



PWC G8 Gals@Technology

February 2020

Misc Items and Questions

Des Moines

07:39 AM

LIVE



made with inematic

BREAKING NEWS

Counting Expert Called In

Expert counter Count von Count called in to aid Iowa Caucus

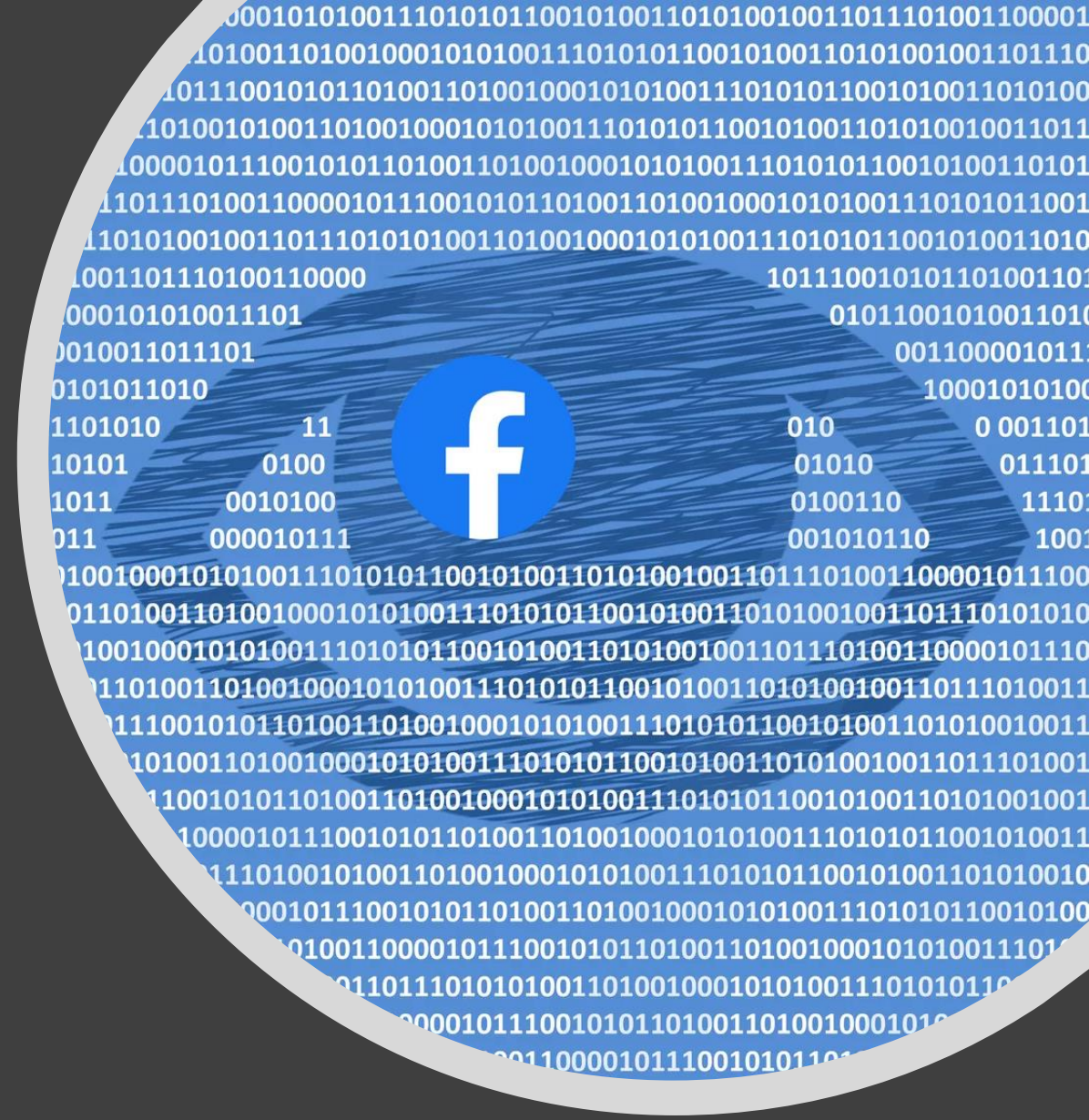
Iowa – Bad Code is Easy to Write!



