

AMENDED Exhibit 721

PLAINTIFFS' OMNIBUS OPPOSITION TO DEFENDANTS' MOTIONS FOR SUMMARY JUDGMENT

Case No.: 4:22-md-03047-YGR

MDL No. 3047

In Re: Social Media Adolescent Addiction/Personal Injury Products Liability Litigation

Age Validation & Verification

Last updated: 02/18/2020

Vision

Users that require age validation and verification are put through a seamless, contextual and re-usable process to establish the age of any user.

Background

We need to do more about validating & verifying a user's age based on coming regulatory requirements (see below). Just collecting a date of birth (DOB) at sign up for an account is no longer sufficient for products that are deemed not suitable for children or have content that is age restricted (the exact products and content are being reviewed and classified by legal and policy). Google has to come up with a comprehensive strategy to tackle this problem while ensuring we do not negatively impact the user experience or our products. This document outlines the use cases, the journeys, the techniques and the teams involved to make this project work.

Legal and Policy background

For the full legal and policy background,^[L3] please check [here](#).

Policymakers are increasingly calling on platforms to 'age verify' their users. To verify age could mean going beyond the self-declared age verification mechanism we have currently implemented. The motivations behind calls for age verification are that:

- Many policymakers and KoFs have suspicions (backed up by research and anecdotal experience) that users, especially young users, may lie about their age to gain access to age-restricted services.
 - There is evidence that in many cases parents actively help children create accounts with incorrect ages in order to access services.
- Platforms are not protecting children's privacy because children may have misrepresented their age or may be using a shared account.
- Platforms are insufficiently safeguarding children in terms of:
 - Preventing access to harmful content.
 - Limiting access by adults who may have predatory interest in children and who can lie about their age to enter ring-fenced kids' spaces.

Page 1 Comments

H1 What countries are we required to implement this?

[REDACTED], 5/6/2020 05:18 AM

F2 All countries in the European economic area

[REDACTED], 5/6/2020 02:00 PM

L3 + UK

[REDACTED], 9/17/2020 02:20 AM

Key Use Cases

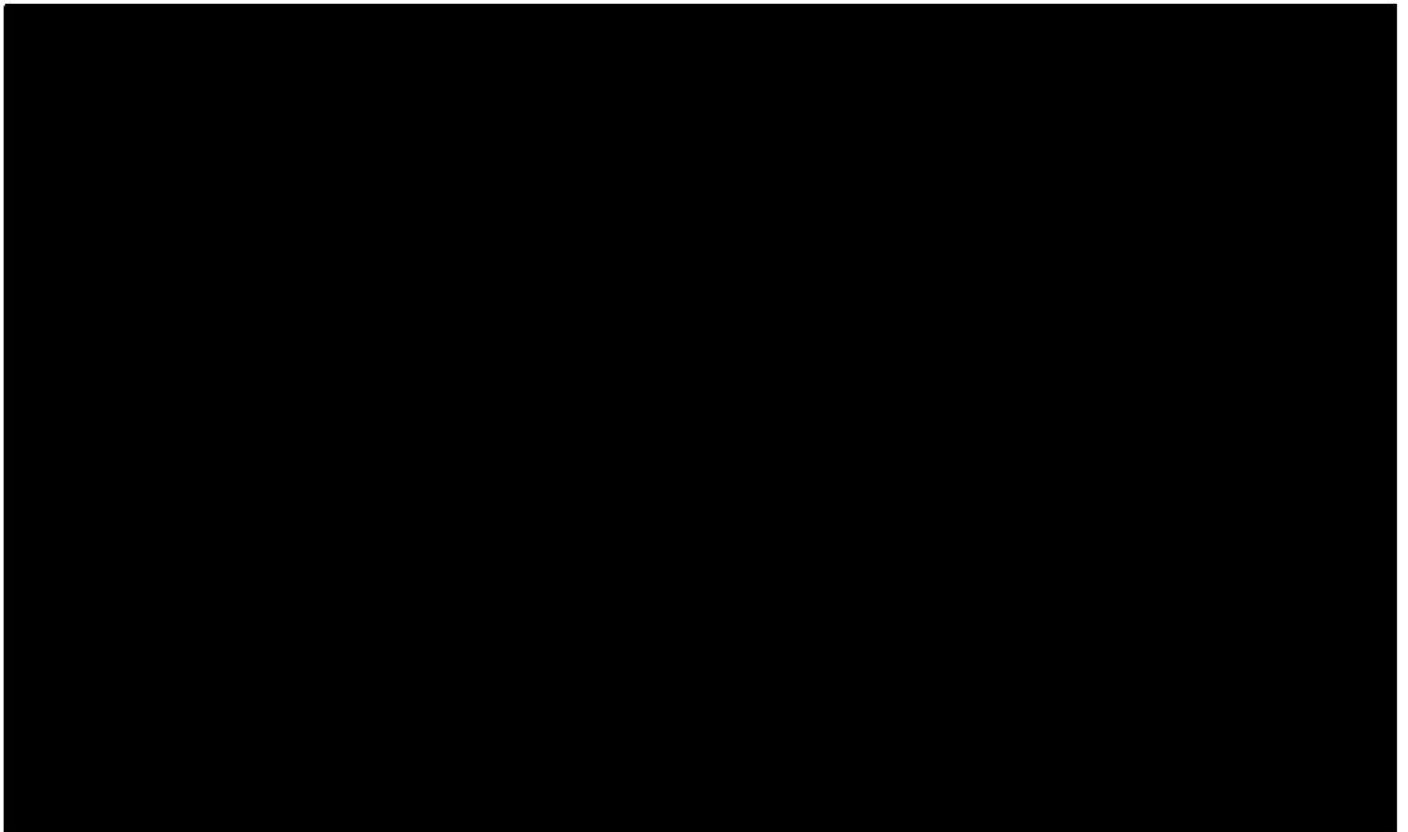
The following are use cases which will invoke the AVV flows to establish whether or not the user is ≥ 18 ^[M8]

