

Cyber Security

An introduction



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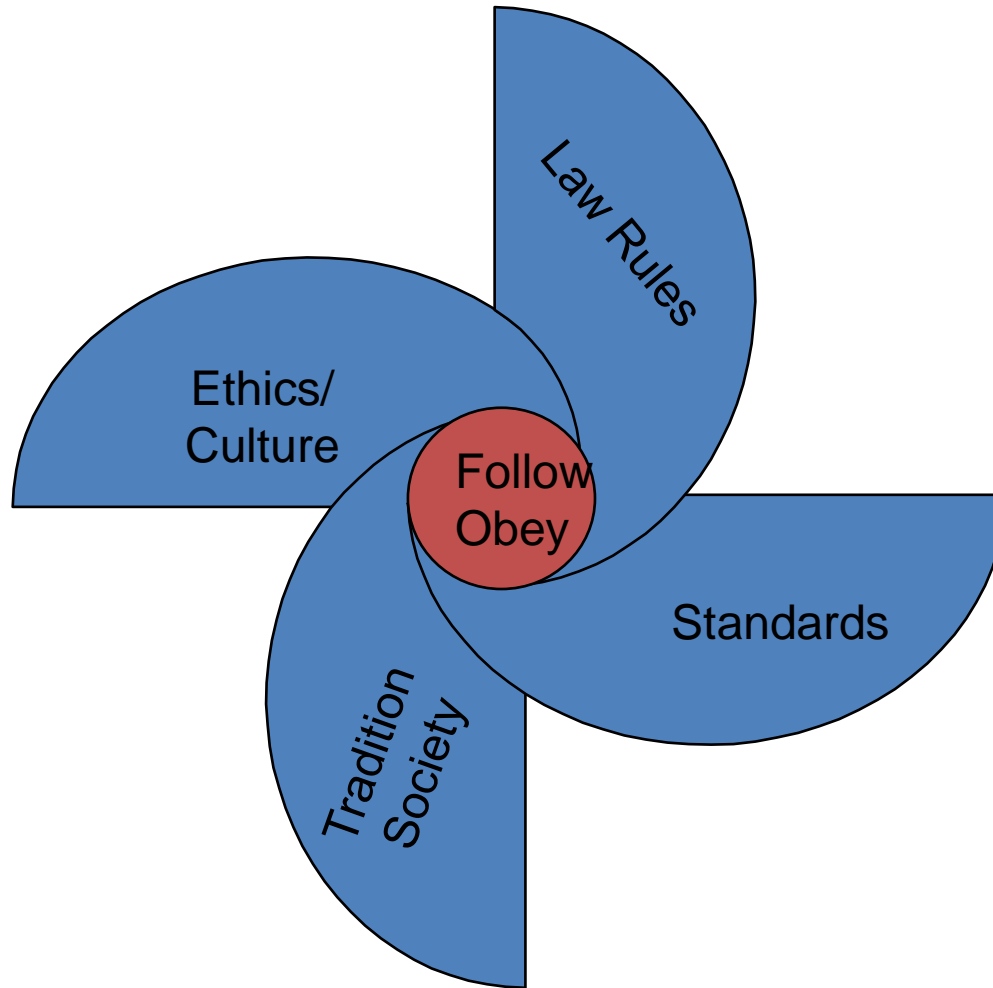
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Society, Crime, Law, Ethics

- What is crime? Description of words like:
Crime, Offences, civil wrong, public wrong, Torts, contracts, violations, breach, contravention etc
Meaning and definition of cyber crime
Data and information?
- What is legal? Lawful?
- What is Ethical?
- Role of a family
- Role of a society
- Role of a nation

