

# Once Upon a Time, on Twitter...

**@ilevin**

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# Preface

Thanks for picking up “Once Upon a Time, on Twitter...” – something different from a typical read.

In this book, I’ve compiled a selection of my tweets from over a decade - musings on cryptography, information security, software engineering, and life in general.

This book is the result of my desire to preserve these tweets in a more permanent form, given the uncertain future of Twitter.

Some tweets are reflective, while others are just rants and grumbles. Regardless, I hope you’ll find them thought-provoking and discover something relatable or inspiring - making the reading experience enjoyable.

*Ilia Levin*  
*Santa Clara, 2023*

Dec 16, 2022

At the end of 2022, the modern computer industry is

- still trying to re-invent Pascal (or, better say, Ada) but with a fancy syntax, out of C derivatives;
- on the brink of re-inventing a mainframe out of cloud technologies.

Oct 30, 2022

Who is that person who buys those \$79.99 digital books from Springer?

Oct 20, 2022

People realize there is only one way for a carbon-based life form to reduce carbon footprint, right?

Aug 4, 2022

TIL, there are IT people branding themselves as “*SF Bay Area alumni.*” Probably for cyber street creds or something.

Aug 3, 2022

Is it time for Triple AES yet?



May 16, 2022

Beating global warming with nuclear winter is like healing a headache with a guillotine. It kind of works, but there is a tiny detail...

Jan 27, 2022

**NFT means Non-Fourier Transform.**

Jan 11, 2022

When you name something Titan as a reference to something strong, mighty, and powerful, you need to remember it also associates with total losers defeated by the Olympians.

Sep 8, 2021

Well, it is conclusive that an average cucumber is 17% smarter than the majority of the population.

Feb 14, 2021

So, did St. Valentine see his shadow today  
or not?

Feb 1, 2021

**It is time for a military-grade  
post-quantum AI.**

Jan 7, 2021

**It is not Artificial Intelligence we need,  
but Artificial Common Sense.**

Dec 14, 2020

<https://youtu.be/tH2w60xx0kQ>

I close my eyes  
Only for a moment, and the tools are gone

All the tools  
Pass before FireEye, a curiosity

Duh, SolarWinds  
All they used was bad SolarWinds

Same old song  
Just a drop of water in an endless sea

"APT!  
We did nothing wrong!" though we refuse to see

Duh, SolarWinds  
All they used was bad SolarWinds



Oct 14, 2020

MacOS ][

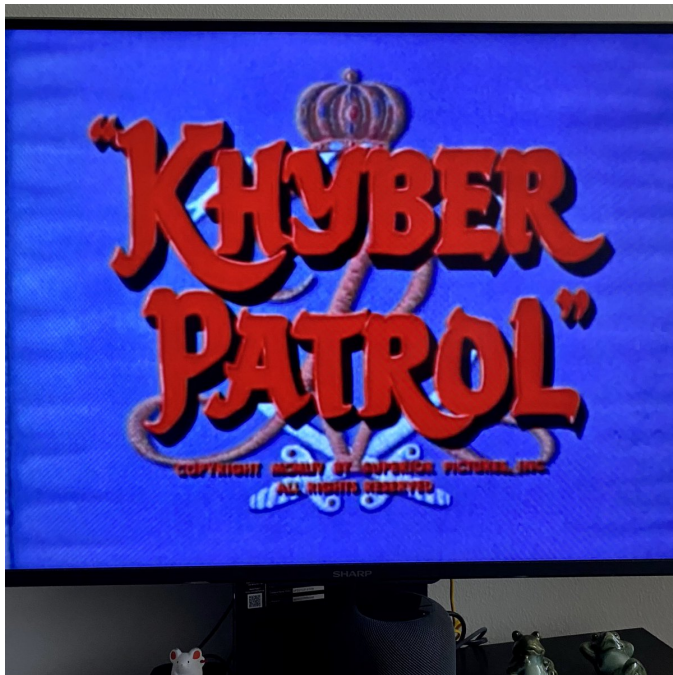
Sep 1, 2020

Self-driving cars need paved roads. Paved roads are scarce out there. People do not need self-driving cars. People need self-driving cars with self-paving roads.

That's a tank. People need self-driving tanks. [@elonmusk](#) should do TanX.

Jul 29, 2020

This is a very deceptive title; the movie is not about khomputers at all.



Jul 3, 2020

Groundhog Day TV Series would be the simplest TV show to produce. All they have to do is to replay a pilot episode for 10 seasons.

