Implementation of an Integrated Computer System for the State Court System

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Background

The 1968 rewrite of the Florida constitution culminated in 1972 with a major revision to Article V of the Florida Constitution, which provided for the organization and jurisdiction of the courts, the state attorneys, and the public defenders. This 1972 revision created Florida's current day uniform system of courts following rules of procedure with statewide application. This was the first restructuring of the Florida courts since 1885.

In 1998, the Constitution Revision Commission proposed, and the voters adopted, Revision 7 to Article V. This 1998 revision specified in broad terms the state and county funding responsibilities for the state court system, and set a deadline of July 1, 2004 for the state to fully fund its' share of the court system. Essentially, the state is to pay for all costs associated with the state courts system, state attorneys' offices, public defenders offices, and court-appointed counsel except for certain enumerated county obligations. The counties are to pay for "the cost of communications services, existing radio systems, existing multi-agency criminal justice information systems, and the cost of construction or lease, maintenance, utilities, and security of facilities for the trial courts, public defenders' offices, state attorneys' offices and the offices of the clerks of the circuit and county courts performing court-related functions. Counties shall also pay reasonable and necessary salaries, costs, and expenses of the state courts system to meet local requirements as determined by general law." (Article V Section 14 (c) of Florida's Constitution)

In order to implement Revision 7 to Article 5 of the Florida Constitution, the Legislature enacted Chapter 2000-237, Laws of Florida, to specify the elements of the state court system and the responsibilities of the state and counties in providing such elements. Section 29.008, Florida Statutes (F.S.), further defines the responsibility of counties to fund communications services. Communications services include all computer systems and equipment, maintenance, support staff and services necessary for an integrated computer system to support the operations and management of the state court system, including the state attorneys, public defenders, and clerks of the court. The computer systems must enable the entities in the state courts system to share and report information relating to revenues, performance accountability, case management, data collection, budgeting, and auditing functions.

The 2003 legislature passed House Bill 113A (Chapter 2003-402, Laws of Florida) which further clarified the state and county responsibilities. HB 113A amended section 29.008, F.S., to require the integrated computer system to enable the electronic exchange of case information, sentencing guidelines and score sheets, and video evidence stored in integrated case-management systems over secure networks. Further, the bill required the integrated system to be operational by January 1, 2006.

Since enactment of the amendments to section 29.008, F.S., representatives from the various court system entities have questioned what would constitute an "integrated system" under the law, how such a system would be implemented, and what their obligations and responsibilities would be.

This interim project was undertaken to develop a general understanding and description of the current systems and equipment that provide information technology services for the state courts system, and to identify issues that may need to be addressed by the legislature to facilitate development and implementation of an integrated information system for the state courts system by January 1, 2006.

Methodology

Staff held several meetings with information technology representatives in the Office of the State Courts Administrator (OSCA), and with the Florida Association of Court Clerks and Comptrollers, Inc. (FACC) to obtain information on statewide systems and applications and to understand the initiatives developed by both those groups. Staff met with representatives of the clerk of the court, the court administrator, the state attorney, and the public defender in several judicial circuits to gain an understanding of their technology, the degree of integration currently existing, and their recommendations on integration. Site visits were made to the 17th judicial circuit (Broward County), the 11th judicial circuit (Miami-Dade), the 13th judicial circuit (Hillsborough County), and the 9th judicial circuit (Orange and Osceola counties). Representatives of the respective county also attended and participated in most of the site visit interviews. See attached appendices for summaries of the site visits. In addition, several exploratory meetings were held with representatives from the 2nd judicial circuit (Leon, Jefferson, Gadsden, Liberty, Wakulla, and Franklin counties) prior to conducting the other site visits. Staff reviewed recent reports relating to the implementation of Revision 7 developed for the legislature by MGT America, Inc., and conducted internet searches for information on integrating court systems in other states. Also participating in this project were staff from the Office of the Auditor General, Information Technology Division, the Office of Program Policy Analysis and Government Accountability (OPPAGA), and the Senate Judiciary Committee.

Findings

Diversity of IT Systems

It has been generally understood by judicial system participants, and confirmed in more detail by this project, that the information technology (IT) infrastructure and organization in Florida's judicial system is very diverse in at least three major ways. An understanding of this diversity is essential to formulating goals and strategies for integrating information technology.

Availability of Technology Tools

The availability of efficient technological tools varies significantly from county to county and circuit to circuit. Many circuits manually process the same data that other circuits process with technology. Only 24 percent of Florida judges are able to access information electronically from the courtroom.[1] Some state attorneys are completing sentencing scoresheets manually with data received from FDLE criminal history records, while some state attorneys have purchased automated applications to generate the scoresheets (e.g., 9th circuit). Although some judges use paperless automated systems in the courtroom to process cases (e.g., the 11th circuit/Miami-Dade SPIRIT traffic system), most court functions are still conducted with paper files due to lack of technology.

Various other technologies are in use in some circuits. Video conferencing is being used for first appearance hearings and arraignments in several jurisdictions, where defendants participate from the county jail. The 9th circuit state attorney maintains a video evidence system for various cases such as driving under the influence. Digital court reporting is perhaps exemplified in the 9th circuit/Orange County courtrooms, where one centrally located reporter can simultaneously cover four courtrooms. In contrast, many jurisdictions have few or none of these technology tools. These examples illustrate the variability of IT use among different entities in the courts system.

The degree to which existing technology systems are outdated varies as well. Seventy two percent of the court environments use technology that is nearing obsolescence.[1] The courts in a number of Florida counties are using personal computers (PC's) and servers considered by the OSCA to be below current standards (e.g., below 450 megahertz). The OSCA technology survey conducted within the last year shows that court employees in 11 counties have no PC's that meet standards, and 49 counties have a mix of PC's that meet or do not meet

[1] See the courts' Judicial Information Strategic Plan, October 30, 2002, page 16.

standards. Across all 67 counties, approximately 53 percent of all the PC's in use are considered below standards. The same survey shows that in 35 counties 104 computer servers do not meet standards, and 266 network hubs need to be replaced. A rough estimate of the cost to replace all outdated PC's, servers, and network hubs serving the court statewide is $7.5 million. Although comparable statewide survey data for other court system entities has not been obtained for this study, observations from the site visits support the presumption that the same mix of current versus outdated technology exists in all the court system entities statewide.

Many circuits still use older mainframe programming technologies developed several decades ago (e.g. 17th circuit/Broward County and 11th circuit/Miami-Dade). These mainframe applications are not user friendly. They limit display on the "green screens" to only characters and numbers. Green screens often consolidate data in formats that may be difficult to navigate and require the use of the keyboard for input rather than a mouse to execute program functions or to move between different application screens. Current mainframe applications commonly use Graphical User Interfaces (GUI) which generally provide more user friendly screens using point and click options to execute functions or to move between screens, while the old mainframe application still executes in the background. Larger circuits with systems that are integrated to some extent are nevertheless operating on legacy mainframe equipment, sometimes using applications that have been extensively modified through the years and are no longer supported by vendors (e.g., 17th circuit/Broward County). Some of these mainframe systems may also lose support as counties move county related applications off these mainframes to a web based distributed computing environment.

Diversity of Hardware and Software Applications

Those processes and data that are automated use a wide range of different hardware and software solutions across counties and circuits. Many applications have been developed in-house using county or court system entity programmers, and other applications have been purchased from various vendors as off-the-shelf solutions. Many of the off-the-shelf solutions have also been customized to varying extents.

From the clerk of courts point of view, court information technology systems can be grouped into a minimum of 6 major functions: criminal, civil, probate, juvenile, jury, and traffic. The FACC has developed a number of computer applications for use by the clerks of the court. These include the:

- Clerk of Court Child Support Collection System (CLERC);
- Offender Based Transaction System (OBTS; criminal application developed in conjunction with the Florida Department of Law Enforcement);

- Comprehensive Case Management System (CCMS; suite of applications including civil, probate, traffic, juvenile, juror/witness, indexing and recording applications);
- Traffic Citation Accounting and Transmission System (TCATS; developed in conjunction with the Department of Highway Safety and Motor Vehicles); and
- Comprehensive Case Information System (CCIS; designed to provide statewide access to court information).

Although these applications are uniformly available to all clerks of court, many other applications have been developed by clerks' in-house programmers or by private vendors for each of these major functions.

Exhibit 1 shows the number of clerks that use the various applications developed by the FACC as opposed to in-house or vendor applications, as reported recently by the FACC.

