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## A/UX: Optimizing X Window Performance (9/94)

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TOPIC -----

I am working on a port of an HP X Window System application, using a Macintosh IIci with 8MB of internal memory. The issue is X-Window display performance.

The display of the X Window System application is faster when the X-server part is used over the network on an HP Model 340, than when the X-display is used on the Macintosh IIci itself!

The kernel has been modified with kconfig as is described in the "X Windows System User's Guide," page 2-6.

Can I get additional optimization by modifying other parameters or in future versions of Apple's X Windows product.

DISCUSSION -----

This is normal behavior for an X environment. Overall performance depends on the combined performance of the host running the X server and the host running the X clients. Network speed is also important, but assuming Ethernet speeds, not so much as computing performance. If both the client and server are running on the same computer, then the combined load will predictably degrade performance.

Because your customer is running the server on the Macintosh IIci, you should make sure they understand the implications of using NuBus versus built-in video with anything other than 1-bit displays. Using built-in video in 8-bit mode could severely impact performance.

Optimizing an X system is similar to optimizing any A/UX networking system. You can improve performance by optimizing the following:

- Available RAM. Install 5MB or more, 8MB if running both server and clients. In A/UX 3.0, at least 8MB of RAM is recommended.
- Kernel parameters like NBUF and NMBUFS. At least 600 block I/O buffers (NBUF) and 200 network buffers (NMBUFS) is recommended.
- Speed and location of swap space. This can be faster if swap space is

located on a second drive.

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