- User is accessing restricted content as a signed in user
- User is accessing restricted content as a signed out user

Key User Journeys

Once a use case is triggered above, the user will have to go through the validation and verification flow(s) to establish their age. Below is a sample journey of what that could look like from both the backend systems and the frontend requirements to collect any data, if necessary. These CUJs will need to be executed across devices (either on mobile or web) in shared and smart device contexts - Amati, Home/DragonGlass, etc. and for all content types (media, apps, etc.)

Signed in user



Page 2 Comments

- M4** Is this what we want to establish or do we aim for an accurate birthday? A +-1year birthday?
[REDACTED], 3/4/2020 09:46 AM
- F5** We need confidence the user is >18. We don't necessarily need to have their actual birthday.
[REDACTED], 3/4/2020 02:35 PM
- M6** [REDACTED]
[REDACTED], 3/4/2020 02:42 PM
- F7** No, so we would not show them the content unless they are able to verify their age through another technique [REDACTED] are over AOC, but not old enough for that particular video
[REDACTED], 3/4/2020 05:10 PM
- M8** Sounds like that will require changes in all 1p use cases requiring 18 or over birthday since user would be 18 or over according to Focus birthday but should not be allowed to use the feature?
[REDACTED], 3/4/2020 05:33 PM
- H9** Will we require reauth here?
[REDACTED], 1/22/2020 11:57 PM
- F10** Yes I think so.
[REDACTED], 1/25/2020 06:15 AM
- G11** Not sure that this is the right design. If this is supposed to happen in-flow when the user tries to access content putting up a re-auth screen will increase drop-off significantly. YouTube and other 1st parties will likely be unhappy about this.
[REDACTED], 2/3/2020 12:27 PM
- L12** This specific flow is not clear for me. What do you mean that "user is prompted for their age"?
[REDACTED], 4/10/2020 12:05 AM
- L13** Is this prompted in the YT surface? where is this prompted?
[REDACTED], 4/10/2020 12:05 AM
- C14** [REDACTED]
[REDACTED], 4/29/2020 07:06 PM
- F15** Yes we could definitely do that. There is a cost however and we would have to check if we can do that without explicitly asking the user
[REDACTED], 4/29/2020 08:06 PM
- C16** Cool, I think it would be desirable to do as much processing as we can up front, since I imagine users may feel annoyed by the "Are you sure" prompt. In Unicorn land we obtain user consent for data checks like this up front by including the string "Google will verify you're a parent by checking your Google Account info." Perhaps a similar string like "Google may verify your age by checking your Google Account info and third-party sources" included in the age prompt would suffice?
[REDACTED], 4/29/2020 11:47 PM
- F17** I like that [REDACTED] as fyi
[REDACTED], 4/30/2020 02:30 PM

ii.



iii. If user passes the check, user can continue on ^[P19]

iv. If user does not pass the check, we will put a hold on the account and do a manual review to determine next steps

1. TBD on what this process is, but the Patronus process seems to be set up to handle this

Signed out user

1. With the signed out user attempting to access the restricted content, we have to attempt to get their age validated/verified and make sure that they are > 18
 - a. For Youtube age restricted content, it cannot be accessed through incognito mode. If the user is not signed in, they will be prompted to sign in or again will be unable to access that content
 - i. Age restricted content is around 0.5% of total YT Watch Time
2. We can provide the user with a few options at this point in the journey
 - a. Prompt the user to sign in to their account
 - i. If they have an account, this is the best way to get through this process
 - ii. If the user does sign in to an account, we can go through the standard steps of the signed in users
 - b. Offer a set of options to validate/verify their age through one of our techniques
 - i.

