

Sun City Computer Club

Cyber Security SIG

August 17, 2023

**Questions, Comments, Suggestions welcomed at
any time**

Even Now

- Audio recording of this session as MP4 file
- Audio recording available at link shown above

Audio Recording In Progress

**SIG attendees are required to be members of the chartered club sponsoring that SIG.
Sun City Community Association By-law**

- This presentation is LONG
feel free to view the remainder on Vimeo
- Apple Users Group September 7 9:00am
Retreat Parking
- New SIGs
Gaming
Scams and Computer Security

- Black Hat 2023 August 5-10
- Defcon August 10-13
- Cyber attack U.K Electoral Commission
40 million
August 2021 Detected October 2022
Disclosed August 2023
- Colorado public school students 2004-2020
Investigations, BUT no meaningful privacy laws
\$375M - Identity theft enrollments
- Black Hat keynote Ukraine & Us Cyber chiefs
- CISA investigation Cloud Security
Microsoft Azure Master Keys Vulnerability
Microsoft hosted government email access
- Gilgo Beach murder case – forensics
Cellular data financial data

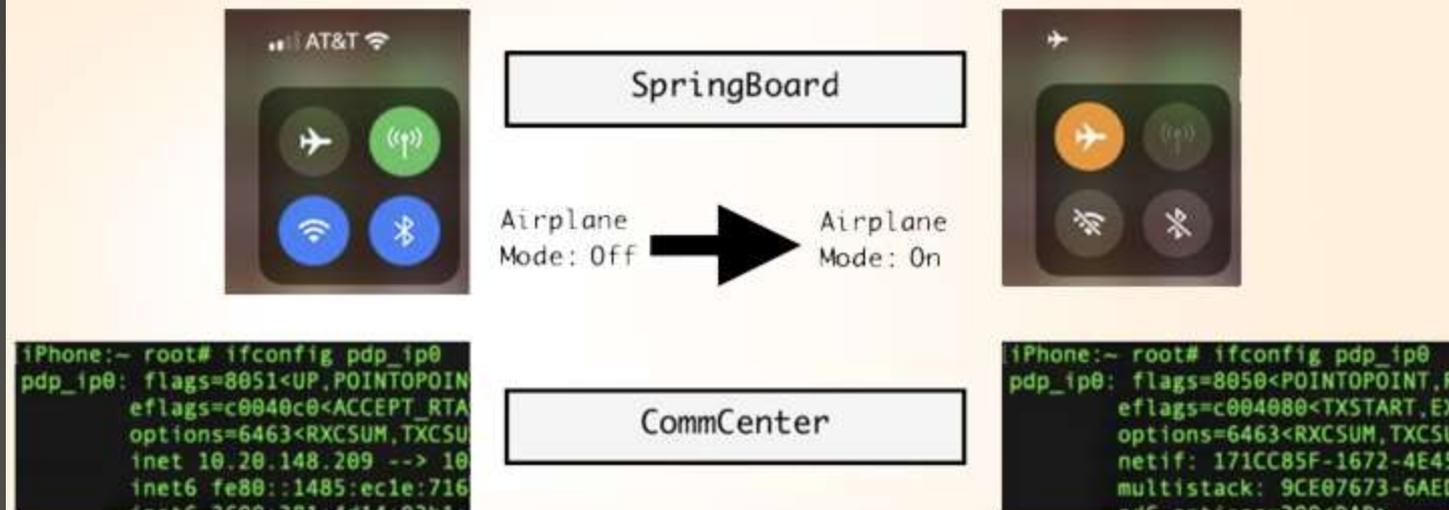
Current Issues

- TunnelCrack – most VPNs leak
- Black Hat FBI talk DDoS networks
- Keyboards have memory, smarts, history, noise
- Vulnerabilities in casino card shufflers
- Prospect Medical Holdings attribution
- China hacked Japan sensitive defense networks (how did we know?)
- DEFCON hack the Sphere, several neon signs
- Rickroll
- NYT Recreate song with brain waves
- Discord.io data breach
- Google Maps Swipe Up Not Tap

Current Issues

- “understand and quickly find key points”
- “Generative AI is experimental. Quality and availability may vary.”
- “Abridgments and condensations of copyrighted material can be illegal as infringing derivatives if they supplant demand for the original,”

Google Search Generative Experience



- For persistence
- Cuts access except for attacker

iOS 16 Fake Airplane Mode

- 116.0.5845.97
- Google Password Manager
 - New Look
 - Across apps
 - Check password safety

Google Chrome Updates

Advanced Search

Find pages with...

all these words:

To do this in the search box

Type the important words: tricolor rat terrier

this exact word or phrase:

Put exact words in quotes: "rat terrier"

any of these words:

Type OR between all the words you want: miniature OR standard

none of these words:

Put a minus sign just before words you don't want:
-rodent, -"Jack Russell"

numbers ranging from:

to

Put 2 periods between the numbers and add a unit of measure:
10..35 lb, \$300..\$500, 2010..2011

Then narrow your results by...

language:

any language

Find pages in the language you select.

region:

any region

Find pages published in a particular region.

last update:

anytime

Find pages updated within the time you specify.

site or domain:

Search one site (like wikipedia.org) or limit your results to a domain like .edu, .org or .gov

terms appearing:

anywhere in the page

Search for terms in the whole page, page title, or web address, or links to the page you're looking for.

file type:

any format

Find pages in the format you prefer.

usage rights:

not filtered by license

Find pages you are free to use yourself.

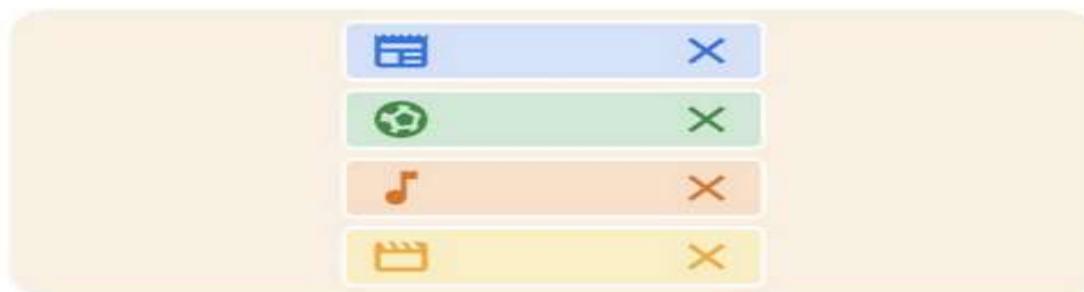
Advanced Search



Turn on an ad privacy feature

We're launching new privacy features that give you more choice over the ads you see.

Ad topics help sites show you relevant ads while protecting your browsing history and identity. Chrome can note topics of interest based on your recent browsing history. Later, a site you visit can ask Chrome for relevant topics to personalize the ads you see.



You can see ad topics in settings and block the ones you don't want shared with sites. Chrome also auto-deletes ad topics that are older than 4 weeks.

More about ad topics



You can change your mind any time in Chrome settings

No thanks

Turn it on



-  Ad topics
Based on your browsing history. This setting is off. ▶
-  Site-suggested ads
Based on your activity on a site. This setting is off. ▶
-  Ad measurement
Sites and advertisers can understand how ads perform. This setting is off. ▶



 Ad topics
Based on your browsing history. This setting is on. ▶

 Site-suggested ads
Based on your activity on a site. This setting is on. ▶

 Ad measurement
Sites and advertisers can understand how ads perform. This setting is on. ▶



Ad topics

Topics of interest are based on your recent browsing history and are used by sites to show you personalized ads



Your topics

You can block topics you don't want shared with sites. Chrome also auto-deletes your topics older than 4 weeks. [Learn more](#)

No topics to show right now

Topics you blocked



As you browse, whether an ad you see is personalized depends on this setting, [Site-suggested ads](#), your [cookie settings](#), and if the site you're viewing personalizes ads

← Site-suggested ads



Site-suggested ads

Sites you visit can determine what you like and then suggest ads as you continue browsing



Sites

You can block sites you don't want. Chrome also auto-deletes sites from the list that are older than 30 days.