Exhibit 1: Major Applications Used by the 67 Clerks

Type of Case	Use FACC Application	Use In-House Application	Use Vendor Application
Criminal	36 clerks	12 clerks	19 clerks
Civil	28 clerks	9 clerks	30 clerks
Probate	27 clerks	12 clerks	28 clerks
Juvenile	29 clerks	13 clerks	25 clerks
Traffic	27 clerks	12 clerks	28 clerks
Jury	33 clerks	11 clerks	21 clerks

In general, smaller county clerks are more likely to use the FACC applications, while larger circuits are more likely to develop their own systems either in-house or with the help of a private vendor.

With regard to the operations of the 20 circuit court administrators there are at least 139 different versions of court applications in the 20 circuits/67 counties.[2] Court administrators use systems operated by other entities as well as many applications developed in-house or with the assistance of private vendors.

State attorneys and public defenders also use different applications, but many have adopted a common case management system called STAC, developed by a private vendor, CIP, in Jacksonville. Currently 11 of the 20 state attorney offices use STAC, and 9 of the 20 public defender offices use STAC. The others use either proprietary or in-house applications to manage their work processes. Those that use STAC have in some cases customized STAC to their business processes,

[2] Ibid.

through programming contracts with the private vendor, as other entities have done routinely with their applications. For example, the clerk in Hillsborough County indicated that, prior to customization, his off-the-shelf system met only 40% of the clerk's functional requirements. Hence, even though two state attorney offices may use STAC or two other court system entities may use the same proprietary application, their systems may still be somewhat different.

During the site visits conducted for this project, it was seen that each court system entity operates numerous unique computer applications, some shared with other entities, and many developed on an ad hoc basis and used only internally.

Funding, Ownership, and Control of IT Systems

The source of funding, ownership and control of technology across jurisdictions are also diverse and complicated. Although counties have funded and maintained much of the technology infrastructure, one or more of the entities in various jurisdictions may also own and control some or all of their IT infrastructure independently. This is one of the more significant observations gained from the selected site visits. In some jurisdictions the county owns most of the equipment, computer hardware and software applications that are used by the sheriff, the clerk of the court, the judges and court administrator's staff, the state attorney, and the public defender. In other jurisdictions the county owns equipment and computer hardware that is used, but each entity uses that equipment to run its own software applications. In yet other circuits, each entity owns and controls all the equipment and the software used, but may use a network provided by the county to share data with other entities. There are jurisdictions where all of the foregoing scenarios can be found, depending upon which entity is considered. The sheriff and clerk may use a county system while the courts and state attorney use their own hardware and applications.

While all the above scenarios exist in general, the complexity is much greater when viewed by type of court case. In most Florida jurisdictions, as stated earlier, court information technology systems can be grouped into a minimum of 6 major functions: criminal, civil, probate, juvenile, jury, and traffic. The diversity of ownership/control of hardware and software is such that two or more of the different scenarios described in the paragraph above may exist within one entity depending on which of the major type of court case/IT group is considered. For example, according to survey data collected by the FACC for this study, in Alachua county the clerk owns the systems for criminal, probate, juvenile and civil, but the county owns the systems for traffic and jury management. This split ownership of systems is also true for various clerks' systems in Broward, Dade, Duval, Leon, Osceola, Palm Beach, Pasco, Polk, Putnam, St. Lucie, and Volusia counties. In many instances the court system entities use a mix of IT infrastructure owned and controlled by other entities as well as equipment and numerous applications owned and developed in-house or purchased from private

vendors, depending on which program or type of court case is considered. This diversity of ownership and control of data and systems may be one of the more difficult factors to accommodate in formulating integration strategies.

Funding for IT staff support is yet another significant difference within and across circuits. The court administrator's office may have in-house IT staff that program and maintain case management systems owned by the court, but the county may provide the funds for those staff, such as is the case in the 17th circuit/Broward County. The state attorney in the 17th circuit/Broward County also has in-house IT staff, but they are state funded. In some cases, county employees in county offices provide IT programming and assistance as needed to each entity, and the entity pays the county for such services, even though the county pays directly for the ongoing use and maintenance of the system (e.g., 11th circuit/Miami-Dade). This variation in support staffing is significant both across the entities within one jurisdiction and across jurisdictions. Many entities in the selected circuits visited receive funds directly from the county to fund IT support staff, and many others do not receive any county funding. In addition, counties vary in their ability to document indirect costs to support court related IT efforts.

Another finding from the site visits is that the business processes upon which IT systems are based vary considerably across jurisdictions. This is to be expected when many of the stakeholders in the judicial system are constitutional officers who are elected by their respective communities and who set their own priorities. Chief judges also have wide latitude in organizing their respective court processes and procedures. Judges in different jurisdictions have established different requirements for court operations and case management, and their IT systems reflect those different requirements. State attorneys and public defenders vary greatly in the procedures they have developed to review and process their cases, and their case management systems have also been structured around those unique processes. Clerks of court likewise operate as they deem best and structure their IT systems to suit their unique procedures.

Each entity in the judicial system may have developed or adapted IT systems not only to suit the unique ways they operate internally, but also to meet the different obligations they may have as part of the judicial enterprise in that jurisdiction. For example, in the 13th circuit/Hillsborough County and the 17th circuit/Broward County the clerk is responsible for scheduling court hearings for criminal, juvenile, and civil cases, whereas in the 9th circuit/Orange County and in the 11th circuit/Miami-Dade it is the court administrator who creates the court calendar. In many jurisdictions the state attorney maintains the statute table used for charging defendants, but in Broward County the sheriff maintains the statute table in the criminal case IT system, even though the state attorney may use a different code in the court filing documents. In some circuits the state attorney enters disposition data into the case record, and in other jurisdictions the clerk enters

disposition data. It is an important finding that some data elements that are common in all jurisdictions may not be the responsibility of the same court system entity across all jurisdictions, and hence may be managed by different court system entity IT systems.

Judicial Circuit Data Sharing and Integration

The degree of information sharing and level of IT integration varies significantly between judicial circuits. Generally, more progress has been made to integrate data and systems for criminal cases than civil cases. Throughout all of the site visits, almost every conceivable method of getting data from one system into another system was documented. The 11th circuit/Miami-Dade courts use electronic file transfers between their systems and CJIS, while the 11th circuit/Miami-Dade public defender uses a less efficient method referred to as "screen scraping."[3] Some court administrators are populating their in-house case management applications by manually reentering all data from hard-copy case folders received from the clerk (e.g., 9th circuit/Orange County), while some are importing data electronically from the clerk's system to the courts case management system (e.g., 17th circuit/Broward court administrator). Others are simply accessing the clerk's system directly for their judicial case management needs without transferring or reentering data into another system or application (e.g., 13th circuit/Hillsborough court administrator). This same variety of manual and electronic data sharing also occurs with state attorneys and public defenders. Typically, if some data is transferred electronically to an entity, there is still much other data being obtained manually by that entity as well. While the 11th circuit/Miami-Dade state attorney is able to electronically obtain data for felony and juvenile cases from the CJIS, all other data is still manually reentered.

There are two broad models of IT integration exemplified by the 11th circuit/Miami-Dade and the 9th circuit/Orange County. In the 11th circuit/Miami-Dade, the court system entities share county-owned and maintained mainframe systems. All entities have shared ownership of an application but individual entities maintain control over certain data and operations of the application. Local law enforcement agencies enter booking data and create a case, the clerk prepares case files for that case, the state attorney enters charging information, witness data, and so forth, all using the same system. The Miami-Dade Criminal Justice Information System (CJIS) began operations in 1992 after 7 years of planning and study. According to Miami-Dade IT staff, CJIS is currently used for 23 major functions and interfaces with over 150 local, state, and national entities. Yet, as

[3] Screen scraping essentially is when a computer program literally reads the data displayed on a computer screen that has only inquiry access to the CJIS. Thus the data is not really "transferred" between the two systems, but rather is obtained by the public defender's system without any special program execution on the part of the CJIS system. Other court system entities use screen scraping also.

integrated as the Miami-Dade systems may be, each of the court system entities still requires many additional IT applications and hardware devices to operate effectively. For example, the 11th circuit court administrator's office created a separate data warehouse that uses information electronically transferred from the CJIS for case management functions. In fact, it was stated that each of the court system entities has created its own unique database using CJIS data. (The same is true for the 13th circuit/Hillsborough County entities.) The 11th circuit state attorney, for example, uses real time data transfers between CJIS and the state attorney case management system known as HYDRA, developed in-house for felony and juvenile cases.

