

F.C. ✓ KO

Printed by Win Hindle

DIGITAL CONFIDENTIAL Document

**I N T E R O F F I C E   M E M O R A N D U M**

**Doc. No:** 026545  
**Date:** 21-Jan-1992 01:53pm EST  
**From:** Ken Olsen  
          OLSEN.KEN  
**Dept:** Administration  
**Tel No:** 223-2301

*Bill Strecker*  
**TO:** See Below  
*cc - Win + others*

**Subject:** PREPARATION FOR STRATEGY WOODS MEETING

\*\*\*\*\*  
DIGITAL CONFIDENTIAL

DO NOT DISTRIBUTE OR COPY

\*\*\*\*\*

The Strategy Subcommittee of the Executive Committee is meeting the first of next week. At that time, I would like to review all the computer and server products scheduled, planned or in the proposal stage. Please assemble a list to include the cost still to be incurred for development, tooling, setting up the factory, filling the inventories, and other production costs involved with each one.

At the same time, I would also like to make two propositions to the Strategy Subcommittee:

**I.   MODULAR COMPUTERS**

First is the modular approach to building computers where the common parts are laid out only once in separate modules which then are assembled to make the type of computer people desire. Part of the modular approach is to have only four to six separate boxes with their assemblies of disks so they do not have to be designed for each computer.

Designing a computer is then concentrated on optimizing the chip, the caches and the memory, and then testing and characterizing the system.

**II.   MODULAR SYSTEMS**

I propose that large computers, with large disk storage systems are obsolete. They are based on the old idea that we put everything through one big computer for increasing numbers of ALL-IN-1, Novell, or Pathworks users. We would need a bigger and bigger computer, with more and more MIPS. Fortunately, as these systems grew, we have been able to cluster computers and disks, but they are still very complex, very hard to balance and manage, and all the quite disconnected functions within a program like ALL-IN-1 are always in danger of interacting with each other.

When people say they want to do mainframe computing with their desktop machines, or when they say they want client/server computing, most of the time they do not have the slightest idea what they mean. I propose they mean they would like to divide all the tasks that go into most programs and spread them around individual machines. Doing this on a desktop with displays and keyboards, and wires on the floor, is, of course, crazy. But, the idea is obvious.

I propose, what this means to our kind of computing is that we have one standard database which does all the database work and nothing more. It does not serve software; it does not do computing; it does not store and forward. It is made by one group, then mass produced. It is easy to install and has only one set of spares. When bigger ones are needed, they are clustered together with a switch with FDDI cables. All other functions are broken up into individual functions and done by individual computers. One machine is a store and forward machine. Another serves software, etc.

If these propositions are correct, most of our computers now being built are obsolete. We should have only one server in maybe two or three sizes and a tiny number of general purpose servers.

This approach also wipes out, I believe, most of the problems we have with the 9000. Instead of running every program through the same machine, we assign one machine for every program. Every program has its own database. With high production of a small number of very simple machines, the cost is so low it is a lot cheaper than the terrible problems of running everything through one machine.

KHO:eh

KO:6479

(DICTATED ON 1/21/92, BUT NOT READ)

**Distribution:**

**TO:** BILL STRECKER ( STRECKER.BILL )

**CC:** Charles Christ @ CORE ( CHRIST.CHARLES )

**CC:** Remote Addressee ( PIER CARLO FALOTTI @GEC )

**CC:** Russ Gullotti @ CORE ( GULLOTTI.RUSS )

**CC:** Bill Johnson ( JOHNSON.BILL )

**CC:** Remote Addressee ( MAX MAYER @OGO )

**CC:** Frank McCabe ( MCCABE.FRANK )

**CC:** BOB PALMER ( PALMER.BOB )

**CC:** DICK POULSEN ( POULSEN.DICK )

**CC:** Remote Addressee ( JOHN RANDO @OGO )

**CC:** John Sims ( SIMS.JOHN )

**CC:** Jack Smith ( SMITH.JACK )

**CC:** David Stone @ CORE ( STONE.DAVID )

**CC:** Don Zereski ( ZERESKI.DONALD )

**CC:** BARRY GOLDSTEIN ( GOLDSTEIN.BARRY )

**CC:** Grant Saviers ( SAVIERS.GRANT )

**CC:** Bill Demmer ( DEMMER.BILL )

**CC:** Mike Thurk ( THURK.MIKE )

**CC:** Dick Fishburn ( FISHBURN.DICK )

**CC:** Win Hindle ( HINDLE.WIN )

**CC:** Martin Hoffmann @CORE ( HOFFMANN.MARTIN )

**CC:** Ken Senior @ CORE ( SENIOR.KEN )

**CC:** Dom LaCava ( LACAVA.DOM )

**CC:** BILL STEUL ( STEUL.BILL )

**CC:** PETER SMITH ( SMITH.PETER )

DIGITAL CONFIDENTIAL Document