X	Promis	15 Minutes	60 Minutes	X				PSI Assignmet	1	
													Indictments			CCIC	Trial History									PTI Trials	4	
													Complaints			FACTS	State Police CCH									PTI Assignment	6	
																Prosecutor	Family Court Info									Trail Readiness	2	
																Parole	Probation Records									Backlog List	8	
																									Drug Court Referral	6		
																									Plea Cut Off	6		
8	Criminal Divison	X	X		X	X		X		X			Court Disop Reprot	X	X	OBCIS		X	Promis	15 minutes	2 hours					PSI	8	
													Indictments	X	X	CCIS			Indictment							CCIS	1	
													Police Reports	X	X	FACTS			Accusations							PTI	2	
																CAPS			Custody							Backlog Report	3	
																										Trail Readiness	4	
																										Drug Court Referral	2	
9	Criminal Division	X	X	X	X	X	X	X		X	X		PLCA Packages				Court Info vis "wheel"	X	Date of Plea	15 minutes	2 hours		X					
													(Police Reports)				to process case		P.O. Assign									
													Incident Reports				Assignment /		CompletionData									
													Lab Reports				Completion											
													CCH															
10	Criminal Division	X	X	X	X	X	X	X		X			Plea Packet			CCIS	Jail	X	PSI								Court	
													Disvovery			ACS	Prison		Curi Info								Prosecutor	
													CHR			OBCIS	Family Court		Defendant Info								Attorneys	
													Calendars			FACTS	Defendant ID											
													Reports															
11	Criminal Division	X	X	X	X	X	X	X		X			Plea Packet	X			ACS	X	Promis				X				PSI	11
													CCH				CCIS									PTI	11	
													Calendars				OBSIS											
12	Criminal Division	X		X			X	X	X	X	X	X	Medical Records	30	X		Medical Records	X	Accurate Asses.	5 Minutes	60 Minutes						Medical Records	5
													Progress Repts	10			Mental Health Rec					x				Drug Court Appl	3	
	1.:Other: Treatment Providers												Drug Ct Appl	5			ID Documents										Psychiatric Docs	5
	and Jail												Transfer	10													Treatment Referral	2
													Tx Retinal	3													Progress Reports	2
13	Criminal Divison (CJP)	X	X		X	X	X	X		X	X		Complaints	55	X	Complaints	Arraignment Results	X	Court Events	5 minutes	7 hours	X					Drig Court Team	2
													Incident Reports	55			of each Def in CJP		Court Schedules								Judge Cronin	2

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Court Executive Development Program – Phase III

Appendix I

Computer Hardware and Software Tally

Computer Hardware / Software Questionnaire

Kaz Lobaza, CEDP Research Project Phase III

Respondent	1. Hardware for Investigation and Criminal Case Tracking			2. Operating System				3. Network Op System	4. Software Applications				5 DatabaseSoftware	6. Local IT Staff		7. Internet Connection	
	PC	Mini	Mainframe	Windows	Linux	AS 400	Mainframe	Software	Version	Developed	Off Shelf		Yes	No	Yes	No	
1 Roseland Police Dept	Yes			XP 2000 Prof				Windows 2000	Poly Sys	2.0		Yes		X		X	
									Excel	2002		Yes					
									Word	2002		Yes					
									Mugshot Pro	3.3.0		Yes					
									Info Cop	NA							
2 Belleville Police Dept	Yes			XP 2000				Windows 2000	CAD			Cisco Public Safety		X		X	
									RMS			Cisco Public Safety					
2 Caldwell Police Dept	Yes			2000				Windows 2000	CAD			Enforsys CAD		X		X	
									RMS			Enforsys RMS					
3 Essex Felles Police Dept	Yes			2000				Windows 2000	CAD			Enforsys CAD		X		X	
									RMS			Enforsys RMS					
4 Glen Ridge Police Dept	Yes			2000				Windows 2000	CAD			Enforsys CAD		X		X	
									RMS			Enforsys RMS					
5 North Caldwell Police Dept	Yes			2000				Windows 2000	CAD			Enforsys CAD		X		X	
									RMS			Enforsys RMS					
6 West Caldwell Police Dept	Yes			2000				Windows 2000	CAD			Enforsys CAD		X		X	
									RMS			Enforsys RMS					
7 Essex Couty Sheriff	Yes	AS400 5250 Term		2000		Mod 720		Windows 2000	CRS		Yes	MS SQL 2000		X		X	
									CAD	3.5	Yes	IBM DB2					
									Photo Mgmt	5.B.1	Yes						
									Fingerprint Capture		Yes						
8 Newark Police Department	Yes							NT 4.0	CAD			Oracle 8.1.7		Yes		Yes	
									Live Scan			MS SQL 2000					
									Fingerprint								
									NCIC		Yes						
9 Prosecutor's Office	Yes			2000				Windows 2000						Yes		Yes	
10 Essex County Corrections	Yes			2000 XP				Windows 2000	Inmate Mgmt System		Yes						
									CCIS		Yes			x		x	
									Victim		Yes						
									Notification System								
									Live Scan		Yes						
11 West Orange Police Dept	Yes			2000				Windows 2000	Livescan		Yes			x		x	
									MsWord	2000							