The other broad model of integration, demonstrated by the proposed 9th circuit/Orange County Integrated Criminal Justice Information System (ICJIS), is currently in development and phased implementation. Begun in 2002, this project will link the automated data for all Orange County court system entities as well as state agency databases using a master information hub funded and maintained by Orange County. This approach allows all existing IT hardware and software systems to remain in place, and uses "middleware" programming to link the various systems through the central hub. The hub server will not contain any data as would a data warehouse, but instead will locate the data requested from the appropriate court entity database and make it available to a user in another entity. This project, estimated to require $8 million in county funds and 3 to 5 years to implement, has been discussed at the national level as one model for court system integration. Concurrent with this multi-entity project, integration of systems within the Orange County clerk of court has been achieved during the last two years, creating a single database and application for felony, misdemeanor, civil, probate, and mental health cases.

In the 17th circuit/Broward County, an interagency data exchange project is being implemented at this writing to integrate the data from systems used by the clerk of court, court administrator, state attorney, public defender, county offices and sheriff. Known as the BREX system, it will be used to provide File Transfer Protocol (FTP) data exchanges between the court system entities and a central database on a nightly basis. As in the 9th circuit, the planned phase B of BREX incorporates middleware programming to link the various systems through a central Oracle database server. The middleware allows real-time bi-directional transfers of data between the entities and the BREX database server. Both phases allow all existing IT hardware and software systems to remain in place. The flow of data electronically once BREX is implemented should significantly improve the operations of each entity. For example, the 17th circuit public defender currently receives all information from the clerk of court and the state attorney manually in paper files and enters the data into his STAC case management system. Under BREX, the public defender will be able to load the needed information into his case management system electronically without manual data reentry.

Both the 9th circuit/Orange County and the 17th circuit/Broward County illustrate the point that there are major efforts underway throughout the state to integrate court system IT, involving significant investments of planning and funding. In addition, many entities have been integrating their internal systems in various ways and to varying extents, such as the clerk of the court in Orange County. Plans are also underway to improve the civil information technology system in the 11th circuit/Miami-Dade County. The Miami-Dade court and the clerk are currently redesigning internal business processes for civil cases. They expect to develop a new case management system over the next 2 years that is expected to be paperless. These local initiatives should be recognized when formulating strategies to further integrate court systems statewide. Strategies that do not allow for current plans and investments to continue may prove not only costly but extremely disruptive to court entity and system operations.

Communications network infrastructure in the circuits also varies. Court system entities often use a network provided and maintained by the county, such as in the 2nd circuit/Leon County and in the 11th circuit/Miami-Dade. Yet, in the 17th circuit/Broward County each entity provides and maintains its own network lines running throughout the same courthouse facility. In the 9th circuit/Orange County, the court administrator's office operates as an independent internet service provider, whereas other circuit courts use either county networks or the state court network for internet access. According to data compiled by the Office of the State Courts Administrator (OSCA) in the Circuit Infrastructure Survey for FY 2002-03, 13 judicial circuits have use of a wide area network and 7 circuits do not (the 1st, 4th, 5th, 7th, 12th, 14th, and 18th circuits do not have a WAN). It is important to note that circuits that haven't made significant local network upgrades in the past five or more years could be unable to run next-generation converged applications, such as IP telephony, integrated instant messaging, and video including video evidence.

With regard to statewide communications infrastructure available for system entities, connections ranged from statewide high speed network connections in larger circuits to dial-up modems in some smaller circuits. This divergence of network connections could impede the creation of certain integration solutions such as a real time statewide data mart which requires always-on secured communications channels from all circuits. Certain statewide network initiatives, such as the State Technology Office's MyFloridaNet, may provide solutions to this challenge. The OSCA provides network access to the Supreme Court, the appellate courts, and to the 20 circuit court seats. The courts in the 47 counties that are not the circuit court seat have no statewide access to the court system. The FACC maintains a secure frame relay network providing access for all 67 clerks of the court and which is used for the child support enforcement program, traffic citation reporting, and other state reporting.

State Level Data Sharing and Integration

At the state level, there is no integrated system in existence that impacts the day to day operations of the court system entities. There are, however, current state level efforts to share data that include the state courts Summary Reporting System (SRS), the Offender Based Transaction System (OBTS), and the FACC's Comprehensive Case Information System (CCIS).

The state courts SRS, required by section 25.075, F.S., compiles case counts and case disposition data from all jurisdictions for use in measuring judicial workload, providing a general representation of court activity. These are summary numbers submitted by each of the 67 clerks of the court on a monthly basis, some using electronic data transfers and some providing manual paper forms.

The OBTS provides standardized reporting of criminal case filing information to the courts' SRS system, and, once a case is disposed, the case information is also sent to the Florida Department of Law Enforcement (FDLE) for inclusion in the crime information system required in section 943.05, F.S.. The OBTS criminal history data maintained by the FDLE is accessed by state attorneys and law enforcement agencies routinely. All clerks of the court submit this data using computer applications or manual methods of their choosing, but they must submit the data to the courts and FDLE according to a uniform data element dictionary. According to OSCA staff, 52 counties use some electronic submission of OBTS data that can be loaded into the courts system directly. Twelve counties have electronic systems that are not yet able to transfer the data into the courts system directly, therefore paper submissions are made. Three counties are able to submit only paper reports.

The FACC's CCIS would provide for a single query for court case information statewide through a secure internet portal. This is one system that could impact the day to day operations of the courts if implemented statewide. Currently piloted in the 14th judicial circuit (Bay, Calhoun, Gulf, Holmes, Jackson, and Washington counties), the type of court data that would be made available statewide using this system would include criminal, civil, juvenile, traffic, probate, official records, and child support case data. A statewide data warehouse would be created using nightly extracts from the 67 clerks' systems, and this data warehouse would be accessed by judges, court staff, clerk of court staff, and other authorized users. During the 2003 legislative session, the FACC demonstrated this system and indicated that the system could be implemented statewide for $8 million. Implementation is planned soon for the 8th judicial circuit (Alachua, Baker, Bradford, Gilchrist, Levy, and Union counties) in coordination with the Department of Children and Family Services. If implemented statewide, this system would not require major changes to local systems or procedures, leaving intact local IT infrastructure. However, questions raised recently include whether

this system alone could meet all the needs of judges and other court system entities. Some representatives of the courts have estimated that 80% of the information judges need is actually maintained by state and local agencies other than the clerks of the court, such as the departments of Children and Families, Corrections, Juvenile Justice, Highway Safety and Motor Vehicles and Law Enforcement. Funding of $3.3 million to create a system that could integrate the data from these and other state agencies was provided in the State Fiscal Year 2002-2003 General Appropriations Act (Chapter 2002-394, Laws of Florida; Specific Appropriation 3157A). This integrated justice information project, known as the Secure Access to Florida's Enterprise Resources (SAFER) project, was jointly developed by the state courts and the State Technology Office, and was designed to provide judges access to state agencies' records via court computers. A contract was executed in April, 2003 with private vendors to implement the project, but the funding was rescinded in the State Fiscal Year 2003-2004 General Appropriations Act (Chapter 2003-397, Laws of Florida; section 42) as part of the reductions/fund transfers required to balance the state budget.

A significant state level effort directed toward integration is the Trial Courts Needs Assessment Project. Begun in June of 2001, this Trial Court Technology Committee (TCTC) project culminated in a detailed strategic plan published in October of 2002. Through numerous planning sessions with court, county, state attorney, public defender, sheriff, and clerk of the court representatives, the TCTC also developed budgetary estimates, integration and interoperability requirements and standards, and functional requirements for each of the courts' major types of cases (criminal, civil, mental health, probate, etc.) The plans and requirements were developed to meet the consensus needs of the judiciary, but would require implementation costs and efforts by all of the other court system entities, including the counties. When published in 2002, the plan estimated that the information access and integration desired by the judiciary could be achieved over an eight year period at a cost of $81.9 million above current court entity annual IT expenditures statewide. The $81.9 million of new funding would be added to the redirected current annual expenditures of state entities and the counties to modify systems and provide interfaces with the clerks, state attorneys, public defenders, sheriffs, and court administrators. On April 8, 2003, the Supreme Court Chief Justice signed Administrative Order No. AOSC03-16 requiring each circuit court and each clerk of the court to adhere to the IT requirements published by the TCTC when implementing new systems or upgrades to existing systems, and to submit the specifications for such changes to the Florida Courts Technology Commission for approval. The order also directs each circuit court to submit a circuit strategic plan for technology to the Florida Courts Technology Commission by October 1, 2003. (Those plans are currently under review by the courts.) Since the publication of the TCTC plans and requirements in October of 2002, OSCA staff have indicated that the initial cost estimate may be reduced

substantially if existing off-the-shelf software packages are purchased by counties and state entities to meet the plan requirements. However, an official revised cost estimate has not been adopted by the TCTC at this writing.

