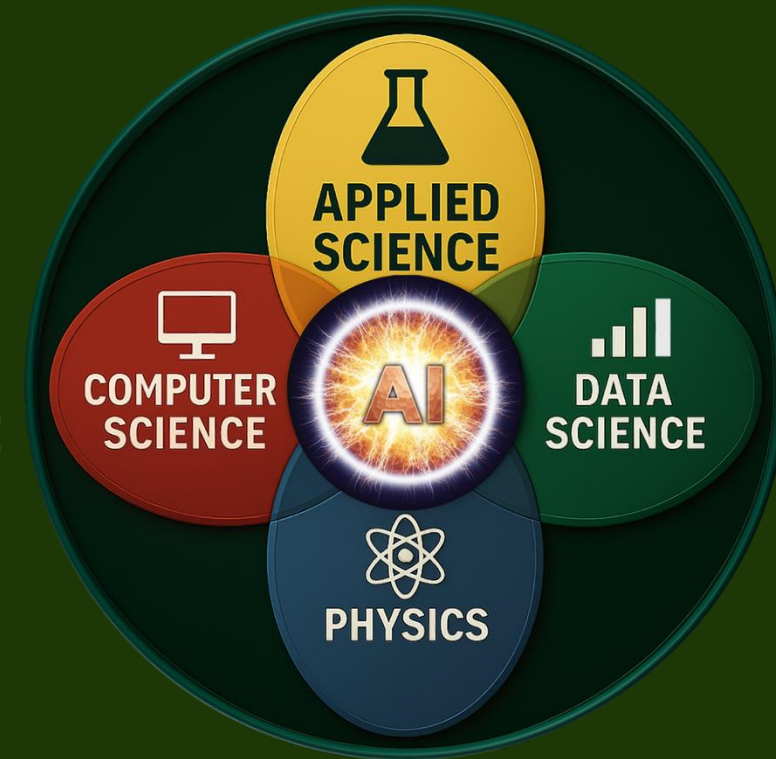


# Cyber-Security & You: Practicing Safe Surfing on the Internet

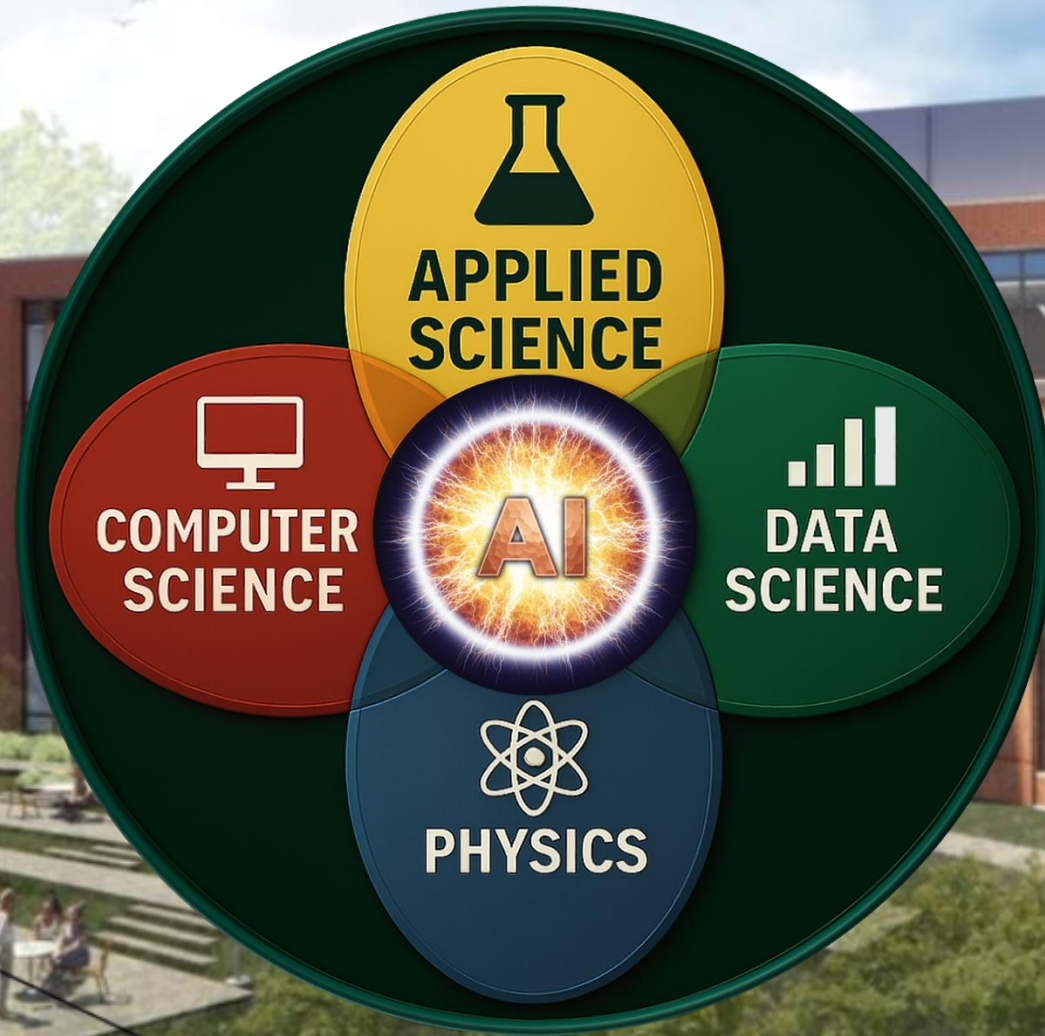


**Dr. Douglas C. Schmidt**  
[dcschmidt@wm.edu](mailto:dcschmidt@wm.edu)  
[www.cs.wm.edu/~dcschmidt](http://www.cs.wm.edu/~dcschmidt)

**Dean of Computing,  
Data Sciences & Physics**



# W&M Developments & Connections



MAGNITUDO NOVA  
PROVOCAMENTA  
QUAERIT, NEC IN  
LAURIBUS QUIESCIT

Greatness seeks new challenges, rather than resting on its laurels

# W&M Developments & Connections

My connections with W&M go back 100+ years!

