### Conversation with Fulton T. Armstrong

Who's Spying on YOU? (and How to Protect Yourself)

Spy Wars

# What can we do to protect ourselves?

Broader Solutions??

Update Legislation U.S. leg

U.S. legislation dates back to

1986 (3 years before Web)

Cooperation

Public-private International

Tech and non-tech firms

Victims

### **Broader Solutions??**

### We are signing for Cybersecurity

The digital world is changing everything. It's improving our lives and economies; at the same time, the risk of exposure to cyberattacks is growing dramatically. That's why we are joining forces and have established the Charter of Trust.





**AIRBUS** 



Atos

illilli CISCO

DAIMLER

**D¢LL**Technologies

enel

IBM

Munich Security MS©
Conference Münchner Sicherheitskonferenz

SGS

SIEMENS

T. . .



Our principles

- 1 Ownership of cyber and IT security | Anchor the responsibility for cybersecurity at the highest governmental and business levels by designating specific ministries and CISOs. Establish clear measures and targets as well as the right mindset throughout organizations "It is everyone's task."
- 2 Responsibility throughout the digital supply chain | Companies and if necessary governments must establish risk-based rules that ensure adequate protection across all IoT layers with clearly defined and mandatory requirements. Ensure confidentiality, authenticity, integrity, and availability by setting baseline standards, such as
- Identity and access management: Connected devices must have secure identities and safeguarding measures that only allow authorized users and devices to use them.
- Encryption: Connected devices must ensure confidentiality for data storage and transmission purposes wherever appropriate.
- Continuous protection: Companies must offer updates, upgrades, and patches throughout a reasonable lifecycle for their products, systems, and services via a secure update mechanism.
- 3 Security by default | Adopt the highest appropriate level of security and data protection and ensure that it is preconfigured into the design of products, functionalities, processes, technologies, operations, architectures, and business models.
- 4. User-centricity | Serve as a trusted partner throughout a reasonable lifecycle, providing products, systems, and services as well as guidance based on the customer's cybersecurity needs, impacts, and risks.
- 5 Innovation and co-creation | Combine domain know-how and deepen a joint understanding between firms and policymakers of cybersecurity requirements and rules in order to continuously innovate and adapt cybersecurity measures to new threats; drive and encourage i.a. contractual Public Private Partnerships.
- 6 Education | Include dedicated cybersecurity courses in school curricula as degree courses in universities, professional education, and trainings – in order to lead the transformation of skills and job profiles needed for the future.
- 7 Certification for critical infrastructure and solutions | Companies and if necessary governments establish mandatory independent third-party certifications (based on futureproof definitions, where life and limb is at risk in particular) for critical infrastructure as well as critical IoT solutions.
- 8 Transparency and response | Participate in an industrial cybersecurity network in order to share new insights, information on incidents et al.; report incidents beyond today's practice which is focusing on critical infrastructure.
- 9 Regulatory framework | Promote multilateral collaborations in regulation and standardization to set a level playing field matching the global reach of the WTO; inclusior of rules for cybersecurity into Free Trade Agreements (FTAs).
- 10 Joint initiatives | Drive joint initiatives, including all relevant stakeholders, in order o implement the above principles in the various parts of the digital world without undue delay.

www.charter-of-trust.com





### What YOU can do

12 major steps experts (and I) recommend ...

Be smart about passwords

Single most important thing you can do

- Change them.
- Make them unique and long.
- Protect from social engineering.
- MOST IMPORTANT: E-mail!

### What YOU can do

**12 major steps** experts recommend ...



1. Be smart about passwords

Single most important thing you can do



REPEAT: MOST important thing you can do!!

### Get a dedicated password manager



**OTHERS:** 

Dashlane, Enpass, Keeper, LastPass, LogmeOnce, RoboForm, and Sticky Password. 1Password



Some store on-line, so can "take it anywhere"

BTW ...

