

**SCHOOL ON RADIO USE  
FOR DIGITAL AND MULTIMEDIA  
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**Survey on Distributed Computing  
Networks - Networks of Workstations**

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**(PNUD/LAMENU/MEHU).**

# **1. Distributed computing Networks**

## **1.1 What is it?**

Distributed system is a programming infrastructure which allows the use of a collection of workstations as a single integrated system.

## **1.2 It 's Aim?**

The ultimate aim is to hide the hideousness of scattered resources across a number of hosts.

## **1.3 It's composition?**

A distributed system is composed of a number of autonomous processors, storage devices and databases which interactively co-operate in order to achieve a common goal.

## **1.4 What use is the Network?**

The communication network is used for information exchange, interaction and co-ordination among the various processes.

## **1.5 How is the system?**

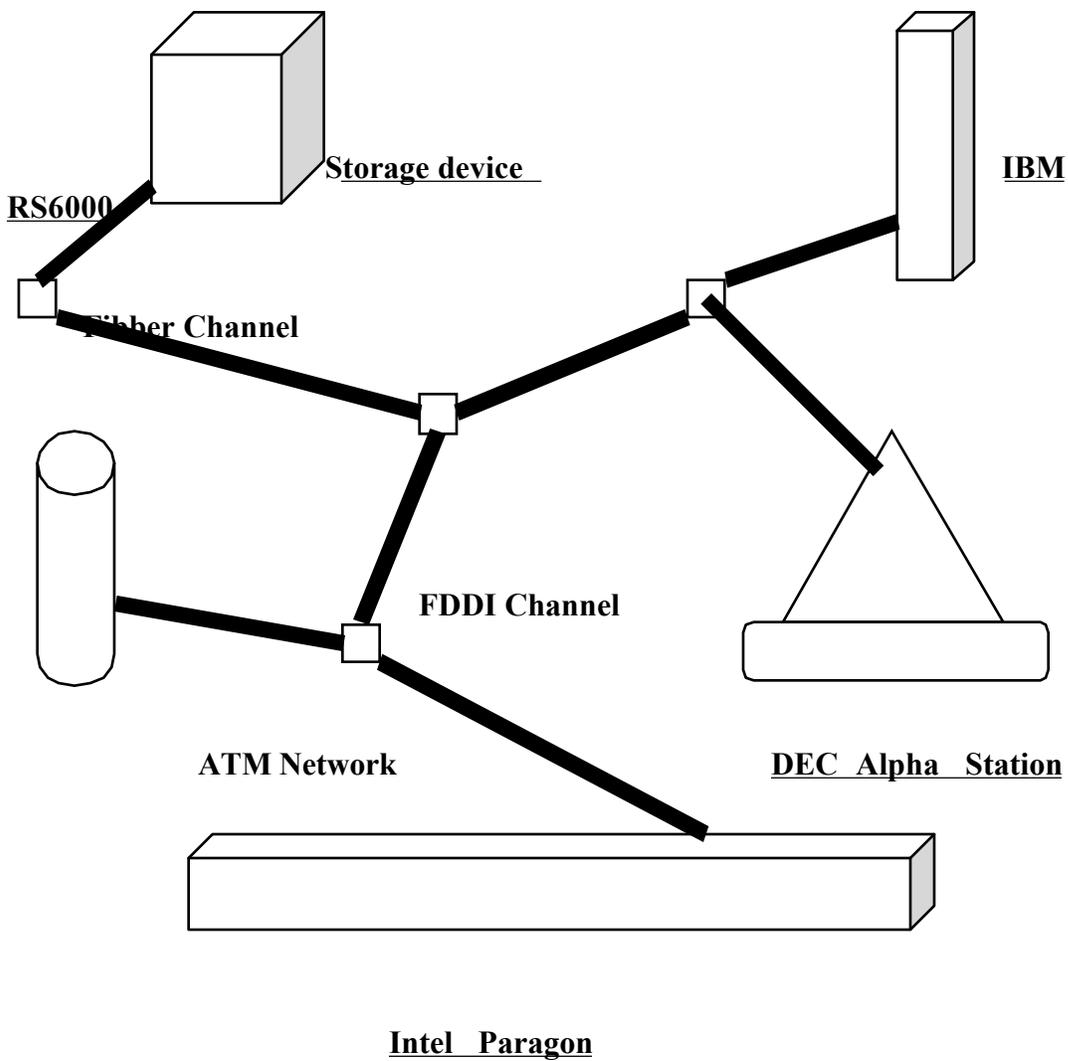
Some systems are a library of routines intended at communication between hosts, while other systems link the various hosts tighter such that the application sees only one system.