Obstacles to Integration

Besides the diversity of systems, funding, ownership/control and business processes, other cited obstacles to integration of court entity data include:

- Inadequate delineation of the goals and definition of the "integrated" system in section 29.008, F.S.. Several of those interviewed indicated greater specificity is needed in law as to the data elements to be integrated, the court system participants that must be involved, and the functional requirements that must be achieved. There is uncertainty as to whether integration requires the use of a common computer system or application by all parties, or simply a mechanism for efficiently sharing data electronically. The term "integration" can mean different things to different people.
- Lack of standards and protocols for data element definitions, data transfer (e.g., via extensible markup language, XML), and security. A state standard for digital signature technology will be needed also.
- Lack of a common personal identifier to be used by all entities. Some interviewees suggested the use of a biometric identifier based on fingerprints or eye scans (although this would be impractical for civil and probate cases), while others felt that algorithms using person-specific data such as is used for a driver's license would suffice.
- Inadequate standard statute table for use in charging and recording dispositions. Many state attorney and public defender interviewees indicated that the FDLE statute table lacks the level of subsection/subparagraph detail necessary for accurate charging. Many state attorneys and public defenders maintain their own statute table.
- Lack of a governance mechanism that can facilitate the needed cooperation of all the constitutional officers, judicial officers, and counties.
- Insufficient data accuracy and timeliness. In some cases, entities are having to correct data submitted by another entity before it can be used, and in some cases data is simply not entered in an automated system soon enough after the event to make the automated data useful to other entities.
- Difficulty and cost of changing proprietary applications, whether off-the-shelf or customized programs. Many applications have been purchased and licensed from private vendors. In-house programs are more easily modified than applications restricted by licensing and changed only through cooperation of private vendor programmers.
- Inadequate security mechanisms to prevent unauthorized access to data shared in an integrated system.
- Lack of funding.

General Recommendations of Local IT Personnel

In general, the vast majority of court system entity representatives recommended that integration of court information should be approached in a manner that allows local jurisdictions to maintain their existing systems and independent processes, but provides technological linkages between data systems. Integration is perceived more as efficient data sharing than implementation of common systems statewide. Furthermore, several circuit interviewees indicated that proposals to segregate county versus state responsibilities for court system IT are not feasible because the current technology today does not allow for clear distinctions between communications services, for which counties are responsible for under Revision 7, and computer processing.[4]

[4] The definition of communication services in section 29.008, F.S., currently subsumes all computer processing and equipment.

Conclusions and Recommendations

The major conclusions can be summarized as follows:

- Availability of information technology infrastructure in Florida's court system is widely diverse. Some entities or jurisdictions have up-to-date technology, but some are poorly equipped and not capable of participating in significant integration strategies without acquiring better hardware and software. There is currently no source of funding for such acquisitions.
- There are so many different applications and systems in use that integration strategies requiring replacement of systems or developing hundreds of complex interfaces may be impractical due to the high cost and disruption of the local court operations.
- State and local funding and control of IT systems are enmeshed and diverse to such a degree that broad statewide integration mandates that account for these differences will be difficult to craft. Different court system entities across the circuits and counties may need to be responsible for selected components of such mandates.
- Significant local efforts to share data and integrate systems have been recently achieved or are being implemented in many jurisdictions. Statewide integration strategies that ignore these efforts may generate unnecessary costs, operational disruptions, and political opposition.
- More progress has been made to integrate information relating to criminal cases than for civil and all other types of cases. State requirements that provide for integration of data for all types of court system cases will require more work than for only criminal cases.
- The state's requirements for IT integration found in section 29.008, F.S., need clarification. Clarification needs to include some mechanisms for establishing standards, procedures, and governance for statewide and intra-circuit IT integration.

In addition to these conclusions, it should be recognized that integrating the court system entities' IT data and systems in Florida is more complicated than in other states due to two factors:

- Florida is unique compared to other states in the number of independent constitutional elected officers involved in the administration of the court system. Many other states do not have elected clerks of court, state attorneys and public defenders. Elected officials have certain prerogatives for structuring their business processes and for setting the priorities of their office in light of their constituents' needs. Further, the clerks of the court in Florida have both a responsibility to serve the courts and a responsibility to provide for the needs of their local board of county commissioners and citizens in their community.

- Florida's constitutional provisions governing the operations and funding of the court system provide for both state and local requirements, among which is the requirement that counties fund the cost of communications services, existing radio systems, and existing multi-agency criminal justice information systems. Implementation of that provision in general law defines all computer related services and supports as county responsibilities. Developing practicable strategies and securing requisite funding of statewide systems is made more difficult when 67 different counties share the responsibility.

In light of the findings and conclusions presented in this report, and with particular consideration for the last two factors stated above, staff makes the following recommendations for legislative action:

1. Create a permanent statewide board comprised of appointed representatives of the counties, the clerks of the court, the courts, the state attorneys, the public defenders, the sheriffs and the State Technology Office serving in an ex-officio advisory capacity. The board should serve similar purposes for the Judicial Branch as the Criminal Justice Information Systems Council serves for the Executive Branch (see section 943.08, F.S.). This board should be responsible for establishing for the court system: principles and requirements for minimal horizontal integration within any given circuit, and for minimal vertical integration across circuits and with state entities; standards and protocols needed for integration; and strategies for achieving the statewide vertical integration. Standards should be established by major type of case processed by the court system (i.e., criminal, civil, juvenile, etc.). The data and operational needs of each of the court system entities represented on the board should be addressed. The board should consider technology solutions that link disparate systems using open standards, data warehouse and middleware connectivity strategies, as well as solutions that may require entities to use the same systems or applications. The board should make recommendations to the legislature for requirements and standards that need to be specified in law.

2. Clarify statutory integration definitions and requirements after the Legislature has received recommendations from the statewide board. Integration of court system IT should be addressed at two levels in the law: intra-circuit integration, and statewide integration. Minimum requirements for horizontal intra-circuit integration among the entities of a given jurisdiction should be established separately from minimum vertical integration requirements across circuits and with state level entities.

3. Create a permanent board in each judicial circuit comprised of representatives from each of the counties in that circuit, the court, the state attorney, the public defender, the sheriffs, and each of the clerks of the court in that circuit. The

circuit board should be charged with developing and implementing the integration solutions to meet the minimum intra-circuit requirements established in law after recommendations by the state board and clarification by the legislature. Each circuit board should be granted the discretion to develop technology solutions and procedures which may be unique within that circuit or within each county in that circuit, but which meet legislatively established general integration principles and specific data exchange requirements.

Appendixes

Appendix A – 17th Circuit/Broward County Site Visit

Current Information Technology

The 17th Circuit/Broward County has several major information technology systems supporting the judicial entities. Many of the current judicial information technology systems are expected to be revised with the county funding of an integration project currently underway. The major systems are listed below. In addition, the sheriff's jail management system provides data on defendants arrested.

Exhibit 1: Major Information Technology Systems in 17th Circuit

Entity	Major System	Description
Clerk	Juvenile, Criminal, Civil, Probate, and Parking Case Maintenance Systems	A group of independent case maintenance and database systems
Courts	Case Management Systems	Mainframe systems and several data bases that provide case management data in a variety of areas.
State Attorney	Case Management Systems	Related data bases for criminal cases, juvenile cases, investigations, evidence destruction, score sheet application, and court costs
Public Defender	STAC	Case management system

Clerk Case Maintenance Systems

The clerk of the court uses several systems to support his function. The systems primarily run on the county mainframe. The systems include: the Criminal Case Maintenance System, the Civil Case Maintenance System, the Probate and Mental Health, the Quest System for juvenile cases, parking, and revenue collection.

Court Case Management Systems

The court administrator's office operates several data bases to provide case type information to its users. The initial case data is entered manually by court staff from the case files provided by the clerk of the court. Other data is collected and entered by court staff from the parties involved in the cases. Much of the data collected supports the case management practices of the judges and are not available from the clerk files.

State Attorney Case Management Systems

The state attorney's office has developed a case management system in house to meet their needs. The case data is received from the clerk of the court for those defendants booked in the jail. For those defendants that are not in custody, the state attorney's office inputs the data to begin the case file. The case management system serves the state attorney staff through out the judicial process and captures disposition data. This allows the case management system to be used as a data base to find out information for repeat offenders, as well as meeting the office's management and reporting needs.

