

AMENDED Exhibit 720

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

A/C PRIVILEGED Teen growth observations

Observations based on our work in H1 2023.

What did we do in H1?

In H1, we formed a central teen growth team under Youth org to track various teen growth projects and launches. Led by the discovery team. Search team and Youth team also contributed to the teen growth projects. Findings below based on these joint efforts.

How is teen capped watch time, DAU, SEU doing?

- Teen DAUs YoY are declining compared to all users (% v/s % in KD markets, [HYPERLINK

[REDACTED]

- Higher fraction of teen users use Shorts than the average user % vs % in KD markets, [HYPERLINK

[REDACTED] "h). However, [REDACTED] is also growing slower than all users (% v/s % in KD markets, [HYPERLINK

[REDACTED] "h).

- From the [HYPERLINK

[REDACTED] "h], we see that Shorts has positively impacted teens more: % cYTT, % DAU for 13-17, % cYTT, % DAU for 13-24, and % cYTT, % DAU for all ([HYPERLINK

[REDACTED] "h). Note, this holdback does not imply that Shorts has converted non-YT users and Tiktok users to Shorts users.

Commented [1]: @ [REDACTED] could you add the stat here with link to holdback.

Commented [2]: added the stat with the combined shorts holdback, which shows that control (prod - w/ shorts) has % higher cYTT and % higher DAU for teens.

I also added the holdback for pcomment, supporting our original hypothesis that pcomment would increase sitewide engagement, and an additional learning on teen relevant & reliable work stream.

What kind of launches move teen capped watch time?

- In 2023, Shorts IP quality launches contributed the most followed by discovery recs quality changes to teen capped watch time. Former contributed % more than the latter ([HYPERLINK

[REDACTED] "h).

- Majority of these projects were designed for all users, indicating there is a decent correlation between what's good for teens and all users.

- CoreX+Shorts packing launches which often boosted shorts (e.g. launch to show even more shorts shelves) were negative on teen capped WT. This may be expected given VODs are longer in length and shorts IP still maturing.

What did we learn from driving teen first projects?

Two teams (Youth org and Discovery org) led some teen first [HYPERLINK

[REDACTED]

[REDACTED] \h] designed to improve teen watch time. Few things we learned are:

- Declared age isn't a reliable signal to build teen specific models. Team built signals like salient age based on watch time data which oftentimes performed better.
- Projects that were designed to help GenZ and Youth experiences turned out to be important to drive Casual users growth.
- Teens prefer more social/community interactions as launches like adding comment boost helped teen growth ([HYPERLINK [REDACTED]])

- [REDACTED] \h] corroborates this with [REDACTED] % ckdYTT for all, [REDACTED] % cVWT for 13-24, and [REDACTED] % SEU-10 for all)
- Teens prefer content that is relevant and relatable to their teen cohort, defined by their life experiences and future plans, their identity and others like them, and sharing their interests. More details on takeaways and progress [HYPERLINK [REDACTED]]

- [REDACTED] \h].
- There was no clear and consistent pattern otherwise. A launch could move the teen slice and not overall or vice versa.

Can we reliably measure impact of various launches on teen slice

Analysis of top launches shows the answer is NO. A lot of launches which were significantly positive or negative on teen slice looked noisy. For example, [REDACTED]

Over time, as we invest in teen reach to increase recall of teenX, this problem can be mitigated, but only to a small extent. [REDACTED]

Did we find anything helpful when tracking impact on teen slices of various launches?

YES. Even though individual launches cannot be trusted. Over time some patterns start to emerge as we analyze clusters of launches in similar area together. For example, [REDACTED]

But, if clusters of launches point towards the same direction, that area can be investigated more.

Is there correlation between fun and growth?

Fun 2-pager defined fun in terms of "for teens, with teens, by teens". Some fun launches like pComments intended to improve the social aspect of the app had some improvement in watch time as well. However, fun satisfaction correlation with dau growth is too soon to say. Other ongoing projects around fun like relatability, authentic will tell us more on the correlation between fun and growth.

All in all, there is some overlap in vision and roadmap of fun and growth for teens. So, if two separate teams work on fun and growth, they would still need to work closely together.

How did we do on our aggressive OKR of driving teen growth via launches?

We scored yellow in the last 6 months. With high standard deviation, the actual score could be anywhere from red to green. So, we don't know for sure. The three dedicated teams at youth, discovery, search were able to be green on teen driven launches driving 1/3rd of our teen growth OKR.

Commented [3]: @ [REDACTED] is there some source to back this claim? Like a uxr or some early experiment, past launch, etc.

Commented [4]: Past launches are highlighted in the CoreX PR link:
 - Boost high GenZ score and Salient Age in Search ranking
 - Add channel subs legos to Shorts IP ranker
 - Add user age to Shorts IP ranker
 - Discovery had also shown through launches on Home that relatable recs had success for youth.

UXR: [REDACTED]

Commented [5]: I think this is a core issue.. when there is so much noise coming through the experiment reviews, it's hard to learn and build on top of previous learnings. If there is interest in this problem, would love to join forces to tackle this broadly for all slices, e.g., Youth, Casual, etc.

Commented [6]: There are a couple of possible scenarios:
 1: fundamentally fun doesn't correlate with WT
 2: we don't have enough data points yet

I tend to believe we are in #2 because we (a) only had a few launches so far, (b) there are experiments boosting fun and leading to top line growth (early iterations)

That doesn't mean #1 is not true, but simply we don't know yet

What can we do to stop decline in capped watch time and DAUs?

From above, it looks like our best hope is shorts which can offer a reasonable alternative to other apps like tiktok, reels, etc. Investing in better VOD ranking for teens (which we assume is already quite decent) probably won't reverse this decline.

Open questions

- Is capped watch time still a good metric for teens?
 - Teens are more likely to use shorts. Capped watch time is more conducive for vods than shorts?
- Should CoreX org even take aggressive teen growth goals, or just leave it to shorts?
- How can various CoreX teams contribute to teen growth goals?
 - Should we mandate each launch be neutral+ or just count growth goals from teams dedicated to teens across CoreX.

Commented [7]: Perhaps capped WT is still a worthy metric; however, we need more sensitive metrics that measure the concrete problem - why do we believe teen DAU and WT are declining

APPENDIX

How is teens' vertical effort different from other vertical efforts?

Other verticals grow by replacing WT from videos of one type from videos of other type (e.g. vods → shorts). Teens is a user based vertical. This probably means that meeting aggressive goals for teens is harder than other content based verticals.

Commented [8]: +1 optimizing for a user slice is very different than optimizing for a slice of the corpus. Perhaps the problem here is more similar to LR ?

Commented [9]: +1. Or we can even learn from female DAU effort that happened few years ago.