



A social engineering wargame

Pablo Garaizar, University of Deusto

Ulf-Dietrich Reips, University of Deusto, Ikerbasque, Basque Foundation for Science

42nd annual meeting of the Society for Computers in Psychology (SciP)

Minneapolis, MI, November 15th, 2012

Social networking is the new

emailing

texting

IMing

blogging

photo sharing

...

Social networking seems to be easy...



[Blog Central](#)

[Corporate](#)
[McAfee Labs](#)
[Enterprise](#)
[Consumer](#)

Consumer
Previous post in Consumer

Actress Sofia Vergara's Personal Photos Hacked or Stolen Via Mobile

Recommend Share +1 Tweet

Monday, October 29, 2012 at 11:26am by Robert Siciliano

About Me
Robert Siciliano
Online Security and Safety Evangelist to McAfee Robert is security theft expert who is

Next post in Consumer »

In my line of work I get emails such as this one: "Hi Robert, I'm not sure if you saw what had happened on my Facebook page last night, but someone stole my cell phone while I was at a concert, and posted all of my naked pictures off of my phone and posted them to my wall. They were up there for hours."

Apparently if you are under the age of 40 this is common place. After the age of 40, not so much.

My response: "Horrible lesson learned. And, ahm, maybe no naked pics on your phone? Jeesh. Digital is forever."

Her response: "That's what everyone keeps telling me, I should've deleted them. Just never thought someone would do that. They could've just taken the phone, they didn't have to embarrass me like that."

The problem is "they" don't just look to embarrass someone, they try to sell them, and in some cases extort the victim. We must remember some people aren't looking to play nice.

The NY Post reports, "'Personal' photos of stunning actress Sofia Vergara have been put up for sale after being allegedly stolen from her fiancé Nick Loeb's BlackBerry. The sexy pictures, which we're told are personal in nature but are not nude images, were somehow hacked or stolen from Loeb's phone before the couple got engaged in July."

In both of these situations just simply locking the device would solve this issue.

Have you ever thought about what would happen if you lost your mobile phone? For a lot of us, it can also be a nightmare if it's lost, stolen or hacked, especially since an untold amount of people are using their mobiles like a bedroom accessory.

[New Posts](#)
[Popular](#)
[Lists](#)
[Video](#)

Billionaire Prodigy
Best Small Companies
Frankenstorm 2012

Search

SECURITY
10/25/2012 @ 4:39PM
23,811 views

Facebook Investigating How Bulgarian Man Bought 1.1 Million Users' Email Addresses For Five Dollars

17 comments, 9 called-out

+ Comment now

Updated with a more recent comment from Facebook below.

It's no secret that Facebook treats your personal data as a commodity. But when that data ends up on the open market, you may be surprised at the price it fetches: in this case, less than half a thousandth of a penny.

Bulgarian blogger and digital rights activist Bogomil Shopov

1.5k
Share
704
Tweet
133
Share
40
Submit
75

40 Things To Say Before You Die

+21,251 views

One Man, One Computer, 10 Million Students: How Khan Academy Is Reinventing Education

+19,679 views

Donating Star Wars Billions Will Make George Lucas One Of The Biggest Givers Ever

+14,860 views

'Halo 4' Is Easily One Of The Best Looking Xbox 360 Games Of All Time

+14,537 views

Newly-Minted Billionaire Is Spinning eBay Scraps Into Gold

+13,458 views

+ show more

Andy Greenberg

Forbes Staff
+ Follow (601)

I'm a technology, privacy, and information security reporter and most recently the author of the book *This Machine Kills Secrets*, a chronicle of the history and future of information leaks, from the Pentagon Papers to WikiLeaks and beyond. I've covered the hacker beat for *Forbes* since 2007, with frequent detours into digital miscellanea like

+ show more

ANDY GREENBERG'S POPULAR POSTS

Cookies on Forbes

...but plenty of unforeseen problems.

Learning about privacy is hard.

Privacy concerns are boring



It's not easy to balance the **trade-off**
between **security** and **usability**



Social engineering

The art of manipulating people into performing actions or divulging confidential information.



