Social networks: The new frontier for Malware, Spam and Identity Theft

Graham Cluley Sophos

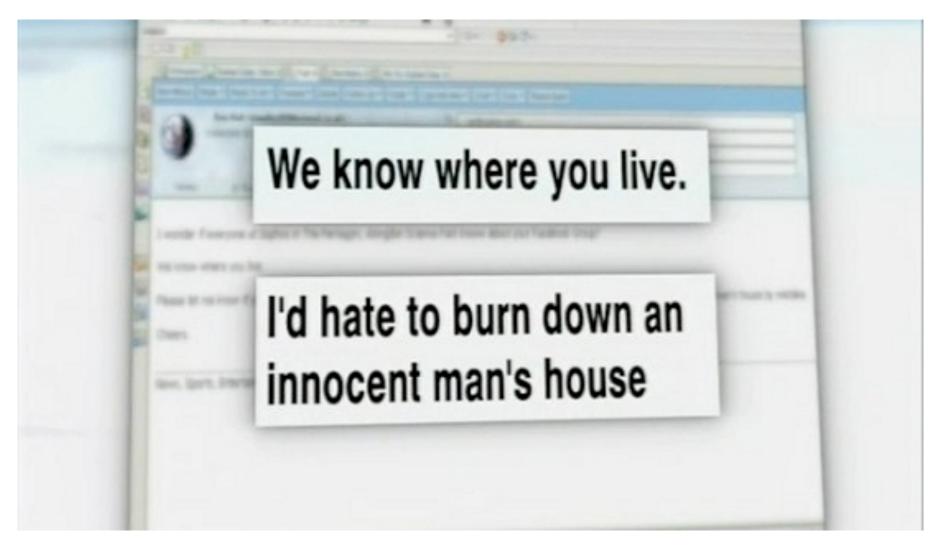


My personal Facebook story

- Someone used my photograph on their Facebook profile
- Trolled on Facebook forums, making inflammatory statements
- Audience reacted, someone recognised my photo, and..



Death threats via Facebook



My personal Facebook story

- Threats to shoot my wife, burn down my house
- Emails to my work, my bosses, complaining about "my" behaviour online
- Bandwagon rolling against me, with offensive doctored images of me posted online

 All because people didn't verify the true identity of the poster – and assumed it was me



My personal Facebook story

 Even after the death threats were publicised, nonsense still spread





What does this teach us?

People trust complete strangers far too easily online



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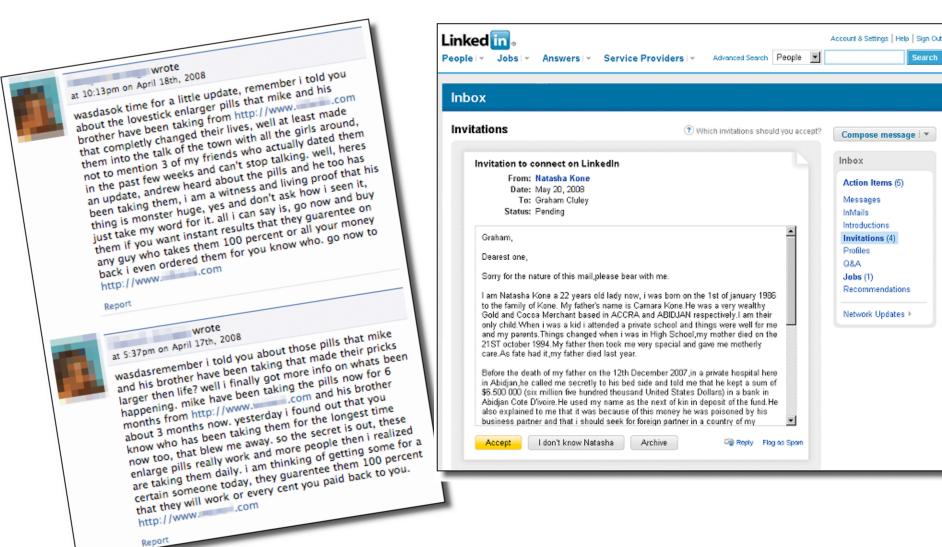
But it's not just strangers who pose a threat



