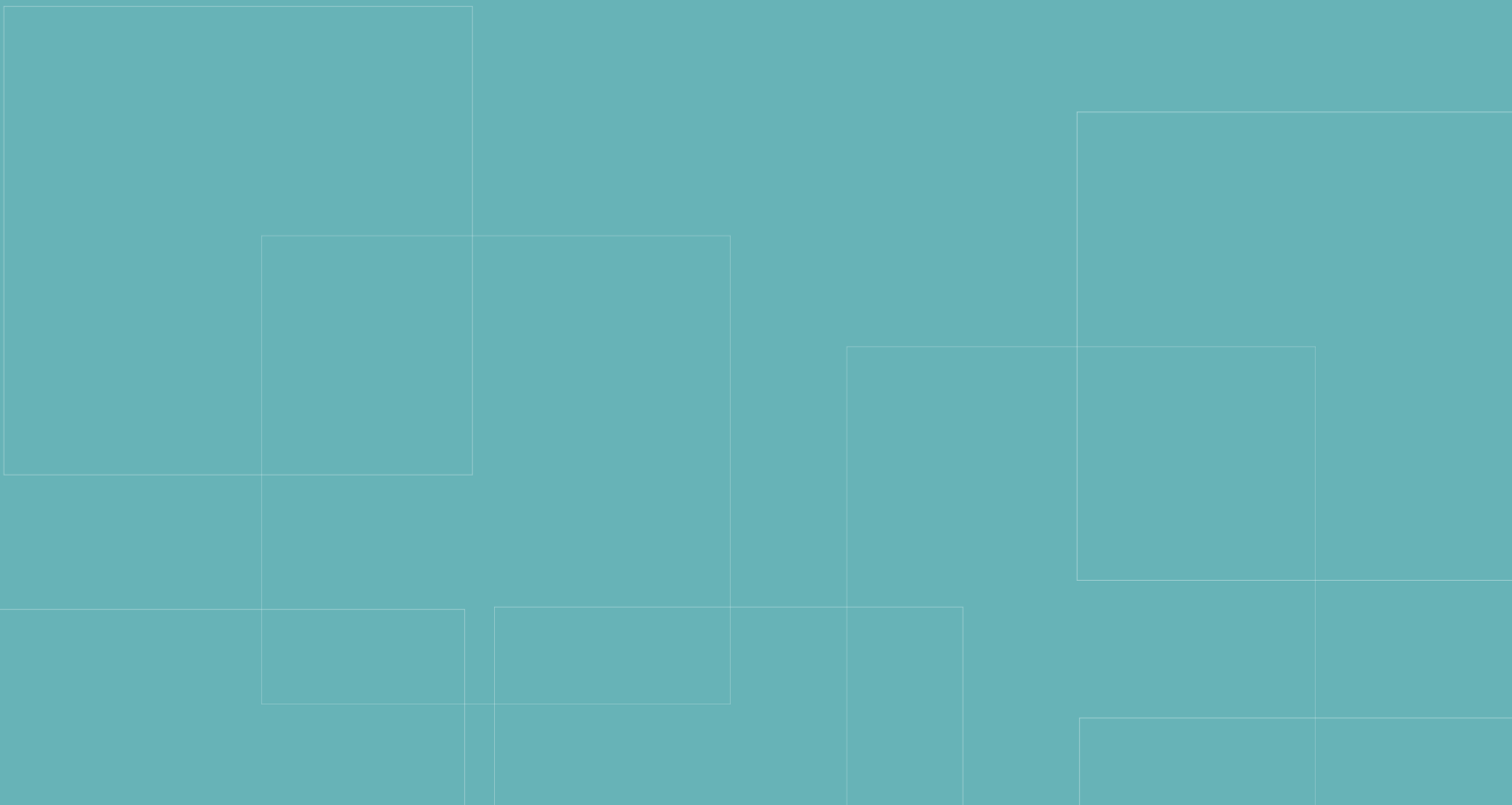




JUSTICE INTEGRATION SERVICES/METROPOLITAN NASHVILLE & DAVIDSON COUNTY



ANNUAL REPORT FISCAL YEAR 2015



MICHAEL F. MONDELLI, CHAIR

Why do an Annual Report? Who reads it? What time frame does it purport to cover?

Three basic questions; the answers to which can sometimes be taken for granted and forgotten over time.

Who prepares the Annual Report and who decides what it says?

As one who sits in a position of administration and not the day-to-day struggle to produce results and keep customers happy I am not privy to the details of those challenges. I address those issues that are more like “infra-structure” problems or obstacles that have the potential to deter JIS’ objectives and so I give way to our Director, Nathalie Stiers to share those matters she decides are news worthy.

