



THE FUTURE OF THE COPPA RULE

an FTC Workshop

October 7, 2019
Washington, DC

Welcome and Introductory Remarks

Jim Trilling

Federal Trade Commission

Division of Privacy and Identity Protection



Opening Remarks

Christine S. Wilson, Commissioner
Federal Trade Commission

The Digital Playground

App Design, Data Collection,
and Policy Implications

Jenny Radesky, MD
University of Michigan Medical School

Outline

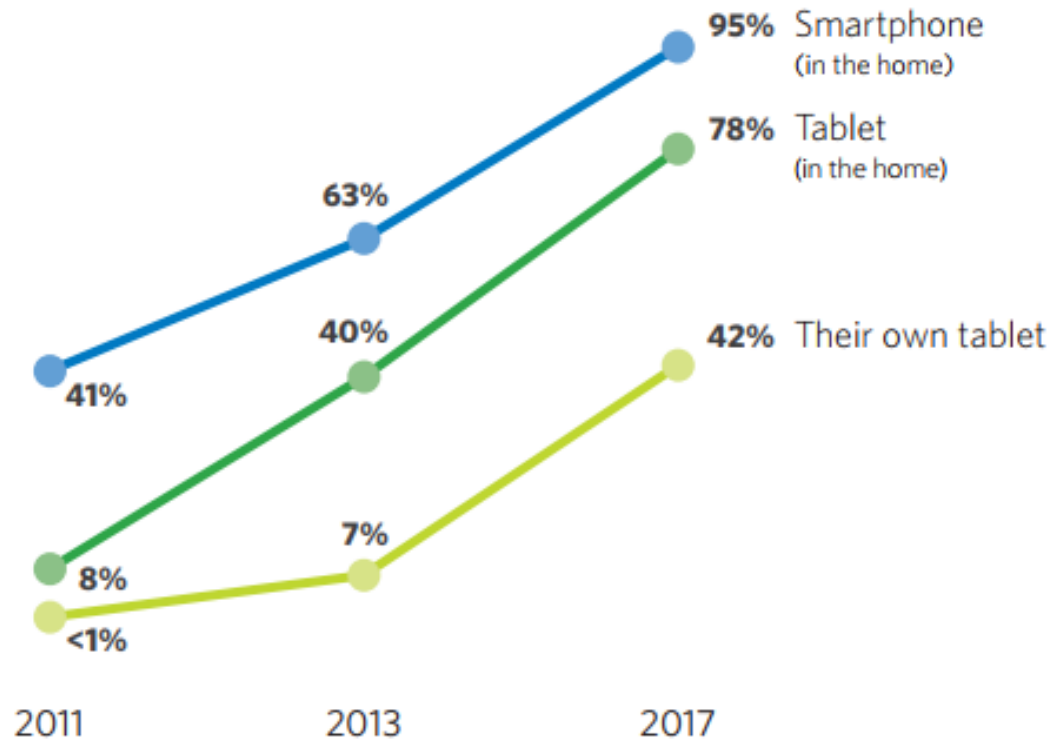
- Changes to children’s digital media use since mobile/interactive media introduced
- Mobile applications played by preschool-aged children
 - General-audience apps
 - Data transmission examples
- American Academy of Pediatrics child privacy priorities

**Note: All screen shots and app images are presented under the Fair Use Doctrine, but remain the property of their respective copyright holders*

Children's Digital Environments

FIGURE A. Mobile Devices in the Home, 2011-2017

Among 0- to 8-year-olds, those with:

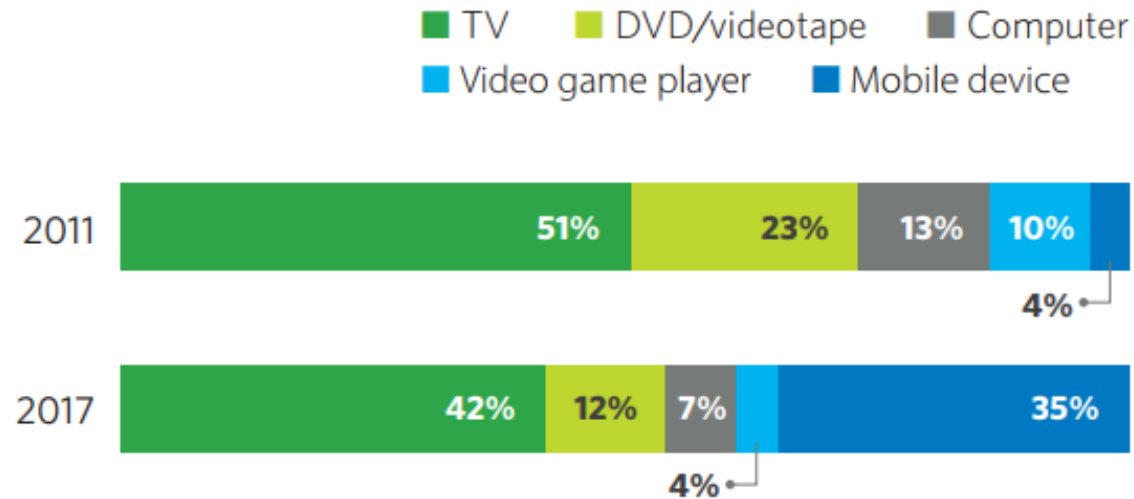


Source: Common Sense Media

Children's Digital Environments

FIGURE B. Screen Media Use, by Platform, 2011 vs. 2017

Among 0- to 8-year-olds, share of time spent using:



Note: *Video game player* includes console and handheld players. *Mobile device* includes smartphone, tablet, iPod Touch, or similar device. Totals may not add to 100% due to rounding.

Source: Common Sense Media

Children's Digital Environments

- As of 2017, 70% of children under 8 years had used a smartphone or tablet to play games, 65% to use apps, 73% to watch videos
- 72% of parents had downloaded an app for their child to use (of which 64% only download free apps)
- 37% of parents report never/hardly ever play apps/mobile games with their kids; even fewer did in naturalistic in-home observations [Domoff, Radesky, et al., *Journal of Child and Family Studies*, 2018](#)
- 20% of children find apps/games themselves (51% parent selects them)

[Rideout, V. \(2017\). The Common Sense census: Media use by kids age zero to eight. San Francisco, CA: Common Sense Media.](#)

Advertising in Children's Mobile Apps

- Content analysis of 135 apps marketed to or played by children under 5 years of age

Meyer, M et al. (2018). Advertising in children's apps: A content analysis. *Journal of Developmental Behavioral Pediatrics*.

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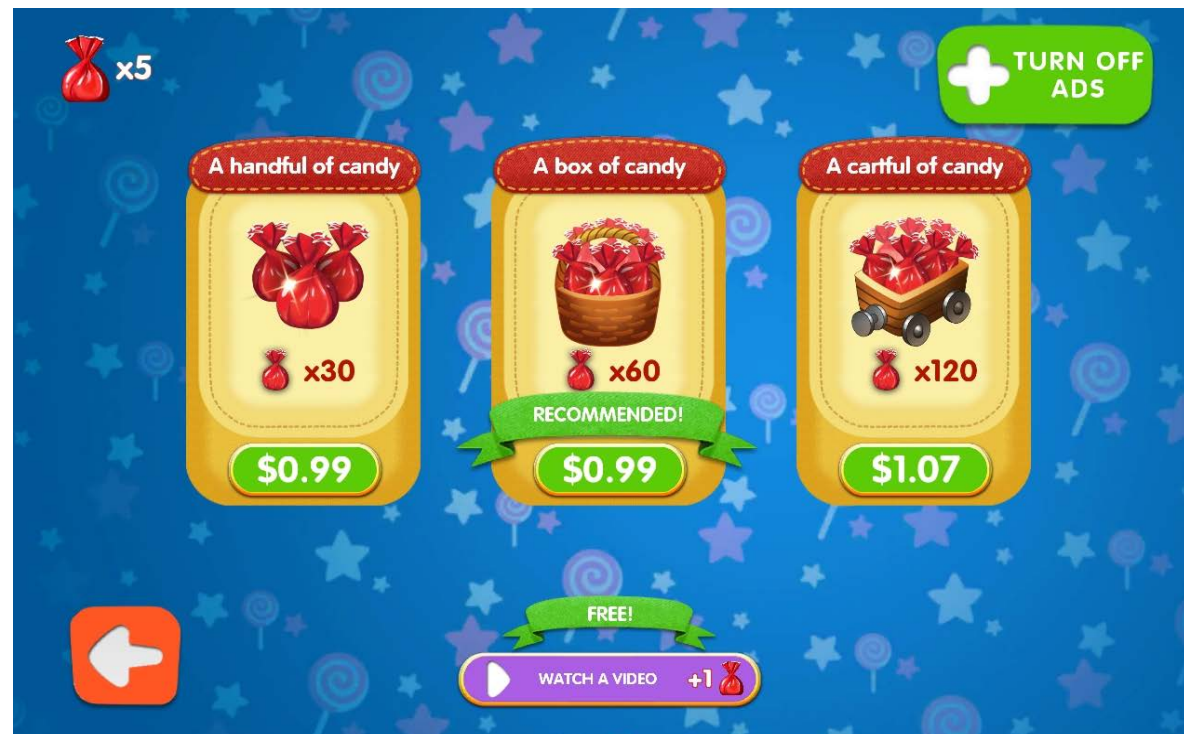
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Preschooler Tablet Study (NICHD R21HD094051)

- 365 preschool-aged children recruited from Michigan
 - 126 Android users
 - 220 iOS users
 - 19 no device use
 - 35% with their own smartphone or tablet
- Mobile device sampling (Chronicle app for Android, battery screen shots from iOS devices) performed for 1 week
- Android apps analyzed for data transmissions using Egelman et al. (2018) method.