Spam on social networks



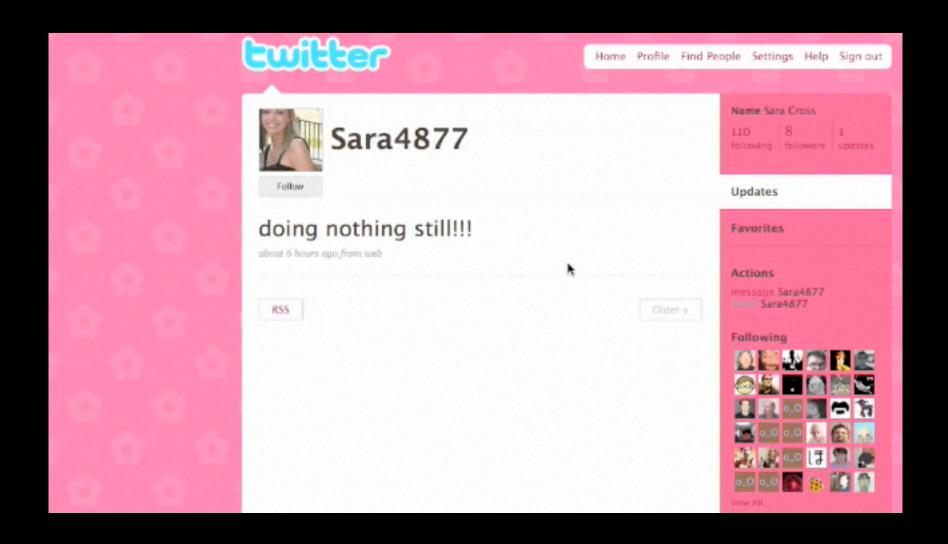
Social networking spam





Social networking spam



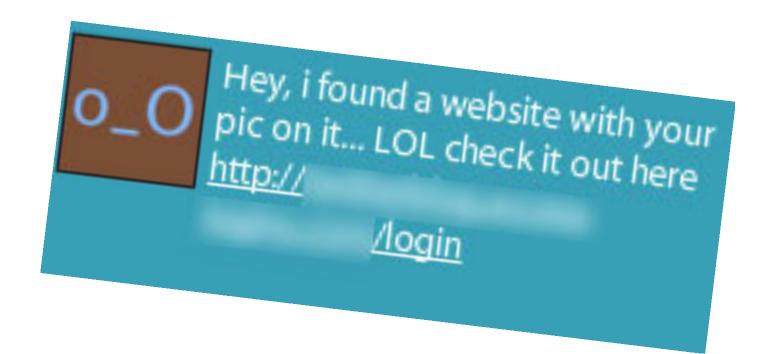


DEMO OF SPAMMER CAUGHT COLLECTING VICTIMS ON TWITTER

Phishing on social networks



Social networking phishing





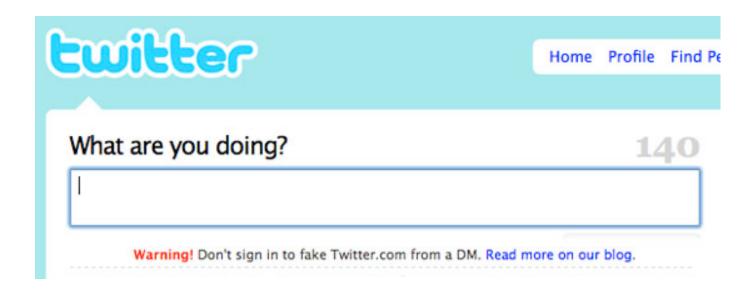
Social networking phishing



biz Twitter Eng and Ops are on it now but be careful of DMs with a blogspot link that redirect to what seems like twitter.com about 8 hours ago from Power Twitter



twitter! be careful of DMs with a link to blogspot.com that seemingly redirects to Twitter.com and asks for your credentials (we're on the case) about 8 hours ago from Power Twitter