Some types of “obstacles” JIS has encountered over this past fiscal year involve licensing matters with Oracle and a storage issue with regard to “proper” content to be backed-up. The Policy Committee was able to work with administration and solve the Oracle matter. Backing-up data became a problem when JIS found it too time consuming to continue as in the past and the Committee worked with the various departments to produce a system that satisfied most users.

On the other hand Annual Reports assume the task of telling an audience that this is what this Agency does; how it does it and why it does it. They are designed to tell readers that this government agency was created by the government to perform a function that provides taxpayers with a benefit or services. JIS functions as the IT department for most of the Davidson County Courts and as such enables the various Clerks’ offices to provide valuable information and services to the tax payers. In order to service our various “customers” JIS employs dedicated and well trained technology specialists who keep their knowledge updated and on the cutting edge of new developments.

Finding and employing the above individuals requires a budget that allows the hiring of such employees; which brings us to the second question above. By publishing this Report elected officials who set our budget can read over our past accomplishments, judge for themselves what kind of job we are doing, and better understand our need to have a strong financial footing with which to pursue employees who meet our needs.



MICHAEL F. MONDELLI, CHAIR

Message from The Chair (continued)

The Annual Report says in so many words “here’s what we’ve done; here’s what we’re going to do; and when putting the budget together keep these things in mind...”.

Lastly our past Annual Reports covered various periods of time; from the last twelve months between reports to longer. This report and future ones will basically cover the accomplishments of this past fiscal year with some bit of information about future projects. In this way we can provide a chronological time frame of our business year and where we are headed.

I cannot conclude without thanking those members of the Policy Committee who through out the year gave of their time and attention as needed to work through various “obstacles”; and a special “Thanks” to all JIS staff members whose expertise and loyalty continue to generate good reports from our customers.

**Michael F. Mondelli, Judge
Chairman JIS Policy Committee**



NATHALIE STIERS, DIRECTOR

JIS is pleased to present the FY2015 Annual Report. This report highlights accomplishments for FY2015 as well as projections for the coming fiscal year. As you will read, it has been a busy year for everyone. There were many enhancements to the CJIS suite, new applications were built, software upgrades were performed, and the hardware infrastructure was upgraded as well.



JIS is at a very exciting time in its history. The CJIS suite is stable and feature rich, as Metro continues to impress other jurisdictions with its high level of integration. The need to make functionality mobile, as well as allow the public to interact with these applications, however, has necessitated JIS to begin to move away from the limitations presented by a client server based system and develop new functionality using a .NET platform.

With the dependency on internal development, and the lack of funding to hire additional resources, JIS has had to move forward in a very methodical, efficient, and effective manner in order to continue to meet the needs of the justice community, utilizing both technology platforms.

The staff has eagerly delved into learning the new technology and developing new functionality, and has been very successful in continuing to deliver high quality products in a timely fashion. I am very happy with the progress that has been made thus far and feel confident that this will continue in the coming year.

In addition to software development, JIS will be installing and configuring a new backup Storage Area Network (SAN) which will replace the current smaller infrastructure.

Also on the agenda for next year is a full upgrade of the CJIS suite databases and tools. This is a huge task that must be undertaken every few years in order to remain current with technology. This will involve many hours of work on the part of both JIS and the justice community in order to ensure a smooth upgrade.

I would like to thank Judge Mondelli and Judge Brothers for their continued assistance and support. I would also like to thank the very talented and dedicated staff of JIS for their continued hard work and commitment to providing quality products and services to the JIS community.

Nathalie Stiers

ORGANIZATION CHART

Chancery Court
Probate Court
Juvenile Court
Circuit Court Clerk

Circuit Court
District Attorney
Sheriff's Office
Metro Police Dept.

