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
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

coop erate 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 ≈ WWW
antipodal clicking...

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