



# COMPUTER NETWORKS

---

**Sivaraman Eswaran Ph.D.**

Department of Computer Science and Engineering

# COMPUTER NETWORKS

---

## Computer Networks and the Internet

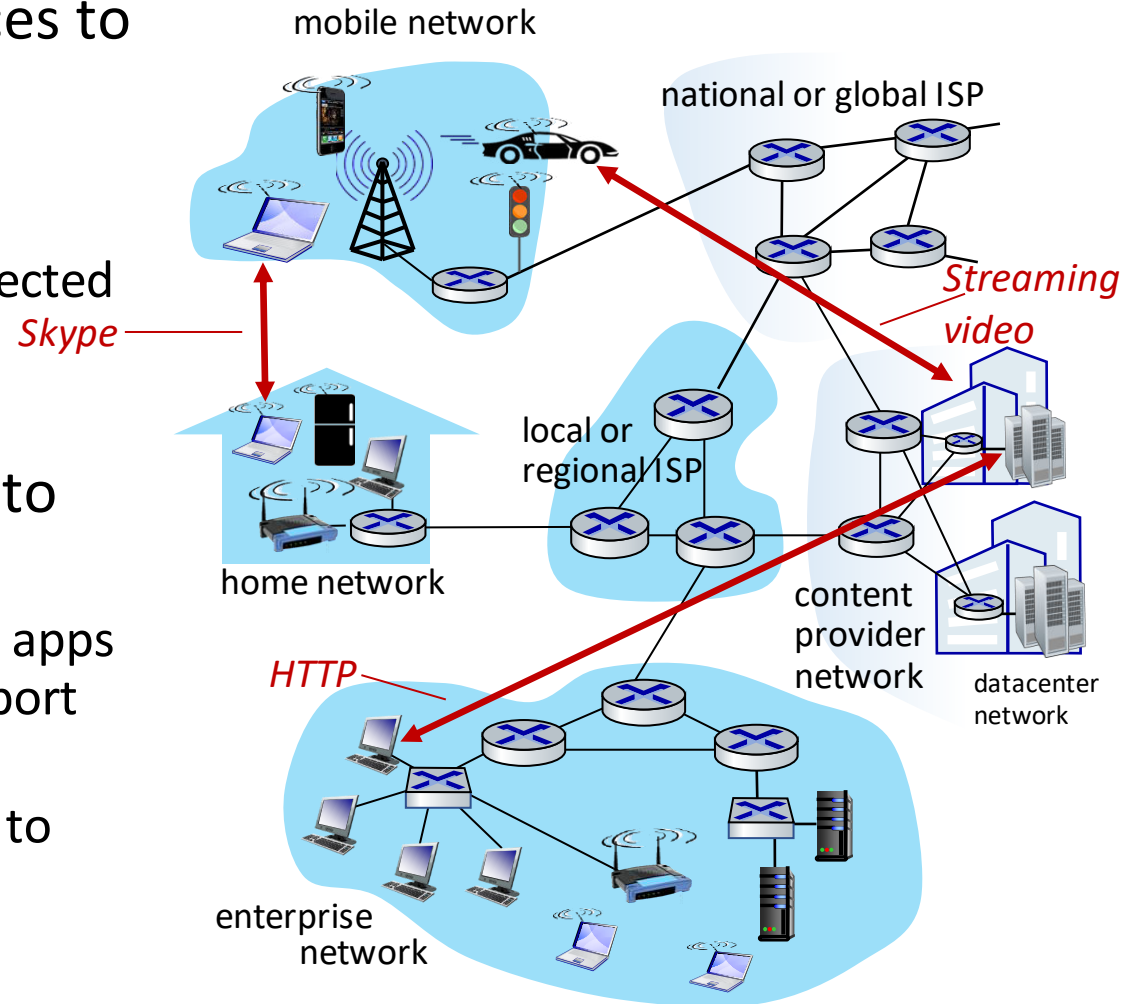
**Sivaraman Eswaran Ph.D.**

Department of Computer Science and Engineering

# COMPUTER NETWORKS

## The Internet: A “Service” View

- *Infrastructure* that provides services to applications:
  - Web, streaming video, multimedia teleconferencing, email, games, e-commerce, social media, inter-connected appliances, ...
- provides *programming interface* to distributed applications:
  - “hooks” allowing sending/receiving apps to “connect” to, use Internet transport service
  - provides service options, analogous to postal service



