CSC104 Winter 2013

Why and how of computing
week 10

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Text: Picturing Programs

Outline

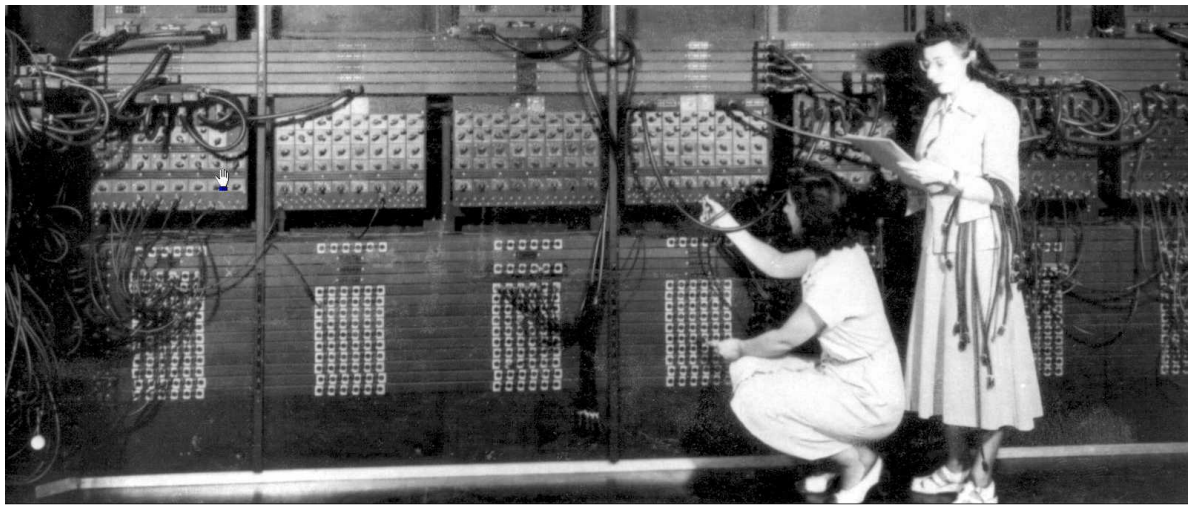
operators and operating systems

networks

Notes

machines take over in batches

Machines began to take over setting the program counter to a new job, collecting the output, fetching memory...but it was still one job at a time.

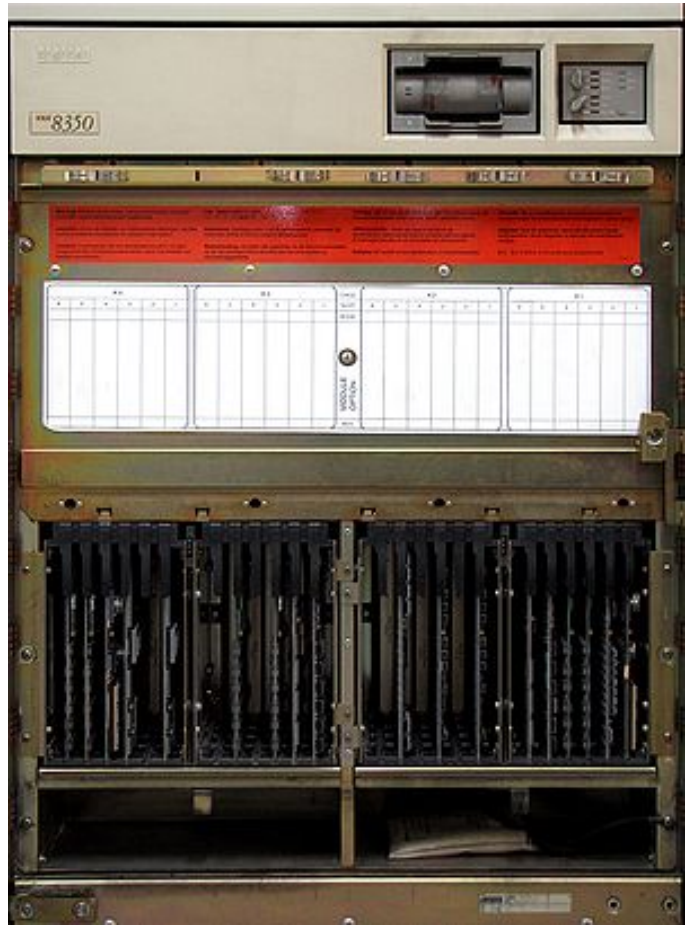


time sharing, version 0.1



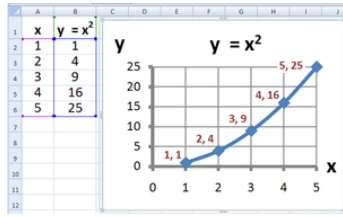






one user, one program, one computer

task-switching to time-splitting, v 1.0



Does one task stop, or only appear to stop, for the other?

