



SNS COLLEGE OF TECHNOLOGY
An Autonomous Institution
Coimbatore-35



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Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

19ECT308-WIRELESS TECHNOLOGIES FOR IoT

III YEAR/ VI SEMESTER

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UNIT 2 – ARCHITECTURE AND DESIGN PRINCIPLES FOR IoT

TOPIC – 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.

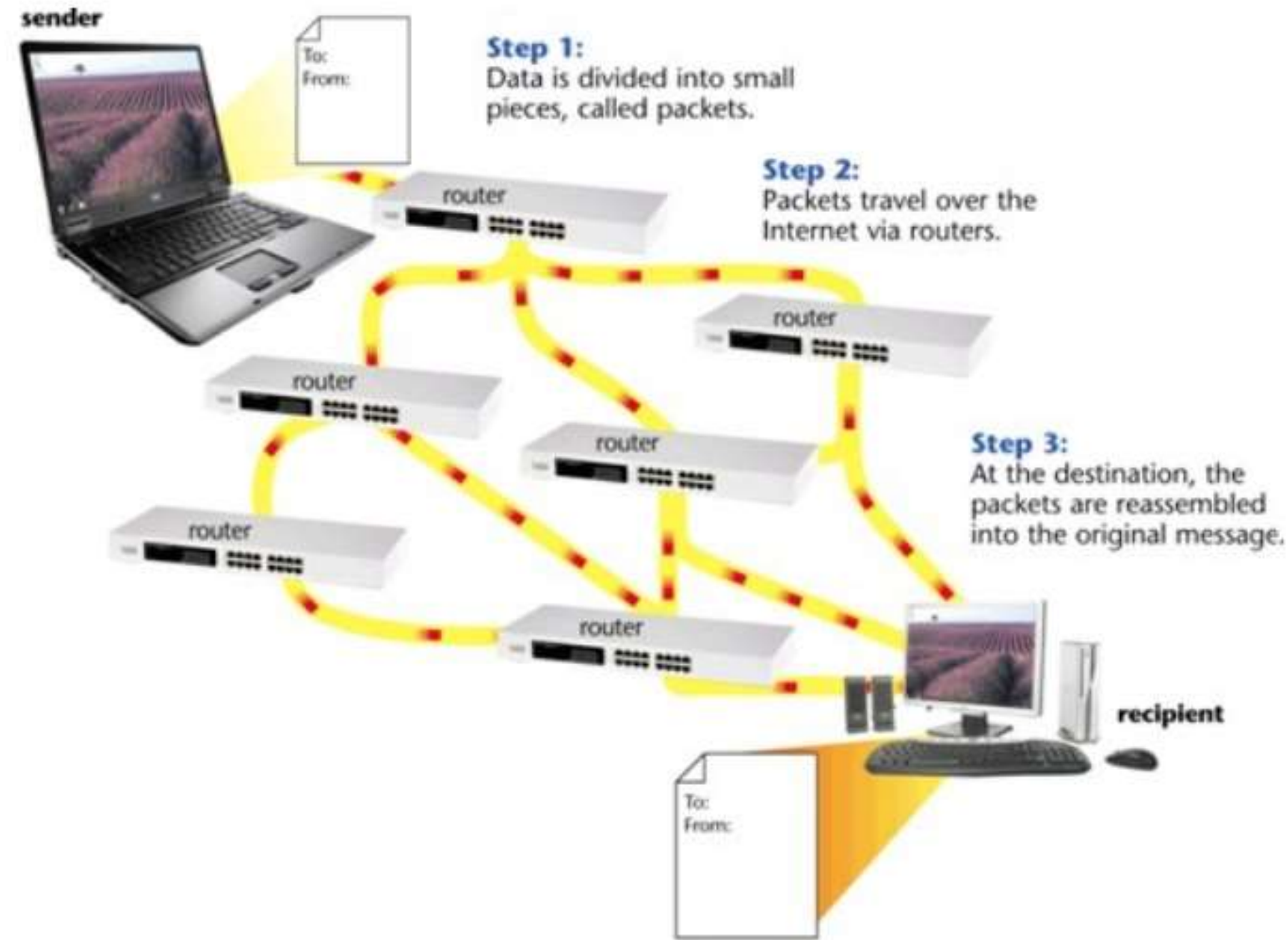


The Internet Today

- 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

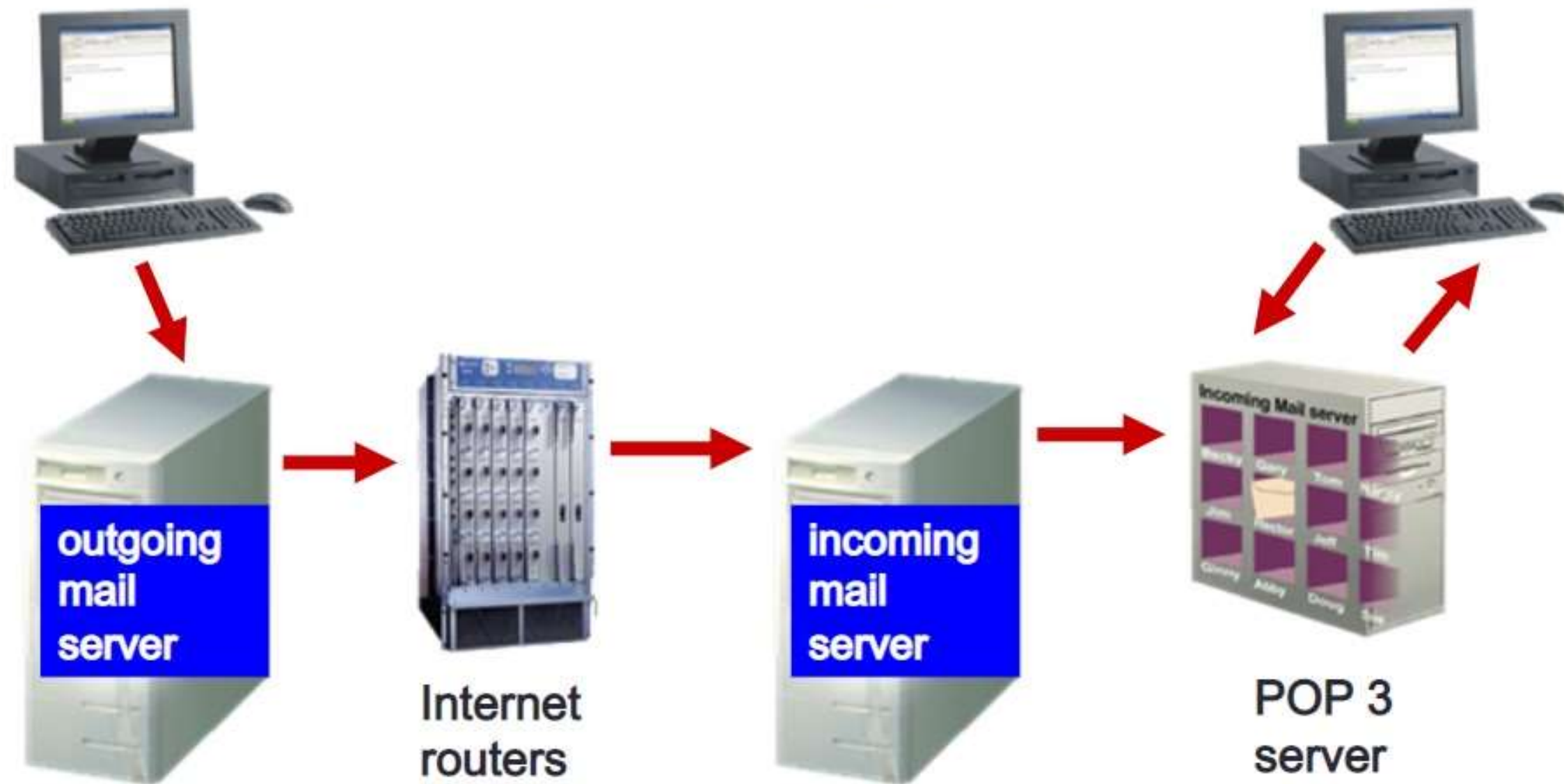
