

Information Security

Keeping Yourself & Your family safe
in a tech driven world

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Best and Worst about Internet and WWW



Best Thing about Internet

Everything Connected and is a Global Network



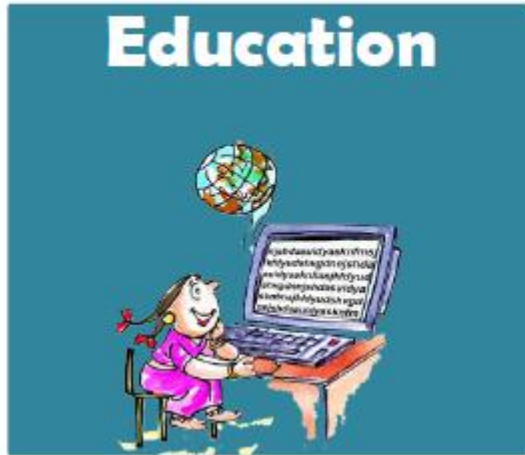
Worst Thing about Internet

Everything Connected and is a Global Network



Cyber Security - In today's world, we depend on Internet at home, in school and at work place

How and for what purpose do you use the Internet ??



While using the Internet what are the primary online risks we face



Cyber Crimes - Types

- Credit card frauds
- Theft of Source Code
- Hacking
- Email spoofing
- Forgery
- Defamation
- Data Diddling (Modification)
- Cyber terrorism
- Denial of Service Attacks
- Salami Attacks
- Email Bombing
- Online gambling
- Cyber Pornography
- Virus, Worms, Trojan Attacks
- Cyber stalking
- Phishing, Vishing, SMiShing
- Intellectual Property crimes software
- piracy, copyright
- infringement, trademarks
- violations

Cyber Crimes – What are they?

- Any unlawful activity where cyberspace is used as a tool, target or both.
- Cyberspace includes computers, the Internet, pen drives.. even cars, automatic washing machines and microwave ovens!
- Cyber Crime **IS NOT** defined in Information Technology Act 2000 nor in the I.T. Amendment Act 2008 nor in any other legislation in India.
- In Short, a COMPUTER CRIME is any crime where Computer (an electronic device) is a target OR a tool of crime OR incidental to crime.

Cyber Crimes rates in India

Under Information Technology Act

Year	Cyber Crimes
2011	1791
2012	2876
2013	4356
2014	7201
2015	8045

Total Crimes in India**

IPC	SLL*
2014 : 28,51,563	2014 : 43,77,630
2015 : :29,49,400	2015 : 43,76,699

* SLL – Special and Local Laws

**As per cyber crime data maintained by National Crime Records Bureau

<http://ncrb.nic.in/StatPublications/CII/CII2015/FILES/Snapshots-11.11.16.pdf>

Cyber Crimes – General Statistics

Cyber threat

Cybercrime is on the rise in India with revenge turning out to be one of the the biggest motive

Cases registered under various heads of cybercrimes has increased by 6.3% in 2016 from the year before



Close to 8,500 cases were filed under the Information Technology Act. The Act deals with dishonestly receiving stolen computer resource, identify thefts, cheating by impersonation using computer and violation of privacy

Type	Total no. of cases under IT act	% to overall
Tampering computer source documents	78	0.91%
Computer related offences	6,818	79.16%
Cyber terrorism	12	0.14%
Publication of obscene/ sexually explicit content	957	11.11%
Breach of confidentiality/ privacy	35	0.41%
Other cyber crimes under IT Act	713	8.28%
Total cyber crimes under IT Act	8,613	100.00%

Mostly 'illegal gain' followed by 'revenge' were cited as the driving factor behind cyber crime cases



Cyber Crimes – In News

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THE TIMES OF INDIA

One cybercrime in India every 10 minutes

TNN | Jul 22, 2017, 02:17 AM IST



One cybercrime in India every 10 minutes

Infrastructure to predict and prevent cybercrimes was crucial.