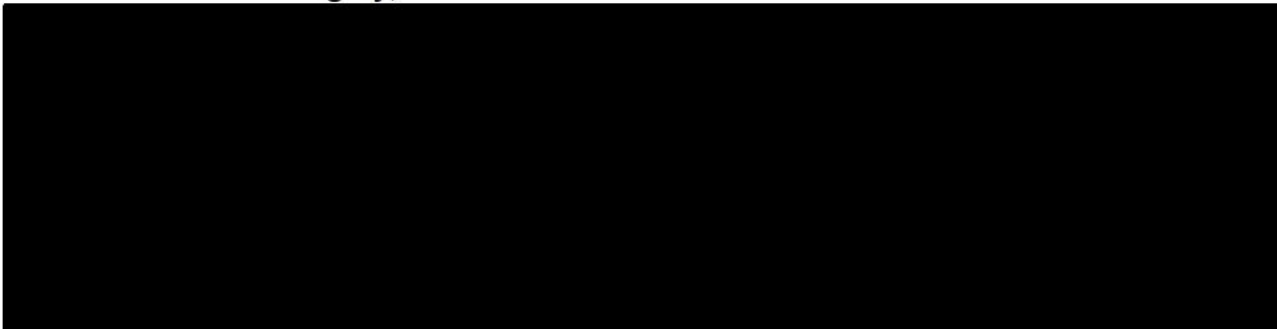


Validation & Verification Techniques

In the spirit of building this product as contextual, seamless and non-repetitive, we want to use multiple techniques to determine the age of the user, validate it through internal data and if needed, verify it through a 3rd party provider. The combination of these techniques will make this a better experience for the users and will limit the impact it may have on our products that are affected.

Some of the ways we can tackle AVV are below.

In the **validation category**, we have: ^[L22]



Page 3 Comments

G18

[REDACTED]

Do you assume that we'll be able to this in realtime?

[REDACTED], 2/21/2020 12:37 PM

F19

Yes, as close to real-time as possible (seconds, not minutes or more)

[REDACTED] 2/24/2020 03:24 PM

L20

[REDACTED] YouTube has a classifier called Athena that detects suspected underage minors based on uploaded videos. Just FYI in case this would be a helpful inferred age signal. Doc:

go/athena_classifier

[REDACTED], 2/24/2020 06:20 PM

L21

[REDACTED]

[REDACTED] 3/2/2020 07:29 PM

L22

Athena could be useful here - people should be aware it tries to detect U13 users, not U18.

[REDACTED] 3/2/2020 09:05 PM

M23

Do we need a recall number too (i.e. I'm sure there are some users we are more accurate than others; how often does this technique work on a new account?)

[REDACTED] 1/27/2020 10:06 PM

F24

Good point. Working with the demographic team on getting the data by country

[REDACTED]

