

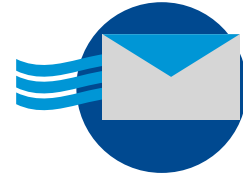
Transforming the Way We Live and Work

The Evolution of IP-Based Communications



1980 – 1982

PERSONAL COMPUTERS BEGIN TO EMERGE.



1990

THE INTERNET GOES MAINSTREAM:

- **E-mail:** America Online introduces the mass market to the Internet.
- **Ethernet:** Broadband office networking emerges.

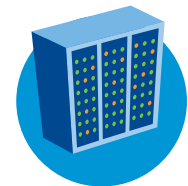


2003 – 2005

A MAJOR SHIFT - CONNECTING OTHER DEVICES:

- **Cameras:** digital photos
- **iPods:** legal music downloads
- **Telephones:** Voice over IP – Vonage and cable companies become telephony players
- **TVs:** multistream video (IPTV)
- **Games:** Xbox, Playstation
- **Wireless gateways**
- **Broadband penetration:** Rises to 61% in 2005

1980 81 82 83 84 1985 86 87 88 89 1990 91 92 93 94 1995 96 97 98 99 2000 01 02 03 04 2005 06



1985

- **NSFNET:** (National Science Foundation Network) links universities and researchers ... lays foundation for the Internet.



1995 – 1998

SEARCH TOOLS AND BROADBAND IMPROVE THE INTERNET EXPERIENCE:

- **Broadband penetration:** is 0.3% in 1998.
- **Ethernet expands** within the enterprise.



2006 and Beyond

THE NEXT GREAT SHIFT - CONNECTING NETWORKS WITH IP (INTERNET PROTOCOL) AS THE COMMON LANGUAGE:

- **Wireless**
- **Wireline**
- **Voice**
- **Data**
- **Video**



2000

EXPANDING ONLINE APPLICATIONS:

- **Music-sharing:** Napster
- **Commerce:** ebay.com, amazon.com
- **Content expands:** news, entertainment and more
- **Broadband penetration:** 6.7%
- **Ethernet expands:** metro network solution