

Chapter 4 – Mobile new media

Many kinds of mobile

- Smartphone – type of mobile phone that reads email, takes pictures, surfs Internet, in addition to making and receiving calls
- Many new media devices that are not a phone at all
 - Ebook readers (eg Kindle)
 - Tablet computer
- Difference between mobile and portable
 - Mobile: used while moving (eg phone)
 - Portable: used while stationary (laptop)

Origins of mobile phones

- Marconi
 - Thought it was a good idea for ships to have radio
 - Ships carrying valuable goods and humans
 - Useful for long and short trips
 - Safety benefits
 - Titanic struck an iceberg, radio operator could call for help
- Size and expense remained problems
 - Initial portable radio systems were built into vehicles
 - By WW2, hand held 2 way radio (walkie-talkie) was on the market
 - Severe disadvantage for business users
 - Constrained by limited capacity in the system
 - Unreliable for calls that went beyond local area
- **Electromagnetic spectrum** – radio waves – wifi, cellphones, AM radio, etc
- Too many people, not enough capacity
 - 1940s - Cellular radio system
 - 1980s – cellphones

New services

- Caller ID
- Short message service (SMS) – text messaging
- Larger display – non-ASCII (American Standard Code for Information Interchange) text
 - Games – first game on mobile phone was widely thought to be “snake” on a Nokia

The internet on your phone

- Mobile phone industry grew explosively through 1990s
- Carrier wave (like a single tone in music) – encode differences from that wave
 - Went out on a single frequency (or more precisely, within a narrow band of frequencies)
 - Possible to have many more radio stations
- How to fit a growing number of calls into a single wire?
 - **Multiplexing** – encoding multiple streams of information into a single stream to make maximum use of a scarce resource such as a telegraph or telephone line, mobile phone radio channels, fibre optics
- **Microblogging** – posting short messages to a website for sharing with others

From multifunction phones to smartphones

- Phone manufacturers did not rest with games, ringtones, caller ID and text messages
 - Had a device with processor, memory, storage, user interface
 - Ingredients for a computer and potential of a computer
- Mobile phones moved to cameras and video recording markets
- Always in consumer's pocket
- Much more integrated into consumer's life

"New" new media on phones?

- **Spime** – blend of space and time
 - Devices able to locate themselves in space and time are spime
- **Augmented reality** – creating an overlay of data on top of what is already visible to the user

Kids on phones

- **Predictive text** – software service in many mobile phones that allow for faster and more accurate entry of words – predicting words based on likely next character or characters
- Slang – used to keep privacy from parents
- "texter's thumb"
- Disruption of sleep patterns
 - Staying up late
 - Being interrupted while sleeping by phone buzzing or beeping with new text
- Contact with inappropriate or undesirable friends
- Cheating on tests
- Large phone bills

What matters with mobile?

- Health concerns
 - Tendency of mobile devices to divert users' attention away from what they should be focusing on (eg texting while driving or walking)
- Environmental concerns
 - Erosion of aesthetic aspects of the environment
 - Cell towers, radio towers
 - Wildlife – birds
 - Entangled in wires or confused by blinking lights
 - Electrocuted in power-supply circuits
 - Mobile phones include electronic components manufactured from rare earth elements, sourced in conflict zones
 - Concerns in human rights and environmental regulation in mining process
 - Made in factories all over the world
 - High carbon load in the form of transport energy that goes into moving parts to factories and finished products to customers
 - Mobile phones replaced often
 - Disposal and recycling of mobile phones is difficult, dangerous, and dirty work farmed out to people in developing countries
 - Mobile phones typically plugged in at night and sit all night in a charger
- Social and cultural impact
 - Asocial trends

- Spread of sexual communication (sexting)
- Helicopter-parenting
- Tracking systems