Most of the materials are children-oriented



Social Lab tackles some of these problems
providing a social engineering wargame

It works because
there is no patch for human stupidity



Purpose of the game



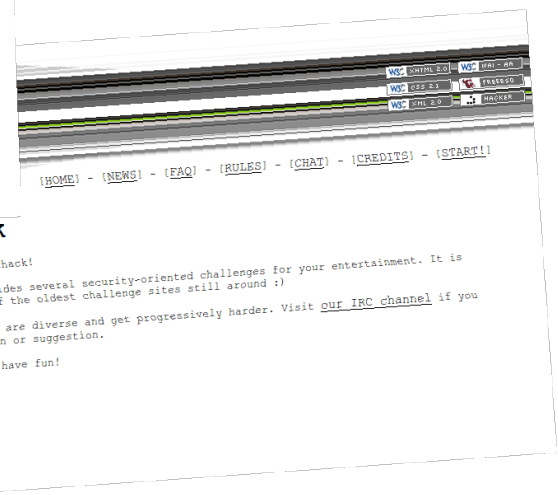
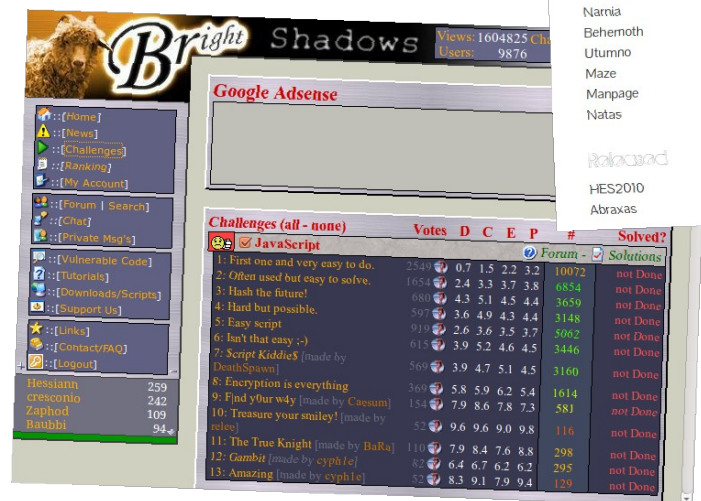
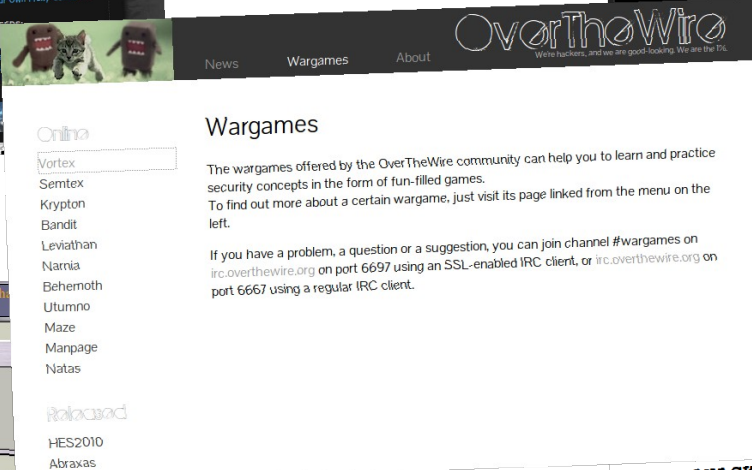
Learn some of the techniques
used by social hackers



Prevent these kind of attacks
in real social networks

Wargames

Security challenges in which players must exploit a vulnerability in an application or gain access to a system.



Wargames

“hacker sandboxes”





Wall

View profile

Edit profile

Requests (0/0)

Messages (0/1)

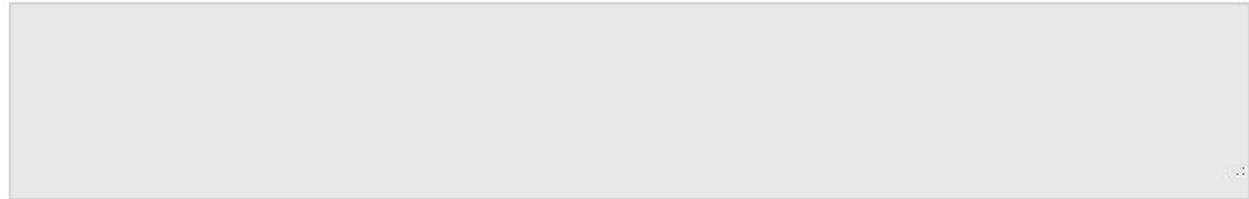
Friends (0)

Search friends

Pictures

★ Pages

The wall of Pablo Garaizar



Update status



Hello, world!

Delete

Pablo Garaizar (less than a minute ago)

Social engineering wargame

A privacy challenge in which players must gain access to user profiles in a "social sandbox" (a fake social network)

How to play Social Lab

[Sign in](#)[Sign up](#)[What is Social Lab?](#)[Terms of Use](#)[About](#)

Sign up

Username

Password

Password confirmation

[Sign up](#)

1. Sign up

[Sign in](#)[Sign up](#)[What is Social Lab?](#)[Terms of Use](#)[About](#)

Welcome to Social Lab!

Social Lab is **NOT** a real social network. If you want to know what it is, [click here](#) ;)

Sign in

Username

Password

☐

Remember

[Sign in](#)

2. Sign in



Welcome to Social Lab!

