

Momentum for VABS

Workstation Update



June 1990

HP Apollo 9000 Series 400 Workstations and VRX Graphics Systems Introduction

Hewlett-Packard is introducing a new series of workstations and graphics system on June 18th. These workstation systems are the first to combine the innovation of Apollo with the quality and reliability of HP, and also the first to run either the HP-UX or Domain/OS operating systems.

A complete literature set will be available at the time of introduction. The set consists of a single-page photo card per product and multi-page data sheets on specific products. This literature spans the SPUs, graphics systems and user interfaces that are being introduced. Your HP sales representative can order additional pieces of literature for you that are appropriate for your company's specific needs.

In June, field and customer introduction events including tele-conferences and seminars will take place in strategic locations worldwide.

Standards Briefing

OSF	Standards implementation continues to be a large part of on-going HP-UX development.
UI	But there are still questions about standards...
X/Open	
NIST	"What do the standards acronyms stand for?"
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This briefing will help you answer those questions in regards to the base operating system and demonstrate HP's leadership position in standards.

What Are the Main Standards Bodies?

	Organization	Description
Implement	OSF - Open Software Foundation UI - UNIX International	Implementors and sellers of standards-based UNIX plus their own value added features
Endorse	X/Open - X/Open Limited	Comprehensive consortium of companies that endorse via a "seal of approval" with the goal of better software portability
Specify	POSIX - Portable Operating Systems Interface for Computer Environments (IEEE Committee)	Working group that was an outgrowth of the /usr/group standards committee (as Uniform was then known) whose goal is to specify application portability
	NIST - National Institute of Standards and Technology (formerly NBS - National Bureau of Standards)	Government version of POSIX
	AT&T - American Telephone and Telegraph	Original specifier of SVID and implementor of proprietary UNIX
	IEEE - Institute of Electrical and Electronic Engineers	Umbrella organization for standards bodies such as POSIX
	ISO - International Standards Organization	International organization for standards bodies such as ANSI
	ANSI - American National Standards Institute	Standards body which specifies various standards

As seen in the preceding table, there are, in general, three types of standards organizations - Specifiers, Endorsers, and Implementors. An analogy with the nuts and bolts industry illustrates these three organizations:

Specifiers

The individual organizations or groups of manufacturers that work to reach a consensus in regards to specific standards. In the case of nuts and bolts, one type of spec is Metric and another is the US thread standard.

Endorsers

The independent organizations, such as Consumers' Union or manufacturing consortiums which determine whether a given product meets specs and can be "branded" as such

Implementors

The manufacturers of the nuts and bolts.

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

With What Standards Does HP-UX 7.0 Comply?

Specifying Body	Spec	Description	HP Status	Test Suite
AT&T	SVID2 BASE	System V Interface Definition Issue 2 (Volumes 1, 2 and 3)	Comply at 7.0 and before	SVVS3
POSIX	P1003.1	Operating system portability specs	Comply at 7.0 and before	Never will be one
NIST	FIPS 151-1	Federal Information Processing Standard specifications equivalent to POSIX 1003.1 for the government.	Comply at 7.0 but test suite not yet available	PCTS in Beta test phase
X/OPEN	XPG2 XPG3	Specifications document in 1988 Updated spec document to correct conflicts with POSIX 1003.1 and ANSI C (1989 version)	Branded at 7.0 and before Comply at 7.0	XVS2 XVS3 not yet approved as branding tool

How Do We Stack Up Against The Competition?

	SVID2 BASE	POSIX* 1003.1	FIPS 151-1	XPG2	XPG3	Current
HP-UX 7.0	Yes	Yes	Yes	Yes	Yes	Now Shipping
Sun OS 4.03	No	No	No	No	No	Now Shipping
Sun OS 4.1	Yes	Yes	Yes	Yes	No	Ship 4/90
DEC ULTRIX 32 UWS 2.2**	No***	Yes	No	Yes	No	Now Shipping
IBM RT/AIX 2.2.1	Yes	Yes	No	No	No	Now Shipping
IBM RT/AIX 3.1	Yes	Yes	Yes	No	Yes	Intro 2/90 Ship???
AT&T V.4	Yes	Yes	Yes	Yes	Yes	Source Code ONLY Is Now Shipping

* Since FIPS 151-1 is the government's version of POSIX 1003.1, FIPS 151-1 compliance implies POSIX compliance

** ULTRIX 32 is a component of ULTRIX workstation software revision 2.2

***Compatibility package V.2 is available

Clearly, HP holds a leadership position today in the area of standards. And it appears that we can maintain this position for the next three to six months, especially for our solution creators.

FrameMaker Performance on the HP9000/345 and SUN SPARCstation1

Recent performance tests of FrameMaker 1.3 running with X Windows shows the HP9000/345 to have slightly better performance than the SUN SPARCstation1 on the workload tested. Other testing shows that the type of graphics interface used and the amount of RAM are the two primary factors that contribute to FrameMaker performance on HP-UX workstations. Disk access is minimal for this test and therefore not a performance factor. Your mileage will vary. These results show that MIPS and MFLOPS ratings are not reliable predictors of application performance.