- App not locked down to certified devices with known identities
- Android platform which makes it difficult to have a single version
- Server communication problems not well tested
 - Iowa (like Indiana) has many rural area communication challenges
 - Various scenarios not well tested (if at all)
- General security weakness in the app. (not well trained professionals)
- Personal website URLs still in code. Code not “cleaned”.
- Copies of the code EASY to obtain and examine (hacker target)
- BTW – Ebay currently selling voting machines used throughout USA

Facebook Privacy

- Electronic Frontier Foundation (EFF)
- How to Change Your Off-Facebook Activity Settings
- Information on “Manage Future Activity”



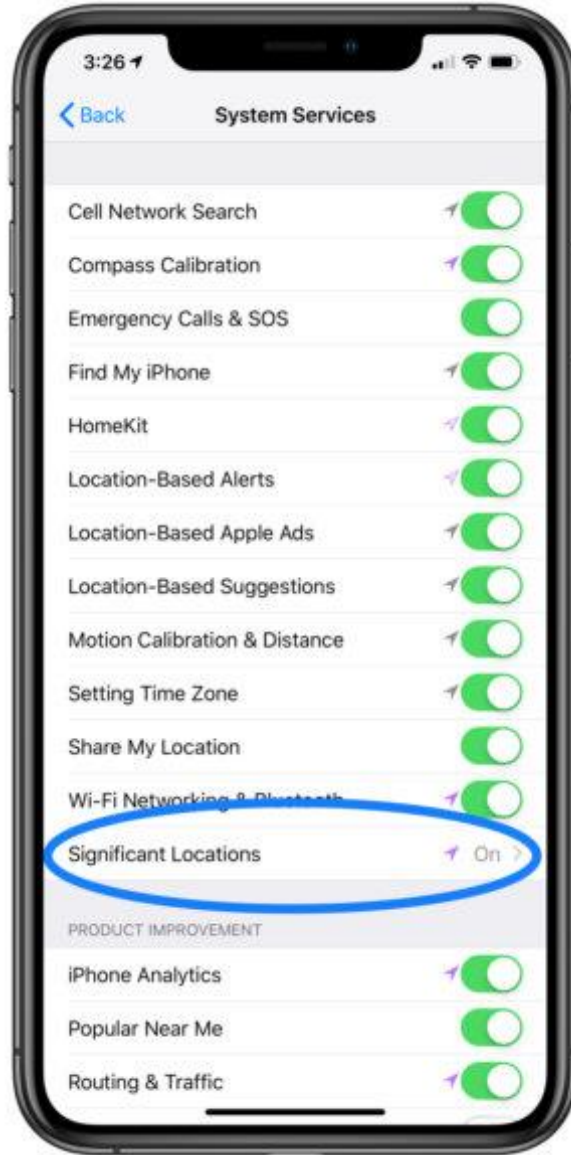
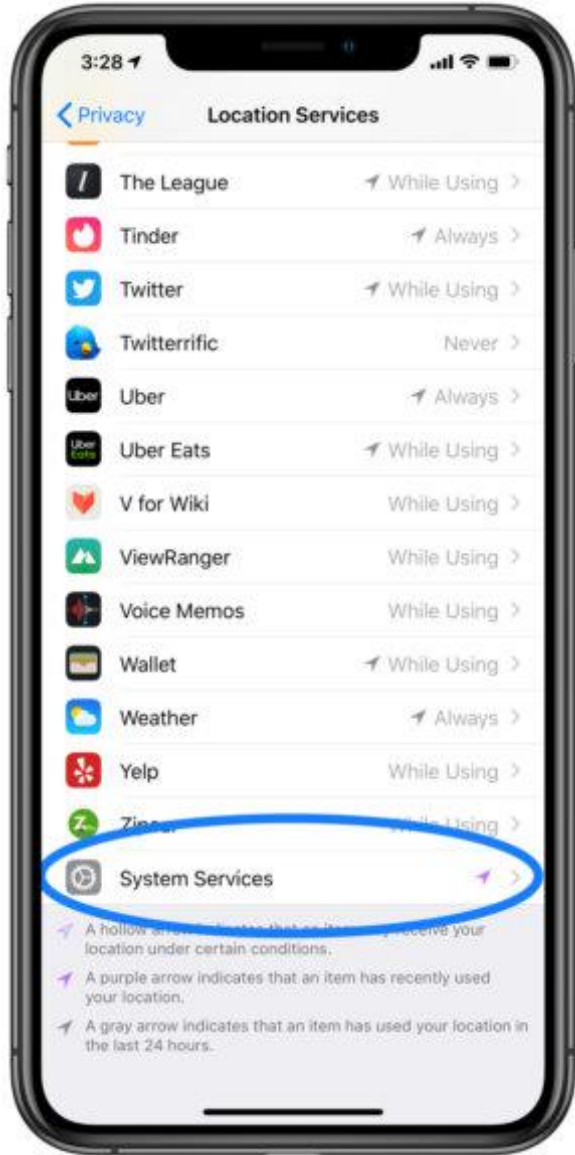
- <https://www.eff.org/deeplinks/2020/01/how-change-your-facebook-activity-settings>