VOL. XXVII. No. 1

APRIL, 1933

BULLETIN

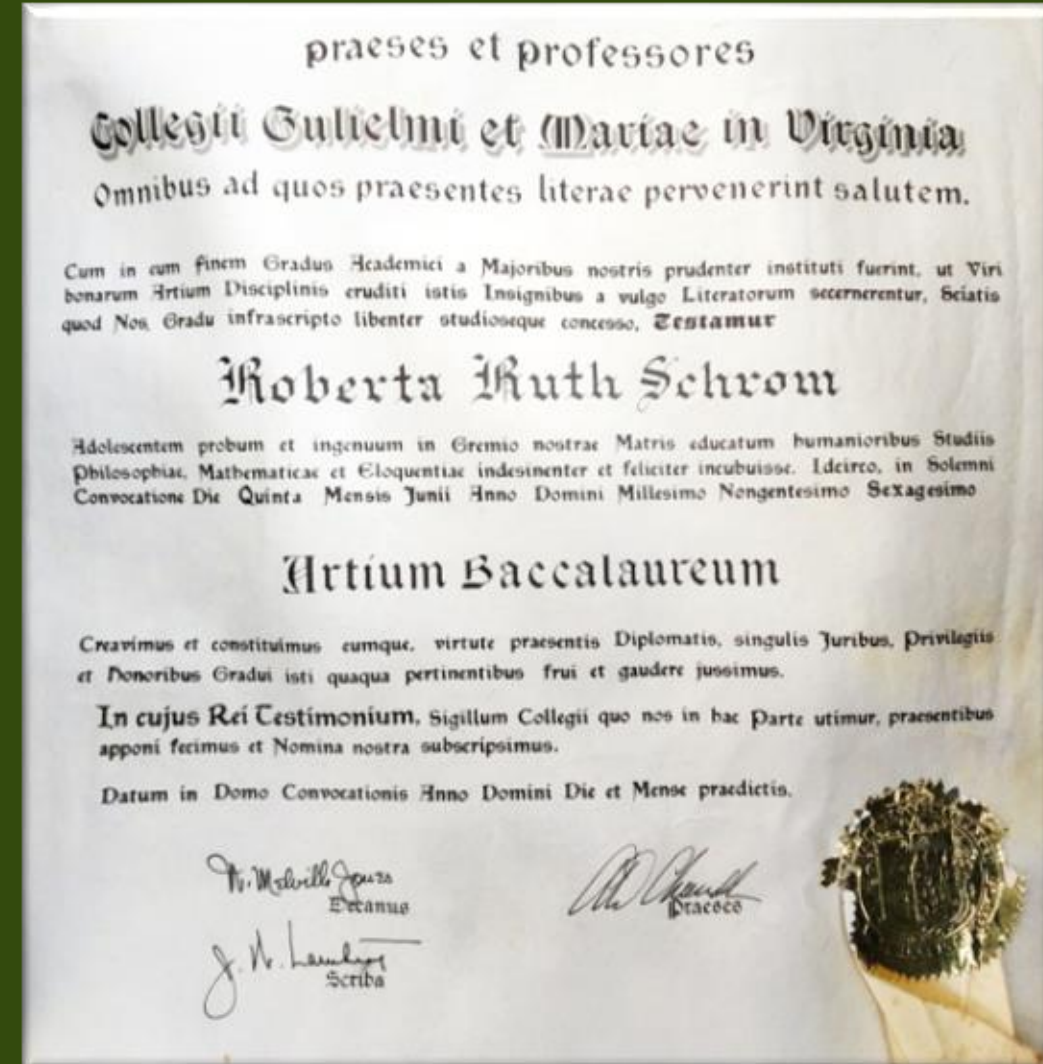
The College of William and Mary  
in Virginia



HENRY C. KREBS, B.S., A.M.-----*Associate Professor of Education*  
B.S., 1889, State Normal College, Kutztown, Pa.; A.M.,  
1923, Rutgers College, New Jersey; County Superintendent of  
Schools, New Jersey, 1902-23; Professor of English Literature,  
College of Mount St. Mary, N. J., 1916-23; Member New Jer-  
sey State Board of Examiners, 1912-23; Instructor in Methods  
of Teaching, University of Virginia Summer School, 1918—;  
Associate Professor of Education, College of William and Mary,  
1923—.

# W&M Developments & Connections

My connections with W&M go back 100+ years!



praeses et professores

Collegii Gulielmi et Mariae in Virginia  
Omnibus ad quos praesentes literae pervenerint salutem.

Cum in eum finem Gradus Academici a Majoribus nostris prudenter instituti fuerint, ut Viri bonarum Artium Disciplinis eruditi istis Insignibus a vulgo Literatorum secernerentur, Sciatis quod Nos, Gradu infrascripto libenter studioseque concesso, **Testamur**

**Roberta Ruth Schrom**

Adolescentem probum et ingenuum in Gremio nostrae Matris educatum humanioribus Studiis Philosophiae, Mathematicae et Eloquentiae indesinenter et feliciter incubuisse. Idecirco, in Solemni Convocatione Die Quinta Mensis Junii Anno Domini Millesimo Nongentesimo Sexagesimo

**Artium Baccalaureum**

Cravimus et constituimus eumque, virtute praesentis Diplomatis, singulis Juribus, Privilegiis et Honoribus Gradui isti quaque pertinentibus frui et gaudere jussimus.

**In ejus Rei Testimonium**, Sigillum Collegii quo nos in hac Parte utimur, praesentibus apponi fecimus et Nomina nostra subscripsimus.

Datum in Domo Convocationis Anno Domini Die et Mense praedictis.

*W. Melville Jones*  
Decanus

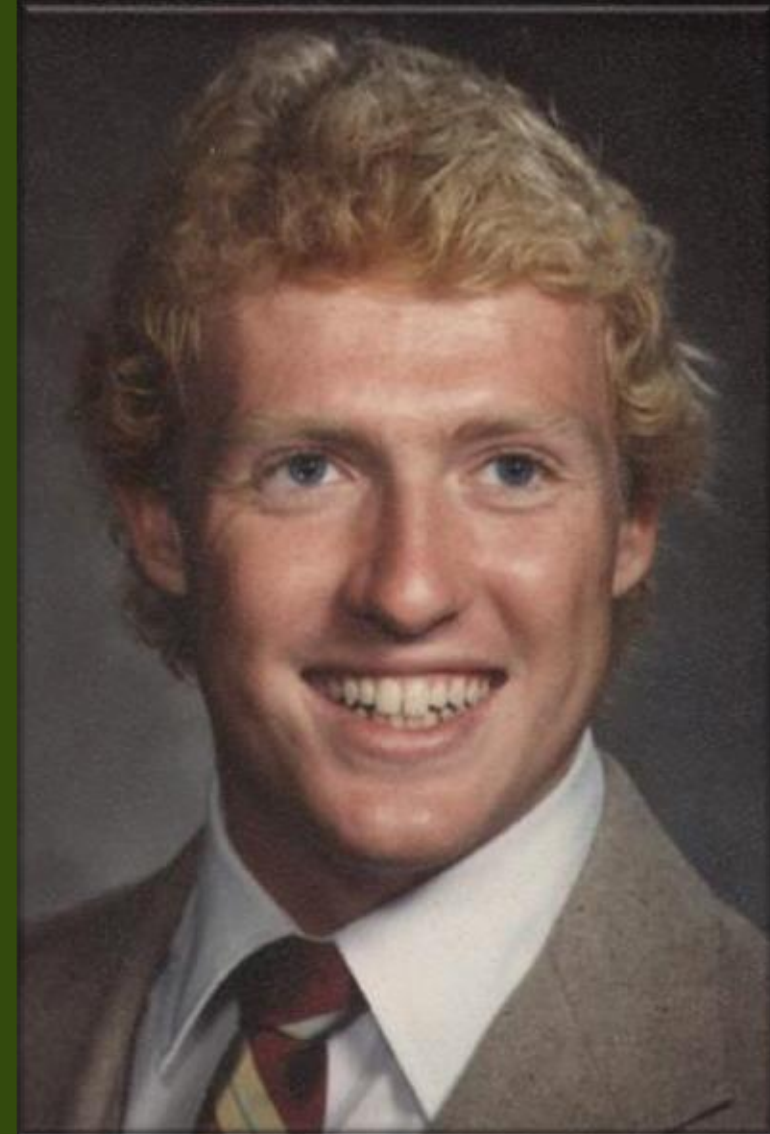
*J. W. Lamberton*  
Scriba

*W. H. Smith*  
Praeco



# W&M Developments & Connections

My connections with W&M go back 100+ years!