[REDACTED] 1/29/2020 05:39 PM

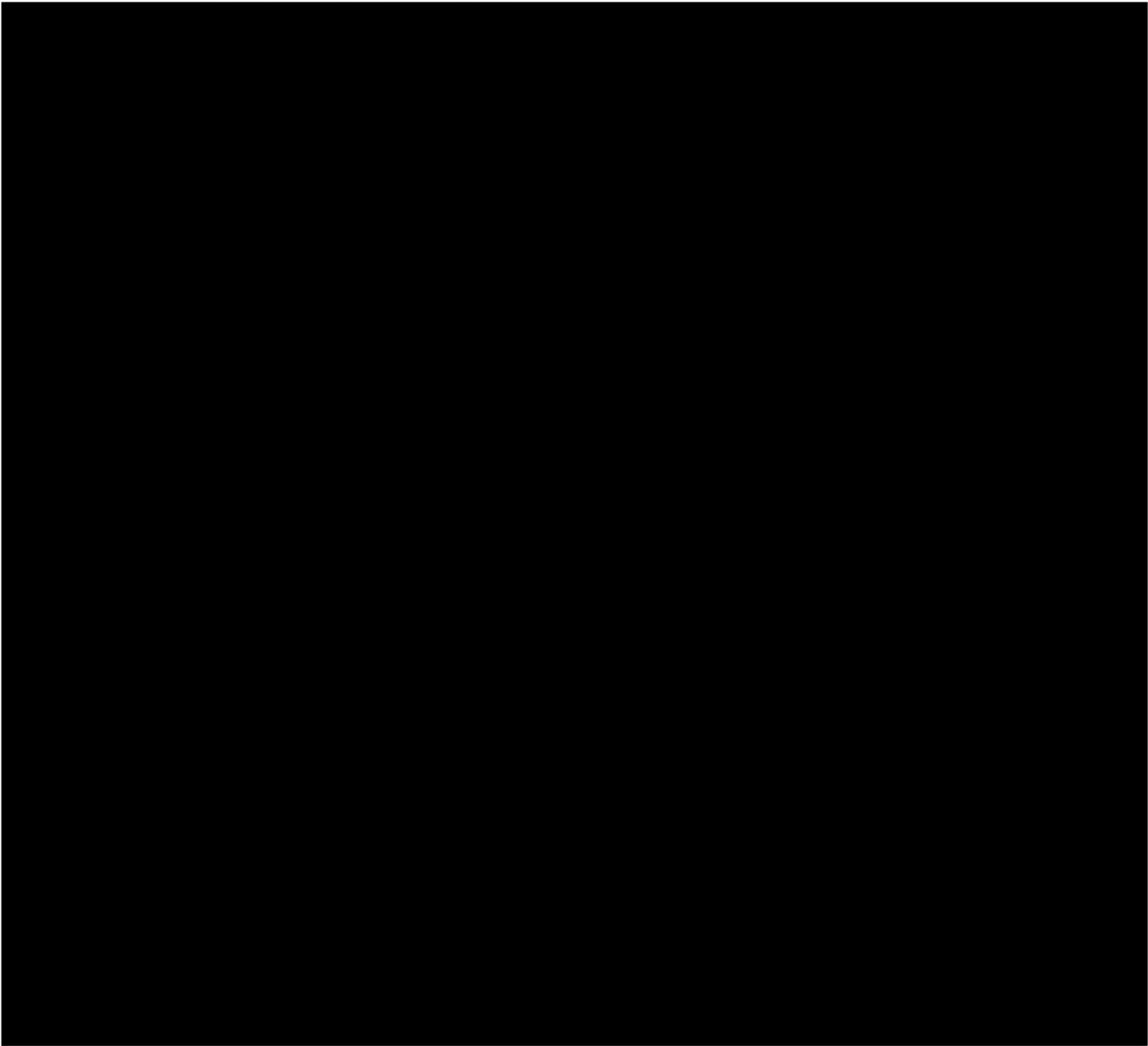
T25

REDACTED - PRIV

Tom Simpson, 2/12/2020 09:59 AM



In the **verification category**, we have:



Page 4 Comments

- M26** Couldn't confirm this working last time we tried
[REDACTED], 2/21/2020 10:11 AM
- B27** Possibly obvious question, but after we verify a person's age, will their account info also be updated and presumably locked?
[REDACTED], 1/22/2020 06:58 PM
- F28** Yes
[REDACTED], 1/29/2020 04:49 PM
- S29** I think this will only affect user who passed verification. For user who passed validation, they can still have DOB will doesn't need to be update.
[REDACTED], 3/10/2020 07:10 PM
- F30** yes correct
[REDACTED], 3/10/2020 07:23 PM
- L31** we'll also need a process by which if the ID is under the AoC in that country, account is GAIA disabled for underage ownership
[REDACTED], 12/13/2019 06:33 PM
- T32**

REDACTED - PRIV

[REDACTED], 2/7/2020 06:26 PM
- L33** currently Birthday Correction process (go/parentalcontrols) allows verifying age through credit card
[REDACTED], 12/9/2019 10:45 PM
- L34** Agree that we should do an audit of all of the products/processes across Google that may be verifying age to ensure a user only has to do this once, eg.
- YouTube's Underage Accounts process (sending ~45,000 accounts/wk through manual YT grace period collecting Govt ID and then Birthday Corrections flow if acct is disabled)
 - Google Identity Escalations (manual process, low volume few hundred/wk)
- [REDACTED] - another reason the "Age Verified" status on user will be useful
[REDACTED], 12/9/2019 10:52 PM
- B35** Link to spreadsheet looking to capture estimated volumes for Age related Govt ID checks
[https://docs.google.com/\[REDACTED\]](https://docs.google.com/[REDACTED])
[REDACTED]
[REDACTED], 12/9/2019 11:13 PM

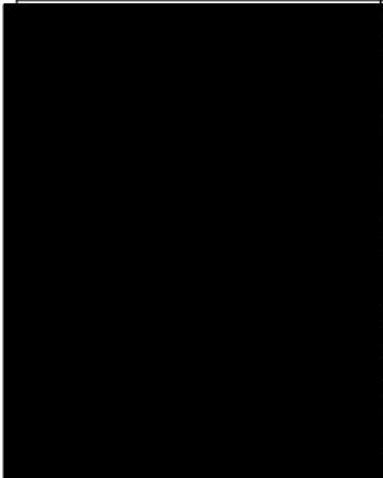


Stack ranking the Age Validation and Verification techniques

Table Legend

- Validation/verification strength
 - How strong is our confidence and trust in the age of the user based on the data signals available to us and the DOB provided
 - *High = Good*
- User impact/friction
 - The effort it requires for a user to complete the proposed solution we put in front of them
 - *Low = Good*
- Implementation effort
 - What will it take to make the proposed solution work and the effort required across teams
 - *Low = Good*

The table below is a stack rank based on the above legend. The top 3 solutions will give us the most value for our investment.

