

**Report of the Hamilton County Criminal Justice Commission  
Data and Criminal Justice Information Systems Committee  
April 2009**

Committee Membership and Activities

The Data Committee includes staff and administrators responsible for juvenile and criminal justice databases in Hamilton County. The Committee was asked to report on the County's current capacity for collecting and assessing juvenile and criminal justice data. The goal is to help system stakeholders—including elected and appointed officials, agency staff and administration, service providers, and the public—to identify best practices for improving public safety and conserving tax dollars.

The Committee was asked to answer the following questions: Who collects juvenile and criminal justice data in Hamilton County? What types of data are collected and how frequently are they collected? Who interrogates the data, how regularly, and to whom are results reported? To what extent is each data system compatible with, or able to "talk to," other data systems?

The Committee also sought to facilitate research inquiries from other committees of the Criminal Justice Commission. Inquiry subjects included misdemeanor probation; the rates and causes for dismissal of domestic violence cases; the type and number of aging warrants; statistics on child-support enforcement cases; and creation of a fixed-time "snapshot" of the population in the Hamilton County Justice Center.

With the assistance of the County Prosecutor, the Committee also drafted a model Memorandum of Understanding (MOU). The model MOU was designed to fulfill three purposes. The first purpose is facilitation of data-based research to identify best-practice juvenile and criminal justice policies. Second, the Committee sought to prevent the inadvertent release of information that is confidential or otherwise protected by law. Third, by promoting communication between researchers and data providers, the MOU protocol should ensure that research is based on reliable data that are interpreted accurately.

Criminal Justice Information System Survey and Recommendations

Overview

Hamilton County has a rich set of juvenile and adult criminal justice data. The primary electronic databases, or networks of databases, were designed and are administered to maximize efficient functioning of the juvenile and adult criminal justice systems. The system performs well in that capacity. There is good cooperation, both formal and informal, between administrators of the various databases. Internal data collection, assessment, and reporting occur regularly, as does inter-agency data sharing. In terms of overall daily system administration, the databases and their operators serve the community well.

There are components of the system, such as the Pretrial Services Information System (PTIS), that are designed to serve the additional purpose of facilitating research and analysis; however, several systems face constraints, including personnel resources and privacy issues, which limit their ability to provide data for research and analysis.

To address these and other concerns, and to build upon the system's existing strengths, three steps should be taken. Each step requires strong stakeholder leadership and cooperation. Inter-institutional assistance and support should be obtained, as appropriate, from universities, nonprofits, foundations, and state and federal agencies.

First, a web-based, searchable library of existing studies and reports on the local juvenile and criminal justice system should be created. The library should be updated as new information is made available. Research should build on—not duplicate—existing information. The library can serve as an integrated “institutional memory” for the juvenile and criminal justice systems. As a central repository of CJIS information, the library can provide an initial reference point for research queries and open records requests. The library may also begin to facilitate a “data dashboard” approach to sharing data, whereby CJIS agencies would provide regular updates on key data points for public consumption.

Second, stakeholders should ensure that any evaluation and improvement of the current system or any of its components is undertaken comprehensively and strategically. Stakeholders should cooperate to identify and eliminate any existing redundancies and overcome possible hurdles with the shared goal of maximizing scarce CJIS resources for administrative and research/policy planning purposes. This coordinated effort should include examining integrated CJIS systems in other jurisdictions for examples of how common hurdles have been overcome elsewhere. These common hurdles include:

- Legal restrictions on the release of data and the responsibilities of administrators to comply with these restrictions while promoting evidence-based criminal justice policies;
- Data integrity demands that insure that all system data is accurate and that it is interpreted reliably when released to the public; and
- Resource limitations in the face of declining revenues and the more public nature of other criminal justice and law enforcement efforts. This hurdle has become particularly onerous in recent years as repeated budget reductions have often had disproportionate impacts of IT staff. Each of the agencies represented on the data committee has lost staff or had vacant positions frozen as a result of fiscal stresses.

Potential resources from other jurisdictions include the following:

- The United States Department of Justice, Bureau of Justice Statistics' Justice Information Exchange Model. The BJS-sponsored website offers protocols and access to technical assistance for Criminal Justice Information Systems (CJIS) strategic planning ([www.search.org/programs/info/jjem/](http://www.search.org/programs/info/jjem/)).
- The Supreme Court of Ohio is investigating opportunities for an integrated state court information network.
- Hennepin County, Minnesota (Minneapolis metropolitan area) brought together elected and appointed officials, including judges and court administrators, to spearhead a Justice Integration Program. The initiative was an outgrowth of that County's Criminal Justice Coordinating Committee. Working together, system stakeholders were able to secure 50% funding for system integration and improvements from federal grants. Its work was made

possible in part by the state Supreme Court's implementing a unified state court information network.

- Montgomery County, OH has created [www.justiceweb.org](http://www.justiceweb.org), an integrated, password-protected web-based instrument that promotes data-based research. The County's CJIS Data Quality Overview (Attachment A) is a possible model for system analysis. The greater breadth and depth of integrated systems in Hamilton County adds challenges to replicating the Montgomery interrogation model.
- The world's richest criminal justice information system was created with the blessing of the Royal Canadian Mounted Police ([www.sfu.ca/icurs](http://www.sfu.ca/icurs)). Research rules require strict privacy protection, security clearance of all programmers and staff, and giving the RCMP a month's lead time before releasing any report. RCMP does not censor researchers or their reports.
- Metro/Davidson County, TN (Nashville area) obtained federal funding through the U.S. Department of Justice to create an integrated CJIS system. The Nashville report (Attachment B) provides a helpful overview of the integration process, including lessons learned.

Third, future research should comply with the three essential elements of the Committee's model MOU protocol. These elements are:

- Promotion of research to identify evidence-based policies that improve public safety and conserve tax dollars;
- Compliance with all legal restrictions governing the release of information that is confidential or otherwise protected by law; and
- Ensuring open communication with data administrators, to facilitate accurate interpretation of reliable data.

Data administrators are deeply concerned about compromising information that is protected by law. These concerns are justified and must be addressed. They have been addressed in Hamilton County and in other jurisdictions through confidentiality protocols. Sample protocols are included with this report as Attachment C (Vera Institute of Justice) and Attachment D (Hennepin County, MN). Also included is the Data Committee's model Memorandum of Understanding (Attachment E). These protocols have been used regularly and successfully across the country. They are an important tool for administrators who must simultaneously promote effective, open government and comply with the law governing the release of protected information.

## System Survey: Components and Capacity

Hamilton County's criminal and juvenile justice data are collected and maintained across several electronic databases or networks of databases. The databases are administered as follows, and as summarized in the attached matrix (Attachment F). Details are provided as they were made available by system administrators in writing and during interviews.

### Law Enforcement

The County Law Enforcement Applied Regionally (CLEAR) system has the responsibility to provide a computerized police information system which assists all Hamilton County law enforcement personnel in the safe and successful performance of their duties. It is a consortium of the 45 Hamilton County, Ohio law enforcement agencies, which includes the Cincinnati Police Department and the Hamilton County Sheriff.

CLEAR is part of the joint City-County Regional Crime Information Center (RCIC), which is funded by a levy and includes local Mayor's Courts. CLEAR functions through the Regional Computer Center (RCC), which is part of the City of Cincinnati.

CLEAR maintains databases for Hamilton County Law Enforcement Agencies. These databases include: CLEAR, Jail Management System (JMS), the Automated Fingerprint Identification System (AFIS), and the Local Law Enforcement System (LLE). The data are entered and maintained by the local law enforcement agencies. The information is used daily by Hamilton County law enforcement personnel in the performance of their duties.

CLEAR contains information on arrested persons, wanted persons, stolen vehicles and property. The data is entered and maintained by each of the law enforcement agencies in Hamilton County. The CLEAR system is interfaced with the State of Ohio and national crime databases (including the Law Enforcement Automated Database Search [LEADS], the National Crime Information Center [NCIC], the Bureau of Motor Vehicles [BMV], and the International Justice and Public Safety Network [NLETS]). Locally, data is exchanged with the Court Management System (CMS), the Jail Management System (JMS), and the Hamilton County and Cincinnati Police Communication Centers Computer Aided Dispatch (CAD) System.

AFIS is the Automated Fingerprint Identification System and contains latent and ten-print functionality. Ten-print fingerprints are captured by the Hamilton County Sheriff's identification staff during the arrest and booking process. The latent crime scene prints are entered and maintained by local law enforcement criminal investigators. Data is exchanged with the state of Ohio and FBI fingerprint systems.

LLE System is the Local Law Enforcement System and provides a regional database for the National Incident-Based Reporting System (NIBRS)-compliant incident reports, arrest reports, minor misdemeanor citations, traffic tags, and non-criminal incidents. These data are entered and maintained by a few of the local law enforcement agencies.

## Cincinnati Area Geographic Information System (CAGIS)

Countywide law enforcement is also supported by the Cincinnati Area Geographic Information Systems (CAGIS), a county-wide effort operated by the Regional Computer Center at the City of Cincinnati. CAGIS is governed by a policy board made up primarily of public works agencies (Water Works, Sewer District, Engineer's Office, etc.) that are the focus of the CAGIS' core work. In addition to serving these agencies, CAGIS also assists law enforcement in the following activities:

- City of Cincinnati police use CAGIS datasets and applications to geo-code crime incidents and to spatially analyze crime activities. The city has 10 or more crime analysts involved in this endeavor.
- The City of Cincinnati Police also use CAGIS data and software applications to assist in certain building and property code enforcement activities on behalf of the city.
- The Hamilton County Sheriff's and Prosecutor's offices use CAGIS data and applications to enforce the sexual predator residency regulations that deal with restrictions on minimum distance from predator residence to school locations.
- The Prosecutor's and Sheriff's offices also use CAGIS to locate certain drug crime incidences with relation to proximity of schools.

## Jail Management System (JMS)

Information is obtained from the Arrest Slip/527 form, from the Complaints and Warrants, and from interviewing the arrestee. Information is entered into the JMS system by Data Entry Operators (DEOs).

JMS collects the information in the list below each time an individual enters the system. JMS uses "free format" fields along with fields that contain drop-down boxes. Several fields are "screen-scraped" into the JMS system from CLEAR/RCIC when the DEO performs various criminal inquiries.

The system is also set up to recognize previous incarceration data as most recent, so it will bring that information forward if the individual is entered into the system again. JMS has instituted various procedures to monitor the data entered into the system. Information is reported to others on a case by case request basis. Other components of the system, including Pretrial, Public Defender, and CMS, also have received access to JMS data.