[Learn more](#)

It can take up to a week for a list of sites to appear here based on your browsing history

Sites you blocked



As you browse, whether an ad you see is personalized depends on this setting, [Ad topics](#), your [cookie settings](#), and if the site you're viewing personalizes ads

Ad measurement

Sites and advertisers can measure the performance of their ads



When on

-  Limited types of data are shared between sites to measure the performance of their ads, such as the time of day an ad was shown to you
-  Ad-measurement data is deleted regularly from your device
-  Your browsing history is kept private on your device and reports are sent with a delay to protect your identity

Things to consider

-  You can always delete ad-measurement data by deleting your browsing data
-  Chrome limits the total amount of data that sites can share through the browser to measure ad performance
-  Your Android device may include a similar setting. If Ad measurement is turned on in Chrome and on your Android device, a company may be able to measure the effectiveness of an ad across web sites you visit and apps you use.

- FLoC Federated Learning of Cohorts
- Tracking for Ads
- Topics API
- DoNotTrack – tracking
- Global Privacy Control – Privacy
- Topics Privacy forward - non tracking
- Local to browser Topic
- 349 topics
- Rolling 3 week “epochs”
- 5 “random” topics to site query
- Resource intensive

Chrome Topics

- Chrome on track to shutdown 3rd party cookies 2024
- Multiple browsers each fit for purpose

Chrome Topics



Las Vegas Locally 🌴 ✓

@LasVegasLocally



The DEFCON hackers are actively trying to hack the Sphere Thingy, according to multiple sources. Be safe out there.



From **Matt Wallace** ✓

You can use [REDACTED] again

Hi [REDACTED],

Thanks for taking the time to request a review. We reviewed your account and found that the activity on it does follow our [Terms of Use](#), so you can use Instagram again.

We're sorry we got this wrong and that you weren't able to use Instagram for a while. Sometimes we need to take action to help keep our community safe.



[Log into Instagram](#)

Instagram

- An email of a neighbor's postal mail
- USPS Change of Address fraud
- Thief acquires name and address
- Change of Address via mail
 - Not online, not in-person
 - More authentication
- Access your mail at their address
- Financial statements
- Pharmacy delivery

- Got a change of address form?
- USPS should notify both old and new address
 - Contact local US Postal Inspection office
 - 1-877-876-2455

USPS Informed Delivery

- You can encrypt ALMOST everything
- BUT your location
- And the location of everyone else

- Malware only gets better
So do security responses

- Multi-Account Containers
- Problem: A Google login logs in for ALL
- Customize containers
Colors, names, icons

Firefox extension

- Passport
- Social Security Card
- Family Photos
- Financial details
- Items with address (except Drivers License)
- Address / Phone lists
- Irreplicable items
- Membership Cards
- Birth certificate
- Excess cash
- Old Receipts
- Excess credit/debit cards
- Spare Keys
- PIN & Password cheat sheets
- Blank checks

Consider your wallet/purse

20:58

5G

SOS

& Emergency Services >

Five people inside a white van between ages 18-30
Location: Territorial Savings Bank, Outlets of Maui
PLEASE ADVISE PLEASE ADVISE! FIRE EVERYWHERE
6:13pm HST

Unsure. Fire is all around us. Vision blocked 6:14pm HST

Information sent to dispatcher



Location from 8/8/23

to: Emergency Services

All buildings around us on fire 6:14pm HST

Should we drive? 6:14pm HST

DRIVING 6:15 pm HST

CANNOT REACH OCEAN 6:16pm HST

to: Emergency Services

Visibility is zero. We are in same location Territorial Savings Bank, Maui Outlets
6:31pm HST

Emergency Services

we are updating the fire department trying to get someone to your location

: Emergency Services

Roads are all blocked. Location Territorial Savings Bank
6:33pm HST

Five people inside a white van between ages 18-30
Location: Territorial Savings Bank, Outlets of Maui
PLEASE ADVISE. Car is super hot...
6:32pm HST

Thank you 6:35pm HST

car is still super hot 6:35pm HST

We are in same location, have not moved. Territorial Savings Bank, Maui Outlets 6:35pm HST

Emergency Services

WE ARE TELLING THEM...,,HANG ON

to: Emergency Services

Five people, white van between ages 18-30
Location: Territorial Savings Bank, Outlets of Maui
PLEASE ADVISE! Car is super hot...21 YOF hypoglycemic
6:36pm HST

Thank you for updates 6:38pm HST

Emergency Services

GOT IT..TY

PLEASE PUT ON YOU HAZARDS

YOU GOT RESPONDERS?

UNDERSTAND THEY ARE EVACUATING - DISCONNECTING

Information sent to dispatcher



Location from 8/8/23

to: Emergency Services

Rescued 6:47pm HST

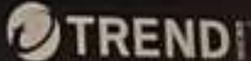
Emergency Services

thank you

CYBERSECURITY CHALLENGE

Hack a Hospital

STEP INTO THE ROLE OF A RED TEAMER
REGISTER AT HACKAHOSPITAL.COM



Veeva 3rd Annual eRx 14.01 to learn how to improve your digital health security posture and reduce human error

Fight Unfairly

SentinelOne

OMIA

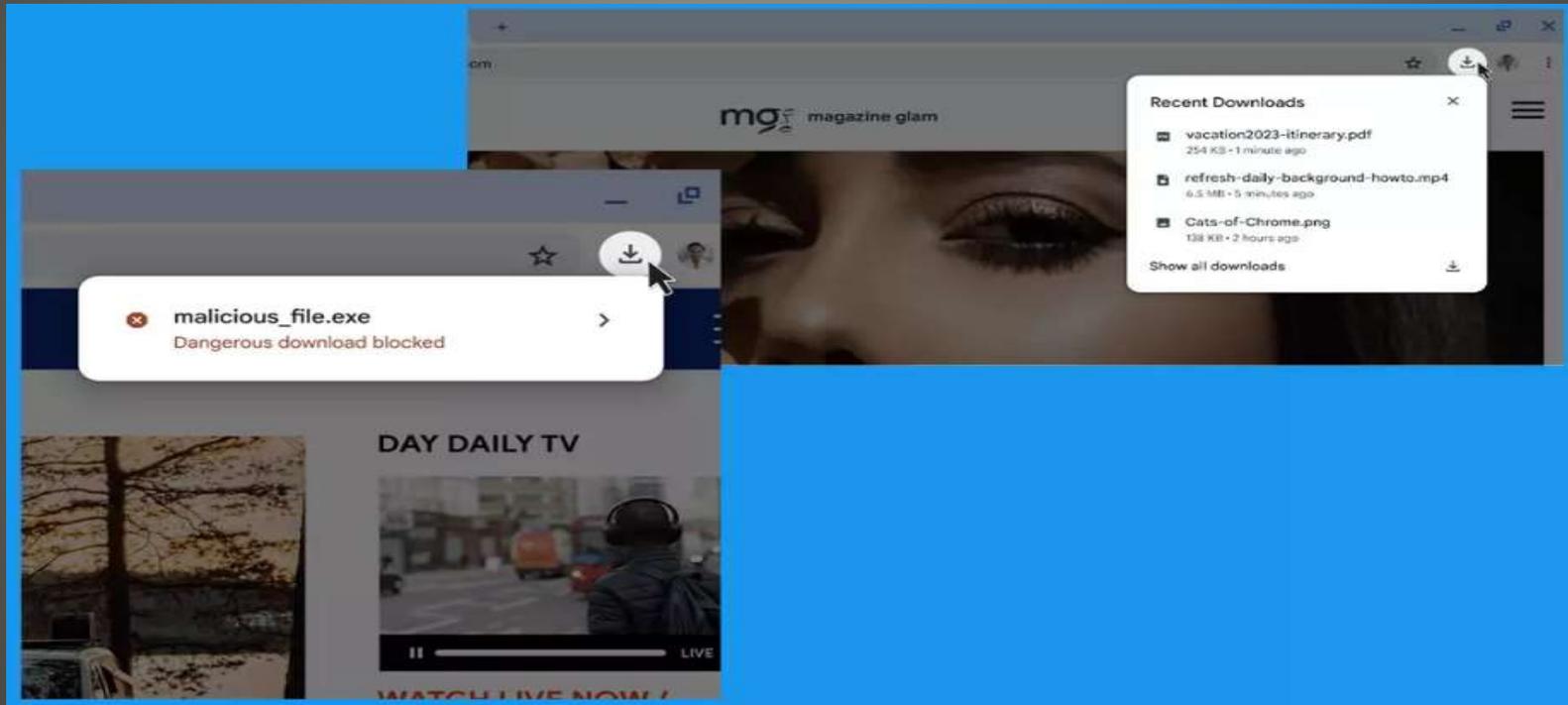
Fortinet
GET FORTNET
DEPENDABLE
IN BUILT
STRONG

