

CONTROL/DCD & COBOL 6.X MIGRATION

Marble Computer, Inc.

May, 2021

Control/DCD

Managing a COBOL migration to COBOL 6.X for Mainframe Applications can have hidden problems depending on the versions of COBOL being upgraded. COBOL 6.X is designed to optimize IBM's new z/15 hardware and z/OS Release 2.4.

Large COBOL programs by their very nature become harder to migrate. These programs have grown over the years due to extensive modifications. Large programs are prone to contain hidden syntactical problems including issues with, Invalid Numeric Display Data, Perform Errors and other legacy code problems that can create invalid run-time code.

Here are 4 major issues that organizations moving to COBOL 6.X are experiencing:

1. Invalid Data for Usage Display for Numeric Fields for COBOL 6.1 through 6.3.
2. COBOL Parameter discrepancies between Called and Calling Programs
3. Invalid handling of Binary and Packed Decimal data.
4. Exceeding the limits of table sizes defined in a COBOL Program

Some COBOL 6.X migration strategies are:

1. Start a Pilot Project on a small application which has a limited number of programs preferably from COBOL 4.2.
2. Select an entire application and migrate the application under a tactical project plan that could, time permitting, take many months to complete.
3. Outsource the migration project to IT firms with a COBOL 6.X migration practice.

IBM estimates that there is now around 350 billion lines of COBOL code being maintained throughout the world. These are mainframe production applications that store and process as much as 70% of the world's Enterprise Data. MicroFocus and other sources say that 1.5 Billion new lines of code are developed annually.

Did you know.....

Marble Computer has been in business since 1983.

Our widely used product Control/DCD helps major corporations manage their mission critical applications



The Alternate Compile Listing Is Viewed With ISPF Or Downloaded To A PC

Why Control/DCD?

Control/DCD can operate in Independent Mode (no compiler is necessary) and analyzes the COBOL code for 6.X compiler errors. This means expensive COBOL 6.X compiles are not required to use Control/DCD's capability. Control/DCD finds incompatible syntax and program code that creates problems with the COBOL 6.X compiler. According to compiler experts, COBOL 6.X can create invalid executable code that can cause production Abends and erroneous results.

The new Enterprise compiler requires more CPU resources for a single compile. Recommendations are to increase address space requirements (No-Limit) and allow for longer run times (3-12X).

Control/DCD analysis is run as a batch job thus CPU time is minimal compared to a 6.X compiler.

The output is available under the ISPF viewer. No need to move the viewer beyond its 80 character limit. Additionally, the output can be transferred to a PC for off-the-mainframe viewing.

With Control/DCD's Alternate Compile Listing (ACL) code that creates Invalid Data, Parameter errors, Occurs and Binary Data errors can be fixed prior to first-compile using a 6.X compiler.

Control/DCD gives the project management team the Analytical Software to make a COBOL 6.X Migration Project successful.

Control/DCD

The new way to manage the mainframe source code environment.

With over 38 years of mainframe experience Marble Computer is taking the legacy of its DCD product line and utilizing the most advanced techniques for programmers to document and understand a program's logic and business rules.

Program modifications are made quickly, easily and accurately.

For more information:

Call (800) 252-1400 to arrange for a demo.



Marble Computer is an IBM Business Partner for z/OS Software.

Migrate Using PDF Reports

Gain more efficiency by moving the COBOL migration process off the mainframe.

By utilizing Control/DCD's Digital Documentation Manual's (DDM) in PDF format, programmers can use any PDF reader to search the DDM's output.

That means the DDM output can be used on PCs, Tablets and Cellphones.

With the PDF reader's search function and the DDM's tab facility the programmer can quickly get to the information they need.

The form of the tab function is: **&(Operand)**

Some **OPERAND** Examples:

FIELD-NAME

ERRORS

CALL ERRORS

OCCURS ERRORS

PERFORM ERRORS

FORWARD-TRACING

CODE-NOT-USED

PERFORM-ANALYSIS

PERFORMED-ROUTINES



By utilizing Control/DCD's simple command structure programmers can use the ISPF Find command for search functions like Call Program Arguments or Forward-Tracing - a hierarchal flowchart of performed routines.

Document the usage of a single data field with one simple command to show the complete flow (*and narrative*) of that data field.

Errors provides warning diagnostics for potential Invalid Data conditions in the program.

Perform Errors highlights performs that are incorrectly nested or where the use of a Go TO statement branches out of the perform.

Flag errors such as differences in Reserved Words, all the way back to early version of COBOL. Now your programmers can bring the code up to COBOL Version 6.X without the fear of introducing errors.

The DDM provides the necessary COBOL documentation for the next stages of the COBOL migration project.

Control/DCD's Benefits

Adds an Intelligent COBOL Analytical capability to your COBOL 6.X migration Project.

No compile is necessary prior to using Control/DCD. Control/DCD produces an alternative compile listing (ACL) that makes the COBOL compiler listing obsolete. Control/DCD output is available under the ISPF editor or by creating a .pdf report for viewing with any PDF reader on any device.

No special training required to understand the analytical output as it is in a narrative format. So the adoption rate is fast and efficient.

Control/DCD's online ISPF capability requires very little training. All panels are intuitive and have a help function.

Control/DCD analyses all of the COBOL code including the Working Storage Section to Procedure Division, all Record and Data formats as well as all Copybooks.

Productivity is dramatically increased from the time the code is opened for migration until it's ready for production.

Management statistics are produced so that the final code changes can be analyzed as to the quality of the program as well as the programmer. Project management is now able to deliver projects on time and under budget. Your organization's migration project will be completed quickly and efficiently.

Marble Computer software products are z/15 compliant, support z/OS V2.4 and COBOL Version 6.X.



Marble Computer Inc. - 6416 Via De Albur Court—Suite 100—El Paso, TX 79912

Phone: (800) 252-1400 - Fax: (915) 845-7918

Website: www.marblecomputer.com

Sales: sales@marblecomputer.com