Location Services

- Facebook posts/check-in
- Twitter
- Windows 10
- Mac OS
- Photo metadata
- iPhone
 - Find my iPhone
 - Share my location
 - Significant Locations



iPhone Significant Locations





Google Photos Testing New Subscription

- Targeted for people who want physical photo memories
- \$8/month – Google will send 10 prints that are “automatically selected from your last 30 days of photos”
- Tailored selections themes
 - People and Pets
 - Landscapes
 - “a little bit of everything”
- Google also interfaces directly with Walmart and CVS Pharmacy for direct photo printing

Windows 7 is Dead

- Windows 7 will continue to function
- No more Microsoft support (aka patches)
- All major anti-virus vendors will continue to support Windows 7 for at least 2 more years
- You can still upgrade to Windows 10 from Win 7, 8, or 8.1 for free even though that program ended in July 2016



- <https://www.cnet.com/how-to/you-can-download-windows-10-free-you-should-because-windows-7-dead/>

Windows 10 Versions

- Home
- Pro
- Pro for Workstations
- Education (Academic Volume Licensing)
- Pro Education (K-12 school target)
- “S” (only load items for Microsoft Store)



Windows 10 Pricing

- Home OEM DVD - \$85 - \$129 (Amazon)
- Pro OEM DVD - \$113 - \$192 (Amazon)
- Download w/o license is free from Microsoft
<https://www.microsoft.com/en-us/software-download/windows10>
- Inexpensive and “legal” Microsoft keys - \$20-\$40
<https://www.kinguin.net/category/22175/windows-10-home-oem-key>

<https://www.pcworld.com/article/3400840/how-to-get-windows-10-cheap-or-even-for-free.html>



Apple Maps

- New version announced with iOS 13 is now fully deployed
- Share your ETA with a contact and they stay updated on your progress. Sends messages to non-iOS devices! Trigger is more than 5 minutes late.
- New feature called “Look Around” that is like Google “Street View”



Browser War Takes A Turn

- Chrome accounts for 64% of browser usage
- Microsoft announces “New Edge” (Version 80)
- Microsoft replaced old “Trident” engine with open-source Chromium engine
- Edge and Google Chrome are now siblings
- Edge add features from Chrome
- Microsoft contributes code to Chromium that will move into Chrome. Good move to “open web”
- <https://www.microsoft.com/en-us/edge>



