Topics in Computer Security Series – Sept. 2019

ISC2 San Diego Chapter

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https://isc2-san-diego-chapter.org/board/

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Topics in Computer Security

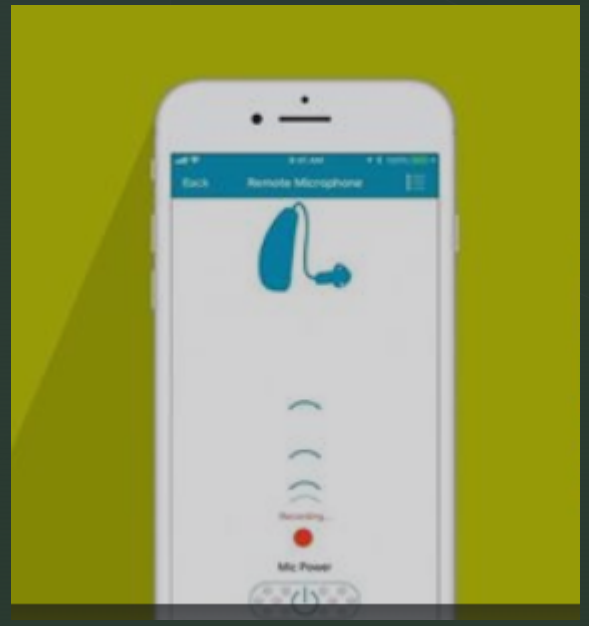
- Each Member…
  - Should keep up to date with latest in computer security news
  - Has experience and expertise to Offer
  - Should benefit from meetings via networking, communication, and exchange of ideas

Topics in Computer Security

- Some Guidelines…
  - There's no set number of topics we must get through, though meetings generally go until 8pm (and beyond)
  - This is a trial run, so feedback is encouraged! (Shall we do this again?)

Hearing Aids

Hearing Aids Can Now Record https://www.starkey.com/blog/2018/06/How-to-record-conversations-with-hearing-aids



- “Cool” features become Security Concerns
- The examples given on their website include visiting a doctor’s office
- This is an example of a product that might get “past the door” where other recording devices would not.

Electrical Grid Vulnerabilities

US Grid CyberAttack – March 5 Analysis https://www.eenews.net/stories/1061111289

- A vulnerability in the web interface of a vendor's firewall was exploited, allowing an unauthenticated attacker to cause unexpected reboots of the devices. This resulted in a denial of service (DoS)1 condition at a low-impact control center and multiple remote low-impact generation sites. These unexpected reboots resulted in brief communications outages (i.e., less than five minutes) between field devices at sites and between the sites and the control center.

US Grid CyberAttack – March 5 Analysis
https://www.eenews.net/stories/1061111289

- “The more recent cyberthreat appears to have been simpler and far less dangerous than the hacks in Ukraine. The March 5 attack hit web portals for firewalls in use at the undisclosed utility. The hacker or hackers may not have even realized that the online interface was linked to parts of the power grid in California, Utah and Wyoming.”

