

Primjena elektroničkih računala

Sigurnost na internetu

Izv. prof. dr. sc. Hrvoje Kalinić



Sigurnost na internetu



"On the Internet, nobody knows you're a dog."



On the Internet, nobody knows you're a dog

From Wikipedia, the free encyclopedia

"On the Internet, nobody knows you're a dog" is an [adage](#) which began as a [cartoon](#) caption by [Peter Steiner](#) and published by *The New Yorker* on July 5, 1993.^{[1][2]} The cartoon features two dogs: one sitting on a chair in front of a computer, speaking the caption to a second dog sitting on the floor.^{[2][3]} As of 2011, the panel was the most reproduced cartoon from *The New Yorker*, and Steiner has earned over US \$50,000 from its reprinting.^{[1][4][5]}

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- 1 History
- 2 Context
- 3 In popular culture
- 4 See also
- 5 References
- 6 Further reading
- 7 External links

History [edit]

Peter Steiner, a [cartoonist](#) and contributor to *The New Yorker* since 1979,^[6] said the cartoon initially did not get a lot of attention, but later took on a life of its own, and that he felt similar to the person who created the "[smiley face](#)".^[1] In fact, Steiner was not that interested in the [Internet](#) when he drew the cartoon, and although he did have an online account, he recalled attaching no "profound" meaning to the cartoon; it was just something he drew in the manner of a "make-up-a-caption" cartoon.^[1]

In response to the comic's popularity, he stated, "I can't quite fathom that it's that widely known and recognized."^[1]

Context [edit]

The cartoon marks a notable moment in the [history of the Internet](#). Once the exclusive domain of government engineers and academics, the Internet was now a subject of discussion in general interest magazines like *The New Yorker*. [Lotus Software](#) founder and early Internet activist [Mitch Kapor](#) commented in a *Time* magazine article in 1993 that "the true sign that popular interest has reached critical mass came this summer when the New Yorker printed a cartoon showing two computer-savvy canines".^[7]

The cartoon symbolizes an understanding of [Internet privacy](#) that stresses the ability of users to send and receive messages in general anonymity. [Lawrence Lessig](#) suggests "no one knows" because [Internet protocols](#) do not force users to [identify](#) themselves, although [local access points](#) such as a user's university may; but this information is privately held by the local access point and not an intrinsic part of the Internet transaction.^[8]

A study by Morahan-Martin and Schumacher (2000) on [compulsive or problematic Internet use](#) discusses this phenomenon, suggesting the ability to self-represent from behind the computer screen may be part of the compulsion to go online.^[9] The phrase can be taken "to mean that [cyberspace](#) will be liberatory because gender, race, age, looks, or even 'dogness' are potentially absent or alternatively fabricated or exaqqerated with unchecked creative license for a multitude of purposes both legal and illegal", an understanding that echoed



Sigurnost na internetu

- Adresa elektroničke pošte
 - ime.prezime@yahoo.com
 - ccorax83@yahoo.com



Sigurnost na internetu

The Joy of Tech™



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by Nitrozac & Snaggy



joyoftech.com

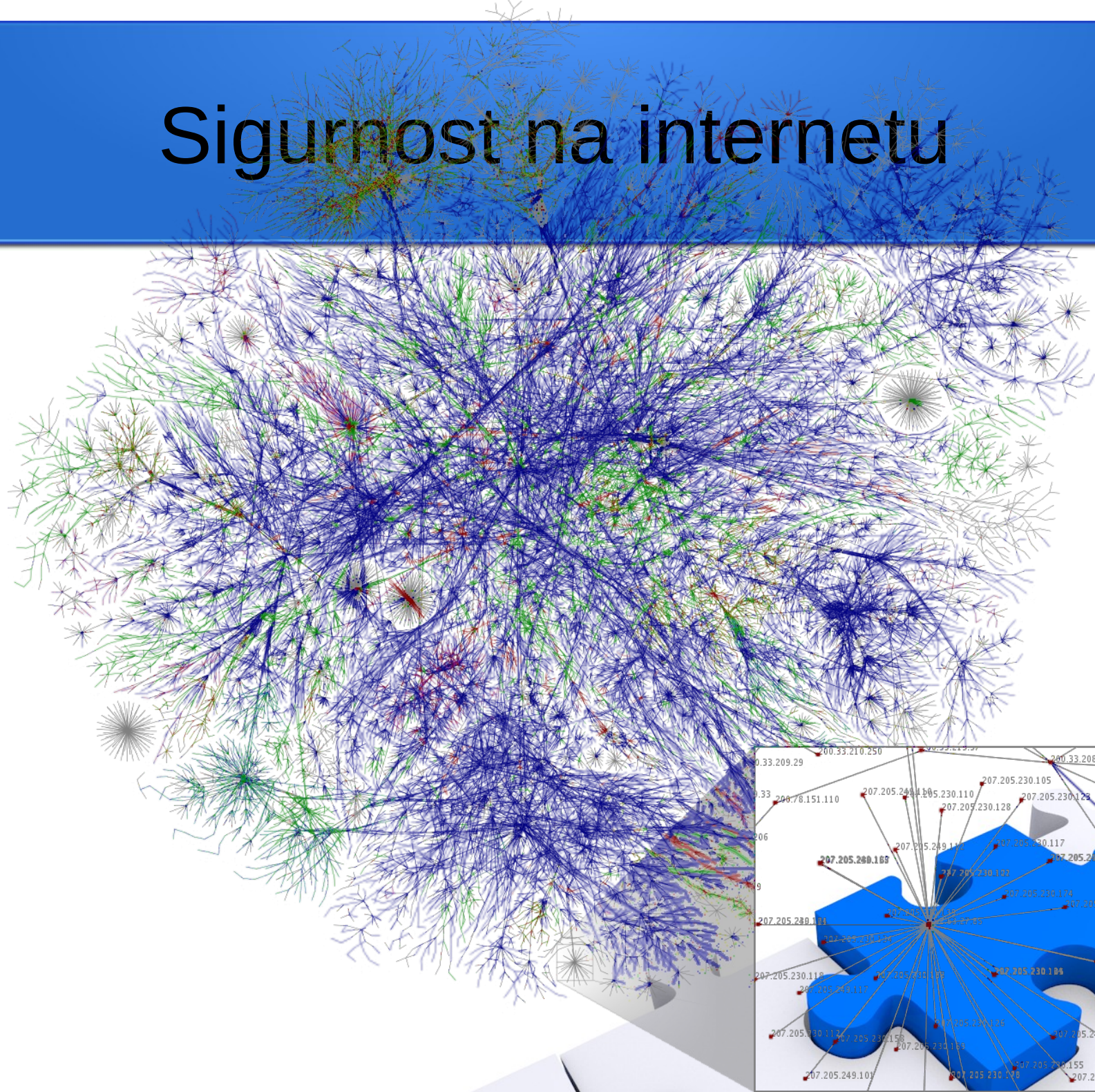
What Happens in an Internet Minute?