Proposed Solution	Validation/Verification strength	User impact/friction	Implementation effort
	High	Low	Low
	High	Low	Low
	High	Medium	Medium
	High	Low	High
	Medium	Low	High
	High	High	High
	High	High	High
	Medium	High	High

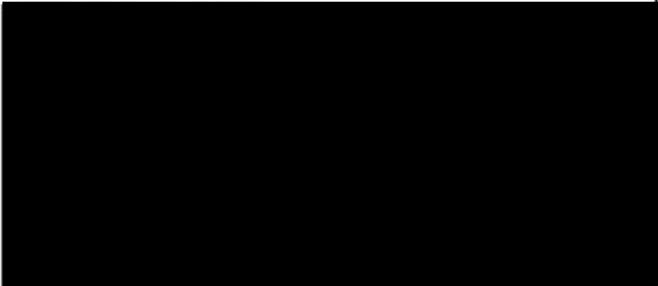
Roadmap

As we get a better understanding of when this needs to be live, we can work backwards from that date to make sure we comply.

Current guidance is that the enforcement by the UK DPA, which is the privacy regulator that is currently pushing more for age verification, will be 1 year from the date of the new regime going into effect. The earliest the new regime can go into effect is January 2021.^[E37] This means that the UK DPA would begin enforcement, and levy potential fines, by January 2021. Other DPAs may also publish guidance. In particular, we're expecting guidance from the Irish DPA (our lead privacy regulator in Europe) that may also touch on age verification and enforcement timelines may shift.

The AVMS regime comes into force in September 2020. Our aim should be to have a compliant solution in place by then, even if AVMS regulators are unlikely to commence enforcement proceedings immediately upon the implementation deadline.

Workstreams and Teams

Workstream	Description	XFN Owners
Impact assessment	Estimate the number of accounts impacted - 0.5% of YT watch time is for age restricted content today - Play access - Search ?	PM: Eng: DS: DA: TPM:
Collection	Campaigns to prompt users to provide/confirm their DOB and age 	PM: Eng: UX: UXW: UXR: TPM:

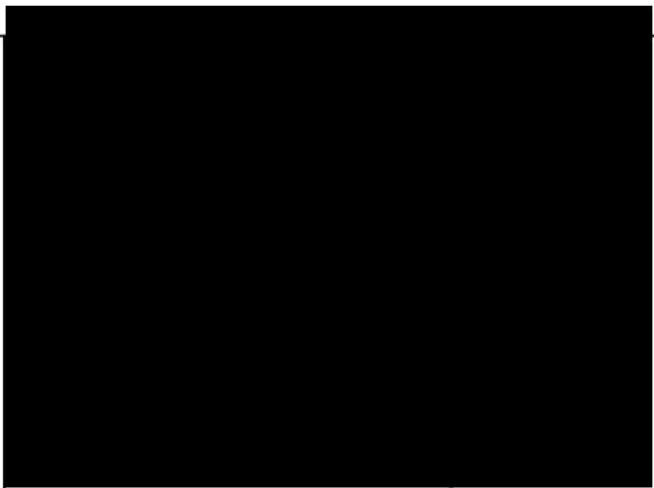
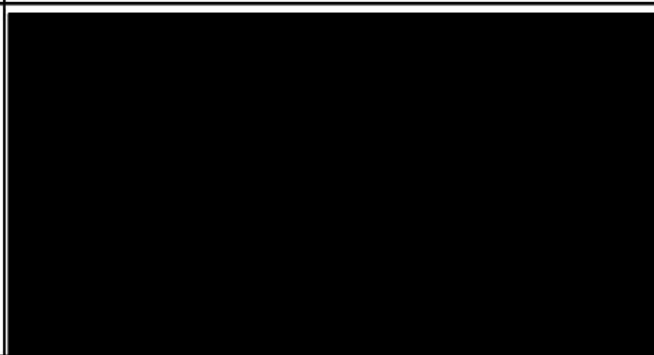
Page 6 Comments

M36 Is it already in effect?

