about 20 minutes per node. Without a way of regularly purging redundant or superfluous workstation data on disk, even with efficient backup procedures, many unnecessary files are copied. To counter file proliferation, automatic tracking of disk file utilization and priority is needed.

Interaction with workstation companies in proprietary areas is the biggest remaining problem. To marry user-tailored software to vendor bundles, it is often necessary to learn more about vendor databases or output format than vendors will readily share. It takes time to build up trust—time to convince vendors that capturing customer concepts and advances is worth sharing vendor secrets. Workstation companies that don’t practice give-and-take won’t attract sophisticated users; their evolution may suffer and, ultimately, their success.

We can convert mainframe to workstation environments without losing the unique capabilities available on mainframes. Workstations are not unlike mainframes in that sophisticated IC design tool users can expand their systems with greater hardware and software capability. Our initial transition cost from mainframe to workstation design environment was $100,000 per designer—split evenly between turnkey hardware/software costs and additional support manpower. Workstation users sharing knowledge, directly one-on-one and indirectly through system vendors, can multiply everyone’s achievement.

References

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