

Exhibit D

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

IN RE: SOCIAL MEDIA ADOLESCENT
ADDICTION/PERSONAL INJURY
PRODUCTS LIABILITY LITIGATION

THIS DOCUMENT RELATES TO:

*People of the State of California, et al. v. Meta
Platforms, Inc., et al.*

MDL No. 3047

Case Nos. 4:22-md-03047-YGR-PHK
4:23-cv-05448-YGR

Judge Yvonne Gonzalez Rogers

EXPERT REBUTTAL REPORT OF MARY CATHERINE WIRTH

April 15th, 2026

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signup. It also has well-defined processes for identifying and removing users once it has actual knowledge that they are under the age of 13.

10. Meta also takes the “layered” industry best practice approach to age-related enforcement. For example, (a) it uses technical measures to prevent users who have failed an age assurance test from circumventing the controls, (b) it uses machine-learning classifiers trained on reliable signals for distinguishing adult accounts from child accounts, (c) accounts flagged as potentially underaged are either immediately actioned (where there is a high degree of confidence in accuracy) or escalated to highly trained human moderators for review (where there is lower confidence), (d) “checkpointed” accounts are no longer accessible to the user or visible to other users during the evaluation process, (e) accounts that fail the age checkpoint are closed and their data is deleted once the appeal period has expired, (f) accounts that are hard-linked to the failed account (for example, a Facebook account linked to an Instagram account) are also closed and deleted, (g) a user changing their self-declared age from under 18 to over 18 triggers a more robust age verification check by a third party account verification vendor, (h) accounts also are automatically checkpointed if a user changes their self-declared from over 13 to under 13, (i) users and the general public can report directly to Meta that a particular user is under the age of 13, and (j) the company has implemented “Teen Accounts” on both Instagram and Facebook, which default to protective settings and offer parents suitable account controls.

11. To the extent that Mr. Estes comes to a different conclusion, it is because he measures Meta’s practices against his own mistaken understanding of what the law requires instead of against universally accepted, broadly published industry best practices. As such, his opinions are divorced from the legal, practical, and operational realities of U.S. age assurance programs.

D. Opinion 4: Mr. Estes Mistakenly Asserts That Meta Has Universal Age Verification and Verified Parental Consent Obligations (It Does Not)

12. Mr. Estes claims that Meta “failed” to implement universal age verification and verifiable parental consent (“VPC”) mechanisms – and, therefore, its age assurance program is somehow “broken.”² He apparently doesn’t understand that (a) universal age-verification is not mandated

² See, e.g., Estes Report at ¶ 4 (“Meta’s age verification systems were either non-existent or broken. Meta allowed millions of pre-teens to use its addictive platforms and collected data from them without obtaining any form of VPC, in violation of industry standards and regulations.”), and at ¶ 171 *et. seq.*

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in the U.S and has not been voluntarily adopted as an industry best practice,³ and (b) COPPA only requires that a platform obtain verifiable parental consent when it allows users under the age of 13 to register for its services and collects personal information from them (Meta does not).⁴

13. Mr. Estes repeatedly asserts that, because various forms of age verification exist, Meta “should” have adopted them. Yet he doesn’t cite a single objective benchmark or compliance obligation in support of his position. And he never once wrestles with the most open and obvious benchmark of all: *i.e.*, what does the rest of the industry do? **No social media platform in the U.S. age verifies at registration**, and for very good reason.⁵ Age verification isn’t required by law (indeed, every state law that has proposed social media age verification has been struck down as unconstitutional). Age verification is deeply mistrusted by the public.⁶ Age verification ties a user’s real-world identity to their online presence (and thus is inconsistent with anonymous speech rights that are highly valued in the U.S.). Age verification is a proven barrier to platform adoption. Age verification introduces new privacy and data security risks. Given these facts, it is unrealistic to expect any social media company to voluntarily adopt the practice.

E. Opinion 5: Lack of Trust & Safety Operations Experience Consistently Undermines The Accuracy of Both Experts’ Conclusions

14. Dr. Sheatsley’s report is based upon his review of data produced by Meta, but his lack of practical trust & safety operations experience leads to him repeatedly drawing erroneous conclusions from that data. Over and over, Dr. Sheatsley introduces false assumptions into his analysis that any experienced Trust & Safety professional would have spotted and rejected immediately. For example, he assumes every report that a user is under 13 is accurate, without

³ See, e.g., Alex LaCasse, *Are new global age verification requirements creating a children's online safety legal patchwork?*, Int’l Ass’n Priv. Pros. (“IAPP”) (August 14, 2025) (describing the age-verification requirements for the European Union, Australia, and the United Kingdom and the fact that U.S. law still does not mandate similar efforts), <https://iapp.org/news/a/are-new-global-age-verification-requirements-creating-a-children-s-online-safety-legal-patchwork->.