12	Fairfield PD	Yes			2000		Windows 2000	Record Keeping System Livescan Mugshot Image	Yes Yes Yes			x			x
13	State Police	Yes	UNIX AIX Sun Solaris	IBM			OS390 CICS, LU6.2, MQ Series, Batch Reports; FTP File Transfer, CICS	CCH, AFIS, CAD/RMS, CJIS, FIFIS, IAFIS, FBI III, Live Scan, NCHIP, NCIC 2000, NICS, NJLETS, NSOR, NJWPS, NLETS				Oracle 8i, DataCom, VSAM	Yes		Yes
14	Department of Corrections	Yes	Sun Solaris	IBM			OS390 CICS, LU6.2, MQ Series, Batch Reports; FTP File Transfer,	OBCIS, iTAG, CAPS, Logician and PRIM				Oracle 8i, VSAM	Yes		Yes
15	AOC	Yes		IBM			OS390 CICS, LU6.2, MQ Series, Batch Reports; FTP File Transfer,	ACS, ATC, CABS, CAPS, CCIS, FACTS, FAMJAIL, PG/JAIL PROMIS/Gavel				Oracle 8i, VSAM	Yes		Yes
16	State Parole Board	Yes			NT		NT	PBIS Connectivity to: OBCIS, iTAG, CAPS				Oracle 8i, Script FTP File Transfer	Yes		Yes
17	Violent Crimes Compensation Board	Yes			NT		NT	CPS (Case Processing System) Connectivity to: PROMIS/Gavel CAPS, ACS, FACTS				Oracle 8i, Script FTP File Transfer	Yes		Yes
18	Juvenile Justice Commission	Yes	CITRIX		NT		NT	JIMS Juvenile Information Management System				SQL Server 2000, SQL Server Script FTP File Transfer	Yes		Yes

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Appendix J

Interview Tally

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Court Executive Development Program – Phase III