And Future Growth is Staggering



Sigurnost na internetu



Sigurnost na internetu

- Moć interneta
 - Stotine milijuna korisnika na udaljenosti od par klikova i par sekundi
- Opasnost interneta
 - Postoje korisnici s lošim namjerama



Sigurnost na internetu



Sigurnost na internetu

- Identificiranje
 - Onim tko sam
 - Onim što znam
 - Onim što imam

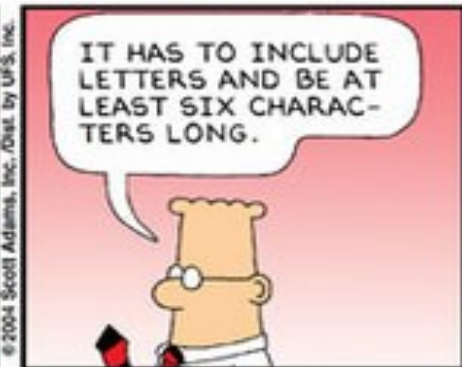
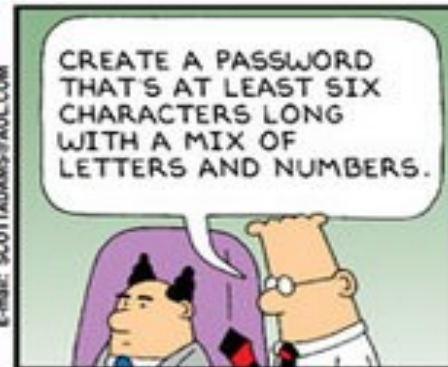


Sigurnost na internetu

- Metafora ključa kao sredstvo identificiranja
 - Softwareski ključ – pin, zaporka...
- Preporuke
 - Koristiti jake lozinke za najvažnije servise:
 - Facebook, PayPal, Gmail...
 - Kumunikacija, društvene mreže, servise za elektroničku poštu, plaćanje...
 - TU lozinku ne koristiti na bilo forumima ili drugim manje provjerenim servisima
 - Odvagati sigurnost nasuprot praktičnosti



Sigurnost na internetu



Sigurnost na internetu

WORST PASSWORDS OF 2012



Sigurnost na internetu

- Moja draga voli filmove s Jamesom Bondom
 - MdvfsJB
 - Mdvf5J8#

* s, S = 5

b, B = 8

_ (ili neki drugi znak) na kraj



i shall use strong passwords.

i shall use strong passwords.

i shall use strong passwords.

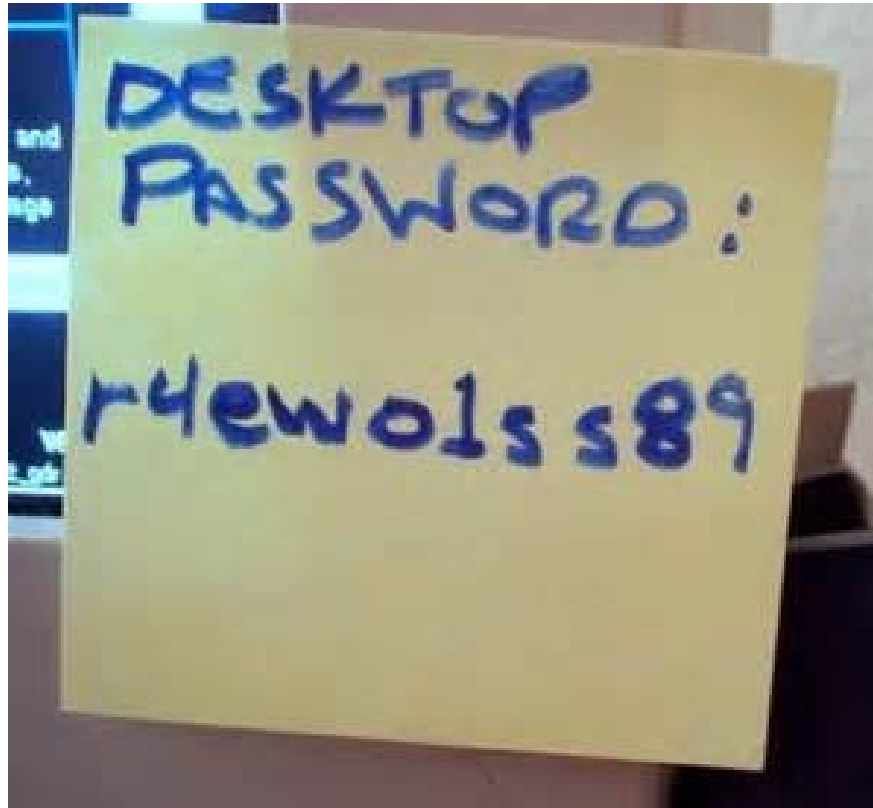
i shall use strong passwords.

I shall use strong passwords!


x	0	x
0	x	x
0	0	x

Strong passwords are a minimum of 8 characters in length & include uppercase, lowercase, numbers & special characters.

Sigurnost na internetu



Sigurnost na internetu



Gmail, PayPal,
Facebook, Amazon ...

Oglasnik...

Forum, komentari...

Sigurnost na internetu

Mdvh5J8#!vi0..7

Mdvh5J8

zeko1234



Sigurnost na internetu

- Zašto?
 - napadač može otvoriti lažni forum s ciljem prikupljanja lozinki (phishing)



Sigurnost na internetu



Dear valued customer of TrustedBank,

We have received notice that you have recently attempted to withdraw the following amount from your checking account while in another country: \$135.25.

If this information is not correct, someone unknown may have access to your account. As a safety measure, please visit our website via the link below to verify your personal information:

<http://www.trustedbank.com/general/custverifyinfo.asp>

Once you have done this, our fraud department will work to resolve this discrepancy. We are happy you have chosen us to do business with.

Thank you,
TrustedBank

Member FDIC © 2005 TrustedBank, Inc.



Sigurnost na internetu

Hello!

As part of our security measures, we regularly screen activity in the Facebook system. We recently contacted you after noticing an issue on your account.

Spelling

Our system detected unusual Copyrights activity linked to your Facebook account , please follow the link bellow to fill the Copyright Law form:

http://www.facebook.com/application_form

Links in email

Note: If you dont fill the application your account will be permanently blocked.

Threats

Regards,

Facebook Copyrights Department.

Popular company

<https://www.woodgrovebank.com/loginscript/user2.jsp>

<http://192.168.255.205/wood/index.htm>





Kontakt

Mapa weba

Traži

traži

Hrvatski

English

Razina prijetnje

» Naslovnica

O nama

Za korisnike CARNeta

Novosti

Preporuke

Alati

Dokumenti

Testirali smo

Prezentacije

Zlonamjerni sadržaj

Provjera ranjivosti



Sigurnije poslovanje

Misija Nacionalnog CERT-a

promicanje i očuvanje sigurnosti Interneta u Republici Hrvatskoj

Posljednja novost

listaj novosti

06.11.2014, [The Daily Dot](#)

Teroristi iskoristili Google DMCA prijavu za...

Teroristi su uspjeli doći do osobnih podataka voditelja anti-islamskog YouTube kanala - Al Hayat TV kojem sada prijete smrću. Podaci su prosljeđeni teroristima nakon što su podigli DMCA prijavu (prijavu o kršenju autorskih prava) koju Google, odnosno YouTube automatski prosljeđuje korisniku te uklanja sporni

[Opširnije](#) »»

Preuzmi RSS

04.11.2014, [Security Week](#)

Poteškoće uzrokovane lažnim curenjem podataka

27.10.2014, [The Hacker News](#)

Zero Day ranjivost u Samsungovoj usluzi "Find..."



