

J.2. Modman Bookwork 1

1) Middleware are software that is logically placed on top of the respective operating systems of the computers that is part of the system.

The middleware provided the distributed applications a single interface to communicate with each other. At the same time it hide the implementation on different hardware.

The middleware acts as an operating system does for a computer. It manage resources across the network.

Furthermore it also offers these functions:

- interapplication communications
- security services
- accounting services
- Masking & recovery from failures

(2)

- 2) The system appears as a single coherent system

Transparency	Description
Access	Hides σ in data structure
Location	Hides where data is located
Relocation	Hides if data is moved within
Migration	Hides when data is moved
Replication	Hides objects are replicated
Concurrency	Hides that object might be shared
Failure	Hides failure and recovery

- 3) Some failures are hard to distinguish dead process and a very painfully slowly responding one.

Other failures are by its nature unavoidable and you can't recover from them.

- 4) There exist two techniques

1) Simply improving capacity (increasing memory, upgrading CPU) called scaling up

2) By using distributed systems, using computer machines - called scaling out.

What emerging pervasive system do you believe is in the near future(5-10 years)? How about 10-40 years out?

5) We will see more sensors being built into cellphones and other smart devices such as watches all connected together. Further it will relate to augmented reality and virtual reality.

However I see the next 10+ years more devices will make there way into the human body. Enhancing the humans capability but also have all these devices interlocked in a distributed manner.