Criminal Court
Public Defender
Clerk & Master
Criminal Justice Planning

General Sessions Court
Juvenile Court Clerk
Criminal Court Clerk

JIS Policy Committee

Operations Subcommittee

Director

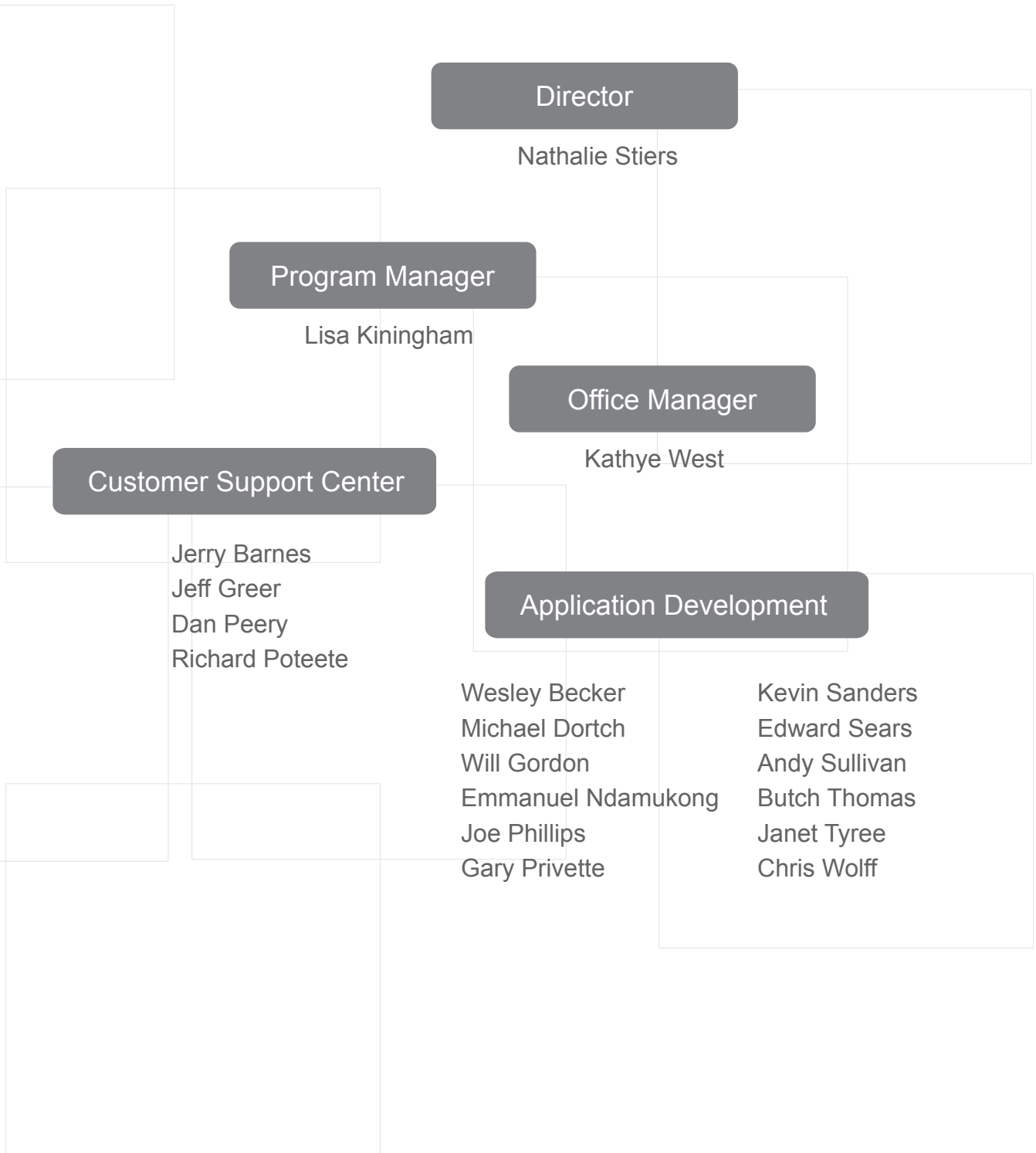
Office Administration

Program Manager

Customer Support Center

Applications Development & Support

STAFF



MEMBER AGENCIES

The following justice agencies are members of Justice Integration Services. JIS provides a combination of desktop support, network services, and application development and support for these member agencies.

Circuit Court Clerk
Clerk and Master
Criminal Court Clerk
Criminal Justice Planning
District Attorney
General Sessions Court
General Sessions Probation
General Sessions Safety Center
Juvenile Court
Juvenile Court Clerk

Metro Police Department
Probate Court
Probate Probation
Public Defender
Sheriff's Office
State Trial Courts:
- Civil Divisions
- Criminal Divisions
- Chancery Parts I-IV

Representative members from each of these agencies participate in the governing of JIS by serving on the **JIS Policy Committee** and/or the **Operations Subcommittee**.

POLICY COMMITTEE

The Policy Committee is the primary decision and policy-making entity of JIS. This committee approves the design, development, and operation of all JIS procedures and projects..

HONORABLE MIKE MONDELLI, Chair General Sessions Court Division VI **

HONORABLE THOMAS BROTHERS, Vice-Chair Sixth Circuit Court **

Mr. DARON HALL **

HONORABLE CHERYL BLACKBURN

MS. CHRISTI SCOTT

HONORABLE GLORIA DUMAS

HONORABLE HAMILTON GAYDEN

HONORABLE CAROL MCCOY

MR. STEVE ANDERSON **

HONORABLE SHELIA CALLOWAY

MR. DAVID SMITH **

GENERAL GLENN R. FUNK **

MR. RICHARD ROOKER **

MR. HOWARD GENTRY**

MS. DAWN DEANER **

The **Operations Subcommittee** provides day-to-day assistance and guidance to the Director of JIS regarding financial management and operations. Additionally, its members review and recommend policies and procedures to the JIS Policy Committee. The JIS Director also serves on the Operations Subcommittee. Policy Committee members who also serve on the Operations Subcommittee are denoted with **.