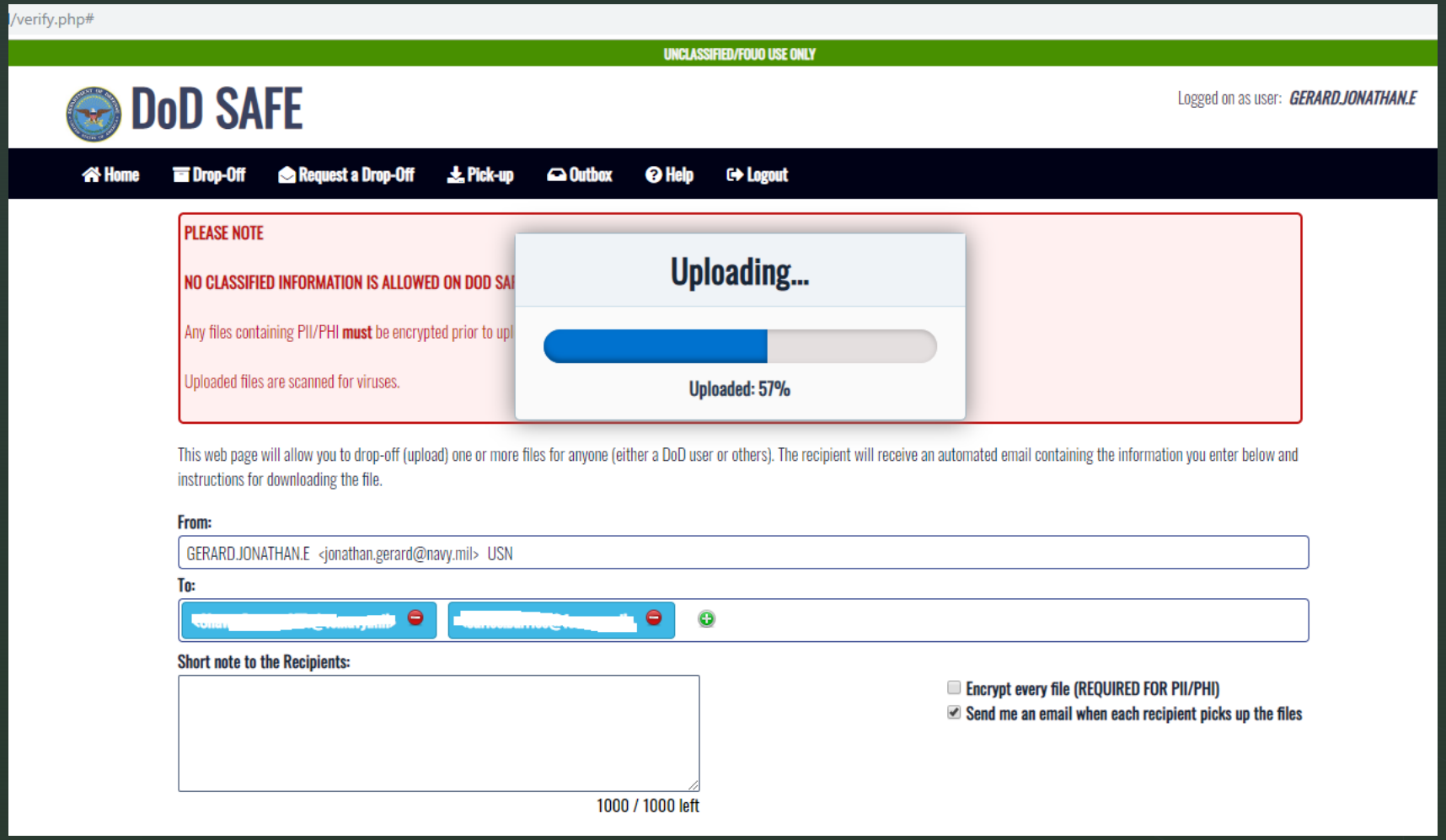
DOD File Sharing Vulnerability

ARMY File Sharing Site Shutdown https://www.fifthdomain.com/dod/army/2019/08/29/how-one-teenager-took-out-a-secure-pentagon-file-sharing-site/

- On Oct. 25, Jack Cable, who worked for the Defense Digital Service and was a freshman at Stanford University, reported a problem to the department through the Pentagon's HackerOne vulnerability disclosure page.
- At age 17, he found 30 vulnerabilities in Air Force websites during the 2017 rendition of the "Hack the Air Force" competition. He ended up winning the contest.

Jack Cable at the “Future of Everything” Conference

Current Site & How the Exploit Worked



YouTube Settlement for Children's Privacy

Children’s Online Privacy Protection Act

- The act, effective April 21, 2000, applies to the online collection of personal information by persons or entities under U.S. jurisdiction about children under 13 years of age including children outside the U.S., if the company is U.S.-based.
- Details what a website operator must include in a privacy policy, when and how to seek verifiable consent from a parent or guardian, and what responsibilities an operator has to protect children's privacy and safety online including restrictions on the marketing of those under 13.

Google To Pay $170 Million To Settle FTC Claims That YouTube Collected Kids Data Illegally

- The fine is a record in a case related to alleged violations of the Children's Online Privacy Protection Act (COPPA), according to the FTC. "YouTube touted its popularity with children to prospective corporate clients," said FTC Chairman Joe Simons. "Yet when it came to complying with COPPA, the company refused to acknowledge that portions of its platform were clearly directed to kids. There's no excuse for YouTube's violations of the law.“
- Under the settlement, YouTube is required to develop and maintain a system that lets channel owners to identify "child-directed content" so that YouTube can ensure it is complying with COPPA. In addition, Google and YouTube must notify channel owners that their child-directed content may be subject to COPPA's obligations and provide annual training about complying with COPPA for employees who deal with YouTube channel owners.

YouTube vowed to halt comments on videos with kids (in March). It still hasn't. https://www.cnet.com/news/youtube-kids-videos-still-alllow-comments-machine-learning-ai-failing-to-suspend-disable/

- Six months later, CNET's single search found more than 100 videos posted in the last month by more than 100 different channels. They all featured young children -- babies, toddlers and kids clearly no older than elementary school students. All had comments enabled.

