Challenges and Directions for Security in Networked Systems

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Hackers are getting more sophisticated

- Hackers use new ways to attack
    - Social Networks (e.g. Facebook users)
    - Twitter
    - Search Engines (e.g. Google users)
    - Corrupt ordinary data files (e.g. PDF)

Do you trust your "friends" on social networking sites?

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Koobface worm to users: Be my Facebook friend

New variant steals log-in credentials for Facebook, MySpace, other social networking sites

By Gregg Keizer
March 2, 2009 12:00 PM ET

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Computerworld - A worm that hit Facebook last December has resurfaced, a security researcher said today, and is now hijacking user accounts -- not only for that social networking service, but also for MySpace, Friendster, LiveJournal and others.

The Koobface worm is again making the rounds on Facebook, said Jamz

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Hackers launch Facebook phishing attack

Perpetrators broke into some member accounts and sent messages to friends urging them to click on fake Web sites.

May 14, 2009: 7:16 PM ET

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BOSTON (Reuters) -- Hackers launched an attack on Facebook's 200 million users Thursday, successfully gathering passwords from some of them in the latest campaign to prey on members of the popular social networking site.

Facebook spokesman Barry Schnitt said Thursday that the site was in the process of cleaning up damage from the

Quick Vote

Do you think the changes being made at Chrysler and General Motors will save the companies?

○ Yes, both of them

○ Only GM

○ Only Chrysler

○ Neither

Are you really getting what you Googled for?

Source: PANDA SECURITY

Can birds twit malware?

CNN INTERNATIONAL .com/technology

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digitalbiz   IN ASSOCIATION WITH KONICA MINOLTA

Twitter message could be cyber criminal at work

June 22, 2009 -- Updated 2036 GMT (0436 HKT)

STORY HIGHLIGHTS
- Some officials say cyber crime has eclipsed drug trade as a money maker
- Latest ploy is planting malicious software in intriguing Twitter topics
- Some companies give in to extortion and remain silent, officials say
- Skimmed credit card numbers can be found for sale on Web sites
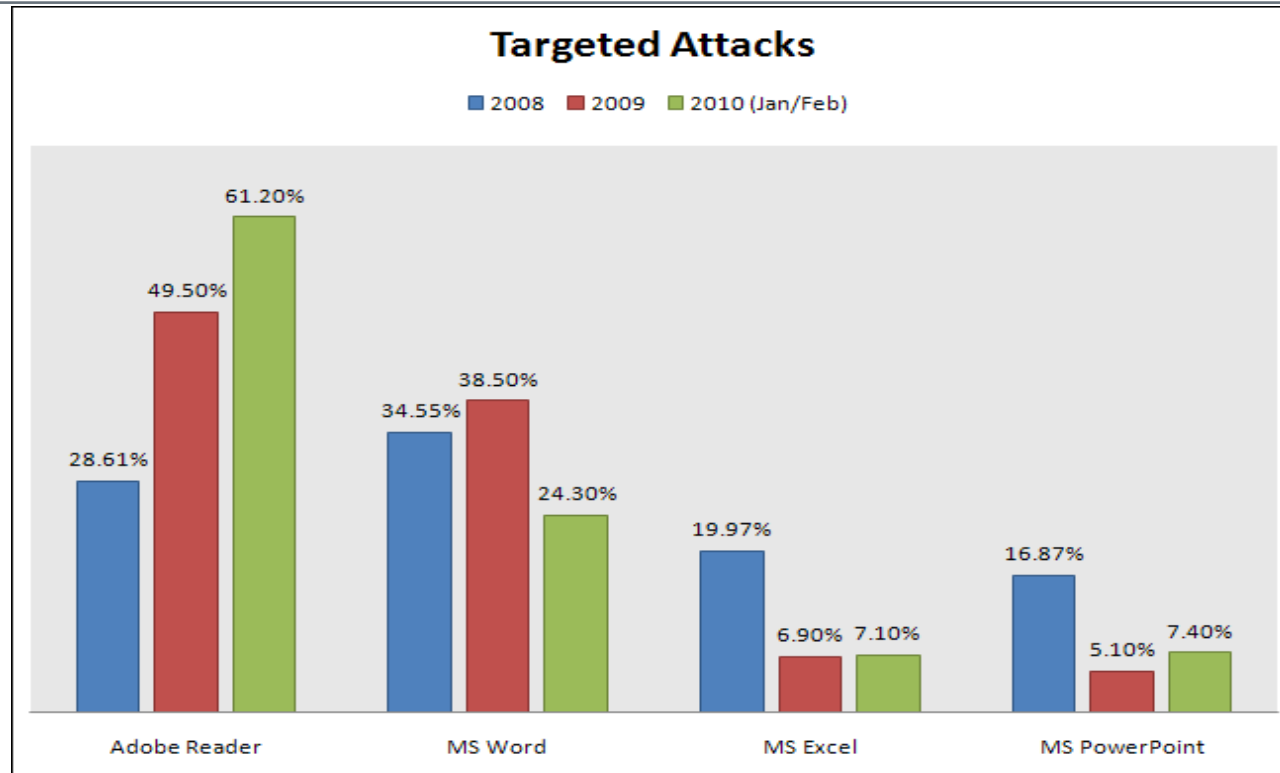
Next Article in Technology »

By Kevin Voigt
CNN

(CNN) -- Cyber criminals are setting snares that move at the speed of news.

