



MR. JULIO VILLAFANE, IT VP FOR COSVI

## COSVI MIGRATES MAINFRAME COBOL TO WINDOWS

**Cooperativa de Seguros de Vida de Puerto Rico, COSVI, is a not-for-profit cooperative institution founded in 1959 in Puerto Rico. COSVI is a leader and innovator, with a track record of solid growth in the insurance industry. At present, they offer a complete line of Life, Accident, Health and Retirement Insurance products, and are the largest writer of Annuities and Group Life in Puerto Rico. COSVI covers more than 1.1 million lives, with a current insurance in-force in excess of \$5.6 billion.**

### THE SITUATION

In 2003, COSVI identified they had an IT problem; their mainframe supplier gave notice that their production mainframe was going unsupported within 9 months.

COSVI needed to replace their existing mainframe system as fast as possible.

Time was limited. Options were few. The mainframe ran significant corporate enterprise business systems. These systems were fundamental and critical to the business at COSVI. COSVI had large hand-coded COBOL applications that processed and supported their Group, Individual & Life Insurance and IRA Accounts. These applications consisted of approximately 1,000,000 lines of COBOL code originally written some 15-30 years ago and much evolved since that time with many modifications and patches provided by

the usual variety of people over the years. This is a typical situation for so many COBOL users today.

COSVI had had a long and happy experience with their mainframe technology and the people that supported them. Their systems were extremely reliable. The Mainframe operating system and database had been "rock solid" for years for COSVI.

COSVI had, over the years, integrated their COBOL systems into a variety of tools and technologies, including Monarch, BARR, COLD and URSA typically for Report Viewing and analysis and creation Graphical Forms for specialized reports and documents. In 2003 COSVI had begun the migration to open systems platforms with the implementation of HIPAA compliant applications. This had been the real start of supporting multiple database and operations system platforms.

### THE NEED

The need was to replace the existing mainframe system that was going out of support of the mainframe supplier. The options COSVI had to choose from were mainly the usual ones to be expected.

#### 1) Keep the existing applications and buy a replacement Mainframe

This option was reviewed, evaluated and costed out in

full. This option created the least disturbance and least level of effort to implement.

## 2) Conversion of the existing systems to a new operating system platform, Windows/Unix.

Conceptually, this was a very tempting option as it had been agreed internally that the system was as delivering excellent value to the user departments and that the IT department was in a good position to maintain and enhance the system using their in depth experience of the application.

The main attractions of this solution would be an industry standard open database and the ability to easily “modernize” the converted application. These became criteria that would be used to benchmark any proposed solution, together with an easy transition to the new operational system and the new development language.

This approach would also satisfy the growing desire to centralize IS resources on fewer operating system platforms. It would also allow COSVI get away from the inherent restrictions that MCP & DMSII brought.

## 3) Rewrite the applications for a new operating system platform, Windows/Unix

This option was not reviewed in any depth as it was clear very early on that the resources required to build and test and the inherent costs would be too significant to justify.

## 4) Replace with packages

COSVI felt they did not have the time to find good application package, modify it to their business requirements, install and train on it and do all the work involved in data conversion in the time available. They also felt the costs would outweigh the benefits.

COSVI identified an organization with a specialized Technology focused on COBOL translations that was potentially capable of delivering the COSVI conversion required.

COSVI saw a move to “open systems”, if it was technically feasible at an appropriate cost level for them, as being highly desirable. COSVI wanted to get the benefits of openness, not just for the obvious budget savings. It was important to COSVI to provide systems that would be easy to maintain and support in the coming years, it was also important to provide these on a “standard” platform

that was easily maintained and easily supported and that offered the potential access to industry standard database applications, business & management support tools available in the SQL market place.

## THE SOLUTION

COSVI reviewed the main two options 1 & 2 in depth and decided the Conversion Option (Option 2) was potentially a preferred solution for them, offering many benefits in both the immediate and long term future:

- SQL Database technology
- The removal of the limitations of the Mainframe COBOL language
- The availability of competition for hardware and software suppliers
- Readily available resources to support the hardware and software
- Ability to implement .NET web resources
- Significant cost saving into the future
- Improved work environment for IT staff as a result of working with new technologies.

The solution selected was Asysco’s Migration Technology (AMT) LION. The database implementation selected was Microsoft SQL Server 2000 because of its ease of implementation and low maintenance burden as well as its general value profile. The AMT-LION product performed well on this database too.

Asysco were invited to present AMT-LION and the Asysco Methodology. After a day of presentations, demonstrations with hard and detailed questioning COSVI felt the solution was viable. User reference calls were made with highly positive results. The decision was made that the AMT-LION architecture would support COSVI’s needs.



Asysco then came in and conducted an on site Discovery process to define the full scope of the project. This encompassed the whole project of decommissioning the Mainframe. All integration issues were explored and defined. All COBOL & WFL code running on the mainframe was documented and a solution for the new platform defined. Complex end of day/week/month/year WFLs were to be converted by AMT-LION and implemented as VB Scripts. The COBOL programs were to be converted by Asysco into AMT-LION Developer language.

**“IN ADDITION TO BE ABLE TO PROCESS INFORMATION FASTER AND MORE EFFICIENTLY, WITH THE NEW INFRASTRUCTURE OF SERVERS AND THE AMT-LION SYSTEM, THE MAINTENANCE COSTS HAVE LOWERED CONSIDERABLY.”**

Responsibilities were defined and a project plan created. A configuration was designed that would support the needs of the application and the needs of COSVI for resilience etc. Solutions were found for all the mainframe platform “products” such as the well used and highly accepted URSA tools & the BARR Print Management tool. The interfaces to Monarch and BARR were reviewed and a simple conversion process defined. URSA was to be replaced with Crystal Reports. BARR and Monarch were to remain in use accepting AMT-LION print files rather than mainframe print files. Some small adjustment would be required, but nothing structural.

