

ATTACHMENT 6

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ATTACHMENT 6

SYSTEM\_PERFORMANCE

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1 Intelligent\_Workstation.

The Contractor shall meet the requirements (with a NCSC evaluated C2 TCB for the single user operating system and with a NCSC evaluated B1 TCB for the multi-user operating system, REF: paragraph E3.9) of either the Neal Nelson Business Benchmark or the AIM Technology Benchmark as described below.

1.1 Neal\_Nelson\_Business\_Benchmark. The basic intelligent workstation with the single user operating system shall not exceed the following "Average Seconds to Complete Test" of Neal Nelson's Business Benchmark at the 20 "Number of Copies Running" point (column 1). The "Average Seconds to Complete Test" results for the advanced intelligent workstation with the multi-user operating system shall be less than those indicated in column 1. The desired test results for the advanced intelligent workstation are as indicated (column 2). The total size of disk cache used for the tests shall not exceed 3 MB.

1	2		
Basic Intelligent Workstation Maximum Acceptable Seconds_____	Advanced Intelligent Workstation Desired Seconds_____	Test__	Description
36	24	1	Average User
9	5	2	Calculation Intensive Average User
62	44	3	Disk Intensive Average User
30	22	5	16-bit Integer Math
35	30	6	32-bit Integer Math
5	4	7	64-bit Floating Point Math
26	18	8	Function Call, No Parameters
15	10	9	Function Call, 9 Parameters
27	16	10	Move and Compare Characters
33	25	11	Sequential Reads of 16-byte Records
40	35	12	Sequential Writes of 16-byte Records
28	20	13	Sequential Reads of 512-byte Records
45	30	14	Sequential Writes of 512-byte Records
45	35	16	5,000 Reads of the same 512-byte Record
45	35	17	5,000 Reads of two alternate 512-byte Records
150	125	18	Random Reads of 512-byte Records

1.2 AIM\_Technology\_Benchmark. The basic intelligent workstation with the single user operating system shall equal or exceed the requirements listed below (column 1). The advanced intelligent workstation with the multi-user operating system shall exceed the requirements listed in column 1. The desired test results for the advanced intelligent workstation are as indicated (column 2). These performance factors are obtained from the AIM Performance Report II using the AIM Multiuser Benchmark (Suite III) and the AIM Utilities Benchmark

(Milestone).

1	2	
Basic		
Intelligent	Advanced	
Workstation	Intelligent	
Minimum	Workstation	
Acceptable	Desired	
Performance	Performance	Test_Description
2.6	3.9	AIM Performance Rating (AIMs)
19.0	28.5	Maximum User Load (User Loads)
4.6	6.9	Utilities Index (MPH)
25.7	.5	Maximum Throughput (Jobs/Minute)

## 2 Super-minicomputer.

2.1 The difference between super-minicomputer configurations shall be obvious only by the number of concurrent users supported. Each configuration shall have sufficient resources to run the operating system and all provided software concurrently while meeting all other performance criteria.

2.2 The super-minicomputer system with a NCSC evaluated B1 TCB (REF: paragraph E3.9) shall support these performance requirements with up to 256 concurrent users. The average number of iterations is the average for all lines running the same scenario over a 60 minute period. Only scenario runs started and completed within the 60 minute period are counted.

Mandatory	Desired	
Average	Average	
Number of	Number of	
Iterations	Iterations	Scenario_number, Short_Title
8	10	Spreadsheet scenario 1, Projected expense account spreadsheet
32	38	Spreadsheet scenario 2, Projected expense account graphs
3	4	Word processor scenario 3, Create word processor documents
8	10	Electronic mail scenario 4, Send/receive message and document
16	19	File transfer scenario 5, File transfer
3	4	TELNET Word processor scenario 6, TELNET - Create word processor documents
8	10	FORTTRAN scenario 7, Fortran programs
11	13	C scenario 8, C programs
9	11	COBOL scenario 9, COBOL programs

Mandatory Average Number of Iterations	Desired Average Number of Iterations	Scenario_number, Short_Title
32	38	Statistical Analysis scenario 10, Linear and non-linear regression statistics
35	42	Database scenario 11, Personnel maintenance
5	6	Database scenario 12, Bulk insert, export and import data
5	6	Database scenario 13, Export and import data, add indices
21	25	Database scenario 14, Print class review report
345	414	Database scenario 15, Quota management
52	62	Database scenario 16, Muster class
33	39	Database scenario 17, Non-nested and nested keyed queries
15	18	Database scenario 18, Sequential query with aggregate functions
101	121	Database scenario 19, Print class review report
177	212	Database scenario 20, Keyed query - eight table join

### 3 Network\_Server.

The network server (with a NCSC evaluated B1 TCB, REF: paragraph E3.9) shall support these performance requirements with up to 64 concurrent client sessions. The average number of iterations is the average for all lines running the same scenario over a 60 minute period. Only scenario runs started and completed within the 60 minute period are counted.

Mandatory Average Number of Iterations	Desired Average Number of Iterations	Scenario number, Short Title
8	10	Spreadsheet scenario 1, Projected expense account spreadsheet
8	10	Electronic mail scenario 4, Send/receive message and document
16	19	File transfer scenario 5, File transfer

Mandatory Average Number of Iterations	Desired Average Number of Iterations	Scenario number, Short Title
3		TELNET Word processor scenario 6, TELNET - Create word processor documents
35	42	Database scenario 11, Personnel maintenance
5	6	Database scenario 12, Bulk insert, export and import data
5	6	Database scenario 13, Export and import data, add indices
21	25	Database scenario 14, Print class review report
345	414	Database scenario 15, Quota management
52	62	Database scenario 16, Muster class
33	39	Database scenario 17, Non-nested and nested keyed queries
15	18	Database scenario 18, Sequential query with aggregate functions
101	121	Database scenario 19, Print class review report
177	212	Database scenario 20, Keyed query - eight table join
15	18	Sign-on scenario 21, Sign-on and sign-off

#### 4 Scenario\_Details.

See the Live Test Demonstration (LTD) Vendors Manual for listings of the scenarios and additional information.