# Enduring & Emerging Risks



# Enduring & Emerging Risks

Top 5 Cyber Risks



# Enduring & Emerging Risks

## Top 5 Cyber Risks

### 1. Cyber-Physical System Compromise

**ars TECHNICA** SUBSCRIBE SEARCH SIGN IN

*PAY UP. —*  
**Honda halts production at some plants after being hit by a cyberattack**

Security researchers suspect outage is the result of

DAN GOODIN - 6/9/2020, 8:11 PM



**THE TIMES OF ISRAEL** Cyber attacks again hit Israel's water system,

## Cyber attacks again hit Israel's water system, shutting agricultural pumps

Incident follows more serious April attack attributed to Iran that officials said could have poisoned hundreds with chlorine

By TOI STAFF  
17 July 2020, 1:18 am | 5

[f](#) [t](#) [in](#) [e](#) [s](#) **1,425** shares

A photograph showing a worker in a blue uniform and white hard hat operating a large industrial water pump system. The worker is standing next to a row of large, blue, circular valves or pumps. The background is a clear sky.

# Enduring & Emerging Risks

## Top 5 Cyber Risks

1. Cyber-Physical System Compromise
2. Supply Chain

US Secret Service warns about increased cyberattacks against MSPs

Reveal(x) 360  
SaaS-based Security  
from Edge to Core to Cloud

LEARN MORE

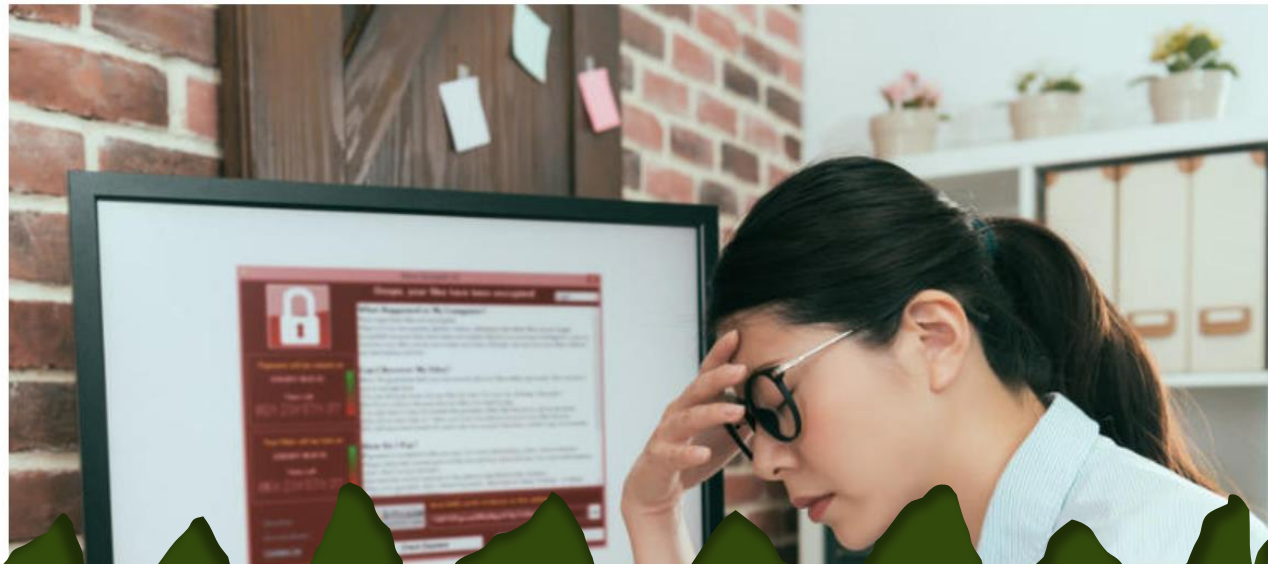


ExtraHop  
Rise Above the Noise.



by Lance Whitney in Security on July 8, 2020, 5:30 AM PST

The US Secret Service has warned organizations about a rise in hacks of MSPs and offers advice on how to beef up security.



# Enduring & Emerging Risks

## Top 5 Cyber Risks

1. Cyber-Physical System Compromise
2. Supply Chain
3. Ransomware Breach



The image is a screenshot of a BBC News article. At the top, the BBC logo is visible on the left, and navigation links for News, Sport, Reel, Worklife, Travel, Future, and More are on the right. A search bar is also present. Below the navigation is a red banner with the word 'NEWS' in white. Underneath, there are more navigation links: Home, Video, World, US & Canada, UK, Business, Tech, Science, Stories, Entertainment & Arts, and More. The article is categorized under 'Technology'. The main headline reads 'How hackers extorted \$1.14m from University of California, San Francisco'. The author is identified as 'By Joe Tidy, Cyber reporter'. The date is '29 June 2020'. There are social media sharing icons for Facebook, WhatsApp, Twitter, Email, and a general 'Share' button. A tag 'Coronavirus pandemic' is visible in a box. The main image of the article shows a close-up of a US one hundred dollar bill, with a digital glitch effect overlaid on it, suggesting a cyber attack or ransomware. The background of the image is dark with some blurred lights.

# Enduring & Emerging Risks

## Top 5 Cyber Risks

1. Cyber-Physical System Compromise
2. Supply Chain
3. Ransomware Breach
4. Protected / Confidential Data Breach



The screenshot shows the top portion of a press release page from the Cybersecurity and Infrastructure Security Agency (CISA) and the Federal Bureau of Investigation (FBI). The page features the CISA logo on the left, a search bar, and two buttons labeled 'COVID Questions' and 'Report Cyber Issue' on the right. The main heading reads 'FBI AND CISA WARN AGAINST CHINESE TARGETING OF COVID-19 RESEARCH ORGANIZATIONS'. Below the heading is the release date 'Original release date: May 13, 2020'. The first paragraph of the text begins with 'WASHINGTON – The Federal Bureau of Investigation (FBI) and the Cybersecurity and Infrastructure Security Agency (CISA) issued a Public Service Announcement today warning organizations researching COVID-19 of likely targeting and network compromise by the People's Republic of China (PRC). Healthcare, pharmaceutical research, and other organizations working on COVID-19 response should be aware of these threats and take steps to protect their systems and data.'

