Computer Networks: Motivation

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Why Study Computer Networks?

Will it be a stairway to wealth?

Will it help me achieve Nirvana?

Why Study Computer Networks?

Can get a good-paying job. Lot of job opportunities!

Earn brownie points from friends/family.

Usage: Personal Level

- Wake-Up: Email
- Breakfast: Web Browsing, Social Networks

- During Day: More browsing, video-conferencing

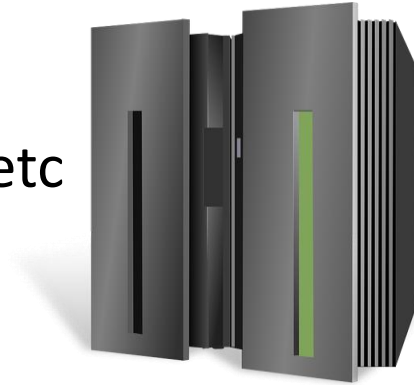- Night: Video-on-demand, Online banking/shopping

- Before bed: Online gaming

Wireless: Everything on the go

Usage: Business Level

- Make data, programs and equipment available irrespective of physical location
  - Customer/Employee records, inventory, financial statements etc
  - Custom software, Security software etc
  - Share printers, scanners
- E-commerce based companies (Amazon, EBay, Flipkart etc)

Out of ordinary/Futuristic Usage

- Sensor Networks: Instrument the physical world
  - environment/habitat monitoring (e.g. air pollution, wildlife); equipment/structure/health monitoring (e.g. motors, bridges, patient ECG)
- Near Field Communication: under few centimeters
  - Google wallet, Smart poster
- Interplanetary Internet

Impact

As of 2010
- 2B (billion) Internet users
- 294B emails sent per day
- 255M (million) websites
- 2B videos watched per day at YouTube
- 600M Facebook users

As of 2013: 1B YouTube users (15% earth population)

[Ref: http://mashable.com/2011/01/25/internet-size-infographic/]

Job Opportunities

- Deploy, maintain and debug
  - Network administrators, network technicians, field engineers, network analysts
- Design better networking technology, protocols and applications
  - Network programmers, research scientists, professors

Summary

- Information age
- High dependence on networks
  - Personal or business front
  - Useful to understand how it works