Public Defender STAC

The public defender in the 17th Circuit uses the STAC program, a proprietary software application, to meet their case management needs. The application has been modified since its initial instillation to meet the needs of the public defender's office. Data is manually entered off the arrest forms from local law enforcement. Additional case information, such as the charges, the witnesses, and disposition is added to the STAC program. Assistant public defenders as well as administrative staff use the STAC program to manage their workloads. In addition to keeping case files, the STAC program also generates the necessary legal documents for the public defender.

Information Technology Integration

There is little electronic information sharing at this time in the 17th Circuit. With the exception of the booking data entered in the Sheriff's jail management system and the data from defendants "Not-In-Custody" that is entered by the state attorney, most data is manually input into the systems used by the court entities. Hard copy information is shared among the entities as needed. Some more minor functions such as data to facilitate the transport of prisoners, data on defensive driving schools, and accounts receivable are transmitted electronically by the clerk. See Exhibit 2 for more information on the flow of case information within the 17th Circuit.

Exhibit 2: Flow of Case Information in the 17th Circuit

Entity	Major Business Process	Flow of Case Information
Clerk	Case maintenance	Broward County Sheriff's Office – *manually input into* – Jail Management System – *electronic transfer to* – Clerk of Court case maintenance system
Court	Case management	Clerk case files - *manually input into* – court case management data bases
State Attorney	Case management	Clerk criminal case files - *electronic transfer to* – state attorney case management system
Public Defender	Case management	Clerk criminal case files - *manually input into* – public defender case management system

Future Information Technology Integration

With funding from Broward County, the court and clerk have initiated a project entitled BrEx to create a database to be used by all local justice agencies to centrally store, share and exchange data. This is a joint effort between the clerk, the court, the sheriff, the state attorney and the public defender. The clerk of the court expects to replace their existing case maintenance systems with a single, unified relational data base to support the maintenance and management of judicial cases. The courts will develop the Court Business Applications that will feed data to the clerk's database.

Multiple data bases and case management systems will be combined and will be able to receive and exchange information through the BrEx project. Such an effort will better support the Supreme Court

initiative of Family Court, where all the cases for a family are consolidated. This cannot be easily done with separate case maintenance and management systems and data bases among the different court entities. The BrEx project is expected to improve the access to information by incorporating browser-based components. The system will integrate imaged documents and other document management systems with the case file. The real time electronic transfer of information among entities will eventually be possible under the BrEx system. Finally, the project will allow easier extraction of court information from the 17th Circuit.

Appendix B – 11th Circuit/Miami-Dade Site Visit

Current Information Technology

The 11th Circuit has several major information systems that support both the judicial and criminal justice entities. The county is the primary owner and operator of the integrated systems. In addition, entities within the court system, such as the state attorney and public defender maintain systems to support their case management needs. See exhibit 1 below for a list of the major information technology systems in Miami-Dade County.

Exhibit 1: Major Information Technology Systems in 11th Circuit

Entity	Major System	Description
County	Criminal Justice Information System (CJIS)	Mainframe information system for judicial and criminal justice functions
County, Clerk and Court	Traffic Information System (TIS)	Mainframe information system for civil traffic infractions
County, Clerk and Court	Simultaneous Paperless Image Retrieval Information Technology (SPIRIT)	System to image and store documents for use by the court and the clerk
Clerk and Court	Civil/Family/Probate (CIVA)	Docketing system for civil division
State Attorney	Hydra	Case management system
Public Defender	Electronic Case File	Case management system

Criminal Justice Information System (CJIS)
Miami-Dade County established the CJIS in 1992. The county owns and maintains the mainframe application that was developed in house. It has since been modified to keep up with the needs of the users. CJIS is the official data base of criminal justice information and supports multiple agencies, such as law enforcement, the courts, the county corrections department, the state attorney, the public defender, the clerk, the probation program, and the Department of Children and Families. There are multiple owners or custodians of the data. For adults, data is entered into CJIS by the police department at booking (there is no sheriff in Miami-Dade County). Information on defendants not booked into jail is entered into the system by the clerk and the system produces the notices to appear. For juveniles, the Juvenile Assessment Center enters booking information. Later, the case number, judicial division, first appearance, online calendar, arraignment notices and other information is entered into CJIS, primarily by the clerk. The system interfaces electronically to several external systems, such as those used by the courts, the state attorney and the public defender. It also produces required state reports, such as the criminal justice Offender Based Tracking System (OBTS) and state court Summary Reporting System (SRS).

Traffic Information System (TIS) and the Simultaneous Paperless Image Retrieval Information Technology (SPIRIT)
In an effort to improve the flow of work in traffic, the clerk found that paper files were touched 37 times. The clerk partnered with a private company to develop a paperless court process, called Simultaneous Paperless Image Retrieval Information Technology (SPIRIT) at a cost of approximately $18 million. Case management data is housed in the Traffic Information System (TIS) and is associated by case number to

scanned images of all the associated documents. SPIRIT schedules the cases for court sessions and downloads the necessary images from the case into the court room. The judge uses the SPIRIT program to review the file in court and enters the order electronically for disposition. The defendant receives their appropriate court papers to sign and can pay any fines and charges at that time. The program benefits customers outside of the court room as well. Clerk counter employees can access all the relevant files and case information so customers can pay all the fines and costs associated with their case(s).

Civil/Family/Probate (CIVA)
The CIVA system is the major system for civil cases other than traffic in the 11th circuit. The system runs on the county mainframe and is used by the clerk and the court administrator. The court uses the CIVA system as a data base--extracting data for use in its case management systems.

Hydra – State Attorney
The state attorney's office developed its own case management system for felony and juvenile cases called Hydra (the state attorney uses CJIS for misdemeanor cases). CJIS electronically supplies Hydra with felony and juvenile case specific data that the state attorney uses to prepare a case for arraignment. The state attorney adds additional data to the case file such as what crimes the defendant is charged with violating. This new data is sent back to CJIS to keep it up to date. Hydra produces the state attorney's necessary legal documents, such as charging documents and warrants, and allows for reporting of management data. Once the defendant is arraigned, the state attorney uses CJIS for case management.

Electronic Case File – Public Defender
In order to improve access to the case file, the public defender's office developed its own case management system. Like the state attorney's system, the public defender obtains case data electronically from CJIS. The Electronic Case File produces the necessary legal documents for the attorneys in the office and allows for reporting of management data. The public defender uses the Electronic Case File throughout the case process and maintains a history of cases. This is important as many current defendants have been served by the public defender in the past.

Information Technology Integration

The main information system supporting criminal cases, the county CJIS, is well integrated with all major entities in the judicial system in the 11th circuit. Local law enforcement generates data on arrested individuals that is then stored in CJIS and available for other users. The clerk adds data to CJIS such as docketing the court events and the disposition of the charges. Both the state attorney and public defender depend on data from CJIS. In the case of the state attorney, she provides the charging information to the clerk to be entered into CJIS. The court relies on CJIS as a database, extracting data for its purposes and creating data marts.

While the CJIS database provided integration within the clerk's applications, the structure of the supporting database prevented easy integration with the state attorney and public defender's case management systems. Specifically, the use of a hierarchal database design in CJIS prevented the creation of direct database interfaces to these case management systems. File transfers between these systems used the older techniques of transferring files between each system periodically and then converting the files to a format matching the

receiving database before data integration. The court administrator created a relational database, populated by the CJIS database, to circumvent these limitations and allow the easier creation of ad-hoc reports in addition to supplementary court uses. Other entities within the circuit maintained access to the court's database but this database was only updated two times a day from CJIS reducing its value to these entities. In addition, the court's database did not always contain data required for the business processes of the state attorney and public defender.

With some exceptions, the civil system in the 11th circuit is less integrated than the criminal system. The court extracts data for civil cases from CIVA for case management purposes. Two areas where integration occurs in civil cases are traffic infractions and unified family court. The traffic divisions are supported by both a mainframe database (TIS) and an image based system (SPIRIT) that is fully integrated with the work of the judges in the court room. Judges in traffic court use the SPIRIT system to review the records electronically and to write their judicial orders. For unified family court, the court system has begun integration by checking various case management systems each night to determine all the cases for families that have several matters before the court. The cases are then combined to allow a more efficient and holistic approach to case management. See Exhibit 2 below for the flow of case information among the judicial entities in the 11th circuit.