Cybersecurity

- Prospect Medical Holdings
- Based in California
 - Sites in Texas, Connecticut, Rhode Island, Pennsylvania
- Digiheals

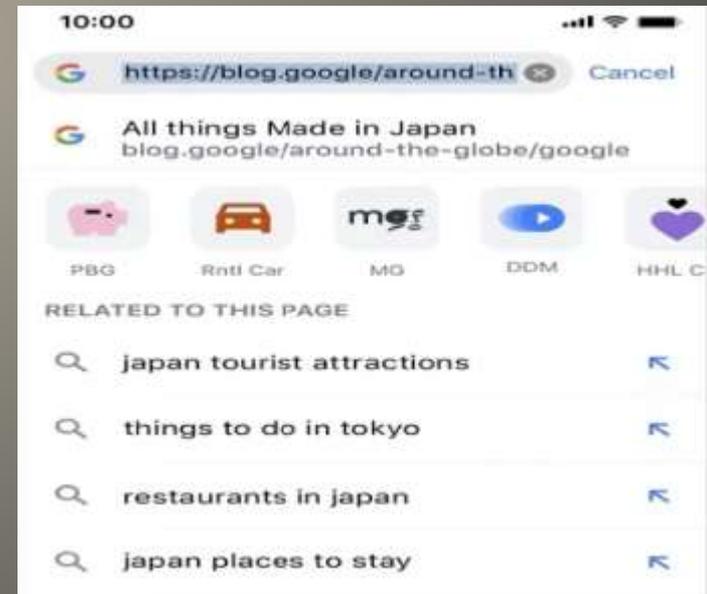
Hospital Cyber Attack

- Version 115.0.5790.111
- Improved download tray



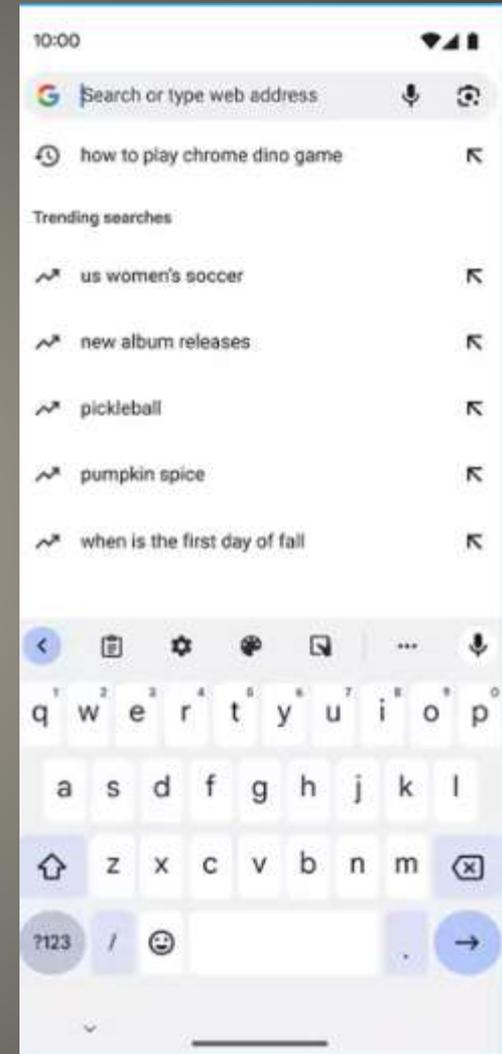
Google Chrome

- Version 115.0.5790.111
- Improved download tray
 - Download notifications moved
 - Animated ring as downloads progress
 - See all downloads given 24-hour period
 - Smarter downloads
- Smarter searching
 - Related to this page



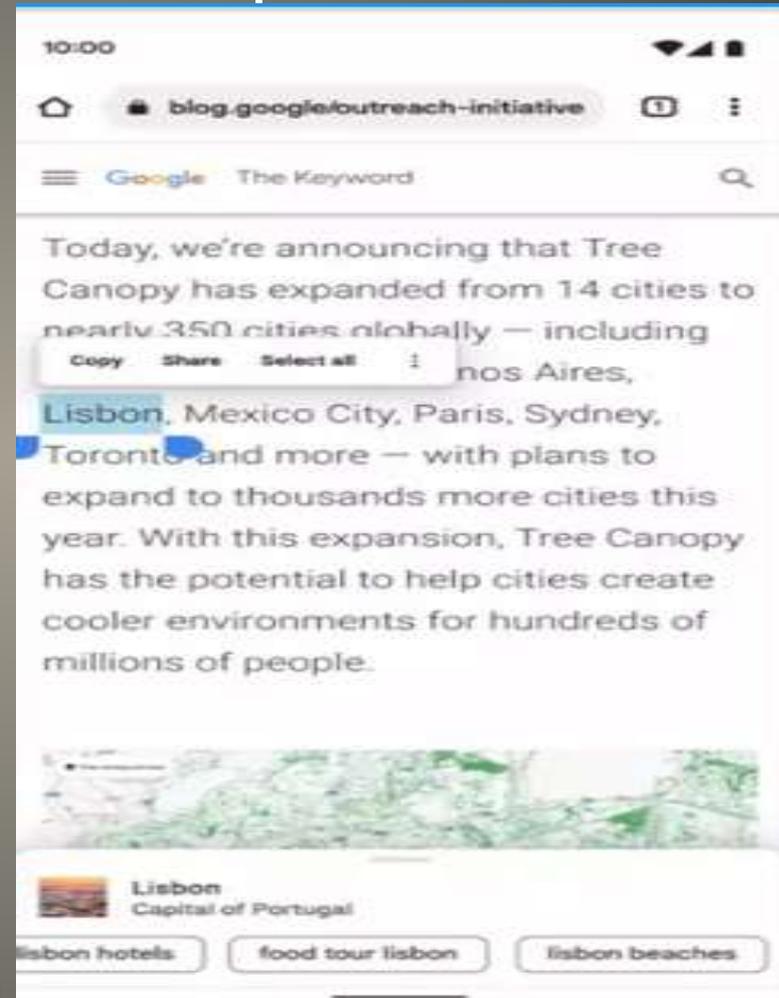
Google Chrome

- Online Trends (Android)



Google Chrome

- Expand Touch to Search Options



Google Chrome

- Credential theft via OCR
- CherryBlos
- Recognize then steal credentials stored on screen
- Overlay recognized screens:
 - Binance and other crypto currencies
 - Withdrawals replaced wallet addresses
 - Safeguards for screenshots bypassed
 - Accessibility functions
 - Auto click "Allow"

Android malware

- New Safety tool from Google
- Apple AirTags
- Google & Apple teamed for standards
- Android 11 and older
Personal Safety
- Android 12 and later
Safety & Emergency

Unknown tracker alerts

Android & Bluetooth trackers



Sound & vibration



Notifications & status bar



Password & security



Privacy



Safety & emergency



Battery



Apps



Location

Press the Power button 5 times in a row to
emergency call.