user name domain
name

samjohnson@scsite.com



E-mail

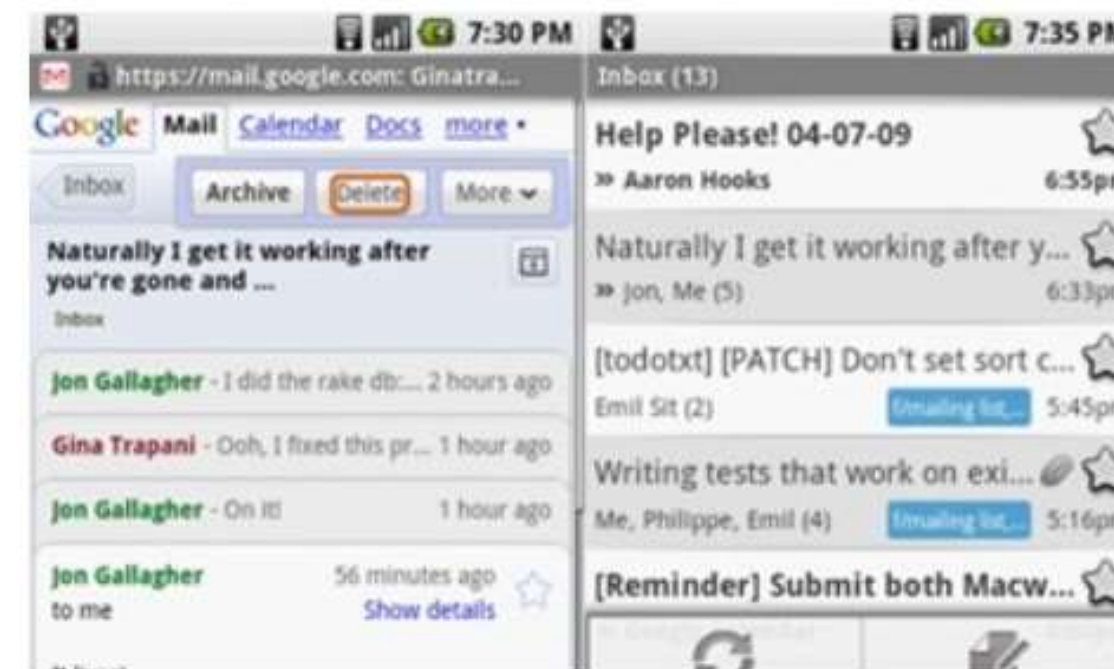
- How an e-mail message travels





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)



Other Internet Services

- Voice Over IP (VoIP)
 - Also called Internet telephony
 - Uses the Internet to connect calling parties
 - Low cost
 - magicJack



Netiquette

- Internet etiquette
 - The code of acceptable behaviors users should follow while on the Internet



Internet Security

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



THANK YOU