Exhibit 2: Flow of Information in the 11th Circuit

Entity	Major Business Process	Flow of Case Information
Clerk	Case maintenance	Jail or clerk - *manually input into* - case maintenance systems (CJIS, TIS, & SPRIRIT)
Court	Criminal case management	county criminal justice information system (CJIS) - *electronic transfer to* - court data marts - *electronic transfer and manual input into* - court case management systems
	Civil (non-traffic) case management	Clerk - *manually input into* - civil case management system (CIVA) - *electronic transfer to* -court data marts - *electronic transfer and manual input into* - court case management systems
	Civil (traffic) case management	Clerk - *manually input into* - traffic case management system (TIS) and imaging system (SPIRIT) - *electronic transfer to* -court calendar and court room
State Attorney	Case management	county criminal justice information system (CJIS) - *electronic transfer and manual input into* - state attorney case management system (Hydra)
Public Defender	Case management	county criminal justice information system (CJIS) - *electronic transfer and manual input into* - public defender case management system (Electronic Case File)

Future Information Technology Integration

The court's information technology needs are greater in the civil area than the criminal. Consequently, plans are underway to improve the civil information technology system in Miami-Dade County. The court and the clerk are currently redesigning internal business processes for civil cases. They will then develop a

new case management system over the next 2 years that is expected to be paperless. Improvements in the jury processing systems will be needed as well.

The state attorney expects to expand the Hydra case management system to cover all of its divisions and to serve the entire case process from arrest through disposition. Once the state attorney's case management system is expanded, it could automate sentencing score sheets. Sentencing score sheets are the document that incorporates the defendant's prior arrests and convictions with the current charges to develop the recommended sentence. Such documents are currently done manually.

The public defender has no major plans to expand information systems, but could however, benefit from improved integration in several areas. The public defender would benefit from improved information on the disposition of cases. Currently, the public defender's attorneys must check what they heard in court with what is documented in the judicial order received sometime later in hard copy form. This is important because mistakes in sentencing can be appealed. Such problems could be found earlier if dispositions were available electronically in a timely fashion. Booking photos of defendants from the jail as well as discovery from the state attorney are needed electronically by the public defender. Electronic sentencing score sheets would also help the work of the public defender.

In addition, the attorneys in the public defender's office would benefit from improved access to state agency databases. They currently rely on hard copies of the records of juvenile defendants from the Department of Juvenile Justice. The public defender does not receive criminal history information on defendants from the Florida Department of Law Enforcement timely or in an electronic format. Instead, they must pay a fee and make a written request to the state attorney for a background check, or review such material when shared in the discovery process. The public defender needs information on violations of probation from the Department of Corrections. Now the office doesn't get evidence of such violations until the defendant is booked in jail. From the Department of Highway Safety and Motor Vehicles, the public defender would like to be able to print the driving record data.

Appendix C – 13th Circuit/Hillsborough County Site Visit

Current Information Technology

The 13th Circuit has several major information systems that support both the judicial and criminal justice entities. The county is the primary owner of the integrated systems with the clerk maintaining data processing equipment and application support. In addition, entities within the court system, such as the state attorney and public defender maintained systems and networks to support their case management needs. See Exhibit 1 below for a list of the major information technology systems in Hillsborough County.

Exhibit 1: Major Information Technology Systems in 13th Circuit

Entity	Major System	Description
County	Banner Criminal Justice Information System (CJIS)	Distributed computing information system for felony, misdemeanor, and juvenile functions (probate and civil justice in process of deployment)
County	Mediation Diversion Application	Distributed computing information system for court mediation efforts
Public Defender	STAC	Case management system
State Attorney	CMS.net	Case management system
County	Data Exchange Server	Information warehouse for selected court data from CJIS

Criminal Justice Information System (CJIS)

In the late 1990's, the agencies within the circuit developed a strategy to replace the existing mainframe based Criminal Justice Information System (CJIS) with a product supporting a distributed computing environment. The procurement process resulted in the choice of the Banner Justice Information System with management of the system delegated to the Clerk's office. The county provided funding for the purchase of the software in addition to the data processing equipment needed to run the system. The Banner system represented an Enterprise Resource Planning (ERP) style solution supported by an Oracle relational database. Selection of this product corresponded to a desire to create user friendly business systems within the circuit while improving the capabilities of sharing data to the supporting agencies. The Banner system provided the circuit the ability to roll out different modules to process court transactions as budget conditions allowed. Principal modules in the system included civil, criminal, juvenile, and traffic. The initial module, deployed in 2000, supported the criminal court processes with the additional juvenile module added after the rollout of the criminal module. System A, a legacy application, maintained civil court activities and will continue to process criminal traffic information. The Clerk's office planned to deploy the civil and probate case modules beginning in November 2003. The CJIS serves as the case management system for the courts administrator. Other circuit entities use CJIS for case research and data extraction for their case management systems. The Hillsborough County Sheriff's Office (HCSO) provided data to the CJIS through a data sharing agreement among the court entities. Many court business processes in the 13th circuit continue to be paper based requiring manual entry and verification in CJIS.

Mediation Diversion Application

The court administrator is in the process of deploying a distributed computing system mediation diversion application to replace a legacy system. Under the legacy mediation system, many of the functions required manual entry of data. Specifically, data transferred from the CJIS to the legacy mediation system required manually reentering data. The new mediation application includes a graphical user interface (GUI) application supported by a relational database to maintain information. Features of the new application include the ability to electronically transfer data between the mediation database and CJIS upon the addition of the civil component in CJIS. Business process improvements include reduce search times for mediation data and automation of functions previously requiring manual actions.

CMS.net

CMS.net is an internally developed and supported case management application used to support the functionality and data structures of all state attorney business functions. Office IT staff maintain the application and are responsible for programming changes into the system. The structure of this application allows any personal computer with a Web browser access if the State Attorney's security manager grants a user access rights. Data for the application flows from the circuit's Data Exchange and from a direct link to the Sheriff's Jail Management System. Intake Clerks review booking material and accept cases into CMS.net for processing on a daily basis. Accepted cases have paper files created from the electronic information in CMS.net for use by attorneys in the office. Further processing includes manual entry of data into the system from court sources as the case proceeds through the system.

STAC

The Public Defender purchased the STAC application and database system for its case management system. Staff within the Public Defenders office maintain the application on IT equipment within their office. Since the STAC application is proprietary, programming changes were contracted out to the vendor for completion. Such programming changes include altering the preprogrammed business functions to meet special needs in the 13th circuit. STAC receives criminal case information from an electronic interface from the circuit's Data Exchange database. Additional case information, from entities within the circuit, originated from E-mail, FAX, and hard copy documents that were manually entered into the system.

Banner Data Exchange Server

To facilitate electronic ad-hoc report requirements and data sharing, the entities within the circuit created a data mart containing CJIS data. Each entity owns its respective portion of the system and each entity managed their data contributed to the database. Running a batch program to extract data nightly, select data from tables within the CJIS database are transferred into the Data Exchange maintained on a relational database server. Benefits include the entities ability to use specialized report generator programs to create customized reports from this data. Additional benefits from using a report generation program include the reduction of special programming by the vendor of the CJIS or clerk programming staff to produce these reports. Further enhancements to circuit integration include facilitating the electronic transfer of data between entities. This process allows the automating of certain data transfers between entities previously handled with manual data entry procedures or batch file transfers. Circuit entities continue to use FTP file transfer methods to transport data between entities when that data is not maintained in CJIS.

Information Technology Integration

The circuit's use of a CJIS, supporting a relational database, provides entities with the integration benefits of an open standards database. Open standards set industry defined methods for communicating with the database allowing applications from multiple vendors, who use open standards for database communications in their product, to interact with the CJIS database server. This eliminates the need to purchase and support special proprietary interface programs to gain access to the centralized database and decreases integration expenses. While the applications supported in CJIS provide business process support for most clerk and court administration functions, the special needs of the state attorney and public defender required each of those entities to develop or purchase case management systems. To facilitate information sharing between circuit entities, the circuit developed Data Exchange databases for processing inbound and outbound records. The Data Exchange process allowed all entities access to selected data maintained in each agency's database server through secure network interfaces. A circuit CJIS council, containing representatives from all entities, selected specific data elements they felt essential in ad-hoc report creation or in feeding data to their respective case management systems. A CJIS User and Steering Committee meets on a periodic basis to review data elements for inclusion or deletion from the Data Exchange in addition to reviewing integration issues.