MISSION STATEMENT

The mission of the Justice Integration Services department is to provide customized, integrated case management software and technology support products to Metro Nashville Justice Agencies so they can manage and use shared information to improve the administration of justice for the Nashville community.

2014 ACCOMPLISHMENTS

CJIS

JIS continues to work with the agencies to introduce new functionality, improvements and corrections into the CJIS application. Some items that were implemented in 2014 include:

- Improve the defendant case search in CJIS to display information similar to the defendant case history. This search tab is unique in that it offers the user functionality such as the ability to perform multiple searches, while retaining the results of previous searches, as well as the ability to create multiple (batch) events
- Introduce the ability to merge demographic records to ensure better data quality
- Improve efficiencies on nightly oracle jobs that perform crucial calculations in the event creation for late fees and late notices
- Update the Criminal Court judgment form to the AOC standard
- Perform a business and technical analysis of sending criminal dispositions to the AOC criminal repository, along with the scanned image of the judgment
- Perform a business and technical analysis based off the Mayor's Domestic Violence report for improvements for the commissioner in the determination of setting bond
- Introduce functionality for the DA's office in the printing of judgment worksheets
- Implement additional warning messages for certain cases when processing a payment
- Implement additional security for Criminal Court cases and the filing

2014 ACCOMPLISHMENTS

CJIS (continued)

- Introduce payment plans around Public Chapter 504
- Introduce the ability to merge demographic records to ensure better data quality

Criminal Court Clerk Public Case Search

The original CCC Public Case was created in 2005, and deployed in early 2006 using Oracle Portal as the platform for delivery of the content on the web. In 2013, JIS began the process of moving the technology from portal to .net.

Through the development process, JIS was able to enhance the user experience by incorporating features such as:

- Better mobility when viewing on mobile devices
- The ability to view future and past court dates, related cases and all available cases on a person that was in the CJIS system
- Enhance the existing reports to include easier navigation from report to case

PTAL - Pretrial Application

The Pretrial application was upgraded to receive the capability to compute a proxy score which aids in determination of the level of risk associated with an individual. Spell check functionality was also added to the Case Notes and Contact Log entry screens.

2014 ACCOMPLISHMENTS

PTAL - Pretrial Application (continued)

Additionally, the Drug Screening data entry screen was updated to mirror the Adult Probations application's screen which enabled further standardization for both applications. Other enhancements included updates to the Intake Search functionality, application reports, letters and field displays.

ADPB Adult Probation Application

The Adult Probation is utilized by General Sessions Probation, State Trial Courts (STC) DUI Probation, Davidson County Community Correction Program (DCCCP), as well as, the Davidson County Sheriff Office's (DCSO) Day Reporting Program and DUI School. JIS strives to ensure that all agencies are informed and consulted on all updates and enhancements before any are made.

- Creating the Chain of Custody form for drug screening and the import of drug screen results from the STC's drug lab into the application
- Creating and printing Probation Violations Affidavits/Warrant in the application
- Upgrading Crystal Reports to version 2013
- Adding fields to various locations in the application which provide users with the ability to better manage their clients, as well as, provide additional reporting and evaluation opportunities for the respective agencies

2014 ACCOMPLISHMENTS

State Traffic Online Payments

The State Traffic Online Payment application is an application that JIS deployed for the Criminal Court Clerk's office which allows offenders to pay their state traffic citation online, if the offense meets certain criteria. This is an application that was rewritten in .net technology.

TBI Expungement Search

The TBI expungement search was built originally in 2007 "re-using" the portal code of the public case search. This site is used by the TBI in the verification of expungements as they receive them.

JIS has moved this over into the .net environment. As part of the development of this application, JIS implemented SSL encryption for both this site, and the public case search.

Crystal Reports Server Move and Upgrade

JIS performed a migration of the Crystal Reports server in 2014 to a newer server with upgraded software that has allowed users to continue automatically schedule and send critical reports to various JIS supported agencies. These reports range from daily arrest reports for probationers and those defendants currently enrolled in the Mental Health and Drug Court program, to weekly exception reports. These tools have been invaluable to the day-to-day business of the JIS supported agencies. This server move has also allowed JIS to move forward with the migration of Crystal Reports in the CJIS suite of applications.

JIS used the opportunity with the server migration to migrate all of the PowerBuilder applications to Crystal Reports 2013 which is the latest version of the software. This reporting tool has several benefits to not only the customers but also to JIS while incorporating very well with .net.

2014 ACCOMPLISHMENTS

Citation Management System

The Circuit Court Clerk has approached JIS with the development of a citation management system which would allow their staff to manage all of the traffic, parking and metro citations issued by various metro agencies. JIS reviewed the current processes for processing and managing state traffic tickets through the CJIS application with the Circuit Court and found functionality similar to the needs of the Circuit Court for this application. JIS performed a business and technical analysis of the processes that the Circuit Court currently uses along with a gap analysis of current CJIS functionality.