Emergency contacts

Not set

Medical info

Not set

Emergency call & message

GOOGLE PLAY SERVICES

Emergency Location Service

Unknown tracker alerts

Wireless emergency alerts

Emergency alert history

Unknown tracker alerts

When alerts are on, you'll get a notification if an unknown tracker is detected traveling with you. Alerts are deleted after 48 hours.

How unknown tracker alerts work

Allow alerts



No trackers detected

Last scanned yesterday, 3:58 PM

Manual scan

Check for trackers near you right now that are

When alerts are on, you'll get a notification if an unknown tracker is detected traveling with you. Alerts are deleted after 48 hours.

How unknown tracker alerts work

Allow alerts



No trackers detected

Last scanned yesterday, 3:58 PM

Manual scan

Check for trackers near you right now that are separated from their owner

Scan now

9:30

5G  



Unknown tracker alerts • now

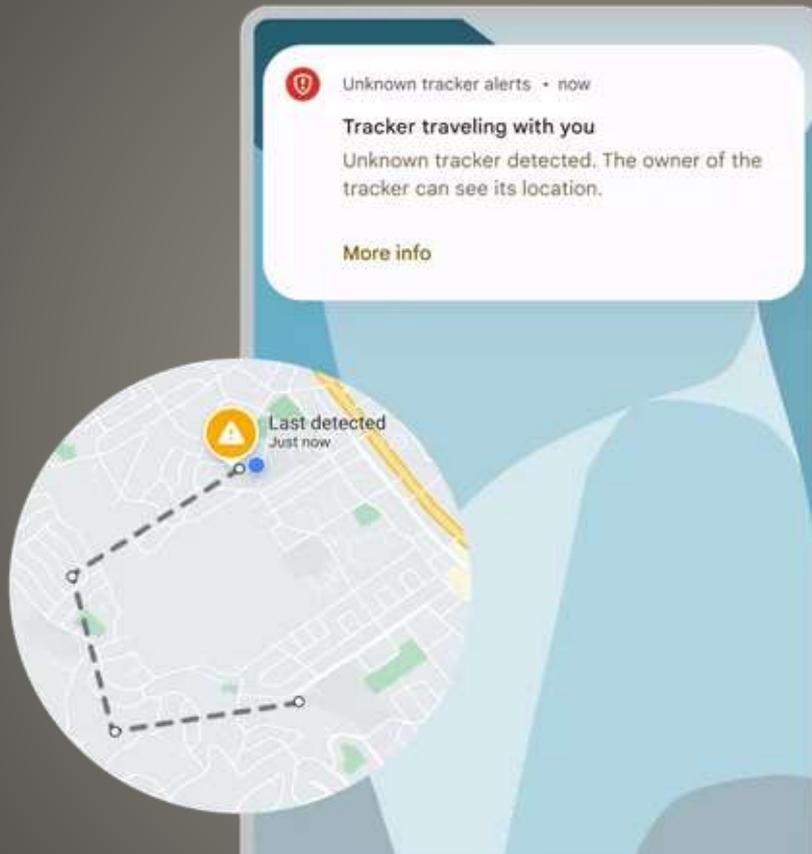
Tracker traveling with you

Unknown tracker detected. The owner of this tracker can see its location.

[More info](#)

ue 19

- Currently only Apple AirTags



Android & Bluetooth trackers

- Tap on-screen Play Sound to locate device
- Advice on what-to-do-next

Android & Bluetooth trackers

- OneDrive Microsoft cloud storage
- OneDrive App
 - File Explorer folder OneDrive
 - OneDrive App synchs files with OneDrive
 - OneDrive App stores logs in single directory
 - Those logs contain session tokens
 - Session tokens used to create junctions
 - Those junctions create access outside OneDrive
 - Target end point
 - Encrypt those files
 - Ransomware
 - Target now contains encrypted backups of encrypted files
 - Endpoint detection does not detect sanctioned OneDrive App
 - Malware first OneDrive App second

OneDrive flaw

- Electromagnetic fields
- Light reflection from camera lens
- Detect Infrared
- Bluetooth
- Wi-Fi

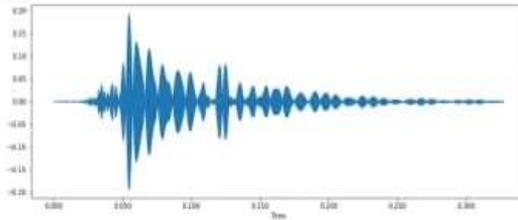
Physical detection:

Smoke detectors, night lights, clocks,
stuffed toys, books,

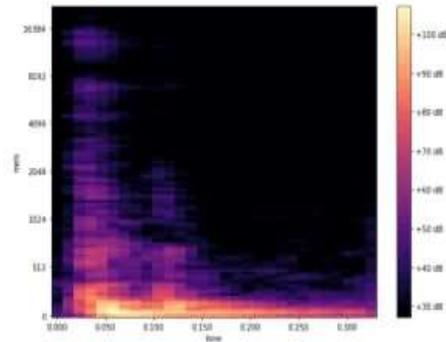
Smart Device Hidden Camera Detection

- Deep learning model
- 95% accuracy (using zoom 93%)
- Zoom Chat (text typed and sound)

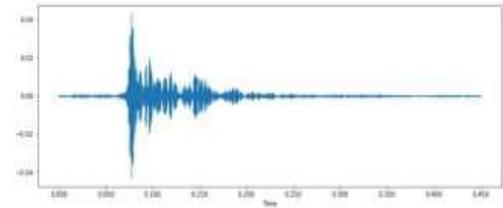
MacBook keystroke waveform



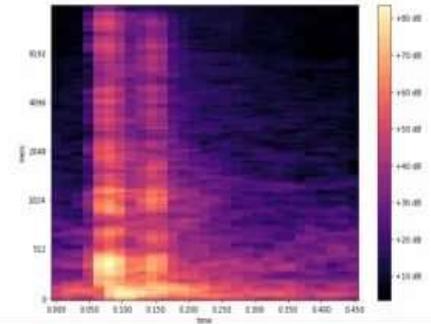
corresponding mel-spectrogram



Zoom-recorded waveform



corresponding mel-spectrogram



Keystroke Acoustic attack

- Cloudzy – cloud hosting company registered in Wyoming
Iranian based hosts
Assisted 17 government hacking groups
- Multiple Chinese APT groups
Planted beachheads
NYT report US military bases
Critical infrastructures air gaped
Guam telecommunications systems
- Pentagon investigation
Engineer in Tennessee Critical compromise
17 Air Force facilities stolen radio equipment
potentially FBI
- In use SSD then encrypt?