⁴ See 16 C.F.R. § 312.5(a)(1); see also Facebook and Instagram’s Terms of Use (both of which require users to be 13 years old or above).

⁵ I reviewed the registration workflows for Snapchat, TikTok, X, YouTube, Discord, Reddit, Pinterest, LinkedIn and Tumblr and none conduct age verification at registration.

⁶ See, e.g., Aisha Malik, *Discord delays global rollout of age verification after backlash* (Feb. 24, 2026) <https://techcrunch.com/2026/02/24/discord-delays-global-rollout-of-age-verification-after-backlash/>

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COPPA FAQ. But a responsible program also *should* voluntarily ensure that it meets “best practices” adopted by companies of a similar size and type in the industry. Experienced practitioners consider their age assurance program responsible and mature if it does both.

48. The very definition of meeting “best practices (whether in legal contracts, NIST cybersecurity guidelines or the dictionary) *is adhering to practices that have been widely adopted in a particular industry because those practices yield effective results at scale*.”²⁶

49. When it comes to age assurance, the clearest articulation of widely accepted “best practices” is set forth in the DTSP Age Assurance Best Practices document endorsed by a broad swath of U.S. Industry – including Google, Apple, Microsoft, LinkedIn, Pinterest, Discord, Reddit, Snap, TikTok and others.²⁷

50. Based on my review of Meta’s public-facing documentation and relevant discovery materials in this case, it is my professional opinion that Meta’s age assurance practices meet or exceed *actual* U.S. industry best practices and standards.

A. Meta Follows Long-Accepted FTC Guidance To Businesses On Age Gating

51. Both Facebook and Instagram have industry standard age-gating mechanisms at registration.²⁸ Both Instagram and Facebook present a neutrally structured birth-date field at sign-up, consistent with the FTC’s explicit guidance. Neither Facebook nor Instagram’s age gates nudge users toward entering an age over 13, default to a compliant age or discourage truthful entry by warning that younger users will be excluded from certain features.²⁹

²⁶ See *Best Practice*, Computer Security Resource Center, https://csrc.nist.gov/glossary/term/best_practice; *Best Practice*, Merriam Webster, <https://www.merriam-webster.com/dictionary/best%20practice>.

²⁷ See <https://dtspartnership.org/#aboutus>.

²⁸ In addition to relying on discovery materials, I independently reviewed and tested Instagram and Facebook’s registration age-gates on December 9, 2025 and compared them, that same day, to those operated by TikTok, Google, X, Microsoft, Adobe and Snap.

²⁹ See, e.g., META3047MDL-190-00000002, *et. seq.* Both Facebook and Instagram’s registration practices have changed over time but, from evidence in discovery, both have always been operated consistently with the FTC COPPA FAQ. For example, prior to 2019, Instagram did not collect user age at registration (a practice the FTC COPPA FAQ expressly permits). See FTC COPPA FAQ at 12 (“The Rule does not require operators to ask the age of visitors. However, an operator of a general audience site or service that chooses to screen its users for age in a neutral fashion may rely on the age information its users enter, even if that age information is not accurate.”) And, from approximately 2017-2020, Facebook’s registration birthdate selector was neutral in that it let users select any available age – however, the date was set at “today’s date minus 25 years” when the user encountered the screen to minimize the amount of scrolling a user would have to do to find their actual age. In 2020, Facebook modified its

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52. Both platforms likewise have well-defined processes followed by trained staff for investigating any circumstance where Meta obtains actual knowledge that a specific user is under the age of 13.³⁰

B. Meta's Age Gating Program Fully Comports With DTSP Age Assurance Best Practices

53. Meta also takes an appropriately layered approach to age assurance for Facebook and Instagram, consistent with the DTSP age assurance best practices.