Pretplata na preporuke

Pretplati se ✓



Prijava incidenta

[O incidentu](#) | [O prijavi](#)

Prijava phishinga

[O phishingu](#) | [O prijavi](#)



Preporuke

(RSS)

[pogledaj sve preporuke](#)

14.11.2014 [Fedora](#)

Sigurnosni nedostatak programskog paketa python3

14.11.2014 [Fedora](#)

Sigurnosni nedostatak programskog paketa gnutls

14.11.2014 [Fedora](#)

Sigurnosni nedostaci programskog paketa aircrack-ng

Sigurnost na internetu

- Zaštita osobnih podataka
 - Na internetu
 - Na osobnom računalu



Sigurnost na internetu



CERT analiza
CarNet webinar

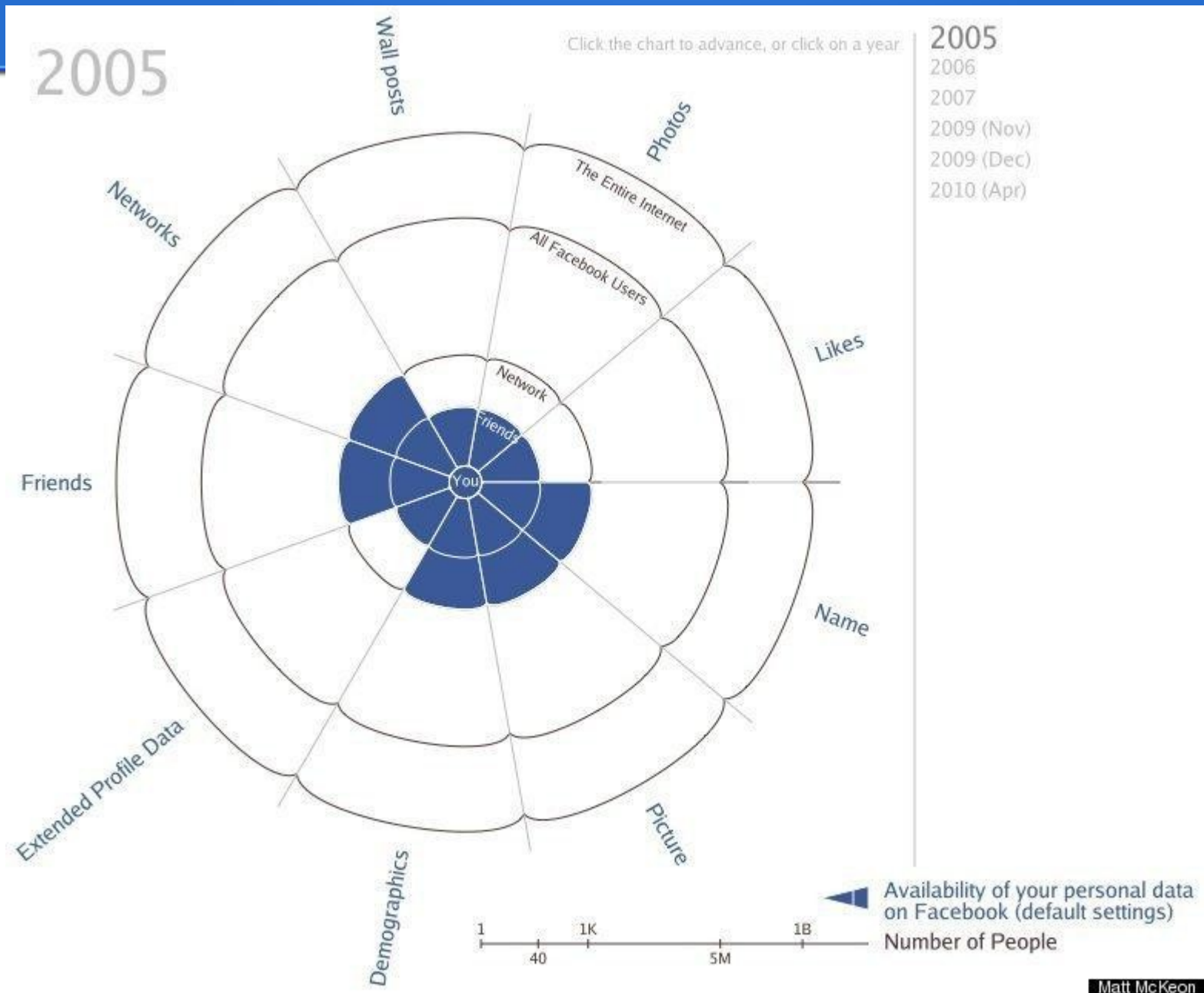


Sigurnost na internetu

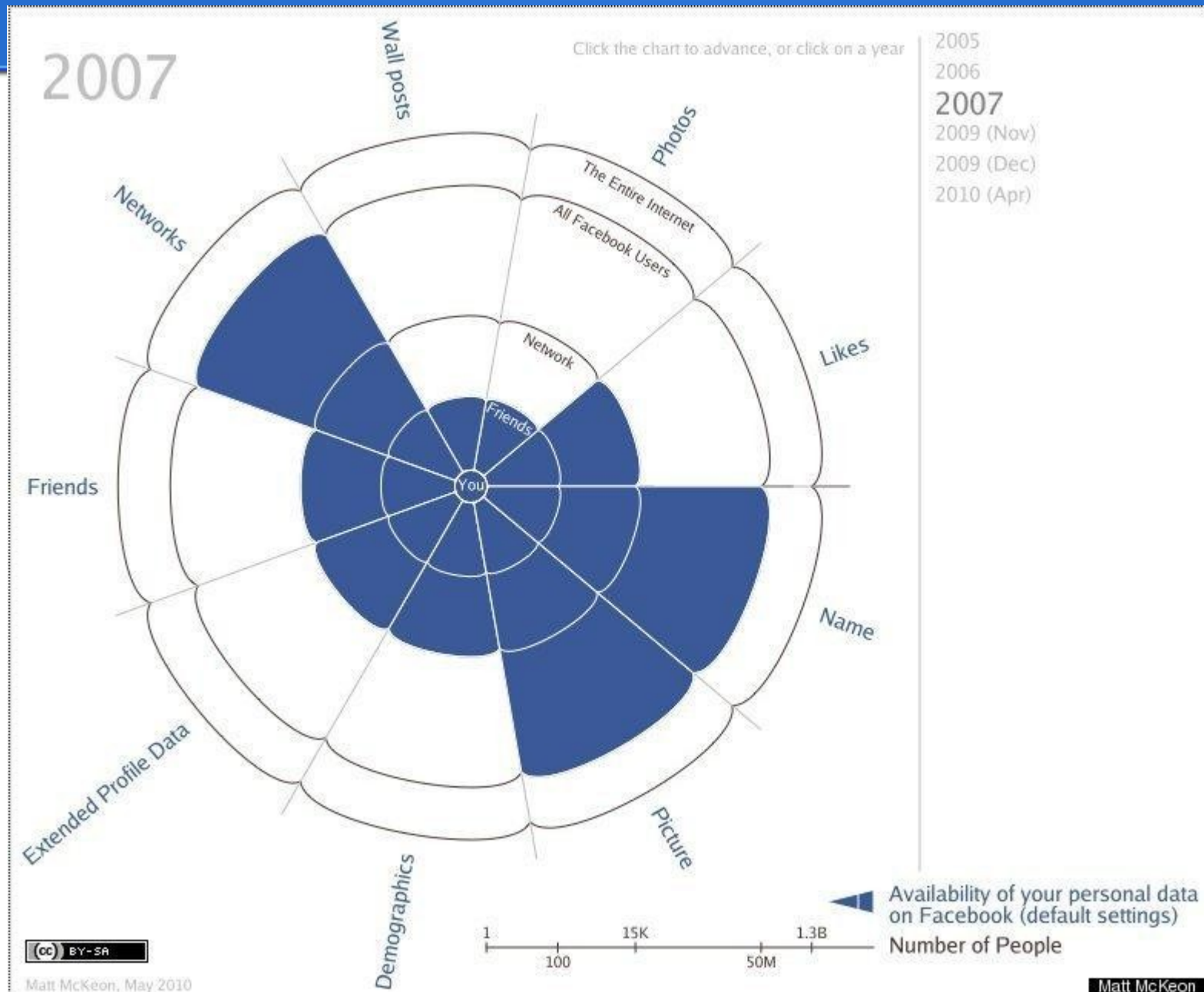
- Registracija
 - Prihvatanje pravila igre
- Vlasništvo, hijerarhija organizacije
 - Tvrtka
 - Upravljanja profitom
- "If you don't pay for the product – you are the product"