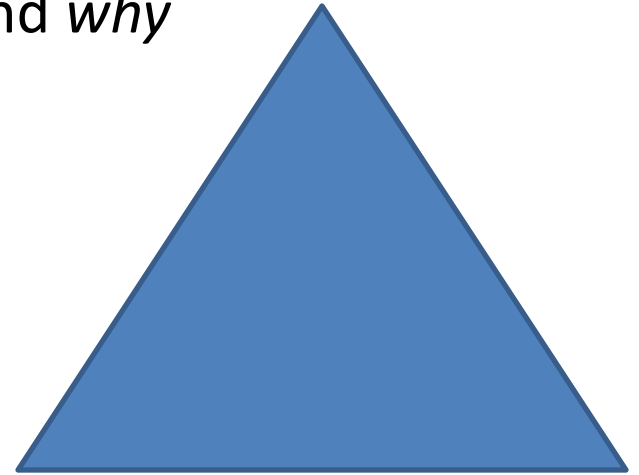


Drivers of the nation



Crimes and Frauds – the basics

- What is Security?
- Need to be secure : *from, when, how and why*
- Fraud triangle:
 - Intention/Necessity,
 - Opportunity
 - Rationalisation to commit the crime
- Genesis and Basis is the same
- ‘Mens rea’ – Criminal Intent and motive unique in the earlier cyber crimes like hacking, virus etc (like just for the heck of it or to show one’s technological superiority)



Confidentiality

Integrity

Information
Security

Availability

Non Repudiation, Authorisation,
Authentication, Accountability
etc

Distinct features of cyber security

- The three factor authentication in security
- Requirements in electronics security
 - What you have (Physical possession)
 - What you are (Bio-metric features)
 - What you know (Password, PIN, Passphrase)
- Possibilities of breach and break of these factors
 - Stealing of physical items
 - Manipulating / circumventing the bio-metric data
 - Password crackers, ID theft, tail-gating, key-loggers

