

## Chapter 10 Societal Impacts

### Digital Footprint

- Digital footprints are the records and traces individuals leave behind as they use the Internet.
- Digital Footprints are the records and traces individuals activities as they use the Internet. Digital footprints are permanently stored.

### Managing Digital Footprint

- Know what our digital footprint is.
- E-behave responsibly
- Keep our digital footprint clean.
- Control the visibility of our information.
- Allow Comments Moderation
- Think before our post.

DIGITAL FOOTPRINT	
<b>BE CAREFUL ABOUT</b>	<b>BE SMART ABOUT</b>
What you share online	Sites you visit
Where you share	Emails you open

### (Net and Communication Etiquettes)

#### Basic rules of netiquettes

- Refrain from personal abuse
- Never spam
- Write clearly and concisely
- Always post correct content in respectful language.
- In a discussion forum, stick to the topic.
- Never expect other people to do your homework for you.
- Do not post copyrighted material to which you do not own the rights

#### Email Etiquettes

- Be concise and to the point.
- Use proper spelling, grammar & punctuation
- Use proper structure & layout
- Do not write in CAPITALS (Case Sensitivity).

- Add an e-mail disclaimer
- Handle abbreviations and emoticons with care.
- Gender Sensitivity.

### Intellectual Property Rights

- Intellectual property rights are rights of the owner of information to decide how much information is to be exchanged shared or distributed .
- Also it gives the owner a right to decide the price for doing (exchanging/sharing/distributing)so.

### Digital Property Rights

- Digital property(or digital assets) refers to any information about you or created by you that exists in digital form, either online or on an electronic storage device.

### Plagiarism

Plagiarism is stealing someone else intellectual work and representing it as our own work without citing the source of information.

### OPEN SOURCE PHILOSOPHY

- Broadly the term ‘open source software’ is used to refer to those categories of software/programs whose licenses do not impose much conditions.
- This type of software generally give users freedom to run/use the software for any purpose to study and modify the program , and to redistribute copies of either the original or modified program(without having to pay royalties to previous developers).

### Free Software

- Free Software means the software is freely accessible and can be freely used , changed, improved , copied and distributed by all who wish to do so.
- No payments are needed to be made for free software.
- Definition by Richard Stallman’s free Software Foundation.  
 “” Free software “ is a matter of liberty, not price. To understand the concept, we should think of “free” as in “free speech,” not as in”free beer.” Free software is a matter of the users’ freedom to run , copy, distribute, study, change and improve the software. More precisely it refers to four kinds of freedom, for the users of the software:
  - The freedom to run the program, for any purpose(freedom o).
  - The freedom to study how the program works , and adapt it to your needs(freedom1). Access to the source code is a precondition for this.

- The freedom to redistribute copies so we can help our neighbour(**Freedom 2**)
- The freedom to improve the program, and release our improvements to the public, so that the whole community benefits(freedom 3). Access to the source code is a precondition for this.

**A program is free software if users have all of these freedoms.**

### **Open Source Software**

- Open Source Software can be freely used(in terms of making modifications, constructing business models around the software and so on) but it does not have to be free of charge.
- Here the company constructing the business models around open source software may receive payments concerning support, further development.
- Important to know is that open source software, the source code is freely available to the customer.

### **Philosophy of open Source**

- **Open source doesn't just mean access to the source code.**
- **The distribution terms of open-source software must comply with the following criteria:**
- **Free Redistribution, Source Code, Derived Works, Integrity of the Author's Source Code,**  
**No Discrimination against Persons or Groups, Distribution of license, License must not be Specific to a Product, The License must not Restrict other Software , Licence must be Technology Neutral**

**A software which is free as well as open belongs to category FOSS( Free and Open Source Software).**

### **Terminology to open source software**

- **OSS and FLOSS ( Free Libre and Open Source Software or to free Libre and Open Source Software.)**
- **GNU(G Not Unix)**
- **FSF( Free Software Foundation)**
- **OSI (Open Source Initiative)**
- **Freeware**
- **W3C (World Wide Web Consortium)**
- **Proprietary software)**
- **Shareware**
- **Copylefted Software**

## Copyright and other Licenses

- The license are permissions given to use a product or someone's creation.
- Copyright is a related term defines the ownership rights.
- A copyright is a collection of rights that automatically vest to the creator of an original creative work such as a literary work, a design, song, movie or software etc.
- A copyright holder can give licenses to use its work in a specific way.

## Copyleft

- Copy left is a license that gives rights opposite to copyright.
- The Copyleft offers users the right to freely distribute and modify the original work, but only under the condition that the derivative works be licensed with the same rights .