Radesky JS, et al. (Under review). Mobile device sampling: An unobtrusive, objective measure of child smartphone and tablet use.

Preschooler Tablet Study: Most Commonly Used Apps

Android Devices (n = 126)		iOS Devices (n = 220)	
	n (%) used		n (%) used
1. YouTube	66 (52.4%)	1. YouTube Kids	67 (30.5%)
2. YouTube Kids	26 (20.6%)	2. YouTube	57 (25.9%)
3. Browser	19 (15.1%)	3. Netflix	54 (24.5%)
4. Quick Search Box	19 (15.1%)	4. Safari	43 (19.5%)
5. Netflix	15 (11.9%)	5. Photos	40 (18.2%)
6. Camera	12 (9.5%)	6. Camera	39 (17.8%)
7. Gallery	8 (6.3%)	7. Siri	35 (15.9%)
8. PBS Kids Games	7 (5.6%)	8. Prime Video	17 (7.7%)
9. Children's Doctor Dentist	7 (5.6%)	9. Nick Jr.	16 (7.3%)
10. Subway Surfers	6 (4.8%)	10. FaceTime	16 (7.3%)

Radesky JS, et al. (Under review). Mobile device sampling: An unobtrusive, objective measure of child smartphone and tablet use.

Subway Surfers



Image source: <https://play.google.com/store/apps?hl=en>

Category:

Arcade, Everyone 10+

Permissions:

- WiFi connections, view network connections, full network access, prevent device from sleeping

Data Shared

- Android ID with 3 domains (Vungle, Kiloo-Games, Flurry)
- Advertising ID with 2 domains (Facebook Graph, Flurry)

Children's Doctor Dentist



Image source: <https://play.google.com/store/apps?hl=en>

Category:

Role playing, pretend play, E+ everyone

Permissions:

- Photos/media/files, Storage, WiFi connections, Full network access, Prevent device from sleeping

Data Shared

- Advertising ID with 5 domains (YovoAds, Facebook Graph, Unity Ads)

General Audience/Mature Apps Played by Preschool-Aged Children (Android Devices)













	# Users	App Name	App Package Name
	1	Gun Fu: Stickman 2 – Fun Shooting Games	com.dobsoftstudios.gunfustickman2
	1	The Walking Dead Dead Yourself	com.amctv.thewalkingdead.deadyourself
	1	Grandson	com.DrHackAndMatrixDeveloper.grandson
	1	Troll Face Quest: Video Games 2 – Tricky Puzzle	air.com.spilgames.TrollFaceQuestVideoGames2
	2	Granny	com.dvloper.granny
	6	Kick the Buddy	com.playgendary.kickthebuddy
	1	Zombie Tsunami	net.mobigame.zombietsunami
	1	Green Grandpa Alien Escape Game	com.scarydudes.green.grandpa.alien
	1	Terrorist Shooter	com.terrorist.shooter.lu
	1	Knife 3D Game Challenge	com.game.flippy.knife.challenge
	2	Super Adventure of Jabber	com.gameone.superadventuresofjabber.free
	1	Pixel Gun 3D: FPS Shooter & Battle Royale	com.pixel.gun3d

Image source: <https://play.google.com/store/apps?hl=en>
<https://www.apkmonk.com/>

General Audience/Mature Apps Played by Preschool-Aged Children (iOS Devices)

App Icon	# Users	App Name
	2	Clash Royale
	1	ARK: Survival Evolved
	1	Hello Neighbor
	1	Pixelmon shooting – online multiplayer shooter #1
	1	Terraria
	6	Roblox
	1	Fortnite
	1	Jumpscare Factory
	1	Fallen Star Galactic Wars
	1	Haunted House of Granny

Image source: <https://www.apple.com/ios/app-store/>

Gun Fu: Stickman 2 – Fun Shooting Games



Image source: <https://play.google.com/store/apps?hl=en>

Category

- Arcade, Action, Adventure, Free, Teen

Permissions

- Gain full network access, including viewing network connections, Wifi connections, prevent device from sleeping

Data Shared

- Advertising ID with 6 domains (Applovin, Facebook Graph, Supersonic ads, Amazon Ad System x 3)

Granny



Image source: <https://play.google.com/store/apps?hl=en>

Category:

Arcade, Free, Mature (17+)

Permissions:

- Access to read, modify, or delete SD card contents, Obtain full network access to view network connections, Photos/Media/Files, Storage, Prevent device from sleeping

Data Shared

- Advertising ID with 13 domains (Adcolony, Applovin, Heyzap, Unity, Adsrvr)
- Android ID with 2 domains (Unity)

Kick the Buddy



Image source: <https://play.google.com/store/apps?hl=en>

Category:

Action, Free, Teen (Editor's Choice App)

Permissions:

- Access to microphone to record audio, Obtain full network access, View network and WiFi connections, Prevent device from sleeping

Data Shared

- Android ID to 7 domains (Vungle, Tapjoy)
- Advertising ID to 13 domains (Applovin, Facebook Graph, Tapjoy, Appsflyer, Tenjin)

Children's Understanding of Digital Privacy

- School-aged children through teens do not understand the complex ways data are collected, analyzed, and used for commercial purposes
- More personal, less technical conceptualization of privacy and digital footprints
- More trusting of anthropomorphized technology, especially if convenient (e.g., location trackers)

Livingstone S, Stoilova M, Nandagiri R. Children's data and privacy online. *Technology*. 2018;58(2):157-165.

Gelman SA, Martinez M, Davidson NS, Noles NS. Developing digital privacy: Children's moral judgments concerning mobile GPS devices. *Child development*. 2018;89(1):17-26.

Children's Understanding of Digital Privacy

- Children report being uncomfortable with their data being used for targeted advertising
- Preschool-aged children through teens believe they should have the right to erase or limit the use of their digital data

United Kingdom Information Commissioner's Office. Towards a better digital future:
Informing the Age Appropriate Design Code. 2019.

AAP Child Privacy Priorities

- Understanding children’s vulnerabilities to persuasion and developmental limits of critical reasoning about digital privacy
- Protecting children from manipulative or deceptive practices
- Helping parents become more informed about the methods used to advertise to children
- Improving the design of the digital environment for children:
Increased funding for PBS as a source of non-commercial, high-quality programming and design

Summary

- Children’s digital environments have evolved so rapidly that privacy protections have not kept pace
- Many young children use general audience apps and platforms, which pose both content-related and privacy concerns
- Many child-directed apps contain similar advertising/monetization and data sharing practices as adult/general audience apps
- Parents cannot be expected to be the only gatekeeper or monitor. Design changes are needed to improve the quality and safety of digital products children access and use

This research was funded by NICHD R21HD094051 and the Jannette Ferrantino Grant from the Department of Pediatrics, University of Michigan Medical School

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[@jennyradesky](https://twitter.com/jennyradesky)

Panel 1: State of the World in Children's Privacy

Panelists:

Phyllis Marcus, Laura Moy, Jo Pedder, Claire Quinn,
Dr. Jenny Radesky, Janne Salminen

Moderators:

Peder Magee & Jim Trilling

U.S. Children's Privacy in a Nutshell

- In 1998, worried about the widespread collection of personal information from children online, and also concerns about online predation, Congress enacted the Children's Online Privacy Protection Act (COPPA).
- Primarily enforced by the Federal Trade Commission (FTC), but states and certain other federal agencies also may enforce.
- Who is a child? Children under age 13.
- Why is this important? Does not cover teens. Affects many websites' Terms of Service.
- If they are . . . directed to U13 or if they have actual knowledge they are collecting PII from U13 children.
- Does not prohibit children's online activities, but does require parental consent.



COPPA's Requirements

Operators must:

1. Post a privacy policy on website or online service.
2. Provide notice directly to parents that the site seeks to collect personal information from children.
3. With limited exception, obtain parental consent prior to collecting, using, or disclosing such information.
4. Allow parents to review personal information collected from their children, and have that information deleted if desired.
5. Establish and maintain reasonable procedures to protect the confidentiality, security, and integrity of children's personal information, and
6. Not require a child to provide more personal information than reasonably necessary for the child to participate in certain online activities.

COPPA: What Changed in 2013 and Beyond?