The state attorney maintained a vendor supported Video Evidence Management System (VEMS) to integrate the management of video evidence. Video evidence includes video capture of traffic stops by patrol officers and deputies. VEMS allowed the state attorney to manage and distribute video evidence directly to the courtrooms for case use or for distribution under public disclosure laws. Content for the system originates at the HCSO where video tapes are digitized and sent over network connections to the state attorney. VEMS catalogs each digitized event and stores the material on a special multimedia server system. During court proceedings, the attorneys have access to the system in the courtrooms with the ability to search and display content on monitors in the courtroom. Attorneys and support staff also have access to material over the state attorney's Intranet or Internet connections.

See Exhibit 2 below for the flow of case information among the judicial entities in the 13th circuit.

Exhibit 2: Flow of Information in the 13th Circuit

Entity	Major Business Process	Flow of Information
Clerk	Case maintenance	Jail or clerk - *manually input and electronic transfer into* - case maintenance systems (CJIS)
Court	Mediation Diversion Application	county criminal justice information system (CJIS) and court – *manual and electronic transfer into* – mediation diversion application
State Attorney	Case management	county criminal justice information system (CJIS) - *electronic transfer into and manual input into*- state attorney case management system (CMS.net)
Public Defender	Case management	county criminal justice information system (CJIS) - *electronic transfer and manual input into* - public defender case management system (STAC)

Future Information Technology Integration

Further enhancements in the 13th circuit included the incorporation of the civil and probate modules in the CJIS. The inclusion of the civil and probate modules will automate many of the manual procedures now performed in these proceedings. Maintaining this data in the CJIS should facilitate the electronic transfer this data to the Data Exchange and ultimately to circuit entities.

As part of an upgrade process to the Jail Management System, the sheriff will expand the transfer of information in real-time to various agencies connected on the CJIS data sharing network. This information transfer at the present time consists of jail booking information. The sheriff is in the process of acquiring a new computer aided dispatch and records management system that will electronically capture offense report data, criminal report affidavit information, and other case related information. The plan is to transfer this information real-time to the various justice agencies as soon as it is captured electronically. The new system should also handle the electronic transfer of subpoena information for the issuing agencies and eliminate the paper handling of these documents.

The court administrator, public defender, and state attorney all expressed a desire for greater integration with the various State law enforcement databases. Similar to the public defender in the 11th circuit, the process of obtaining criminal history records from the Florida Department of Law Enforcement (FDLE) requires manual procedures that can delay the process of obtaining these documents by several weeks. Further integration issues for the public defender included the lack of electronic connections to select Department of Juvenile Justice (DJJ), Department of Corrections (DOC), and Department of Children and Families (DCF) databases. The court administrator cited limited connections to FDLE and DOC and no network connections to DCF and DJJ as statewide network integration issues.

Ultimately the integration of major business processes in the 13th circuit rests with the degree of automation of court business processes. The greater the use of paper documents in the business processes of the circuit, the more difficult the task of integrating these processes in an electronic data processing system. All entities in the circuit understand this issue and continue to work to improve integration as budgets and acceptance by court participants allows.

Appendix D – 9th Circuit/Orange County Site Visit

Current Information Technology

The 9th Circuit makes use of a variety of information technologies. The interim project team did not visit the Clerk of Circuit Court in Osceola County therefore references to the clerk's information technology systems relate only to those in Orange County. Case management systems are maintained by all the major entities in the judicial system. Currently there is little integration between these systems in terms of electronic data sharing. The major systems are listed below.

Exhibit 1: Major Information Technology Systems in 9th Circuit (Orange County)

Entity	Major System	Description
Clerk	Criminal and Civil Case Maintenance Systems	Integrated case maintenance systems for criminal, civil, probate and mental health, family, juvenile, and traffic cases
Court	Video and Audio Court Room Systems	Systems to support video court services and digital audio court reporting
State Attorney Public Defender	Case Management System	Case management system serving both state attorney and public defender

Clerk Criminal & Civil Case Maintenance Systems

In Orange County, the clerk has recently implemented a new case maintenance system for criminal, civil, probate and mental health, family, juvenile, and traffic cases. All cases can be queried by name or case number. This system is integrated with the clerk's imaging system. The clerk's office in Osceola County operates paperless for both criminal and civil cases. This was achieved with the implementation of an imaged-based case file system.

Court Video and Audio Court Room Systems Court

The court uses the clerk's system for inquiry access, but relies on their own case management systems. The court has made major investments in the use of video and audio court reporting. Video systems are run by the court to allow video arraignments with the jails and to show video evidence during trials. In addition, the court has replaced staff court reporters with digital audio court reporting. They record and store such audio centrally and these recordings are transcribed as needed.

State Attorney and Public Defender Case Management System

The state attorney and public defender share a data center and case management system. The state attorney's office, with input from the public defender, developed the case management system in house. Initial data is retrieved electronically from booking records entered by the two sheriffs in the 9th Circuit. The case management system also allows the state attorney to share other information, such as discovery, with the public defender electronically. The state attorney's office has developed a web based interface for the case management system to allow easier use. Disposition data is entered into the case management system by the state attorney. The offices estimate that sharing the server and case management application

has saved the state approximately $150,000.

Information Technology Integration

There is limited information technology integration in the 9th Circuit. Most systems are independent of each other and most data is input manually with the exception of the case management system of the state attorney and public defender. Their system receives data electronically from the sheriffs of Orange and Osceola Counties and the county-run jail in Orange County. See Exhibit 2 below for the flow of case information among the judicial entities in the 9th circuit.

Exhibit 2: Flow of Information in the 9th Circuit

Entity	Major Business Process	Flow of Case Information
Clerk	Case maintenance	Law enforcement and clerk - *manually input into* - case maintenance system
Court	Criminal case management	clerk – *manually input into* - case management systems
	Civil case management	clerk – *manually input into* - case management systems
State Attorney	Case management	Law enforcement - *electronic transfer to* - case management system
Public Defender	Case management	Law enforcement - *electronic transfer to* - case management system

Future Information Technology Integration

Orange County, within the 9th circuit, is developing a major information technology integration project called the Integrated Criminal Justice Information System (ICJIS). This system will make use of a data hub and specialized software, known as "middleware," to connect existing data systems in the criminal justice system. The system will rely on law enforcement officers to input information for the arrest record on their lap tops in their squad cars. The information will be sent via a wireless connection to the central data hub where a case number established by the clerk will be added to the file. The data will also be sent to the jail, where the information will be reviewed when the defendant is booked. The data will then be available to the clerk, the court, the state attorney and public defender. Implementation of the CJIS system will take 2-5 years and is currently being piloted with 15 police officers. All the local law enforcement officers in Orange County have laptops in their cars. The county has funded $8 million for the middleware and imaging for ICJIS.

In addition to the changes for ICJIS, the clerk continues to implement processes that will enhance data integration. Traffic citation data is available and can be transmitted to the case maintenance system. Some entities, such as the turnpike authority, will be able to send their data on tickets electronically to the clerk system. For others, the clerk will scan the ticket and clerk staff will enter the data from the scanned image. The court and clerk will use this system in traffic court, similar to what is done in Miami-Dade County with the SPRIRIT system. These and other changes will also allow the clerk to accept electronic filing in the next year.

The court expressed the need for better case management information. The courts need a case management system with "tickler" features to remind users of certain events, with the ability to track event milestones, statistics, and the ability to sort cases by their level of activity in order to get the slower cases moving.

The state attorney and public defender will benefit from implementation of ICJIS. The public defender would also benefit from better access to information from law enforcement. In addition, the public defender would benefit from better access to statewide databases, such as those maintained by the Florida Department of Law Enforcement, Highway Safety and Motor Vehicles, and the Department of Juvenile Justice.

Appendix E – Glossary of Selected IT Terms

Database
A database is a collection of interrelated data supplied to one or more computer applications. Databases can vary in the way data is stored and accessed. During our field trip, we noted the following variations in database design:

- **Relational Database**
  A relational database is a collection of data items organized as a set of formally-described tables from which data can be accessed or reassembled in many different ways without having to reorganize the database tables. Most relational database vendors utilize open standards (see definition below) for communicating with the database. The open standard design removes the restriction of being tied to a specific vendor's application. Additionally, a relational database design allows multiple users and applications to access the database concurrently. Current relational databases include Microsoft's SQL Server, Oracle's 9i database, and IBM's DB2. During our fieldwork, we noted the 13th circuit/Hillsborough County utilized an Oracle relational database to support their CJIS. Other circuits utilized relational databases to support data marts for reporting purposes.