Interview Questionnaire

Kaz Lobaza, CEDP Research Project Phase III

Interviewee

Section 1 - Agency Overview

	1	2	3	4	5	6
1. Type of Agency	Superior Court Municipal Division	Superior Court Criminal Division	Essex County Jail	Essex County Sheriff	Information Technology Office (AOC)	Essex County Prosecutor's Office
2. High Level Workflow Case Initiation	Municipal Courts initiate 90% of criminal complaints in NJ. Conduit of information from arresting authority to the Prosecutor and Superior Court.	See Attached	Hold defendants until requested by courts or released.	See Attached	NA	See Attached
Case Processing	Municipal Courts enter cases into ACS and receive documents which are forwarded to other agencies. A paper complaint is required. ACS information is forwarded to Promis/Gavel.	See Attached	Research Bail Information	See Attached	NA	See Attached
Case Disposition	When matters are downgraded the paper file is returned to the Municipal Court for processing. Data is transmitted from Promis/Gavel to ACS.	See Attached	Prisoner Released or Sent to State Prison	See Attached	NA	See Attached
3. Information Needed from:						
Law Enforcement	Police Reports and Witnesses	Arrest Reports	Yes		NA	Yes
Prosecution	Police Reports, Complaints when case is downgraded.	Complaints, custody information, arrest report, notice to defendant, municipal court complaints	Yes	Yes	NA	Yes
Jail/Corrections	Detainers. Pending charges relevant to the court.	Jail slip, status change, detainers, bail information, commitment status,		Yes	NA	
Public Defender	NA		Yes	Yes	NA	Yes
Municipal Courts	NA	Complaints,	Yes	Yes	NA	Yes
Superior Court	Receive results of municipal appeals	Non-custody from Municipal court,	Yes	Yes	NA	Yes
Other	Occasionally need information from DYFS and schools regarding truancy					
4. Two Critical issues for integrations			Providing accurate and timely information by Municipal and Superior Courts	Arrest Report Availability to All Participants	Communication	Communication
	Identification of defendants	Forms automation			Funding	
	Elimination of paper and original documents		Identificatin of Defendants	Identificatin of Defendants	Conflicting Priorities	Identificatin of Defendants
	Jail Status		Linking the Inmate Records			Electronic forms
			County Integrated Law Enforcement Initiative	County Integrated Law Enforcement Initiative	See Attached	County Integrated Law Enforcement Initiative
5. Integration Initiatives in Progress	None	Automated forms project				

Section II: IT Integration

1. Applications which are part of CJ information Sharing	ACS, ATS, Promis Gavel, DMV, Prosecutor Domestic Violence, CCIS, CCH, Sheriff's ID and data, Local Police	ACS, ATS, Promis Gavel, DMV, Prosecutor Domestic Violence, CCIS, CCH, Sheriff's ID and data, Local Police	ACS, ATS, Promis Gavel, DMV, CCIS, CCH, NCIC	Livescan Fingerprint Station, Mug Image System, Criminal Records System, Computere Aided Dispatching System,	See Attached	ACS, ATS, Promis Gavel, DMV, CCIS, CCH, NCIC
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Section 1 - Agency Overview

1. Type of Agency

1 Superior Court Municipal Division

2 Superior Court Criminal Division

3 Essex County Jail

4 Essex County Sheriff

5 Information Technology Office (AOC)

6 Essex County Prosecutor's Office

2. Is strategic Plan Developed

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

3. Is it adopted

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

Section III: Benefits of Integration Project

1. Impact on Defendant ID

High Low

High Low

High Low

High Low

High Low

High Low

2. Case Status

High Low

High Low

High Low

High Low

High Low

High Low

3. Criminal Case History

High Low

High Low

High Low

High Low

High Low

High Low

4. System Scope

Geographical

Couty and Citywide

Countywide

Countywide

Countywide

Jurisdiction

Criminal and Juvenile Justice Systems

Criminal and Juvenile Justice Systems

Criminal Justice Systems

Criminal Justice Systems

5. Does the project take on critical issues?

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

Section IV: Assess the Risks

1. How big is change required?

Big Small

Big Small

Big Small

Big Small

Big Small

Big Small

2. Complexity of Project

High Low

High Low

High Low

High Low

High Low

High Low

3. Cost

High Low

High Low

High Low

High Low

High Low

High Low

3. Funding resources available

High Low

High Low

High Low

High Low

High Low

High Low

4. Performance Requirements

High Low

High Low

High Low

High Low

High Low

High Low

5. Conformance to Standards

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

6. Skills of personnel on project?

High Low

High Low

High Low

High Low

High Low

High Low

7. Political Risk

High Low

High Low

High Low

High Low

High Low

High Low

Section V: Current System Deficiencies

1. Unknown Warrant or Detainer

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

2. Status unknown to Judge/Prosecutor

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

3. Event Unknown to Probation

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

4. Incomplete Criminal History Available

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

5. Court action not rec'd or misinterpreted by jail

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

6. Mididentification of Warrant

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

7. Recalled / Satisfied Warrant

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

8. Order of Release not Received

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

9. Incarceration Status Unknown

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

10. Data entry redundancy

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

11. Missing Data

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

12. Untimely Data

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

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