BENGALURU: From the global ransomware attacks that hit hundreds of systems to phishing and scanning rackets, at least one cybercrime + was reported every 10 minutes in India in the first six months of 2017. That's higher than a crime every 12 minutes in 2016.

According to the Indian Computer Emergency Response Team (CERT-In), 27,482 cases of cybercrime were reported from January to June.

These include phishing, scanning or probing, site intrusions, defacements, virus or malicious code, ransomware and denial-of-service attacks.

With more Indians going online, cyber experts said putting in place critical

India has seen a total of 1.71 lakh cybercrimes in the past three-and-a-half years and the number of crimes so far this year (27,482) indicate that the total number is likely to cross 50,000 by December, just as in 2016.

"It is not just enough to make efforts at the government level, which is, in some sense happening, but cybercrime affects hundreds of individual systems and firms, all of whom need to be ready with specialised teams," cybercrime expert Mirza Faizan Asad said.

While India has been dealing with crimes such as phishing and defacement, ransomware attacks have come as a surprise.

Cyber Crimes – In News

Wrath of cyber crime: Over 50,300 incidents observed in 2016

PTI | Feb 09, 2017, 08:24 AM IST

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- » 60 per cent people pay more attention to their smartphones when out on a date: Survey

NEW DELHI: Over 50,300 cyber security incidents like phishing, website intrusions and defacements, virus and denial of service attacks were observed in the country during 2016, Parliament was informed today.

"As per the information reported to and tracked by Indian Computer Emergency Response Team (CERT-In), a total number of 44,679, 49,455 and 50,362 cyber security incidents were observed during the year 2014, 2015 and 2016, respectively," Minister of State for Electronics and IT P P Chaudhary said in a written reply to Lok Sabha.

He added that the types of cyber security incidents included phishing, scanning/probing, website intrusions and defacements, virus/malicious code and denial of service attacks.

"With the proliferation of Information Technology and related services, there is a rise in instances of cyber crimes in the country like elsewhere in the world," he said.

As per the data maintained by National Crime Record Bureau (NCRB), a total of 5,693, 9,622 and 11,592 cybercrime cases were registered during the years 2013, 2014 and 2015, respectively, showing a rise of 69 per cent during 2013 to 2014 and 20 per cent during 2014 to 2015.