X Mark as read

**Your first assignment as a social hacker
will be to become a friend of [Alice
Johnson](#).**

Good luck! ;)

Social Lab (less than a minute ago)

3. Solve social challenges

All the challenges are automated profiles with fake
personal information...

(disclaimer: no privacy was harmed in the making of this site)

... but real interactions between players are also
possible

(and can affect the results of the game)



Wall

View profile

Edit profile

Requests (0/0)

Messages (0/1)

Friends (0)

Search friends

★ Pages

Friendship request

Asking **Alice Johnson** to be a friend...

Hi Alice!

[Send request](#)

Each time a **friendship request** is made, Social Lab **checks** if it involves an automated profile and if that is the case, it **schedules a task**

Scheduled tasks are like **scripts**

Alice Johnson (level 1 bot):

- Step 0: Accept friendship.
- Step 1: System message (level 2).

Currently, Social Lab provides a
10-level wargame of increasing difficulty

And...



**IT'S
FREE**



use it (in research, teaching)

download it

modify it

You can... share your modifications


translate it

use it for other purposes (it's
a social network)

Backend


[User](#) [Profile](#) [Message](#) [Request](#) [Friendship](#) [Page](#) [Picture](#) [Fan](#) [Tag](#) [Gender](#) [Status](#) [Privacy](#) [Bot](#) [Step](#) [Command](#) [Scheduled](#)
[Automsg](#) [Logout](#)

REQUEST LIST

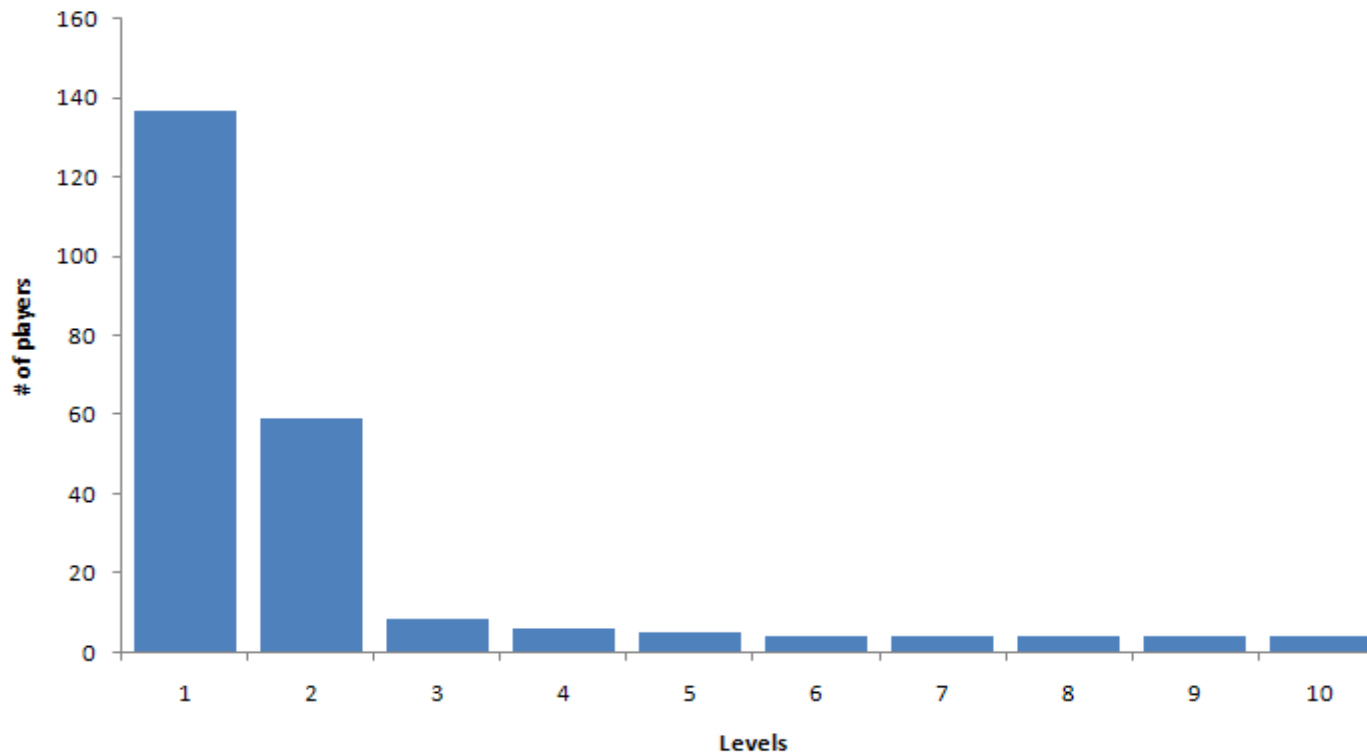
<input type="checkbox"/>	Id	From	To	Text	Status	Updated at	Actions	
<input type="checkbox"/>	1	5	12	Hello Kate!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	2	7	13	Hi Laura!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	3	8	13	Hello Laura!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	4	14	10	Hi Igor!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	5	16	11	Hello Jack!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	6	15	16	Hi there!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	7	2	19	Hi Ryan!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	8	19	11	Hi Jack!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	9	3	18	Hi Peter!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	10	3	25	Hi Alan!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	11	3	21	Hello Tom!	1	January 1, 2012 1:01 AM	 Edit	 Delete

