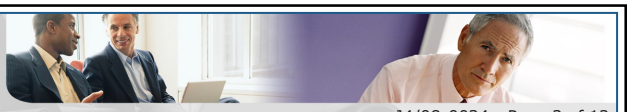
COBOL Technical Committee

Thoughts on the Future of COBOL Standardization

John Billman, Product Director, Micro Focus
Huib Klink, Senior Consultant, Micro Focus

Introduction

- This presentation is designed as a basis for input and discussion by J4 and possibly other NBs, probably passing on info to WG4
- It presents a viewpoint from Micro Focus of some of the background and challenges faced by the COBOL standard and represents an initial proposal for future positive developments
- Those development's goals include:
  - Faster standards publications
  - Better market acceptance



COBOL usage in the market place

- COBOL is predominant in core business systems with an estimated 200 billion lines of code in production
- COBOL remains a robust, maintainable and high performance business processing language
- COBOL is established across platforms and has some incremental usage with new technologies
- The emphasis of COBOL programming has switched to extension and modernization

The influence and relevance of COBOL standardization

- The COBOL standard historically played a critical role in the evolution of the language and the utilization of key new features in a standards-based portable cross-vendor context
- COBOL ’74 and ’85 (including the Intrinsic Functions amendment) were seminal, measureable benchmarks of COBOL standardization in the industry delivering significant benefits to end-users
- COBOL 2002 has not replicated this success
  - Most Vendors have not implemented the entire standard
  - There is little commercial demand for many of the features it contains
  - Compliance to the standard cannot be measured

Current Activity Status – A Critical View

- COBOL standardization progress is slow and under resourced
- Historical standards retain credence but current activity is more peripheral to the COBOL marketplace
- There is little market interest in the COBOL standard, with the possible exception of Japan
- COBOL standardization can be perceived as not sufficiently providing COBOL direction in the light of the emergence in the industry of key technologies such as .NET , SOA, and J2EE
- COBOL standardization has tried to embrace new concepts such as OO but COBOL “legacy” perceptions remain a challenge
- Recent moves to render some selected 2002 standard items optional represents positive & pragmatic progress that requires further work
- There is decreasing participation from countries in WG4 and (vendor) member resourcing of J4 and other national bodies

Key challenges to resolve

- Building a standard that users will actively want; a standard that will develop COBOL as a language of the 21st century
- Creating a standard that most active vendors can and will willingly implement
- Creating a standard that will demonstrate to the marketplace the positive evolution of the language
- Creating a standard that will support the creation of COBOL applications and their integration with other current technology
- Creating a standard that supports the strategic extension of existing COBOL code
- Resourcing, focus and process to deliver a speedy and relevant standard
- Delivering a compiler certification process for conformance measurement

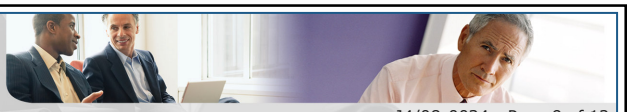
Building a Future for COBOL Standardization

A future strategy for COBOL standardization must:

- Restore credibility to the COBOL standardization process
- Rapidly deliver an effective and acceptable standard
- Deliver improvements that match market needs
- Consider the dual realities that (1) extension of existing COBOL code is most of the COBOL marketplace, while the (2) language is often not considered contemporary or applicable for new “green-field” application development

Building a Future for COBOL Standardization

- To address these serious requirements Micro Focus recommends J4 and WG4 to:
  - Rapidly create a COBOL 201x standard focused on customer and market needs, building on the ANSI’85 core and replacing the 2002 standard
- The COBOL 201x standard would represent the final planned major standard revision of the language in its current form
- Micro Focus recommends parallel activities to create a tightly defined modern COBOL language targeted at new development, somewhat in the model of COBOL#, but not vendor specific



COBOL 201?

- Removes (i.e. make optional or obsolete) the marginal*) and rarely implemented features from the COBOL 2002 standard, including:
  - Exception Handling - RESUME
  - The VALIDATE statement + related features
  - Enhanced Report Writer
  - All locale-based features
  - Multiple Inheritance
  - Potentially remove more OO – possibly class objects

  *) Those classified as "peripheral" or "limited in cross-platform usefulness" etc.

- Strong recommendation against adding features such as:
  - Collection Classes
  - Variable length items and (dynamic capacity) tables
  - IEEE 754r support

Details to be found in J4/08-0062

COBOL 201?

- Consider no additions if this will expedite a new standard

- Alternatively add only limited relevant additions to the standard focused on code extension that can be rapidly delivered, potentially ONLY:
  - XML Support (eventually in the form of a TR)
  - Increase size of all literals except numerics
  - Increase minimum maxima on record locks
  - [Perhaps zero-length literals]

- Delivered with a test suite for standards compliance measurement
  - Need a defined certification process for measuring compiler conformance
  - Consider the best domain to get this processed (ISO/ANSI?)

Open Discussion of Next Steps

Thoughts on the Future of COBOL Standardization

John Billman, Product Director, Micro Focus
Huib Klink, Senior Consultant, Micro Focus