JMS information includes the following:

- Unique identifier for the criminal database (if there is none, JMS creates one in RCIC/CLEAR)
- Name, address, social security number, and phone number
- Arresting officer, badge number, and agency
- Arrest date, time, and location
- Charge
- Booking type
- Bond type and bond amount (if any)

- Sex, race, date of birth, place of birth, height, weight, eye color, hair color
- religion, education, marital status
- Alias information
- Contact information: next of kin, emergency contact, doctor, employer
- Scars, marks, tattoos

Information is also contained within the system after an individual has his/her first court appearance. The DEO creates an inmate summary that contains information on what occurred during the court appearance and any appearances thereafter. The information includes the next court appearance, bond information as well as any sentence given by the judge.

### Pretrial Information System (PTIS)

PTIS imports data from the Jail Management System (JMS) once defendants are positively identified. PTIS collects additional data through interviews. PTIS serves the Courts by providing as much relevant data as possible for informed judicial decision-making. PTIS data also is migrated into the Defender Offender Profile System (DOPS) so that it is accessible via the Court Management System (CMS). The information also is used by the Public Defender's office to inform their interview process and determine eligibility for services. The Probation Department also has access to PTIS data for PSI reports.

While PTIS start-up funding initially came from grants, system support is now funded through the Municipal Court. PTIS staff estimate that the system will require over \$60,000 in hardware investments through 2013.

In addition, the PTIS Failure to Appear (FTA) Unit interfaces with CMS and imports information to determine if a defendant has an open capias. The FTA Unit reschedules court dates for defendants who have missed a court appearance. They will recall any eligible capias, but recalls are limited to one per case and two per defendant.

The following specialized programs are also offshoots of PTIS:

Interpretive Services: If an interpreter is needed, it is scheduled and the case is followed from beginning to end. This service is provided to both defendants and victims involved in court cases.

Jail Monitoring/Release Program: This automated system allows filing of Pro Se motions at the defendant's request, including early release, mitigation from court treatment (Request for Judicial Intervention [RJI] and Men's Extended Treatment [MET]), and transition from jail to the community (pretrial or post-conviction).

Forensic Behavioral Health: This unit tracks defendants and referrals and prepares reports for related agencies for defendants with identified mental health needs. It liaisons with Court Clinic Services, the Mental Health Access Point and Mental Health Court.

Court Diversion: This unit facilitates statutory diversion (usually for first time offenders), sets up restitution payment schedules and tracks payments until the case is over. Some defendants have further conditions (job training, family counseling, community service hours, etc.) which are also tracked. Typically

diversion is completed in one to five years. This data is available to the Prosecutor via a web application.

JMSPOP (Jail Management Services Population Review): This system gleans data from JMS and filters it into several groups of interest. These groups are routinely catalogued to determine release possibilities at any point in criminal case processing. Inmates/detainees who are homeless, have mental health issues, are non-support cases, have special housing needs, are under probation supervision, or are on court ordered programs are reviewed and updated with specific action plans.

PTIS collects the following information:

Incident: Data collected for each defendant through intake

- Arrest Officer/Agency
- Bond preference information
- Arrest Slip/527 information (verbatim as written by arresting officer)
- Charges: case numbers, bond amounts, charge degree, capias indicator, co-defendant information
- Appearances: judge, hearing type, date/time/location, hearing disposition

Disposition:

- Emergency Jail Refusal Indicators
- Criminal History
- Special Needs

Interview/Investigation/Assessment: Data collected for each case going to court:

- Time in country/state/county
- Marital status
- Number of children living with defendant
- Education level
- Military service addresses (Current, Last, Prior or up to 5 years)
- Community Ties (Amount of family/blood relative contact)
- Drug History
- Mental Health History
- Special Needs
- Criminal History Summary:
  - Local and national criminal history database searches (RCIC and LEADS)
  - Number of adult and juvenile convictions (violent felonies, felonies, violent misdemeanors, misdemeanors, minor misdemeanors, DUI, traffic)
  - Charge Classification for adult convictions (e.g., drug trafficking, other drug, domestic violence[DV]/stalking, temporary protection order [TPO], violation, sexual assault, weapon)
- Risk Assessment due to current charge(s):
  - Previous convictions of DV or TPO violation
  - Three or more prior DUI convictions
  - Surrender on current charge
  - Out-of-county history

- Arrested while on bail
- Weapon brandished or serious physical harm caused
- Final verified point total, eligibility determination.

While PTIS start-up funding initially came from grants, system support is now funded through the Municipal Court. PTIS staff estimate that the system will require over \$60,000 in hardware investments through 2013.

Court Management System (CMSNet),  
Juvenile Court Management System (JCMS), and Probate Court Management System (PCCMS)

CMSNet is a formal association of nine justice-related agencies working cooperatively to improve technology for the benefit of all participating members and the Hamilton County justice system in general. CMSNet was originally created in 1992, but the agencies have since adopted a governance agreement that defines items such as the organizational structure, funding, management, vendor selection and contracting. The governance body of CMSNet is the CMSNet Steering Committee, which is made up of the elected official/administrator of each of the nine member agencies. There is a chairperson and a vice-chairperson annually elected from among the voting body. CMSNet personnel are under the general direction of the CMSNet Steering Committee, but are subject to the authority and personnel practices of the Common Pleas Court.

CMSNet provides contract oversight for an application support contract, currently between the County and Sadler NeCamp Financial Services (d.b.a. Proware). The application support contract provides for the ongoing support and maintenance of several database applications, including CMS (Court Management System), JCMS (Juvenile Court Management System), PCMS (Probation Case Management System) and numerous synchronization processes between these databases and other law-enforcement and criminal justice databases. To clarify misinformation presented in the July 2008 National Legal Aid and Defender Association's assessment of Hamilton County's public defense system, the County owns all data within these databases. The County and the vendor co-own the source code. The County's contract for application support provides a specific number of programming hours for the support of the existing application databases. These hours are budgeted to each agency and are used to modify existing code to meet legislative changes and elected official requirements seeking to improve the efficiency of their agency within the criminal justice system. New programming generally requires an addendum to the existing contract and requires additional funding.

CMSNet is currently entering into contract with an independent consultant to provide an enterprise-wide analysis of CMSNet, including the systems, security, hardware, software, and network infrastructure. This analysis will assist CMSNet in developing a plan to improve each of these areas.

CMSNet members include the following Hamilton County agencies: Clerk of Courts, Court of Common Pleas, Municipal Court, Court of Domestic Relations, First District Court of Appeals, Juvenile Court, Hamilton County Prosecutor, and Public Defender. Other agencies served by CMSNet include: Private Complaint; Mediation and Diversion; Court Reporters; Hamilton County Facilities; License Intervention Program; Pre-Trial Services; Adult Probation; Jury Commission; Hamilton County Sheriff; Cincinnati Police Department; and several other law-enforcement and/or criminal justice agencies.

The Court Management System (CMS) database was created in the 1990s to maximize efficiencies across criminal justice agencies by eliminating duplicate data entry and decreasing the time to change programs for legislative rule changes. (At that time, research showed that a single piece of data was entered by at least five data-entry personnel for each case. Database modifications were taking months, where today they take weeks.) The CMS database contains offender- and case-related data for Municipal and Common Pleas (general division) criminal and civil cases in Hamilton County. The CMS database exchanges data daily with CLEAR and Pre-Trial Services' Defender Offender Profile System (DOPS) database. CMS also has the ability to view data within JMS. CMS includes PCMS, the Probation Case Management System, which is where most offender-related data is stored.

Much of the data within the CMS database is currently considered public record information and is displayed on the Clerk of Courts website. Some data, including some offender-related information, is confidential or otherwise protected by law. Any request for such information requires close consultation with relevant data administrators, including the Hamilton County Adult Probation Department, to ensure full compliance with the governing law.

In December 2008, the Supreme Court of Ohio adopted changes to Rules of Superintendence 44 through 47. As adopted, the changes provide for increased protection of personal information in court records. The new rules take effect May 1, 2009. All court cases filed prior to May 1, 2009 will be subject to the current rules and protections under Ohio Revised Code 149.43. Cases filed on or after May 1, 2009 will be subject to Rules of Superintendence 44-47.

Gathering data within the databases is fairly simple, but requires knowledgeable personnel resources. In the past five years, CMSNet personnel have decreased from twelve (through the RCC) to two full-time county personnel (with a single vacancy). The vacant position is the only analyst position within CMSNet. The Clerk of Courts information systems personnel have also decreased from four full-time to one full-time analyst. CMSNet is forced to rely solely on the contracted vendor to provide reports and modifications to the database. Data requests require additional funding.

Further, the CMSNet relies heavily on the Clerk of Courts Automation Fund (CCAF), a restricted fund that is dedicated solely for the use of the Courts and the Clerk. Hardware such as the Clerk's mass data storage unit, which holds all of the Clerk's digital records, is paid for out of the CCAF and the fund was used for the initial conversion of data and creation of the current Court Management System (CMS). CMSNet now uses this restricted fund for the routine replacement of hardware and the purchase of software licenses annually, while saving any additional balance for major projects such as the creation of a new front-end application for the CMS databases, replacement of old infrastructure, and building a centralized computer room for CMSNet agencies. Each of these items is estimated to cost two to four million dollars. This funding must remain available to allow CMSNet to continue building the infrastructure and applications to provide the Hamilton County criminal justice systems efficient and secure means of storing, sharing, and retrieving data. Potential Ohio Revised Code changes allowing restricted funds to be used for general fund purposes during times of fiscal stress threaten the Clerk's and the Courts' ability to maintain the technology infrastructure necessary to operate, and should be considered very carefully, both in legislative scope and local implementation.

Probate Court is related to the juvenile and criminal justice information system to the extent that the court remains a member of the CMSNet steering committee, shares the county network, and works cooperatively with other courts and agencies in CMSNet. Approximately four years ago, Probate Court

opted to create a case management system independent of Proware. The court's data and the system code are the property of the Probate Court, and are maintained by employees of the court. The court's primary link to the criminal justice system is through its handling of competency issues; however, there is no digital exchange of data from the referring CMSNet court.



## Montgomery County CJIS Data Quality Overview

1. Existence and Validity (Does the agency capture the data? Is it stored correctly?)
  - a. A site survey was done at each agency to find out what data they were capturing and how it was being stored.
  - b. The surveys were compared to determine data commonality.
  - c. A common schema was made for CJIS.
  - d. Each agency had their vendor or DBA create extracts which CJIS funded through grants.
  - e. Transformation routines created for each extract to the CJIS schema.
  - f. Validation rules applied in the transformation process. Any data exceptions are stored in import logs.
2. Consistency (How frequent is the data entered by the agency?)
  - a. End user's were questioned regarding their application use during the site survey and the database records were counted.
  - b. Administrative database views created to easily check how frequently CJIS receives the data.
  - c. Web pages were created in the application to display this information easily.
3. Timeliness (How often does CJIS get the data?)
  - a. Court records updated daily which is consistent to the least frequent data providers. This allows consistency to the end user for all courts and does not impact court operations.
  - b. Sheriff records updated hourly. Small and frequent data pulls do not impact the Sheriff's operations.
4. Accuracy (Is the data right?)
  - a. Data Extracts – Review was done by both the agency's DBA/vendor as well as by the CJIS team before final acceptance by CJIS. Comparison between database counts and export counts along with comparison between extract and application.
  - b. Import Routines – Review was done by the CJIS team comparing the counts between extract records and data warehouse records. Comparison between extracts, data warehouse and the agency's web application were used to ensure accuracy of the imports.
  - c. Subject Matter Expert Reviews – During the development phase, subject matter experts were brought in to review the data warehouse data and compare it to their application.
  - d. Ongoing End User Review – Users from different agencies can check status of records in other agencies. This enables a cross-reference to ensure proper, timely and accurate workflow between agencies.



