

INFORMATION SYSTEMS & SERVICES MIGRATION PROJECT

Information Systems and Services have been maintaining Saginaw County applications in the mainframe environment for over 30 years. The amount of knowledge and effort put into these applications (by departments and ISS) over the years has made replacing them difficult to do. With that in mind, along with the interfacing of applications to each other, and the detailed business processes established, it has been difficult to find alternative solutions. Add to this the increases in IBM Mainframe costs and new technology offering better solutions for our customers, ISS needs to make changes. So, we have teamed up with Datatek Inc. and Microfocus, Inc. to help us migrate the twenty plus applications off of the mainframe and into a web based environment.

WHY GO THIS ROUTE?

Going this path takes all the functions, data, reports, processes of the current applications and puts them in a 'newer' environment which opens the door for new solutions. This allows training to be a minimal, which can be a huge cost alone.

This newsletter is for our customers to be informed on the progress of the project. The project is being done in phases, with some phases going on simultaneously. A brief description of each phase follows:

Phase 1: Easytrieve conversion. The programming staff writes batch programs (reports, file updates, nightly processing, job submission jobs) in either COBOL or Easytrieve. To get into our new environment, the Easytrieve has to be converted to COBOL. There are over 800 Easytrieve programs.

Testing

ISS will be providing testing opportunities for all departments we serve. We have an area set up where department heads can send employees to for testing their work. Steps currently taken on the mainframe environment will be duplicated on the new environment. Problems can be addressed. This will be determined by department management who and when to send people to test, allowing for coverage. Programmers will be available to set the employee up to test their work and critique it!

WE ARE WORKING CURRENTLY ON PHASE 1 AND 2.

Phase 2: Move our current COBOL programs to Microfocus COBOL. This includes batch jobs, online programs and screens. We have sent all of these programs, screens, files to Datatek to achieve this. When this phase is completed, we will no longer be in the 'mainframe environment' but the customer will not see changes in their screens – we will still be using the passport sessions. Our files will be structured as they are on the mainframe.

Phase 3: This step takes us from the current file structure (we call VSAM files) to SQL table structure. This opens up to have a true database and allows for new and exciting file storage and retrieval. The COBOL programs will be in visual COBOL and the applications will be web based.

WHAT IS AN EASYTRIEVE PROGRAM?

ISS writes batch programs for our customers in COBOL or Easytrieve. We have over 800 programs written in Easytrieve. The first phase of the conversion requires the Easytrieve programs to be converted to COBOL. How do you tell if a program is written in Easytrieve? Look at the program identifier that is on reports you receive or jobs you request through the Job Submission system. If the program identifier ends with 'E', it is written in Easytrieve. If it ends with 'P', it is written in COBOL. The image to the right is an example of identifying what the program is written in. In this case it is FMB428E, written in Easytrieve.

We wrote programs in Easytrieve as it is quick processing. We have over 20 applications, with several thousand programs to maintain. Writing in Easytrieve allowed us to get programs out quickly to our customers. The problem is, Easytrieve is not 'portable' off of the mainframe. COBOL is. So we have to convert these Easytrieve to COBOL and then they can be migrated off the mainframe.

Each new COBOL program is tested against the Easytrieve program that it is replacing. Whether it is updating files, or printing reports, the programming staff is testing and making modifications. The end results will be seamless to our customers. If there are situations that we can not make seamless, the programmer will get with the customer to discuss solutions. The new 'COBOL' programs will be identified with a 'F' on the end. As with the above, FMB428E will be FMB428F. This will help the programming staff when troubleshooting that this is a converted program that we are working with.

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09/26/12                                FINANCIAL MAN
                                           SELECTION

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PROGRAM NAME    EXP BUDGET STATUS REPORT (COUNTY)
CRITERIA ENTERED:

DESCRIPTION      ENTERED
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COUNTY YEAR    2012
FUND            101
BEG ACTIVITY    23000
END ACTIVITY
09/26/12
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                                           AS OF 9
                                           FOR COUNTY

