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A/UX: Overview and Description (01/95)

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TOPIC -----

This article is from an A/UX Frequently Asked Questions (FAQ) list maintained at a NASA Internet ftp site.

A/UX is Apple's implementation of UNIX (it's Apple's/UNix) for various Macintosh computers. A/UX merges two computing environments, UNIX and the Macintosh Finder OS, and provides the full functionality of both.

DISCUSSION -----

A/UX is based on AT&T UNIX System V.2.2 with numerous extensions from V.3, V.4 (such as streams), and BSD 4.2/4.3 (such as networking, the Fast File System, job control, lpr, NFS with Yellow Pages, SCCS, and sendmail 5.64). It also provides full POSIX compliance. A/UX provides SYSV, BSD and POSIX compatibility switches and libraries.

A/UX is fully compliant with the System V Interface Definition (SVID). A/UX provides all three standard shells: sh, csh, and ksh. X-Windows is also provided standard.

A/UX 3.0 and later incorporates System 7 for the Macintosh allowing for the use of the vast majority of Macintosh applications under A/UX. System7 and UNIX are fully-integrated under A/UX 3.0 and later with the UNIX file system being seen as a disk drive by the Finder.

There are quite a few people who feel that A/UX is a near-perfect implementation of UNIX. Of course, every operating system has its share of devotees, so that's not a very valid scale of whether the system is any good.

A/UX is UNIX - it's not some form of pseudo-UNIX. It insulates the user from UNIX, if required, but the System Administrator needs to become UNIX-aware. Furthermore, if you want straight UNIX, you can get it. People may also complain that A/UX is based on an "obsolete" version of AT&T UNIX (V.2.2). In many ways, Apple's extensions make A/UX very V.3-like (V.3 is in many ways an enhanced V.2 - it even uses the V.2 kernel). The list of extensions to A/UX are impressive. Compare what you get standard with other systems and you'll be shocked! On some, 'cc', 'f77', NFS, etc... are costly options.

The main consideration (and opposition) to A/UX is the platform it runs on: the Macintosh. Some consider this a boon, others a bust. At present, Apple's

top-level workstation is the Quadra 800, a 33MHz 68040-based system. Some consider this underpowered; others consider it overkill; others consider it, like Goldilocks, "just right".

If you need super-fast state-of-the-art number crunching capability then A/UX may not be for you; the Q800 benchmarks at maybe 10-16 SPECmarks (depending on compiler used, external cache size, etc...) and you can get lots faster with other platforms. Of course, you'll have to "settle" for their operating systems, but if you need it, then that's how you'll get it. Of course, this doesn't mean that A/UX "crawls".

There are very few people who need this type of performance though. If you need (or just want) a UNIX workstation with the speed and power of UNIX and the user interface and application selection of the Macintosh then A/UX is the way to go. In many, many ways, A/UX is the UNIX "for the rest of us" even if we are long-time UNIX junkies. If you love the Macintosh, you'll love A/UX; if you love UNIX, you'll love A/UX. And if you want a near-perfect marriage of the two, then you'll love A/UX.

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