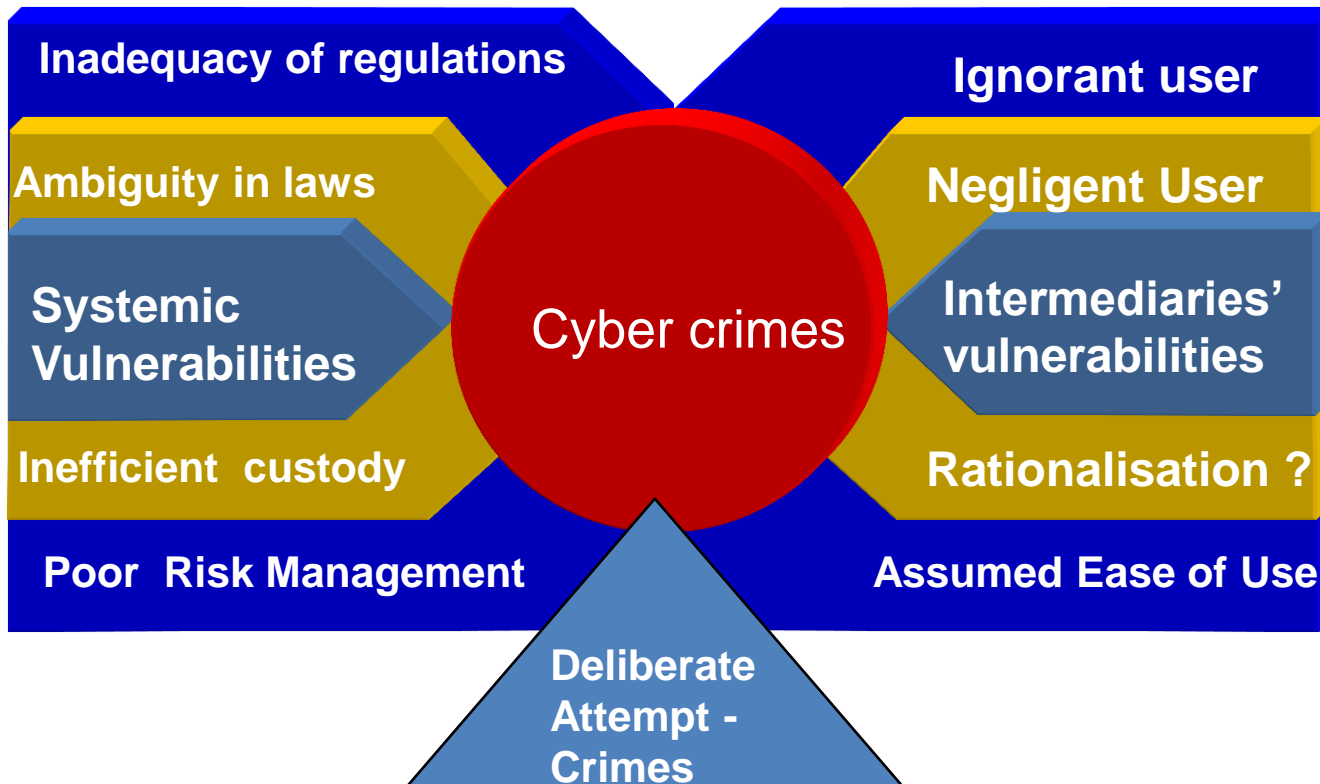


Crimes and Security



- Most intelligent system: human brain
- Thinking and interpretation:
non-conformance, violation and criminality – all inter-related !
- Crime *per se* is as old as human being
- Use of intelligent systems in the historic past
 - Use cryptography (Caesar, Alexander, Kautilya)
 - Use of spying – in politics, governance (Arthashastra)
 - Information collection
 - Intelligence gathering – its use, abuse, misuse?

Crimes in the cyberspace!



Types of Cyber Crimes

Cyber Crimes – types

- **Against persons:** defamation, cyber stalking, phishing, id theft, email spoofing, online gambling, card frauds, virus, DoS, phishing etc
- **Against property:** larceny, data, information, software piracy, trade marks, copyrights, IPR etc
- **Against government:** cyber terrorism
- **Combination of one or more of the 3**



Data Security – Threats and attacks

- Data diddling (False data entry)
- Data manipulation
- Data spying
- Scavenging
- Dumpster Diving
- Data Leakage
- Piggy backing and tailgating
- Masquerading



Cyber crimes vs normal crimes

- Normal crimes:
 - Physical, tangible, painful (mental or bodily), financial loss, Loss is felt immediately, evidence easy, investigation starts at once, jurisdiction clear, culprits may be located immediately
- Cyber Crimes:
 - Mental and financial, no bodily injury, evidence gathering technical, may be noticed at a much later stage also, jurisdiction is an issue, investigation often difficult, nabbing the culprit is mostly difficult, trans-border?



Crimes in Journalism or communication

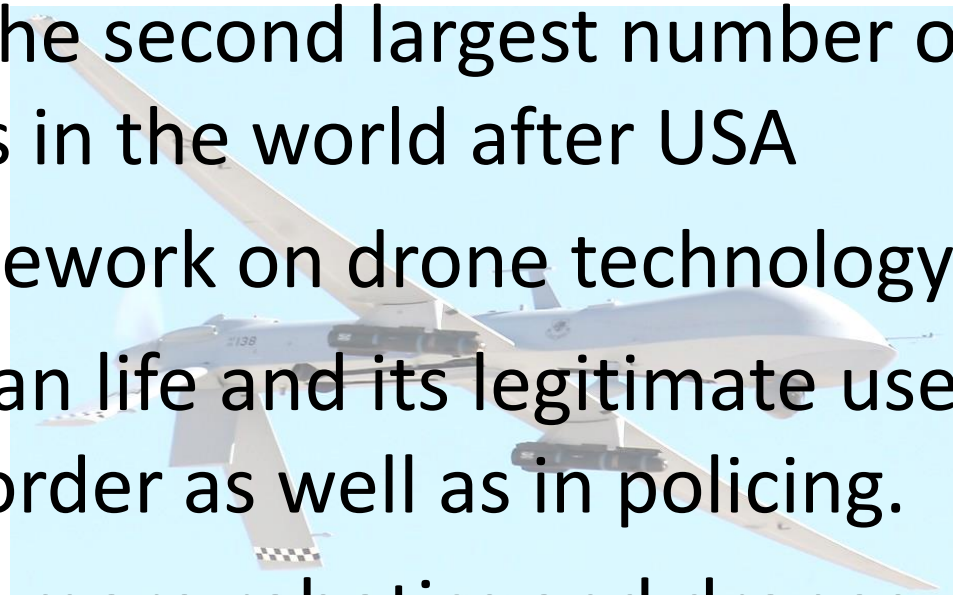
- Misusing WhatsApp or SNS
- Ridiculing a celebrity – Fake news
- Journalistic scoop – Breaking News!
- Sting operation and evidences
- Illegally obtained evidences
- Irrefutability of evidences in judica
- Digital Evidences vs Phyiscal