May 7, 2020

Seeing someone presenting a new perspective research project, same as one of mine killed 12 years ago for “*meh, too sciency*” is depressing these days.

Apr 11, 2020

COBOL this, COBOL that. As a former PL/1 guy, I find this fuss mildly annoying.

Apr 3, 2020

What is a big deal about using the ECB mode? All an attacker could be able to see in encrypted data is only a penguin. Who cares.

Mar 29, 2020

This season of Westworld<sup>1</sup> is so Singapore that I wouldn't be surprised to see Phua Chu Kang stepping in any moment.

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<sup>1</sup>Westworld, Season 3



Dec 3, 2019

*“Do not write your own crypto!”*

For years, I have said this is a stupid mantra. Cryptographic algorithms do not grow on trees. Someone has to research and create those.

The right mantra should be *“DO NOT F\*CKIN’ DEPLOY YOUR OWN CRYPTO!”*

Aug 20, 2019

Cryptography is a field where most big names from study books are still alive and active. If you are studying cryptography, leverage this opportunity now because the window is shrinking.

Aug 7, 2019

Treating a programming language as a silver bullet to all security issues is a security issue.

Jun 12, 2019

The number of patches issued by Microsoft to fix Windows by now would be sufficient to create the entire Windows from scratch. Twice.

Jun 4, 2019

There were Alice and Bob, who would  
love to share a blob.

But Bob's Eve bears malice toward Bob  
and Alice,

Helping Mallory with her job.

May 31, 2019

Artificial intelligence is such a silly phrase. What is “artificial”? Is it “made by humans”? Last time I checked, humans make humans too. Intelligence is intelligence, regardless of origin.

Mar 11, 2019

Only a stable genius reduces privacy to  
end-to-end encryption.

Jan 25, 2019

It takes two goats on a narrow bridge to  
make a story.



Jan 9, 2019

Me on attending a conference when I have to

- sit on a plane for many hours: *“Woo-hoo! I’m going on an adventure!”*
- drive for about 15 minutes: *“Meh... I’ve things to do.”*

Oct 25, 2018

Surprisingly many people say “*quantum key distribution*” instead of “*we use TLS over a fiber optic link to distribute keys.*”

Sep 4, 2018

I wonder, how many times have people asked Siri to play that funky music.

Aug 10, 2018

With quantum computers, dividing by 0  
should be fun, right?

Jun 15, 2018

*“Do not invent your own crypto!”*

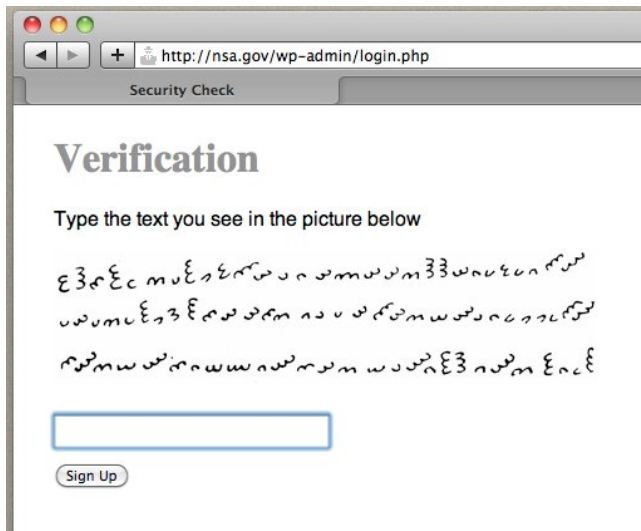
Finally, I can totally agree with this statement because it has nothing to do with cryptography nowadays.

May 14, 2018

Shooting yourself in the foot with a silver bullet is still shooting yourself in the foot.

May 1, 2018

You should know you are a fine person if you can get this old joke.



Apr 3, 2018

If you bring encryption to a system,  
remember to bring proper key  
management, too, at the least.



Jan 20, 2018

We should give up crypto to hordes to use it for cryptocurrency and think of a new term for cryptography. Maybe cipherology? We could be cipherologists, hashionistas, assymetricians, etc. Just kidding. Crypto is cryptography. There is already a short word for cryptocurrency: scam.

Dec 15, 2017

Replying to @mikko

You know things are getting real when a Finn calls some language funky.

Aug 13, 2017

**Think different. But still about a subject.**

Aug 9, 2017

We need fintech, blockchain, etc., to keep some people busy and avoid their “expertise” anywhere near actual problems.