[REDACTED] [REDACTED], 2/21/2020 10:14 AM

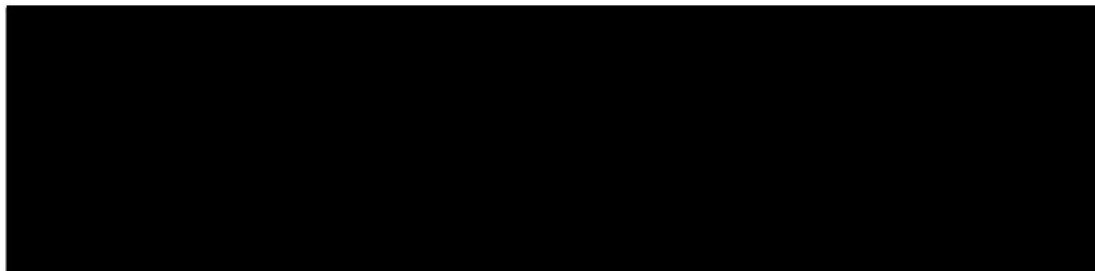
F37 No, Typo on the date. That should say 2021. Fixing that

[REDACTED], 2/24/2020 03:25 PM

Validation & Verification	 (Patronus/Audubon)	PM: Eng: UX: UXW: UXR: TPM:
Storage		PM: Eng: UX: UXW: UXR: TPM:

MVP

By end of September 2020, we need to be able to do the following:



Phase 2 of the project will look to add additional verification methods and further automation.

Risks

There are various risks associated with this project. The main risks are that we either do not do enough on the AVV side to address regulatory requirements and get fined and receive negative press, or that we go too far on AVV and impact our products overly negatively. We

Page 7 Comments

M38 Is it just govt. ID or something else too?
[REDACTED] 2/21/2020 10:16 AM

can also lose YT creators if we are not able to provide them the assurances that we will comply with regulations and provide the tools for compliance.

Additionally, will our users be concerned we are collecting this type of data for AVV? Is this another data grab? We will have to carefully outline the user experience and our messaging around this effort to ensure we get ahead of the story vs. the story being told about us.

Dependencies On Other Teams

Many teams are involved in this effort and we require them to work alongside us to meet the requirements. Teams are split into 3 buckets of dependency:

1. Affected products that fall in the scope of the requirements
 - a. These teams need to collaborate with us to ensure that the flows are live before the deadline and that they follow the enforcement requirements laid out
2. Products who have data we can leverage to validate and verify age (data owners)
 - a. Many teams across Google are already collecting, validating and in some cases verifying DOB for their use cases.
3. Products who have techniques that verify age today (verifiers)
 - a. Some teams are required to verify users and as part of that verification, they have a verified DOB on file

Here is a table with the list of teams that we will need to work with to make this project work

Affected products ^[F40]	Data owners	Verifiers
YouTube (regular and kids)	YouTube	Audubon
Play ^[F42] (regular and dumblestore)	Demographics	Demographics
Search	Audubon	Looknet
Payments	Payments	Payments
Identity	Identity	Identity
Assistant	Unicorn	
Shopping	CAT	
Maps/LH	Focus (go/fbs)	
Ads		
Photos		

Page 8 Comments

L39

REDACTED - PRIV

11/29/2019 10:14 PM

F40

REDACTED - PRIV

12/4/2019 02:34 PM

H41

REDACTED - PRIV

4/16/2020 11:24 PM

F42

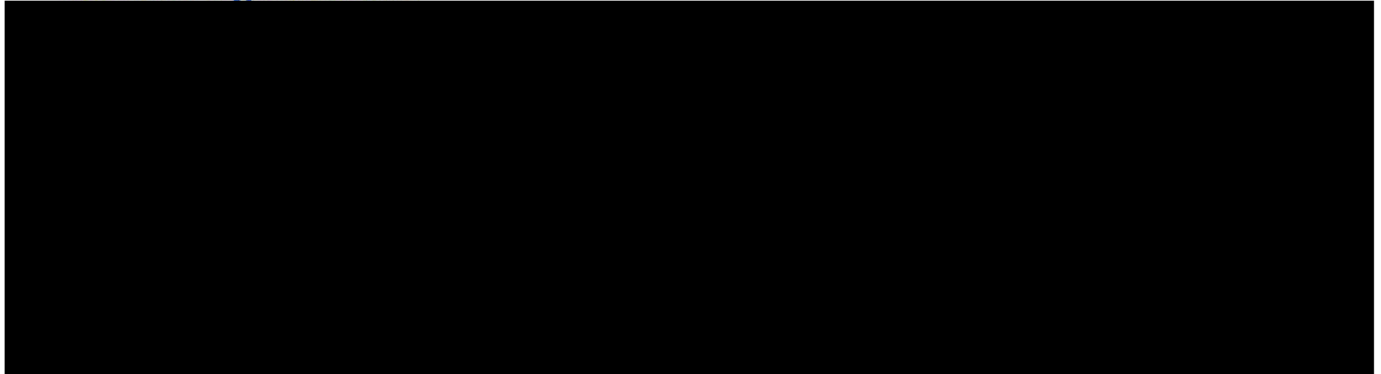
REDACTED - PRIV

4/17/2020 03:00 PM

GFit/Wearables		
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The teams involved will be part of the working group that is being created for this project. POCs and more will be identified to minimize the number of folks involved from each team/PA.