Platform vs Publisher

- **Platform**
  - Open “public” space for discussion
  - So much data, that it couldn’t possibly be analyzed
  - YouTube: 60 hours of video uploaded per minute
  - May have generic, broad rules of enforcement
- **Publisher**
  - Cultivates content
  - May have arbitrary rules for which content is allowed
  - A publisher may be liable for the content which remains present

Scraping Other's Collected Data

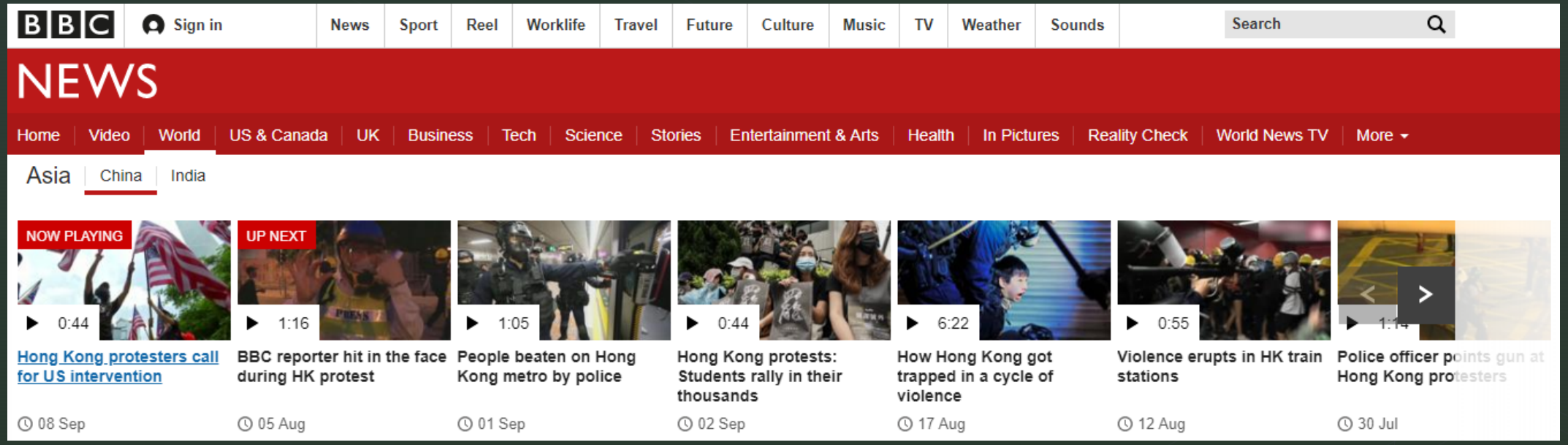
Web scraping doesn’t violate anti-hacking law, appeals court rules https://arstechnica.com/tech-policy/2019/09/web-scraping-doesnt-violate-anti-hacking-law-appeals-court-rules/

- Scraping a public website without the approval of the website's owner isn't a violation of the Computer Fraud and Abuse Act, an appeals court ruled on Monday. The ruling comes in a legal battle that pits Microsoft-owned LinkedIn against a small data-analytics company called hiQ Labs.

Hong Kong Protestors Find Ways to Communicate

Hong Kong Protestors Using Bluetooth Mesh Messaging App (Bridgefy)

https://www.forbes.com/sites/johnkoetsier/2019/09/02/hong-kong-protestors-using-mesh-messaging-app-china-cant-block-usage-up-3685