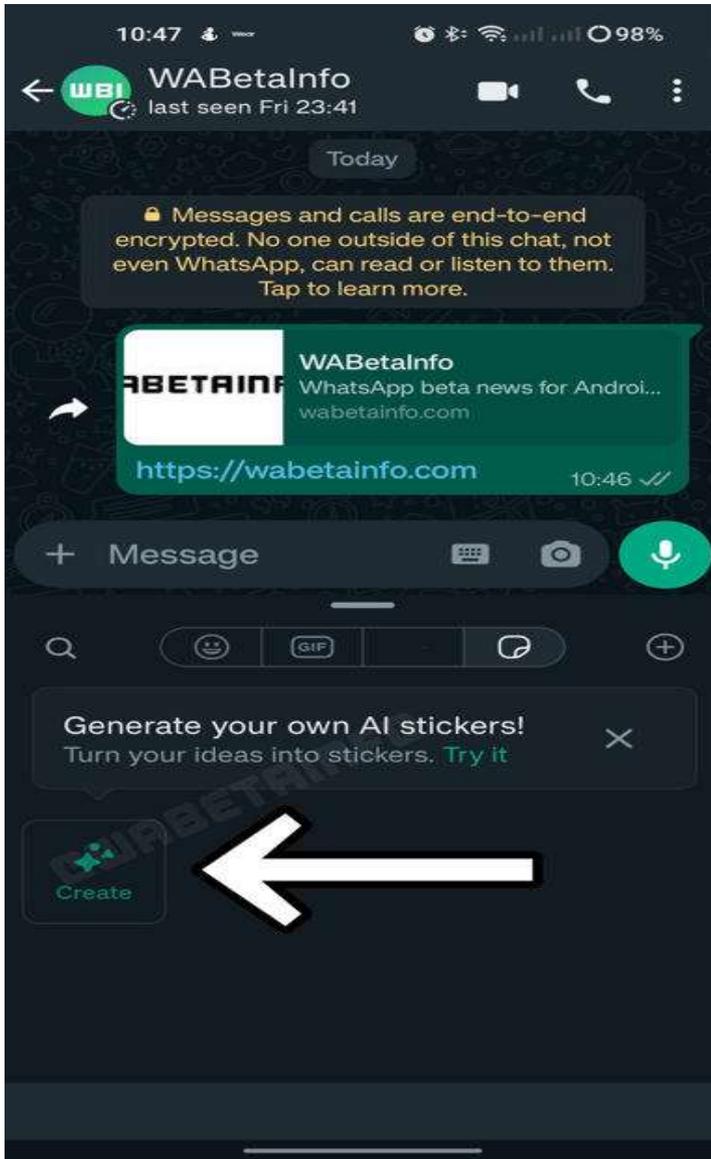
Current Issues

- BeyondTrust
 - US company privileged identity management
 - Vulnerability CVSS 10.0
 - unauthenticated attacker inject commands
 - NO PASSWORD or Credentials required
 - Disclosure behind paywall
- US inter-agency intelligence fusion center
- NYPD Flipper Zero
- US Senate bill to allow marijuana users
- Security clearance
- Cannon printers
 - Factory reset does NOT clear Wi-Fi settings
- OpenAI bankruptcy?
- Macs use as proxy exit nodes increasing

Current Issues

- AI Incident Database
Indexing harms and near harms of AI
<https://incidentdatabase.ai/>
- Worldcoin – scan your iris for cryptocurrency
- LetMeSpy Android spying app
Shutdown - cyber attack deleted all its data
- Newer infection avoidance techniques
File extension rename appending
Inflate size past limits of detection
Multiple programming languages
- ChromeOS update 115.0.5790.182
- WhatsApp testing AI-generated stickers

Current Issues



- Cellular backup Internet
- WiFi extender
- Rechargeable battery 4 hour

Comcast Xfinity Storm-Ready WiFi

- Save screenshot of every webpage
- View for history
- View for offline

Edge browser

Services

Microsoft Edge may use web services to improve your browsing experience. You can always choose to turn these off.

Use a web service to help resolve navigation errors



Suggest similar sites when a website can't be found



If a website can't be found, the web address will be sent to Microsoft to try to find the correct site

Save time and money with Shopping in Microsoft Edge [?](#)



We'll automatically find you the best prices across the web and help you check out faster

Show opportunities to support causes and nonprofits you care about



We will automatically identify when nonprofit sites you visit can be supported with Microsoft Rewards points or cash donations

Get notifications of related things you can explore with Discover



We'll show you recommendations about things you can explore like travel destinations, weather, recipe, travel cards and more

Let Microsoft Edge help keep your tabs organized



We'll offer suggestions on how to organize your tabs so that you can browse with ease

Address bar and search

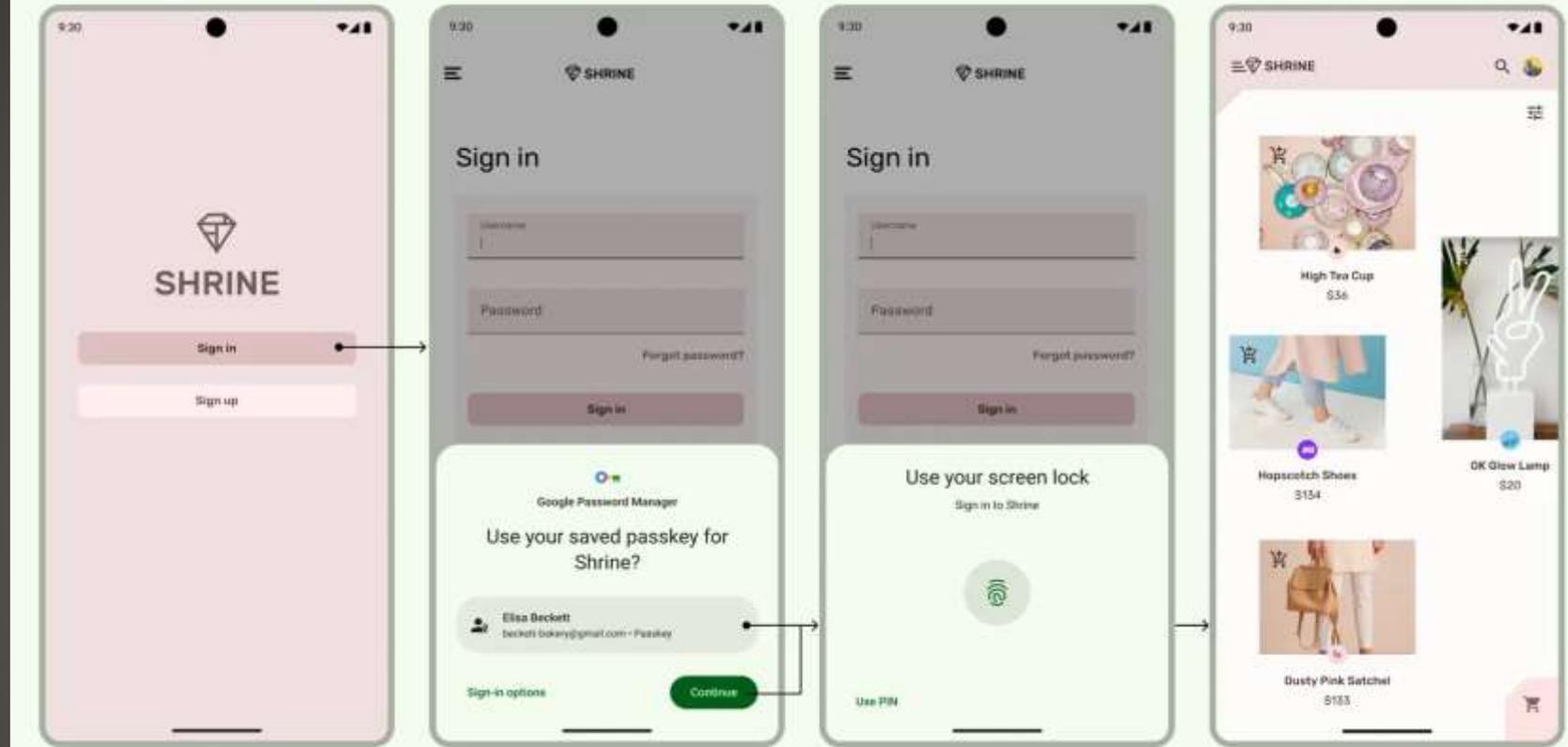


Manage search suggestions and search engine used in the address bar

Save screenshots of site for History



We'll take screenshots of the sites you visit and save it so that you can quickly revisit the site you want from history.



