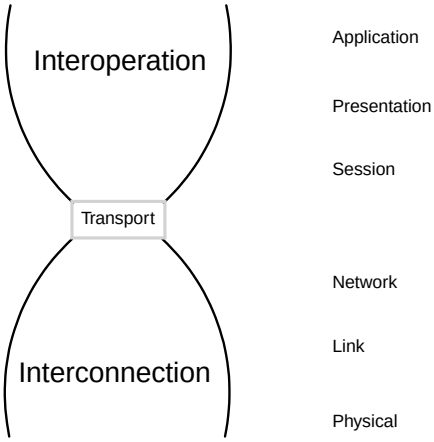
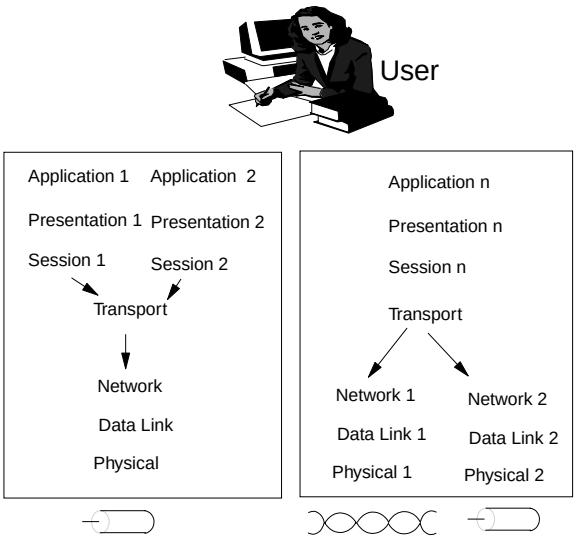
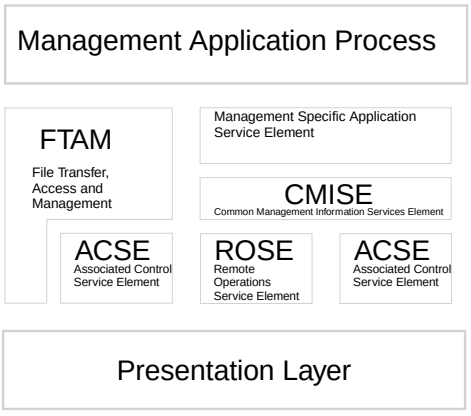
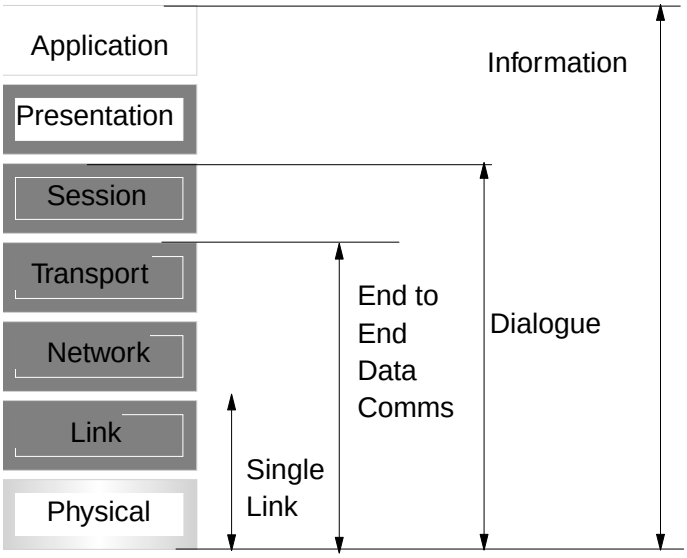
The OSI Basic Reference Model