The Servers configuration suggested was:

- 2 dual processor servers, clustered, for the Database Server
  - With 2 GB of memory and RAID 10 disk
- 3 dual server processor servers for Application Servers
  - With 1 GB of memory
- 1 dual processor server of the Testing Database Server
- 1 dual processor server of the Testing Application Server.

The final project plan was then given close review and the final, revised cost justification was presented to top management for final approval.

### **THE PROCESS**

Asysco worked off site, at Asysco headquarters, to complete the initial conversion process. COSVI ordered up the required hardware, Asysco then came on site, at COSVI, and delivered the converted code to COSVI. Training was provided for the Operations staff in the running of the AMT-LION environment and AMT-LION developer training was delivered to the IT staff.

This training was completed in 7 business days. The implementation of the AMT-LION system was then conducted as scheduled. Asysco then worked hand-in-hand with COSVI to support the testing process and the implementation of the integration issues.

COSVI went live March 2005 with a newly converted system leaving the proprietary mainframe and COBOL environments behind.

### **THE FINAL RESULT**

All applications are off the mainframe. The mainframe is decommissioned. The savings are starting and the new development environment is already allowing modernization to proceed apace. A new application went live in March 2005 also.

COSVI has made the change they initially thought was not possible. The systems run much faster now on AMT-LION than they did on the mainframe and are currently running at about 20% utilization.

*Mr. Julio Villafañe, IT VP, makes the following comments:*

### **Did the conversion exercise deliver the results you were looking for?**

Yes. If you consider we had an enormous amount of systems and programs that had been developed using COBOL over the past 30 years and in less than a year were successfully converted to a totally new environment, you have to be very pleased, and we are.

### **Is the system easy to use?**

In all new processes there is a learning curve and that is normal. But during the conversion process we learned so much that when we went live we felt pretty comfortable with the system. AMT-LION offers a wide range of possibilities and tools for developing systems. Every day we learn more and plan to take advantage of all the options we have available in AMT-LION to develop new systems for our users. We also know we can count on Asysco's support to help us during this learning process. As far as running the systems we have had no problems or surprises, our users required no real training and our operators were confident after the 2 day training course.

### **Does the system bring additional value over and above the original mainframe implementation?**

In addition to be able to process information faster and more efficiently, with the new infrastructure of servers



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and the AMT-LION system, the maintenance costs have lowered considerably. You feel that you are also contributing to the company's economy. Another value is that tasks takes less time to process so we can assign new responsibilities to the Computer Room resources instead of recruiting new personnel. Our data is now much more accessible to us with the new SQL database, allowing us to use industry standard tools and products to get information quickly and easily.

#### What do you miss from the old system?

You have to forgive me I have a short memory problem... There's nothing there I see a need to go back to.

#### Do your developers feel comfortable with the new AMT-LION Developer after all those years of COBOL?

If you consider that we are just starting with AMT-LION I feel amazed how fast our developers are "forgetting" the old platform and have acquired so much confidence and expertise with AMT-LION. They are quietly confident in its use.

#### What do your users like about AMT-LION?

For the users the change has been somewhat transparent, and that was our expectation. We told them that first we have to move to the new platform before we provide them with new systems full of capabilities and functionalities. That been said, there is a positive feeling because the processes now are much faster and that is a plus for them. But there is a lot of expectation of the new things that we are going to create for them. Those users, typically our managers, who had to wait for 'ad hoc' reports to be run on the mainframe, are very happy to see that these reports can now be run immediately on the Windows Servers. They get their results so much more quickly. They are also able to view their results and work with the data as they need now. This was a valuable feature of AMT-LION for us.

#### What do your IS people like?

They have more options, opportunities to learn new technology and tools that make their job easier and more professional. The debugging tool is something that is making them very happy and much more productive. We already created a new Claims Processing system and the comments from the users have been very positive because of the new functionalities. When the users are happy you, as a developer, feel proud of what you have accomplished. They are very pleased with the AMT-LION Developer and would not trade it back in for COBOL – ever.

#### What do your managers like?

They have been supportive and patient during the conversion process. Now they are looking for "new" functions and processes in addition of the advantages I already mentioned here. I feel comfortable predicting that we will now be able to deliver systems that will satisfy their demands and needs.

#### If you have the chance would even think of going back or not starting the project?

No. This was the best decision I made in many years. This is the starting point for a new IT Department, full of challenges and excitement. Now that the developers are working with relational databases, a near object oriented language and new technology there is a sense of "freedom" in them because they are better prepared to compete in the job market with their new skills and knowledge. For me this is not a threat, my people are invigorated and the situation now allows me to recruit so much more easily being able to find talented professionals keen to work with a company with an state-of-the-art Information Technology Department.

#### CUSTOMER

Cooperativa de Seguros de Vida de Puerto Rico (COSVI) a not-for-profit cooperative institution in Puerto Rico that offers a complete line of insurances.

#### SECTOR

Insurance

#### PROBLEM

COSVI needed to replace the existing mainframe system that was going out of support of the mainframe supplier.

#### SOLUTION

Migration to Asysco's Migration Technology (AMT) LION. This allows a conversion of the existing systems to a Windows-based system environment. This industry standard open database has the ability to easily modernize the converted application.

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