Aug 9, 2017

We do not need self-driving cars. We need  
safely-arriving-to-a-proper-destination  
cars.

#realitycheck

Aug 9, 2017

We do not need flying cars. We already have helicopters and autogyros.

#realitycheck

Jun 30, 2017

It is fun how a security researcher is cool,  
and a QA engineer is dull when both  
essentially do the same thing.

Jun 20, 2017

**If you ask a full-stack developer to learn another technology, you may see a stack overflow.**



May 31, 2017

If you xor 'covfefe' with '59&31/+',  
you'll get 'VVPUTIN'  
QED.

#covfefe #quantum #crypto

May 29, 2017

Microsoft won at AI. Clearly, Windows became self-aware a long time ago.

Nobody knows what, when & why it does whatever it does to a PC.

Feb 26, 2017

Linus on SHA-1 is no worse than, let's say,  
Rivest on MD6 engineering challenges.

Authority extrapolated beyond expertise  
rarely holds.

Dec 15, 2016

Finland knows so much about  
cybersecurity they actually have a  
particular word to describe it:  
*myötähäpeä*.

Nov 22, 2016

The most secure communication channel is a pair of medical doctors exchanging handwritten prescriptions. Perfectly post-quantum too.

Oct 17, 2016

As said before, one does not simply master an artificial intellect while hardly using a natural one.

Aug 22, 2016

Everyone thinks outside the box  
nowadays, and nobody is left to focus on  
the actual agenda.

Jun 27, 2016

I like how people talk about democracy in the #Brexit context. Democracy. In the UK. Democracy. In a kingdom.



Jun 6, 2016

Things you do not see every day: a bus captain is doing wushu while waiting at a traffic light.

May 2, 2016

So much “*satoshi*” in the news makes  
“*quantum*” feel depressed.

Mar 28, 2016

I honestly do not understand people who ridicule malware authors for screwing things up. A properly made malware is the last thing to wish for.

Mar 14, 2016

Using a decades-old desktop OS for #IoT devices is as smart as using a steam engine to fly a plane.

Feb 27, 2016

If there exists Objective-C, then why is there no Biased Ocean?

Feb 16, 2016

Political science: the product of two  
prime ministers is a semiprime minister.

#nevergetsold #reprise

Feb 1, 2016

It is a time when we need a name for a person who praises Snowden revelations and refers to NIST authority in the same talk.

Jan 20, 2016

**If you do computer security  
Your career will die in obscurity.**



Jan 17, 2016

*“Privacy, anonymity, and security are three different things that do not automatically imply each other.”* - Capt. Obvious

Jan 12, 2016

We had a chance to get things right with IoT until someone brought Windows 10 and invited a myriad of Windows programming talents.

Dec 21, 2015

$$+\infty - (-\infty) = +\infty + \infty = +2\infty$$

Nov 26, 2015

The results of Google Images search for *superpose* are not quite as boring as you would expect for a mathematical term.

Nov 23, 2015

The true purpose of autocorrect is not to fix typos and errors. It is to blame for any.

Oct 18, 2015

I really like the requirements to use certain tools that “*run on Sun Workstations, on DEC VAXes running Berkeley UNIX, and on Multics*” in 2015.

Aug 16, 2015

Schrödinger Cipher: secure until you try  
to describe it.

#post-quantum #suiteB

Aug 16, 2015

Trying an SQL injection against an FPGA system is *sure* a thing.



Aug 12, 2015

Breaking a cipher is not a real challenge.  
Making people stop using the broken one  
is.

Aug 4, 2015

Threat intelligence is a new perimeter protection.

#iyskwim #moarncyber

Jul 15, 2015

**We can improve RC4 by applying it twice!**

Jun 20, 2015

For a portion of bee hoon  
I would run right through a typhoon.

For a good Nasi Lemak  
I would trade my new iMac.

For a good banana cake  
I would swim across a lake.

For a cup of Kopi-C  
I would swim across a sea.

Apr 30, 2015

Everybody is so busy trying to prevent leakage out of data processing circuits. Hello? Key scheduling circuits? Anyone?

#Eurocrypt

Apr 27, 2015

There is always a middle man in RSA. His name is Adi.

Apr 21, 2015

The world will never be the same until  
absolute zero.

Mar 31, 2015

To be a part of the solution is a strange  
desire, chemically speaking.



Mar 14, 2015

Every day is a  $\pi$  day. It doesn't have to be the first digits, you know.