## Montgomery County CJIS Data Quality Overview

5. Relevance (Does it make sense to the users? Is it helpful?)
  - a. User Participation –
    - i. CJIS held meetings with multiple agencies and end users to determine critical data and desired functionality.
    - ii. Pilot sites were created to show proof of concept, encourage participation and increase creativity.
    - iii. Demonstrations are given to different agencies and users which spur additional feedback on displaying relevant information.
  - b. Business Rules –
    - i. Identity Matching – CJIS uses strict logic to ensure that identities are matched correctly or not matched at all. This results in no false positives.
    - ii. Code Translations – CJIS translates each agency's internal codes to simple, consistent code descriptions.
    - iii. Information Linking – CJIS uses logic to match Sheriff's hand entered court case numbers to the data warehouse court record. CJIS links the data warehouse record to the agency's public record website when available. CJIS uses simple logic to link mug shots to CJIS identities.
    - iv. Operations Logic – CJIS applies business rules to assist users in interpreting the data. An inmate's charges are reviewed to determine the most severe active charge. CJIS completes incomplete court charge information. Example: A court charge disposition is received that never had an initial charge, the initial charge is filled in with the final charge.
  - c. Presentation
    - i. Navigation – Simple menus, summary screens, consistent layout.
    - ii. Record Source – CJIS displays the agency and record number for each data record. Where relevant, CJIS displays when the data was received and last updated.



## Montgomery County CJIS Import Overview

Data	Court	Frequency	Description
Data Extract of CPC Court	CPC	Daily 5:30 PM	Copies data from CPC's production database server to the CJIS staged production Oracle server so imports do not impact CPC operations.
Court Case Data	CPC	Daily 7:00 PM	Console Application scheduled in Task Scheduler pulls files from Oracle as it converts them to CJIS format and then sends the data to the tables directly.
Data Extract of Area Courts	Area Courts	Daily 11:00 PM	Copies data from Area Courts' production database server to the CJIS staged production Oracle server so imports do not impact Area Courts operations.
Court Case Data	District Courts	Daily 1:00AM	Console Application scheduled in Task Scheduler pulls files from Oracle as it converts them to CJIS format and then sends the data to the tables directly.
Court Case Data	Municipal Courts	Daily FTP varies	VB.NET Service waits for a file to be FTP'ed from the court, converts the file to CJIS format and then sends the data to the tables directly.
Jail Inmate Data	Montgomery County Sherriff	Hourly 35 after	Console Application scheduled in Task Scheduler which pulls files from Oracle as it converts them to CJIS format and then sends the data to the tables directly.
Mugshots -- Retrieve from Sheriff	Montgomery County Sherriff	Hourly 20 after	Batch job that runs via Task Scheduler that connects via FTP to the Sherriff's mugshot system and copies them to a CJIS Server.
Mugshots Import into Database	Montgomery County Sherriff	Hourly 50 after	Console Application that runs via Task Scheduler that reads in the mugshot text file, looks up the Jail Booking and then uploads the mugshot.

# Case Study Series

A REPORT OF THE NATIONAL TASK FORCE ON COURT AUTOMATION AND INTEGRATION

## METRO/DAVIDSON COUNTY, TENNESSEE

# CRIMINAL JUSTICE INFORMATION SYSTEM PROJECT OVERVIEW AND KEYS TO SUCCESS

By Teri B. Sullivan, SEARCH  
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Metro/Davidson County<sup>1</sup> has implemented a successful integrated criminal justice information system that can serve as a model for jurisdictions nationwide, both in how the system was organized and implemented, and in how it works technically.

In September 1999, the Office of Justice Programs (OJP) sent representatives to Nashville to review Metro/Davidson County's Criminal Justice Information System (CJIS). OJP is the

The National Task Force on Court Automation and Integration was established in 1997 by the Bureau of Justice Assistance, U.S. Department of Justice, and SEARCH to develop practical resources and to provide technical assistance to state courts in the development of automated and integrated court and justice information systems. The "Davidson County Criminal Justice Information System" is the latest in a series of Case Studies developed under the guidance of the Task Force to document examples of operational integrated justice information systems. Additional Case Studies and further information on integrated justice information systems are available at [www.search.org](http://www.search.org).

Federal agency under the Department of Justice that provides grant funding and technical assistance to State and local levels of government to improve the criminal justice system. The following are excerpts from a memo OJP sent to Davidson County following its visit:<sup>2</sup>

*In OJP's experience looking at State and local justice information systems nationwide, we find that "integrated" systems are designed from an information visibility perspective and from an information management perspective. Systems built on the information visibility design allow various components of the justice system to "view" data within the system, but do not address the streamlining input, access, and supplementing a record as it moves through the justice process. The information management perspective, however, allows the system to streamline how data is entered and maintained, eliminating redundant data entry and allowing for real-time access to data by all participating agencies.*

*The Justice Information System currently under construction and testing in Davidson County, Tennessee, is a leading example of an integrated county justice information management system. In our experience, there are only a handful of integrated justice systems, all of which are at the county level, that*

*address the data management issues as comprehensively as the Davidson County JIS.*

*The successes thus far appear to be linked to the following:*

- *County-level executive sponsorship*
- *County governance body representing all necessary components and interested parties to the justice system*
- *A dedicated funding stream for all phases of the project*
- *Commitment from high-level component leaders, i.e. the judiciary, county board members, the District Attorney*
- *A project manager with the vision, experience, and commitment necessary to understand justice integration concepts, contract negotiation, system design, implementation management, and local politics*
- *Trust by the justice components of the project manager and each other*
- *An industry partner dedicated to working with the user community and the project director to implement solutions meeting jurisdictional needs, rather than redesigning business practices to fit previously developed technologies*

This case study is intended to provide background on the Justice Information System (JIS) agency, which was created in 1992 to develop the Criminal Justice Information System (CJIS) for the Davidson County justice community.<sup>3</sup> In addition to providing background on JIS, its purpose and governance structure, this case study also provides an overview of CJIS; documents the phases of the system; discusses the technical applications; describes cost and funding sources; recommends successful strategies for other agencies undertaking integration projects; and explains the lessons learned by the agencies involved in this ongoing effort.<sup>4</sup>

**Background**

In the late 1980s, key elected officials from Davidson County attended a SEARCH conference on integrated justice. Based upon the information-sharing principles that were presented, they decided to formally work together to automate and integrate the justice agencies within the county. In order to

accomplish this goal, a unique, cooperative organization, JIS, was created by Metropolitan Ordinance Number 092-415.<sup>5</sup>

One of the purposes of JIS was to develop, implement and maintain a comprehensive, automated justice system that would be solely managed and controlled by the members of the justice community. The independent nature of JIS was required due to the extremely important and sensitive nature of justice-related activities. Matters of public safety, confidentiality of certain records and the efficient administration of justice were paramount considerations in establishing this unique organization. JIS is composed of the 14 agencies that comprise the justice community in Davidson County. Figure 1 shows the participating agencies within JIS. Operationally, these agencies cover the major components of a typical local-level justice system, including criminal, civil, chancery and juvenile courts; prosecution and public defense; law enforcement (police and sheriff); and probation.

In addition to developing and implementing the CJIS, the JIS agency is also responsible for:

- Network hardware, including servers and the network operating system, fiber-optic backbone and all hubs, switches and routers,
- 24/7 support of network infrastructure and critical network and software applications.
- Email, including remote access.
- Backup of all user applications and data stored on JIS servers.
- Technical support, including both front-line support to users and backup support to agencies' in-house technical support staff.
- Database and application support for CJIS and Chancery Case Management systems.
- Help Desk services and access to problem-tracking software.

- Training services, materials and facilities.
- VPN (Virtual Private Network) assistance for secure remote access to network resources.

*Strategic Value Recognized*

The creation of JIS represented recognition by all branches of government in Nashville that a multiagency body was necessary to improve the local justice system through greater coordination and cooperation of elected officials. The member agencies of JIS recognized that it was only through common action and purpose that the goal of establishing integrated justice information systems would be achieved.



Figure 1:  
JIS Participating Agencies

- Chancery Court
- Circuit Court
- Criminal Court
- General Sessions Court
- Probate Court
- District Attorney
- Public Defender
- Juvenile Court
- Juvenile Court Clerk
- Circuit Court Clerk
- Criminal Court Clerk
- Metro Police Department
- Sheriff's Office
- Clerk and Master

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“The Justice Information System has brought recordkeeping and procedures forward from the 18th century to the 21st century. We have put away our quill pens and grabbed our mouse,” said the Honorable John P. Brown, General Sessions Court, Division V. “A major part of our success was made possible by vesting control of JIS in a governing body of users. We have been able to present a unified front to our Mayor and our legislative body.”

#### *Purpose of JIS*

Under the ordinance, JIS was charged with the following mission:

*“To improve the administration of justice through the creation and operation of comprehensive integrated management information systems and to promulgate and implement minimum uniform standards for all participating agencies. The goals to be accomplished are: create a modern simplified system or systems for managing justice information; provide quick and easy access to information; expedite case processing; enhance productivity and efficiency by the use of technology; reduce costs and increase revenue; and plan for future needs.”*

#### **JIS Organizational Structure/ Governance**

Justice agency leaders and decisionmakers in Davidson County recognized that developing a strong governance structure for JIS was a necessary foundation step for this information technology (IT) project. A strong structure provides leadership and accountability, defines the business needs and goals of the participant agencies, analyzes technical environments, policies and solutions, and provides effective policy management.