Cyber Crimes – In News



2 accused in suicide case of girl harassed online in 14 days judicial custody

IND - Aug 17, 2012, 06:02AM IST

Tags: suicide case of girl harassed online | Raksha Sharma | Lovepreet Singh

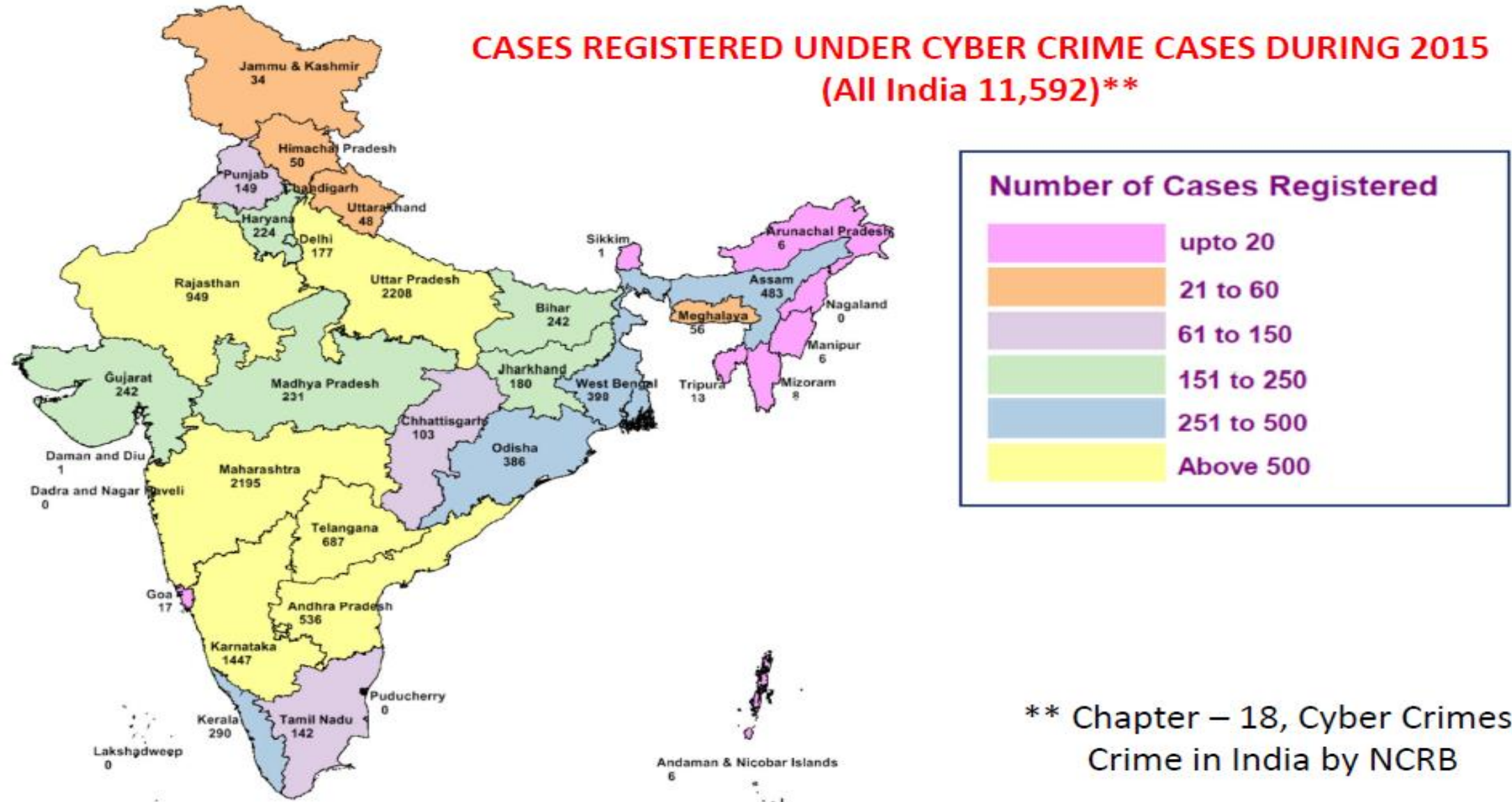
JALANDHAR: Two boys accused in the suicide case of Raksha Sharma of Mehar Chand Polytechnic here were sent to judicial custody for 14 days on Thursday.

Eighteen-year-old Raksha Sharma, a second year student at the polytechnic, ended her life in the hostel room on Tuesday night, after the duo - Lovepreet Singh and Deepak Saini - allegedly posted obscene messages about her on a social networking site.

Arrested on Facebook
A cyber crime police officer arrested a couple for creating a fake profile of a girl on Facebook and posting obscene images on it. The couple, who were students of a local college, had created the profile of a girl named Raksha Sharma. The girl had committed suicide after receiving obscene messages from the couple. The police officer said that the couple had created the profile of the girl and had posted obscene images on it. The girl had received these images and had committed suicide. The police officer said that the couple had been arrested on Thursday.