From	<input type="text"/>
To	<input type="text"/>
Text	<input type="text"/> <input type="checkbox"/> is empty
Status	<input type="text"/>
Updated at	from <input type="text"/> / <input type="text"/> / <input type="text"/> to <input type="text"/> / <input type="text"/> / <input type="text"/> <input type="checkbox"/> is empty
<input type="button" value="Reset"/> <input type="button" value="Filter"/>	

Doing research in Social Lab is comfortable:
HTTP logs and a backend application

<input type="checkbox"/>	12	4	21	Hi Tom!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	13	2	20	Hello E...	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	14	4	25	Hi Alan!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	15	5	12	Hi Will!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	16	5	17	Hi Olivia!	1	January 1, 2012 1:01 AM	 Edit	 Delete
<input type="checkbox"/>	17	7	22	Hi Vincel	1	January 1, 2012 1:01 AM	 Edit	 Delete

Distribution of achieved challenges:



181 friendship requests
between players
(26 accepted, 7 rejected, 148 pending)

101 status updates

629 messages
between players
(13 public, 616 private)

Last week: more than 100 new players

Currently we offer:

Info about the project:

<http://www.sociallab.es>

Social Lab's code:

<https://github.com/txipi/Social-Lab>

Demo servers:

English version: <http://en.sociallab.es>

Spanish version: <http://es.sociallab.es>

www.sociallab.es

The logo for 'iscience' features a stylized blue icon resembling a curved line or a partial circle to the left of the word 'iscience' in a bold, italicized, blue sans-serif font.

<http://iscience.deusto.es>



References

- Cranor, L., Hong, J., & Reiter, M. (2007). Teaching Usable Privacy and Security: A guide for instructors. Retrieved from: <http://cups.cs.cmu.edu/course-guide/>
- Edbrooke, O. & Ambrose M.L. (2012). Teaching Privacy in the Twenty-first Century. Social Education, 76(4):217-220.
- Fagerlund-Savisaari, A. (2010). Thanks for adding me! : The complexity of Facebook friendships and public privacy. Case: Finnish politicians. Tampereen ammattikorkeakoulu. Retrieved from: <http://hdl.handle.net/10024/14558>
- Fischer-Hübner, S. & Lindskog, H. (2001). Teaching Privacy-Enhancing Technologies. In Proceedings of the IFIP WG 11.8 2nd World Conference on Information Security Education. Perth, Australia, pp. 1-17.
- Johnson, M. (2011). Winning the Cyber Security Game. MediaSmarts, Media Awareness Network. Retrieved from: <http://cira.ca/assets/Documents/Publications/WinningCyberSecurityGameLesson.pdf>
- Johnson, M. (2011). Privacy Pirates: An Interactive Unit on Online Privacy. MediaSmarts, Media Awareness Network. Retrieved from: <http://mediasmarts.ca/blog/privacy-pirates-interactive-unit-online-privacy>
- Johnson, M. (2011). From Passport to MyWorld: Media Awareness Network extends digital literacy skills to secondary students. MediaSmarts, Media Awareness Network. Retrieved from: <http://mediasmarts.ca/blog/passport-myworld-media-awareness-network-extends-digital-literacy-skills-secondary-students>

References

- Media Awareness Network (2009). Privacy Playground: The First Adventure of the Three CyberPigs. MediaSmarts, Media Awareness Network. Retrieved from:
<http://mediasmarts.ca/game/privacy-playground-first-adventure-three-cyberpigs>
- Meeker, M., Devitt, S. & Wu, L. (2010, June 7), Internet Trends, Morgan Stanley Research. Retrieved from:
<http://www.slideshare.net/CMSummit/ms-internet-trends060710final>
- Ovaska, S. & Rähkä, K-J. (2009). Teaching Privacy with Ubicomp Scenarios in HCI Classes. Proceedings of the 21st Annual Conference of the Australian Computer-Human Interaction Special Interest Group. OZCHI 2009, 411, pp. 105-112. ACM, New York. 2009. pp. 105-112.
- Tuten, Tracy L. (2008), Advertising 2.0: Social Media Marketing in a Web 2.0 World. Westport, CT: Greenwood.

All rights of images are reserved by the
original owners*, the rest of the
content is licensed under a **Creative
Commons by-sa 3.0** license



* see references in each slide