

## **Chapter 10 – Conclusion**

- Most of the world’s spam is not sent directly from spammers but through “botnets” or personal computers that have been hijacked and used by others for nefarious purposes
- Spam represents more than 80% of the email traffic in the world
- Computers operating as part of a botnet can be used for tasks even more malicious and dangerous than spam
  - Distributed denial-of-service (DDOS) attacks that rise up to disable even the most well-protected Internet hosts
- “citizen journalism”

### **Internet of Things (IoT)**

- Term coined in the late 1990s by a group based at MIT known as Auto-ID
- Objects given internet access
  - Eg internet connected refrigerators, Amazon “dash” buttons, internet connected toasters, etc
  - Tracking of shipping containers or pallets in trucks
    - Instead of having a barcode, they have computer chips with memory and low-power radio frequency identification device (RFID) that allows nearby receivers to query the object and determine the status

### **Networks: Always on and Always There**

- Increasing access to high-speed broadband services and diminishing costs associated with Internet access
- Becoming the norm to leave computers on always
- Having more storage off your computer
  - Cloud storage

### **Meeting People Made Easy: Social Media**

- 100 million bloggers worldwide
- Social media sites have more than 1 billion accounts
- Facebook has become a force to be reckoned with in political circles
  - Politicians can no longer dismiss user groups on Facebook
  - Winter 2009-10 – Canada Parliament briefly suspended (prorogued) and 200,000 people joined a Facebook group in protest

### **Surveillance and New Media**

- New media enabled an unprecedented and dangerously unremarked level of **surveillance**
- Some surveillance is purposeful and targeted, some is incidental and a side effect of other features
- “panopticon”
  - prison design based on the premise that all inmates are within view of an unseen guard in a tower
  - inmates police themselves because they would never know when they were being watched
- Surveillance for social purposes
  - Flickr – people upload photos from their daily lives

- Automated tagging in photos
  - Giving names to faces in your pictures by recognizing those faces using a computer algorithm
- Cable TV boxes
  - Nielson Ratings System
    - How many people are watching a particular TV program at a particular time?

**Augmented Reality, 3D Printing, and Robots**

- **Augmented reality**
  - Images overlain or projected over reality
    - A blend of digital media (images, text, sound) with the world around us
    - Sometimes these things are projected onto a surface
  - Eg Nintendo 3DS augmented reality games with AR cards



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- Google Glass



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- Augmented reality is distinct from virtual reality (in which participants wear goggles)
- Goal isn't to displace the material world but to add to it
- Can serve educational, informational, and entertainment purposes
- 3D Printing
  - Print 3D objects with plastic and 3D modelling/rendering software (eg Autodesk Maya, Autodesk 3ds Max)



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- Robots
  - Cybernetic systems
    - A system that has feedback and control loop
  - Robots that clean floors, build automobiles, maintain and enhance user-generated content on YouTube
  - Software robot called Content ID scans videos on YouTube to ensure it isn't pornography, doesn't infringe copyright, isn't a hate message, etc
  - Software robots maintaining Wikipedia
    - Maintain, improve, and fend off malicious entries and edits on Wikipedia
  - Spam filters, anti-virus software, automated vacation messages