



# **SNS COLLEGE OF TECHNOLOGY**

## **An Autonomous Institution**

### **Coimbatore-35**



Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A++' Grade  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

## **DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

### **19ECT308-WIRELESS TECHNOLOGIES FOR IoT**

*III YEAR/ VI SEMESTER*

1

### **UNIT 2 – ARCHITECTURE AND DESIGN PRINCIPLES FOR IoT**

### **TOPIC 1 – INTERNET BASED COMMUNICATION**



# What is the Internet?

- The Internet is a worldwide collection of networks that link together millions of businesses, governments, educational institutions, and individuals.
- Each of these networks provides resources and data that add to the abundance of goods, services, and information accessible via the Internet.





# A Brief History of the Internet

- The Pentagon's Advanced Research Projects Agency (ARPA) begins a project to network computers around the country, ARPNET.
- 1969 started as a network of four computers at the University of California at Los Angeles ARPNET
- 1972 The first e-mail is sent
- 1981 the IBM PC is introduced
- 1984 Apple introduces the McIntosh computer



## A Brief History of the Internet (cont.)

- In 1989, a researcher named Tim Berners-Lee proposed the idea of the World Wide Web (WWW) as a way to organize information in the form of pages linked together through selectable text or images (today's hyperlinks) on the screen.



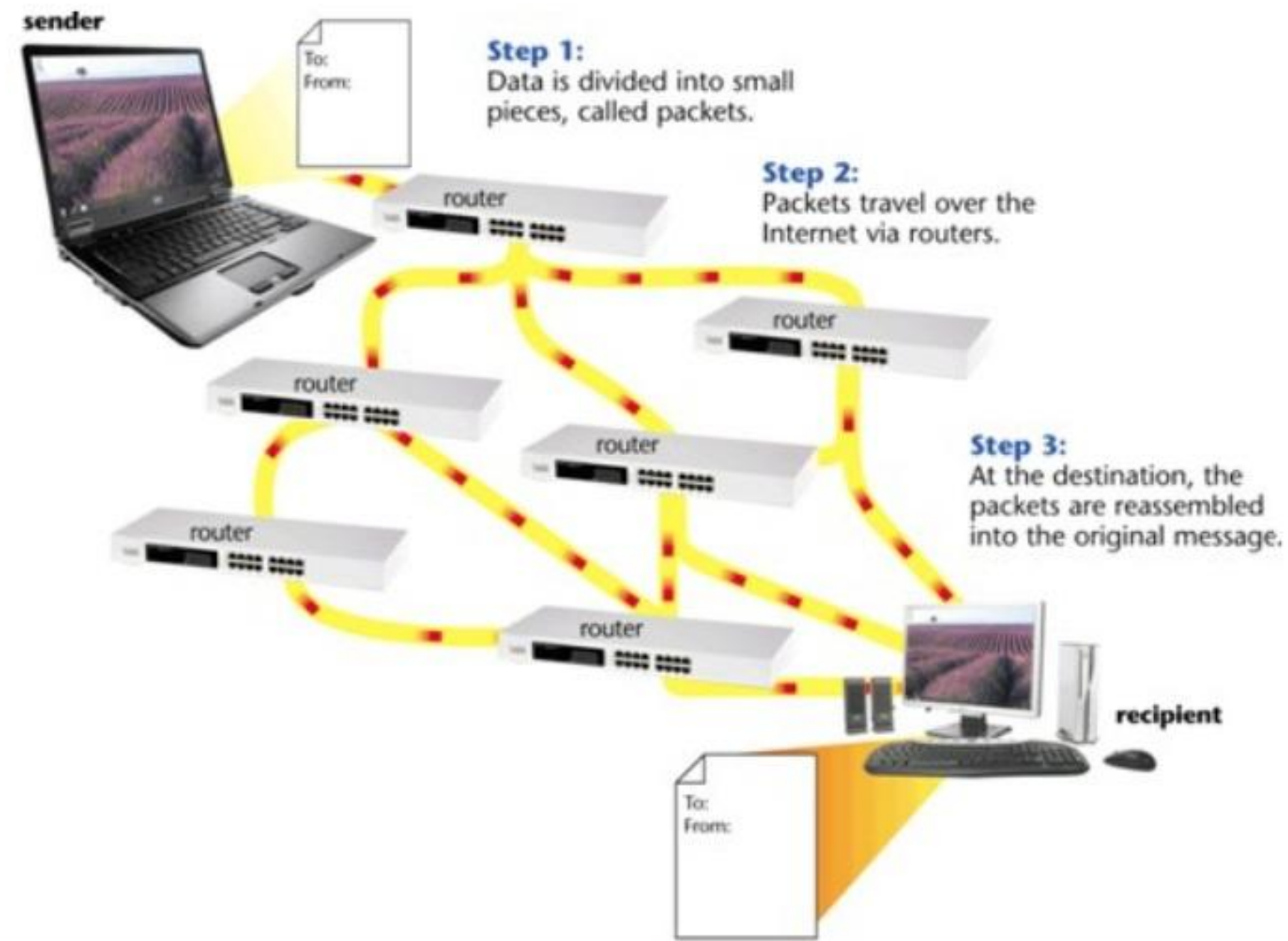


# The Internet Today

- Backbone now provided by variety of corporations
- Various organizations help define standards
  - Internet Society (ISOC)
  - ICANN ( Internet Corporation for Assigned Names and Numbers)
  - The World Wide Web Consortium ( W3C)
- Internet2 (I2)
  - Extremely high-speed network
