**MIS 105 LECTURE 3**

**CHAPTER REFERENCE – CHAPTER 1**

**Lecture Topic**

**The Internet**

* NETWORK
  + A collection of computers and devices connected together via communications devices and transmission media.
  + When a computer is connected to a network it is ONLINE.
* WHAT IS THE INTERNET?
  + The largest network of computer systems in the world
  + Is a worldwide collection of networks that connect millions of businesses, government agencies, educational institutions and individuals.
  + WHAT ARE THE MOST COMMON USES OF THE INTERNET?
* INTRANET – the network within an organization.
* EXTRANET – an organization’s network that has been expanded to allow access to authorized outside users.
  + HOW DO WE NAVIGATE THE INTERNET?
    - Browsing
    - Browser – a computer program that is used to navigate the internet.
    - WWW (World Wide Web) – is a SERVICE on the internet. It is a subset of text,images,sounds and other media linked together to allow users to BROWSE related topics.
    - WEB SITE – each location on the internet is called a Web Site.
    - IS THE INTERNET THE SAME AS THE WORLD WIDE WEB?
    - EXAMPLES OF OTHER SERVICES ON THE INTERNET
  + IS THE INTERNET FREE?
  + WHO OWNS THE INTERNET?
  + WHAT WAS THE INTERNET ORIGINALLY STARTED AS?
  + HOW DO WE ACCESS THE INTERNET?
    - ISP – Internet Service Provider
    - To connect to the internet each computer must connect to a SERVER – their ISP’s server.
    - Each server uses special software called TCP/IP (Transmission Control Protocol/Internet Protocol) – it is the standard that allows different computers to communicate with each other. It is the address of your computer on the internet.
    - IP Address – identifies your computer on the internet.
    - DOES EVERY COMPUTER HAVE A DIFFERENT IP ADDRESS?
  + WHAT ARE SOME OF THE POSITIVES AND NEGATIVES OF THE INTERNET?
  + IS IT HARMFUL?
  + HOW DOES THE INTERNET HELP BUSINESSES GROW?
  + EXAMPLE OF AN INTERNET BASED BUSINESS?
  + WHAT IS A DIGITAL FIRM?

So how did the Internet really get started? Believe it or not, it all began with a [satellite](http://science.howstuffworks.com/satellite.htm).

It was 1957 when the then Soviet Union launched **Sputnik**, the first man-made satellite. Americans were shocked by the news. The [Cold War](http://people.howstuffworks.com/the-cold-war-timeline.htm) was at its peak, and the United States and the Soviet Union considered each other enemies. If the Soviet Union could launch a satellite into [space](http://science.howstuffworks.com/space-channel.htm), it was possible it could launch a missile at [North America](http://maps.howstuffworks.com/maps-of-north-america.htm).

President Dwight D. Eisenhower created the **Advanced Research Projects Agency** (**ARPA**) in 1958 as a direct response to Sputnik's launch. ARPA's purpose was to give the United States a technological edge over other countries. One important part of ARPA's mission was computer science.

In the 1950s, [computers](http://computer.howstuffworks.com/) were enormous devices that filled entire rooms. They had a fraction of the power and processing ability you can find in a modern [PC](http://computer.howstuffworks.com/pc.htm). Many computers could only read magnetic tape or punch cards, and there was no way to [network](http://computer.howstuffworks.com/home-network.htm) computers together.

ARPA aimed to change that. It enlisted the help of the company Bolt, Beranek and Newman (BBN) to create a computer network. The network had to connect four computers running on four different [operating systems](http://computer.howstuffworks.com/operating-system.htm). They called the network [ARPANET](http://computer.howstuffworks.com/arpanet.htm).­

Without ARPANET, the Internet wouldn't look or behave the way it does today -- it might not even exist. Although other groups were working on ways to network computers, ARPANET established the protocols used on the Internet today. Moreover, without ARPANET, it may have taken many more years before anyone tried to find ways to join regional networks together into a larger system.

In 1973, engineers began to look at ways to connect ARPANET to the **packet radio network** (**PRNET**). A packet radio [network](http://computer.howstuffworks.com/home-network.htm) connects computers through [radio](http://electronics.howstuffworks.com/radio.htm) transmitters and receivers. Instead of sending data across [phone](http://communication.howstuffworks.com/telephone.htm) lines, the computers use radio waves. It took three years, but in 1976 engineers successfully connected the two networks [source: [SRI](http://howstuffworks.com/framed.htm?parent=internet-start.htm&url=http://www.sri.com/about/timeline/timeline3.html)].

Technicians joined the [**Satellite**](http://science.howstuffworks.com/satellite.htm) **Network** (SATNET) to the other two networks in 1977. They called the connection between multiple networks **inter-networking**, or the **Internet** for short. Other early computer networks soon joined. They included **USENET**, **BITNET**, **CSNET** and **NSFNET**.

In 1990, Tim Berners-Lee developed a system designed to simplify navigation on the Internet. In time, this system became known as the **World Wide Web**. It didn't take long for some people to mistakenly identify the Internet and the Web as the same thing. The Internet is a global interconnection of computer networks; the World Wide Web is a way to navigate this massive network. In sailing terms, it's like comparing an ocean to a ship.

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| A Matter of Protocol  The first four computers in ARPANET all used different operating systems. The system's designers had to come up with a common set of rules the network would follow in order for the computers to communicate with each other without crashing the system. These rules are called **protocols**. The first set of protocols was collectively called the Network Control Protocol (NCP). In 1983, ARPANET switched to the **Transmission Control Protocol** and **Internet Protocol** suite (**TCP/IP**), the same set of rules the Internet follows today. |

Most early Internet users were government and [military](http://science.howstuffworks.com/military-channel.htm) employees, graduate students and computer scientists. Using the World Wide Web, the Internet became much more accessible. Colleges and universities began to connect to the Internet, and businesses soon followed. By 1994, Internet commerce had become a reality.

Today, the Internet is more complex than ever. It connects computers, satellites, mobile devices and other gadgets together in a massive network millions of times more intricate than the original ARPANET. And to think, we owe it all to a silver beeping ball that once orbited miles above the [Earth's](http://science.howstuffworks.com/earth.htm) surface.

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| Taming the Internet  Several organizations and committees formed to help shape the Internet into what it is today. They included the **Internet Activities Board**, the **Federal Research Internet Coordinating Committee** and the **Federal Networking Council** among others. These groups worked to establish the rules and standards that make it possible for different computer networks to work together. |