“While the JIS process and the CJIS system are huge tech advances for the Metro Justice community, I think that another important benefit we have realized has been in the broader area of collaborative decisionmaking,” said Ross

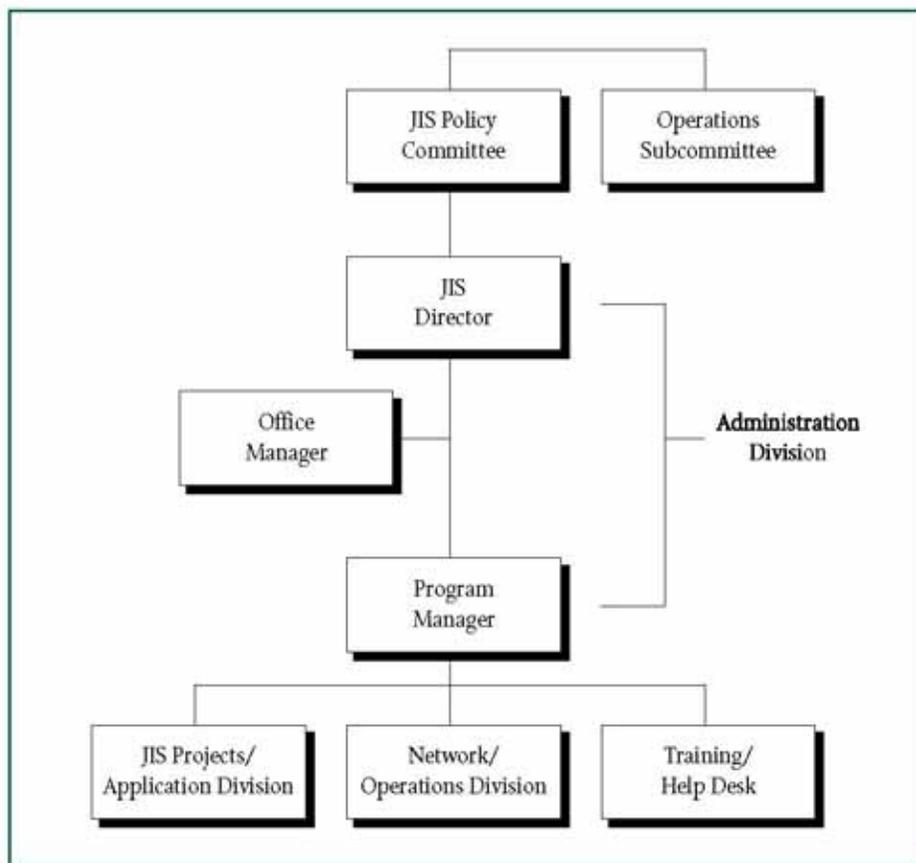


Figure 2: JIS Organizational Chart

Alderman, Public Defender and Chair, JIS Policy Committee. “As you know, the process of developing JIS and designing the CJIS required literally years of meetings between representatives of the several member agencies. Since some of the agencies have competing interests concerning how information is gathered, stored and shared, the development and design efforts required that each agency buy into the concept that there is a larger systemwide benefit that could only be realized if each agency was open to discussions about changing the business processes within the justice community. Because we were successful in the development of JIS and CJIS, the Metro justice system agencies have been reinforced in the skills that allow us to meaningfully collaborate on much broader issues such as jail population management.”

Figure 2 provides an organizational chart of the JIS governance structure.

The major elements of this structure are as follows:

The **Policy Committee**, comprised of elected and appointed officials, is the primary decision- and policymaking entity of JIS. The Committee coordinates, approves and implements the design, development and ongoing management of JIS. The Committee consists of one judge each from the Criminal, Circuit, Chancery and General Sessions courts. For multi-judge courts, the judges who serve as representatives on the Policy Committee are selected by a majority vote of the judges of each court. Additional members include the Police Chief, Sheriff, District Attorney General, Public Defender, Juvenile Clerk, Criminal Court Clerk, Circuit Court Clerk, and Chancery Clerk and Master.

The **Operations Subcommittee**, a subgroup of the Policy Committee, provides day-to-day assistance and guidance to the JIS Director regarding

financial management and operations. The subcommittee also has the responsibility to review and recommend policies and procedures having multiple organizational impacts; to provide a focus for the current and future justice systems studies; and to provide a knowledge base for understanding the interrelated Metro justice processes, and how changes in any part of those processes will have an impact on the total system.

The **JIS Administration Division** (three staff members) is comprised of the JIS Director, Program Manager and Office Manager. The JIS Director is the highest-ranking staff person at the agency and is responsible for the day-to-day operations of JIS. The JIS Director reports directly to the Chair of the JIS Policy Committee.

The next three elements of this structure report to the Program Manager and, ultimately, to the JIS Director:

- The **JIS Projects/Application Division** (nine staff members) is responsible for the database and functional support of a multitude of justice applications, some of which operate on a 24/7 basis.
- The **JIS Network/Operations Division** (three staff members) is responsible for all network hardware and operating systems for participating justice agencies.
- The **JIS Training/Help Desk** (three staff members) provides various types of support within the JIS community. Software and hardware installation, support and troubleshooting are provided directly to a number of JIS member agencies.

## CJIS Overview

One of the major projects of JIS is the Criminal Justice Information System (CJIS). JIS and Metro/Davidson County partnered with Unisys Corporation and have successfully integrated the diverse needs of the Metro/Davidson County criminal justice agencies into a modern, fully automated, enterprise-level

system.<sup>6</sup>

In many areas of operation, users have gone from an entirely manual mode of doing business to a fully computerized business process. Automation has improved the processing, reporting, information access and information management needs of the justice agencies in Davidson County. (See Figure 3 for a partial list of justice tasks CJIS has automated, and the “Phases” section on page 6 for a more detailed description of the system capabilities.)

“The implementation of the CJIS system has produced many benefits throughout the justice system and specifically within the District Attorney’s Office,” said General Victor S. (Torry) Johnson III, District Attorney General and Vice-Chair, JIS Policy Committee.

“We are now able to track our files and produce all grand jury reports electronically. This has allowed us to reallocate resources and to participate in quality control within the court system. More importantly, the accuracy of the criminal history records maintained in Davidson County has improved. All cases are tied to fingerprint identification and all dispositions are being sent to the State criminal history repository. Also, management information that was previously nonexistent in the manual system is now available.”

CJIS has allowed for much greater efficiency in many areas, but more importantly, it ultimately improved *public safety* by reducing the amount of paperwork law enforcement personnel had to manually complete, thereby getting officers back on the street faster, providing precise tracking of prisoner release date calculations, and precisely determining releasability of prisoners in a jail-overcrowding situation.

### CJIS Goals/Objectives

One of the major goals of the CJIS program was to streamline criminal workflows and processes through the use of state-of-the-art technology. This

automation improved the efficiency and overall information flow within and between the JIS criminal justice agencies. The major objectives/benefits were:

1. **Reduction of repetitive tasks.** Data are collected and input once at the source. For example, once an arrest record is created on the police system, this information automatically flows into and creates records in the case management system.
2. **Enhancement of data quality.** Edit checks, in many cases, are automatically performed on all incoming data to ensure data are input correctly. For example, all dates and charge codes are validated. Additionally, the system is coded to check and report on any incomplete dockets. Some cases require documents to be filed within a fixed number of days, and the system reports on those cases that are approaching or have missed the deadline.
3. **Increased information accessibility.** An automated system allows many people to view the same information at the same time. Also, an automated system allows the users to access and view the data in many different ways. For example, one user may look up a case using party name and date, while another user may use a case number.
4. **Increased organizational integration.** The information on the system is shared between the agencies of the JIS community. Therefore, the data is no longer “mine,” or “theirs,” but “ours.”
5. **Enhanced statistics and monitoring.** This system provides standard statistical reporting, as well as ad hoc reporting capabilities. The users within the different agencies extract and format data in a way that is meaningful and useful to them.
6. **Increased effectiveness.** Information stored in an automated system can perform new functions not practical in a manual environment. For example, the system supports a

master docketing and calendar system and an integrated accounting system.

As these goals were met, better information was available faster to the people who needed it to make decisions, fund programs desired by the public, report on the state of the community, interact with the criminal and juvenile justice system, and improve public safety.

“The CJIS integrated system has allowed the Office of the Criminal Court Clerk to move to the forefront of automated public offices,” said Walt Draper, Chief Administrative Officer, Criminal Court Clerk’s Office. “The automation of affidavits, warrants, subpoenas, capiases and dockets has vastly improved our ability to serve the justice community and the public both more professionally and more efficiently.”

**Public Benefits**

Additionally, there are many public benefits with the implementation of an integrated CJIS. Some of these benefits are outlined below:

**Reduce the time from arrest to trial.**

Much of the time that passes between arrests and completion of trial is protracted while court and justice officials gather information on criminal histories, research and validate court data, and review and gather defendant information. Having this information available on a single system reduced the amount of time to perform multiple record checks in multiple agencies, so cases could be scheduled faster and disposed of more efficiently.

**Reduce continuances because of conflicts.** Often a citizen would appear for a court event only to find the event had been rescheduled because of a conflict with another case that the attorney, public defender, police officer or witness would have. A single scheduling system that checks for conflicts and does not allow double booking reduces the number of times a person has to

Phase I		
Agency	Key Functions	Implementation Status
Criminal Court Clerk/ State Trial Court	Judicial Commissioners	April 1999
	Warrant and Bond	September 1999
	General Sessions Division	October 1999
	Case Management	October 1999
	Accounting/Collections	January 2000
	State Traffic	January 2000
	Criminal Division	January 2000
District Attorney	Grand Jury Processing	January 2000
Police Department	Arrest and Incident Entry	March 1999
	Police Interface to CJIS	March 1999 – January 2000
	Officer Scheduling	January 2000
	Police Criminal History	January 2000
Phase II		
Probation	Adult Probation	January 2000
	DUI School/Safety Center	February 2000
Public Defender	Case Management (unique view)	March 2001
	Attorney Time Tracking	March 2001
Pretrial Services	Case Management	First Quarter 2003
Juvenile Court Clerk/ Juvenile Court	Intake	February 2003
	Case Management (Delinquent/Dependent Case Processing)	February 2003
	Accounting/Collections	February 2003
	Records/Minutes	February 2003
	Juvenile Probation	May 2003
District Attorney	Case Management (unique view)	July 2001
	Victim/Witness Module	Spring 2003
Phase III		
Sheriff’s Office	Inmate Intake/Classification	August 2000
	Transportation	August 2000
	Civil Warrants Service Processing	August 2000
	Inmate Release	August 2000
	Interfaces with CJIS/Police Mainframe/Circuit Clerk	August 2000
Additional Features and Upgrades		
Feature	Implementation Status	
Web access to dockets	April 2002	
Web access to CJIS case search (case number or name)	April 2002	
Upgrade version of DB engine and application code (Oracle 9i and PowerBuilder 8)	December 2002	
Integrated imaging component (Adult/Juvenile)	Second quarter 2003	
Upgrade to storage area network (SAN) for disaster recovery and high availability (with seamless failover)	December 2002	
Convert to browser-based system	2003-2004	

Figure 3: CJIS Overall Enterprise System Solution Implementation Phases

appear at the court, and makes it possible for the public to schedule its court- and justice-related actions more efficiently.

**Record criminal history information faster and more accurately.** Since information is transferred automatically from the courts to the police system following the disposition of an

mitigate project risk, it was decided that a phased development and rollout of the systems would result in the most successful outcome.

#### *Phase I*

Phase I of the CJIS application was designed to meet the business processing requirements of the Davidson

Financial processing includes the assessment of fines and costs through case events, collection of fines and costs, automatic posting of received funds to the General Ledger, and disbursement of collected funds to the appropriate entities.