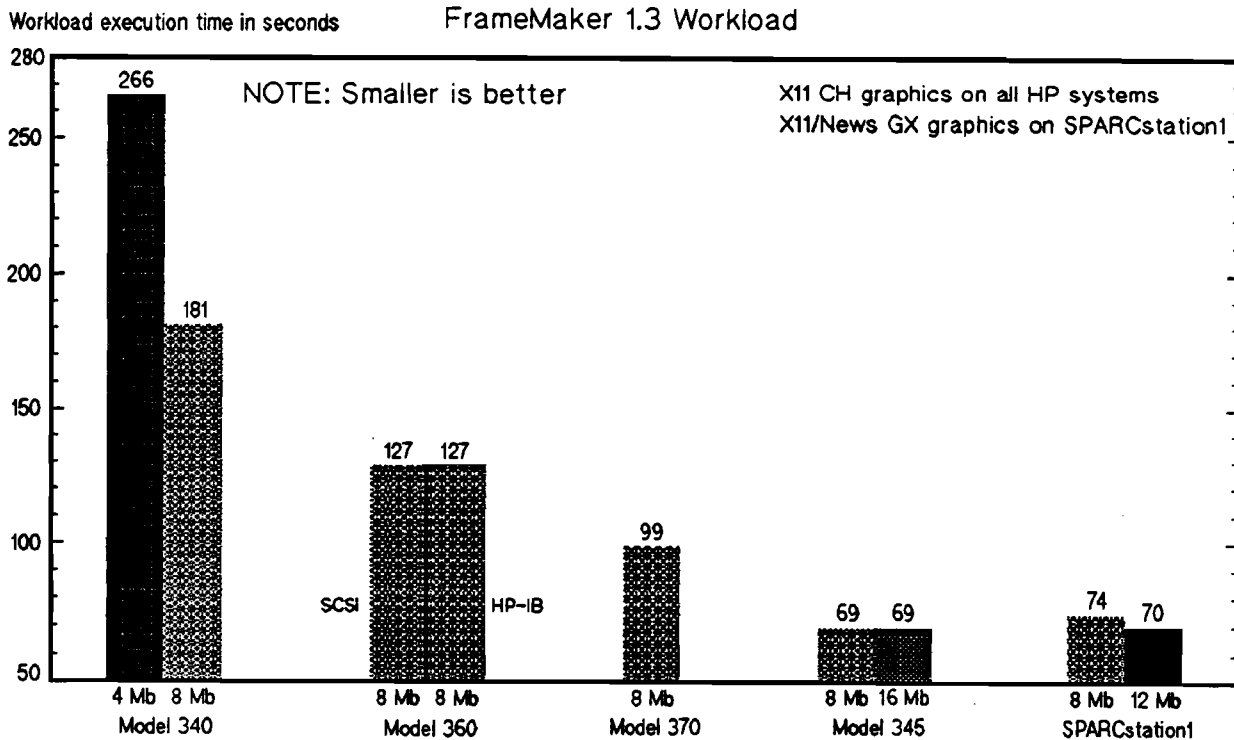
FrameMaker Performance on the HP9000/345 and SUN SPARCstation1

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Fort Collins Workstation Lab - Performance Evaluation Section

This test, including OS and windows, requires a minimum of 6 Mbytes of memory for acceptable performance on an HP9000/300, leaving 2 Mbytes of user memory. While FrameMaker will run on a 4 Mbyte system, a performance degradation of 30% to 45% can be expected. Additional physical memory over 8 Mbytes yields minimal improvement. The use of MH, C+, CH, or CHX graphics provides considerable improvement over the M or C graphics options.

HP-UX Workstations vs Sun SPARCstation1



Configurations Tested

To provide a reasonable comparison between the SPARCstation1 and Model 345, the configurations were matched as closely as possible in terms of functionality and pricing. The Model 345 was tested with 8 Mbytes and 16 Mbytes of RAM, using the 200 Mbyte internal SCSI disk drive and CH graphics, running HP-UX 7.0 with X11. The SPARCstation1 was tested with 8 Mbytes and 12 Mbytes of RAM, using the internal disk drive and GX graphics, running SunOS 4.0.3c with X11/NeWS.

The Model 340, 360, and 370 configurations consisted of CH graphics, 8 Mbytes of RAM, and one 7959B disk drive connected via high-speed HP-IB, running HP-UX 6.5 with X11. An additional test was run using CH graphics, 8 Mbytes of RAM, and one 7959S SCSI drive, running HP-UX 6.5 with X11. A verification test confirmed that results with HP-UX 7.0 are the same.

Workload

FrameMaker was started and the document loaded before starting the timer on the test workload. The workload consists of the following eleven steps executed via the FrameMaker macro facility:

1. Insert two words at the beginning of the document.
2. Page through all 22 pages of the document and return to the first page.
3. Reformat the entire document.
4. Bring up the TOOLS window.
5. Bring up the HELP window.
6. Page through all 22 pages of the document and return to the first page.
7. Page through all 22 pages of the document and return to the first page.
8. Reformat the entire document.
9. Bring up the TOOLS window.
10. Bring up the HELP window.
11. Page through all 22 pages of the document and return to the first page.