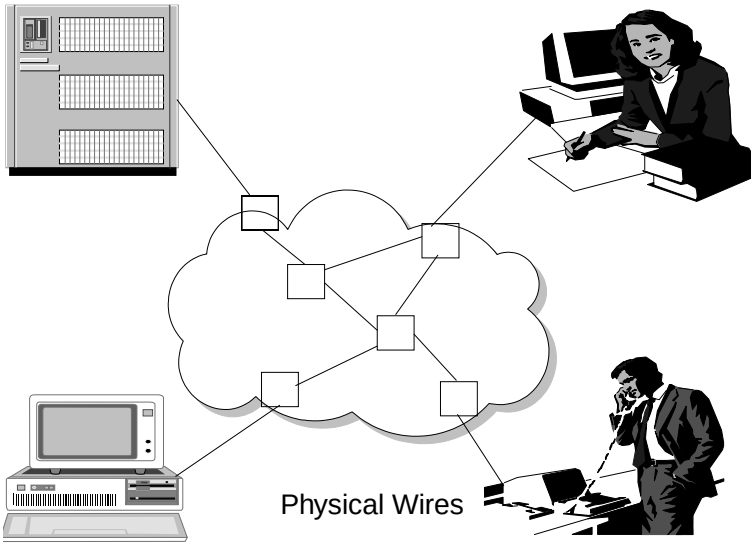


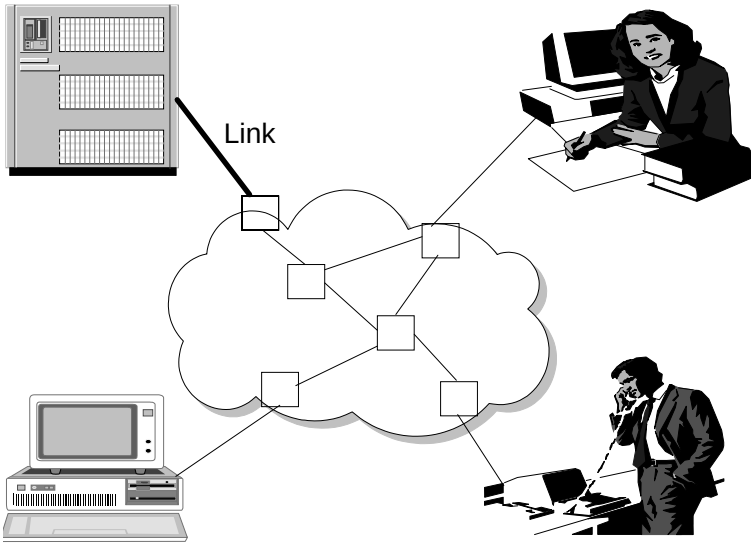
The 'Wine glass' indicating the relative number of options at each layer