# Enduring & Emerging Risks

## Top 5 Cyber Risks

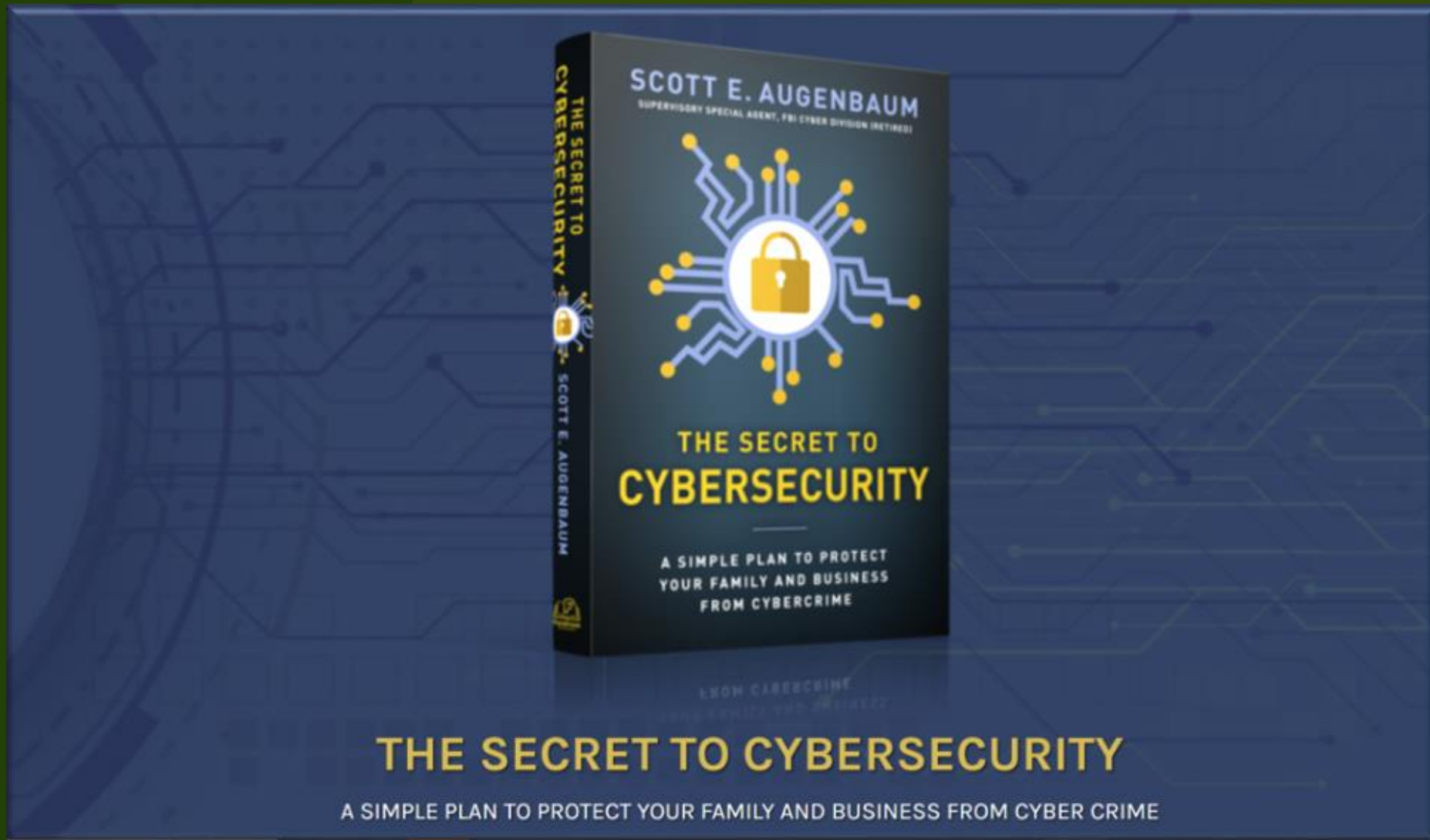
1. Cyber-Physical System Compromise
2. Supply Chain
3. Ransomware Breach
4. Protected / Confidential Data Breach
5. DeepFakes

**Fraudsters deepfake CEO's voice to trick manager into transferring \$243,000**



by RAVIE LAKSHMANAN — 28 days ago in SECURITY

# Protecting Yourself Online



[www.thesecrettocybersecurity.com](http://www.thesecrettocybersecurity.com)

# Protecting Yourself Online

- Beware of “phishing” attacks



# Protecting Yourself Online

- Beware of “phishing” attacks
  - “Problems” with package delivery, billing, etc.



Dear Customer,

It has come to our attention that your account Billing Information records are out of date. That requires you to update your Billing Information. Failure to update your records will result in account termination.

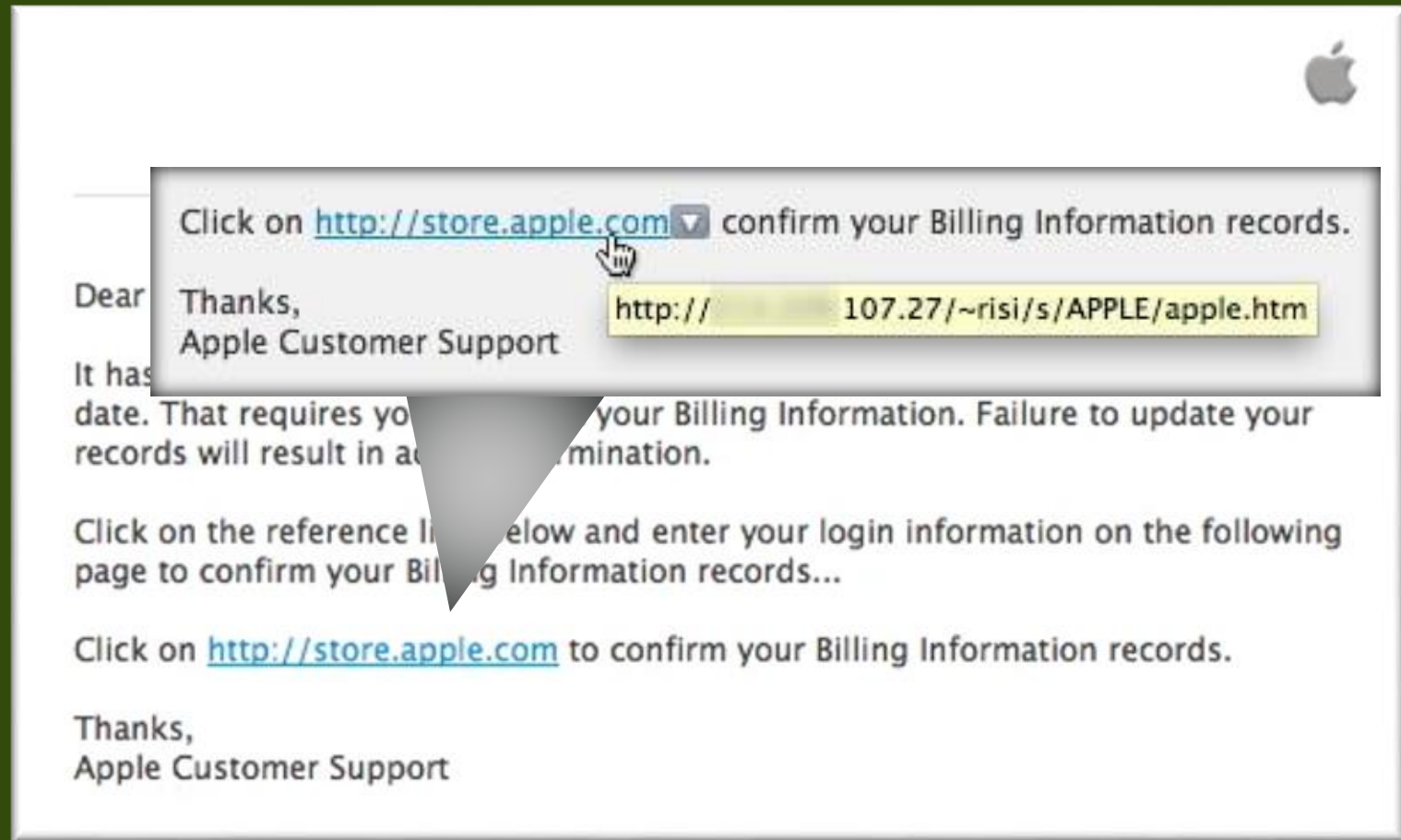
Click on the reference link below and enter your login information on the following page to confirm your Billing Information records...