- **New forms of PII:**

- ✓ Persistent identifiers that can be used to recognize a user over time and across different Web sites or online services
 - ✓ Covers Online Behavioral Advertising
- ✓ Photos, videos or audio files containing a child's voice or image
- ✓ Geolocation information sufficient to identify street name and name of city or town

- **Carve Outs:**

- ✓ Mixed audience sites intended for kids and others, where employ an age screen
- ✓ Specified list of "support for internal operations"
- ✓ Voice as a replacement for search

- **New forms of parental consent:**

- ✓ Government id matching
- ✓ Knowledge-based authentication
- ✓ "Face match to verified photo identification"

- **Coverage Clarified:**

- ✓ IoT Devices (*Vtech*)
- ✓ Ad Networks (*InMobe Pte., LAI Systems, Retro Dreamer*)
- ✓ Platforms (*YouTube*)

Related Children's Privacy Regimes: California

- CCPA provides an opt-out for sales of personal information.
- For children under the age of 16 years old, this becomes an opt-in right where the business has “actual knowledge” of the consumer’s age.
 - Ages 13-16: the consumer must affirmatively authorize the sale of their personal information.
 - U13: a parent or guardian must affirmatively authorize the sale of information.
- Businesses that “willfully disregard” a consumer’s age are held to have had actual knowledge of that consumer’s age.
 - The CCPA does not define the terms “actual knowledge” or “willfully disregard.”
- Arguably, businesses that have reason to believe children under 16 use their services may need to implement an age-gate mechanism.

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Dr. Jenny Radesky, Janne Salminen

Moderators:

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BREAK
10:50-11:05 am

Remarks

Noah Joshua Phillips, Commissioner
Federal Trade Commission

Panel 2: Scope of the COPPA Rule

Panelists:

Parry Aftab, Malik Ducard, James Dunstan,
Dona Fraser, Josh Golin, Don McGowan

Moderators:

Peder Magee & Maneesha Mithal

Hypo

Company D operates what it intends to be a general audience sports fan site, but it turns out that 25% of users are children.

Should the site be considered directed to children?

Would 25% be sufficient to make it a “kids site” absent any other indicia of its appeal to children?

If the site is not child-directed under COPPA, should there be other obligations – *e.g.*, a duty to investigate?

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LUNCH BREAK

12:30-1:30 pm

Developers and COPPA: Their Real-World Experience

Morgan Reed



THE FUTURE OF THE
COPPA RULE

an FTC Workshop

Level Set

- The App Association ~ 5,000 companies worldwide
- Survey includes members of closed kids app developer group of ~800 companies/devs
- 1-1 Interviews/focus group questions with 14 independent kids app companies/devs

What the Outside World Says

- General Audience (GA) Products Dominate
 - PwC sees kids 12-15 consuming 20 hours/week of screen time
 - American Heart Study shows kids 8-18 consuming 7 hours/DAY!
 - YouTube owns the space
 - YouTube Kids grew fast, but;
 - 80% of kids use YouTube (GA), making it the largest single kids digital entertainment platform. PwC estimates it will account for 25% of kids digital ad spend by 2021.

What the Outside World Says

- TikTok not far behind – result of FTC action against Music.ly unclear
- GA is:
 - “Free” (ad supported)
 - Unfettered
 - Widely available
 - Entertaining

What do Parents Say?

- Study and analysis by danah boyd, Eszter Hargittai, Jason Schultz, and John Palfrey in 2011 holds true today – parents are making expected decisions.
- But **85%** of parents are “concerned about their children’s digital privacy”
- Good News! Parents and kids think parental controls are a good idea (65% of 11-15 yr olds)

What do Parents do?

- Bad News! Parents don't use them (less than 1 in 3).
- Pew finds 81% of parents have knowingly allowed their child to use GA YouTube.
- Why?
 - Friction
 - Restriction
 - Cost

What About Kid-Focused Developers

- Kid-focused developers see a tsunami of “free” GA/UGC washing quality kids devs out to sea (92% say GA/UGC biggest competitor).
- Not just us saying this:
 - Children’s Technology Review found “In 2013, we reviewed 673 releases from studios like Toca Boca, Nosy Crow, Touch Press and Duck Duck Moose. In 2017, that number dropped to 105 — just 15.6% of the 2013 amount.”

What About Kid-Focused Developers

- “It’s cultural, they [parents] don’t want to pay for software”
- “We get requests from users. Why don’t you have ads so it’s free?
Especially in Google Play.”
- “I’m a parent, and I let my kid watch videos on GA apps. I know about the privacy issues, but it’s fast, easy, and they like it”

Conflicting Products

- “Free” (ads)
- Unfettered
- Widely Available
- Entertaining

Conflicting Products

- Expensive/Onerous “Friction-full”
- Restrictive
- Less known/Available
- Entertaining...ish

Is COPPA a barrier?

- “Most people these days are using multiple devices. Seamlessness is expected, but with COPPA, seamlessness is impossible.”
- On VPC: “We wanted to make this easy. We ended up throwing our hands up and said, ‘This is impossible!’ “
- “We can’t reach our customers!”

Is COPPA a barrier?

- “We wanted to create a hub for kids to promote creativity, so kids could make their creations and share videos of it. Any videos that would contain the voice of a kid or even an arm or a leg would require parental consent. Because of COPPA, creating a community was impossible. What was left of the app was a one-time use.”
- “Verified Parental Consent is a nightmare. It’s completely unrealistic.”
- “Parental consent makes the whole process very complicated, but I have no good answer.”