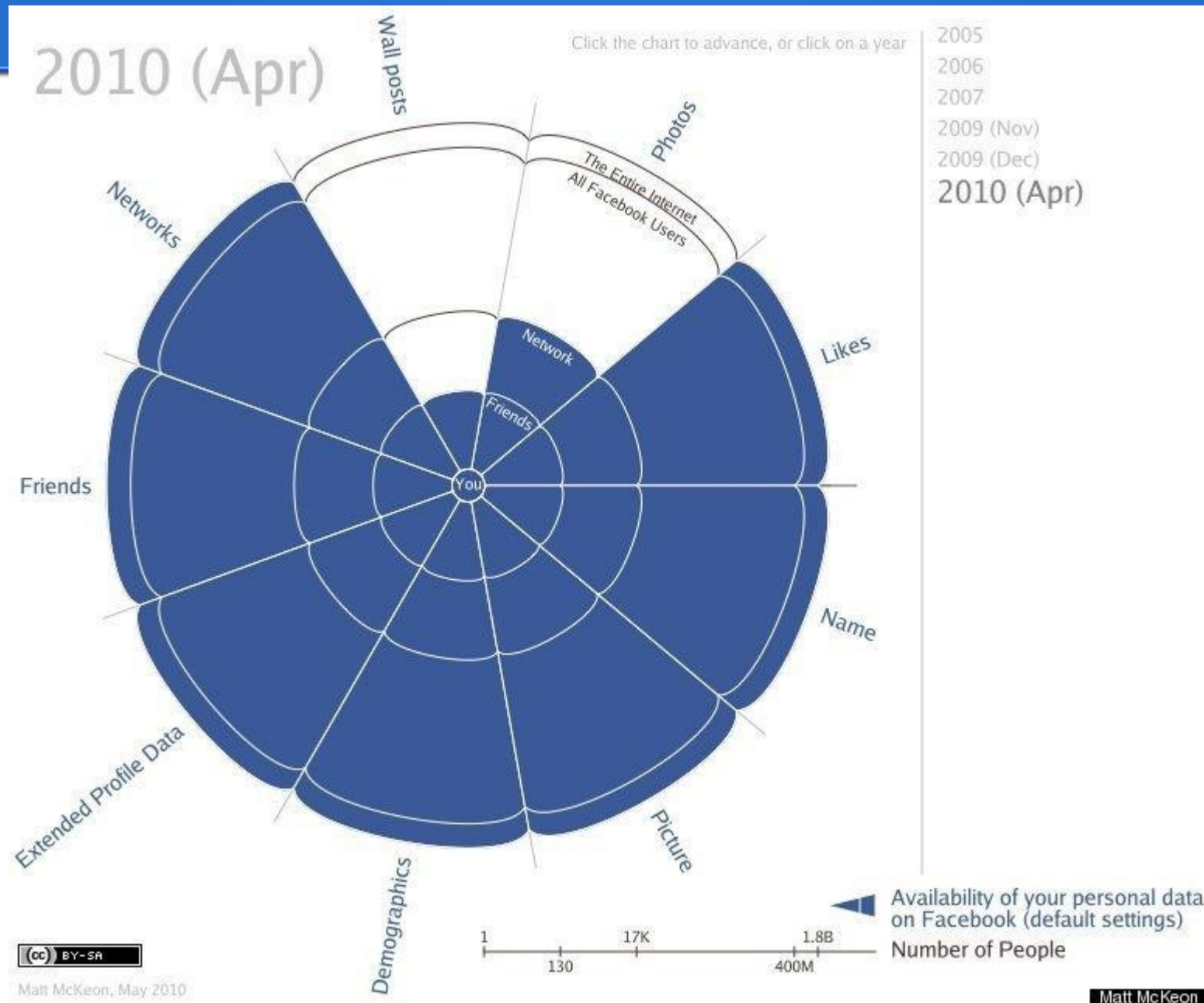
Sigurnost na internetu



Sigurnost na internetu



Sigurnost na internetu



Sigurnost na internetu

- Dostupnost FB podataka
 - U srpnju 2010., kanadski sigurnosni istraživač Ron Bowes, postavio je na javni P2P servis BitTorrent, bazu koja se sastoji od podataka iz čak 170 milijuna korisničkih računa sa Facebooka



Sigurnost na internetu

- Dostupnost FB podataka
 - <http://www.facebook.com/policy.php>
 - Politika privatnosti
 - <http://www.facebook.com/terms.php>
 - Uvjeti korištenja, 9. paragraf, točka 2 definira način na koji treće strane upravljaju našim podacima
 - kome će biti dostupni podatci koje ostavljamo na profilima drugih, ovisi o **njihovim postavkama** !



Sigurnost na internetu

- Koje osobne podatke držati privatnima (posebno zaštićenima)
 - bilo kakve kontakt informacije (e-mail adresa, telefonski broj itd.), adresa
 - datum rođenja
 - bilo koji osobni podaci koje su poznati jedino nama ili užem krugu (obitelji)



Sigurnost na internetu

- "Risk vs. Gain"
 - korist i zadovoljstvo u usporedbi s rizicima
- Koja je svrha društvene mreže
 - društvenost != prijateljstvo
 - Pravilo krda

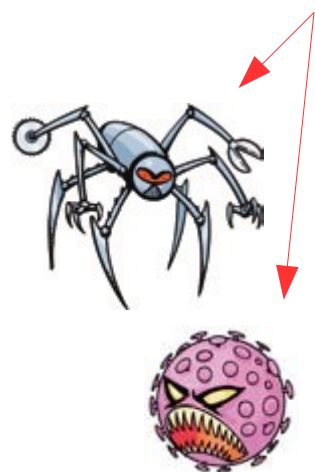


Sigurnost na internetu



Sigurnost na internetu

- Štetni programi (malware)
 - Računalni programi kojima je glavni cilj kompromitacija računala
 - Virusi, crvi, trojanci, rootkiti...