Click on <http://store.apple.com> to confirm your Billing Information records.

Thanks,  
Apple Customer Support

# Protecting Yourself Online

- Beware of “phishing” attacks
  - “Problems” with package delivery, billing, etc.



**Always think (& double-check) before you click**

# Protecting Yourself Online

- Don't fall for online scams



# Protecting Yourself Online

- Don't fall for online scams
  - "Tech support"

WARNING: CPU VIRUS CHECK - Google Chrome

www.systemversion.com/?s1=rptest1a&tsid=63640-2040\_5250\_us

**WARNING!**

**YOUR COMPUTER MAY BE INFECTED:**

System Detected (2) Potentially Malicious Viruses: Rootkit, Sirefef.Spy and Trojan.FakeAV-Download. Your Personal & Financial Information MAY NOT BE SAFE.

To Remove Viruses, Call Tech Support Online Now:

**1(866) 627-4049**  
(High Priority Virus Removal Call Line)

Your IP Address: 216.37.72.238 | Generated on 03-11-2014 | Priority: Urgent

**Error** Please install Flash Player HD to continue (Required)

Watch HD movies online | Support for full screen mode with multiple monitors | Bug fixed and security enhancements

See details [User license Agreement](#) | Updating takes under a minute No restart is required | [Update](#)

# Protecting Yourself Online

- Don't fall for online scams
  - "Tech support"
  - Jury duty fines

## PROTECT YOURSELF AGAINST JURY DUTY SCAMS

### DID YOU KNOW?

Court officers will never ask for payment, a credit card or social security number for failure to appear for jury duty. Report suspicious activity immediately to your local law enforcement agency.



**DON'T GIVE OUT  
PERSONAL INFORMATION  
BY PHONE OR EMAIL**

# Protecting Yourself Online

- Don't fall for online scams
  - "Tech support"
  - Jury duty fines
  - Sweepstakes & lottery "winning"

Never pay to  
get a prize.

**That's a scam.**

[ftc.gov/fakeprizes](https://ftc.gov/fakeprizes)



FEDERAL TRADE  
COMMISSION

**#FTCTopFrauds**

**ReportFraud.ftc.gov**

# Protecting Yourself Online

- Don't fall for online scams
  - "Tech support"
  - Jury duty fines
  - Sweepstakes & lottery "winning"
- Special deals on cell-phone plans



# Protecting Yourself Online

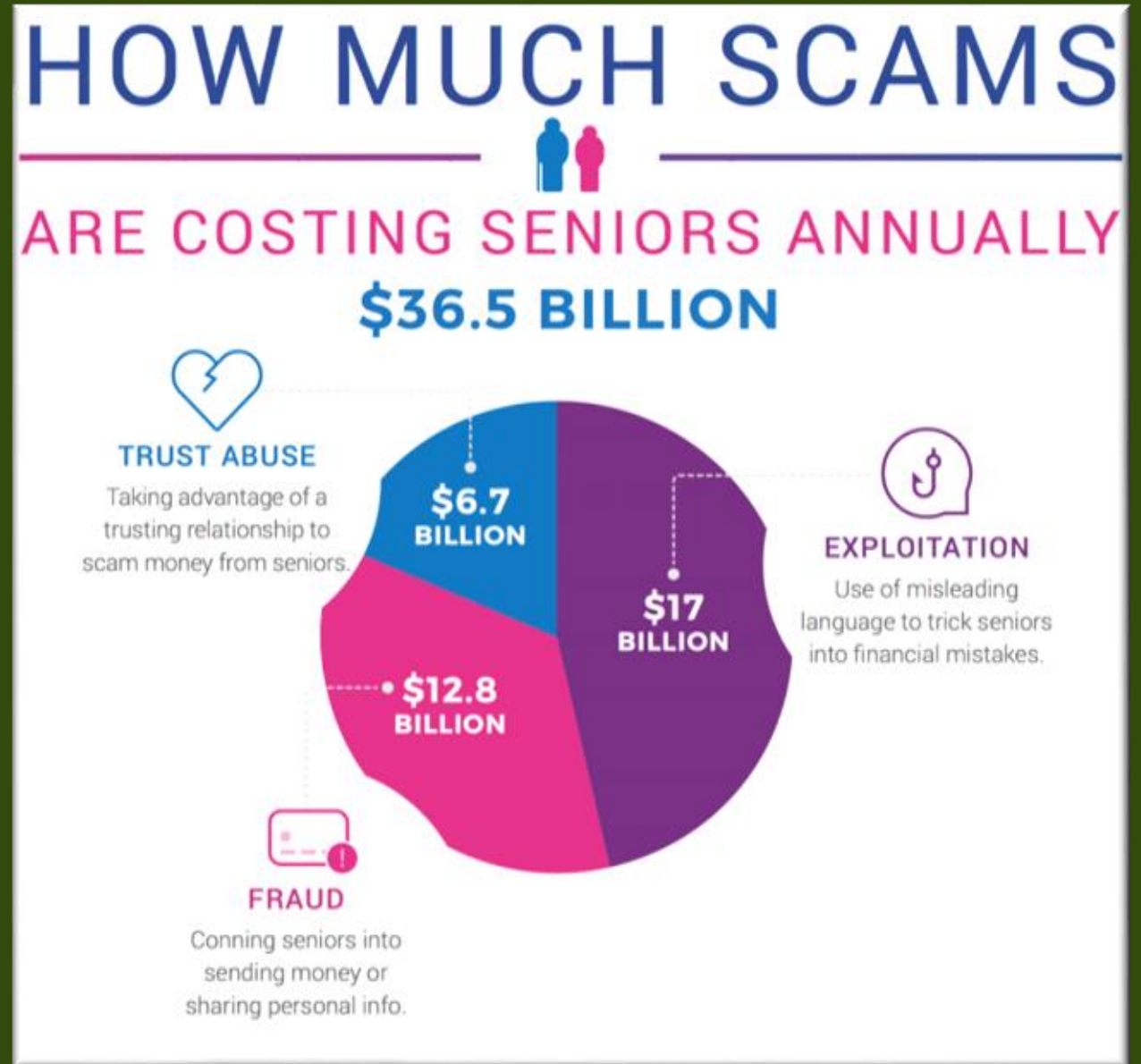
- Don't fall for online scams
  - "Tech support"
  - Jury duty fines
  - Sweepstakes & lottery "winning"
  - Special deals on cell-phone plans