Developers need insight to make better products

- Loss of analytics is huge (100% of respondents), but most (58%) don't blame the platforms.
 - “Having no analytics is insane. [It] becomes Pay to Play. Who can afford to build their own analytics? Without analytics, [companies] are completely in the dark, not making any money, and no chance to make things better.”
 - “Is there a trust? The platforms are always reacting.”

Developers need insight to make better products

- Developers who don't want to collect data face problems:
 - “I don't want to collect information on kids, but I can't set up a way for my app to work on the phone, tablet, and the parent's device seamlessly without creating accounts”
- Duo-lingo and Educational products

Is Friction the Function?

- VPC is intentional friction
 - Authors of COPPA didn't want information to be collected, so friction is intentional. This intentionality is leading to GA just destroying kids specific products.
- Lesson learned from Napster / Limewire
 - Piracy is still a problem, but habits changed when the friction for paid content was lower than for pirated.

Solutions – what do kids app developers want?

- “Why can’t the platforms manage VPC in one location, like you manage subscriptions?”
- “Parents want one simple consent process for all apps. Everyone implements their own system, and it’s super complicated, both for the app makers and the parents.”
- “VPC should encourage and reward me for protecting children’s privacy.”

Solutions

- For analytics, move towards a use standard rather than a pure collection standard.
- Make re-consent easier.
- Allow platforms to innovate and experiment. This includes platforms like Google, Apple, Amazon, and Steam as well as Safe Harbors like CARU, ESRB, Privo, etc.
- Take a page from the FDA's 2013 MMA guidance and look to use of regulatory discretion / FinTech's use of regulatory sandboxes.

Panel 3: Definitions, Exceptions, and Misconceptions

Panelists:

John E. Ahrens, Ariel Fox Johnson, Sheila A. Millar,
Samantha Vargas Poppe, Morgan Reed,
Steve Smith, Amelia Vance

Moderators:

Kristin Cohen & Jim Trilling

Hypo

Company Q is an Ed Tech vendor that sells an app used in the classroom to help kids with their reading. Q collects from children their names and their voice recordings to share with their teachers. Q has contracts with several large school systems. Q also makes its app available to parents individually, and sometimes teachers sign up directly.

Can Q get the consent of the school for this information collection, or should Q be required to get parental consent?

Can Q use these voice recordings to improve its app?

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BREAK
3:00-3:15 pm

Technology Trends Since the Revised COPPA Rule

Jonathan Mayer

 PRINCETON UNIVERSITY



- 1 Mobile Devices
- 2 Internet of Things (IoT)
- 3 Educational Technology (EdTech)

1 Mobile Devices

2 Internet of Things (IoT)

3 Educational Technology (EdTech)

Mobile devices

Federal Register / Vol. 75, No. 64 / Monday, April 5, 2010 / Proposed Rules

17089

Powerplant Program, Part 1 of the Bomberbird C-40002110 MEM CSP-053; for related information.

Issued in Renton, Washington, on March 19, 2010.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.

IFR Doc. 2010-6850 Filed 4-2-10; 8:45 am)

BILLING CODE 4910-13-P

FEDERAL TRADE COMMISSION

16 CFR Part 312

Request for Public Comment on the Federal Trade Commission's Implementation of the Children's Online Privacy Protection Rule

AGENCY: Federal Trade Commission.

ACTION: Request for public comment.

SUMMARY: The Federal Trade Commission ("FTC" or "Commission") requests public comment on its implementation of the Children's Online Privacy Protection Act ("COPPA" or "the Act"), through the Children's Online Privacy Protection Rule ("COPPA Rule" or "the Rule"). The Commission requests comment on the costs and benefits of the Rule, as well as on whether it, or certain sections, should be retained, eliminated, or modified. All interested persons are hereby given notice of the opportunity to submit written data, views, and arguments concerning the Rule.

DATES: Written comments must be received by June 30, 2010.

ADDRESSES: Interested parties are invited to submit written comments electronically or in paper form, by following the instructions in the

invitation to comment part of the "SUPPLEMENTARY INFORMATION" section below. Comments in electronic form should be submitted by using the following weblink (<https://public.commentnetworks.com/ftc/2010COPPAReview/>) and following the instructions on the web-based form.

Comments in paper form should be mailed or delivered to the following address: Federal Trade Commission, Office of the Secretary, Room H-135 (Annex E), 600 Pennsylvania Avenue, NW, Washington, DC 20580, (202) 326-2252.

