



The Continuing Importance of Contemporary COBOL in the Federal Government

The evolution of COBOL has kept pace with the constant changes of business needs. As a consequence, it continues to be used in both the private and public sectors. Today, organizations in both sectors are successfully integrating existing COBOL applications into their SOA environments at a fraction of the cost of complete rewrites; this clearly demonstrates that COBOL continues to enjoy status as a viable and often used contemporary language. A case in point is the CSC Airline Solution which maintains the COBOL based SAS worldwide data network which processes 3.5 million transactions every year. The CSC COBOL solution is reliable and scalable supporting 500 applications with more than 38,000 workstations. CSC has also achieved 40 percent overall cost savings and seen a 24 percent productivity improvement for its Financial Services Group clients using Micro Focus COBOL.

The Federal Government agencies' goal of delivering improved services to its citizens, reduce redundancy, realize cost savings and facilitate cross-agency information sharing can easily be accomplished with today's contemporary COBOL at a fraction of the cost of a "rip and replace" strategy. This is possible because COBOL is available and supported on contemporary operating system platforms such as Windows, UNIX and Linux and runs very efficiently on virtually any hardware platform, from the mainframe to a distributed platform. Any COBOL application development, testing and production execution can be performed on either of these environments. Few 'contemporary' languages can achieve this level of cross-platform ubiquity: write once run anywhere. Because COBOL is object-oriented, developers can use it to develop reusable

code. The object-oriented features of COBOL permit code generation to function in the object world just as other languages like Java, C++ and C#. Like these languages, COBOL supports XML processing as well as the latest database technologies. Updated COBOL business processes are composed of multiple aggregated transactions and are delivered as a single business service to an SOA environment using .NET, Java or Web service interfaces with relative ease when compared to a full-scale re-write. Furthermore, it is well documented that Services created from COBOL applications are easily integrated with application servers such as WebSphere.

There are a number of powerful, easy-to-use, graphical-based tools for developing, maintaining and testing COBOL applications. GUI-based development is not something enjoyed solely by contemporary programming languages. An example of this is COBOL applications can be developed within popular development frameworks such as Visual Studio 2008 and Eclipse

Major financial institutions such as banks, insurance companies and financial service providers continue to use COBOL for their core systems. There are an estimated 5 billion lines of new COBOL code written every year. So it would seem that it is working very well for many organizations including the Federal Government. COBOL is being used in specific DOD Federal Agencies dealing with software supporting and maintaining Depots. In the private sector using your bank's Website and paying a bill or transferring funds you are using a COBOL application. These institutions would not be using COBOL if it were not capable of sustaining years of change without impacting reliability or performance.

The often popular “rip and replace” all COBOL strategy can be a costly and risky approach to meet new business and systems integration requirements¹:

- \$170 million spent on replacing COBOL which was canceled after a \$104 million loss
- \$180 million spent so far on a newly designed system to replace COBOL – this new application was still under development

Newly developed or packaged solutions designed to replace existing COBOL systems many times lack critical functionality present in the applications they intend to replace and require long-term customization cycles to reach the same level of usefulness of the original application. Once newly developed or packaged solutions are implemented, they often become legacy applications themselves and are usually written in a variety of languages that are far more difficult to maintain and extend.

COBOL originally developed by Rear Admiral Grace Murray Hopper was designed specifically for use in developing business applications and hence the name COmmon Business Oriented Language. COBOL is again being taught at the college level today. Over the last two years, 140 universities worldwide and over 50 universities and colleges in the United States have added COBOL programming back to their curriculum. Recognizing the value of COBOL to the business world and the employment opportunities it presents to students, universities and colleges are taking action to fill the gap as the current group of programmers retires. Since last May 2007, Micro Focus has signed up at least one college or university every week; in late September, it surpassed 50 U.S. academic institutions. There is an expectation of 7,500

students graduating with COBOL skills next year and that number will grow to 10,000 or 15,000 in the near future. Prospective employers are looking for COBOL skilled people who understand business, have a diverse skill set, and possess the ability to learn new technologies as necessary².

COBOL is a very simple language to learn.

It is self documenting and easy to maintain when compared to other languages – hence its pervasiveness and longevity. It is easy to write and maintain because of its English-based syntax, making it straightforward to read and understand program logic – even if the developer performing maintenance did not write the original program. Because COBOL is English-based, programmers can gain a much better understanding of the business and its needs, making them a very valuable business asset.

The decision of ripping and replacing

COBOL written applications with other solutions that (eventually) provide the same business functionality when the same and in many cases improved outcomes can be achieved by leveraging existing systems for a fraction of the cost needs to be given thoughtful consideration. This involves a careful evaluation of all possible approaches in meeting current and future information technology requirements. A final selection should be based on a thorough and thoughtful evaluation of methodologies that represent the best balance between cost and benefit. In many cases, greater benefits can be realized by extending and leveraging existing technology rather than completely discarding what is available and starting over from scratch.

For further information please visit www.microfocus.com/federalgovernment.
Telephone: 1877 772 4450 ext 2654
Email: government@microfocus.com

¹ INPUT 2005: “IT Consolidation in the Federal Government”

² Oct. 23, 2008 New York Times