Cyber Crimes – Cases Registered in 2015

CASES REGISTERED UNDER CYBER CRIME CASES DURING 2015
(All India 11,592)**



**** Chapter – 18, Cyber Crimes,
Crime in India by NCRB**

Cyber Crimes – Under IT Act

SL	Crime heads under IT Act	Cases Registered			% Var.	Persons Arrested			% Var.
		2013	2014	2015		2013	2014	2015	
1	Tampering Computer Source Documents (Sec. 65 of IT Act)	137	89	88	-1.1	59	64	62	-3.1
2	Computer Related Offences(Sec. 66 to 66E of IT Act)	2,516	5,548	6,567	18.4	1,011	3,131	4,217	34.7
3	Cyber Terrorism@(Sec. 66F of IT Act)	-	5	13	160.0	-	0	3	-
4	Publication/Transmission of Obscene/Sexually Explicit Content(Sec. 67 to 67C of IT Act)	1203	758	816	7.7	737	491	555	13
5	Intentionally not Complying with the Order of Controller(Sec. 68 of IT Act)	13	3	2	-33.3	3	4	3	-25
6	Failure to Provide or Monitor or Intercept or Decrypt Information(Sec. 69 of IT Act)	6	2	0	-100	7	0	0	-
7	Failure to Block Access any Information Hosted etc. @ (Sec. 69A of IT Act)	-	1	0	-100	-	0	0	-
8	Not Providing Technical Assistance to Govt. to Enable Online Access@(Sec. 69B of IT Act)	-	0	3	-	-	0	0	-
9	Un-authorized Access/Attempt to Access to Protected Computer System(Sec. 70 of IT Act)	27	0	8	-	17	0	4	-
10	Misrepresentation/Suppression of Fact for Obtaining License etc. (Sec. 71 of IT Act)	12	5	4	-20	14	13	2	-84.6
11	Breach of Confidentiality/Privacy(Sec. 72 of IT Act)	93	16	20	25	30	13	6	-53.8
12	Disclosure of Information in Breach of Lawful Contract@(Sec. 72A of IT Act)	-	2	4	100	-	5	2	-60
13	Publishing/Making Available False Elect. Signature Certificate (Sec. 73 of IT Act)	4	0	3	-	8	0	0	-
14	Create/Publish/Make Available Electronic Signature Certificate for Unlawful Purpose(Sec. 74 of IT Act)	71	3	3	0	51	5	3	-40
15	Others	274	769	514	-33.2	161	520	245	-52.9
Total Offences under IT Act		4,356	7,201	8,045	11.7	2,098	4,246	5,102	20.2

Computer Related offenses

- Section 66
- 3 years jail and / or fine up to 5 lakh
- New provision
- Replaces 'hacking'

Password Security

- First and Foremost, set your password **STRONG**

What is **STRONG** password

- Use at least 8 characters
- Use special characters
- Avoid using the words from dictionary
- It must be easy to remember difficult to guess
- Example of Pass phrase
 - I Love Working at CDAC Bangalore
 - Password: 1Lw@cdacB



Password Attacks

Brute force attack 🔑



Take care about shoulder surfing

Shoulder Surfing



Dictionary attack 🔑

Changes related to Secrets

- Refusing to hand over passwords to an authorized official could land a person in prison for up to 7 years.
- The offence of cyber terrorism has been specially included in the law. A cyber terrorist can be punished with life imprisonment

Identity Theft

- Fraudulently or dishonestly using someone else's electronic signature, password or any other unique identification feature.
- 3 years jail and fine up to Rs 1 lakh.



What do skimming devices look like?

- Can you tell if this ATM machine has a skimming device fitted to the card reader ?



Spot the difference...Can you tell now?



- Top photo shows an unadulterated ATM fascia. The flashing lead through entry indicator is easily observed.

• *Note: Most skim devices when fitted will obscure the flashing entry indicator this should be a vital clue as to any suspect tampering.*

• **Spot the difference in the next photo.**



- A skim device has been placed in or near the card reader slot. Although the device has been given the appearance of being a standard part of the terminal it is in fact an additional fitted piece & clearly is different from the above photo.

• ***Note: No flashing lead through light can be seen. The shape of the bezel is clearly different.***

What do PIN Capturing devices look like?



- **Can you spot a PIN capturing device?**
- Here we have a piece of merchandising placed on the side ATM fascia wall.