Unless you plan to be in perfect health forever, don't forget to tell family where you're hiding your master password list.



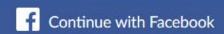
Related to that ...

Do not use Facebook or other social media portal to enter other sites.

### goodreads

#### Discover & read more

Log in to get better recommendations with a free account.



**a**, Continue with Amazon

Sign up with email

Already a member? Sign in

By clicking "Sign up" I agree to the Goodreads Terms of Service and confirm that I am at least 13 years old. Read our Privacy Policy



Don't click on links and don't open attachments!!!!!!!!

... unless you know EXACTLY what they are

CONFIRM WITH
ORIGINATOR
BEFORE CLICKING!!





DOYOUR ROUTINE MAINTENANCE: back up files; update OS; use good anti-virus, etc.

4.

Use "two-factor authentication" wherever possible

- Or three-factor, with biometrics

Increasing

New:



5-

Protect your sensitive data

6.

Send secure text messages whenever you can



ENCRYPT: PGP, VeraCrypt, BitLocker, etc.

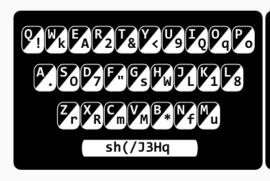
<u>STORE</u> on removable drive.

WhatsApp, Signal, or other with end-to-end encryption

### Encryption on a card

### **OWERTYCARD**

The simple plastic card that goes in your wallet for easy to remember very strong passwords





Step 1: Type in the code letters shown on the 'spacebar' of the card



Step 2: Enter your own password or secret word



**Step 3:** Type in the code characters for each letter of the website you are using Example: www.AMAZON.com use the code characters for each letter of **AMAZON** 





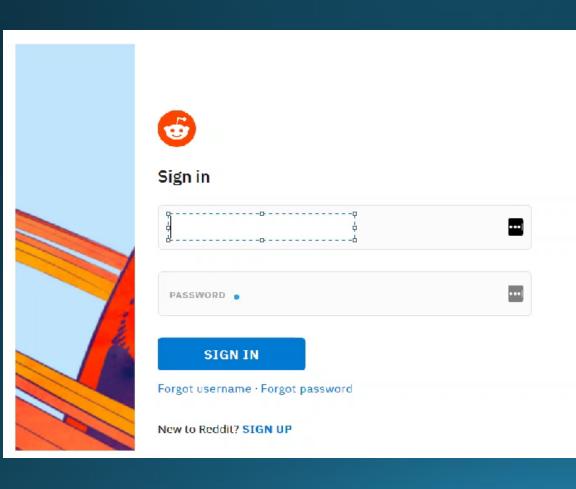
White letters on black are original; black on white are code

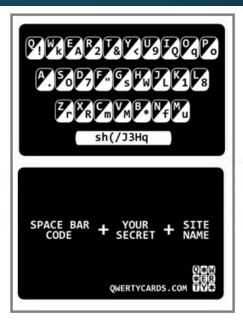
**HOW TO USE IT >>>>** 

1. Encode site name – e.g., "Reddit"

- 2. Enter username
- 3. Enter code on "spacebar"; your secret word; and encoded site name and ENTER