Drones and Data Theft?

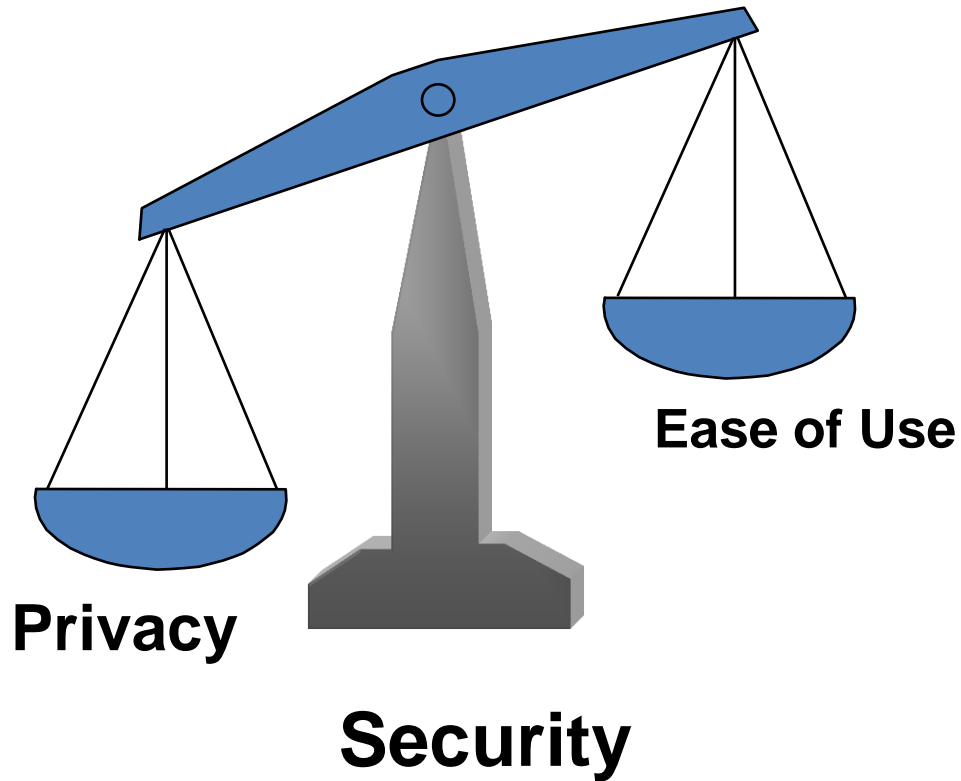
- Drones ie Unmanned aerial vehicle or Remotely Piloted Vehicle may become a spying weapon
- India reportedly has the second largest number of acknowledged drones in the world after USA
- DGCA's policy or framework on drone technology?
- Use of drones in civilian life and its legitimate use in enforcing law and order as well as in policing.
- In future, we may see more robotics and drones



Crimes, Security and Society

- Electronic devices designed for crimes
- Normal devices used illegally
- Technology as a double edged sword?
- Technology as an enabler and a destroyer?
- Invasion into privacy?
- Digital disruption – the emerging scenario