Inferred Age models ^[F48]



Appendix

Key questions

This is a list of questions that are still open and we need to answer. Some of these will impact the work effort and the teams involved.

- What countries are in scope?
 - We are unsure at this moment
 - Europe is the primary
- How do we get regulators to accept our approach?
 - A policy plan would allow us to be coordinated across regions (once we have confirmation about the idea for AV that we'd like to pursue). PLT can contribute with privacy legal arguments to help local policy teams defend the proposal.
 - From the DPA perspective, we could do a briefing with the Irish DPA and the ICO (UK DPA) where we'd run through our proposal and explain why it's robust enough (note that this also implies that we'll get feedback)
 - [REDACTED] is the primary POC, but [REDACTED] is her backup
 - For search,
- Are enterprise accounts in scope or not?
 - Follow up on seeing these accounts have age on account
 - For Audubon, this is out of scope
 - First phase, out of scope, but could be part of the ongoing initiatives
- This just affects signed in users?
 - This impacts signed out users as well

Page 9 Comments

F43

[REDACTED]
Please add your info into this section. I am going to move it around after you have finished

Assigned to [REDACTED]

[REDACTED], 5/29/2020 09:08 PM

L44

PTAL

[REDACTED] 6/4/2020 05:19 PM

F45

Thank you very much. this is helpful

[REDACTED], 6/4/2020 10:29 PM

V46

[REDACTED] - who was asking for this.

[REDACTED] 6/22/2020 10:07 PM

V47

[REDACTED] - fyi

[REDACTED], 6/22/2020 11:00 PM

F48

Reassigned to [REDACTED]

[REDACTED] 7/13/2020 04:45 PM

- We may push for a sign in if some of our techniques (inferred age) are pointing to an underage user
- We can keep the transaction, but not the data?
 - We want to make sure the user is only prompted once to verify their age and we can “re-use” their verification in the future
- What are some turnarounds today and how do we expect that to be?
 - ~4hrs
- How do we add age to the core data model?
 - Age > 18, 21, etc...
 - Products can come and see that the user is of a certain age without sharing the DOB
- Will we preemptively require AVV at account creation?

Glossary

It is important we all speak the same language and have common definitions for some of the verbiage in this document.

Validation

For this document, validation refers to a technique where we use existing data signals or internal techniques to validate that the user is above the required age to access the content or product. We may not have the right DOB, but we are highly confident that the user is older than the required age.

Verification

Verification is where we go to an outside 3P and verify whether the DOB is accurate for that user. We not only get a signal on the accuracy of the provided DOB, but we also get an independent party stating that this user is older than the required age to access the restricted products.