#PiDay

Mar 3, 2015

25 days without solving any crypto puzzle  
meant for general public amusement

#keeponstrudging

Feb 24, 2015

The amount of cyber experts is so high  
their combined expertise causes integer  
overflow.

Feb 24, 2015

Quantum cryptography is like Y2K.

Feb 24, 2015

More options to encrypt something – less chances it will be encrypted at all.

Feb 22, 2015

Being first matters only if you move in the right direction.

Feb 17, 2015

Once you finish with HDD firmware wailings, look into a network card or a baseband processor.

Feb 16, 2015

*“A military grade encryption algorithm based on chaotic DNA encoding”* is funny until you realize it can still be *“Funded by.”*



Feb 15, 2015

Apparently, a stable version is one written by a bunch of horseheads.

If you want confidence in an open-source tool, never compile it from the sources.

90

Jan 23, 2015

A masked input field for a one-time password signifies not-so-bright system developers.

Jan 20, 2015

On an unrelated note, @znation & @WalkingDead\_AMC should do a cross-cameo for giggles and science.<sup>1</sup>

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<sup>1</sup>It is a pity they never did.

Jan 13, 2015

That awkward moment when a man wrote a line of JavaScript code and suddenly felt like a legit “*cyber-weapon*” authority.

Jan 12, 2015

I think whoever intercepts and profiles  
my search queries just giggled a bit right  
now.

Dec 29, 2014

Microsoft is going to make a new browser named Spartan. I don't know about their branding strategy, but Trojan seems more appropriate.

Dec 21, 2014

*“In other news, Anonymous claims they have breached North Korean Internet and erased drive C:”*



Dec 17, 2014

Zenzizenzenzic, zenzicubicubic, etc. We should totally unobsolete these terms.

Dec 9, 2014

Legends say that there was a time when computers were actually used for computing.

Nov 23, 2014

We should be legally allowed to hit anyone trying to present a new crypto anything of *military-grade* or *based on chaos theory*.

Mar 28, 2013

In response to NSA's CRYPTOLOG declassification, here is a very top-secret declassified Soviet document.

№ 2

СССР

КОМИТЕТ  
ГОСУДАРСТВЕННОЙ БЕЗОПАСНОСТИ  
при СОВЕТЕ МИНИСТРОВ СССР

30 марта 1976 г.  
№ 709-4/сб.  
г.р. Москва

Совершенно секретно  
ОСОВОЙ НАДНОСТИ  
ОСОБАЯ НАПКА

ТОВАРИЩ

Влас. и см. 2  
1976 г.

№ 40802/13.1

2555

Nov 12, 2014

Yo, cosmonauts. How can one land on something that technically is not land?

Cometed on the comet, marsed on Mars, mooned on Moon...

Nov 3, 2014

**Crash dummy (noun)** - a person that analyzes fuzzing output.

Oct 28, 2014

Ahead of the curve is kind of a lonely place. Plus, there is always that cutting-edge thing.

Oct 15, 2014

Nowadays, vulnerabilities are like hipster startups popping up with silly names, logos, and bootstrapped websites.



Oct 14, 2014

Apparently, some people seriously believe in detecting malware by looking for vulnerabilities in potentially malicious code.

Oct 14, 2014

Attempting to prove the safety and correctness of code that is meant to be unsafe is what I like about ivory-tower academia.

Oct 13, 2014

Superposition is nothing but a lack of measurement methods known to observers.

Sep 16, 2014

How come liddat you know  
Suka-suka makan go  
Use tissue chope a seat  
Singlish poem, please retweet.

Sep 9, 2014

**There is no theoretical science or applied science. There are those who can demonstrate results and those who can only talk in hypotheses.**

Aug 18, 2014

Tactical Hash Collision. Advanced  
Persistent Whitening. S-boxing.  
Perimeter-protected Key Exchange.  
Cyberlinear Shift Register. Cloud LFSR.

Aub 10, 2014

Thou shalt not be l33t without making thy  
TrueCrypt clone, an SSL replacement ,and  
a cryptocurrency.

May 7, 2014

**Information security is a funny business:  
the more you succeed less you can talk.**



Apr 16, 2014

Static analysis cannot help against bugs like Heartbleed. You must go for formal methods; may God have mercy on your soul.

Apr 14, 2104

- The Titanic was built by professionals...
- ... yes, and OpenSSL was written by amateurs.

Apr 1, 2014

There are plenty of Prime Ministers worldwide, but where are all the composite ones?

Mar 18, 2014

What is the point in creating artificial intelligence when we still hardly use the natural one?

