"We're dealing with an urban myth. It's like the story of alligators in the sewers of New York. Everyone knows about them, but no one's ever seen them."

~Peter Norton on computer viruses

Of Norton Antivirus, Norton 360, Norton Internet Security, etc.
Notes

• Computer Museum Follow-up
  • Will still go over some computer history timeline in future class, which will be fair games for test

• Homework 3 is posted, and due Friday

• Timeline:
  • Tomorrow Guest Speakers: Submit 3 questions to dropbox by class tomorrow
  • Midterm Next Tuesday (Monday wrap up and review)
  • History, Internet (history of, deep web, etc.), Intellectual property
First, a bit of history

- http://www.ted.com/talks/george_dyson_at_the_birth_of_the_computer#t-227061
Timeline of Malware
Viruses

*a piece of code that is capable of copying itself*

- **1949 - 1966** – John von Neumann - *Theory of Self-Reproducing Automata*

- **1959** – Victor Vysottsky, H. Douglas McIlroy and Robert P Morris (Bell Labs) – *Darwin/Core Wars*
  - Game in which programs competed for the processing time of PC
Viruses

*a piece of code that is capable of copying itself*

- **1971** – Bob Thomas - *The Creeper*
  - Experimentally spread through ARPANET (The Advanced Research Projects Agency Network)
  - Self-Replicating Program, kind of
  - “I’m the creeper, catch me if you can!”
  - The Reaper was created to fix it
Viruses

*a piece of code that is capable of copying itself*

- **1974 – Wabbit (Rabbit)**
  - Origin of “Fork Bomb”
  - Code that reproduces itself until it brings the computer performance to a stop
Viruses

*a piece of code that is capable of copying itself*

- **1983** – Frederick Cohen - “**Virus**” coined
  - the computer programs that are infectious with a tendency to replicate

- **1986** – **Brain Boot Sector**
  - First MS-DOS Virus, which effects the boot sector
  - Created in attempt to keep track of the piracy of their software
Worms

Worms spread from computer to computer with the capability to travel without any human action.

- **1988** – Robert Tappan Morris – **Morris Worm**
  - Cornell student Robert released 99 lines of code (from MIT) to try to assess how large the internet was
  - Because of bug, made several computers unusable
  - Contacted Harvard friend who tried to email instructions on how to stop or remove the problem
Worms

Worms spread from computer to computer with the capability to travel without any human action.

- **1988** – Robert Tappan Morris – **Morris Worm**
  - However the email could not go out because their virus had clogged the system
  - Estimated to have caused between $10,000,000 and $100,000,000 of damage
  - Robert becomes the first to be punished under the “Computer Abuse and Fraud Act”
Worms

Worms spread from computer to computer with the capability to travel without any human action.

- **1999** – David L. Smith - *Melissa Virus*
  - ~20% of computers worldwide
  - Used office macro to send email to the first 50 contacts in Outlook
Worms

Worms spread from computer to computer with the capability to travel without any human action.

- **1999** – David L. Smith - **Melissa Virus**
  - Used infected word document that contained a list of pornographic sites,
  - Randomly inserted quotes from The Simpsons TV show into documents on the host computer and deleted critical Windows files.

![Image of a computer screen showing a phishing email with a list of files including a document and a zip file.](image)
Worms

Worms spread from computer to computer with the capability to travel without any human action.

- **1999** – David L. Smith - *Melissa Virus*
- Estimated to have caused $1 Billion Dollars in damages
- David was fined $5,000 and spent 20 months in jail
Worms

Worms spread from computer to computer with the capability to travel without any human action.

- **2000** – Reonel Ramones and Onel de Guzman in Philippines – **ILOVEYOU Virus**
  - Emails with attachment LOVE-LETTER-FOR-YOU.TXT.vbs
  - Sent emails to everybody in contacts
Worms

*Worms spread from computer to computer with the capability to travel without any human action.*

- Deleted all files with the extensions JPEG, MP3, VPOS, JS, JSE, CSS, WSH, SCT and HTA
- Estimated to have caused between $5.5 - $8.7 billion in damages
Worms

Worms spread from computer to computer with the capability to travel without any human action.

- Charges were not brought against Ramones
- Spawned Movie “Subject: I Love You”
- https://www.youtube.com/watch?v=Z3IP9mT6xxU