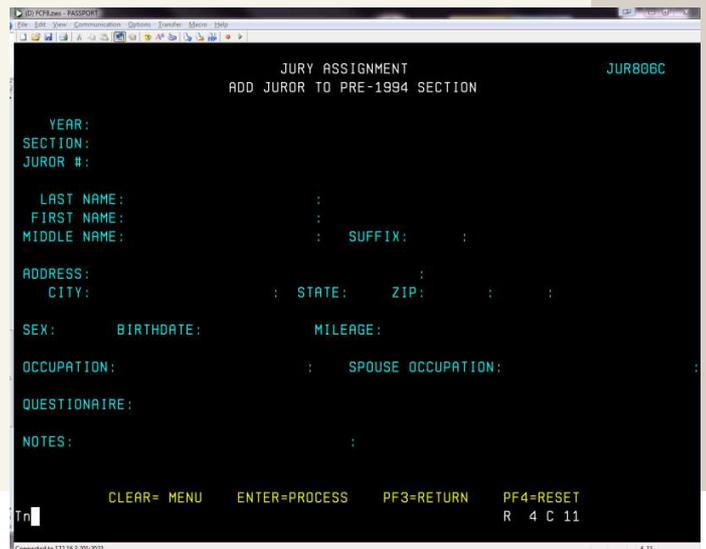
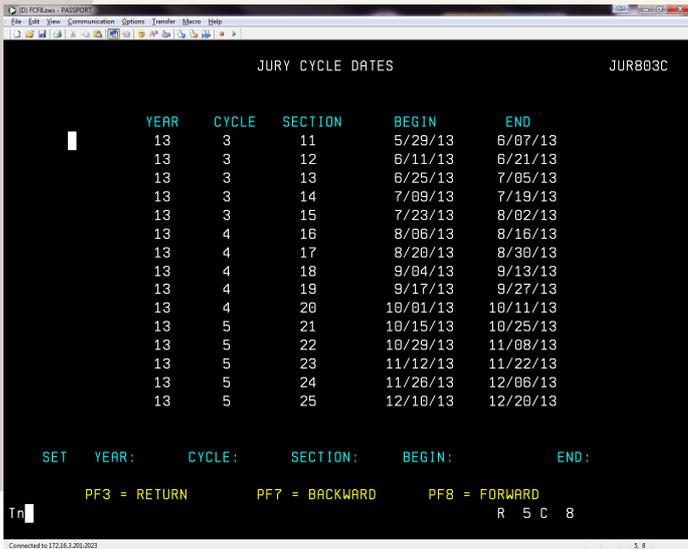
101 GENERAL OPERATING
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EASYTRIEVE PROGRAM

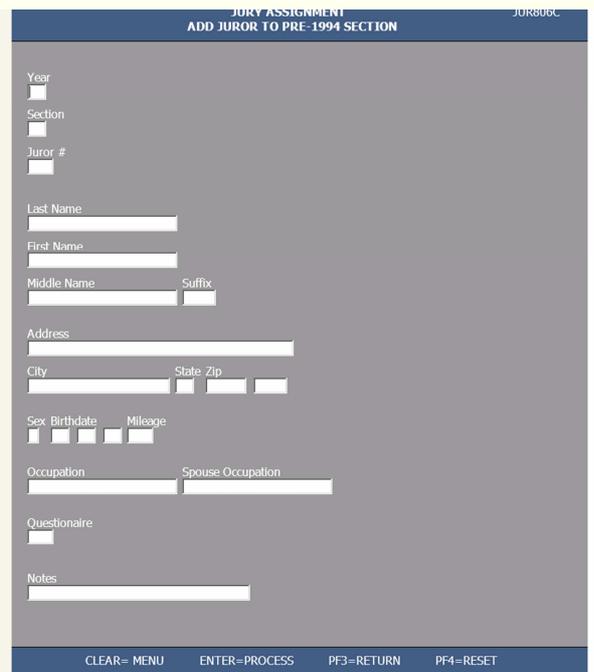
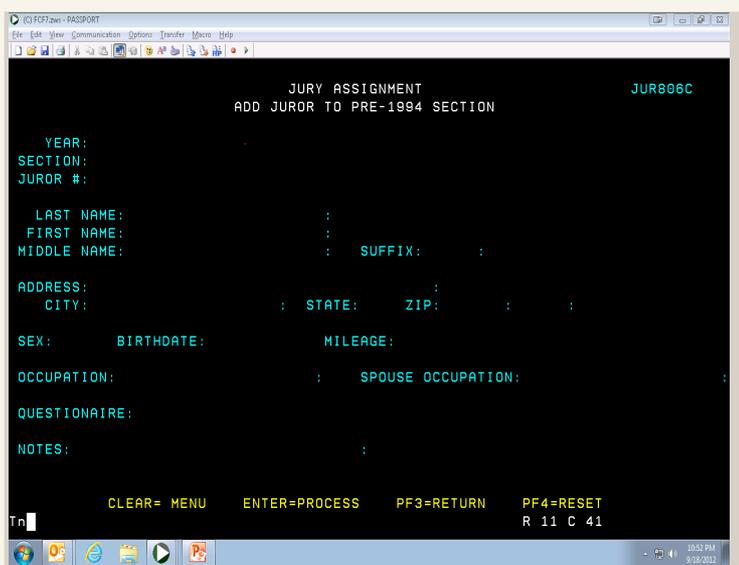
*“The end results
will be seamless
to our customers.”*