Mar 9, 2014

Quantum computers can break RSA encryption in the blink of an eye, but the result is always a bit entangled.

Feb 23, 2014

**Blaming C for security failures is like  
blaming a scalpel for being sharp.**

Jan 27, 2014

**A familiar threat is still a threat that is not any safer until eliminated.**

Sep 25, 2013

**It is a real problem unless it is an integer.**



Sep 5, 2013

Ironically, many of those hysterical about NSA & crypto have absolutely no issues with things like AES-NI or Intel RNG.

Aug 11, 2013

How academia breaks crypto:

*“Guess first  $2^{96}$  bits, brute force the rest  $2^{32}$ .”*

---

How practitioners break crypto:

*“Is it neither 3DES nor RC4? Yeah, it is broken!”*

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How government agencies break crypto:

*“[redacted]”*

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How PR junkies break crypto:

*“WE CAN BREAK YOUR CRYPTO if you use this key. Or this one.”*

Jul 29, 2013

“– Hello, I’m calling on behalf of NSA...  
– Yes, I know  
– How?  
– You are calling on a switched-off cell  
phone”<sup>1</sup>

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<sup>1</sup>To clarify, this is a paraphrase of an old joke that originally featured KGB and an iron.

Jun 26, 2013

There was a big data of cloud  
That was overhyped by a crowd  
After being attacked, it apparently sucked  
And the crowd was laughing quite loud.

Jun 21, 2013

These SIMON and SPECK ciphers from NSA are actually nice. At least, there is some intelligence behind it.

Jul 18, 2013

Here is an idea: formally model AES,  
throw it to a model checker, and let these  
things pillow-fight each other.

Jun 17, 2013

Surprisingly many people need help with understanding Boolean algebra and linear temporal logic. I wonder why.

Jun 4, 2013

How to make a plain joke? First, you'll need three dots...



May 28, 2013

A 994-page model checking theory book without a single reference to the Büchi automaton is undoubtedly credible, right?

Apr 29, 2013

It is amazing what an additional single-bit rotation can do to some “*military-grade*” ciphers... Now, back to boring less-funny things.

Apr 17, 2013

Theoretician cryptographers to formal verification guys are like bagpipes to vuvuzelas.

Mar 14, 2013

Bitwise rotation is a duct tape of a crypto world.

Mar 13, 2013

I like how authors of “*compute  $2^{200}$  values and put them in a hash table*” want to be taken seriously.

Mar 11, 2013

Someone's NDA is someone's else healthy self-esteem.

Feb 28, 2013

Old school is a new ahead of the curve.

Feb 25, 2013

Would you trust someone you do not know who just paid some money to someone you do not know? Welcome to the wonderful world of PKI/CA.



Jan 14, 2013

The modern anti-malware industry is like selling fly swatters with an illustrated guide titled “WTF JUST FLEW IN HERE” to a guy with a broken window.

Dec 5, 2012

**You must design and build a security system assuming it would be disclosed and known. You are not obliged to actually disclose it.**

Nov 2, 2012

I do not get why this mouse pad is so expensive - it is not that great, and the mouse feels laggy.



Oct 29, 2012

LOAD XYZ ABC (CLEAR NOMAP NODUP  
START

If you remember this, then hello, my  
fellow fossil.

Sep 13, 2012

Now that we have tablets, it is time to start working on scrolls.

*“The new iRoll 4m is made of beautiful retina e-paper. It is gorgeous!”*

Sep 6, 2012

A security theatre is when your nice complex password with an OTP token can be bypassed with *\*a forced\** 8-digit phone-banking PIN.

Aug 22, 2012

To some, it is a surprise that the Caesar cipher is a military-grade encryption. A Roman military, circa 60-44 BC.

Jun 10, 2012

This is my 404<sup>th</sup> tweet. Naturally, it is not found.



Jul 9, 2012

Is there some law that a book on cryptography should have a chapter on Caesar and similar ciphers regardless of actual topic complexity?

Jun 26, 2012

A “*researcher*” is inevitable doomed to the same fate as a “*hacker*.”

Jun 19, 2012

If backward compatibility would matter as much as some say, we would still look like dinosaurs with quills and gills.

Jun 12, 2012

It is adorable how some people instantly jump to lecture someone without knowing whom they preach (background, reasons & motivation, etc.)

Apr 26, 2012

Some people are open-source enthusiasts only because they are incapable of creating anything worthy on their own.

Apr 25, 2012

Clouds are good, but too many clouds  
make a thunderstorm. No, I'm not talking  
about weather.