PIN Capturing devices – Be Vigilant



PIN Capturing devices – Be Vigilant

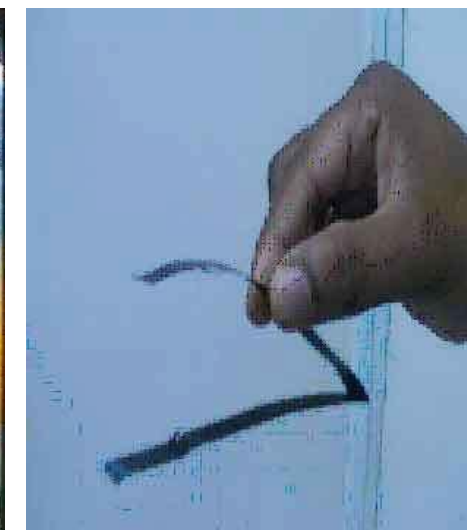


PIN Capturing devices – Be Vigilant

See the **Pin hole camera** installed on the bottom side - Upon closer inspection of the merchandising unit, capturing an image of the keypad and subsequently, the customers PIN



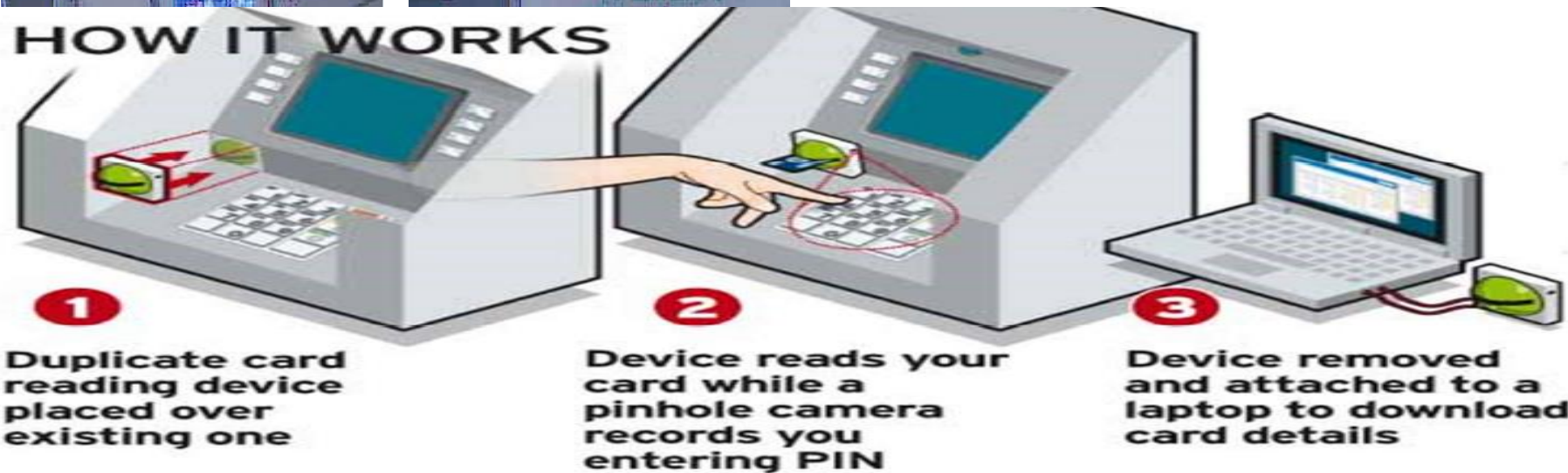
ATM PIN – THIEVES in WHITE CLOTHES



ATM PIN – THIEVES in WHITE CLOTHES



HOW IT WORKS



ATM PIN – Hide the PIN while entering



SOCIAL ENGINEERING

How to recognize and respond to threats

Social engineering: Hacking tricks to get users to share account or login information.

Phishing



Email-based hacking

Vishing



Phone-based phishing

Smishing



Text-based phishing

Impersonation



In-person deception

Obscene SMS/ Emails

- The punishment for spreading obscene material by email, websites, SMS has been reduced from 5 years jail to 3 years jail.
- This covers acts like sending 'dirty' jokes and pictures by email or SMS.

Conclusion

- Nothing comes for free in this world – Understand it
- Nothing is Secure in the World of Security
- Risks are inherent in any Cryptographic System
- Any security system is only as safe as the weakest link in a security chain!
- Anti-virus, Firewall is not a one-stop solution for all your security needs

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