

Vision. Value. You. fgcw

# Introduction to Computers

## CGS 1100

Spring 2004  
Unit 12A

Dr. Martin Hepp 1

Vision. Value. You. fgcw

# Reading Assignment for Next Class

MS PowerPoint 2000 Textbook:

1. Project 2
2. Read and apply!
3. Check the sections "What You Should Know" (pp. PP 2.58)

Dr. Martin Hepp 2

Vision. Value. You. fgcw

# Your Data is at Risk

- Loss
- Manipulation and Corruption
- Unauthorized Access and Usage
- Abuse of your computer for attacking others

Dr. Martin Hepp 3

Vision. Value. You. fgcw

# Malware (Malicious Software)

- Computer Viruses
- Trojan Horses
  - Password sniffer, Keyboard logger
  - FTP clients
- Worms
- (Advertising) Spyware

Dr. Martin Hepp 4

Vision. Value. You. fgcw

# Computer Virus

The diagram illustrates the structure of a computer virus. It features a central green box labeled "Original Application Program". This box is enclosed within a larger red box labeled "Virus Routines". Two arrows originate from the "Virus Routines" box: one points to a red box on the left labeled "Replication & Propagation", and the other points to a red dashed box on the right labeled "Malicious Activity".

Dr. Martin Hepp 5

Vision. Value. You. fgcw

# Trojan Horses

Program that appears to be a useful tool but secretly performs malicious activities

Dr. Martin Hepp 6

Vision. Value. You.

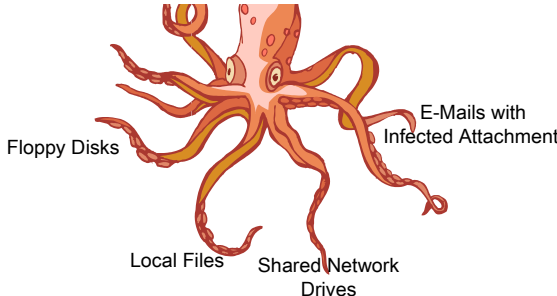
## How Malware Propagates

- Media exchange (floppy disk, ZIP, CDR, memory stick,...)
- E-mail attachments
- Infected documents
- Network drives
- Security leaks in the Operating System or Application software

Dr. Martin Hepp 7

Vision. Value. You.

## Propagation

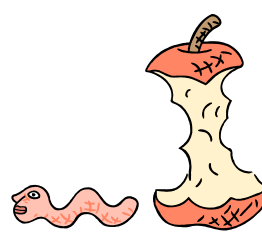


Dr. Martin Hepp 8

Vision. Value. You.

## Computer Worm

A self-replicating computer program. Computer viruses attach themselves to, and becomes part of, another executable program; a worm is self-contained and does not need to be part of another program to propagate itself.

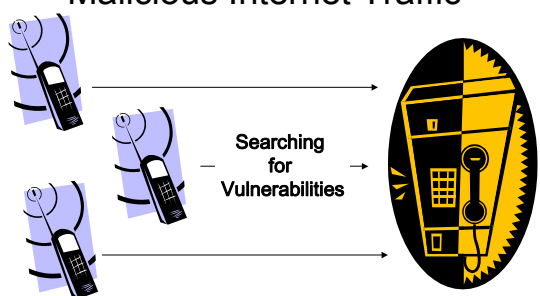


[http://en.wikipedia.org/wiki/Computer\\_worm](http://en.wikipedia.org/wiki/Computer_worm)

Dr. Martin Hepp 9

Vision. Value. You.

## Malicious Internet Traffic



Dr. Martin Hepp 10

Vision. Value. You.

## Security Leaks in Commercial Software




Dr. Martin Hepp 11

Vision. Value. You.

## Spyware

- Collect information from your computer and transmit it without telling you to a remote computer
- Usage patterns, credit card details, passwords, ...


Dr. Martin Hepp 12

  
Vision. Value. You.

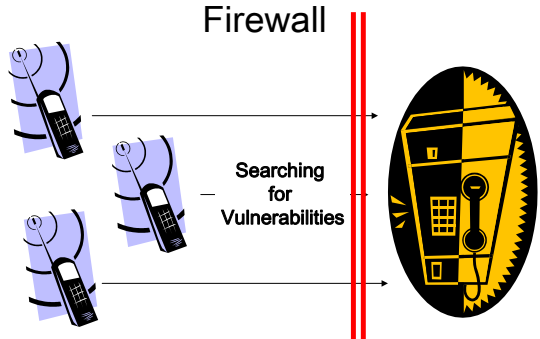
## Protect Yourself!

- Backups
- Firewall
- Anti-Virus Software
- Software Updates
- Behavior

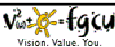
Dr. Martin Hepp 13

  
Vision. Value. You.

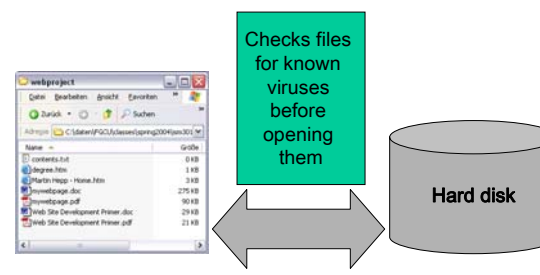
## Firewall



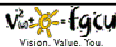
Dr. Martin Hepp 14

  
Vision. Value. You.

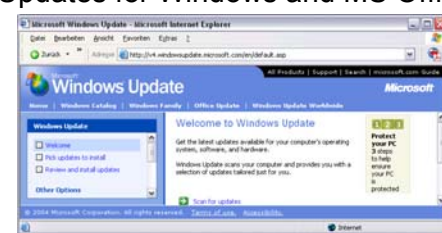
## Virus Scanner



Dr. Martin Hepp 15


  
Vision. Value. You.

## Updates for Windows and MS Office



<http://windowsupdate.microsoft.com>  
<http://office.microsoft.com/productupdates>

Dr. Martin Hepp 16

  
Vision. Value. You.

## Hoaxes

- Malicious Code (Virus and Trojan ) Warnings
- Urban Myths
- Sympathy Letters and Requests to Help Someone
- Traditional Chain Letters
- Threat Chains


Information about hoaxes:  
<http://hoaxbusters.ciac.org>

Dr. Martin Hepp 17

  
Vision. Value. You.

## Most important: Be careful!

Dr. Martin Hepp 18

  
Vision. Value. You.

## Thank you!

The slides will be available on the internet at  
<http://ruby.fgcw.edu/courses/mhepp/>  
(-> CRN10026)

Dr. Martin Hepp 19