**Anything that sounds too good (or bad) to be true is a scam..**

# Protecting Yourself Online

- Watch out for elder scams



# Protecting Yourself Online

- Watch out for elder scams
- “Grandchild” in need

## Grandchild Imposter SCAM ALERT



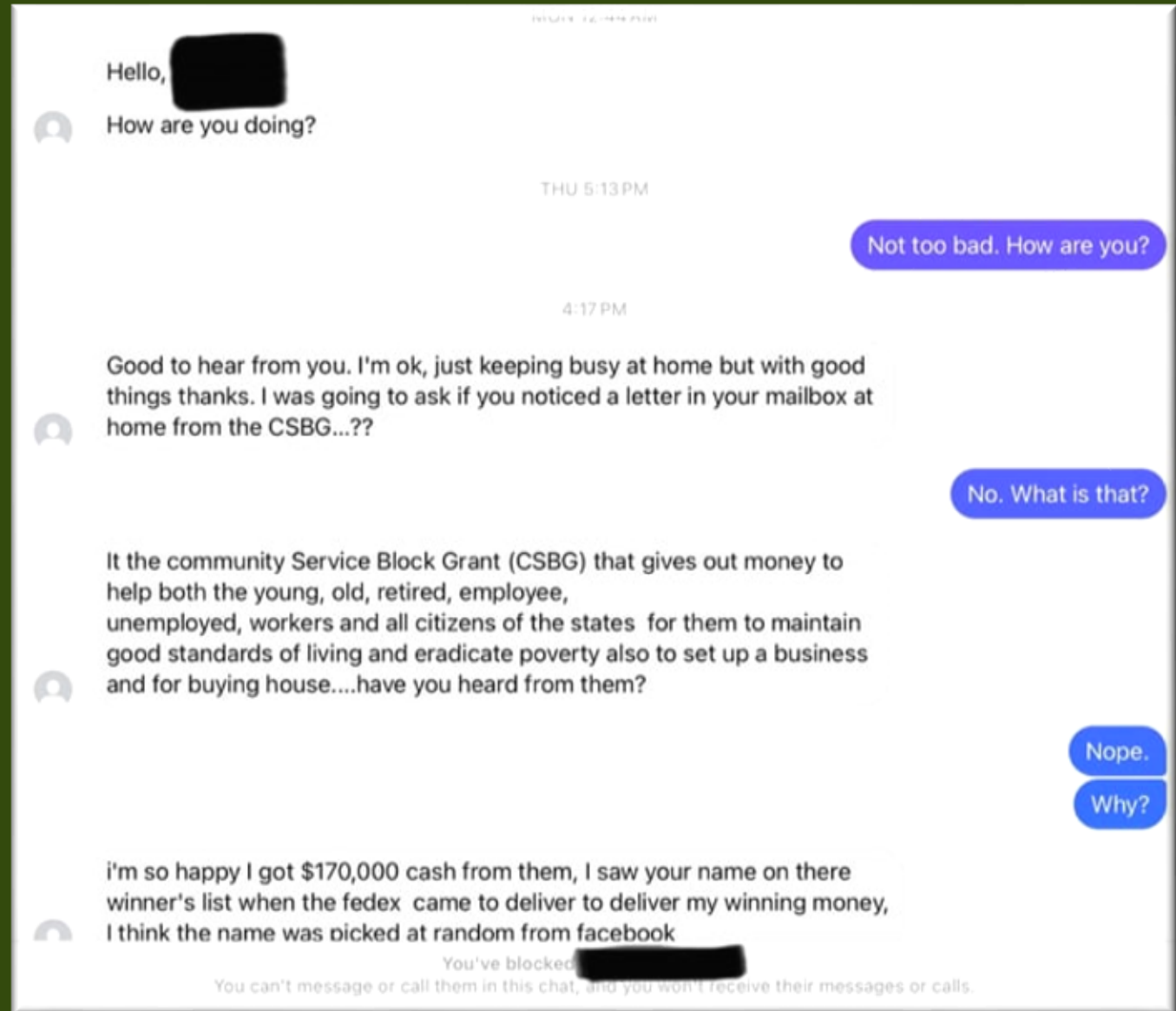
- Hang up the phone!
- Call a family member or friend to verify.
- Don't send cash, gift cards, cryptocurrency, or wire transfers.

Contact CAP to report scams!

(800) 649-2424 | [ago.cap@vermont.gov](mailto:ago.cap@vermont.gov)