Social networking phishing





Scams on social networks



"Stranded in a foreign city" scams

am Matt its up? 0am Rakesh i had to visit a resort here in london and i got robbed at the hotel im staying ack... that's terrible. Sorry to hear it. 7:22am Rakesh 7:22am Matt we just want some helo flying back home yeah,thanks 7:23am Rakesh So why are you stuck there?' all my money to get a ticket back home got stolen I didn't understand this "we just want some helo flying back home 7:23am Matt 7:29am Matt from school

7:25am Matt actually i got some money wired to me to catch a flight back home but we still need \$800 more to complete our ticket fee and fly back home 7:26am Rakesh good Honestly, it sounds like someone's hacked your Facebook account and is using it to defraud your 7:26am Matt i have the money in my checking acct,i cant just access it from here Lauren is here with me and my kids 7:28am Rakesh your wife's name is on your profile page 7:28am Matt what about my kids name? 7:28am Rakesh in photos? how do we know each other? when did we meet?

"Stranded in a foreign city" scams

 They use information from your friend's profile to appear more plausible

You never know who you're talking to, until you

really *talk* to them







When social networks go bad



Can you trust social networking sites?

- It's not just malicious behaviour that puts our personal information at risk on social networking sites
- Sometimes it can be incompetence on the part of the website

| Sex: | Male ▼ |
|-----------|---|
| | ✓ Show my sex in my profile |
| Birthday: | Jan ▼ 1 ▼ 1979 ▼ |
| | Don't show my birthday in my profile. ▼ |





Identity thieves would love to know your date of birth

DEMO OF FACEBOOK REVEALING FULL DATES OF BIRTH EVEN WHEN USER HAS SET THEM TO BE PRIVATE

Can you trust social networking sites?

- Which is why I've chosen to break Facebook's terms of service, and tell them a fake date of birth
- ..even though I've asked for it to be kept private

| Sex: | Male ▼ |
|-----------|---|
| | ✓ Show my sex in my profile |
| Birthday: | Jan ▼ 1 ▼ 1979 ▼ |
| | Don't show my birthday in my profile. ▼ |