CONVERSION SAMPLE

Below are two examples of an application's screens after Phase 2, where we are still on passport sessions but off the IBM Mainframe. At this point of the conversion, the screens look and act the same.



The next two options are the look for the final conversion. The left is the look we currently use. On the right the screen display allows for a more windows look with the same functionality. This opens up for the screen to have more data on it, and more flexibility and benefit of migrating off of the mainframe.



A MAJOR MICHIGAN COUNTY INNOVATES WITH MICRO FOCUS ENTERPRISE SERVER

COST AND EFFICIENCY BENEFITS RAPIDLY ACHIEVED THROUGH APPLICATION MODERNIZATION ROCKVILLE, MD, JULY 26, 2012

Micro Focus (LSE: MCRO.L), the leading provider of enterprise application modernization, testing, and management solutions, today announced that Saginaw County, Michigan, is using Micro Focus Enterprise Server within .NET to transform its core business applications by moving them onto a flexible Windows server environment. Once complete, this modernization initiative will yield significant savings in ongoing operating costs for applications that have traditionally been hosted on a mainframe platform. By choosing Micro Focus Enterprise Server as the target platform, the COBOL/CICS applications are being moved with virtually no change, removing any risk from the process.

With a population of more than 200,000, Saginaw County depends on its core applications to deliver critical services for its citizens including payroll, finance and the county's jail management system. These applications have evolved over 30 years with much expertise invested in developing the four million lines of COBOL code, which represents this county's critical business processes.

In considering application modernization, Saginaw County assessed several options, including rewriting applications, and migrating and normalizing data into commercial off the shelf (COTS) packages based around relational databases. However, given the time and resources needed, it was clear that none were going to be viable options for the county.

"Redeveloping our applications from scratch was simply an impractical, wasteful and cost-prohibitive approach for us," said Johnathan J. Miller, Information Systems and Services Director, Saginaw County. "For more than three decades, our COBOL applications have been tightly integrated with our business process developments. We quickly shifted our thinking from re-engineering code to a modernization approach which would involve re-hosting our existing COBOL applications onto the managed code .NET framework on Windows, while associated VSAM data was moved to Microsoft SQL Server."

To begin this modernization journey, Johnathan and his team first needed to sell the cost savings and resource benefits of this approach to their "customers", which included elected officials, department heads, judges, the CIO/Controller, and the county's board of commissioners. They highlighted that an application re-hosting program using the most widely used target environment from Micro Focus would prove to be a sound investment, deliver initial savings in as early as eight months, and ensure increased value from those applications in the future.

"It's something that our in-house developers created decades ago, and we wanted to keep the business processes in place," continued Miller. "By recompiling this application's code with Visual COBOL and hosting it on Enterprise Server on Windows, we retained all of its core functionality, imperative to our county's legal process, and this will translate to dollars saved."

After realizing the benefits of modernization with this initial application, Saginaw County launched a multi-phase project in which additional core applications, including its court systems, finance and jail management applications, will ultimately be re-hosted in the same manner.

"As IT departments in the public and private sector continue to face budget constraints, they are under increased pressure to do more with less, without adding to existing IT debt," said Ed Airey, Product Marketing Director, Micro Focus. "This is one of the many reasons Saginaw County turned to Micro Focus. A replacement strategy was regarded as too risky and expensive, while the Micro Focus strategy of re-use demonstrated they could realize real cost savings early and fund additional business innovation to take these applications into the future."