

ACATR SUPPLEMENT

Supplement Number A980511E2.1-020D01

January 10, 2000

Rational Software Corporation
18880 Homestead Road
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Rational Software Corporation hereby requests that the Ada Conformity Assessment Authority (ACAA) extend the certified status documented in the above-referenced Ada Conformity Assessment Test Report (ACATR) and in Ada Conformity Assessment Certificate (ACAC) 980511e2.1-020 to the implementation class(es) described in the following pages.

Technical Contact:

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Approval: _____ Date _____
Ada Conformity Assessment Authority

Implementation Class Information

Implementation Class Category: Maintenance

Processor Identification: Rational Apex Ada, Digital Alpha AXP/Unix, version 3.2.0b

Host Systems: Digital AlphaStations (under Digital Unix 4.0D, 4.0E, 4.0F)

Target Systems: Same as Host

Representative Processor and Configuration Tested:

Host System: Digital AlphaStation 500/500 (under Digital Unix 4.0D)

Target System: Same as Host

Client Certification of Testing and Processor Derivation:

I, the undersigned, representing the client, certify that the above identified representative processor was tested on the described configuration with the customized ACATS that was used in the conformity assessment leading to the certificate named in this Supplement, with modifications described in this Supplement, and that the testing results were the same as those obtained in that conformity assessment, with exceptions as described in this Supplement. I further declare that the Client knows of no deliberate deviations from the Ada language standard (ANSI/ISO/IEC 8652:1995) in the identified representative processor above. I further certify that the above identified representative processor and configuration meets the definition of base, maintained, rehosted implementation (as described in the Operating Procedures for Ada Conformity Assessment).

David J. Lofgren

Date

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Maintenance Changes:

Improved application performance (Perfective)

Apex 3.2 had major improvements in front end and middle pass optimizations as well as upgraded code generation.

Improved performance and accuracy of Strict mode Generic_Elementary_Functions (Perfective)

Added Support of Digital Unix OS versions 4.0E and 4.0F (Perfective)

ACATS Modifications:

None.

Test Results Differences:

CA5003A6

Under referenced version, reports Elaboration order of 24351 while under original certified processor the test yielded an elaboration order of 12345. The reference processor is using a new algorithm for calculating elaboration orders. While yielding differing results, they are still correct and the test indicates that it passes.

CA5006A

Under the referenced version the test reports "PROGRAM_ERROR RAISED IN CA5006A1" while the original certified processor reports "PROGRAM_ERROR RAISED IN CA5006A2". Again this is the result of a new algorithm for calculating elaboration order. And again while the results differ the test indicates a passing result.

B392002

While testing the original certified processor, work on a future release exposed an error in this test. The following grading modification was given for test B392002 in anticipation of such future release. The referenced processor (3.2.0b version) generates the identified error and would be covered under the grading modification.

(GM=P): PRIMITIVE FUNCTION IN PRIV.PART VIOLATES 3.9.3(10)

The AVO accepts the petition for deviation on this test program; this program may be processed with the following grading modification for validation under ACVC 2.1:

accept compiler error diagnostics for the (illegal) function declaration at line 186

The function Primitive_Of_Both_Func2, declared at line 186, violates the second sentence of ARM 3.9.3(10) as it is a primitive operation, declared in the private part, of a tagged type that is declared in the visible part, and the function doesn't override anything. This grading modification encourages this unintended illegality to be detected.

BDE0001

While testing the original certified processor, work on a future release exposed an error in this test. The following grading modification was given for test BDE0001 in anticipation of such future release. The referenced processor (3.2.0b version) generates the identified error and would be covered under the grading modification.

BOTH IMPLICIT & EXPLICIT FUNCTIONS @ 154 VIOLATE 3.9.3(10)

The AVO directs that this test program may be processed with the following grading modification for validation under ACVC 2.1:

accept compiler error diagnostics for lines 153 & 154

The implicit declaration of inherited function Func generated by the full type declaration at line 153, and the explicit declaration of Func at line 154, both violate the second sentence of ARM 3.9.3(10) in being declarations, in the private part, of a primitive function with a controlling result of a tagged type declared in the visible part, with neither function declaration overriding a function declared in the visible part. These declarations should be detected as illegalities. (These declarations would need the parent type's Func to be inherited at the point of the private extension, yielding an implicitly declared Func in the visible part.)

The following list of tests differ from the original certified processor in that the wording on some of the error messages is different.

B3A0002, B490002, B83030B, B83030D, B91001G, B951001, BC3009C, BD2001B,
BD2A03A, BD2A03B, BD2B03A, BD2B03B, BD2C03A, BD2D03A, BD2D03B,
BD3001C, BD3002A, BD3003A, BD4002A, BD4003A, BD4003B, BD7101H