FOR FURTHER INFORMATION CONTACT: Phyllis Marcus, (202) 326-2854, or Marnie Kresses, (202) 326-2070, Attorneys, Federal Trade Commission, Division of Advertising Practices, Washington, D.C. 20580.

SUPPLEMENTARY INFORMATION:

Section I. Background

The COPPA Rule, issued pursuant to the Children's Online Privacy Protection Act, 15 U.S.C. § 6501, *et seq.*, became effective on April 21, 2000. The Rule imposes certain requirements on operators of websites or online services directed to children under 13 years of age, and on operators of other websites or online services that have actual knowledge that they are collecting personal information online from a child under 13 years of age (collectively, "operators"). Among other things, the Rule requires that operators provide notice to parents and obtain verifiable parental consent prior to collecting, using, or disclosing personal information from children under 13 years of age. The Rule also requires operators to keep secure the information they collect from children and prohibits them from conditioning children's participation in activities on the collection of more personal information than is reasonably necessary to participate in such activities. Further, the Rule contains a "safe harbor" provision enabling industry groups or others to submit to the Commission for approval self-regulatory guidelines that would implement the Rule's protections.¹

Section II. Rule Review

COPPA and § 312.11 of the Rule required the Commission to initiate a review no later than five years after the Rule's effective date to evaluate the Rule's implementation. The Commission commenced this mandatory review on April 21, 2005. After receiving and considering extensive public comment on the Rule, the Commission determined in March 2006 to retain the COPPA Rule without change.² However, the Commission believes that changes to the online environment over the past five years, including but not limited to children's increasing use of mobile technology to access the Internet, warrant reexamining the Rule at this time.

In this notice, the Commission poses its standard regulatory review questions to determine whether the Rule should be retained, eliminated, or modified. In addition, the Commission identifies several areas where public comment would be especially useful. First, the Commission asks whether the Rule's current definitions are sufficiently clear and comprehensive, or whether they might warrant modification or

expansion, consistent with the COPPA statute. Among other questions, the Commission asks for comment on the application of the definition of "interest" to mobile communications, interactive television, interactive gaming, and similar activities. Further, the Commission asks whether the Rule's definition of "personal information" should be expanded to include other items of information that can be collected from children online and are not currently specified in the Rule, such as persistent IP addresses, mobile geolocation information, or information collected in connection with online behavioral advertising.

The Commission also seeks comment on the use of automated systems for reviewing children's web submissions (e.g., those that filter out any personally identifiable information prior to posting). In addition, the Commission asks whether change is warranted as to the Rule provisions on protecting the confidentiality and security of personal information, the right of parents to review or delete personal information, and the prohibition against conditioning a child's participation on the collection of personal information. Finally, the Commission seeks comment about its role in administering the Rule's safe harbor provisions.

Section III. Questions Regarding the COPPA Rule

The Commission invites members of the public to comment on any issues or concerns they believe are relevant or appropriate to the Commission's review of the COPPA Rule, and to submit written data, views, facts, and arguments addressing the Rule. All comments should be filed as prescribed in the Invitation to Comment part of the "SUPPLEMENTARY INFORMATION" section below, and must be received by June 30, 2010. The Commission is particularly interested in comments addressing the following questions:

- A. General Questions for Comment*
1. Is there a continuing need for the Rule as currently promulgated? Why or why not?
 - a. Since the Rule was issued, have changes in technology, industry, or economic conditions affected the need for or effectiveness of the Rule?
 - b. What are the aggregate costs and benefits of the Rule?
 - c. Does the Rule include any provisions not mandated by the Act that are unnecessary or whose costs outweigh their benefits? If so, which ones and why?

¹ 16 CFR Part 312.

² See 16 CFR Part 312.10, 64 FR at 5998-5998, 5993.

³ See 71 FR 13247 (Mar. 15, 2006).

March 24, 2010



Mobile Devices

iPad

Our most advanced technology in a magical and revolutionary device at an unbelievable price.



April 3, 2010

Mobile Devices: What We Know

- Ownership
 - Household ownership of mobile devices is nearly universal, up from about half of households at the time of the last revision
 - About half of children (≤ 8 years old) own a mobile device (most commonly tablets), up from almost none at the time of the last revision
- Usage
 - Children (2-8 years old) spend about an hour a day using mobile devices
 - In comparison to traditional computers, children (≤ 8 years old) spend about 5x as much time using mobile device
 - Use of traditional computers by children is declining, largely because gaming is shifting to mobile devices
 - There appears to be greater child usage of mobile devices in minority, lower income, and lower educational attainment households
- Content
 - The most popular uses of mobile devices among children (≤ 8 years old) are watching online videos, playing games, and using apps
 - Among parents who install apps for children on mobile devices, two thirds only install free apps