Sigurnost na internetu

- Štetni programi (malware)
 - Računalni programi kojima je glavni cilj kompromitacija računala
 - Virusi, crvi, trojanci, rootkiti...
 - Posjeduju mogućnost samostalnog širenja
 - Elektronička pošta
 - Mrežne stranice
 - Prijenosni diskovi (USB)



Sigurnost na internetu

- Zaštita
 - Ne posjećivati sumnjive mrežne stranice
 - Kockanje
 - Piratski software
 - XXX



Sigurnost na internetu

- Zaštita
 - Ne otvarati sumnjivu poštu

Hello!

As part of our security measures, we regularly screen activity in the Facebook system. We recently contacted you after noticing an issue on your account.

Spelling

Our system detected unusual Copyrights activity linked to your Facebook account , please follow the link bellow to fill the Copyright Law form:

http://www.facebook.com/application_form

Links in email

Note: If you dont fill the application your account will be permanently blocked.

Threats

Regards,

Facebook Copyrights Department.

Popular company



Sigurnost na internetu

- Zaštita
 - Ne otvarati sumnjivu poštu
 - Pošta od nepoznatih pošiljatelja
 - Preuzimati datoteke samo s provjerenjih mrežnih stranica
 - Ne preuzimati podatke od nepoznatih osoba (u "chat/messaging" programima)



Sigurnost na internetu

- Zaštita
 - Vatrozid
 - Antivirusni programi
 - ClamAV
 - Avast
 - AVG
 - BitDefender
 - Redovito održavanje softwarea

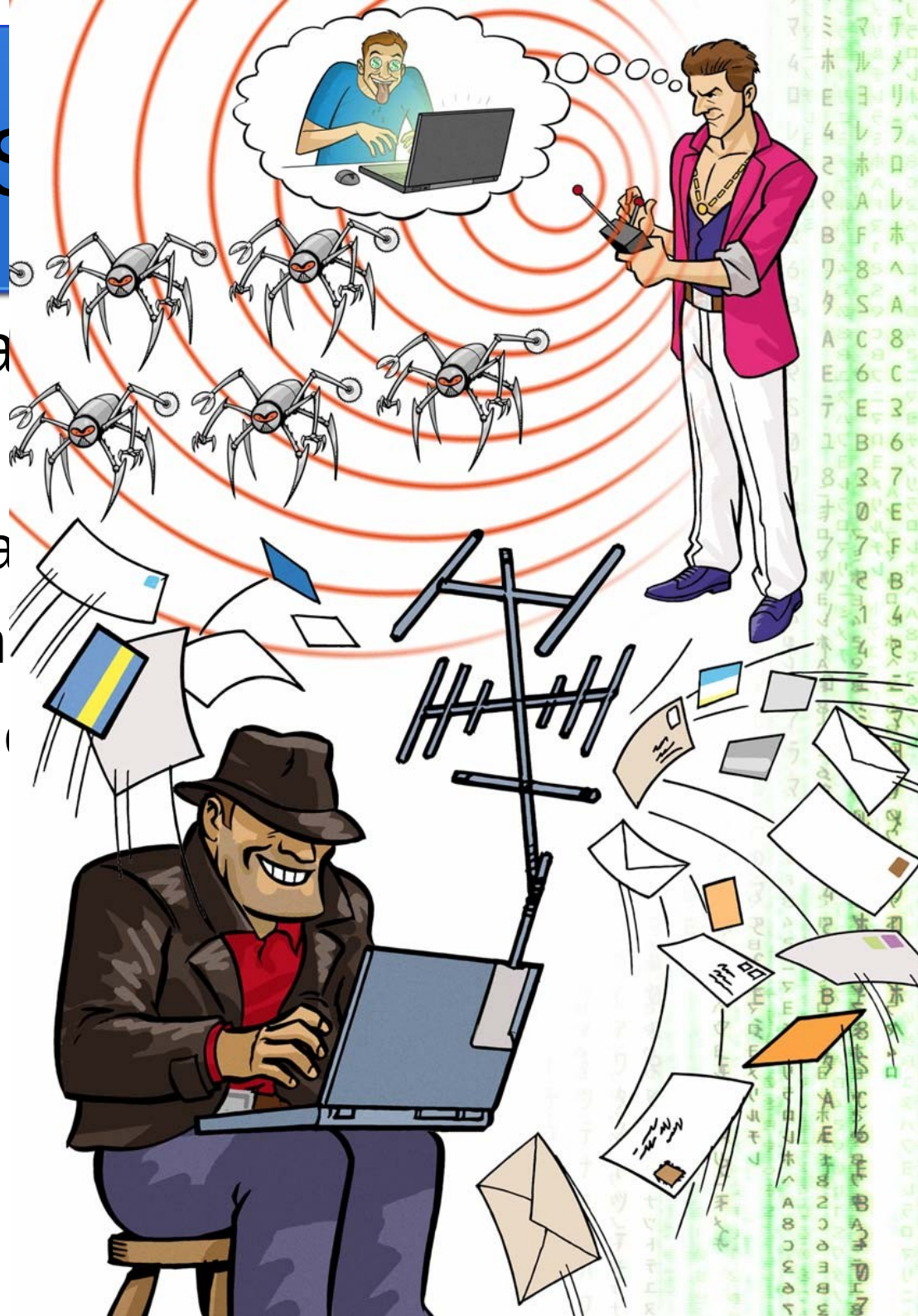


Sigurnost na internetu

- Uporaba tuđih računala za vlastitu korist
 - Spam
 - Oglašavanje
 - Bitcoin rudarenje
 - Napade
 - ...



- Uporaba
 - Spam
 - Oglaš
 - Bitcoin
 - Napad
 - ...



ist



Sigurnost na internetu

- Socijalni inženjering kao sredstvo dobivanja ovlasti
 - Lažiranje identiteta
 - Krađa identiteta
 - Krađa podataka
 - Zarada





Email spoofing

From Wikipedia, the free encyclopedia
(Redirected from [Hoax email](#))

Email spoofing is the creation of [email](#) messages with a forged sender address - something which is simple to do because the core protocols do no [authentication](#). [Spam](#) and [phishing](#) emails typically use such spoofing to mislead the recipient about the origin of the message.^[1]

A number of measures to address spoofing are available including: [SPF](#), [Sender ID](#), [DKIM](#), and [DMARC](#). Although their use is increasing, it is likely that almost half of all domains still do not have such measures in place.^{[2][3]} However, as of 2013, 60% of consumer mailboxes worldwide use DMARC to protect themselves against direct domain spoofing^[4] and only 8.6% of emails have no form of domain authentication.^[5]

Contents [hide]
1 Technical detail
2 Use by spam and worms
3 Fooling media
4 Historical legitimate use
5 The effect on mailservers
6 Identifying the source of the email
7 See also
8 External links and references

Technical detail [\[edit\]](#)

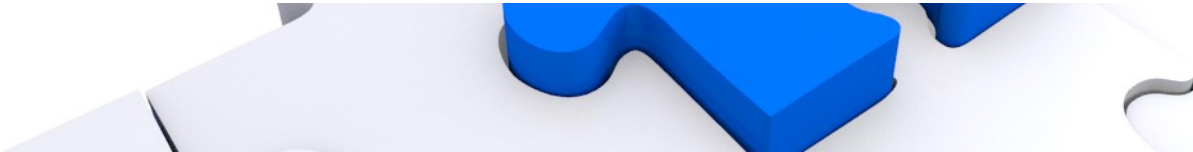
When an [SMTP](#) email is sent, the initial connection provides two pieces of address information:

- **MAIL FROM:** - generally presented to the recipient as the *Return-path*: header but not normally visible to the end user,^[6] and by default *no checks* are done that the sending system is authorized to send on behalf of that address.
- **RCPT TO:** - specifies which email address the email is delivered to, is not normally visible to the end user but *may* be present in the headers as part of the "Received:" header.