Hong Kong Protestors Use Bridgefy to Avoid Chinese Surveillance

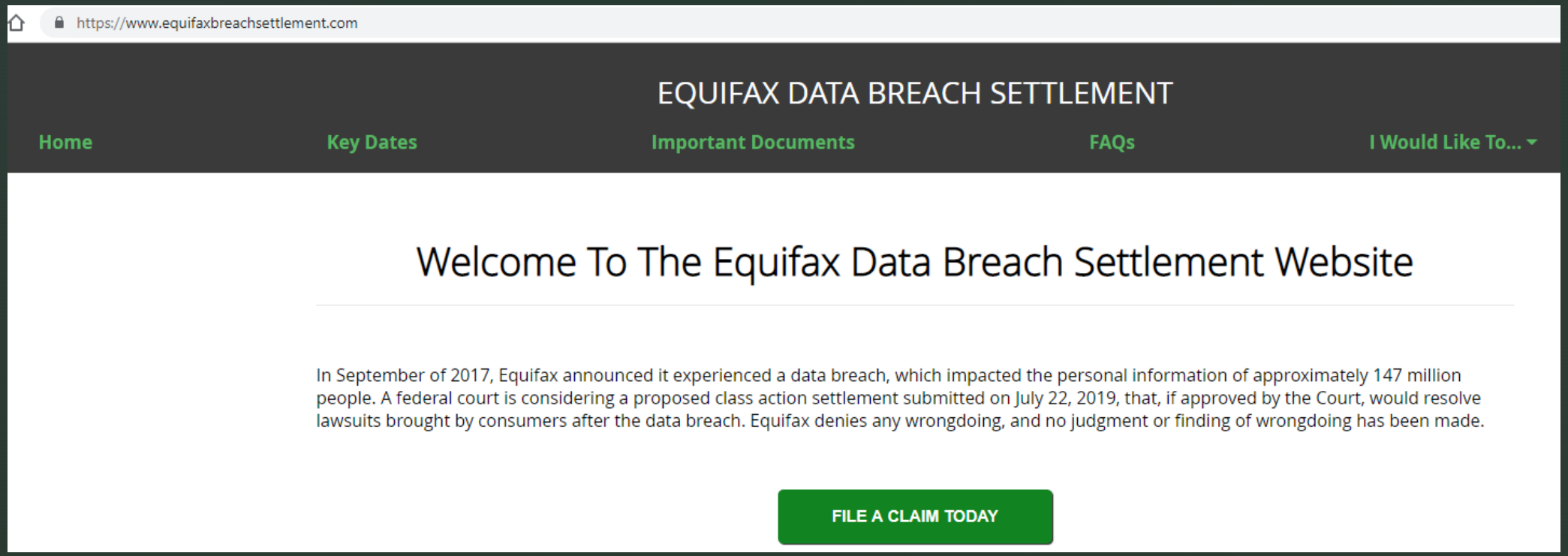
- Hong Kong Protestors Using Mesh Messaging App China Can't Block: Usage Up 3685%
- The app can connect people via standard Bluetooth across an entire city, thanks to a mesh network. Chatting is speediest with people who are close, of course, within a hundred meters (330 feet), but you can also chat with people who are farther away. Your messages will simply "hop" via other Bridgefy users' phones until they find your intended target.

Equifax to pay at least $575 million as part of FTC settlement

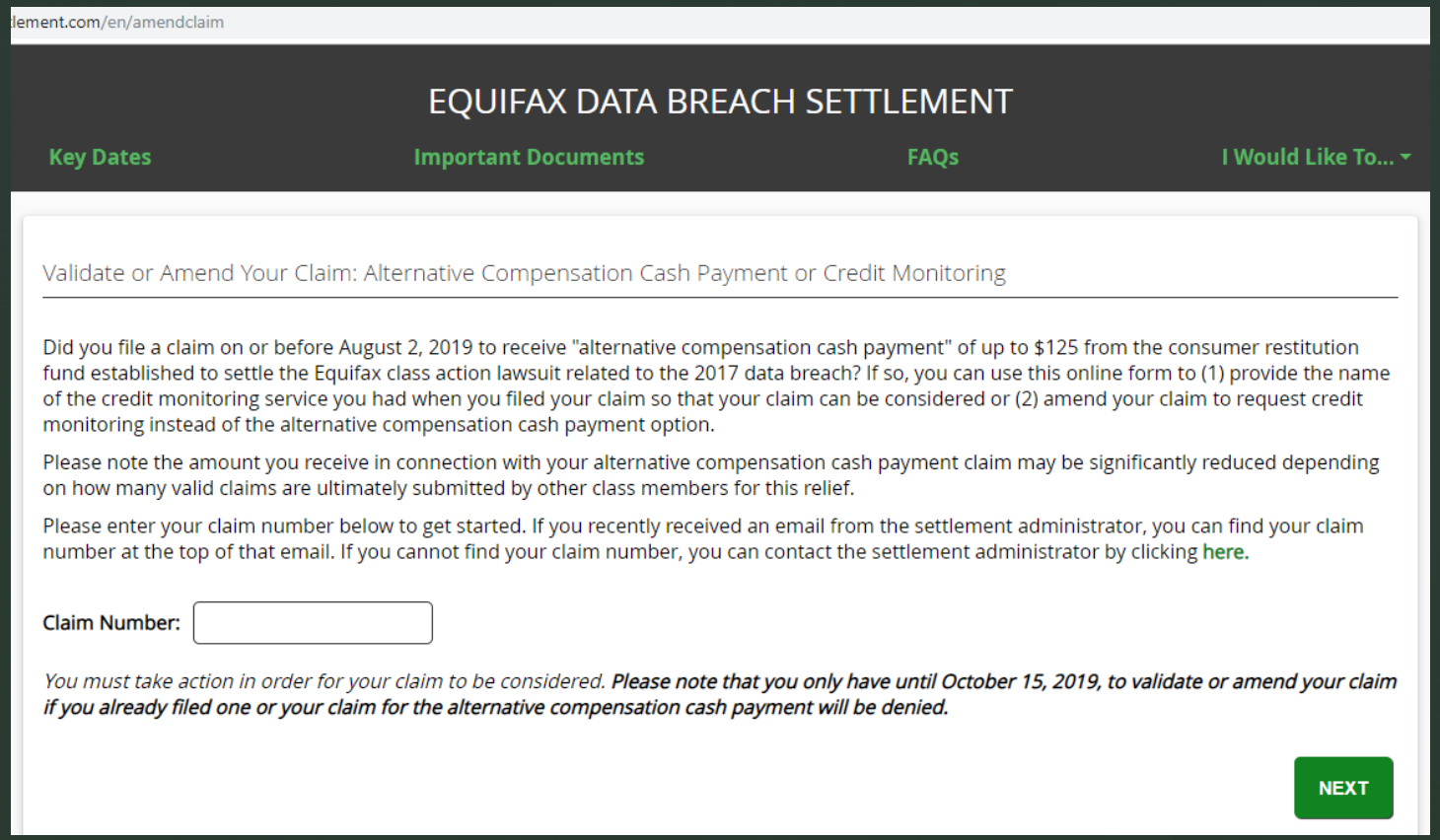
- Hackers stole the personal information -- including Social Security numbers and home addresses -- of nearly 148 million Americans from Equifax's servers in a data breach that ran from May to July in 2017.
- A December 2018 House Oversight Committee report called the breach "entirely preventable," saying Equifax didn't take action to prevent it and wasn't prepared for the aftermath.
- You were probably affected.
- As a security expert, you may have more claim to money than others do…