### Human protocols:

- “what’s the time?”
- “I have a question”
- introductions

... specific messages sent

... specific actions taken when  
message received, or other  
events

### Network protocols:

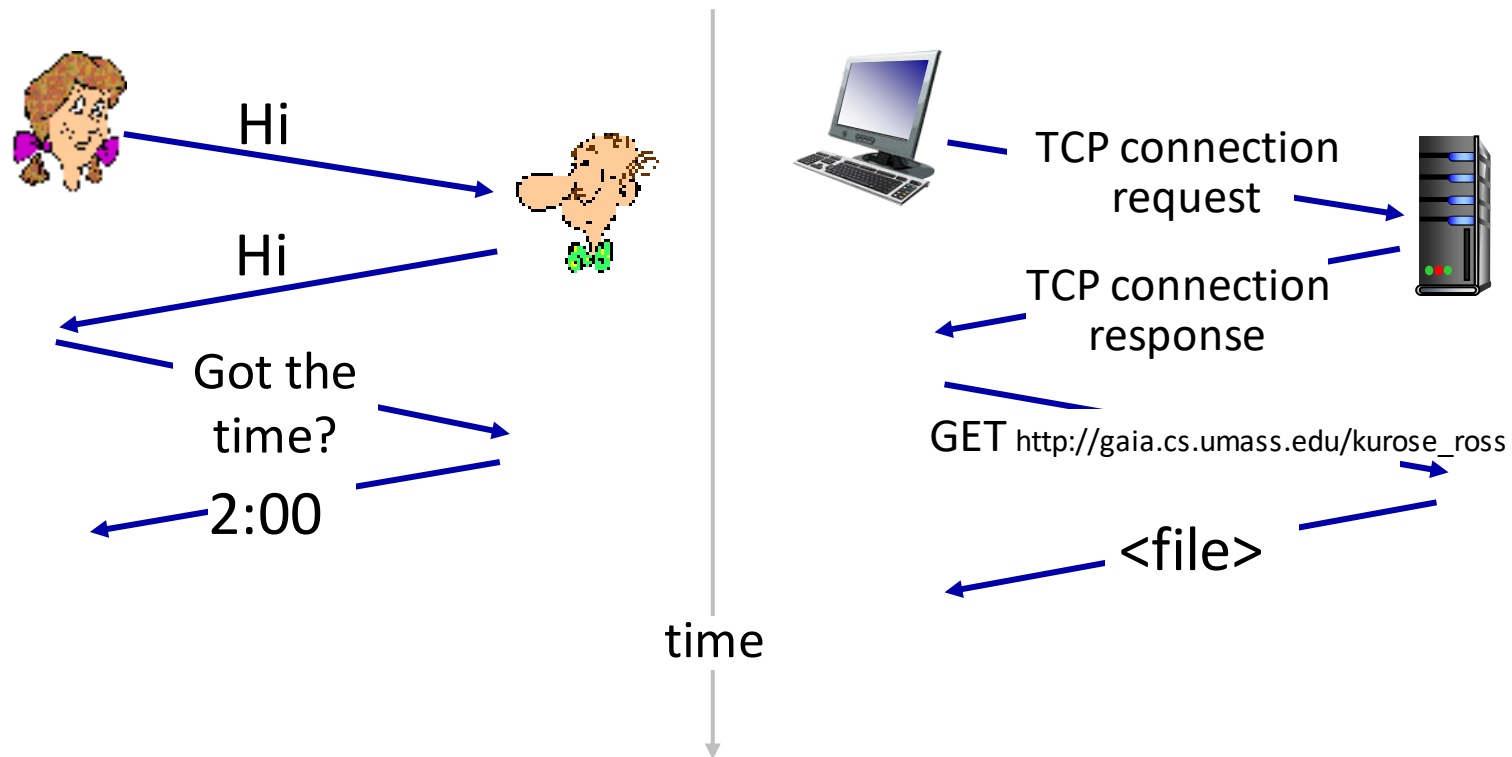
- computers (devices) rather than humans
- all communication activity in Internet  
governed by protocols

*Protocols define the **format, order** of  
**messages sent and received** among  
network entities, and **actions taken**  
on msg transmission, receipt.*

# COMPUTER NETWORKS

## What's a Protocol?

A human protocol and a computer network protocol:



*Q:* other human protocols?



Thank You  
For Your Attention



**THANK YOU**

---

**Sivaraman Eswaran Ph.D.**

Department of Computer Science and Engineering

**[sivaramane@pes.edu](mailto:sivaramane@pes.edu)**

**+91 80 6666 3333 Extn 834**