JIS began development of the application, called 'TVIS'. This application is estimated to be delivered in the summer of 2015.

JCM (Juvenile Case Management)

In order to increase user productivity and increase data integrity, the following enhancements were made to the JCM application.

- Allowed a Decree in the JIMS application to be linked to a Case in the JCM application – allows a User in JCM the capability to view the charges listed on a JIMS Decree
- Added the ability to Open/Close Case Assignment in JIMS with a Case in JCM – allows the 2 systems to stay in sync with each other on Court Staff/Case Manager assignment
- Updated JCM with updated JIMS Code – keeping both applications code in sync
- Upgrade Crystal to release 2013
- Added Administration function – gives Admin Users the ability to change the Case Type

2014 ACCOMPLISHMENTS

JCM (continued)

In order to increase user productivity and increase data integrity, the following enhancements were made to the JCM application.

- Added Administration function – gives Admin Users the ability to change the Case Manager

JIMS (Juvenile Information Management System)

In order to increase user productivity and increase data integrity, the following enhancements were made to the JCM application.

- Ability to create a link between JIMS and JCM as it pertains to case manage – allows a user the ability to link a JIMS court staff employee with a JCM case manager which help keep the records in sync
- New auto updating for School tab – allows the system to automatically uncheck previous current schools when a new current school is added by a User
- System Enhancements:
 - o Made Arrest Number field editable until a Petition is filed – allows a user the ability to make corrections until a Petition is filed
 - o Added Age Range Option to Juvenile Search window – allows a user to more accurately pin-point the desired search results

2014 ACCOMPLISHMENTS

JIMS (continued)

- o Enhanced Juvenile Record tabs – gives a User needed information in one location
 - ◆ Attorney – current address, phone, and email is displayed
 - ◆ Employer - phone is displayed
 - ◆ Church - phone is displayed
 - o Added sorting capabilities to the TCA Select Window – gives a user easier access to find desired data
 - o Enhanced Juvenile Record tabs – gives a User needed information in one location
 - ◆ Attorney Standard Search Window
 - ◆ Enforcing Officer Standard Search Window
 - ◆ Court Staff Standard Search Window
 - ◆ Judge Standard Search Window
 - ◆ Referee Standard Search Window
 - o Added default new Decree Event Date to Court Session Date/Start Time – allows the system to more accurately reflect Court actions
-
- Automated the Create Decree Functionality - saves time and resources for the Clerk's Office
 - Migrated Crystal Reports to release 2013

2014 ACCOMPLISHMENTS

JIMS (continued)

- Created a monthly batch job for Returned Runaway Docket Job – runs automatically, job executes without user intervention
- Treated sealed Images with a sealed event the same as a sealed petition – allows the system to protect the integrity of the images
- Created Petition Templates with Crystal Reports – gives a user the ability to control needed changes or enhancements to their forms

In addition to the major enhancements listed above, the system benefited from many minor bug fixes and corrections.

Public Defender Application

The past year has been an exciting one for the Public Defender Information System. Many changes were made within the application making data entry, data tracking, and general information about clients easier to do and access.

Here are a few of the highlights from this past year:

“Contact”

The Contact functionality gave the Public Defender’s office the ability to manually create a record on a client without the defendant being arrested and booked. Before this functionality was introduced, the Public Defender’s office was only able to create an electronic record on a potential client if the person had already been booked and a record was created in CJIS. Now, the office can create a record on any person coming into their office and keep electronic notes, events, and track time on these clients. If the potential client is eventually arrested, all of the data on the “Contact” can be merged appropriately with the record created post arrest.

2014 ACCOMPLISHMENTS

Public Defender Application (continued)

“Interactive Docket”

The Interactive Docket project was a large milestone for the Public Defender application. This functionality allows a user, through PDIS, to search for a specific court docket. When the search is performed and the docket is open, the system filters CJIS court docket through the Public Defender application and displays in a table format, only the Public Defender’s clients for the selected docket. This allows the data entry personnel within the Public Defender’s office to have a list of all their clients to enter data and close out records from one screen. Before, the users would have to search each name on the docket individually. This functionality also provided the ability to enter data on more than one client with single entries. This tremendously reduced the amount of data entry.

“Time Tracking Enhancements”

Time tracking is of the utmost importance to the Public Defender’s Office. Enhancements were made this year to allow Time Tracking to be reported in the Public Defender application to specific events on client case records instead of just making generalized entries. This functionality allows the Public Defender’s office to report and categorize time, not only by attorney or employee, but also on specific cases, case types, defendants, and specific activities. These changes allowed for reporting to be created to measure time in very specific areas and percentages.

