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SOFTWARE RELEASE NOTICE

01. SRN Number: PA-SRN-162		
02. Project Title: General Purpose Interpreted Language Software		Project No.: 20-1402-761
03. SRN Title: S-Plus version 3.4		
04. Originator/Requestor: James Winterle		Date: 11/6/97
05. Summary of Actions		
<input checked="" type="checkbox"/> Release of new software <input type="checkbox"/> Release of modified software: <input type="checkbox"/> Enhancements made <input type="checkbox"/> Corrections made <input type="checkbox"/> Change of access software <input type="checkbox"/> Software Retirement		
06. Persons Authorized Access		
Name	RO/RW	A/C/D
All CNWRA Technical Staff	RO	A
07. Element Manager Approval: <i>RG Pava</i>		Date: 11/10/97
08. Remarks: Purchased from MathSoft, Inc.		

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SOFTWARE SUMMARY FORM

01. Summary Date: 11/6/97	02. Summary prepared by (Name and phone) James Winterle, (210)522-5249	03. Summary Action: New	
04. Software Date: 8/5/97	05. Short Title: S-Plus, v.3.4		
06. Software Title: S-Plus version 3.4		07. Internal Software ID: NONE	
08. Software Type: <input type="checkbox"/> Automated Data System <input checked="" type="checkbox"/> Computer Program <input type="checkbox"/> Subroutine/Module	09. Processing Mode: <input checked="" type="checkbox"/> Interactive <input type="checkbox"/> Batch <input type="checkbox"/> Combination	10. Application Area A. General: <input checked="" type="checkbox"/> Scientific/Engineering <input type="checkbox"/> Auxiliary Analyses <input type="checkbox"/> Total System PA <input type="checkbox"/> Subsystem PA <input type="checkbox"/> Other B. Specific:	
11. Submitting Organization and Address: CNWRA/SwRI 6220 Culebra Road San Antonio, TX 78228		12. Technical Contact(s) and Phone: James Winterle (210)522-5249	
13. Narrative: S-Plus is an interpreted language computer software "calculator," statistical package and graphical tool. It is being used by CNWRA staff to assist in KTI "sensitivity analysis" for the NRC.			
14. Computer Platform: UNIX/SUN	15. Computer Operating System: UNIX	16. Programming Language(s): N/A	17. Number of Source Program Statements: N/A
18. Computer Memory Requirements: Varies	19. Tape Drives: N/A	20. Disk/Drum Units: N/A	21. Graphics: Varies
22. Other Operational Requirerments: No other requiremnts			
23. Software Availability: <input checked="" type="checkbox"/> Available <input type="checkbox"/> Limited <input type="checkbox"/> In-House ONLY		24. Documentation Availability: <input checked="" type="checkbox"/> Available <input type="checkbox"/> Inadequate <input type="checkbox"/> In-House ONLY	
Software Custodian: <u><i>James Winterle</i></u>		Date: <u>11/7/97</u>	

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TO: Bruce Mabrito
FROM: J. Winterle
SUBJECT: QA Control of S-Plus Software
DATE: November 6, 1997

The S-plus Software Package, distributed by MathSoft, Inc. as executable only, is an object-oriented programming language that is useful for performing complex statistical analyses, and creating graphical representations of data. Currently, version 3.4 of S-plus for UNIX is installed on the network at CNWRA.

At this time we have no user's manuals for version 3.4. Thus, I was compelled to perform an installation test using older user's manuals from previously installed versions 3.1 and 3.2. The installation test consisted of executing many of the commands in the introductory sections of these manuals. Results of executing these commands was consistent with the user's manuals. Because S-plus is a sort of programming language, it can be used to perform a nearly-limitless variety of calculation tasks, and it would be impossible to check all of them.

Attached are results of some simple commands printed directly from the display screen while using S-plus. These results show output of S-plus is as expected. The tasks performed by these commands are as follows:

1. Create a vector of numbers from zero to ten.
2. Write vector to a file called "vec". Then show contents of file.
3. Multiply vector by 10 and take square root.
4. Convert vector to a 2 x 5 matrix
5. Open a graphics window, and plot vector.

Additional information on S-plus and its applications may be obtained from the MathSoft technical support staff by calling 800-569-0123, extension 234.

Jim Winterle
11/06/97

hornet:/home2/mammoth/jwinter> Splus.init
S-PLUS : Copyright (c) 1988, 1996 MathSoft, Inc.
S : Copyright AT&T.
Version 3.4 Release 1 for Sun SPARC, SunOS 5.3 : 1996
Working data will be in /home2/mammoth/jwinter/.Data

> c(1:10)
[1] 1 2 3 4 5 6 7 8 9 10
> vec<- c(1:10)
> vec
[1] 1 2 3 4 5 6 7 8 9 10
> sqrt(vec * 10)
[1] 3.162278 4.472136 5.477226 6.324555 7.071068 7.745967 8.366600
[8] 8.944272 9.486833 10.000000
> matrix(vec, ncol=2, byrow=T)
[,1] [,2]
[1,] 1 2
[2,] 3 4
[3,] 5 6
[4,] 7 8
[5,] 9 10
> openlook()
> plot(vec)