Google Credential Manager Android API

- Web sites support
- Beta testing other password managers
- Android 14

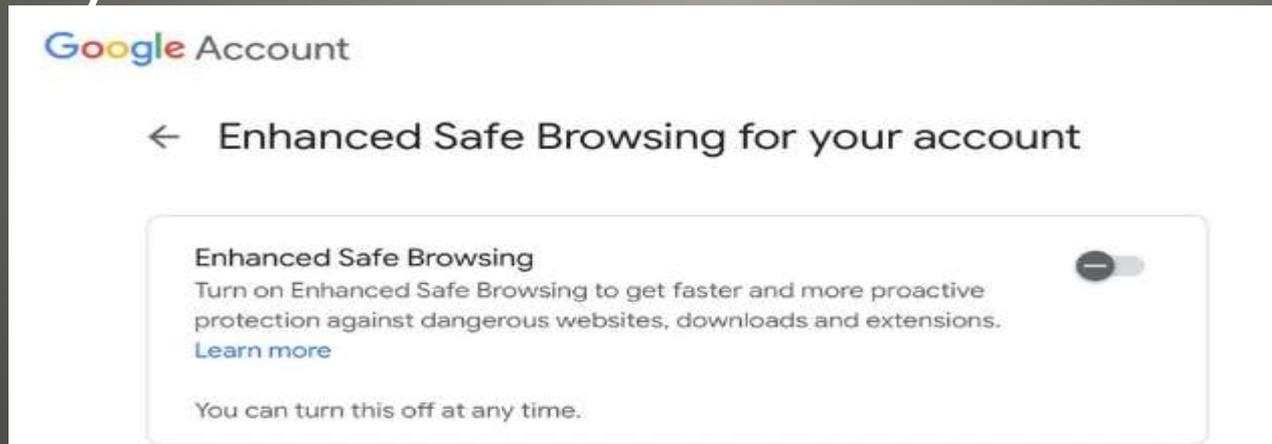


Google Credential Manager Android API

- any entity who is able to obtain access, even transient access, to your eMail flow obtains unfettered access to your entire online life

Multiple Multiple Multiple

- “improve your security in Google Chrome and Gmail when you're signed in,” “temporarily associates” this information with your Google account to help protect across Google apps.
- May 2020

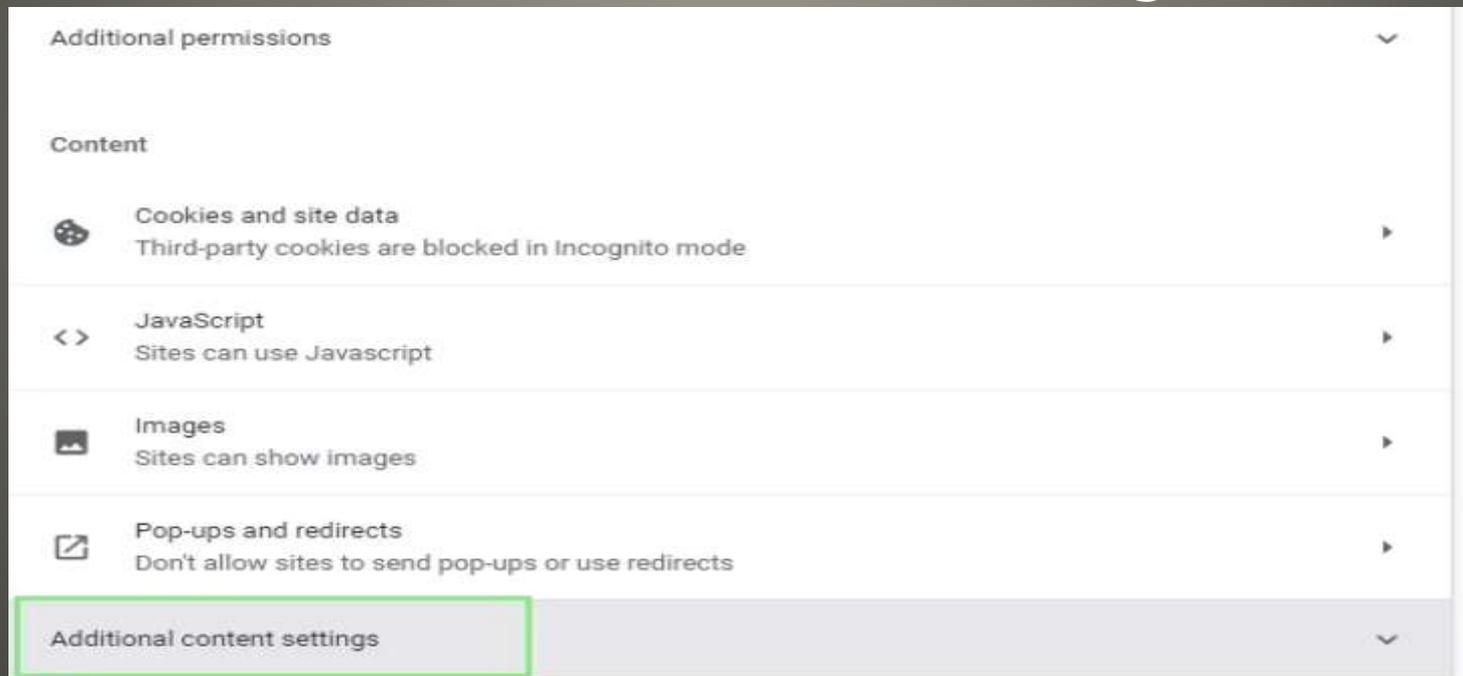


Gmail Enhanced Security

Android vs. iOS: Security Comparison

Security Aspect	Android	iOS
Operating System Type	Open-source	Closed-source
Ecosystem Fragmentation	Wide range of hardware and software configurations from many companies	Hardware and software ecosystem managed by one company
Secure Enclave	No dedicated secure enclave	Incorporates secure enclave for enhanced data protection
Attractiveness to Attackers	Larger market share attracts more malware developers	Smaller market share reduces attractiveness to attackers
Malware Vulnerabilities	Potential for malware from third-party app stores and sideloaded apps	Fewer instances of malware due to strict App Store review process
App Store Security	Google Play Protect scans apps and provides warnings	App Store's stringent review process minimizes malicious apps
Exploitability and Patching	Fragmented ecosystem results in delays and inconsistencies in delivering security updates	Centralized control allows for prompt and uniform distribution of security updates
User Practices and Security	Flexibility to sideload apps and use third-party app stores	Restricted to App Store due to difficulty in sideloading, reducing the likelihood of malware infiltration
User Privacy	Privacy controls and initiatives to give users more control over their data	Commitment to user privacy with features like App Tracking Transparency

- Extensions
- Settings
- Privacy and security > Site Settings
Content > Additional context settings



Google Chrome Ad control

Sites usually show ads so they can provide content or services free of charge. But, some sites are known to show intrusive or misleading ads.