“UCF Build 06.05.00”

This build consisted of several items, but two very large changes that greatly enhanced the application. First, color coding was introduced to the application’s search screens. This functionality looks at all items returned in a search and looks for specific data on these items to determine if the record involved Mental Health Staff, if the client was a Non-Citizen, or if the record was deemed a “Conflict” for the Public Defender. Now, each of these appear in a specific color allowing the user to identify these specific record types without having to fully open the record. Secondly, the build gave the Public Defender’s office the ability to create multiple records on multiple defendants with one entry, as opposed to having to create these records individually.

2014 ACCOMPLISHMENTS

Web Applications

In 2014, JIS performed an upgrade to the web infrastructure used by the Justice Community. This upgrade replaced a legacy system that had been in place for over ten years. In addition to the Justice Community's individual public web presences, the platform is also used to build internal intranets and document repositories.

In addition to the obvious technological improvements, there were also immediate cost benefits. JIS was able to provide an enhanced web platform for its customers while eliminating costly licensing required by the legacy web system.

Many best of breed platforms were combined to build a reliable and customizable solution that would satisfy our web requirements, including:

- **Wordpress** – A Content Management System that allows for JIS customers to easily maintain their websites on their own, with no technical skills necessary, if desired, or with the help of JIS. Boasting an impressive community, Wordpress offers endless extensions and plugins for most any need imaginable. Wordpress is the platform of choice for many highly available sites including Time, Bloomberg, Target Pulse, Vogue and NASA, to name a few.
- **Mysql** – Mysql is the database engine used to store the data for website content. Now owned by Oracle, Mysql fit nicely into the current realm of JIS supported database platforms.
- **IIS** – Microsoft's Internet Information server is the application server that serves each site. IIS was an obvious choice in that JIS is now writing applications using .NET. These applications are also deployed to IIS, meaning only one application server is supported for all web applications.

2014 ACCOMPLISHMENTS

Infrastructure Upgrade

JIS purchased a new EMC VNX SAN (Storage Area Network) and began setting it up to replace the much older EMC Clariion SAN as it approached the end of its warranty. This VNX is faster, contains more storage and is more expandable than the Clariion system that is being replaced. The SAN houses the file systems for the JIS community, that most people know as the H:, G: and P: drives. It also houses the storage for the VMWare system that runs most of the servers.

One of main features of the new system is its ability to recognize file systems that are in high demand and the ability to move those file systems from slower, cheaper storage to faster storage on the fly. These file systems are then automatically moved back to slower storage when the demand drops. Another feature is the ability to use extremely fast solid state drives to serve these file systems and operate as additional memory for the VNX to use when needed.

Once the migration to the new VNX is complete the old Clariion SAN's will be combined into one SAN to use for disaster recovery until another VNX is purchased and installed later in 2015.

Microsoft Windows 2003 upgrades

Microsoft announced that Windows Server 2003 would reach end of life on July 14th, 2015. Both ITS and JIS in turn set that as a deadline to remove, or replace all 2003 servers still in use, as continuing to have these servers in service after that deadline would be a security risk. Starting with over twenty 2003 servers JIS has worked steadily to meet this goal over the year, and have reduced the number of remaining servers to six. That group of six are all related to an ongoing project which is scheduled to be complete with the next few months, at which point all of those remaining 2003 servers will be retired bringing us into total compliance with the EOL. Steps will be taken to mitigate any risks to the six remaining servers until they have been removed from the network.

2014 ACCOMPLISHMENTS

Windows 7 Upgrade

The JIS Help Desk upgraded or replaced over 99% of the Windows XP workstations with Windows 7 Enterprise and introduced BitLocker to all laptops. This was done one department at a time, over several months, through an imaging process that required the Help Desk to backup any personal files that the user had on the local workstation before wiping the workstation, and then moving those files back to the workstation. After each image it was verified that the user had access to all apps and everything was functioning normally.

Before any of this took place, several months were spent building, imaging and testing with Windows 7 32-bit and 64-bit to verify all JIS supported applications worked properly and no functionality would be lost. The total number of Windows XP workstations replaced was in excess of 1000 systems across all JIS supported departments.

This upgrade was initiated because Microsoft brought Windows XP to end of life and stopped issuing security updates for it. The few remaining Windows XP workstations have been mitigated to local access only and are in use because they are needed to support software that will not run on any other OS.



PROJECTIONS

Fiscal Year 2016 Projections

As JIS states its projections for Fiscal Year 2016, it is important to note that the work that JIS performs in the way of application development is at the request of the JIS agencies. Furthermore, this work is reviewed, prioritized, and approved by the JIS Steering Committee which is comprised of agency representatives across the JIS community. At the time this annual report is written, the projections are made up of upcoming work that has already been approved, as well as requests that have not yet been approved. However, all are goals set forth by individual agencies to be accomplished in Fiscal Year 2016. In addition, this report does not account for project goals that will be met in Fiscal Year 2016 that have not yet been requested.