Together these are sometimes referred to as the "envelope" addressing, by analogy with a traditional [paper envelope](#).^[7]

Once the receiving mail server signals that it accepted these two items, the sending system sends the "DATA" command, and typically sends several header items, including:

- **From:** Joe Q Doe <joeqdoe@example.com> - the address visible to the recipient; but again, by default no checks are done that the sending system is authorized to send on behalf of that address.
- **Reply-to:** Jane Roe <Jane.Roe@example.mil> - similarly not checked



Phishing

From Wikipedia, the free encyclopedia

For more information about Wikipedia-related phishing attempts, see [Wikipedia:Phishing emails](#)

Phishing is the attempt to acquire [sensitive information](#) such as usernames, [passwords](#), and [credit card](#) details (and sometimes, indirectly, [money](#)) by masquerading as a trustworthy entity in an [electronic communication](#).^{[1][2]} Communications purporting to be from popular social web sites, auction sites, banks, online payment processors or IT administrators are commonly used to lure unsuspecting public. Phishing emails may contain links to websites that are infected with [malware](#).^[3] Phishing is typically carried out by [email spoofing](#)^[4] or [instant messaging](#),^[5] and it often directs users to enter details at a fake website whose [look and feel](#) are almost identical to the legitimate one. Phishing is an example of [social engineering](#) techniques used to deceive users,^[6] and exploits the poor usability of current web security technologies.^[7] Attempts to deal with the growing number of reported phishing incidents include [legislation](#), user training, public awareness, and technical security measures. Many websites have now created secondary tools for applications, like maps for games, but they should be clearly marked as to who wrote them, and you should not use the same passwords anywhere on the internet.

Phishing is a continual threat that keeps growing to this day. The risk grows even larger in social media such as Facebook, Twitter, Myspace etc. Hackers commonly use these sites to attack persons using these media sites in their workplace, homes, or public in order to take personal and security information that can affect the user and the company (if in a workplace environment). Phishing is used to portray trust in the user since you can usually not tell that the site or program being visited/ used is not real, and when this occurs is when the hacker has the chance to access the personal information such as passwords, usernames, security codes, and credit card numbers among other things.

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 - 1.2 [Transition from AOL to financial institutions](#)
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 - 2.1 [Notable phishing attacks](#)
 - 2.1.1 [List of phishing types](#)
 - 2.2 [Link manipulation](#)
 - 2.3 [Filter evasion](#)
 - 2.4 [Website forgery](#)
 - 2.5 [Phone phishing](#)



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The Free Encyclopedia

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419 scams

From Wikipedia, the free encyclopedia
(Redirected from [Nigerian Email Fraud](#))

419 scams are a type of fraud and one of the most common types of [confidence trick](#). The scam typically involves promising a significant share of a large sum of money, which the fraudster requires a small up-front payment to obtain. If a victim makes a payment to the fraudster either invents a series of further fees for the victim, or simply disappears.

There are many variations on this type of [scam](#), including advance-fee fraud, Fifo's Fraud, [Spanish Prisoner Scam](#), the [black and white scam](#), and the Detroit-Buffalo scam. The number "419" refers to the article of the Nigerian Criminal Code dealing with fraud.^[1] The scam is often conducted with fax and traditional mail, and is now used with the Internet.

Online versions of the scam originate primarily in the United States, the United Kingdom and Nigeria, with Ivory Coast, Togo, Netherlands and Spain also having high incidences of such fraud.

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 - [4.4 Pet scams](#)
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Common Fraud Schemes

[Home](#) • [Scams & Safety](#) • [Common Fraud Schemes](#) • [Internet Fraud](#)

Internet Fraud

Listed below are tips to protect yourself and your family from various forms of Internet fraud.

For information on the most common complaints and scams, see the annual reports of the Internet Crime Complaint Center, or IC3, a partnership of the FBI and the National White Collar Crime Center. Also see its information on [Internet Crime Schemes](#) and its [Internet Crime Prevention Tips](#).

Use our online tips form or the IC3 website to report potential cases of cyber fraud.

Tips for Avoiding Internet Auction Fraud:

- Understand as much as possible about how the auction works, what your obligations are as a buyer, and what the seller's obligations are before you bid.
- Find out what actions the website/company takes if a problem occurs and consider insuring the transaction and shipment.
- Learn as much as possible about the seller, especially if the only information you have is an e-mail address. If it is a business, check the Better Business Bureau where the seller/business is located.
- Examine the feedback on the seller.
- Determine what method of payment the seller is asking from the buyer and where he/she is asking to send payment.
- If possible, purchase items online using your credit card, because you can often dispute the charges if something goes wrong.
- Be cautious when dealing with sellers outside the United States. If a problem occurs with the auction transaction, it could be much more difficult to rectify.
- Ask the seller about when delivery can be expected and whether the merchandise is covered by a warranty or can be exchanged if there is a problem.
- Make sure there are no unexpected costs, including whether shipping and handling is included in the auction price.
- There should be no reason to give out your social security number or driver's license number to the seller.

Common Frauds

Common Fraud Scams

- [Telemarketing Fraud](#)
- Nigerian Letter or "419" Fraud
- Identity Theft
- Advance Fee Schemes
- Health Care Fraud/Health Insurance Fraud
- Redemption/Strawman/Bond Fraud

Investment-Related Scams

- Letter of Credit Fraud
- Prime Bank Note Fraud
- Ponzi Schemes
- Pyramid Schemes

Internet Scams

- Internet Auction Fraud
- Non-Delivery of Merchandise
- Credit Card Fraud
- Investment Fraud
- Business Fraud
- Nigerian Letter or "419" Fraud

Fraud Target: Senior Citizens

- Health Care Fraud/Health Insurance Fraud
- Counterfeit Prescription Drugs
- Funeral and Cemetery Fraud
- Fraudulent "Anti-Aging" Products
- Telemarketing Fraud
- Internet Fraud
- Investment Schemes
- Reverse Mortgage Scams