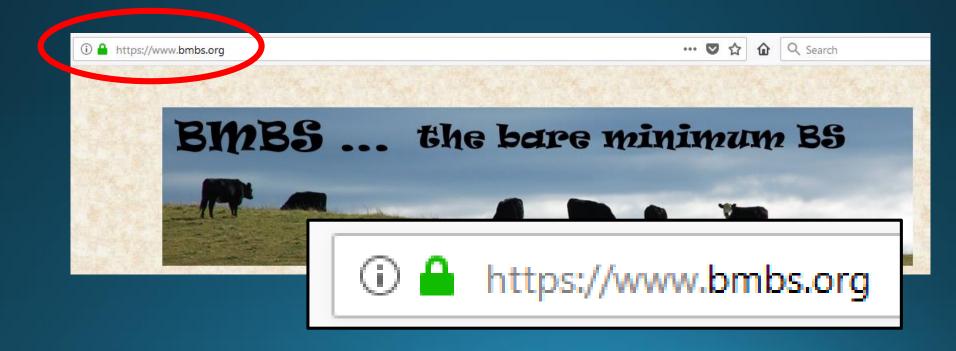








### Make sure browser is on HTTPS sites







### Use a Virtual Private Network (VPN)

Encryption out of current location





Turn off your geo-locational data unless you need it

For mobile and browsers

10.

Cover your webcam with tape



Do sensitive searches smartly

Use DuckDuckGo

Use TOR ("TheOnionRouter") browser

Go to the library

Bare minimum

Good but complex and lightning rod

Use a machine that's not traceable to you (but no naughty stuff!)



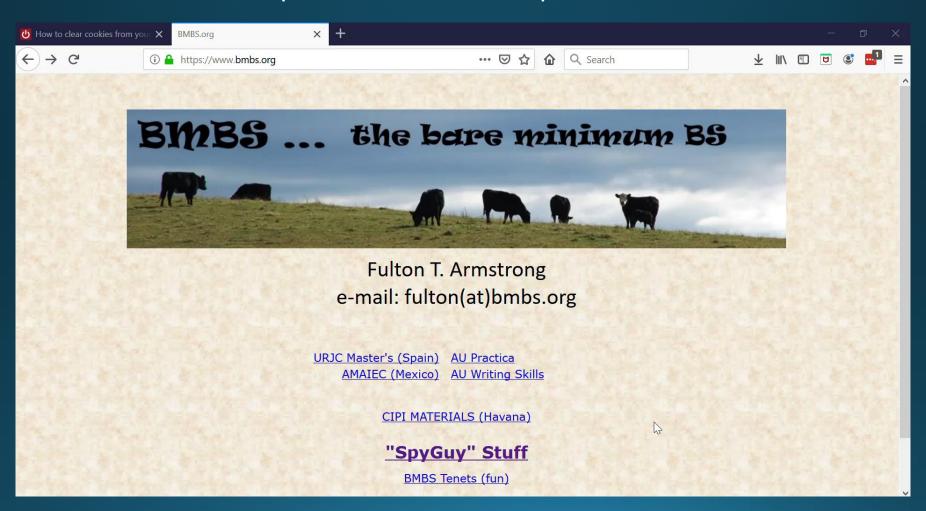
For less-sensitive searches ...

Such as when pricing products ...

Change machines or, better, IP addresses and DELETE COOKIES between searches.

### GOOD PRACTICE: Delete Your Cookies

Example: Firefox (but they're all similar)



### "Internet of Things"

### Devices upon which we depend

- Electronics
- "Digital Personal Assistant"
- "Echo" "Siri"

"Alexa"

- Appliances (including heating and A/C)
- Door locks
- Automobiles

#### **Bloomberg**

Technology

# Amazon Workers Are Listening to What You Tell Alexa

A global team reviews audio clips in an effort to help the voice-activated assistant respond to commands.

By <u>Matt Day, Giles Turner</u>, and <u>Natalia Drozdiak</u> April 10, 2019, 6:34 PM EDT



SHARE THIS ARTICLE

f Share

**y** Tweet

In Post

Tens of millions of people use smart speakers and their voice software to play games, find music or trawl for trivia. Millions more are reluctant to invite the devices and their powerful microphones into their homes out of concern that someone might be listening



## ALEXA, STOP BEING A PERV Outrage as Amazon's Alexa listens to Brits having sex, rowing, swearing and sharing medical news

#### EXCLUSIVE

#### Nick Parker

29 Jul 2019, 22:31 | Updated: 2 Aug 2019, 12:07



Information is power.

This is the new battlefield.

Privacy is no longer an individual right; it's a national imperative.