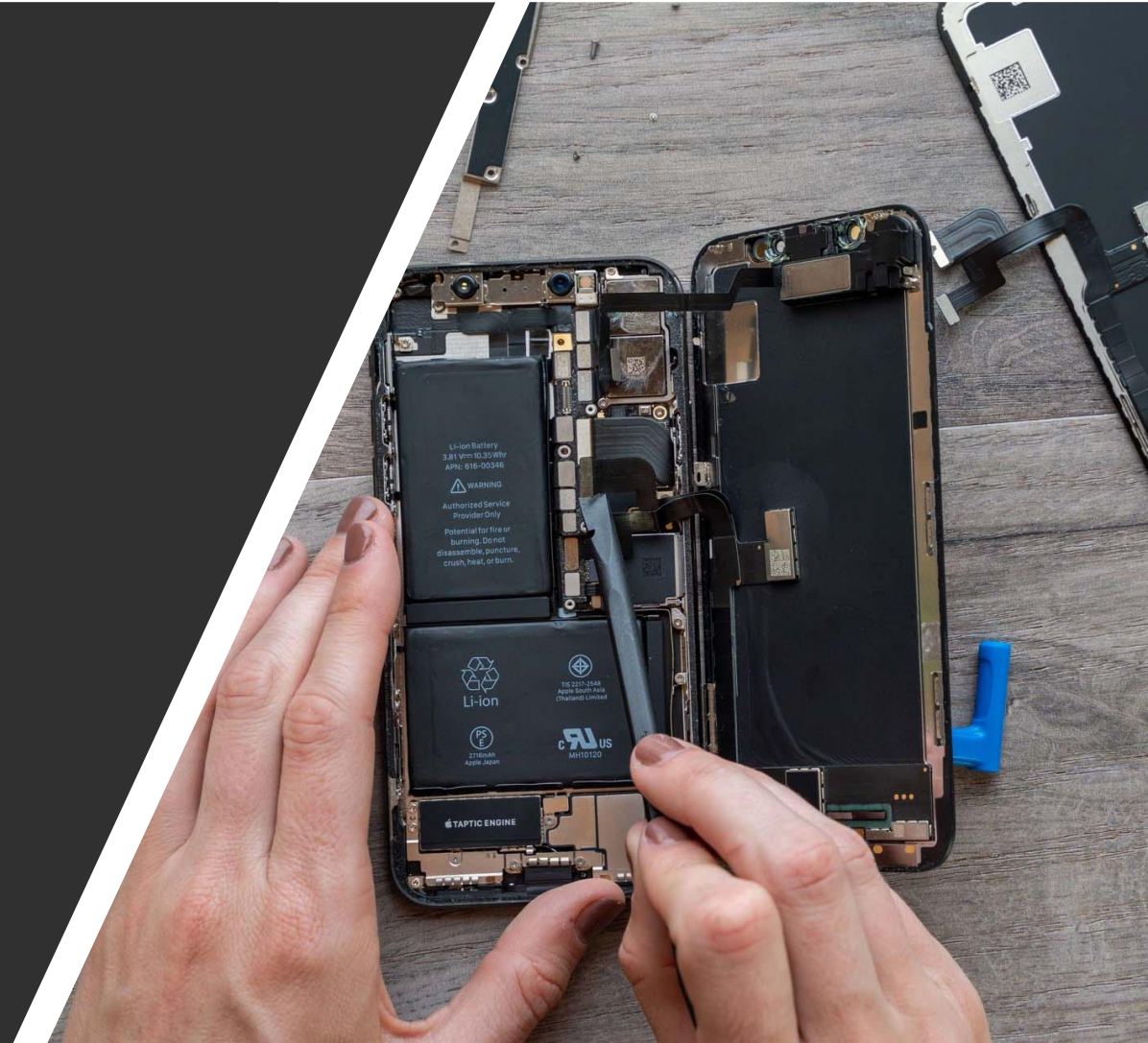
When is it Time for a New Phone?

- Physically damaged (average repair \$125)
- Battery develops “charge memory” (new battery < \$100)
- Age – 5-7 year “lifetime”
- Changing carriers
- New features available
 - Size
 - Camera
 - Connectivity (5G)
 - Folding!!



Can I Repair My Phone Myself?

