Hacking and Hackers

HACKERS CAN TURN YOUR HOME COMPUTER INTO A BOMB

By RANDY JEFFRIES / Weekly World News

WASHINGTON — Right now, computer hackers have the ability to turn your home computer into a bomb and blow you to Kingdom Come — and they can do it anonymously from thousands of miles away!

Experts say the recent "break-ins" that paralyzed the Amazon.com, Buy.com and eBAY websites are tame compared to what will happen in the near future.

Computer expert Arnold Yabenson, president of the Washington-based consumer group National CyberCrime Prevention Foundation (NCPF), says that as far as computer crime is concerned, we've only seen the tip of the iceberg.

"The criminals who knocked out those three major online businesses are the least of our worries," Yabenson told Weekly World News.

"There are brilliant but unscrupulous hackers out there who have developed technologies that the average person can't even dream of. Even people who are familiar with

how computers work have trouble getting their minds around the terrible things that can be done.

"It is already possible for an assassin to send someone an e-mail with an innocent-looking attachment connected to it. When the receiver downloads the attachment, the electrical current and molecular structure of the central processing unit is altered, causing it to blast apart like a large hand grenade.

"As shocking as this is, it shouldn't surprise anyone. It's just the next step in an ever-escalating progression of horrors conceived and instituted by hackers."

Yabenson points out that these dangerous sociopaths have already:

● Vandalized FBI and U. S. Army websites.
● Broken into Chinese military networks.
● Come within two digits of cracking an 87-digit Russian security code that would have sent deadly missiles hurtling toward five of America's major cities.

"As dangerous as this technology is right now, it's going to get much

scarier," Yabenson said.

"Soon it will be sold to terrorists cults and fanatical religious-fringe groups.

"Instead of blowing up a single plane, these groups will be able to patch into the central computer of a large airline and blow up hundreds of planes at once.

"And worse, this e-mail bomb program will eventually find its way into the hands of anyone who wants it.

"That means anyone who has a quarrel with you, holds a grudge against you or just plain doesn't like your looks, can kill you and never be found out."

... & blow your family to smithereens!

KABOOM! It might not look like it, but an innocent home computer like this one can be turned into a deadly weapon.

Sickos can wreak death and destruction from thousands of miles away!

Arnold Yabenson.

What do hackers do and why do they do it?

What is a hacker?

"Hacking might be characterized as '*an appropriate application of ingenuity*'. Whether the result is a quick-and-dirty patchwork job or a carefully crafted work of art, you have to admire the cleverness that went into it."

- **Jargon File** (Eric S. Raymond)

An Example

CHDK

(link)

What Hackers Do

Lifecycle of a hack:

- Unfilled need
- (Reverse engineering)
- "Ingenious" Solution
- Sharing
- Collaboration and community
- (Adoption by firms)

More Examples

(link)

Why do hackers "hack"?

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I've shown that hacking includes distinct processes. Better questions might be:

1. Why do hackers innovate without expectation of payment for their work?

2. Why do hackers freely share their innovations?

Q1: Why do hackers innovate?

Why do hackers innovate without expectation of payment for their work?

A1: Why do hackers innovate?

Why do hackers innovate without expectation of payment for their work?

- Raymond (1999)'s *Cathedral and the Bazaar* describes open source hackers as "*scratching their own itch*"

    - Users are in the best position to recognize their problem and to solve it (as we saw earlier).

- Users enjoy hacking (Lakhani and Wolf 2002)

A1: Why do hackers innovate?

Intrinsic

vs

Extrinsic

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Q2: Why do hackers reveal?

Why do hackers freely share their innovations with others?

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Why do hackers freely share their innovations with others?

- Ideological commitment to sharing

- Building reputation

- Benefits of collaborative work

- Sharing is low cost! (i.e. "Why not?")

A2.1: Why do hackers reveal?

Ideological commitment to openness and sharing:

- e.g. "Software should be free." (Stallman 2002; Williams 2002)

- Hacker projects, working as social movements, explicitly reinforce ethical commitments (Coleman and Hill 2003)

A2.2: Why do hackers reveal?