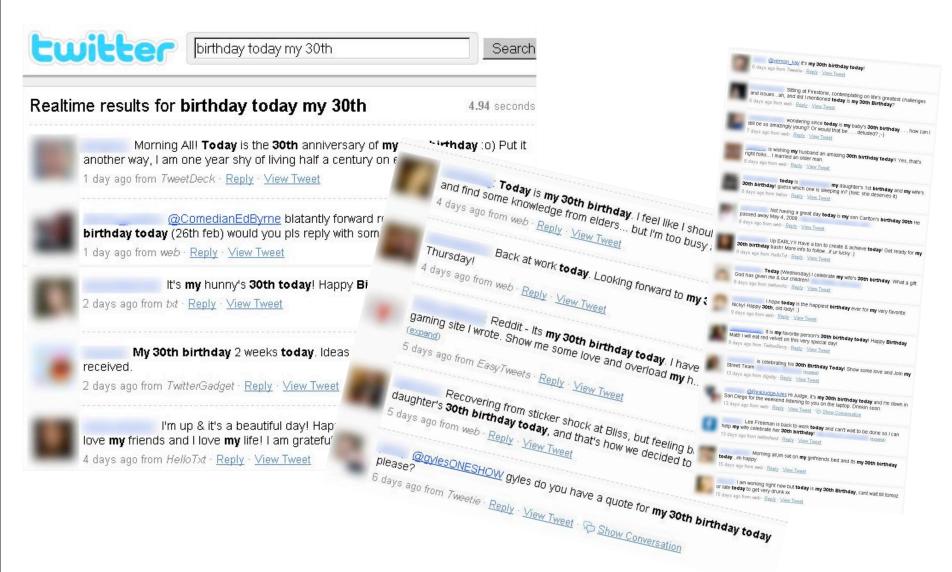


Social networking identity risks





Social networking identity risks

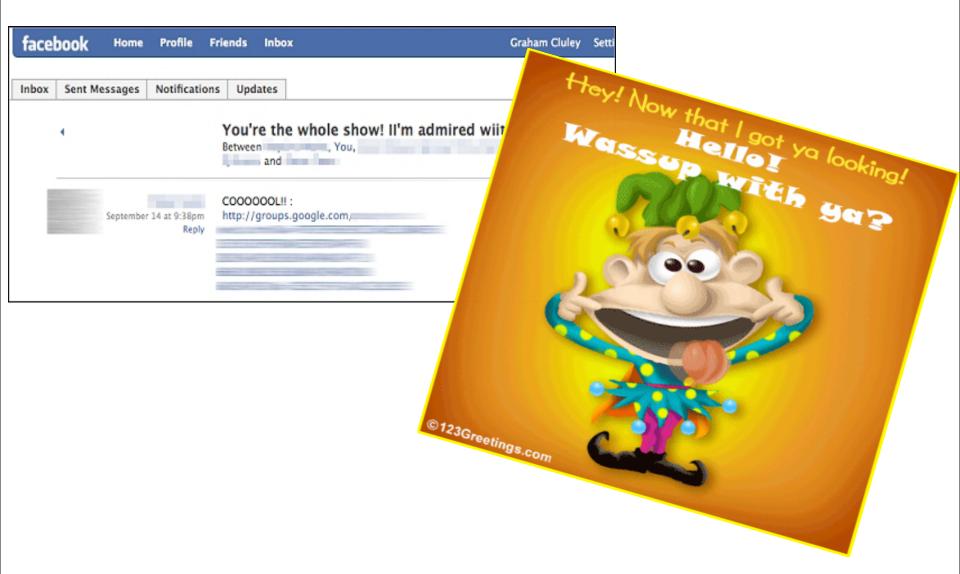




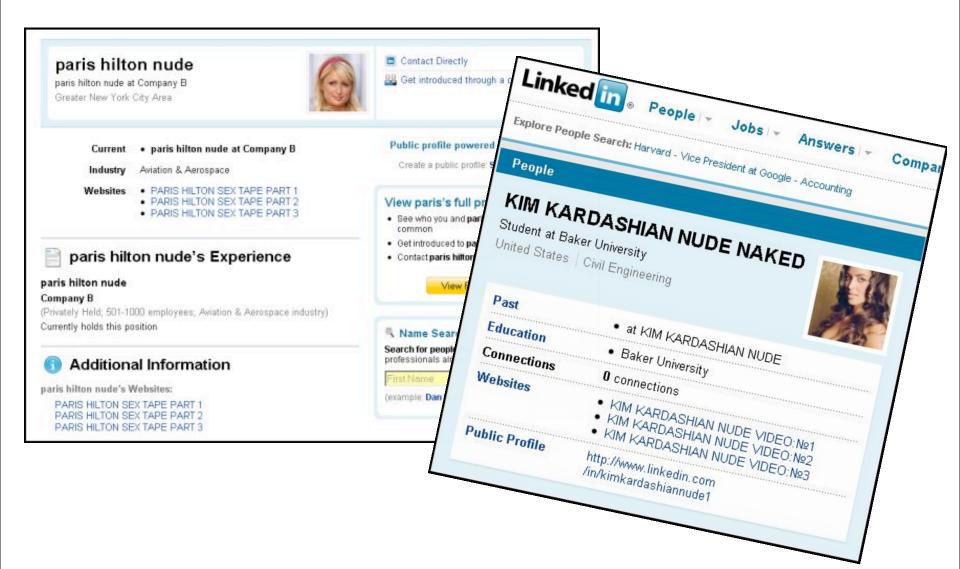
Malware on social networks



Social networking malware



Social networking malware



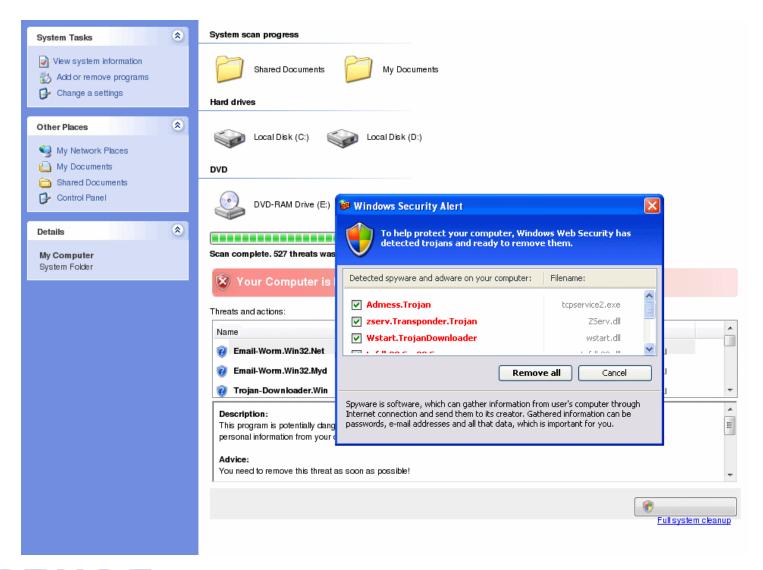
Social networking attacks evolve

Web Images Maps News Video Mail more ▼

