

CC ARTISAN

CC Reengineering
CC Open Source
CC Outsourcing
CC Consulting
CC Training
CC ANALYZER
CC AUDITOR
CC ARTISAN
CC ASSESS
CC OPAIRA

COBOL
Transformation and Conversion

**CC ARTISAN
COBOL
Transformation and Conversion**

Description:

CC ARTISAN is a rules-based transformation system for reformatting COBOL programs. **CC ARTISAN** makes COBOL code easier to read, and reformats code to meet individual coding standards. When used together with the quality measurement tool **CC AUDITOR**, **CC ARTISAN** automatically eliminates problems with structure and format that have been identified.

Processing Mode: Batch/Dialog
(menu-driven)

Dialog Language: English

Areas of Application: Software Maintenance
SW Quality Assurance
Conversion
Reengineering
COBOL 85-Conversion

Language: COBOL

System Environment: Windows
IBM z/OS

The following scenario can be observed over and over again in data processing offices:

Lack of quality in COBOL programs is discovered when productivity during maintenance is not up to par. It is decided that the standards of quality have to be addressed. Then, with much to-do, new programming guidelines are developed, or the old ones are modified. But now, how are the numerous COBOL programs going to be adapted to these standards? And how is adherence to the standards going to be guaranteed? Taking this on manually would require too much time. Internally, there would be even less time for other tasks, and externally, the financial investment would be too high. The realization slowly dawns that quality standards can only be met by a rules-based automatic transformation system, if one approaches this realistically in terms of time and financial considerations.

CC ARTISAN makes a fine art out of reformatting and can be customized for use in the following areas of quality management:

- ❑ Definition of company-specific standards and their implementation
- ❑ Increase readability of program sources through standardization of presentation
- ❑ Increase speed of familiarization with new applications
- ❑ Simplify application of other tools
- ❑ Increase quality, particularly in combination with **CC AUDITOR**
- ❑ Increase productivity in maintenance cycle

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Characteristics

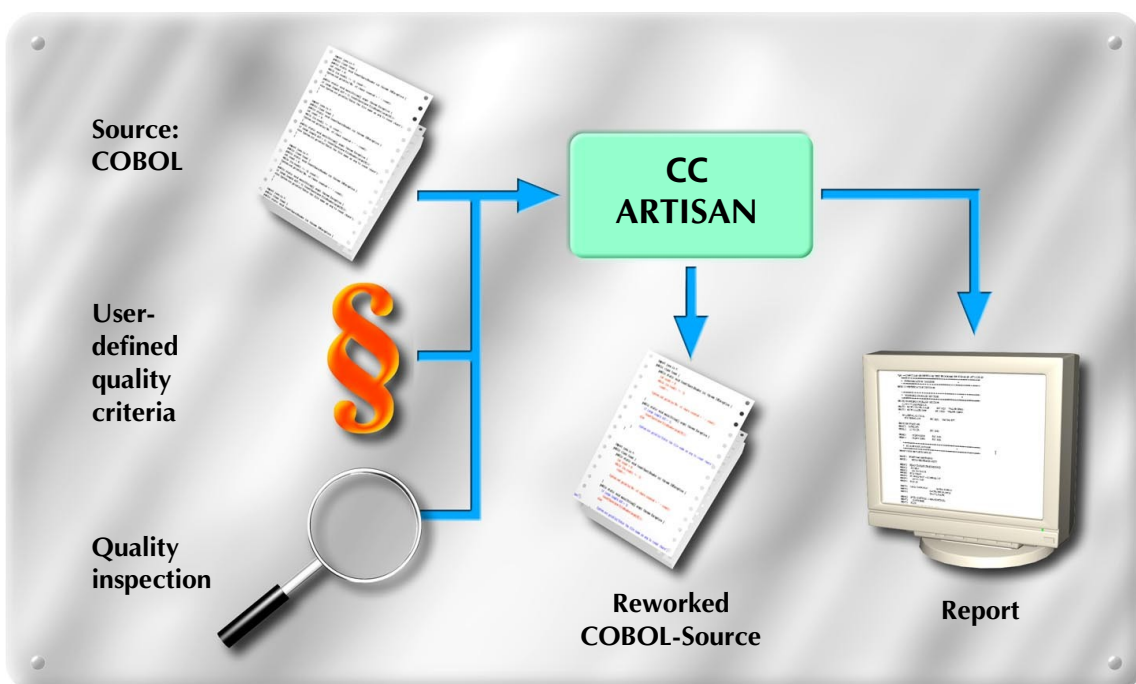
CC ARTISAN can be customized to individual, company-specific programming standards and offers the following functions:

- ❑ Automatic conversion to COBOL 85-Standard
- ❑ Reworks or replaces undesirable commands and constructs, e.g. ALTER or DISPLAY ON CONSOLE/-SYSOUT
- ❑ Automatically applies standards identified through the results and quality measurements of **CC AUDITOR**
- ❑ Automatically recognizes ANSI standard
- ❑ Automatically produces standardized program formats for complete portfolios
- ❑ Implements reformatting based on provided standards or user-defined transformation rules

- ❑ Prepares program code for reengineering activities, improves readability and simplifies maintainability of programs
- ❑ Retains logic in structure after reformatting

Product Advantages

- ❑ Improved readability of program sources through standardization of presentation
- ❑ Improved readability of applications, particularly vendor-supplied programs
- ❑ Increased quality and productivity in development and maintenance
- ❑ Transfer of vendor-supplied programs to internal standards





CC ARTISAN for COBOL Samples
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Sample Source Code

```

000010 IDENTIFICATION DIVISION.
...
001740 WORKING-STORAGE SECTION.
001750 77 WS-TA-JUL-DATE          PIC 9(5)      VALUE ZERO.
001760 77 WS-DATE-DIFF          PIC S9(5)     VALUE ZERO.
...
002790 01 TRANS-IN.
002800 02 FILLER.
002810 03 TR-TA                  PIC X(6) .
...
003660 05 INV-SSN4                PIC X(4) .
003670 05 INV-SSN3                PIC X(3) .
...
008330 PROCEDURE DIVISION.
...
008520      PERFORM WRITE-EXC THRU WRITE-EXC-EXIT.
...
008560      READ TABLES-FILE RECORD
008570          AT END
008580          GO TO T-OUT
008590      END-READ.
008600
008610      IF TABID NOT = 'DT' GO TO T-IN.
...
008760      CALL 'DATCALC' USING RTNCD, DATE-CHECK-NUM, TA-JUL-DATE.
...
009460      IF TR-CONTROL GREATER THAN MA-CONTROL
009470          NEXT SENTENCE
009480      ELSE
009490          GO TO CHECK-FOR-LOW.

```

Balance-Report

DATE: 2006-02-20 AUDITOR (R) QUALITY BALANCE SHEET PAGE 1
TIME: 15:22:01 (C) CC GmbH 2006

SELECTION CRITERIA: DATE SELECTED: 2006-02-20
TIME SELECTED: 23:59:59

PROGRAM GRADE =====	NUMBER OF PROGRAMS =====	PERCENTAGE OF PROGRAMS =====
OK	1	2.63%
I	5	13.16%
W	1	2.63%
E	1	2.63%
S	30	78.95%
=====	=====	=====
TOTAL	38	100.00%



COBOL Sample Reports under z/OS

Formatted Output

```
*QA = ARTISAN (R) REWROTE THIS PROGRAM ON 2006-02-20 AT 12:38:19
*****
* IDENTIFICATION DIVISION. *
*****
000010 IDENTIFICATION DIVISION.
...
*****
* WORKING-STORAGE SECTION. *
*****
001740 WORKING-STORAGE SECTION.
01 WS-77-SAMPLE2-001.
001750 05 WS-TA-JUL-DATE PIC 9(5) VALUE ZERO.
001760 05 WS-DATE-DIFF PIC S9(5) VALUE ZERO.
...
01 LITERAL-01-00001.
05 LITERAL-DT PIC X(2) VALUE 'DT'.
...
002790 01 TRANS-IN.
002800 05 FILLER.
002810 10 TR-TA PIC X(6) .
...
003660 15 INV-SSN4 PIC X(4) .
003670 15 INV-SSN3 PIC X(3) .
...
*****
* PROCEDURE DIVISION. *
*****
008330 PROCEDURE DIVISION.
...
008520 PERFORM WRITE-EXC
008520 THRU WRITE-EXC-EXIT.
...
008560 READ TABLES-FILE RECORD
008570 AT END
008580 GO TO T-OUT
008590 END-READ.
008600
008610 IF TABID NOT = LITERAL-DT
008610 GO TO T-IN
008610 END-IF.
...
008760 CALL 'DATCALC' USING RTNCD
008760 DATE-CHECK-NUM
008760 TA-JUL-DATE.
...
009460 IF TR-CONTROL > MA-CONTROL
009470 CONTINUE
009480 ELSE
009490 GO TO CHECK-FOR-LOW
009490 END-IF.
```



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