

Why Deployed SUNs Should Have Disks.

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1. The deployment this fall should be a *dress-rehearsal* of the large-scale deployment scheduled for 1985 and 1986. Except in scale, the deployment this fall should be as close as possible to the final deployment.
2. The target IBM workstation will have disks. Therefore, our fall 1984 deployment should match this.
3. Unless pressing need is experienced in the current deployment, there will be NO motivation for effort in tasks such as:
 - a. disk maintenance,
 - b. mechanics of software distribution,
 - c. and development of software for disconnected operation.

Necessity is the mother of invention.

4. It is claimed that deploying diskless SUNs allows recycling disk servers as file servers. What is to become of the diskless SUNs in that case? If each SUN had its local disk, we would have 75 stand-alone usable systems to be recycled. Otherwise we would have 75 worthless pieces of hardware.
5. In addition to the above primary reasons, there are a host of secondary reasons not to go diskless:
 - a. VICE design has always assumed workstations with disks. During the design phase, diskless operation was explicitly ignored because it was argued that the cost of disks was declining to a point where disklessness was not desirable. *We should revisit the design if our ground rules have been changed.*
 - b. Since disklessness implies non-local paging, we will NEVER be able to disassociate the performance penalties caused by non-local file access from the penalties of non-local paging.
 - c. The figures cited indicate that diskless SUNs will cost about \$2000 more than diskless ones. For 75 SUNs, this amounts to \$150K. We believe this is a trivial price to pay for the ability to more closely simulate the final deployment.
 - d. SUN will be discontinuing disk server support from December 1984. They will then be switching to a file server. Are we really interested in deploying a file server cascade? (Remember this is similar to PC Server!). If we persist with disk servers, who will maintain the software?