#### *Phase II*

Phase II of CJIS allows users throughout the Metro criminal justice system to have access to the most up-to-date information. Data from CJIS are used to initiate cases in the Public Defender, District Attorney, Pretrial Services and Probation systems, eliminating the need for duplicate data entry. The DUI School uses data from the Adult Probation system to initiate DUI School cases, when possible. Court dates, dispositions and other court events, maintained in the Criminal Court Clerk's office, are viewable by all users. The Juvenile Court and Clerk will also have a new system that will process civil cases, such as neglect/dependant, child support and delinquent cases. Juvenile Probation will use data from the Juvenile Court system to initiate its cases. The Public Defender and District Attorney systems interface with both the Juvenile and Adult systems. Additionally, bar-coding technology has been integrated into the CJIS Phase I, II and III modules with imaging capabilities to follow.

#### *Phase III*

Phase III of CJIS is comprised of functions necessary to provide a fully integrated Jail Management System (JMS) and interfaces to facilitate interagency data access and exchange between JMS and other components of CJIS. The CJIS JMS replaced the existing mainframe-based inmate tracking system with a comprehensive jail management system. The JMS supports a relational database of name, demographic, arrest and behavioral information relating to individuals who are currently in jail, as well as information on previous incarcerations. The JMS

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— Walt Draper  
Chief Administrative Officer  
Office of the Criminal Court Clerk

individual's case, the records accessed are more up-to-date. The more accurate information allows the justice system officials to make more informed decisions when a complaint is brought forward.

**Produce audit trails for tracking money due to the court, witnesses or victims.** The county now finds it easier to track moneys due. Often, a single individual owes several types of fines, fees and support to the county. It is difficult, if not impossible, in a manual system to track what is owed on a defendant-by-defendant or fund-by-fund basis. Coordinated financial records and tracking assist in accurately reporting what funds are due and for what reason.

#### **CJIS Phases**

Due to the extensive scope of change associated with the automation of many of the participating agencies' business processes, funding cycles, and to

County Metro/State Criminal Courts and criminal justice agencies. These requirements included records management functions, calendaring, grand jury case processing, financial processing and police interface functions. The records management functions included affidavit, charging instrument, bond and case management. The calendaring requirements consisted of the ability to set up calendar docket sessions in which cases could be scheduled. The ability to set caps for the number of defendants and cases was included, as well as conflict checking for judges, police officers and attorneys.

The system meets the case reporting requirements of the State Administrative Office of the Courts and the arrest/disposition reporting requirements of the Tennessee Bureau of Investigation (TBI). The CJIS application also handles financial processing for Criminal Court, General Sessions and Juvenile cases.

includes a Warrants module that tracks the service status of papers served by the Sheriff's Office. Additionally, several interfaces are coded to exchange information with internal Metro and external State agencies.

"With the development and implementation of our new CJIS program, I am able to keep tabs on my court dates, cases, defendants and dockets all in one program. I can tell what caseloads look like and what adjustments need to be made in order to keep moving forward and not waste anyone's time," said the Honorable Michael Mondelli, General Sessions Court, Division VI. "In the near future I will also have the ability to check my traffic docket for caseload information and be able to avoid congested courtrooms, which lead to frustrated scenarios and rushed results. CJIS is a good tool with potential."

### Development Methodology

In order to produce high-quality software, the development organization must have a well-defined, documented process that guides software development. Unisys followed the development process described in this section, which was tailored for the CJIS program.

The Unisys system development approach was a disciplined methodology that used a combination of established methodologies to best capture the information required to engineer the system. A controlled development effort and continuous customer participation were key aspects of this approach. Implementation of this approach resulted in reduced risk, improved product quality and maintainability, and a cost-effective solution. By involving the customer as an integral part of the process, it ensured the system was designed to meet the needs of the users.

The methods and techniques Unisys introduced into the system development approach included:

- **Data and process modeling.** Both data and process modeling were performed to capture the data and processing requirements based on information obtained from existing documentation, and from interviews/casual analysis. The Metro staff had full visibility of the models, and Unisys worked with the Metro staff and users to verify and validate all models produced.
  - **Evolving development (prototyping).** Prototyping was introduced early in the requirements phase and evolved to become operational at the deployment phase. Graphical User Interface (GUI) builders greatly enhanced the development of prototypes by allowing rapid generation of user interfaces and on-line modification based on customer interaction. The PowerBuilder development environment was used for this purpose.
  - **Incremental development.** The initial system was a small, central core of functionality, and the desired system
- was enhanced by integrating additional functions and modules. As the new functions were added, the existing functions were constantly refined and tested. This method provided for continual testing by the user and early detection of problems, thereby minimizing the impact on subsequent software modules.
- **Phased planning.** As each phase of the development process concluded, plans for the next phase were made and any risks were assessed and resolved.
  - **Customer involvement.** The system was developed for the users with participation of the users throughout the development process. From the definition of requirements — using business process reengineering techniques and interviews — to system testing, *the customer was involved at all levels*, thereby providing the validation and verification of the evolving system.

**"With the development and implementation of our new CJIS program, I am able to keep tabs on my court dates, cases, defendants and dockets all in one program. I can tell what caseloads look like and what adjustments need to be made in order to keep moving forward and not waste anyone's time. In the near future I will also have the ability to check my traffic docket for caseload information and be able to avoid congested courtrooms, which lead to frustrated scenarios and rushed results. CJIS is a good tool with potential."**

— Honorable Michael Mondelli  
General Sessions Court, Division VI

**Technical Overview**

The CJIS application is a three-tier Client/Server application with a GUI front-end and distributed databases employing a Relational Database Management System. (Figure 4 shows the CJIS Architecture for Phases I, II and III.) The GUI is the client portion of the system. The databases consist of structures to store data (SQL Schema), business rules and transactions (Stored Procedures), and system utilities to support the business functions (Replication, Periodic Process Scheduler, Backup Scheduler, etc.).

Under the original environment, the GUI was intended for a Windows 95 or 98 or higher client and was developed using the PowerBuilder 5.0.4 32-bit object-oriented development environment. The databases were implemented using Oracle 7.3.x with the stored procedures developed using PL/SQL.<sup>7</sup> The GUI gathers input from the user and passes it to the database by invoking System Business Transactions (SBT)

implemented through PL/SQL stored procedures on the Oracle servers. The GUI retrieves data for presentation to the user employing Standard Query Language (SQL).

The CENTRALized Repository Interface with Object Databases (CENTRIOD) application/database middleware switch system was developed in response to the need to transfer data between two or more Oracle databases or between an Oracle database and some other type of system, such as the Police mainframe. The CENTRIOD is comparable to a post office that acts as a central location for the movement of information between systems. For example, when the arrest process is started for the defendant, a file containing all defendant demographic information is created by the Police mainframe and placed in a folder on the CENTRIOD server. The CENTRIOD application picks up the file from the folder, retrieves all of the data from the file, and then inserts the data

into specific tables in the CJIS database to be processed. This example is typical of how all data are processed through the CENTRIOD. It acts like a post office by picking up the data (from a file or directly from an Oracle database), determining where it needs to go, and placing it in the correct location for further processing. This system allows the transfer of data to and from all systems in the CJIS enterprise transparently, smoothly and with enough flexibility to allow for additional exchanges as needs arise.

*Business Process Reengineering*

One of the primary goals of JIS was to streamline criminal justice workflows, which meant the agency had to avoid simply automating the existing manual processes. In order to help accomplish this goal, operational project teams (comprised of vendor representatives, JIS staff and justice agency staff members) were formed and educated on basic reengineering principals. In order

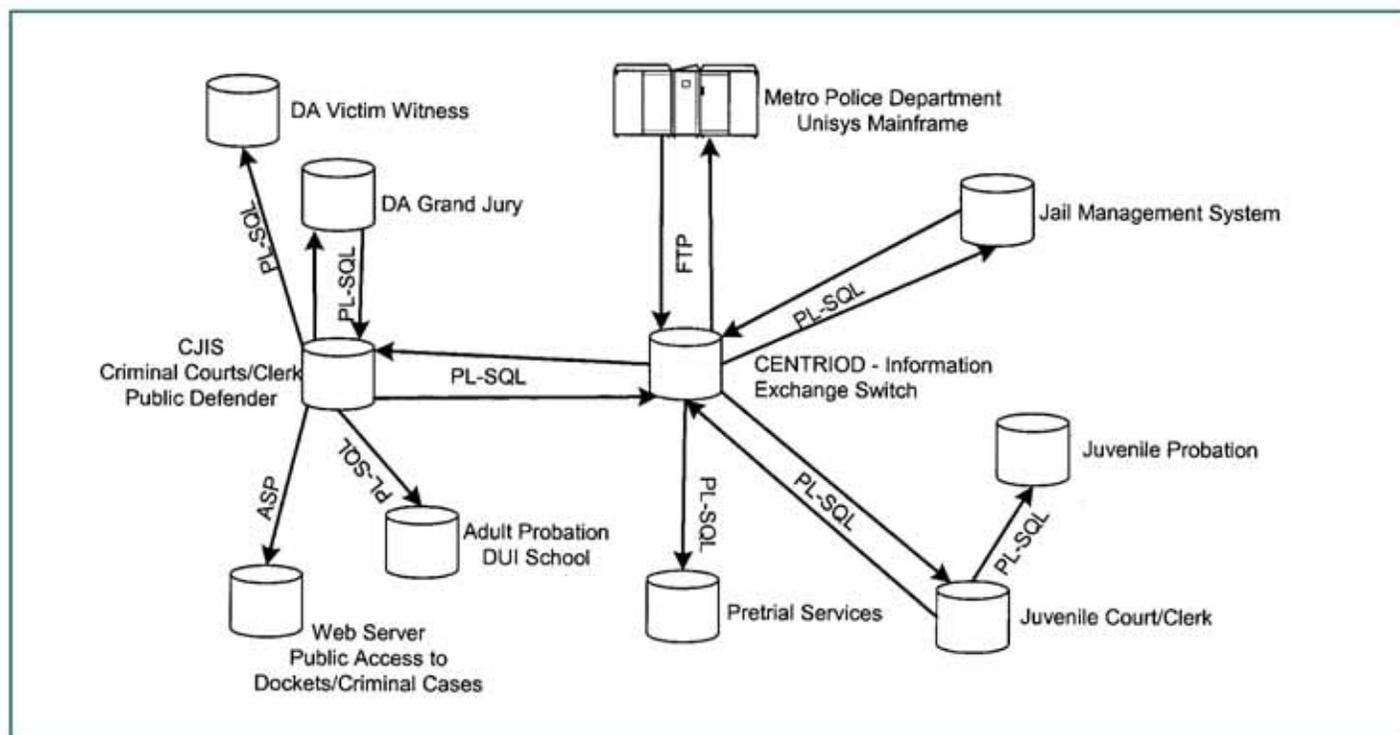


Figure 4: CJIS Architecture, Phases I-III (Distributed Oracle Database)

to electronically document the business processes of Metro/Davidson County's justice agencies, Popkin's System Architect was chosen as the case/process-modeling tool. The teams used the IDEF<sup>3</sup> component of the tool, which was a structured modeling methodology widely used to improve business processes and systems. The IDEF models provided a graphical representation and consistent interpretation of the business processes, and enhanced the communication between the technicians and the justice users.