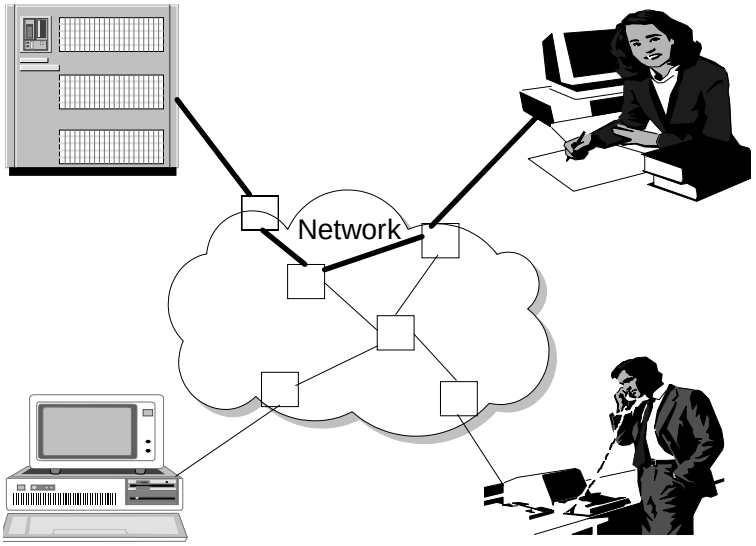


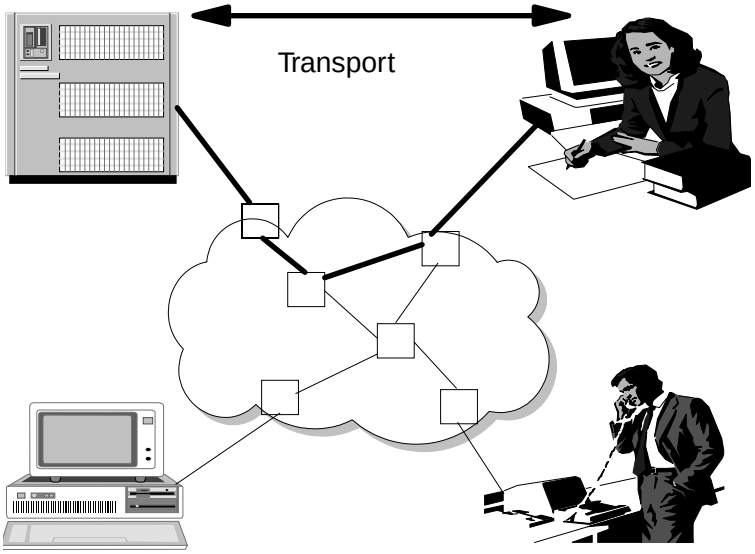





Physical Wires


Link


Network


Transport

Why OSI ?

Non-communicating proprietary systems

Users have equipment from many suppliers
(Show me a site with kit from one supplier
and I'll show you a site with more money than
sense !)

'Locked into a supplier'

Mergers, co-operating ventures,
joint research, Electronic funds transfer etc.

All these mean that companies need their
equipment to interwork effectively and
efficiently

Profiles

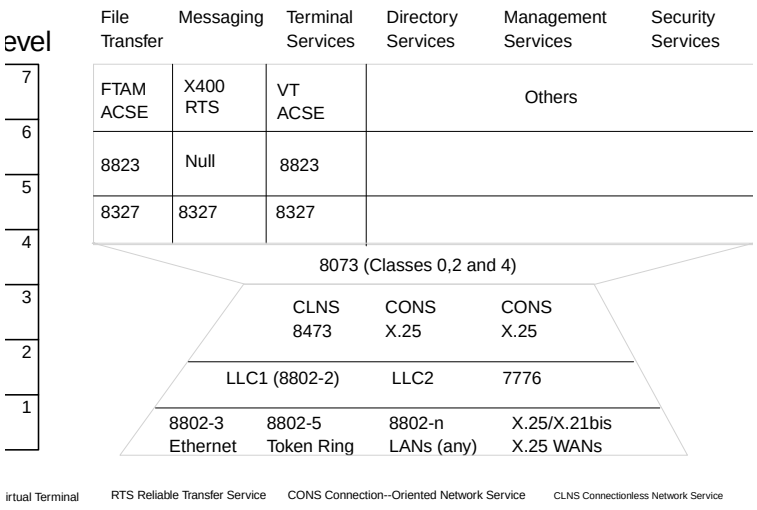
As there are lots of options at each layer, it is very easy
to have two OSI stacks that cannot communicate at all

(Window size, block size, transport class,
session subset etc)

A **Profile** is a set of options preselected for a given
application

Various bodies produce these (GOSIP, OSI/NM Forum etc

Government OSI Profile



In 1979 the ISO (International Organisation for Standardisation started work on OSI.

GOAL to provide a means whereby many different sorts of systems can communicate with each other and understand each other.

Method to define a model of computer communication - The OSI Reference Model

Already mandatory for Public Service bids
Much commitment from industry

Where to now:

Addition of OSI Management

Addition of Security

Possible restructure of level 7 as it is far too complex

Making the lowest 3 layers recursive in order to accommodate telecommunications

roblems:

- Profiles
- Power
- Portability

Data Communications has a structure.

By thinking about each function separately, we make a better job of it.

We can also replace one layer by another functionally equivalent one without having to rewrite the whole thing !

e.g. change the encoding from ASCII to EBCDIC.
e.g. change a telephone line for a LA|N