54. Meta's layered practices include:

- Deploying technical methods to help prevent users who have failed an age assurance test and have been deemed ineligible from circumventing the controls.³¹
- Employing machine-learning classifiers trained on reliable signals for predicting whether an account belongs to someone over or under the age of 18.³²
- Directing accounts flagged as potentially underage through an automated process that determines whether the account should be escalated for human review or immediately actioned.³³

age selector so that it was set at the date of registration when encountered. *See* Allison Hartnett Depo., Exh. 6 p. 25 *et. seq.*

³⁰ *See, e.g.*, META304 7MDL-012-00000003 (Meta trains thousands of human reviewers to review accounts that are reported by other users for potentially violating the Meta terms of service and content guidelines. In the course of reviewing these accounts in response to any type of report, a reviewer may notice certain details suggesting that the account holder may be a child under 13 (e.g., photos posted to the account reflecting age or text in the account bio stating an age under 13), in which case the reviewer will escalate the account for underage review. Meta may also identify underage users through other review processes including, for example, where Meta requires users to provide identification to access certain features (e.g., Meta Verified)). *See also* META3047MDL-146-00072824 (overview of age assurance workflows) and Allison Hartnett Deposition at p. 182 *et seq.*

³¹ *See, e.g.*, META3047MDL-019-00129336 (describing 12 hour cooling off period to prevent additional registration attempts when user enters date of birth under 13) and META3047MDL-053-00012657 at 12662 (If a user tries to put in a U13 birthday, "After two consecutive attempts, the user will be prevented from creating an account and locked out of the registration process for a period of 12 hours.")

³² *See* META3047MDL-012-00000005 *et seq.*; META3047MDL-146-00072880 (high-level overview of the age labels used for training and evaluating the age prediction models); Allison Hartnett Deposition at p. 175 *et. seq.*

³³ META3047MDL-012-00000003 *et. seq.* (Meta may learn that a user is underage directly from the user, if the user attempts to change the date of birth on their account to a date that would make them under 13. As of February 2021, the user will be automatically placed in an age checkpoint and must provide sufficient proof that they are old enough (i.e., 13 or over in the United States) to use Instagram before they will be permitted to continue to use the service.)

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- Where classifiers are not confident in their prediction, flagging such accounts and escalating them for review by human moderators trained in investigating account age.³⁴

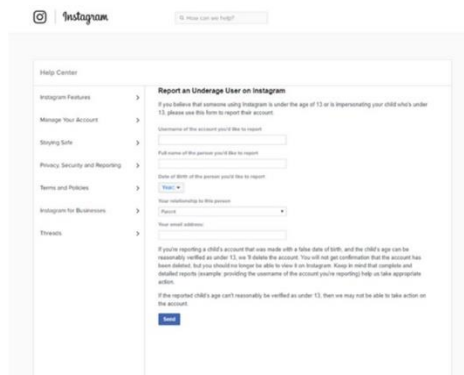


Figure 2 Instagram "Report an Underage User" Screen META3047MDL-040-00000322.

- Suspending accounts that have been checkpointed so that they are no longer accessible to the user or visible to other users during the evaluation process.³⁵
- Flagging the data of any account that has been checkpointed as “not for business use.”³⁶
- Closing accounts that fail an age checkpoint and, once the period for user appeal has expired, erasing their data. Moreover, any accounts hard-linked to the failed account in Meta’s Account Center (for example, a Facebook account a user has linked to an Instagram account) are likewise closed and deleted.³⁷

³⁴ See META304 7MDL-012-00000001 at -0006-0008 (All potentially underage accounts that are manually reviewed are reviewed using Meta’s content review platform, which is specifically designed for large-scale manual review efforts. The platform standardizes the underage review process and allows Meta to track and properly document decisions made. To ensure that the human review process is consistent and that reviewers evaluate each profile using the proper criteria, Meta’s content review platform provides reviewers with a ‘decision tree’ or standardized flow that they must follow for each flagged account. Reviewers are also able to include notes and provide additional context for why they made a particular decision.)

³⁵ See META3047MDL-012-00000007.

³⁶ Lars Backstrom Deposition at p. 32.

³⁷ See META3047MDL-012-00000010. A “hard-linked” account is one where the user has affirmatively connected accounts together – e.g., by logging in with their user name and password and choosing to link two accounts in the settings menu. Meta does *not* delete “soft matched” accounts (i.e. ones where data like device ID or IP address suggest they might belong to the same person) because the likelihood of erroneous account deactivation is simply too high. For example, deleting soft-matches would risk deleting the account of an older sibling or parent who logs into their account via a shared family desktop computer or the account of a co-worker who logs into their account via a common office wi-fi network IP address.