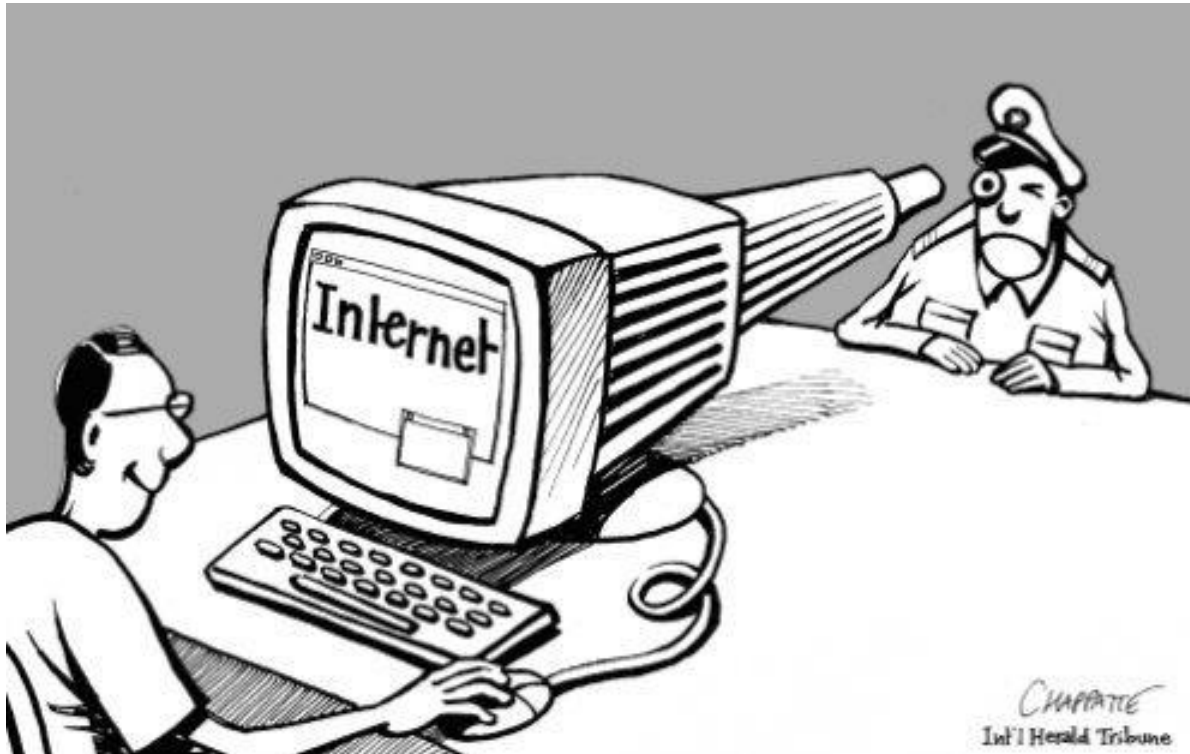
Security and Privacy



Is there anything like 100% security?

While on the net, you are always watched!

Software downloads, spyware, malware, adwares...



Long Term Vision for India

Techno Legal solution:

Promote our own O/s – C-DAC's BOSS to be marketed

- A national level firewall, Search engines etc
- Our own Anti Virus, UTM boxes, IDS, IPS etc
- Our own hardware: servers, cables, disks etc

Techno Legal Solution:

- Certainty of punishment, rather than severity of laws
- Implementable rules rather than stricter legislations
- Co-ordinated actions rather than multitude of enactments
- A robust and stronger data privacy legislation in India.



I4C or NCCC to be made operational immediately – Need of the hour

For complete protection against Cyber Crimes!

NEW TYPE OF "UPVAS"

LIVING 1 DAY

WITHOUT

1. MOBILE.

2. ATM

3. FACEBOOK.

4. INTERNET...

5. PC/LAPTOP

TRY DIS 2 GET REAL PEACE OF MIND...