has faced some errors when checking your profile View The Errors Message 40 minutes ago has faced some errors when checking your profile View The Errors Message 44 minutes ago has faced some errors when checking your profile View The Errors Message 49 minutes ago

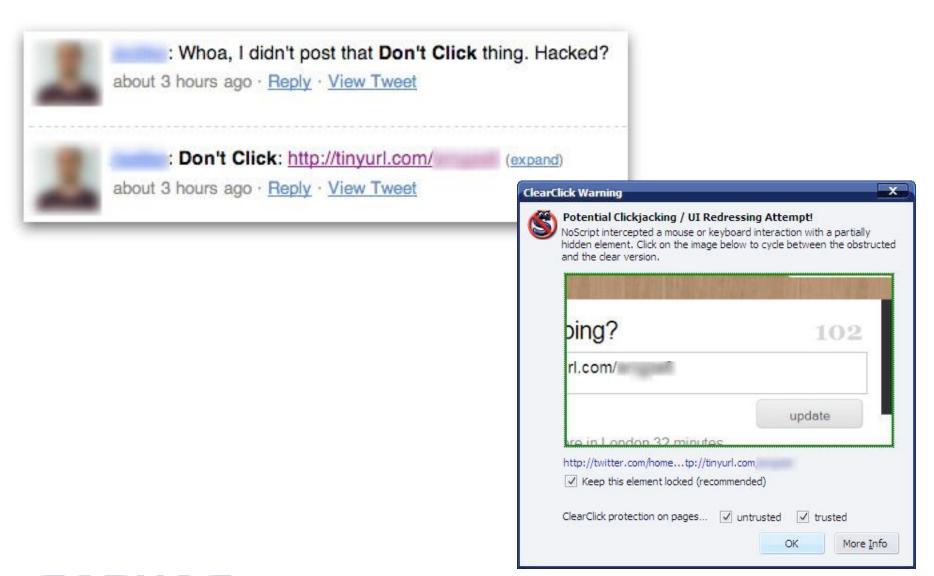
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Social networking attacks evolve



