

## Chapter 1 – Introduction to new media

**Convergence** - the process by which media technologies, industries, and services **merge** - through changes in computing, communication networks, and content

### **What is new media? - 3 Cs**

1. Computing and information technology (IT)
2. Communication networks
3. Content and digitized media; arising out of another process: a fourth C, convergence

### **Convergent media combines computing, communications, and media content**

**New media** can be thought of as **digital media**

**Digital media** are forms of media content that combine and integrate data, text, sound, and images of all kinds; are stored in digital formats; and are increasingly distributed through networks such as those based on broadband fibre-optic cables, satellites, and microwave transmission systems

- **Manipulable:** digital information is easily changeable and adaptable, at all stages of creation, storage, delivery, and use
- **Networkable:** digital information can be shared and exchanged between large numbers of users simultaneously, and across enormous distances
- **Dense:** very large amounts of digital information can be stored in small physical spaces (eg USB flash drives) or on network servers
- **Compressible:** the amount of capacity that digital information takes up on any network can be reduced dramatically through compression, and decompressed when needed
- **Impartial:** digital information carried across networks is indifferent to how it is represented, who owns or created it, or how it is used

### **What differentiates old media from new media?**

**New media** has “**three elements**” (**artifacts, activities, and arrangements**)

- Are **interactive** in a way that previous media were not usually thought to be

### **What is the Internet?**

1. A technical infrastructure of computers and other digital devices (eg servers, routers) permanently connected through high speed telecommunications networks
2. The forms of content, communication, and information sharing that occur through these networks
3. “The electronic network of networks that links people and information through computers and other digital devices allowing person-to-person communication and information retrieval” (DiMaggio)
4. The global information system that (i) is logically linked together by a globally unique address space based on the Internet Protocol (IP) or its subsequent extensions/follow-ons; (ii) is able to support communications using the **Transmission Control Protocol/Internet Protocol (TCP/IP)** suite or its subsequent extensions/follow-ons, and/or other IP-compatible protocols and (iii) provides, uses or makes accessible, either publicly or privately, high level services layered on the communications and related infrastructure described herein

## Internet History

- Cold War: US vs Russia
- 1957 - Advanced Research Projects Agency (ARPA) - established after Soviets launched Sputnik satellite
- 1960s - ARPA - packet switching - long messages broken into smaller “packets”
  - Messages could be rerouted if there was a blockage at one message route or point of connection between 2 computers
  - Messages would be sent in an asynchronous mode (message would not come to receiver until after some time after it was originally sent)
  - Established the principle of a decentralized network with no single point from which control can be exercised
- 1969 - ARPANET - national long-distance computer network
- 1972 - ARPANET demonstrated sending and receiving data at International Conference on Computer Communication in Washington, DC where the world’s first email was sent (not called this at the time)
- 1974 - Robert Kahn and Vinton Cerf - TCP/IP (transmission control protocol/internet protocol)
- 1983 - quasi-privatization of ARPANET - birth of the Internet as we know today - adoption of TCP/IP as common interconnection protocol
- 1990s - development of the Web - CERN (Conseil European pour la Recherche Nucleaire or the European Organization for Nuclear Research)
- 1992 - Marc Andreessen of the National Center for Supercomputer Applications (NCSA) developed Mosaic as the first popular web browser
  - Andreessen became one of the founders of Netscape Communication, which developed Netscape, the first major commercial web browser in 1994
- 1995 - Microsoft releases Internet Explorer browser, as part of Windows 95

**Hypertext** - blue underlined words that provide links on web pages

**Hypertext transfer protocol (HTTP)** - provided a platform-independent means of interconnection between websites

**Hypertext markup language (HTML)** - a means of writing source code for the Web

**Digital divide** - the differential access to and use of the Internet according to gender, income, race, and location

**Horizontal integration** - when a company buys another company that is directly related to its business

**Vertical integration** - occurs when a company owns and controls all aspects of the production process

**Technological determinism** – the theory that a society’s technology drives the development of its social structure and cultural values

**Web 2.0** – “read-write web” – any website in which the contributions to and evolution of the site happens through the web, via users of the website