Computer Viruses

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Roadmap

- Introduction : Computer Viruses in brief
- Danger of Virus attacks
- Virus Attacks and Ethics
- Economic Impact of Viruses
- Example of Computer Viruses
- Conclusion

Introduction

Computer Virus is a software that copies itself and infects the victim's PC without his knowledge.

Infects the victim by:

1- Floppy disks, CDs and Flash memories

2- Emails

3- Another methods, Fraud..

Virus Attacks Danger

- Not a one-time damage, keeps increasing
- Damage in tens of billions of dollars
- Difficult to be contained
- Hard to capture the attacker

Computer Viruses and Ethics

- Three key points in virus attacks
  - Attacker
  - Victim
  - Purpose
- Attacker: individual or group
- Victim: individual or group
- **Purpose**: where ethics lies

Computer Viruses and Ethics cont.

- Private pleasure
- Better security
- Kind of advertisement
- Defensive measures

Computer Viruses and Ethics cont.

- False, when was other's time and money a game ?!!
- False, causing damage never was a way to correct mistakes
- False, clear case of fraud and deception
- Pure act of self-defense

Economic Impact of Computer Viruses

- Labor costs for analyzing and repairing infected systems
- Loss of user productivity
- Loss of income
- Huge investments in anti-virus technology
- Secondary costs, e.g. stealing private info

Economic Impact of Computer Viruses cont.

Financial Impact of Malware Attacks 1997–2006

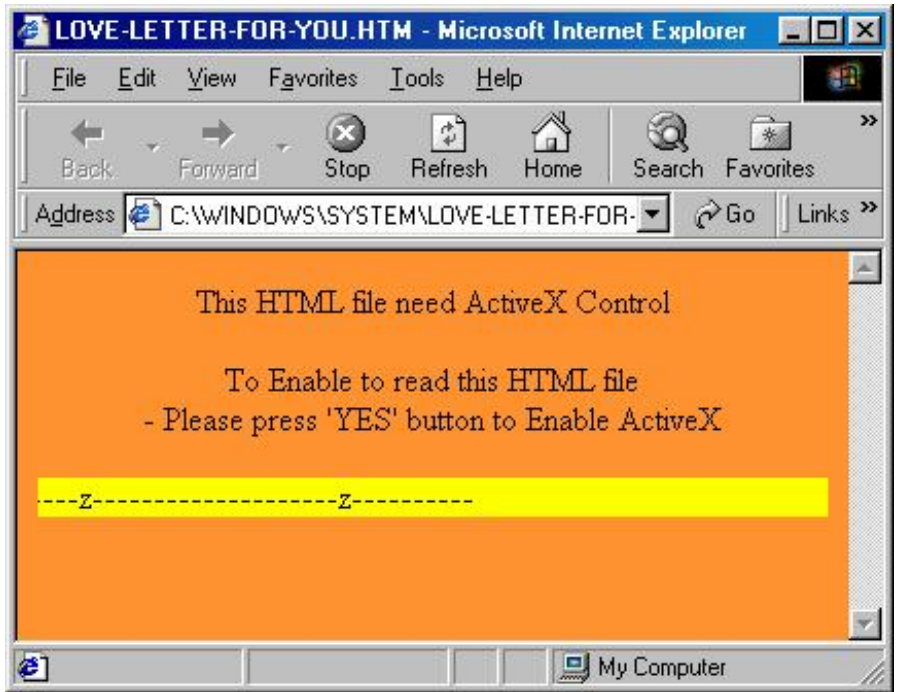
	Worldwide Impact (U.S. $)
2006	$13.3 Billion
2005	14.2 Billion
2004	17.5 Billion
2003	13.0 Billion
2002	11.1 Billion
2001	13.2 Billion
2000	17.1 Billion
1999	13.0 Billion
1998	6.1 Billion
1997	3.3 Billion

Source: Computer Economics, 2007

Figure 1

Examples of Computer Viruses

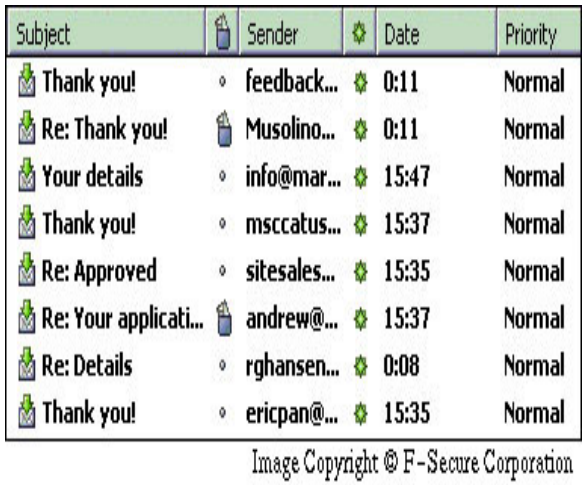
- ILOVEYOU Virus (2001)
  - Spreads through emails and chat clients
  - Affects web development and media files (JPEGs, MP3s …)
  - Estimated damage of 10 to 15 billion dollars



Virus	Year	Estimated Damage
CIH	1998	20M to 80M $
Melissa	1999	300M to 600M $
Code Red	2001	2.6B $
SQL Slammer	2003	shut down South Korea's online capacity for 12 hours
Blaster	2003	2B to 10B $
Sobig.F	2003	5B to 10B $
MyDoom	2004	At its peak, slowed global Internet performance by 10 percent and Web load times by up to 50 percent
Sasser	2004	Tens of millions of dollars

Blaster

CodeRed



Sobig.F

Sasser

Summary

- Computer viruses in brief
- Importance of virus attacks
- Ethical PoV of virus attacks
- Impact on the economy
- Some computer viruses

Thank You…