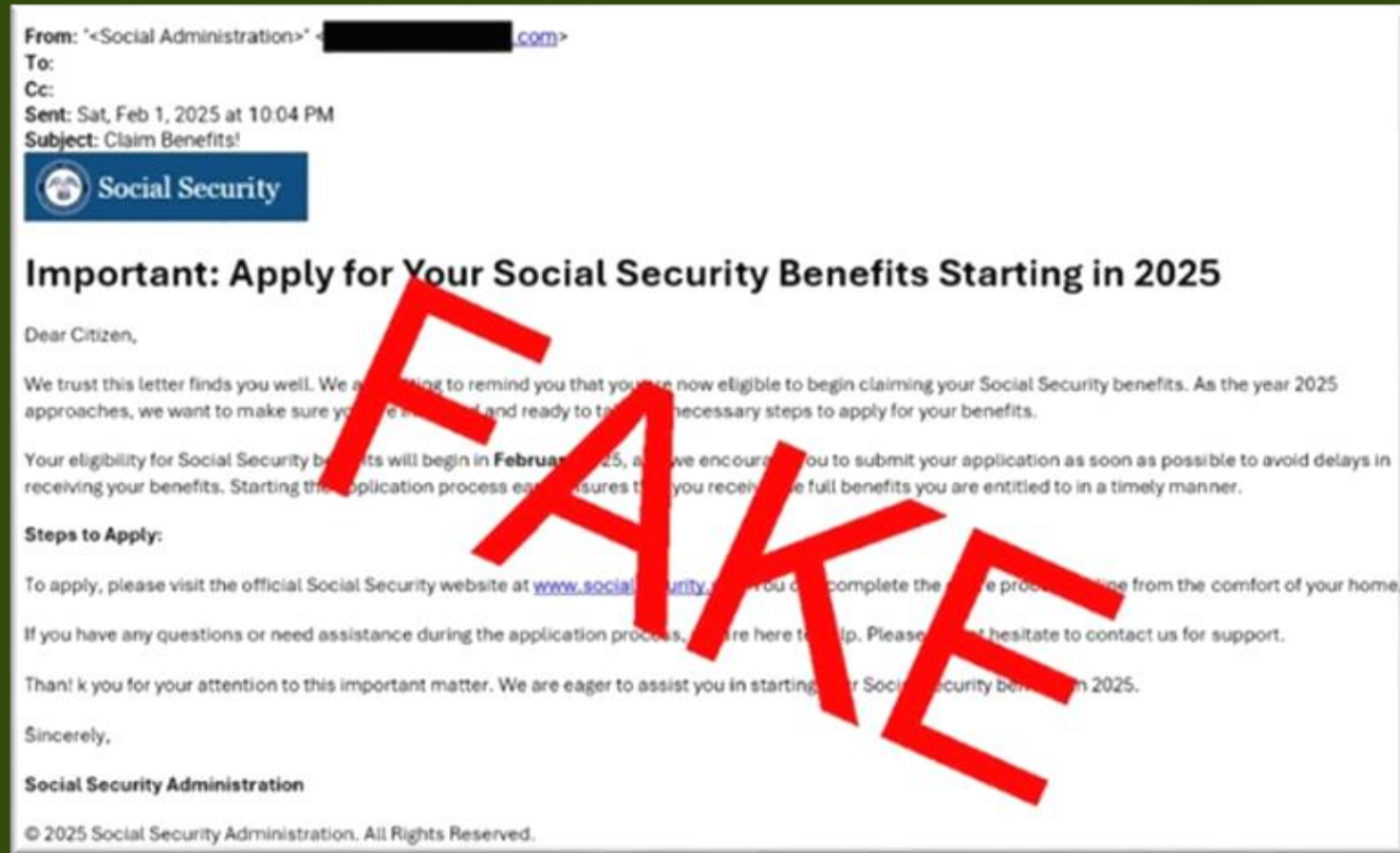
# Protecting Yourself Online

- Watch out for elder scams
  - “Grandchild” in need
  - Long-lost friend or colleague



# Protecting Yourself Online

- Watch out for elder scams
  - “Grandchild” in need
  - Long-lost friend or colleague
- Social security benefit payments



# Protecting Yourself Online

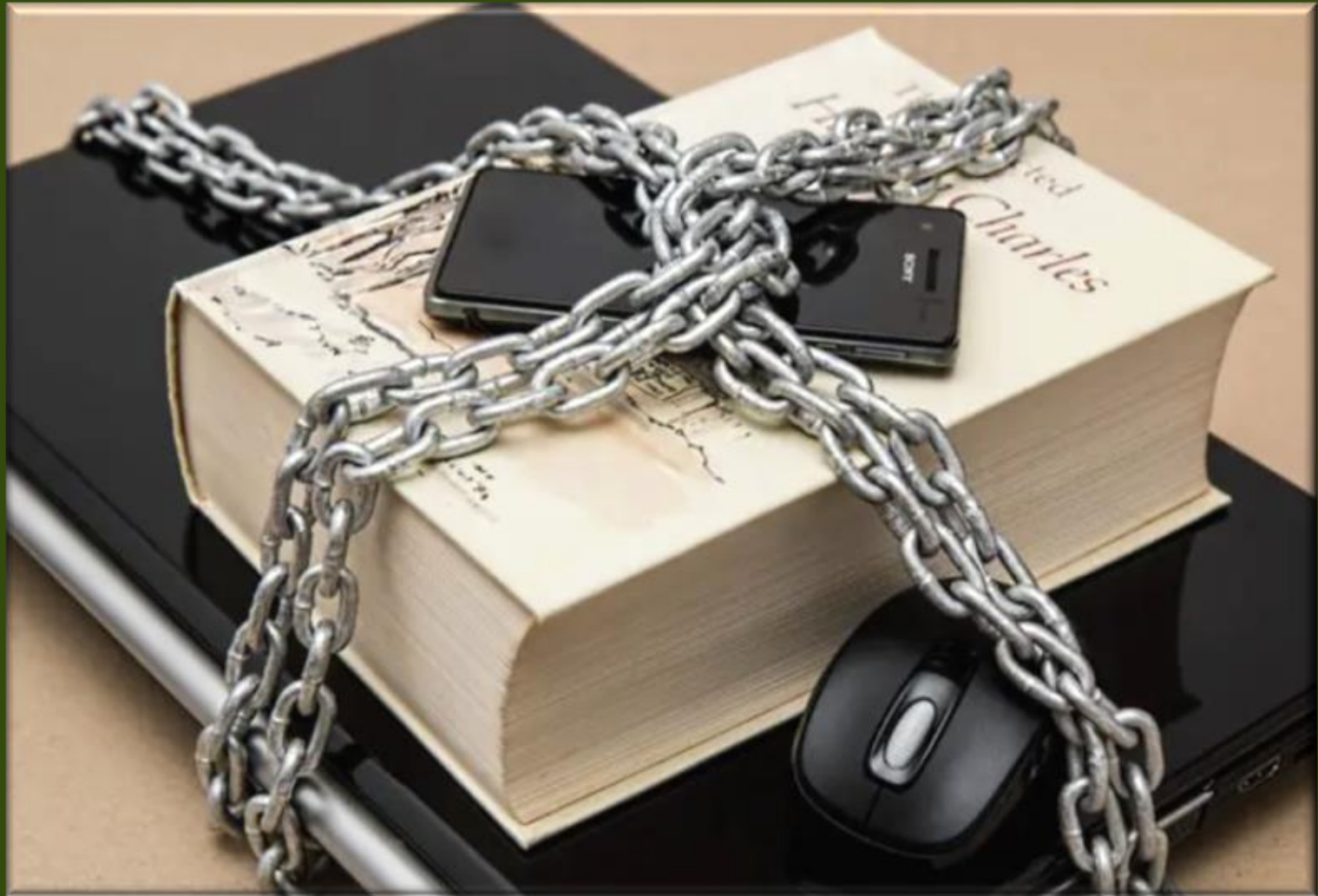
- Watch out for elder scams
  - “Grandchild” in need
  - Long-lost friend or colleague
  - Social security benefit payments