Feb 28, 2012

**Brace yourselves; Advanced Persistent  
Cyber Threat Intelligence Experts &  
Tactical Cyberwarfare Specialists are  
coming.**

Feb 12, 2012

An advanced persistent military-grade chaos-inspired quantum one-time pad is an oblivious touchstone of zero-knowledge crypto.



Feb 9, 2012

It is ridiculous that every single smartphone already has a secure element (a SIM card) and nobody can use it because of telcos' legal issues.

Feb 7, 2012

Now that most of our gadgets have GPS,  
how about location-based passwords?

Jan 26, 2012

I like how most of those apocalyptic experts talk about the Mayan calendar while demonstrating the Aztec disc.

Jan 12, 2012

There should be a compulsory 2yrs  
industry service for vanilla academicians  
so engineers would not laugh at their  
*“production ideas.”*

Dec 6, 2011

Unbelievable. It is the end of 2011, and some people still talk about perimeter protection in all seriousness.

Nov 15, 2011

Why stop halfway with *Middleperson*  
instead of going full retard with *Advanced  
Persistent Equally Placed Person With  
Listening Abilities?*

Nov 8, 2011

(putting on hipster's glasses) I made  
SafeBoot ages before this went  
mainstream

#SecureBoot

Oct 16, 2011

*“Password must be between 7 to 10  
characters in length”*

If you do this in your software, then find  
another job.



Jul 28, 2011

*“I’m sorry, Dave, I’m afraid these are not  
the droids you are looking for.”*

Jul 27, 2011

Something tells me that one should first learn how to fix memory leaks before engaging in any OS development. Right, Mozilla?

Jul 8, 2011

**It's amazing how many people sincerely believe that full disk encryption prevents malware infection.**

Jun 15, 2011

A new star in the Universe always begins  
with someone wondering what this  
button will do.

Apr 26, 2011

No, seriously. Users of Foursquare, Facebook Places et al. are complaining about Apple spying on them. So cute.

Mar 15, 2011

The ongoing worldwide anti-nuclear hysteria is an indicator of how many people have failed common sense and a school course in physics.

Dec 22, 2010

Your #Skype is not working? You are holding it wrong!

Oct 14, 2010

**What will happen when Captain Obvious  
meets General Failure?**



Jul 29, 2010

It is almost impossible for some security “experts” to understand a very basic thing about biometrics: it is a username, not a password.

Jul 15, 2010

Whenever I stumble upon an interesting and clear crypto research paper, it happens to be written by or co-authored by Adi Shamir.

Jun 21, 2010

It hurts my feelings when someone refers  
a 500KB software as tiny.

Jun 17, 2010

**After vuvuzelas, people finally will start to appreciate bagpipe music.**

May 26, 2010

Who needs spies when there are morons  
that talk business out loud over the phone  
while taking public transport.

Mar 14, 2010

How to prevent Bruce Schneier from designing another block cipher? Name yours as Fourfish.

Mar 4, 2010

Whenever I see OCBC, my first unconscious reaction is always like “what is that obscure encryption mode?”

Feb 28, 2010

**Grammar Nazi Lemak.**



Feb 21, 2010

The final scene from “Burn After Reading” is awesome. “*What did we learn, Palmer?*” lol every time.

Jan 12, 2010

**Promote Capt. Obvious!**

Dec 8, 2009

I like phishers. They are probably the only people who sincerely believe that I own AmEx Platinum or drive Lexus.

Oct 31, 2009

What will happen to McLeod when  
Vogons arrive?

Sep 28, 2009

Sadly, not many people can realize that  
`pkcs11.dll` is, in fact, as ridiculous and  
stupid as `pkunzip.zip`

Sep 24, 2009

Agent 007-11.

$H_2DSO_4$ . Ok, this one is too geeky and Singapore-specific.

#capt #obvious #joke

May 28, 2009

**In response to Microsoft's Bing, Yahoo  
die-die must re-brand self to Tribbiani.**

May 27, 2009

**flu types: H1N1 - swine; R2D2 - jedi**



Apr 4, 2009

The quick lorem ipsum jumps over dolor  
sit amet.

Mar 17, 2009

My password is strong  
And the risk level is none.  
No way you can hack it.  
It is *password1*.

Feb 12, 2009

Eight programmers said  
that PC is heaven.  
One said Mac is better  
And there were seven.

Feb 2, 2009

If you plugged a device on the first attempt, it was not a USB socket.

The end.