- **Hierarchical Database**
  A hierarchical database links records together like a family tree such that each record type has only one owner, e.g. a case record is owned by only one customer or application. Hierarchical structures were widely used in early mainframe database management systems. However, due to restrictions on how the data may be accessed, they often cannot be utilized by applications not specifically written for the database. (Proprietary database interfaces are needed.) The 11th Circuit uses a hierarchical database to support its CJIS resulting in limitations in data sharing among agencies. For example, the public defender used a screen scraping program (see definition below) to extract data from the CJIS database to populate their case management program, due to the complexities posed by the hierarchical database restricting direct access to this data.

- **Virtual Storage Access Method (VSAM) Data Sets**
  VSAM is a legacy file access system developed in the 1970's primary for mainframe computer operations. VSAM data sets allowed an enterprise to create and access records in a file in the sequential order that they were entered. Unlike a relational database were data items are linked allowing easy access, VSAM data sets are unique to each application they support. Therefore there may be multiple VSAM data sets with a first name and last name data field. In a relational database, there may be a one master data set with a first and last name field and a virtually unlimited number of sub datasets linking back to the master record for the name fields. Thus, duplication of data fields is reduced in a relational database environment as apposed to the VSAM environment. During our fieldwork, we noted the 17th Circuit continues to use VSAM data sets for their CJIS.

Database Update Procedures
There are three procedures used to update database items:

- **Batch**
  A batch job is a program that is created to automatically be executed, usually at prescribed times, by the computer to run without further user interaction. In a database environment, a computer operator would create a batch job and set it to run at 12 am to initiate a program to copy data from the CJIS and transfer it to a data mart created by the agencies within a circuit. If data does not need to be current for decision making purposes, this is an acceptable method of data transfer. Examples of the use of batch jobs in a judicial setting include the proposed BREX data mart in the 17th circuit and the data mart used in the 13th circuit maintained by the courts administrator.

- **File Transfer Protocol (FTP)**
  FTP is a method used to transfer files between users via the Internet or within an entities Intranet. FTP can be programmed as a batch job or initiated by direct interaction from a user.

- **Real Time**
  In a real time data transfer system, data is transferred as a transaction occurs within the application feeding data to the supporting database. For judicial systems, an example would include the immediate updating of a CJIS database with information of an arrest as the local CJIS receives this information from a sheriff's jail management system. This is in contrast to a batch update of the CJIS database were the jail data could take up to 24 hours to appear in the database. Middleware is often used to extract continuous real time data changes via bi-directional communications with attached databases.

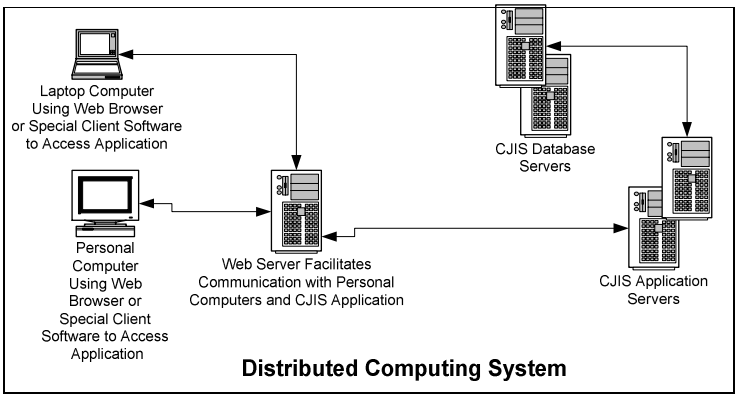
Data Mart
To circumvent the data sharing limitations of certain database structures such as Hierarchical and VSAM structures used in some CJISs, agencies are creating data marts. A data mart is usually a relational database structure, maintained on an agency's computer system, containing downloads of select CJIS data. Downloads to the data mart may occur as transactions are posted to the CJIS in a "real time" mode or through scheduled downloads enacted periodically in "batch mode". A data mart allows the agency's users the ability to run reports or process data without the limitations imposed by the CJIS's database structure. Agency users can also utilize the data mart freely without worrying about slowing down day-to-day operations of the production database used to service the CJIS applications. This is due to the fact the data mart runs on the agency's computers and storage devices rather than on the county or clerk's system. Agencies employ programs specifically developed to pull data from the data mart and create ad-hoc reports. We observed data marts being deployed or in the process of being deployed in the 9th, 11th, 13th, and 17th circuits. The Comprehensive Case Information System (CCIS) supported by the Florida Association of Court Clerks and Comptrollers, Inc. was built on a data mart architecture. Data marts may be created using the following methods:

- **ETML (Extract, Transform, Move, Load), aka ETL**
  ETML is a batch process used to update a data mart. ETML represents:
  - **Extract** volumes of data from operational databases such as VSAM, Oracle, DB2, or Microsoft's SQL Server.

- **Transform** the operational data types and data structures into a useful format for query and analysis. The transformation process converts legacy data types and data structures into relational formats to allow easier sharing of data.
- **Move** the data to the data warehouse environment over an local network (BREX in the 17th circuit) or by a Statewide network (CCIS).
- **Load** the data collected into the data mart.

➢ **Operational Data Stores (ODSs)**
A type of real time data mart reflects data currency within seconds or minutes of a transaction occurring at a remote data collection site. Prior to sending data to the data mart, any legacy data types or data structures must be transformed into a format compatible with the data mart. In the 17th circuit, there are plans to upgrade the BREX data mart into the ODS format through the use of middleware. The 9th circuit had deployed an ODS using middleware as a communication software solution between circuit entities.

Distributed Computing
A distributed computer system is a computer system in which several interconnected computers (servers) share the computing tasks assigned to the system. Usually, this employs the client/server form of communications between devices. A typical distributed computing architecture includes servers maintaining the application, servers holding the data bases, and a personal computer used to run the application. During our site visits, we noted the 13th circuit in Hillsborough ran their CJIS on a distributed computing platform. This is opposed to mainframe computing where a central box provides the processing functions to process applications and access data bases that reside on storage devices attached to the mainframe. Circuits using a mainframe architecture for their criminal justice information systems included the 17th in Broward, the 11th in Miami-Dade, and the 10th in Orlando.



Middleware
Middleware is software used to connect two or more separate applications or databases. The software acts as a director of data traffic between multiple databases in court technology deployments. For example, in the 17th circuit, middleware will be used to connect all entities to a data mart allowing real-time and bi-directional

interaction with the data mart.

Open Standards
In the court system, the use of open standards for databases allows agencies within a circuit to develop or purchase case management programs made by a large selection of vendors that can easily interface with a central database maintained by the Clerk. In the past there were proprietary (the opposite of open standards) database architectures, such as IBM's VSAM (still used in the 17th circuit) that require special interfaces to access the data. Often the owner of the proprietary interface controls it, including when and how the interface changes, who can adopt it, and how it is to be adopted, creating a vendor dependency for applications. The 17th circuit is building BREX on an open standards database (Oracle) to facilitate the sharing of data and bypass the proprietary nature of the Clerk's VSAM database files. On the other side, the Clerk in Hillsborough used the Oracle database structure with the Banner application allowing other circuit agencies to use applications based on open standard interfaces to move data between databases or query the Clerk's database. The greatest benefit may be the fact that open standards allow the use of multiple vendors to supply applications and the databases that support these applications. The state attorney in the 13th circuit/Hillsborough County also showed that it is also possible to bypass vendors and internally develop an application to work with a database built on open standards.

Screen Scraping
Screen scraping is used to capture data from legacy applications (like a circuit's CJIS) to populate a database supporting a case management system without actually pulling the information directly from the legacy database. The scraper acts like an automated cut and paste tool used in a word processing program such as Microsoft's Word. A programmer maps each data field in the legacy application's page, or pages they have access to. The programmer then develops routines to copy these fields for pasting the captured fields into the document within a program (like a case management system). In the 11th circuit, the hierarchical database structure used for CJIS did not allow a client/server application (the public defenders case management system) to easily access the CJIS database directly to extract needed information. To compensate for the inability to directly extract data from the CJIS database, the public defender developed a screen scraping program that works within their case management system to populate a form with CJIS information by the user activation of the screen scraper. The program accesses multiple screens within CJIS to copy and paste the information into the case management system form. It is important to note this process does not involve extracting data directly from the source database (CJIS). Problems with this system can occur if pages are modified in CJIS to add new data fields or change the lengths of data fields for a particular screen. If the screen scraper program is not adjusted to compensate for changes in CJIS pages, the scraper will copy and paste incorrect or truncated data into the case management system.

Structured Query Language (SQL)
SQL is a standard programming language for getting information from and updating a database