Inferred age

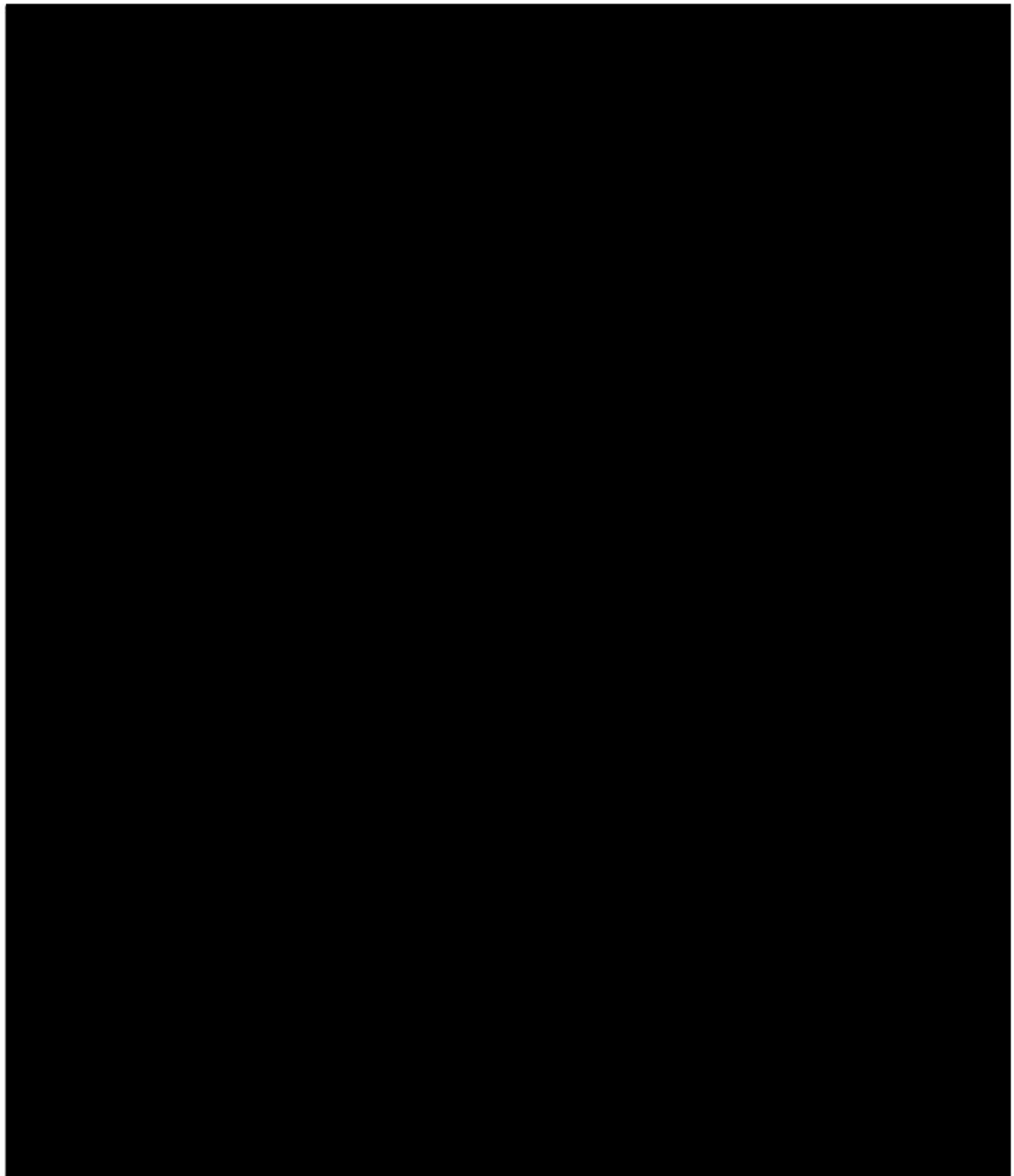
Inferred age is the age demographics team has calculated for a user based on their behavior and activities on the platform. It takes the declared age as a signal, but it uses many signals to determine the user's age.

Data providers: Sources

- Data sources these vendors have available include, but are not limited to:

Page 10 Comments

- S49** Wondering if user upload a Gov-ID to Google and Google verified that ID, will this count into Verification?
[REDACTED] [REDACTED] 3/10/2020 07:32 PM
- F50** Yes it would
[REDACTED] 3/10/2020 07:41 PM
- S51** So, I am thinking mention 3P may not cover all the verification use case, since Google also do some verification.
[REDACTED] [REDACTED] 3/10/2020 07:49 PM
- F52** true, I will try to edit it to reflect that
[REDACTED] 3/10/2020 09:08 PM
- S53** Thank you!
[REDACTED] [REDACTED], 3/10/2020 09:19 PM



Next Steps

1. Find the POCs for each team that needs to be part of this effort
 - a. Ack, review and LGTM the PRD
 - b. Assign resourcing
 - c. Be part of the working group
2. Create a working group

Page 11 Comments

R54 [REDACTED - PRIV]
Assigned to [REDACTED], 1/10/2020 03:58 PM

F55 [REDACTED - PRIV]
[REDACTED] 1/20/2020 03:06 PM

R56 [REDACTED - PRIV]
[REDACTED], 1/10/2020 03:59 PM

- a. Setup a cadence for this group to meet and start the work
3. Do a UX workshop
 - a. Scheduled for Feb 6, 2020
4. Review PRD
5. Define roadmap
 - a. V1 must have by launch
 - b. V2 improvements to user experience
6. Review proposal with Legal
7. Update PDPO steering with the plan
8. Get regulator agreement to our proposal
9. Refine proposal based on feedback
10. Create team to build the flows and efforts
 - a. Team needs to include UX, TPM, legal and privacy
11. Create joint OKRs with dependent teams

DOCUMENT SLIPSHEET

Bates Number: GOOG-3047MDL-05665186.ECM-GOOG-3047MDL-05665207.ECM

BEGATTACH: GOOG-3047MDL-05665186.ECM

ENDATTACH: GOOG-3047MDL-05665207.ECM

PRODVOL: PROD028

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THREADID:

Subject:

REDACTION TYPE: REDACTED - PRIV

REDACTIONS: YES