## Licenses and Domains of Open Source Technology

As per Open Source Initiative, “ open source licenses are licenses that comply with the open Source Definition ---in brief, they allow software to be freely used, modified and shared. “

### Broadly used open source licences are being given below

- GNU (General Public License (GPL)
- GNU Lesser General Public License(LGPL)
- BSD License
- MIT License
- Apache License

## Cyber Crime

- Cybercrime is any criminal offense that is facilitated by , or involves the use of, electronic communications or information systems, including any electronic device, computer, or the Internet.
- The term, cybercrime, is a general term that covers crimes like phishing, credit card frauds, illegal downloading, industrial espionage, child pornography, cyber bullying, cyber stalking , cyber terrorism , creation and/or distribution of viruses, spam and so on.

### Some common cybercrimes

- Hacking (Spoofing ,Phishing , social engineering)
- Cyber Trolls and Bullying
- Cyber Stalking
- Scams
- Illegal Downloads
- Child Pornography

## **Cyber Law and IT Act**

- Cyberlaw is a generic term which refers to all the legal and regulatory aspects of Internet and the World Wide Web.
- Anything concerned with or related to or emanating from any legal aspects or issues concerning any activity of netizens and others, in Cyberspace comes within the ambit of Cyberlaw.
- Regulatory mechanisms and legal infrastructures come within the domain of Cyber law, which is need for vibrant and effective regulatory mechanisms which propelled by the growth of Electronic Commerce.

### **India's IT Act and IT (Amendment) Act, 2008**

- In India the cyber laws are enforced through Information Technology Act, 2000(IT Act 2000) which was notified on 17 October 2000.
- It is based on the United Nation's Commission for International Trade related laws(UNCITRAL) model law.
- IT ACT 2000's prime purpose was to provide legal recognition to electronic commerce and to facilitate filing of electronic records with Govt. i.e to provide the legal infrastructure for e-commerce in India.
- The Act was later amended in December 2008, through the IT (Amendment) Act, 2008.
- The Information Technology Act, 2008(IT Act 2008) came into force from October 27, 2009

## **E-Waste Disposal**

- Electronic waste , e-Waste , e-Scrap or Waste Electrical and Electronic Equipment(WEEE) describes discarded electrical or electronic devices. “
- Electronic waste also defined as discarded computers , office electronic equipment , entertainment device electronics , mobile phones , television sets and refrigerators.
- This includes used electronics which are destined for reuse , resale , salvage , recycling or disposal.

## **Different Characteristics of E-Waste**

- The fastest growing segment of waste (ii) most valuable due to its basic composition
- Very hazardous if not handled carefully.

## **E-Waste Disposal Process**

- Dismantling i.e removal of parts containing dangerous substances(PCB, CFCs)
- Segregation of ferrous metal , non-ferrous metal and plastic.
- Refurbishment and reuse
- Recycling / recovery of valuable materials
- Treatment / disposal of dangerous materials and waste

## **Benefits of e-Waste Recycling**

- Allows for recovery of valuable precious metals.
- Protects public health and water quality
- Creates Jobs
- Toxic Waste
- Save landfill space.

## **Health Concerns with Technology Usage**

### **➤ Impact on HEARING**

- **Studies have proven that listening to music that loud for more than 15 minutes cause hearing damage overtime.**
- **Also, it has been said that using headphones increases the bacteria levels in our eyes over 700 times when used for more than an hour.**
- **This shocking statisc came from a stydy way back in 1992 when experts measured bacteria on 20 headsets.**

### **➤ Impact on Bones and Joints**

- **Use of technology has affected our postures .**
- **Most of the times, we sit in the same postures and making similar, repetitive movements e,g thumb movements on mobile phones.**
- **Slouching or using our joints and muscles in repetitive movements all cause strain on our muscles and joints.**
- **Repetitive Strain Injury(RSI) is an injury or disorder of the muscles, nerves, tendons, ligaments and joints.**

### **➤ Eye Problems**

- **Constant exposure to smart phone, laptops and computer screens impacts our vision**
- **and may lead to other eye related problems.**
- **The blue light that comes from our phones and computers is very damaging on the retina, even more than UV light; this may even lead to vision loss.**
- **Computer Vision Syndrome (CVS) is a technology related health condition affecting eyesight.**

➤ **Sleep Issues**

- Excessive smartphone computer and tablet use can disrupt our sleep.
- Bright lights from these devices block melatonin secretion, the hormone that regulates sleep and this leads to smaller sleep cycles and disrupted sleep.
- Sleep is so essential for overall health that it impacts our normal thinking and behavioural patterns , memory and attention span.

➤ **Mental Health Issues**

- Excessive use of technology leads to isolation as people don't get time to physically socialise,
- It sometimes also leads to anxiety and depression as by looking at picture perfect social media profile of others, people often tend to think that their "Connections" have "perfect rosy lives" while they are not.
- Excessive use of technology and Internet leads to addiction.
- People keep obsessively looking through emails and messages.,
- They start feeling stress if they don't get some likes or replies on their posts etc. this problem is formally termed as Internet addiction disorder.