Default behavior

Sites automatically follow this setting when you visit them

- Any site you visit can show any ad to you
- Ads are blocked on sites known to show intrusive or misleading ads

Customized behaviors

Sites listed below follow a custom setting instead of the default

Not allowed to show intrusive or misleading ads

Google Chrome Ad Control

- Now (August 8) End-to-End encryption
- Android <-> Android
- Now the default
- Includes group chats
BUT NOT iMessage
 - even 1 iMessage user turns off encryption
- Rich Communications Services (RCS)
- Check RCS in Settings

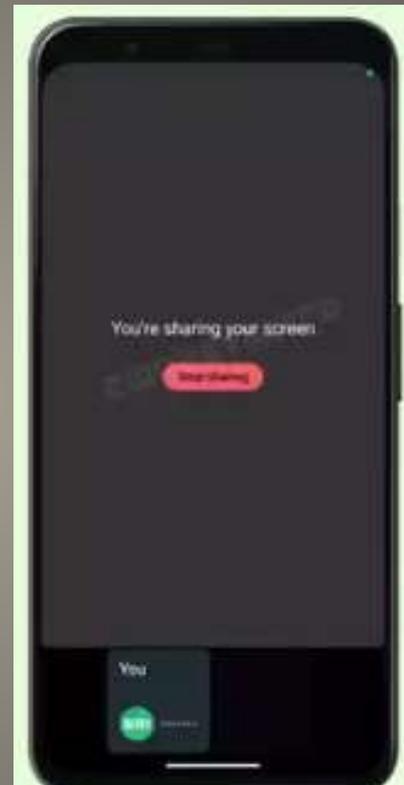
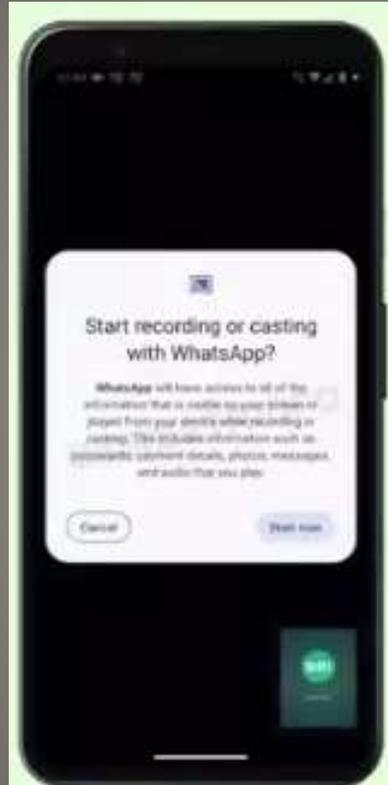
WhatsApp, Signal, Telegram, iMessage

Google Messages

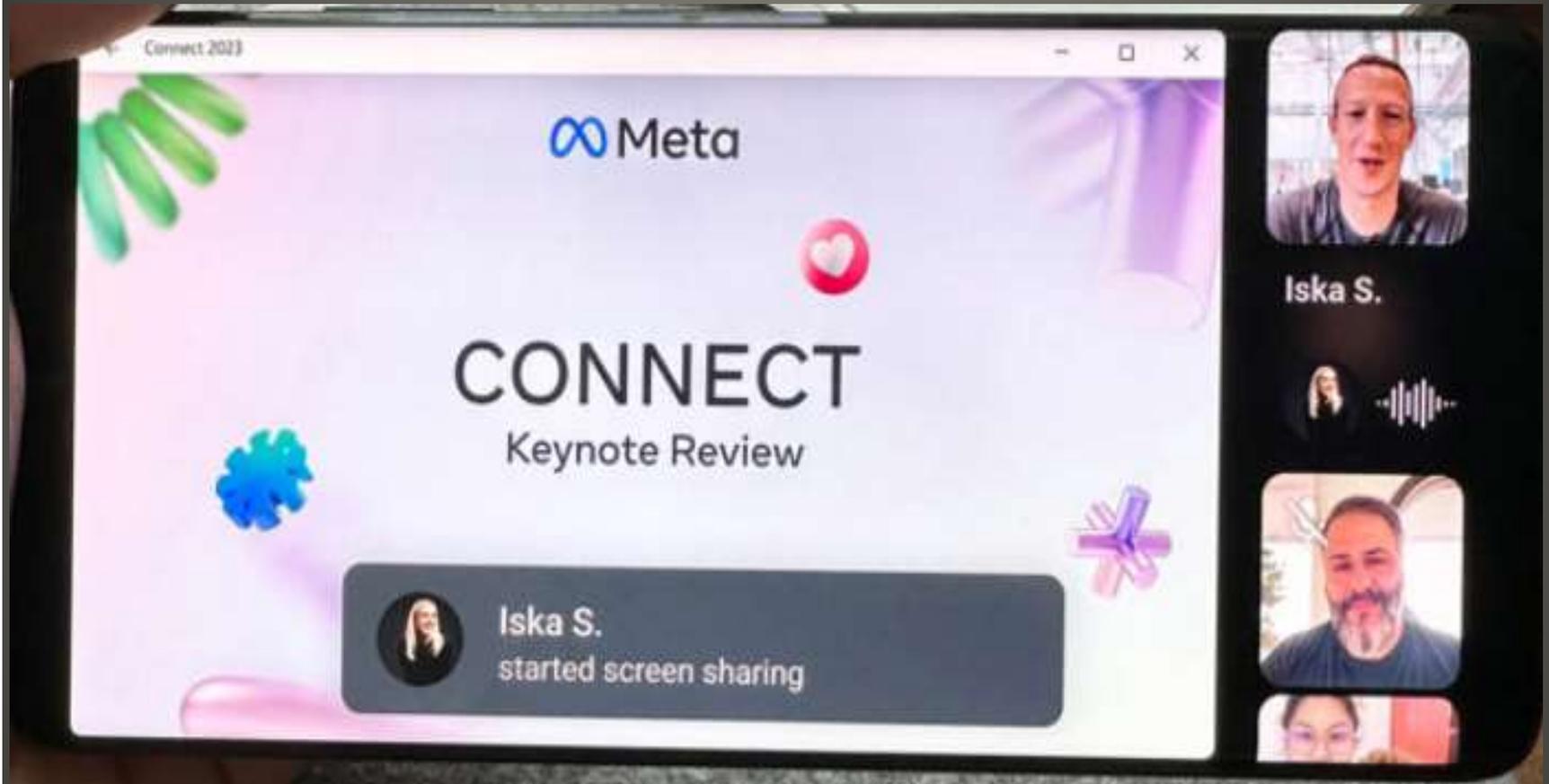
- \$549 million
- 1934 Securities Exchange Act
- Self-report, cooperate, remediate

**Financial Institutions fined
Using iMessage and Signal**

- Screen Sharing



WhatsApp



WhatsApp Screen Sharing

- Screen Lock
 - Conversations behind locked screen
- MFA 2-step Authentication
 - 6-digit pin
- Security Notifications

WhatsApp

- Latest Anti-fraud Alert
- Voice Scams
- By now you have probably seen news reports of the new improved version of grandparent scams. In the older version, you got a call from someone claiming to be your grandchild, telling you about an emergency and why they needed you to send money asap. The caller's voice was probably muffled, and the caller might have explained that away by saying, for example, that his or her nose was broken in "the accident."
- Those were scary enough. Now though, scammers are using AI to do voice cloning. Now the caller can sound EXACTLY like your grandchild or other relative or friend. Some writers suggest that you and your grandchildren agree on a password or passphrase now, so that if you receive a call about an emergency, you can ask for the password or passphrase.
- Voice cloning raises another problem as well. Scammers can also obtain a recording of your voice, simply by getting you to talk on the phone. Unfortunately, AI voice cloning is now good enough to fool voice recognition systems. Recent articles say that for a few dollars, anyone with an internet connection and a recording of another person's voice can synthesize that voice in a few minutes. So, if you use voice recognition as part of your authentication process for accessing any of your financial or other important accounts, you should consider using or adding a different factor.
- More scams targeting seniors start with a phone call than any other method. If you need yet another reason to stop answering phone calls from people you do not know, remember that the stranger calling you may be recording your voice.