- Yes, but
- Need correct tools (iFixIt tools \$25)
- Screens \$30-\$100, based on age
- Battery \$25
- YouTube video instructions
- First repair is a learning experience



Unlocked Cell Phone

- A phone that can be used on any cell phone carrier
- Verizon, T-Mobile, AT&T, and Sprint are usually “locked” even if you don’t buy the branded phone directly from the carrier
- Not all phones can be unlocked
- Unlocked phones use a SIM card inside
- Amazon and Best Buy sell unlocked cell phones
- Unlocking doesn’t switch between radio technology GSM v CDMA
- My opinion – don’t try to unlock a locked phone. Purchase an unlocked phone if you want to go that route.



Why are there always new “Updates”?

- Mostly to correct bugs
 - New functionality
 - Security fixes
- New features to attract new users
- To support new hardware
- Best to stay within 1-2 month window
- Getting easier to control “unexpected updates”
- Pick a time that works – overnight, weekends
- Some updates can take a number of hours



Cutting The Cord?



- Content is King!
- Hulu and YouTubeTV current leaders for general content
- Disney+, AppleTV+, Amazon for specific original content
- DVR space and number of streams are factors
- Hardware – SmartTV, Roku, AppleTV, Amazon Fire
- Guide and single remote still challenging

Is Cloud Storage Safe?

- Yes but ...
- Use encrypted content for sensitive data
 - Native to provider like Carbonite
 - Use WinZip to encrypt
- Cloud storage business stability
 - Amazon
 - Google
 - Microsoft
 - Apple
 - Maybe Carbonite ...
- Interesting legal issues still exist
- ALWAYS have a non-cloud backup



Passwords??!!

How long will it take to crack your password?



| Length of Password (Chars) | Only Numbers | Mixed Lower and Upper case alphabets | Mixed numbers, Lower and Upper case alphabets | Mixed numbers, Lower and Upper case alphabets , symbols |
|----------------------------|--------------|--------------------------------------|---|---|
| 3 | Instantly | Instantly | Instantly | Instantly |
| 4 | Instantly | Instantly | Instantly | Instantly |
| 5 | Instantly | Instantly | 3 secs | 10 secs |
| 6 | Instantly | 8 secs | 3 mins | 13 mins |
| 7 | Instantly | 5 mins | 3 hours | 17 hours |
| 8 | Instantly | 3 hours | 10 days | 57 days |
| 9 | 4 secs | 4 days | 153 days | 12 years |
| 10 | 40 secs | 169 days | 1 year | 928 years |
| 11 | 6 mins | 16 years | 106 years | 71k years |
| 12 | 1 hour | 600 years | 6k years | 5m years |
| 13 | 11 hours | 21k years | 108k years | 423m years |
| 14 | 4 days | 778k years | 25m years | 5bn years |
| 15 | 46 days | 28m years | 1bn years | 2tn years |
| 16 | 1 year | 1bn years | 97bn years | 193tn years |
| 17 | 12 years | 36bn years | 6tn years | 14qd years |
| 18 | 126 years | 1tn years | 374tn years | 1qt years |

Two-Factor Authentication (2FA) Multi-Factor Authentication (MFA)

- Something you have + something you know
- Multi-factor authentication is an authentication method in which a computer user is granted access only after successfully presenting two or more pieces of evidence to an authentication mechanism: knowledge, possession, and inherence.