Panda Security, a Spain-based antivirus maker, has been monitoring an onslaught of links with malicious software, or "malware," on Twitter that tag

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Exploits do not come only in .exe files

Targeted Attacks

2008 ■ 2009 ■ 2010 (Jan/Feb)

- Adobe Reader: 28.61%, 49.50%, 61.20%
- MS Word: 34.55%, 38.50%, 24.30%
- MS Excel: 19.97%, 6.90%, 7.10%
- MS PowerPoint: 16.87%, 5.10%, 7.40%

- Hackers use ordinary documents (e.g. PDF, WORD) to deliver exploits

Source: F-Secure

Government: The Parliament under attack

The Conficker virus has infected computers in the Houses of Parliament Photo: GETTY

Transportation: No train signals

Computer Virus Brings Down Train Signals

The virus infected the computer system at CSX's headquarters, shutting down signaling, dispatching, and other systems for trains throughout the East.
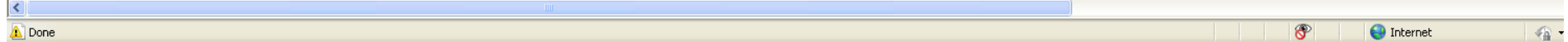
By Marty Niland, Associated Press Writer
InformationWeek
August 20, 2003 06:00 PM

NEW YORK (AP) -- A computer virus was blamed for bringing down train signaling systems throughout the East on Wednesday.

The virus infected the computer system at CSX Corp.'s Jacksonville, Fla., headquarters, shutting down signaling, dispatching, and other systems at about 1:15 a.m. EDT, CSX spokesman Adam Hollingsworth said.

"The cause was believed to be a worm virus similar to those that have

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Transportation: No cars

Energy: No electricity

Defense: fighter planes grounded

Telegraph.co.uk

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French fighter planes grounded by computer virus

French fighter planes were unable to take off after military computers were infected by a computer virus, an intelligence magazine claims.

by Kim Willsher in Paris
Published: 11:43AM GMT 07 Feb 2009

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FUTURE CRIMES: ANTICIPATING TOMORROW'S CRIMES TODA[Y]

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The future is already here - it is just unevenly distributed. ~

WEDNESDAY APRIL 14TH 2010

Sear[ch]

The Crimes

Artifical Intelligence/Automated Crime (1)

Biological and Human Genome (2)

Biometrics (2)

Cloud Computing (2)

Critical-Infrastructure (3)

GPS/Location

Hacking the Human Heart: Medical Devices Found Subject to Technical Attack

Since the dawn of the 1970's television action show the Six Million Dollar Man, the public has been fascinated by bionics and the integration of technology into the human body. What once seemed to be a far-off science fiction fantasy, is increasingly, however, becoming real. For years, surgeons have been replacing human

Future Crimes

A futurist perspective on the effec[t] of scientific and technological progress on crime, policing and t[he] criminal justice system.

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Research Roadmap

- Privacy

- Targeted Attacks

- Security of New and Emerging Technologies

- Mobile, Smart, Ubiquitous

- Usable Security

Privacy

- Must investigate how to protect users against disclosure of personal info

- Expected Impact:

    - Increase confidence of citizens in privacy-preserving ICT

    - Further increase adoption of ICT though assured protection of privacy

    - Protect the privacy rights of citizens

Targeted Attacks

- Must develop new techniques to collect and analyze data on with such attacks

- Expected Impact:

  - Win ground against sophisticated attacks

  - Improve collaboration

  - Better protect users

Security of New and Emerging Technologies

- Cloud Computing – Online Social Networks – Smart Meters – SCADA Networks – etc.

- Must secure these new and emerging technologies before it is too late

- Expected Impact:
  - Citizens will increase adoption and place trust
  - Reduce costs of associated security incidents
  - Lower barrier to provide services on these platforms

Mobile, Smart, Ubiquitous

- Tools and techniques to detect and prevent attacks against smart, mobile devices

- Expected Impact:

    - Increase adoption for commercial use by citizens

    - Improve (European) industrial competitiveness in mobile apps

Usable Security

- Usability of security mechanisms and countermeasures

- Possible need for interdisciplinary research

- Expected Impact:
  - Empower citizens for a more secure cyberspace
  - Support decision making
  - Increase adoption of security/monitoring tools

Data, Analysis, Threat Intelligence

- We must try to be one step ahead of the attackers
  - Learn how the attackers think, act and operate
- We must collect data
- We must analyze data
- We must share data

European Effort

- ## WOMBAT
  - Worldwide Observatory of Malicious Behaviors and Attack Threats

- ## FORWARD
  - Identify and coordinate research for secure and trusted ICT systems and infrastructures.

- ## SysSec
  - Create a Network of Excellence in the field of Systems Security in Europe

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