NRO Anti-Scam

- Google Chrome to release weekly updates
Was 15 days
- Executive order to limit investments
China sectors
semiconductors & microelectronics
quantum information technologies
certain artificial intelligence
- NightOwl app enables Users to share internet traffic by modifying their device's network settings to be used as a gateway for internet traffic. Additionally, the User's device acts as a gateway for NightOwl app's Clients, including companies that specialize in web and market research, SEO, brand protection, content delivery, cybersecurity, etc. systems
- NightOwl Mac app Now malicious

Current Issues

- AIxCC
- Biden administration August 9, 2023
- Major 2-year competition
- DARPA led
- Major collaborators
- \$20M in prizes/awards
- Qualifying event Spring 2024
- Top teams DEF CON 2024
- Final phase DEF CON 2025
- Winning codes implemented “right away”
- Executive order - legislation
Help America lead the way in responsible AI innovation

AI Cyber Challenge

- Large numbers of reviews
- *Read reviews that mention*
- Amazon mobile app

Amazon AI Reviews summarizer

← Search Amazon....

205,913 global ratings

Customers say

Customers like the performance, fit and delivery of the coin cell battery. They mention that it works well, is the perfect size for a variety of devices and that it was delivered promptly.

AI-generated from the text of customer reviews

✓ Value

✓ Performance

✓ Fit

✓ Delivery

✓ Ease of installation

Battery life

Quality

✖ Damage

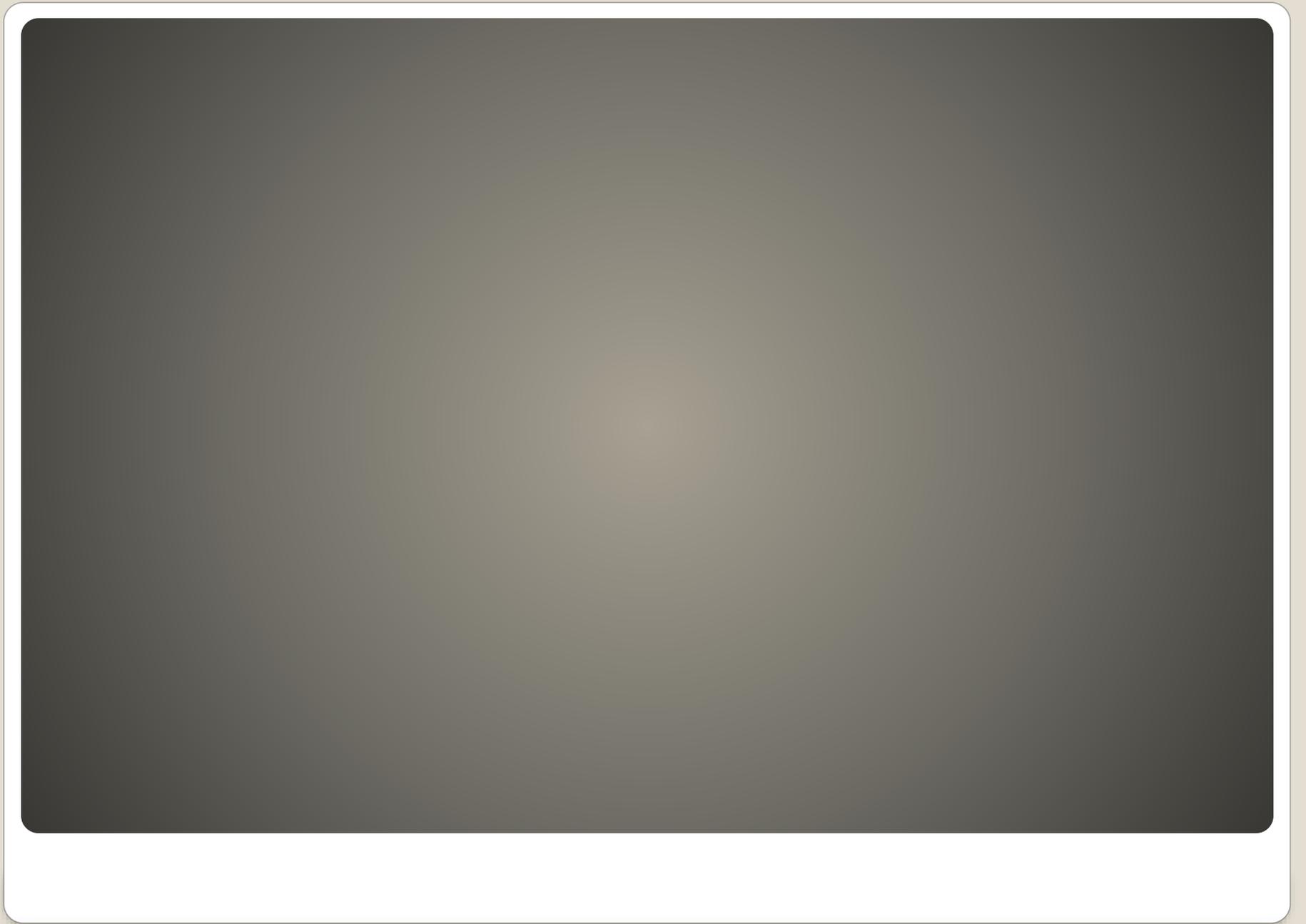
Add to Cart

Reviews with videos



- Threat to source content
- Self sabotage?
- CCBot

GPTbot



- Firefox, Brave, DuckDuckGo browsers
- May 5, 2022 Cyber Security SIG
- GPC mechanism to inform sites:
Respect your privacy rights
Not to be tracked
Data Not sold

<https://globalprivacycontrol.org/>

● GPC signal not detected.

Please download a browser or extension that supports it.

● GPC signal detected.

Test against the reference server.

Global Privacy Control

- Control??

Global Privacy Control



Review your Global Privacy Control preferences

You're using [Global Privacy Control \(GPC\)](#). This leads to a lower-quality experience on Yahoo by blocking certain editorial content, including embedded tweets and YouTube videos, and third-party ads that are relevant to your interests.

To enhance your Yahoo experience, allow us to share and sell your personal information. This includes [technical identifiers](#), like your IP address and cookie IDs, but does not include things like personal emails or contact information.

This won't affect your GPC settings for other websites and you can always change this preference in [Privacy controls](#).

Allow

Don't Allow

- Online news High Tech & Startup
- Acquired by AOL 2010
- Verizon purchased AOL & Yahoo 2015
- 2012 Verizon sold AOL, Yahoo, TechCrunch to Apollo Global Management
Yahoo! Inc

TechCrunch



Review your Global Privacy Control preferences

You're using [Global Privacy Control \(GPC\)](#). This leads to a lower-quality experience on Yahoo by blocking certain editorial content, including embedded tweets and YouTube videos, and third-party ads that are relevant to your interests.

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Allow

Don't Allow

- After link to TechCrunch
- Black overlay
 - lower quality experience
 - blocking certain editorial content
 - third-party ads

To enhance your Yahoo experience, allow us to share and sell your personal information.

This includes technical identifiers

<https://legal.yahoo.com/us/en/yahoo/privacy/technical-identifiers/index.html>

Review of Review

- Identifiers => You, Family, coworkers, ...
- Yeahbut I use Do Not track
- Do Not Track >> More trackable
- Privacy laws
- California Consumer Privacy Act
- California Privacy Rights Act
- Nevada, Utah, Colorado, Virginia, Connecticut
- GPC privacy DNT tracking

Global Privacy Control

- Browser Test

<https://globalprivacycontrol.org/orgs>

Global Privacy Control

- Helpful < - > Harmful
- Awareness, Preparedness, Understanding

Computer Club, Help Center, SIGs,
Presentations, classes

Cyber Security SIG meetings, NEWSBLOG
Internet

- Questions, suggestions, comments?

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