Sigurnost na internetu

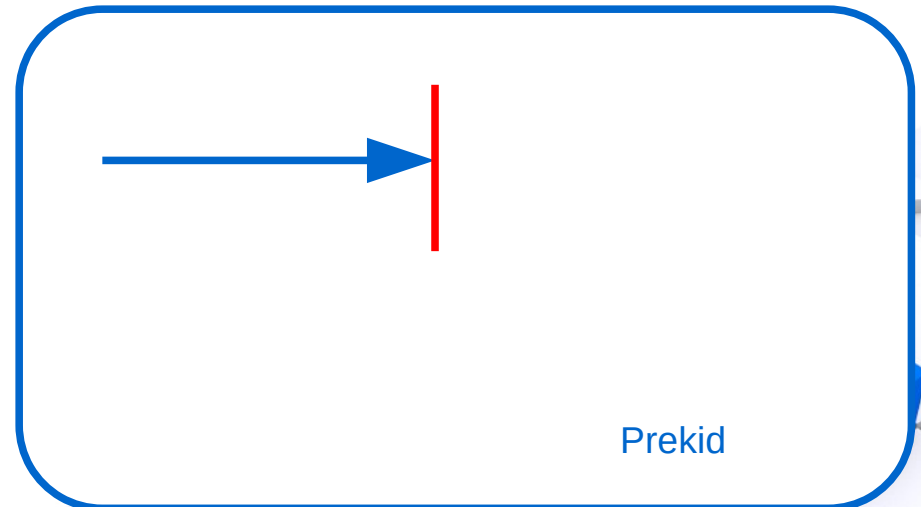
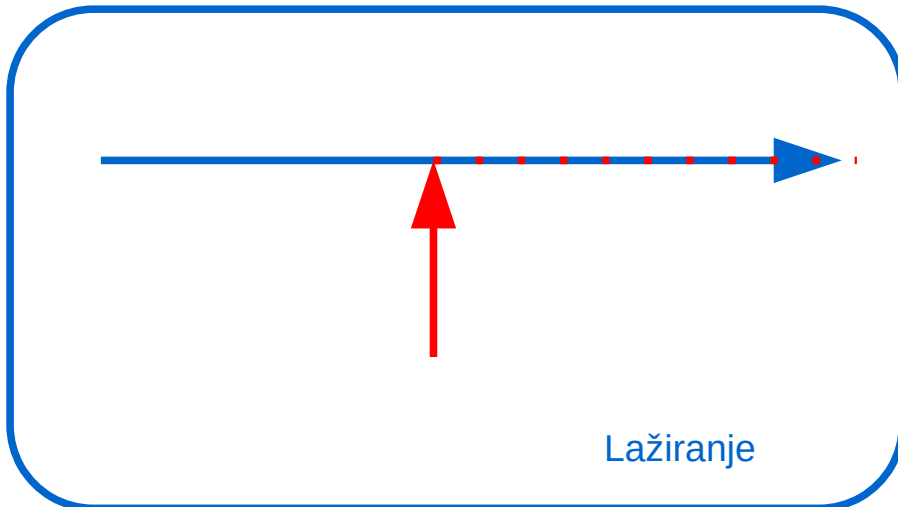
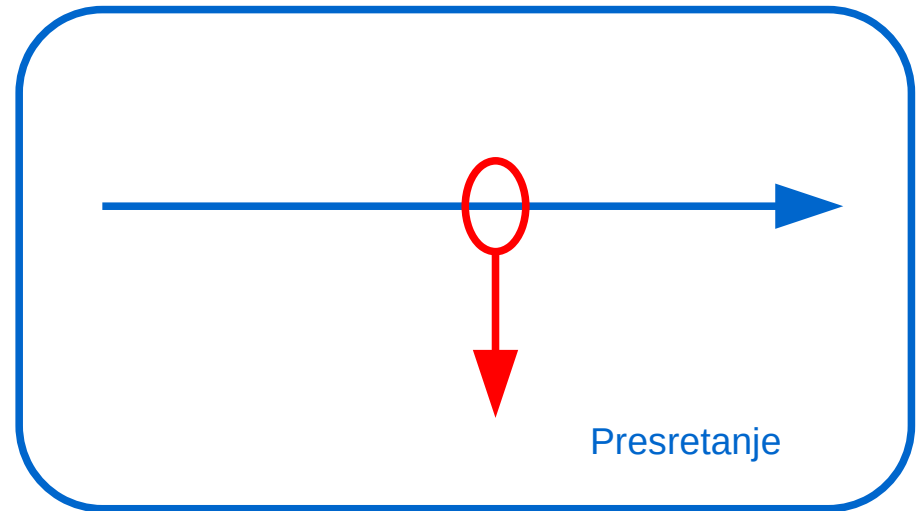
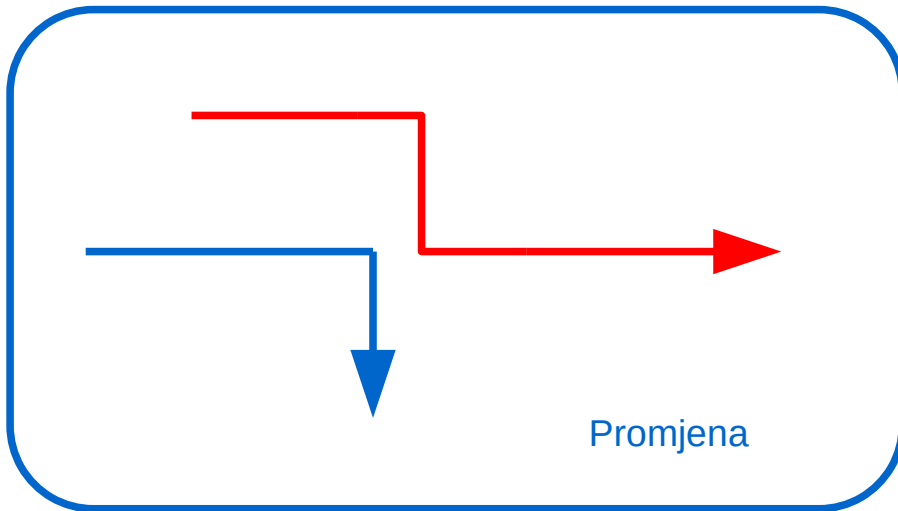