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- Deploying an age assurance check via a third-party vendor if a user changes their self-declared age from one that was under 18 to an age over 18.³⁸
- Automatically checkpointing accounts if users change their self-declared age from one that was 13 or older to an age under 13.³⁹
- Allowing users (and non-users) to report directly to Meta that a particular user is under the age of 13.⁴⁰
- Implementing “Teen Accounts” on both Instagram and Facebook, which default to protective settings and offer parents access to controls like approving changes to teen settings or permissions, monitoring usage, setting time limits and more.⁴¹

55. In my experience, this is everything I would expect a mature, responsible U.S.-based Internet or social media company’s age assurance program to do — and more. Based upon my review and my professional experience, I am confident that Meta’s program is at least comparable to (and in many instances likely exceeds) age assurance programs operated by DTSP members of similar size.

V. META IS NOT REQUIRED TO AGE VERIFY OR OBTAIN VERIFIABLE PARENTAL CONSENT

56. When evaluating Meta’s practices, Mr. Estes ignores longstanding FTC guidance and industry-accepted principles that have guided U.S. age-gating development for more than two

³⁸ See META3047MDL-012-00000015 (When a user attempts to change their date of birth from an age under 18 years old to an age 18 years or older, Meta provides the user multiple options for verifying age, including the option to upload a self-portrait video. If a user elects this option, Meta will collect a video selfie from the user and share a selfie image with third-party service provider, Yoti, a leading age verification provider for several industries around the world, including social media, gaming, and age restricted ecommerce. Yoti’s technology will estimate a user’s age based on their facial features, and will share back to Meta the user’s estimated age. Meta and Yoti delete the uploaded image after Yoti sends Meta the user’s estimated age. If Yoti estimates that the user is under the age of 13, the user will be placed in an age checkpoint.).

³⁹ See META3047MDL-053-00012657 at 12664-65 (When a user changes their date of birth from an age 13 or older to an age under 13, their account is automatically placed in a checkpoint on both Instagram and Facebook, and the user is required to prove their age within the specified period to regain access to their account).

⁴⁰ See, e.g., META3047MDL-012-00000002, *et. seq.* (Since at least January 1, 2019, anyone, including individuals who do not have an Instagram account, can report to Meta that a user is or appears to be under the age of 13 by filling out an online reporting form.); META3047MDL-053-00012709 at 12716 (“Anyone, including individuals who do not have a Facebook or Instagram account, can report to Meta that a user is or appears to be under the age of 13 by filling out a platform-specific online reporting form.”).

⁴¹ See, e.g., Meta Family Center (<https://familycenter.meta.com/>).

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decades. Mr. Estes faults Meta for allowing “self-declared age” at registration,⁴² without once mentioning that (1) the FTC staff FAQs explicitly approve this practice; and (2) it is standard practice within the industry to do so.⁴³ Mr. Estes never mentions that FTC staff guidance (1) fully anticipates that young users may lie and (2) states that this type of general knowledge in and of itself gives rise to no specific investigative duty. Mr. Estes also never mentions the DTSP or its Age Assurance Best Practices publication. And he never once acknowledges that every large social media and general or mixed audience Internet platform in the U.S. approaches age assurance in the very same way that Meta does (and encounters the very same problems). Nor does he engage with any of the policy reasons *why* this is the case.⁴⁴

57. Despite failing to identify or discuss the FTC guidance and published industry best practices that guide every practitioner who develops and oversees age assurance programs, Mr. Estes nonetheless proclaims that he is “intimately familiar with the legal requirements and best practices” regarding age assurance.⁴⁵ He then opines – without reference to a single objective benchmark or valid compliance obligation – that Meta’s age assurance program is “broken” and “in violation of industry standards and regulations” because it does not require universal age verification at user registration⁴⁶ and does not obtain verified parental consent.⁴⁷

⁴² See, e.g., Estes Report at ¶ 43, ¶ 52.

⁴³ DTSP, *Age Assurance: Guiding Principles and Best Practices* at p. 8 (self-declaration “is the most widely deployed method to date of age assurance”).