unix (mostly) to the desktop

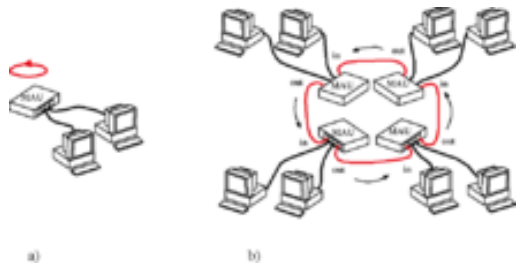
GUIs, time-sharing, networking, flame-wars

an operating system should have

- kernel (shell, shielded access to hardware, referee sharing)
- utilities

roundly connected

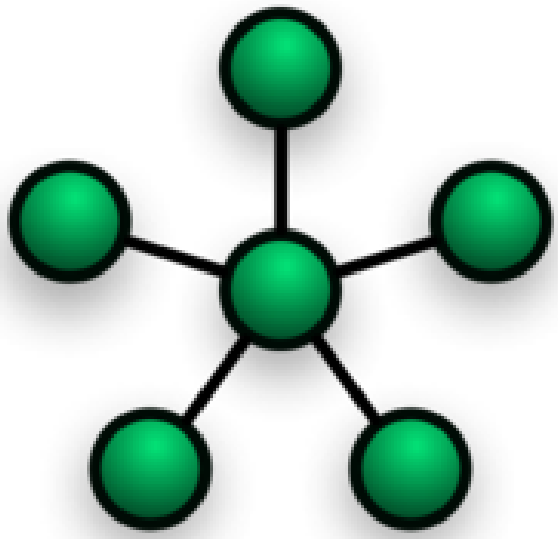
ring topology



wait for the token

centrally connected

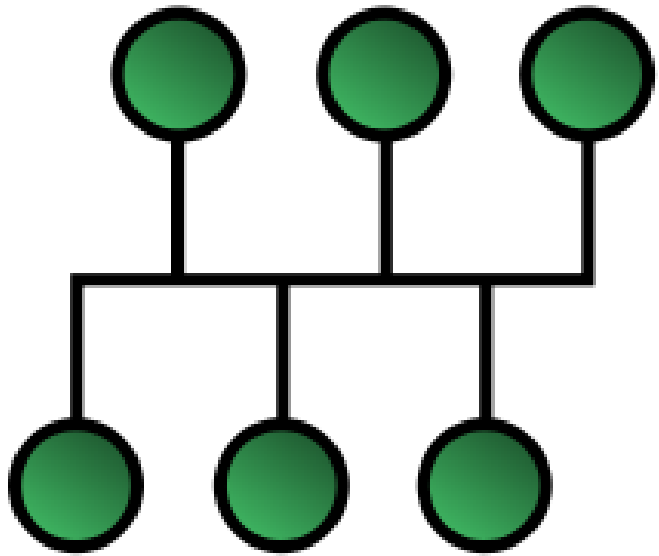
star configuration



server runs things

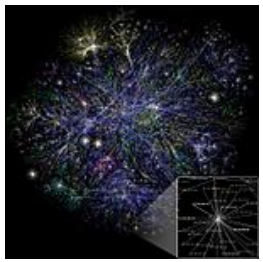
all connected

bus configuration

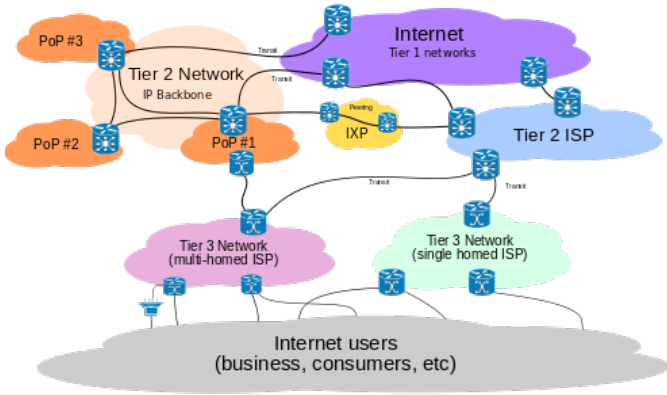


cooperate and back off

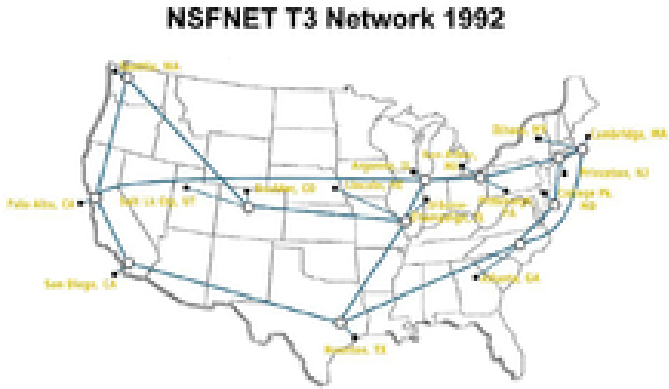
network of networks



local networks
interconnected by
gateways
(click images)



the medieval internet



- email
- file transfer protocol
- Network File Service
- Tim Berners-Lee: WWW impossible without open protocols

now the internet $\approx$ WWW

antipodal clicking...

- where's the content?
- how's it move around
- who's in charge?

Notes