Equifax Settlement

https://www.equifaxbreachsettlement.com/



A recent change may mean less money and the requirement to prove monitoring



Deepfakes and AI Implications

Fraudsters Used AI to Mimic CEO's Voice in Unusual Cybercrime Case https://www.wsj.com/articles/fraudsters-use-ai-to-mimic-ceos-voice-in-unusual-cybercrime-case-11567157402

- Criminals used artificial intelligence-based software to impersonate a chief executive's voice and demand a fraudulent transfer of €220,000 ($243,000) in March in what cybercrime experts described as an unusual case of artificial intelligence being used in hacking.
- Phishing attacks can now become more effective…

Ransomware

New Bedford Hit With $5.3m Ransomware Demand https://www.infosecurity-magazine.com/news/new-bedford-hit-with-53m/

- A Massachusetts city has revealed that cyber-criminals tried to hold its data ransom to the tune of more than $5m over the summer, in a sign of the growing risk to organizations from online extortionists.
- The hackers wanted $5.3m in Bitcoin, a figure he countered with a much lower sum of $400,000 as this apparently would have been covered by cyber insurance.
- The attackers rejected that sum outright, highlighting just how high the bar is now for victims of ransomware attacks. In New Bedford's case the relatively small number of machines affected meant restoring from back-up was pretty straightforward and no critical systems were impacted.

Mayors Unite Against Ransoms https://www.infosecurity-magazine.com/infosec/as-mayors-unite-against-ransoms/

- 170 cities have now been impacted
- A survey found 40% of IT Pros believe ransomware should be illegal
- Resolutions by a group of city mayors has pledged to not pay ransomeware at 87th Annual US Conference of Mayors (USCM). This includes Mayor Faulconer of San Diego.
- Paying is common. Most cyber insurance groups simply pay up.

Cloud vs OnSite Security

CISOs: Cloud is Now Safer Than On-Premises https://www.infosecurity-magazine.com/news/cisos-cloud-is-now-safer-than/

- The perception of cloud security appears to have reached a tipping point, with a majority of cybersecurity leaders now believing the risk of a breach is the same or lower than in on-premises environments, according to Nominet.
- However, concerns persist: 71% were moderately, very or extremely concerned about malicious activity in the cloud. Over half (56%) cited regulatory fines as their biggest concern, whilst a similar number (54%) pointed to the increasing sophistication of cyber-criminals.
- Multiple Vendors Increases Footprint
- Offloading to cloud may reduce liability\ransomware likelihood

Questions? Comments? Feedback?

Upcoming Events

October 10

Rahul Raghavan

Co-Founder and Chief Evangelist, we45

Topic: AWS Security

November 14

Matt Bossom

Presidio, Inc.

Topic: Security Strategy for Today's Expanded Attack Surface

December 12

Chris Newborn & Paul Shaw

Defense Acquisition University

DAU
Defense Acquisition University