  - Develop and test latest Internet technologies
  - Members include more than 200 universities in the United States, along with 115 companies



# How the Internet Works (cont.)







## Members of The Internet Community Today

- Users - People who use the Internet to retrieve content or perform online activities,
- Internet service providers (ISPs) - Businesses or other organizations, including telephone, cable, and satellite companies, that provide Internet access to others,







## Members of The Internet Community Today

- Internet content providers – create and publish content to the internet.
- Application service providers (ASPs) - companies that manage and distribute Web- based software services to customers over the Internet.
- Infrastructure companies - The enterprises that own or operate the paths or “ roadways” along which Internet data travels, such as the Internet backbone and the communications networks connected to it.
- Hardware and software companies - The organizations that make and distribute the products used with the Internet and Internet activities.





# Connecting to the Internet

- Slow speed technology
  - Dial-up access
- High speed technology
  - Digital subscriber line (DSL)
  - Cable television Internet services (CATV),
  - Satellite
  - Wireless Broadband
- Connection is always on



## E-mail

- The transmission of messages and files via a computer network
- Messages can consist of simple text or can contain attachments, such as documents, graphics, or audio/video clips
- Internet access providers usually provide an e-mail program
- Some Web sites—such as MSN Hotmail and Yahoo!—provide free e-mail services





## E-mail

- The e-mail address is a combination of

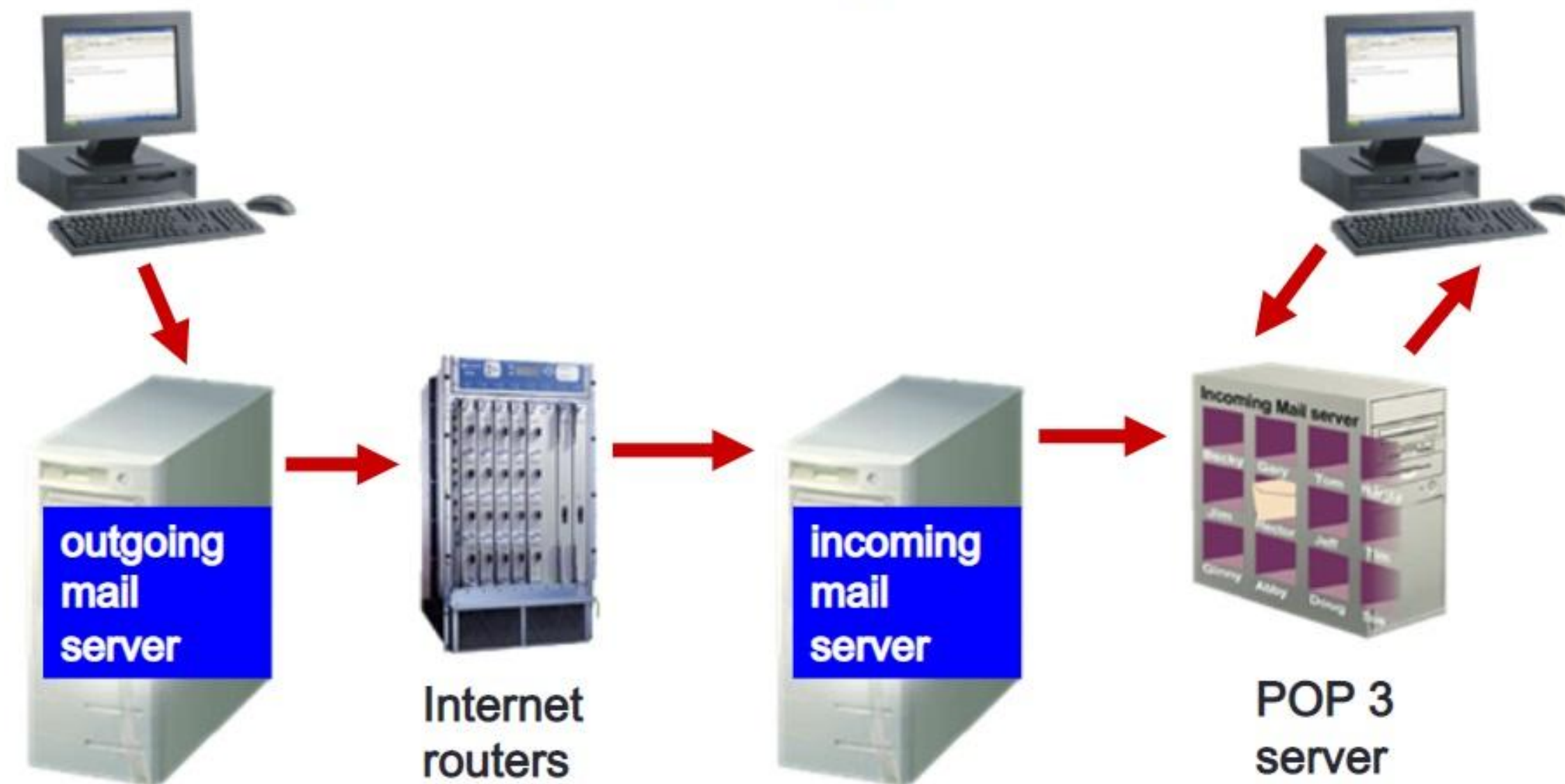
user name                      domain  
name