Sigurnost na internetu

- Mogući napadi
 - Promjena
 - Lažiranje informacije
 - Presretanje
 - Prekid



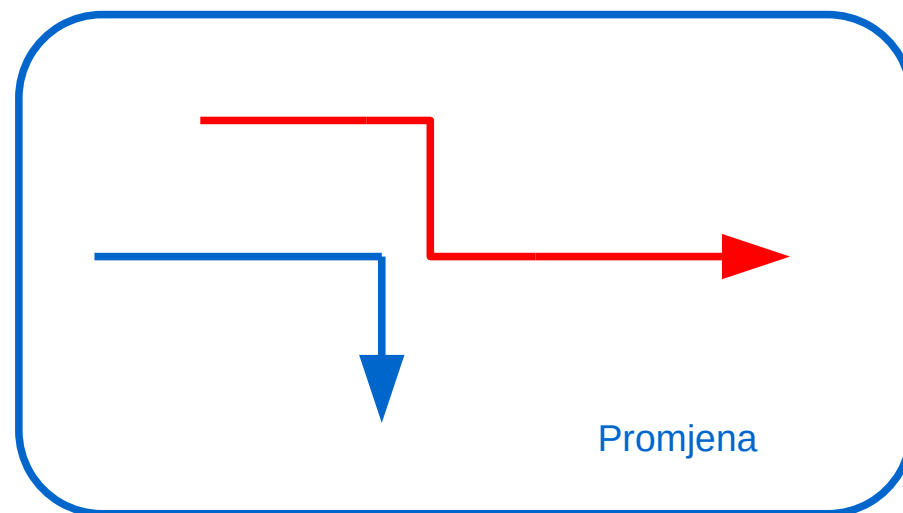
Sigurnost na internetu



Sigurnost na internetu

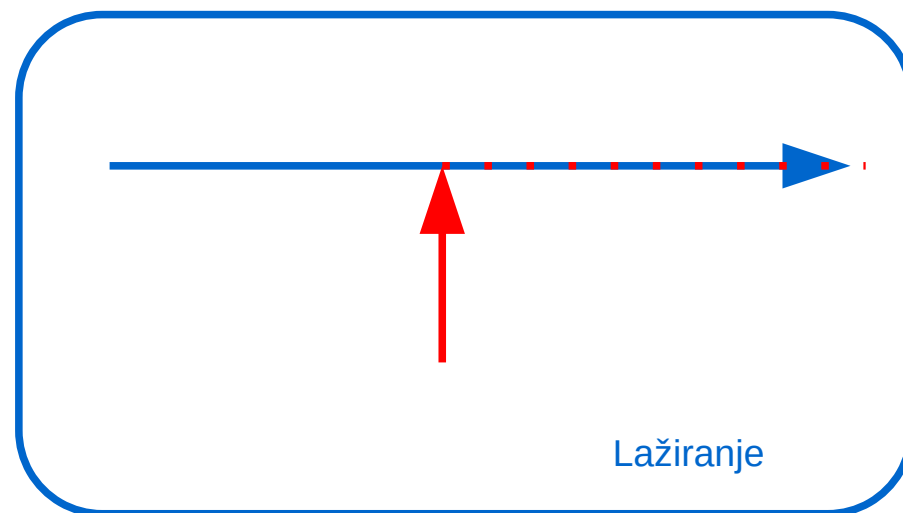
- Promjena

- Promjena podataka u bazi
- Kompromitiranje sustava
- Uskakanje u zastoju u komunikaciji
- Promjena pogonivača sklopovlja



Sigurnost na internetu

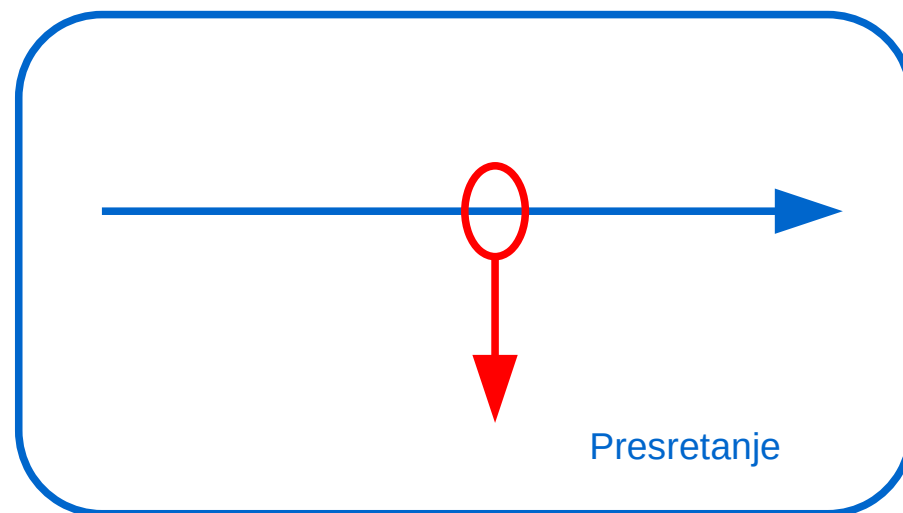
- Lažiranje informacije
 - Lažne elektroničke poruke
 - Lažna mrežna sjedišta
 - Ubacivanje lažnih podataka u bazu
 - IP spoofing
 - DNS spoofing



Sigurnost na internetu

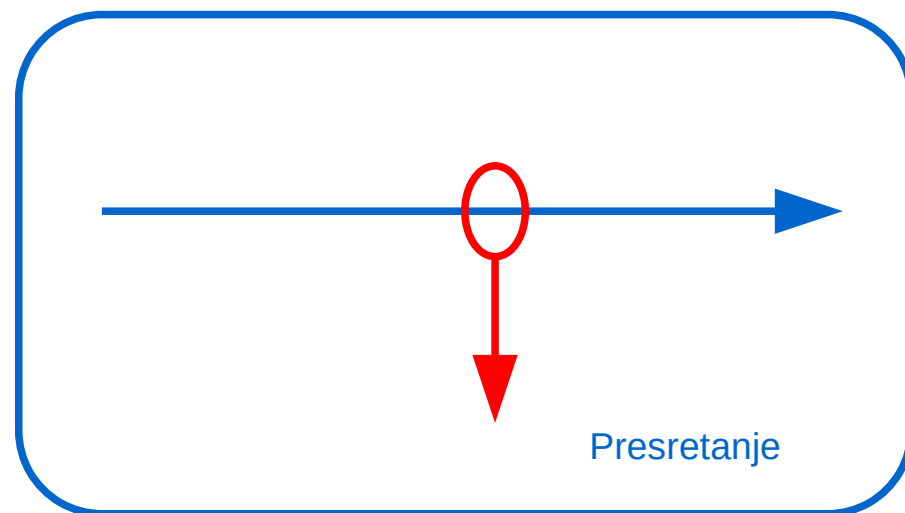
- Presretanje

- prisluškivanje (eavesdropping)
- nadzor mrežne komunikacije (link monitoring)
- snimanje mrežnog prometa (packet capturing)
- kompromitacija sustava (system compromisation)



Sigurnost na internetu

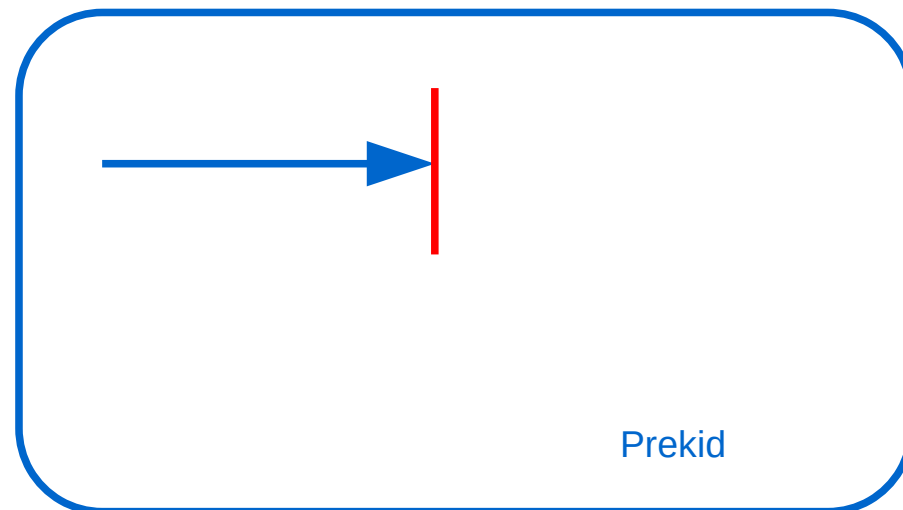
- Presretanje
 - Neovlašćena osoba ima pristup informacijama
 - Rizik raste kod:
 - Bežične komunikacije
 - Grupne komunikacije



Sigurnost na internetu

- Prekid

- uništavanje sklopovlja
- fizičko uništavanje komunikacijskih medija
- ometanje komunikacije (šum)
- narušavanje tablica usmjeravanja
- brisanje programa ili datoteka
- uskraćivanje usluge



Sigurnost na internetu

ime.prezime@pmfst.hr