Building reputation:

- Building professional reputation (Lerner and Tirole 2002)

- Building reputation within community (Lakhani and Wolf 2005)

A2.3: Why do hackers reveal?
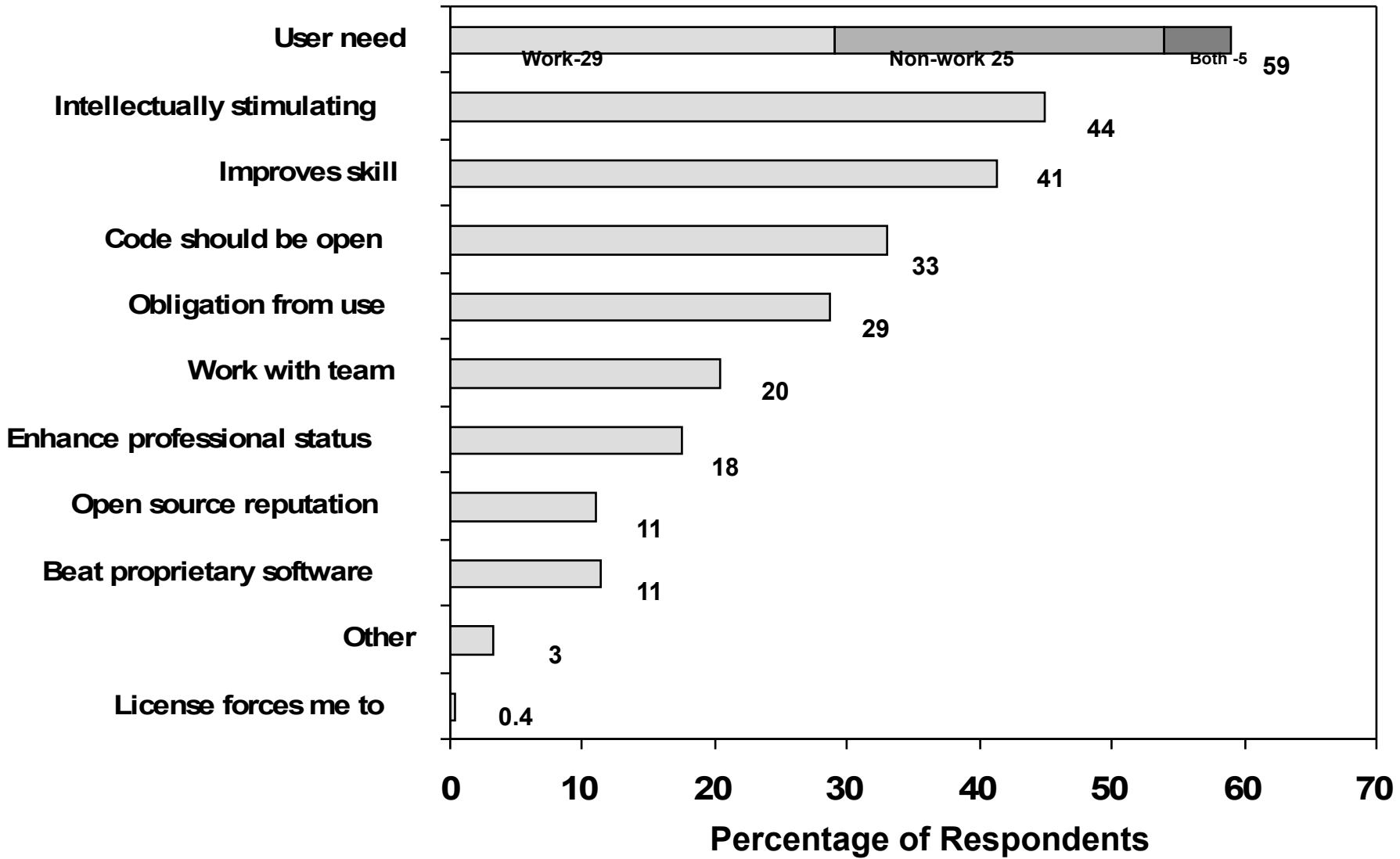
Users benefit from collaborative work:

- Linus's law: "*With enough eyeballs, all bugs become shallow*" (Raymond 1999)

- Sharing improvements means others can help improve and maintain them.

- Users feel that they are getting more than they are giving (Ghosh)

A2.4: Why do hackers reveal?

Sharing is cheap and easy:

- By definition: benefits to the sharer must outweigh the costs

- The Internet drives down *transaction costs* associated with sharing (Benkler 2002, 2006)

  - Costs of doing the same work in either markets or firms remains prohibitively high

Survey Data from Free Software/Open Source Projects

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Note: n=684
Source: Lakhani, Karim and Bob Wolf (2002)