The first step in the process was to develop the "AS IS" business model. Each agency had to document its existing workflow down to the smallest detail. To develop the enterprise model, interagency process flows were documented and all existing paper forms were collected and analyzed to determine the information exchange points. The next step was to develop the "TO BE" business model, which is how they wanted the system to be designed. The two models were then compared and from that comparison the functional requirements for the system were developed. The teams spent over a year on this part of the project for each of the phases.

This detailed analysis enabled the teams to design the future integrated system, identify how each agency fit into the overall "big picture," determine which parts of the system would be automated and which would remain manual, identify the processes that would be modified and their resulting effect on the organizational resources, and gain a better understanding of how each agency's processes impacted the overall justice system.

### JIS/CJIS Funding

Approximately \$10 million was expended for the development and implementation of CJIS. This amount included funding for the network infrastructure, hardware and personal computer purchases needed to support

the software. It did not include money for salaries or fringe benefits. Local bond funds were attained for the custom development of the CJIS program and can be broken down by phase: Phase I — \$2.6 million, Phase II — \$2.7 million, and Phase III — \$3.2 million. Ongoing support and maintenance is funded from JIS' annual operating budget.

JIS funding falls in either a recurring or non-recurring category and comes from four sources:

- Metropolitan Davidson County annual operating budget;
- 4% County funds (used to purchase hardware/network components);
- Bond funding enacted to procure CJIS; and
- State and Federal grants, which have been obtained on an ad hoc basis.

### Keys to Success

The JIS organization has learned a great deal from the CJIS project efforts to date. Based on its experiences, JIS offers the following recommendations for other jurisdictions undertaking integration efforts:

#### *Develop a Comprehensive Plan: Avoid Simply Automating the Existing System*

The success of the CJIS project to integrate Metro/Davidson County criminal justice agencies into an automated, enterprise-level system began with a comprehensive plan that considered the range of user needs, identified automation and integration priorities, and analyzed existing and potential technology and data standards.

#### — Model your processes

Implementing a good process-modeling tool is key to a successful project. JIS dedicated more than a year to this part of the project. Each agency was asked to draw out or diagram its existing workflow in detail. To be effective, do not assign this project to a small team of upper-level administra-

tors; the elements of CJIS that are working the best involved every member of the staff during the planning and reengineering phase of the project. Each agency diagrammed its workflow as it existed at the start of the project. Within several months, each employee's daily activities — including every piece of paper they touched and each document they produced — was analyzed. This detailed analysis enabled them to design the integrated system as they wanted it to be in the future. Teams of employees were able to identify the areas of each agency that should be part of CJIS. They were able to identify the area of the system that should be computerized, and which forms and reports should be built into the system as a PowerBuilder document. That preliminary exercise prepared them to specify the systems requirements.

Taking as much time as necessary on this part of the project will save money in the long run. Many of the costly changes made in the Davidson County CJIS in the past several years were often a result of a lack of a complete analysis of the workflow. If problems arise, the time spent documenting your future system will also provide the proof that you will need to get the system fixed while it is still under warranty. You will be able to prove that it is not performing as designed. There is a huge difference between a bug (fixed at no-cost under warranty) and an enhancement (a potentially high-cost system addition). If possible, you need to avoid this type of frustration and additional costs that can lead to project failure.<sup>9</sup>

#### — Involve users

A side benefit to this analysis was the teamwork. All employees contributed to the design of the new system. They understood why it was being built and were interested in its success. Some employees were asked to do additional work that traditionally would be handled by other agencies in the criminal justice system. By being

involved in the design, they were ultimately willing to do data entry that would benefit agencies other than their own. For the first time all the players in the system understood how the other agencies were organized, recognizing that each had different needs.

The system analysis also allowed managers to understand how CJIS would impact each organization's resources and to effectively plan for the changes before the system went "live." It enabled all the individuals in the system to begin to redesign jobs. By the time the system was put into operation, employees had clear ideas of their new jobs and how to function within the CJIS environment. By involving each employee in the initial design, good trainers were identified who could assist after CJIS was built.

### *Testing! Testing! Testing!*

Initiating your own testing is integral to the project. Do not rely solely on vendor testing. The first step will be to identify the employees with the most experience, enthusiasm for their jobs and imagination. The chosen team will design test scripts to challenge the system. They will need to imagine as many different and difficult situations as possible. Specific demographics will need to be written for each person type — defendant, victim, witness, attorney, etc. Each form and report will have to be checked after altering any data.

Because all parts of the justice system were to be integrated, end-to-end tests had to be designed. Profiles of fake individuals were created in the Police Department mainframe, and the testing started at the booking process where the team checked whether demographic information would come through the interface between the mainframe and CJIS. Next, the test information was processed through the General Sessions court module; some cases were disposed of in the lower court, and others through the grand jury. If the cases were disposed of in the lower court, the test team verified that the disposition information

was transferred to the Police Department mainframe and the Sheriff's Office JMS. During the grand jury testing, charges were changed and added, defendants were added, and grand jury reports were generated. At this point, the testing proceeded to the State Trial Court module for motions, trials and dispositions, and was finally completed when the outputs from the court processing were electronically transferred to the Police Department mainframe and the JMS. These end-to-end tests allowed the users to verify that information was flowing correctly from the initial booking process, into the grand jury and court systems, and back into the Police criminal history records.

This step is a difficult and time-consuming process, but it will pay dividends. The more time and imagination expended in this activity, the better the system will perform. The agencies in the CJIS project that spent the most time in designing test scripts and testing now have the fewest problems.

The difficult part of testing the system is that it never ends. The system must be retested after each new build or upgrade.<sup>10</sup> It is inevitable that something that worked before an upgrade will be damaged after the enhancement or replacement. Locating the ripple-effect errors *before* an upgrade is rolled out to the user community will save time and trouble. A full end-to-end test of CJIS requires several people from each agency working full-time on the project for at least three weeks.

Agencies should maintain records of their tests; doing so will result in cost savings. Accurate records will assist an agency's case if the agency needs to show the vendor that a particular part of the delivered system worked the last time the test scripts were run, and the current problem was created by the vendor's most recent upgrade.

### *Identify an Incentive*

Asking a group of employees to disrupt their workflow and expend a

great deal of time and energy to provide input into the development of a system requires an incentive, or "hook." Something is needed that will get people interested and excited about what they will be working on when they are designing your system. This goal, or hook, will be different for each agency. Finding one will result in a motivated group that will put in the time and effort to make the project a success.

For example, the CJIS goal for the Office of the District Attorney General was the creation of a complete criminal history record for each defendant that would then be transmitted to the State criminal history repository and on to the Federal system. This goal has now been spotlighted by the current emphasis on homeland security.

The criminal justice system had been relying on the Police Department mainframe to transmit criminal history data to the FBI. The District Attorney General's Office had been relying on a manual system of record cards. Once CJIS forced a detailed analysis of the data from the mainframe, large gaps were found in the old system. The old system worked very well in the lower courts where there was a one-to-one relationship between an arrest on a single warrant and a later disposition of that warrant. However, it did not work well in the felony court system after indictment by the grand jury.

Working on CJIS has allowed representatives from the District Attorney General's Office, the Police Department and the Criminal Court Clerk's Office to correct those errors. The system requires each defendant to be identified by fingerprint in order to be scheduled for court. It will track the merger of warrants into a single count in an indictment, alternative theories of a crime added in the grand jury, co-defendants who are at different stages in the court system, additional charges that were not part of the initial arrest but were added in the grand jury, and all the charges that are contained in sealed indictments.

These solutions require:

- 1) A positive ID of *all* defendants.
- 2) Police Department cooperation in rebuilding the legacy system.
- 3) Increased data entry by employees of the District Attorney General.
- 4) Each count of an indictment having all the data elements that tie it to a particular arrest.
- 5) All agencies agreeing to a multitude of new numbering schemes.
- 6) The creation of tables that tie every criminal offense by name and code number to a particular law enforcement identifying number.
- 7) Ongoing implementation meetings that bring all the agencies together on a regular basis to work on problems as they arise.

By achieving the goal of electronically compiling and maintaining complete criminal history records of defendants, the prosecutors now have a more complete picture of a defendant's background and this helps them make more informed decisions on how to prosecute a case. Consequently, the

employees at the District Attorney's Office have been willing to accept a system that requires a huge increase in data entry by their office. (CJIS offers hundreds of ways that data can be shared. Figure 5 illustrates a small example of interactive, integrated data sharing in CJIS.)

### Lessons Learned

As with any project, there were elements of the CJIS project that should have been handled differently. It is important to identify those issues throughout the project so past mistakes are not repeated. The following is a summary of some of the critical "lessons learned" from the CJIS project:

- Issues are mostly political, not technical.
- Funding must include development, as well as maintenance costs.
- Identify cost/benefit measurement tools in the initial planning process.
- Development and implementation are complicated, time-consuming processes.

- Do not overlook the infrastructure (network) and need for stability in that area.
- Ensure executive-level members have a clear understanding of the amount of time and resources the project will require.
- If possible, implement the system in phases that reflect flow of information through the criminal justice system.
- Have full-time administrative help for the project.
- Assign key personnel from the user community to the project full time.
- Keep records of all design meetings/decisions with vendor.
- Carefully manage the vendor's Project Manager.
- Establish an effective error-tracking system.

In summary, there is no exact formula that guarantees a successful system implementation. But by effectively managing the process of technological change, the risk factors can be greatly reduced.

### Conclusion

One of the critical success factors of the Davidson County CJIS project was the continued dedication and commitment from the members of the project teams and the JIS staff, and the unflinching support of the Operations Subcommittee and the Policy Committee.

This spirit of cooperation in working toward the seemingly unattainable goal of building a truly integrated justice system has been a remarkable achievement that benefits the government as well as all citizens of Davidson County.

For additional information on the Davidson County project, contact Ms. Nikki Meyer, JIS Director, at [nikkimeyer@jis.nashville.org](mailto:nikkimeyer@jis.nashville.org) or (615) 862-6195, ext. 109.