⁴⁴ Mr. Estes likewise makes a variety of inflammatory, unsupported child safety allegations against Meta and its platforms (e.g., referring to them as “hunting grounds for predators seeking to exploit children.”) Estes Report at ¶ 35. Because Mr. Estes devotes no real effort to supporting these allegations, they don’t merit a detailed rebuttal. However, as someone who has spent more than twenty years developing and overseeing programs to stop the online storage and distribution of child sexual abuse material (“CSAM”), I did notice that Mr. Estes fails to mention Meta’s industry-leading anti-CSAM program and related initiatives. As a result of its highly aggressive (and entirely voluntary) program, Meta’s platforms file more CyberTips with the National Center for Missing and Exploited Children (NCMEC) each year than every other service provider registered with NCMEC combined. See, e.g., NCMEC, *CyberTipline Reports By Electronic Service Providers* (2024). <https://www.ncmec.org/content/dam/missingkids/pdfs/cybertiplinedata2024/2024-reports-by-esp.pdf>. Mr. Estes also cites subjective survey data as if it was objective fact and misstates the volume of inappropriate weekly minor contacts on Meta’s platforms. See Estes Report at ¶ 36 (citing a subjective BEEF survey vs. more objective prevalence data published by Meta and citing inappropriate contact volumes without also citing the downward correction to that number as stated in the deposition testimony of Sayed Oturu).

⁴⁵ *Id.* at ¶ 46 (“I have become intimately familiar with the legal requirements and best practices for providing online platforms to children.”).

⁴⁶ See, e.g., *id.* at ¶ 59 (faulting Meta for not age verifying with ID or credit card at registration).

⁴⁷ See *id.* at ¶ 4 (“Meta allowed millions of pre-teens to use its addictive platforms and collected data from them without obtaining any form of VPC, in violation of industry standards and regulations.”) and at ¶ 41. To the extent

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58. Mr. Estes ignores that the U.S., unlike some other countries, has not adopted age verification legislation for social media or general audience platforms for very good reason – *i.e.*, it is inconsistent with the uniquely high value that Americans place on unfettered speech, as well as on access to those platforms that facilitate it. He ignores that no U.S. social media voluntarily verifies age at registration (not just out of respect for these speech protections but because users deeply distrust the practice). He likewise does not seem to understand that platforms are only obligated to obtain “verifiable parental consent” when they allow users under 13 to register and participate (Facebook and Instagram do not).⁴⁸

A. Universal Age Verification Is Not Required (And Is Not The Standard) in the United States

59. Universal age verification is a system that requires every user to prove their age through some form of documentary or biometric verification—such as a government ID, credit card, facial age estimation, or third-party verification service—before being allowed to register for or use an account. Universal age verification is not mandated in the U.S. and, to date, no U.S. social media company has voluntarily adopted the practice.

60. It is only in the last several years that a limited number of foreign nations have begun to adopt (or consider adopting) laws that require social media companies to verify users’ ages and prohibit children below a certain age from using social media altogether.⁴⁹ Thus far, Australia has adopted the broadest approach: its law requires that major social media platforms prevent users under 16 from registering. France, Brazil, Norway, Spain, Ireland, Slovenia, Indonesia and Malaysia have either enacted or are actively considering laws that are similar to Australia’s.

that Mr. Estes is opining that Instagram and Facebook are legally obligated to obtain verified parental consent under COPPA (or that Meta violated regulations for failing to do so), it isn’t appropriate for a software developer (or any expert) to offer that opinion. Moreover, Mr. Estes’ opinion is at odds both with industry practice (*i.e.*, platforms whose service terms forbid registration by those under 13 do not obtain VPC) and FTC staff COPPA FAQ (which expressly allow platforms to rely on self-declared age).

⁴⁸ See DTSP, *Age Assurance: Guiding Principles and Best Practices* at p. 6 (“For instance, the Children’s Online Privacy Protection Act (COPPA) in the United States requires that services get parental consent if they know that a user is under the age of 13. COPPA has had the effect of bifurcating services into those that are directed at youth under 13 and implement parental consent, and those that do not allow users under 13.”)

⁴⁹ See, e.g., Alex LaCasse, *Are New Global Age Verification Requirements Creating A Children’s Online Safety Legal Patchwork?* (IAPP August 14, 2025) <https://iapp.org/news/a/are-new-global-age-verification-requirements-creating-a-children-s-online-safety-legal-patchwork->; see also Rescorla, Arnao and Cooper, *Age Assurance Online: A Technical Assessment of Current Systems and Their Limitations* (Knight Georgetown Institute, January 2026).