2015 PROJECTIONS

Mental Health / Drug Court (MHDC) Application

The MHDC application is a case management system that was deployed in 2007 using the java tools available to JIS at that time. The MHDC application allows a case manager to create their clients' records from CJIS, record the assessment and drug screens, as well as view any upcoming court dates.

JIS will move this over into a .net environment which will allow JIS to better update and maintain the application to meet the needs of the users.

CJIS

JIS continues to work with the agencies to introduce new functionality, improvements and corrections into the CJIS application. Some items of note planned for 2015 include:

- Allow the staff of the criminal court clerk to batch process citations. The batching process will include creating, scheduling, printing and scanning of all the required documents surrounding a citation. This functionality will free up needed resources in the Criminal Court Clerk's office
- Allow the Criminal Court Clerk's office to move dockets
- Introduce changes to CJIS to allow improvements for the affidavit creation process concerning domestic violence cases including:
 - o Enhanced Juvenile Record tabs – gives a User needed information in one location
 - o The ability to create notes on the affidavits as a way to communicate between the magistrates
 - o The ability for the commissioner to update the affidavit after affidavit approval for necessary data corrections

2015 PROJECTIONS

CJIS (continued)

- Improve the printing of event forms through the batching process. This functionality enhances the search window used for printing in batches by allowing the clerk to narrow the search results to cases that meet a specific criteria
- Improve the batch printing of documents pertaining to a court session for the District Attorney's office
- Develop a web service for sending criminal dispositions to the AOC's criminal repository along with the scanned image of the judgment
- Improve the accounting functionality in CJIS as it pertains to the assessment of costs

TVIS

In 2015, JIS will deliver a citation management system called TVIS for the Circuit Court Clerk's office. This application is anticipated to replace two of the systems that the staff currently uses for creating and managing all traffic, parking and metro citations in Davidson County. The functionality scheduled will include:

- The ability to create, modify and dispose of a Metro, Parking or Traffic citation
- The ability to report all required cases to the Department of Safety
- The ability to generate docket reports and all paperwork as a result of a court date
- The ability to provide a response necessary for the registration of the online traffic school
- The ability to generate executions (liens/garnishments/parking warrants) from within the system

2015 PROJECTIONS

JCM (Juvenile Case Management)

Below are the anticipated projects for the JCM application:

- Mobile Device Functionality for Probation Officers – implement new functionality on mobile devices to enhance capabilities of out-posted personnel
- Add Imaging to JCM – this shall include the ability to Add, Update, or Delete an image
- Add Diverted Case Functionality in JCM to Other Case Types - which shall give users the ability to set other case types to pull charges from the Diverted Queue on creation

JIMS (Juvenile Information Management System)

Below are the projected projects for the JIMS application:

- Assessment Enhancement – enhance assessment system wide for more accurate accounting
- State Invoicing – final piece in the accounting process – will replace manual invoicing process
- GL Corrections (currently in test) – correcting inaccurate entries
- Automate Docket Freezing and Printing – replaces manual process – saves time and resources
- Add new Tickler Functionality – allows a User to more effectively handle events

2015 PROJECTIONS

JIMS (continued)

Below are the projected projects for the JIMS application:

- Processing Queue – ability to handle missed charges in a group of charges – makes processing of all charges more efficient
- Processing Queue – ability to merge Processing Charges with Manually Created Charges - makes processing of all charges more accurate
- Processing Queue – ability to handle Arrest Order Entries – allows a user the ability to handle incorrect Arrest Orders
- Modify Event Entry Type AVT Screen for easier user entry – make AVT entries more user friendly
- System Not Defaulting to 'PT' When Adding Petition to Event - Entered as 'pt' – allows for easier data entry for a User
- Create Letter, Envelope, and Queue Entry when Summons or Subpoena is Created – saves time and steps for users
- Ability for users to send emails directly from the JIMS application – saving time and steps for users



2015 PROJECTIONS

ADPB - Adult Probation Application

JIS continues to work with customers to enhance and improve the features and functionality of the Adult Probation (ADPB) application. The following are some of the projects slated for analysis and/or development in the coming year:

- Proxy Score/Risk Level and Needs Assessment – Sponsor: GS Probation (In Development)
- Updating Address and Employment Information via Internet – Sponsor: GS Probation (In Analysis)
- Enhancement of DUI School completion certificate
- Internet registration and fee payment for DUI School
- Internet fee payment for GS Probation
- Updating application window to allow the viewable display area to be full screen, reduced or proportional to the monitor or tablet being used
- Where feasible, replacing internal application reports with Crystal Reports
- Creating event driven Crystal Reports

Secondary SAN

In the winter of 2015, JIS plans to configure and install a secondary SAN to replace the current backup SAN which is approaching the end of its warranty. The second VNX SAN will be located at another site so that fail-over will still be possible in the event that the ability to access the production data center is lost.

2015 PROJECTIONS

Secondary SAN (continued)

The new VNX will increase JIS' ability to provide the Justice Community with improved performance and greater disaster recovery.