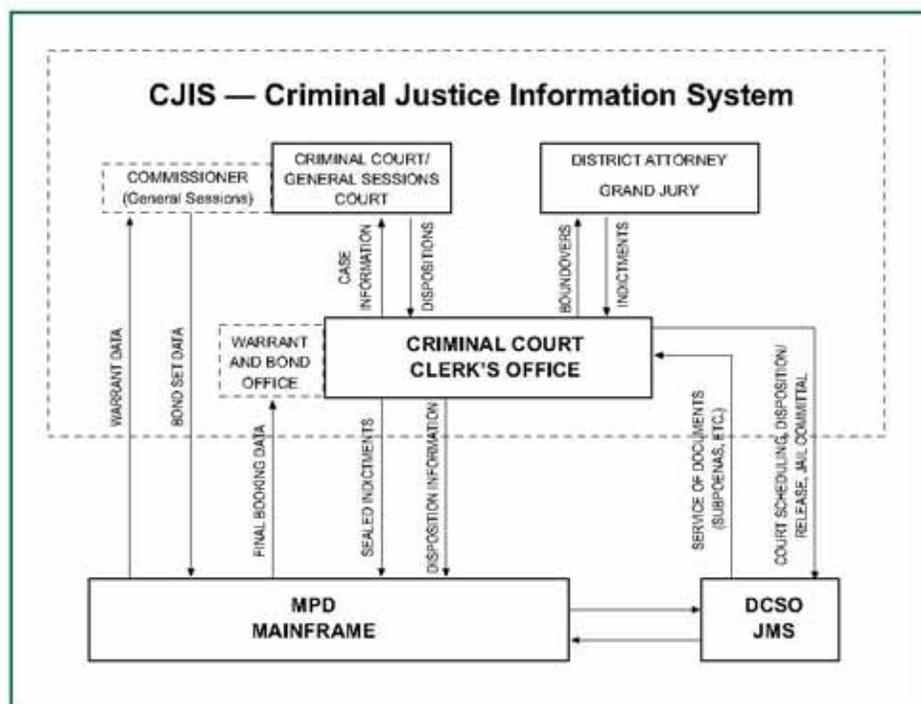


Figure 5: Example of Interactive, Integrated Data Sharing



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### Update: 100% Disposition Matching

Beginning in May 1999, Davidson County deployed the initial phase of an integrated CJIS that had been designed and built in cooperation with Unisys Corporation. As of late 2002, it is in final testing with the Tennessee Bureau of Investigation to clear 100 percent of all case dispositions (felonies and misdemeanors) in the Davidson County justice system each night to the State's criminal history repository located at the Bureau. The final implementation of this process will complete a major milestone in the CJIS project, and will provide accurate criminal history dispositions tied to fingerprint identifications to the State criminal history repository and on to the Federal repository.

#### ENDNOTES

<sup>1</sup> Davidson County has a metropolitan form of government. The State capital of Nashville is the seat of that government. In 2001, Metro/Davidson County had a population in excess of 540,000, according to the U.S. Bureau of the Census.

<sup>2</sup> Memorandum from Anne Gardner and David Boyer, September 1999.

<sup>3</sup> JIS created and maintains a Web site, <http://www.jis.nashville.org/>, to inform the public and Davidson County justice agency participants of the status of the CJIS project, as well as the support provided by the JIS agency.

<sup>4</sup> Information contained in this case study was compiled through interviews and personal observations, and from the JIS Web site and system documentation. Ms. Sullivan is a Justice Information Systems Specialist with SEARCH. Prior to joining SEARCH in 2001, she served as Director of JIS. Ms. Mathews is an Assistant District Attorney General with the Office of the District Attorney General, Nashville. She was involved in the CJIS project from the RFP release until system implementation and has served as a voting member of the Change Control Board for 4 years.

<sup>5</sup> The full text of Metropolitan Ordinance Number 092-415 is available at: <http://www.jis.nashville.org/ORDINANCE%20NO2.pdf>.

<sup>6</sup> The system was designed and developed by the Justice and Public Safety Division of Unisys Corporation. The application is written in Oracle and PowerBuilder and was installed on Microsoft Windows NT servers running on a Novell Network. More information about Unisys Corporation is available at: <http://www.unisys.com/index.htm>.

<sup>7</sup> After the upgrade in December 2002, the current technical environment consists of Windows 2000 clients that will utilize PowerBuilder 8 and Oracle 9i.

<sup>8</sup> IDEF means "integrated definition," a group of modeling methods that can be used to describe operations in an enterprise.

<sup>9</sup> "Failure" in this context is defined as a project that cost more or took longer to implement than planned, did not meet user expectations for functionality, and/or negatively impacted the organizational culture.

<sup>10</sup> The testing process has evolved over time. Davidson County has created test scripts that are now run through an automated testing tool. This automated tool allows them to speed up the testing as well as have an objective statistic on response time for "before" and "after" results.

## **CONFIDENTIALITY PROTOCOL VERA INSTITUTE OF JUSTICE**

April 2008

Vera acknowledges and respects the confidential and private nature of the information obtained in furtherance of its projects. To ensure the privacy of human-subjects data and reduce the risk of inappropriate disclosure, the following protocol outlines how human-subjects data must be treated. The terms of the protocol are applicable to all Vera staff, consultants, subcontractors, interns and volunteers.

At the conception of new projects that involve the collection of data about human-subjects, the Principal Investigator, in conjunction with the Research Director and Counsel's Office, will complete a project specific "Human Subjects Protections Guideline" (HSPG) protocol.<sup>1</sup> The protocol will address human-subjects protections and accompanying data for each of the subcategories below.

### **I. Subject Identification Coding and Separation of Identifiers**

Each human subject recruited for a Vera research study or project for which individually identifying information is needed (e.g., name, address, social security number, or personal identifiers or data elements that when used together identify or locate a person) shall be given a numerical code by which he/she shall be identified. Individually identifying information of each human subject shall be kept separate from the other data collected from the subject and from the list connecting a human subject to his/her numerical code as specified in the HSPG protocol. This applies to both paper and electronic data. Coding must be done as soon as possible after data are received and data matching is complete.

### **II. Paper Documents**

All hard copies of individually identifying information shall be kept in a locked file cabinet when not in use and should be stripped of all identifiers. The document linking the individuals to their numerical codes should be kept in a separate locked cabinet as specified in the HSPG protocol. There will be two keys to each cabinet. One key shall be safeguarded by the Administrative Director of Research and the other by the Principal Investigator or staff person to whom this task is assigned. The key shall be given only to Vera staff who need the information in order to perform work directly related to the project for which the information was collected. Upon retrieving the needed file(s) staff shall lock the file cabinet and return the key. The Administrative Director of Research shall keep a log of who has access to the files.

### **III. Computer Files and Disks**

All electronic versions of individually identifying information shall be stored in computer files to which there is restricted access. Access to the files will be given only to Vera staff who need the information in order to perform work directly related to the project for

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<sup>1</sup> The HSPG will set forth in detail the confidentiality and data security protocols that will govern individual projects. HSPGs that deviate from the general rules set forth in this Protocol (e.g., if required by a grant or Vera's Institutional Review Board), must be reviewed and signed by the Research Director.

which the information was collected. Such staff must use their password in order to access these files.

All disks or electronic media containing individually identifying information shall be kept in a locked file cabinet when not in use. There will be two keys to each cabinet. One key shall be safeguarded by the Administrative Director of Research and the other by the Principal Investigator or staff person to whom this task is assigned. The key shall be given only to Vera staff who need the information in order to perform work directly related to the project for which the information was collected. Upon retrieving the needed file(s) staff shall lock the file cabinet and return the key. The Administrative Director of Research shall keep a log of who has access to the files.

#### **IV. Disclosure of Data**

Data in any form shall not be shared with any unauthorized persons or agencies. Disclosures must comply with all contract restrictions, with all grant restrictions, with all applicable laws and regulations as specified in the HSPG protocol and with this policy.

##### *Disclosing Data to Vera Staff*

Before sharing data with Vera personnel not assigned to the project for which the data was collected, permission from the Principal Investigator/staff person managing the project must be obtained. That permission may be oral or in writing. In his/her absence, this request shall be made to the Research Director. Permission will only be granted if the Principal Investigator/staff person managing the project determines that the disclosure is necessary, executed in a manner that continues to ensure confidentiality, complies with any grant or contract restrictions, and is in compliance with the HSPG protocol.

##### *Disclosing Data Externally*

Sharing data, for professional or personal reasons, with persons outside Vera seriously diminishes our ability to protect the confidentiality of data and subjects' privacy. For this reason, before data is shared with non-Vera personnel, permission from the Research Director and Counsel's Office shall be obtained and documented. For example, other organizations working on or researching similar issues may request Vera data for use in their own research. Without prior approval, sharing data in any form in response to such a request is prohibited.

#### **V. Reporting Results**

Results shall be reported in a form and manner decided by the Principal Investigator/staff person managing the project in consultation with the Research Director and must comply with contract and grant restrictions. Generally, results shall not be reported in identifiable form. In the rare case that results are reported in identifiable form, prior written permission from the Research Director, General Counsel and, when appropriate, Vera's Institutional Review Board, must be obtained.

Staff is not permitted to report preliminary results, formally or informally, to anyone outside Vera without first consulting with the Principal Investigator/staff person managing the project.

**VI. Ownership of Data**

Vera controls the use of any data, analyses and research results related to all Vera projects. Employees are prohibited from using data or results for their own purposes. This prohibition applies to current and past Vera employees. For example, a Vera employee may not use Vera data or results for a personal research project nor may she/he use data or results for a project commissioned by another organization for which she/he works. After consulting with Counsel's Office, the Research Director may grant written waivers to this policy if it does not conflict with the terms of the grants and contracts governing the project and if it furthers the interests of the Institute.

**VII. Final Disposition of Individually Identifying Information**

Upon completion of a project, the security of individually identifiable information shall be protected by physically destroying/erasing all copies of such information; or, if required, by returning the information to the grantor. Nothing in this paragraph shall prevent Vera staff from retaining data, stripped of the individually identifying information, for use in future project analysis, if such action is not limited by law or the terms of applicable grants or contracts. Principal Investigators/staff person managing the project is responsible for final disposition of individually identifiable information.

**VIII. Staff Agreement to Protect Confidentiality of Data**

All Vera staff, subcontractors, consultants, interns and volunteers shall be given a copy of this protocol and shall sign below acknowledging that they agree to comply with all applicable confidentiality laws and regulations, and with this protocol. Principal Investigators/staff person managing a project are responsible for ensuring that staff receive and sign a copy of this protocol, and that each staff member working on a study/project has signed it. The Administrative Director of the Research Department shall keep a copy of all signed agreements on file, and a copy shall be made for the employee.

I have read and understand the Vera Institute of Justice Confidentiality Protocol, and I agree to abide by all its terms and conditions. In addition, I will comply with all confidentiality and privacy laws and regulations specific to each project.

Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

This protocol acknowledgement must be renewed annually and expires one year from the date of signature.

**GOVERNMENT DATA ACCESS AND NONDISCLOSURE AGREEMENT**

- 1. Hennepin County hereby authorizes Christine Bardwell, an employee of Cornerstone Consulting, access to Hennepin County computer systems as part of the Hennepin County Justice Integration Project (Justice Integration Project).
- 2. Access to the Justice Integration Project data shall be for the purpose of assisting Hennepin County in developing, testing and implementing the Justice Integration Project.
- 3. SECURITY AND NONDISCLOSURE. The Contractor's Employee shall protect the privacy interests of individual data subjects and hereby agrees that all data classified by state or federal law as not public which is obtained from Hennepin County shall be kept confidential at all times during the Justice Integration Project and after completion of the Justice Integration Project.