**Trust nothing & no one online!**

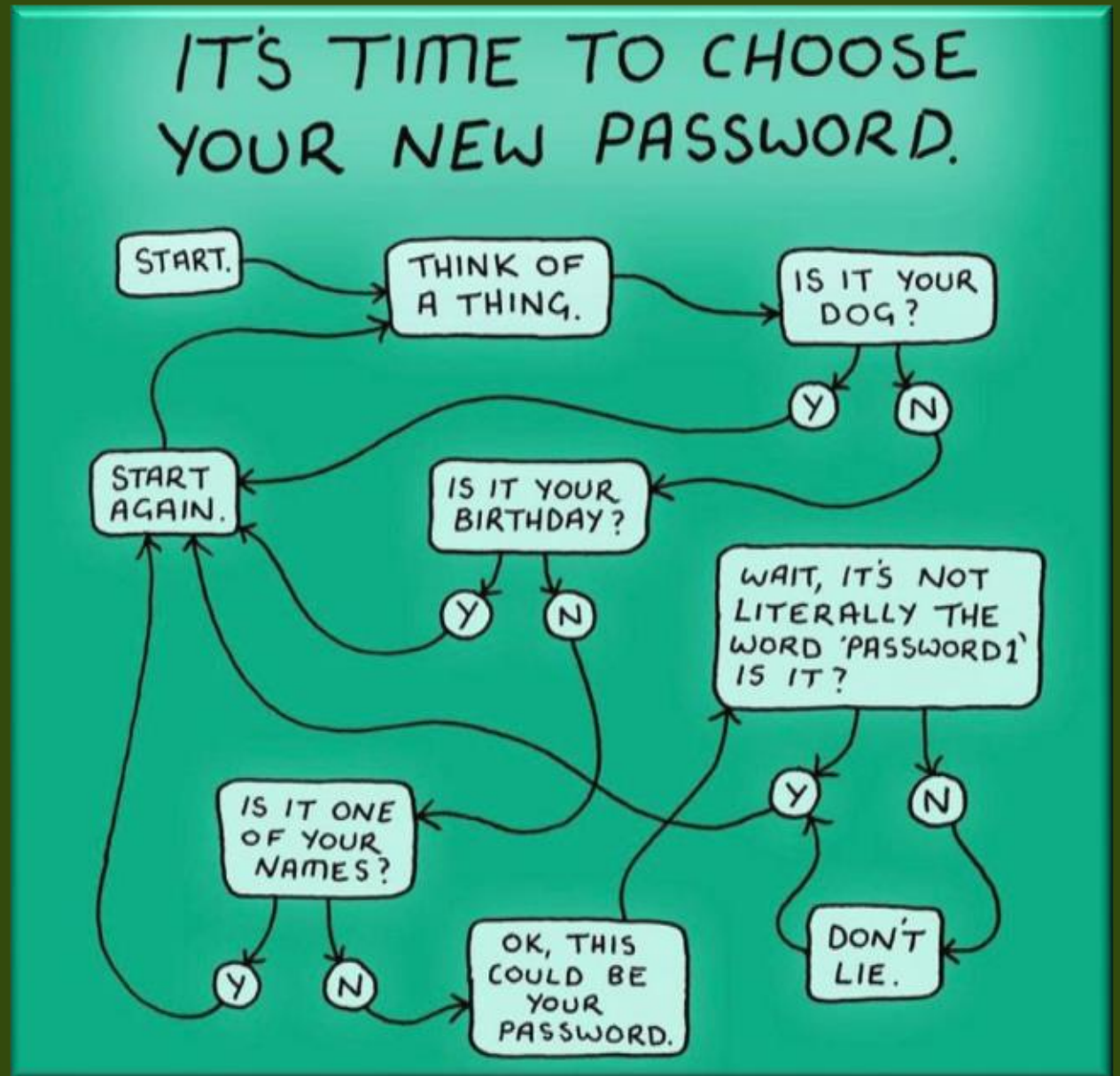
# Protecting Yourself Online

- Protect your data & your identity



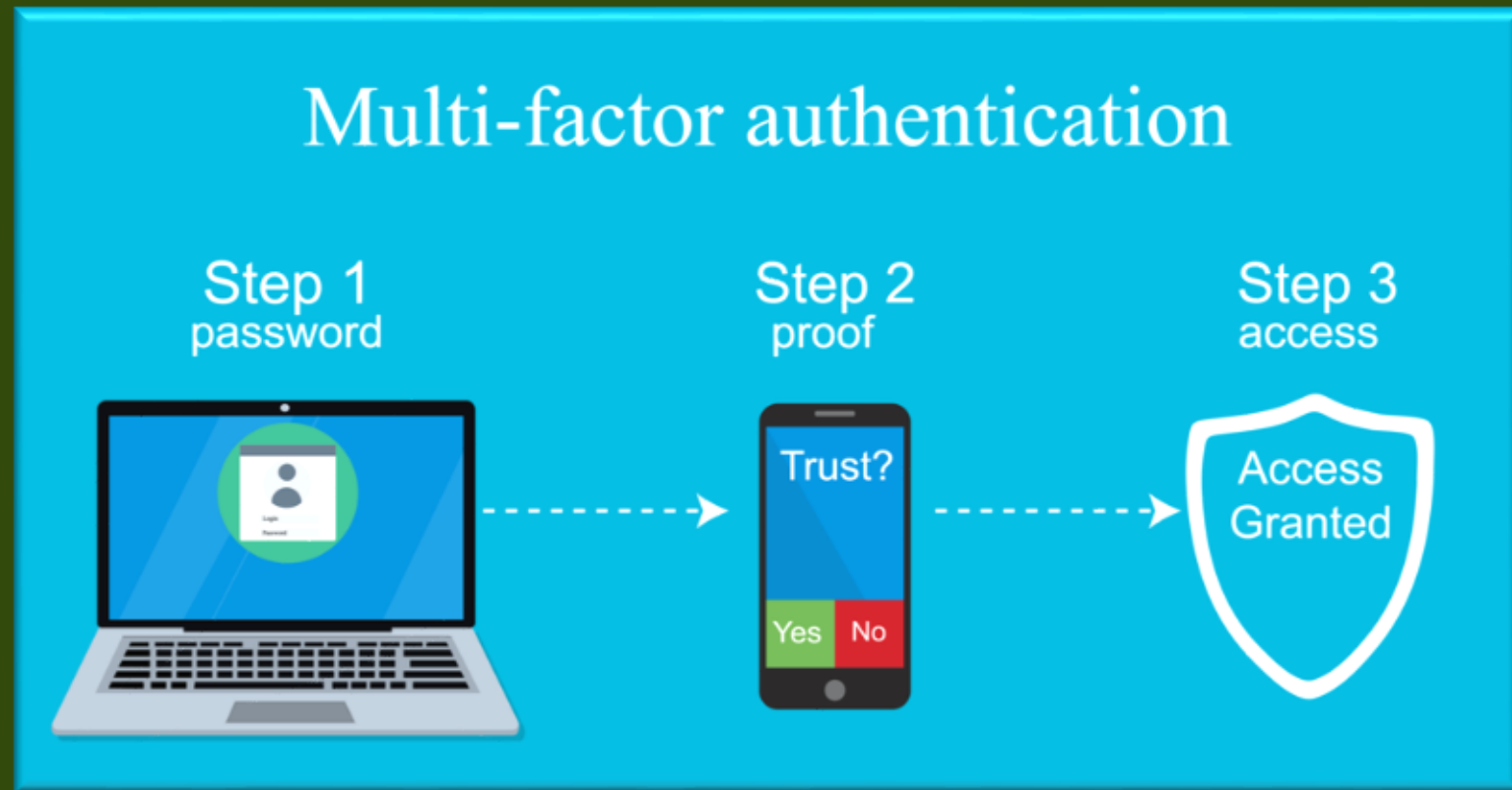
# Protecting Yourself Online

- Protect your data & your identity
- Choose passwords wisely



# Protecting Yourself Online

- Protect your data & your identity
  - Choose passwords wisely
- Enable multi-factor authentication



# Protecting Yourself Online

- Protect your data & your identity
  - Choose passwords wisely
  - Enable multi-factor authentication



**Consider putting a “freeze” on your own credit!!**

# Parting Thought



**End of Cyber-Security & You:  
Practicing Safe Surfing  
on the Internet**