Database Migration to Oracle 12C

In the coming year, JIS will embark on a massive upgrade mission to migrate its current oracle 11g (11.2.0.3) database systems to oracle 12c. Databases will also be moved from their current windows operating system to Oracle-Linux, which is a more robust and a better performing operating system for Oracle. Oracle 12c employs cloud based computing and it is by far the most robust relational database on the market today. It is also Oracle's most significant database release in many years, as it is loaded with so many new features and advanced capabilities that will not only improve performance, but will increase scalability and consolidate physical servers to reduce costs and ease of management.

Unlike grid in computing where one or more computers coordinates to solve problems together, cloud base computing used in 12c usually employs a service. That service has access to a large amount of physical resources, and can dynamically allocate them as they are needed. In this way, if an application requires only a small amount of some resource, then the service only allocates a small amount, say on a single physical CPU (that may be shared with some other application using the service).

Conversely, if the application requires a large amount of some resource, then the service allocates that large amount, say a grid of CPUs. Oracle 12c consolidates and manages databases as cloud services and this accelerates performance while achieving new levels of efficiency, security, and availability.

Oracle Multitenant:

High density database consolidation per server



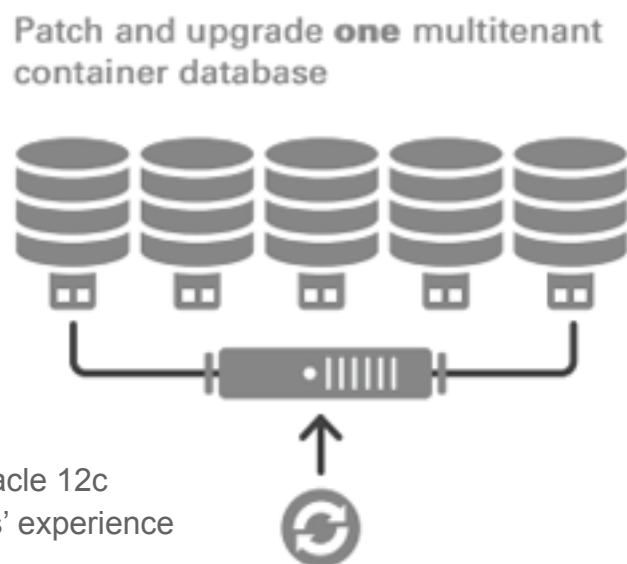
2015 PROJECTIONS

Database Migration to Oracle 12C (continued)

Among the most important benefits of Oracle 12c, JIS through this upgrade will:

- 1. Consolidate data and resources.** Through the use of Oracle 12c's new multitenant feature, JIS will consolidate current database systems into one or two container databases, creating pluggable databases that can be easily relocated from one container to another if necessary. These pluggable databases will continue to function independent of each other, and will share only the DBA users who will manage the entire container of independent databases. All other users and user access will remain unchanged and transparent to current users. This will not only simplify maintenance and management, but will also reduce the cost of purchasing multiple servers.
- 2. Improve productivity with application continuity feature.** Prior to Oracle Database 12c, DBAs could spend hours making changes and lose their work, if not committed intermittently. With Oracle Database 12c application continuity feature, Java-based applications can seamlessly fail over in case of a server failure even when there are outstanding data changes. It does this by keeping a record of uncommitted changes and seamlessly replaying them in case of a failure, all of which is completely transparent to the application.
- 3. Cost reduction.** The cost associated with the purchase of multiple servers will be greatly reduced. By putting all production databases in one or two containers on a few servers, the number of physical servers used for the multiple databases will be significantly reduced. This will not only reduce the maintenance cost, but will also reduce the storage needed for multiple databases and backups.

A lot more new security features abound with Oracle 12c and this upgrade will no doubt improve the users' experience when the new system is deployed.



2015 PROJECTIONS

Consolidating CJIS Suite in Oracle Multitenant Environment (continued)

- 3. *New Paradigms for Rapid Patching and Upgrades.*** The investment of time and effort to patch one multitenant container database results in patching all of its many pluggable databases. To patch a single pluggable database, you simply unplug/plug to a multitenant container database at a different Oracle Database software version. To upgrade all hosted pluggable databases in a container database, simply upgrade the container database and all hosted pluggable databases are upgraded 'in-place'. To upgrade a single PDB, you simply unplug/plug the pluggable database in to a container database at a higher version and upgrade the pluggable database.
- 4. *Manage Many Databases as One.*** By consolidating existing databases as pluggable databases, administrators can manage many databases as one. For example, tasks such as backup and disaster recovery are performed at the multitenant container database level.
- 5. *Pluggable Database Resource Management.*** In Oracle Database 12c, Resource Manager is extended with specific functionality to control the competition for resources between pluggable databases within a multitenant container database.

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