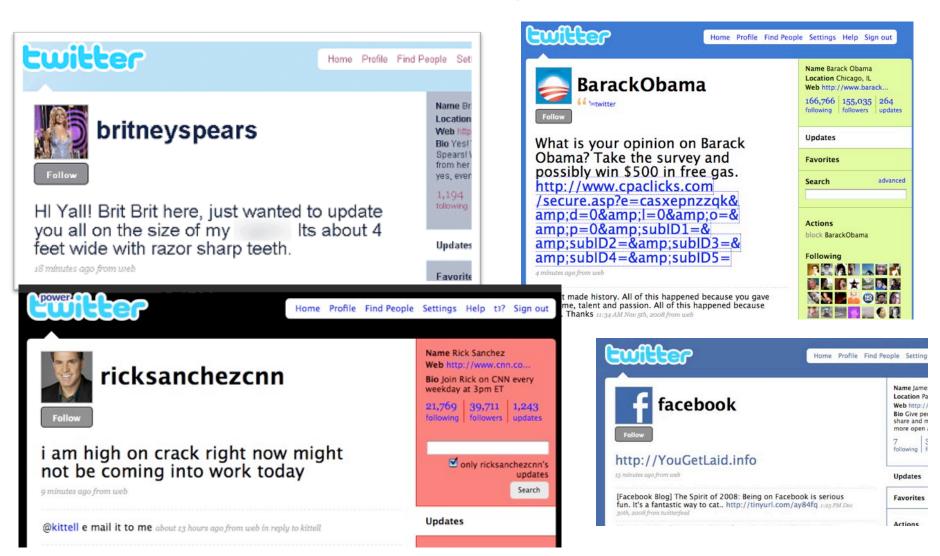


Clickjacking





Social networking defacement









britneyspears

Follow

Just watched some footage of Britney's tour rehearsals and whoa, are you all in for a treat. Get Ready!!! - Larry Rudolph

4:55 AM Jan 10th from web

Just heard Brit had a great time in Louisiana. It was super chill, with lots of working out and spending time with her whole family. ~Lauren 3:46 AM Jan 3rd from web

Happy Holidays from Britney!! http://tinyurl.com/7uyrr4 9:22 PM Dec 24th, 2008 from web

Britney went to Jerry's Deli last night for after shopping at Target. She had a black and white milkshake with dinner. ~Lauren 6:27 PM Dec 23rd, 2008 from web

Just found out that Britney had Pinkberry Sunday night. She gets the plain flavor with berries on it. Yum! ~Lauren 4:51 PM Dec 23rd, 2008

Name Britney Spears Location Los Angeles, CA

Web http://www.britne...

Bio Yes! This is the real Britney Spears! We've got updates from her team, her website and yes, even Britney herselfl