Sources: Common Sense Media 2017, Ofcom 2017, Kabali et al. 2015



Mobile Devices: What We Know (Video)



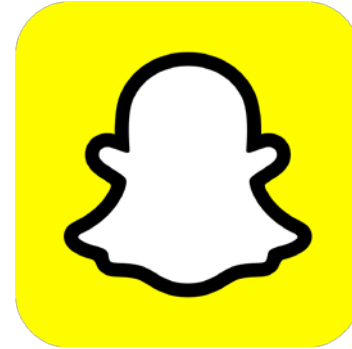
2005



2010



2011



2011



2017

- Traditional TV viewing time among children (≤ 8 years old) has declined by about a quarter since the last revision
- Meanwhile, video viewing time on mobile devices has increased by over an order of magnitude
- Popular categories of video include educational content, animals, how-tos, unboxing, music videos, game streaming and recordings, and stunts

Mobile Devices: What We Know (Gaming)



2011



2012



2017

- Console and portable console gaming time for children (≤ 8 years old) has dropped by about half since the last revision
- Meanwhile, gaming time on mobile devices has increased by about 5x
- Popular mobile games are increasingly free-to-play, offer in-app purchases, and provide social features

Mobile Devices: What We Don't Know

- Which apps (and content platforms), specifically, are children using?
- What are the privacy properties of these child-friendly apps?
 - Child-friendly apps collect and share personal information, just like other apps
 - Advertisements are common in child-friendly apps, including advertisements with mature content
 - Privacy disclosures for child-friendly apps provide limited information
- Do these apps consider themselves “directed to children” within the meaning of COPPA?
- Is that assessment consistent with the current COPPA Rule?
- Are parents using the parental controls offered by mobile devices?
- Are parents making informed decisions about mobile devices?

Sources: Reyes et al. 2018, Reyes et al. 2017, Liu et al. 2016, Chen et al. 2013, FTC 2012, FTC 2012



- 1 Mobile Devices
- 2 Internet of Things (IoT)
- 3 Educational Technology (EdTech)

Internet of Things (IoT): What We Know

- Smart Speakers / Virtual Assistants
 - Adoption: ≈53M owners
 - Growth: ≈36% per year
- Streaming Devices and Smart TVs
 - Adoption: ≈64M households
 - Growth: ≈7.5% per year
- Internet-Connected Toys
 - Adoption: ?
 - Growth: ?

Sources: NPR 2019, Comscore 2019



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Internet of Things (IoT): What We Don't Know

- Which IoT devices, specifically, are children using?
- What are the privacy properties of these devices?
 - IoT devices frequently share usage data with third parties
 - Many IoT devices have poorly implemented security
- Are parents using the parental controls offered by these devices?
- Are parents making informed decisions about these devices?
 - Parental preferences appear to be very context specific
 - Parents appear to have particular concerns about audio recording
 - Parents appear to be frustrated with using parental controls

Sources: Huang et al. 2019, Moghaddam et. al 2019, Ren et al. 2019, Apthorpe et al. 2019, Chu et al. 2019, McReynolds et al. 2017

- 1 Mobile Devices
- 2 Internet of Things (IoT)
- 3 Educational Technology (EdTech)

Educational Technology (EdTech): What We Know

- Investments exceed \$1B per year
- Growing segments include, among others...
 - School administration
 - Course content management
 - Classroom communications
 - Educational materials
 - Exam proctoring

Source: EdSurge



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Educational Technology (EdTech): What We Don't Know

- Do these EdTech platforms work (e.g., make education more effective, accessible, or efficient)?
- Which platforms, specifically, are students, parents, teachers, and schools using?
- What are the privacy properties of these platforms?
- Is the Student Privacy Pledge sufficient to ensure strong privacy protections?
- Do these platforms consider themselves “directed to children” within the meaning of COPPA?
- Is that assessment consistent with the current COPPA Rule?
- Are students, parents, teachers, and school administrators making informed decisions about these platforms?
- What are the privacy expectations and preferences of students, parents, teachers, and administrators when using these platforms?
- Who do students, parents, teachers, and administrators think is able to and should be able to make privacy decisions about these platforms?
- Who is best positioned to provide consent to data practices by these platforms, and how should that consent be scoped (e.g. time limited, purpose limited, or party limited)?

Technology Trends Since the Revised COPPA Rule

Jonathan Mayer

 PRINCETON UNIVERSITY



Panel 4: Uses and Misuses of Persistent Identifiers

Panelists:

James Cooper, Harry Jho, Katharina Kopp,
Jonathan Mayer, Kate O'Loughlin, Julia Tama

Moderators:

Mark Eichorn & Laura Hosken

THANKS!

Reminder: The deadline for filing a public comment on the FTC's implementation of the COPPA Rule is October 23, 2019.