## **1.6 Why a Distributed system?**

Workstations and PCs give better performance due to the effect of volume manufacturing on computer price to performance ratios and are preferred.

But sometimes task at hand may be bigger than will feasibly run on a workstation in which case a Network of Workstations has to be used instead of supercomputer.

# 2. Networks of Workstations (NOWs)



**HIGH PERFORMANCE DISTRIBUTED COMPUTING NETWORK**



## **2.1 Challenges for Networks of Workstations**

The key issues involved in the successful performance of the NOWs is the ability to deliver the interactive performance of a dedicated workstation and at the same time provide the aggregate resources of the network for demanding sequential and parallel programs.

## **2.2 What is new about NOWs?**

The innovative feature of this new concept NOW or workstation cluster computing or hypercomputing, is the fact that the line between the processor and storage technologies like DEC Alpha, Cray 2S, Cray Y-MP, Convex C220 and system concepts like OS, disks, etc. is evaporating.

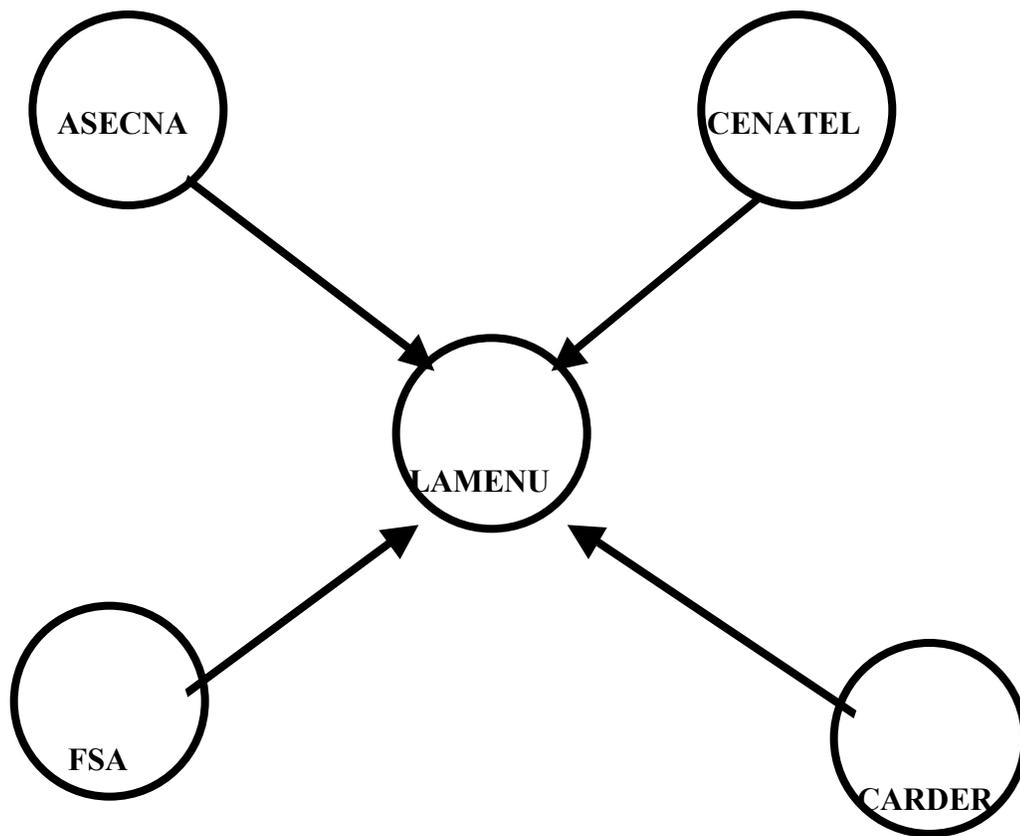
## **2.3 Opportunities for NOW?**

The advantages of NOW are several, when implemented on a building-wide scale of hundreds of machines. The pool of resources in a NOW include memory, disks and processors.

Due to speedy network communication as a result of switched networks, the NOW's aggregate DRAM can be used as a giant cache for disks.

### **3. Case Study:**

**Presently in BENIN we are implementing a Distributed Data Base which's data are providing from different places.**



**Data Base on Climate Changing in BENIN**  
**(PNUD/LAMENU/MEHU).**

**Conclusion:**

What to keep in mind is that for every thing you want to do, you must:

- Work hard
- Work smart
- Get help.

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