All Hennepin County data accessed by Contractor's Employee are the property of Hennepin County.

The Contractor's Employee shall not make reproductions of any data in the files or remove any such data from the County's computers.

Contractor's Employee agrees that no data obtained during the Justice Integration Project shall ever be disclosed or communicated to anyone by any means.

- 4. ACCESS PERIOD. The term of this access agreement expires upon the date that the County's contract with Cornerstone Consulting expires.

Signed: \_\_\_\_\_  
Contractor's Employee

Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_

**MEMORANDUM OF UNDERSTANDING TO COORDINATE RESPONSES TO  
THE HAMILTON COUNTY CRIMINAL JUSTICE COMMISSION**

THIS MEMORANDUM OF UNDERSTANDING (“MOU”) is made on this \_\_\_\_ day  
of \_\_\_\_\_, 2008, among the following criminal justice agencies in Hamilton  
County, Ohio (the “parties”):

- CLEAR Board of Advisors (“CLEAR”)
- Court Management System Network (“CMS Net”)
- Hamilton County Sheriff (“Sheriff”)
- Hamilton County Clerk of Courts
- Hamilton County Municipal Court
- Hamilton County Common Pleas Court
- Hamilton County Court of Domestic Relations
- Hamilton County Juvenile Court
- Hamilton County Probate Court
- Hamilton County Pretrial and Community Services
- Hamilton County Probation
- Hamilton County Private Complaint and Mediation Services
- Hamilton County Prosecutor
- Hamilton County Public Defender

WHEREAS, the Board of County Commissioners (“BOCC”) has established the Hamilton County Criminal Justice Commission (“CJC”) to evaluate, monitor and make appropriate recommendations to the public and to local and county elected officials and to public safety officials on laws, policies and practices that promote public safety, reduce recidivism and improve the efficiency and cost-effectiveness of Hamilton County’s criminal justice system; and

WHEREAS, recommendations of the CJC should be based on the analysis of accurate and reliable data and evidence-based practices; and

WHEREAS, multiple County and City agencies are responsible for the development and maintenance of information and data in records required for the operation of the criminal justice system in Hamilton County, some of which records and information are protected by law from public release or otherwise limited in its use by Ohio and federal statutes; and

WHEREAS, the CJC has established the Hamilton County Data and Criminal Justice Information Systems Committee (“CJIS”) to develop an action plan to coordinate data collection and dissemination among key agencies and facilitate the development of long-term plans to maximize the effectiveness of the County’s criminal justice and corrections system; and

WHEREAS, in order to assist in providing the CJC with timely and reliable data from their records consistent with legal constraints, the parties wish to enter into a cooperative arrangement to establish a framework to coordinate the provision of such records; and

WHEREAS, this MOU is not intended to create legal obligations binding on the parties, but to establish a tool to assist in the coordination of responses to the CJC;

NOW, THEREFORE, the parties intend to implement, where possible, the following practices and procedures with respect to responses to requests by the CJC for criminal justice information and data from records under their respective jurisdiction and control:

1. Requests from the CJC for criminal justice data or information from the records of the respective parties (“data request”) will be received and coordinated by the CJIS. The CJIS will designate a representative (“CJIS data representative”) who will be responsible for the coordination of such data requests with the appropriate party or parties responsible for the creation and control of the records and supporting the data.
2. The CJIS data representative will work with the CJC towards formulating its data requests in such a manner as to be most readily retrievable from existing public records maintained by the parties, with appropriate redactions where necessary to comply with state and federal law. The CJIS data representative will seek to determine which party has primary responsibility for the creation, control and maintenance of the records containing the information and data requested (“originating party”).
3. Each of the parties to this MOU will designate a representative (“party representative”) responsible for working with the CJIS data representative and for receiving and responding to data requests from the CJC. The party representative for the originating party will be the primary contact for such party to work with the CJIS data representative in coordinating responses to CJC data requests from that party’s records. The party representatives will work cooperatively with each other and with the CJIS data representative to provide timely, accurate responses from existing public records.
4. No records or information that is protected by law from public release or otherwise limited in its use by Ohio and federal statutes will be provided or disclosed in response to data requests. The originating party shall determine what records and information can be provided in response to a request consistent with the requirements and protections of state and federal law, rules and regulations.
5. It is the intent of the parties that information or data in response to data requests will be provided primarily from existing public records. In the event that the data requested is not readily retrievable from existing public records and is not subject to legal confidentiality requirements, the originating party will determine whether the creation of a new record providing the requested

data is appropriate and useful in carrying out its statutory responsibilities or would serve to promote evidence-based criminal justice policies.

6. Records, data and information provided to the CJC will be provided by the originating party or by a holder of the records at the request of the originating party. In the event that record(s) containing data or information the release of which is prohibited by law should inadvertently be provided in response to a data request, the party or parties receiving such record(s), data or information will forthwith return the record(s), data and information to the originating party, and keep any information or data obtained from such record strictly confidential.
7. The parties understand the importance of the mission of the CJC, and will work cooperatively within budgetary and legal constraints to provide timely and accurate responses to its requests. In the event of a dispute involving the release of data or information from the records of a party or matters related thereto, the parties agree to work together in good faith to resolve the matter by escalating the dispute to higher levels of management for each party until a resolution of the matter can be obtained.
8. In the event of a public records request to the CJC for records provided to the CJC by any of the parties, the CJIS data representative will immediately forward such request for response to the originating party for the record(s) sought.
9. The parties recognize that this MOU has been created for organizational and efficiency purposes in responding to requests from the CJC, and that nothing in this MOU is intended to, nor shall it create any legal obligations among the parties to do anything or to provide any records, data or information which is inconsistent with or in addition to the party's duties and responsibilities under the law. Nothing in this MOU is intended to create any obligations to, or rights or entitlements in third parties not signatory hereto, and the parties agree that it shall not be so construed.

CLEAR Board of Advisors:

Hamilton County Sheriff:

By \_\_\_\_\_  
Col. Al Schaefer

By \_\_\_\_\_  
Sheriff Simon L. Leis Jr.

Hamilton County Clerk of Courts:

Hamilton County Public Defender:

By \_\_\_\_\_  
Patricia Clancy

By \_\_\_\_\_  
Louis F. Strigari

Hamilton County Prosecutor

Hamilton County Court of Common Pleas,  
Domestic Relations Division

By \_\_\_\_\_  
Honorable Joseph T. Deters

By \_\_\_\_\_  
Honorable Susan Lake Tolbert

Hamilton County Juvenile Court

Hamilton County Probate Court

By \_\_\_\_\_  
Honorable Thomas R. Lipps

By: \_\_\_\_\_  
Honorable James Cissell

CMSNet  
Hamilton County Court of Common Pleas  
Hamilton County Municipal Court  
Hamilton County Probation  
Hamilton County Private Complaint and Mediation Services  
Hamilton County PreTrial Services

By \_\_\_\_\_  
Michael L. Walton

System	Governance Structure	Staff/Administration	Funding Sources
CLEAR	CLEAR is directed and advised by the CLEAR Board of Advisors, an 18-member board representing Hamilton County, the City of Cincinnati, and law enforcement agencies county-wide. The City of Cincinnati is the operating agent for the CLEAR systems under a contractual arrangement with the County, and with advice from the CLEAR Board of Advisors.	Seven staff provide development, support and maintenance for CLEAR's various databases, applications, and hardware. Additional staff provide technical support and client assistance.	CLEAR is supported by a 0.54 mill continuing property tax levy.
CAGIS	The CAGIS consortium is a legal agreement between Hamilton County, the City of Cincinnati, and Duke Energy, and is directed by a nine member executive board comprised of four County representatives, four City representatives, and one representative from Duke. The executive board membership represents organizations who make significant use of CAGIS services. Ten additional local government jurisdictions and five public/quasi-public organizations also participate in CAGIS as paying, non-voting, associate members.	The CAGIS Administrator directs a CAGIS Office staff of 18 FTEs, comprised of enterprise GIS and Workflow (permits, code enforcement, capital project tracking, customer service request, and construction coordination) software application developers, enterprise database administrators, and enterprise computer systems staff that support all CAGIS services. The CAGIS Office provides 7/24/365 support for its systems.	CAGIS capital projects are funded 50/50 by Hamilton County and the City of Cincinnati. The annual CAGIS operating budget is comprised of a \$30,000 flat contribution from Duke Energy, the remainder is funded 50/50 by the City of Cincinnati and Hamilton County. The City of Cincinnati's funding comes from their 302 Income Tax Infrastructure fund and 980 Capital fund, Water Works, and the Stormwater Management Utility. Hamilton County funding is provided by MSD, the County Engineer and the General Fund.
JMS	System management is under the Sheriff's Office.	Intake Processing – 3 shifts: 2 Supervisors; 1 Clerk and 13 data entry operators (DEOs). Corrections Records – 2 shifts: 2 Supervisors and 9 DEOs	Sheriff's staff funded through county general fund; database and application support and maintenance provided by CLEAR.
PTIS	Agency Director reports to Hamilton County Municipal Court, Agency MIS Director reports to Director of Pretrial and Community Transition Services. Municipal Court is member of CMSNet.	Two staff provide in-house programming, system maintenance, and 24-hour technical assistance.	Start up funding came solely from grants. Hardware/software upgrades and intra-system support provided through Municipal Court.

<b>System</b>	<b>Governance Structure</b>	<b>Staff/Administration</b>	<b>Funding Sources</b>
CMS	Governed by CMSNet Steering Committee; formal governance body with a formal governance agreement signed by elected officials/department heads of nine court-related agencies	Director, Project Asst, and Analyst (currently vacant); all report to the CMSNet Steering Committee (but follow the personnel policy and procedure of the Court of Common Pleas and report to the Court Administrator for routine business)	Personnel and contracts funded by the county general fund through the Court of Common Pleas; infrastructure, hardware and software for Municipal, Common Pleas, and the Clerk of Courts funded by the Clerk of Courts Automation Fund (a restricted fund).
JCMS	System management is under the judiciary of the Juvenile Court. The agency is a member of CMSNet.	System is maintained by 11 county staff, as well as two contractual positions with Conexio: one helpdesk position and one network engineer. Two county staff are on 24-hour call for emergency assistance.	Funding for the system follows a similar structure to the Juvenile Court, with general fund and grant funding, as well as school district support at the Hillcrest training school.
PCCMS	System management is under the Judge of the Probate Court. Probate Court is a member of CMSNet.	System is managed, developed, maintained, and supported by three court staff supplemented by incidental network and hardware support from Conexio as needed.	Court staff are funded through the county general fund. IT infrastructure is generally funded through a restricted court automation fund.