1,192

21.641 68 following followers updates

Updates

Favorites

Actions

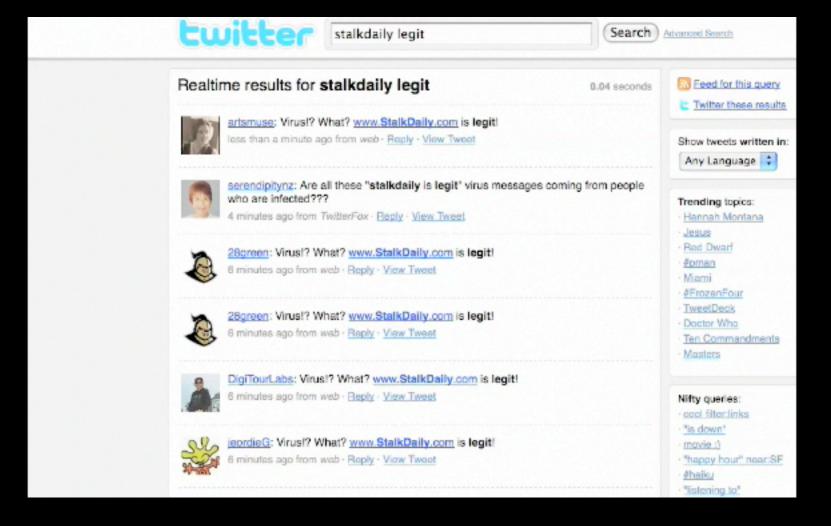
block britneyspears

Following



DEMO OF DEFACED CELEBRITY TWITTER PROFILES





DEMO OF MIKEYY MOONEY XSS WORMS

Summary

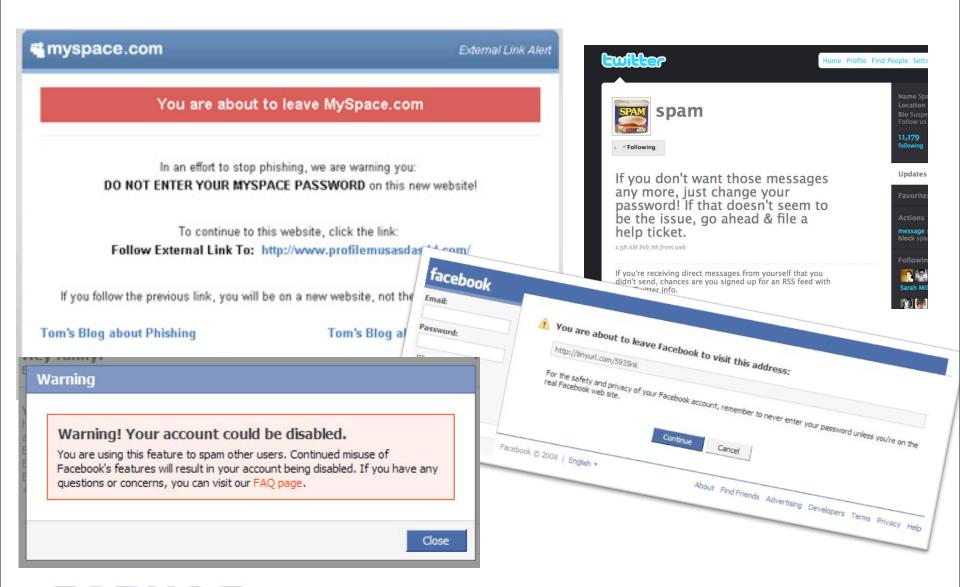
- Criminals are increasingly using social networking websites to steal identities, spread malware and send spam
- Social networks are typically poor at protecting users against these threats
- The onus is on the user to defend themselves, and are largely left to do their own policing
- So what are companies to do?



The social networks respond



Social networks to the rescue?



Social networks to the rescue?

- Some ask users to confirm they really want to visit an external website – but many will ignore
- Micro-blogging websites like Twitter rely on services like TinyURL meaning destination websites can be hard to determine before clicking
- Social networking sites need to start scanning communications for malware and spam, just like webmail services



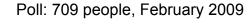
Social networking survey



Survey results



worry that
workers are
sharing too much
information on
social networking
websites

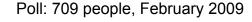




Survey results

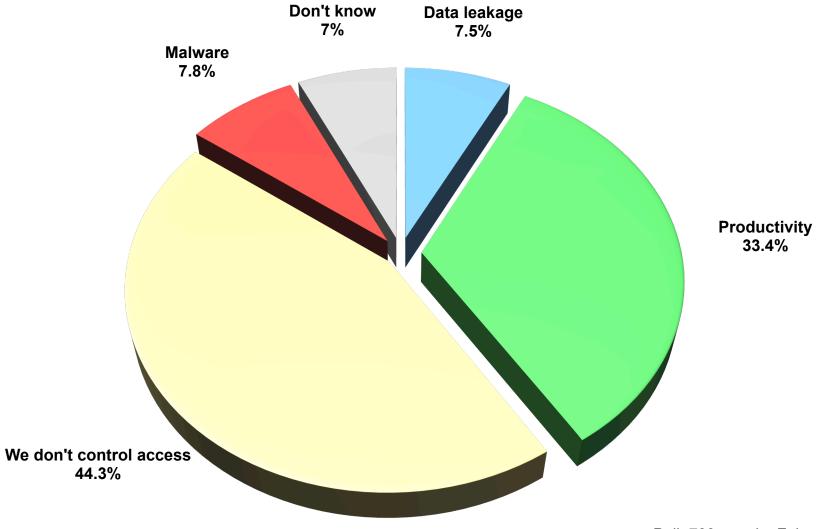


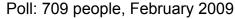
think workers' activity on social networking sites could endanger security at their company