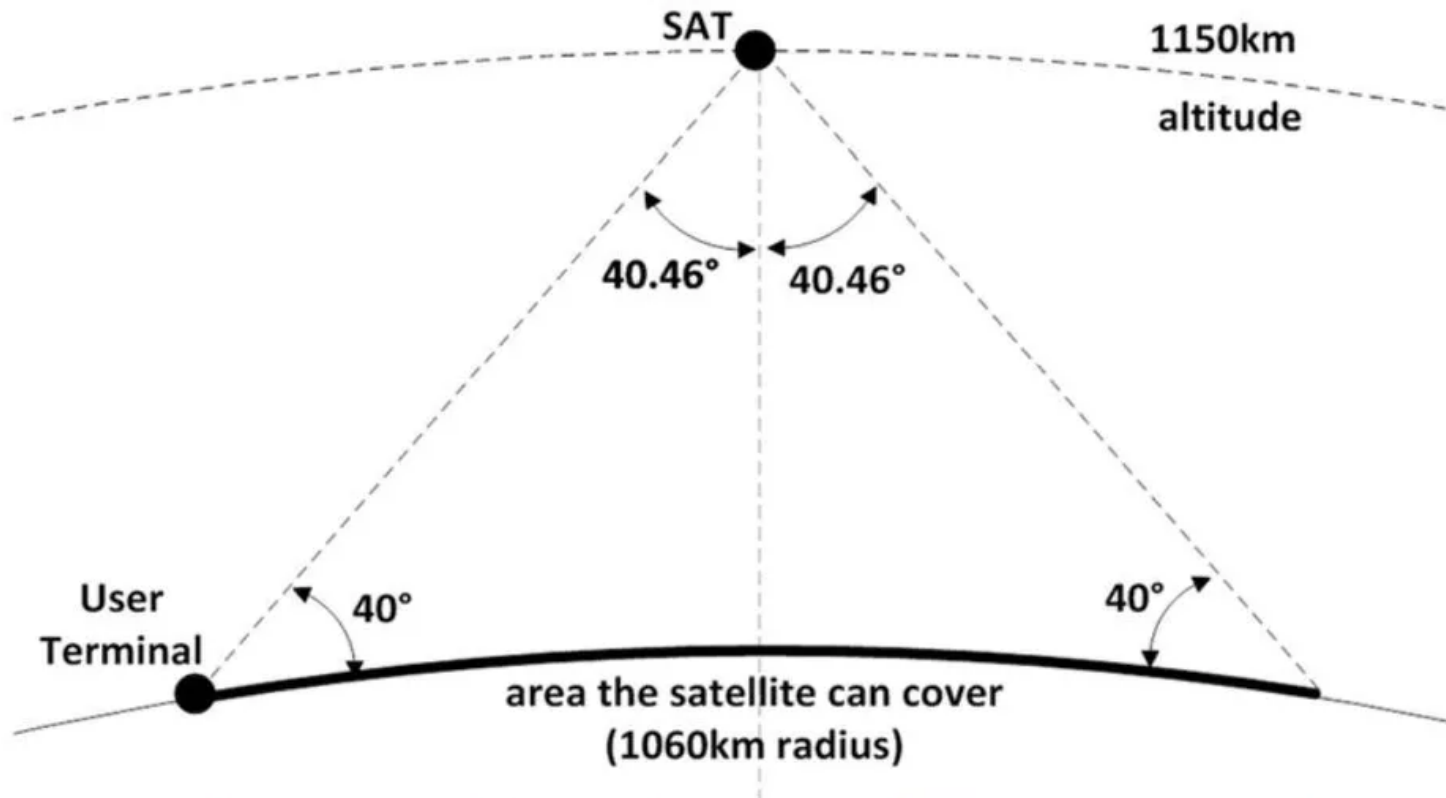


Figure A.3.1-1: Steerable Service Range of Ku-band Beams (1,150 km)

Is Satellite Internet Real?

- SpaceX Starlink
- 302 in orbit, more every 3 weeks
- 12,000 by mid-2020
 - 7500 at 340km (210 m)
 - 1600 at 550km (340 m)
 - 2800 at 1150km (710 m)
- User antenna about the size of a pizza box
- OneWeb and Boeing are main competition

What's the "Next Big Thing"?

- Non-contact wireless power
 - Medical devices
 - Internet-of-Things
- AR (Augmented Reality)
 - Heads up displays
 - AR glasses as primary interface
- Internet for everyone (Satellite or 5G)



RUSSIAN ELECTION HACKING CENTER

NOT EVEN WE
COULD CREATE
THAT MUCH
CHAOS...