┌──────────┐                      ┌──────────┐  
samjohnson@scsite.com



## E-mail

- How an e-mail message travels

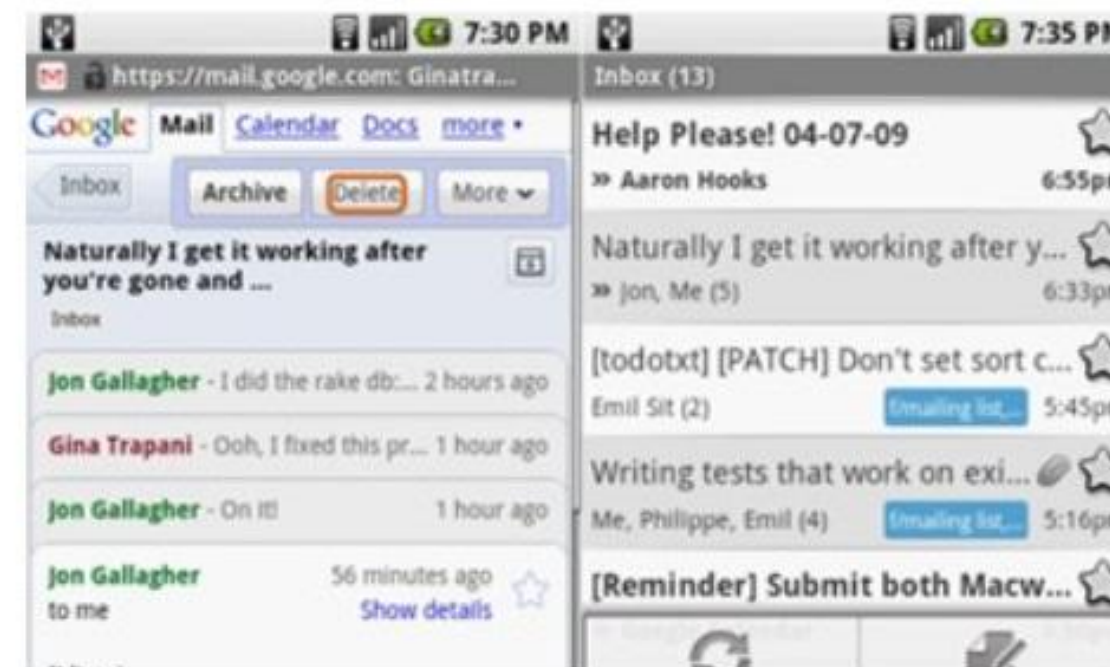






## Accessing E-mail

- E-mail clients are programs that allow you to send and receive e-mails.
- Different ways to display your email
  - As part of a web site
  - App on a smart phone





# Other Internet Services

- FTP (file transfer protocol)
  - FTP sites and servers
  - Allows file downloads and uploads
  - Anonymous FTP
  - FTP programs





## Other Internet Services (cont.)

- Newsgroups and Message Boards
  - Online area in which users conduct written discussions about a particular subject
  - Usenet
  - News server
  - Newsreader
  - Article
  - Posting
  - Threaded discussion
  - Message board



## Other Internet Services (cont.)

- Mailing Lists
  - Group of e-mail names and addresses given a single name
  - Subscribing and unsubscribing
  - LISTSERVs





## Other Internet Services (cont.)

- Instant Messaging
  - Real-time communication
  - See when one or more people are online
  - Exchange messages and files
  - Join a private chat room
  - Text messaging
  - Short Message Service (SMS)



# Assessment

List few Network security system

## Internet Security

- Firewall
- Filtering software
- Acceptable Use Policy (AUP)





**THANK YOU**