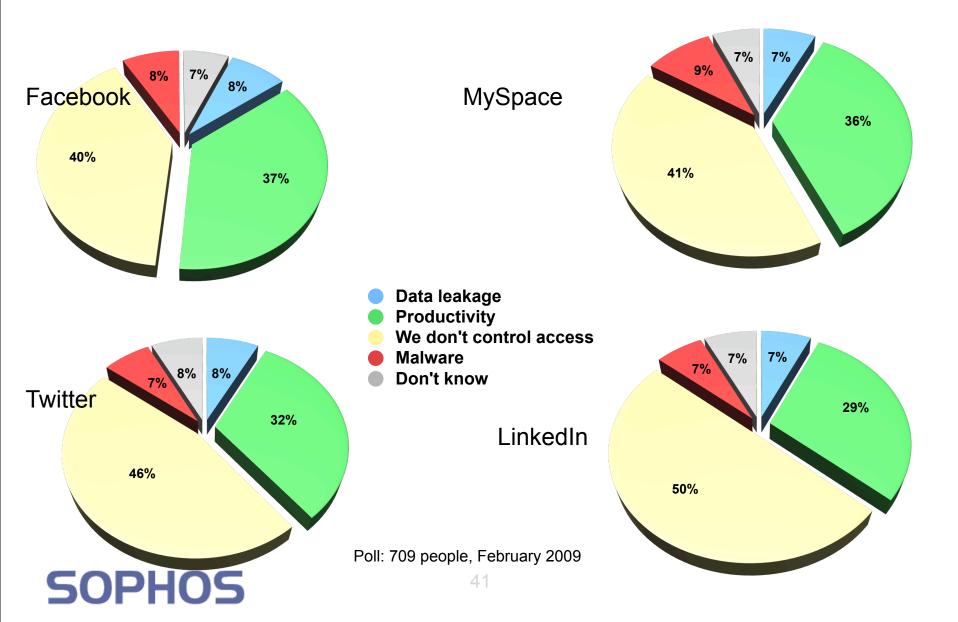


Reasons for blocking social networking

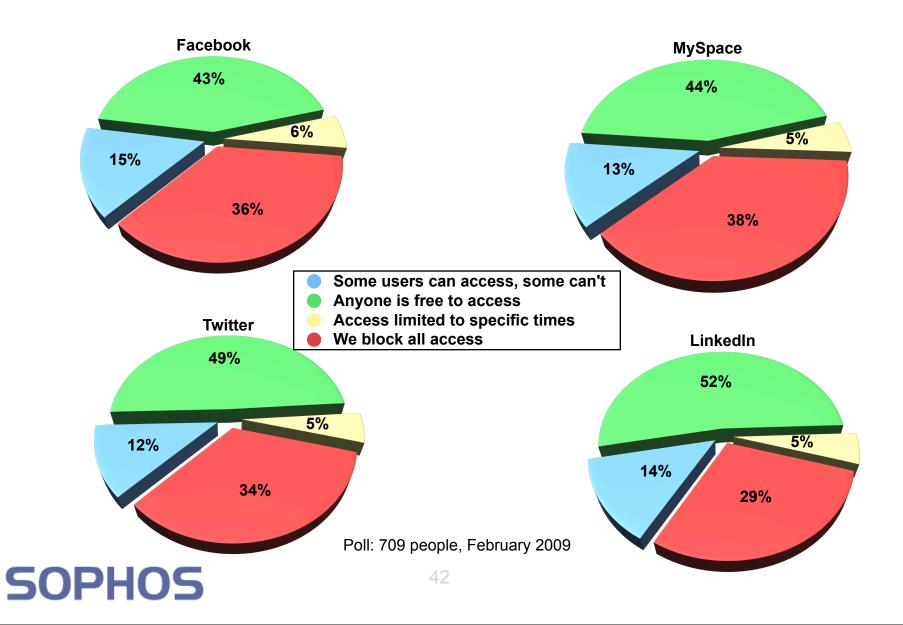




The main reason for controlling access

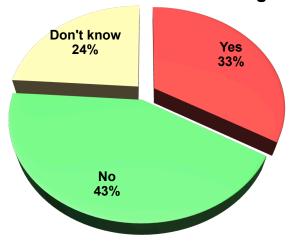


How does your firm control access to...



Have you, or colleagues, ever been..

Spammed on a social networking site?



Sent malware on a social networking site?



Phished on a social networking site?



Poll: 709 people, February 2009



Conclusions

- Criminals will continue to exploit social networks, commandeering identities to steal information and spread more attacks (a web 2.0 zombie)
- Users will continue to share information inappropriately, putting their identities – and potentially your firm – at risk
- But banning social networking may be rash
- Need to offer greater security and control to social networkers



Apply advice

- Regularly review the information you and your staff are sharing online, and act as appropriate
- Review your web 2.0 security settings you should only be sharing info with trusted parties
- Consider filtering access to social networks groups and time
- Scan websites accessed for malware/cybercrime
- Educate workforce regarding online risks



Questions

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