

AMENDED Exhibit 556

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

for more context)

Feature	[	[	[	[	[	Weekly Screen Time Updates	Daily Screen Time Limit	Restricted Mode	Family Pairing	Take a Break Videos
Data	WIP	WIP	WIP	[	link	link	[			
				HYP			HYPE			
				ERLI			RLINK			

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D A U	*A/B testing	*A/B testi ng	*A/B testi ng	~25 m WA U	1.8 m / .25 %	5.3m / .75%	3.5m / .5%	1.1 m / .15 %	658k / .09%	28m / 4%
L a u n c h D a t e	~mid Januar y	~mi d Janu ary	~Fe brua ry	Oct obe r 202 2	Jun e 202 2	June 2022	2020	20 20	2021	2019
K e y S c r									[HYPE RLINK 	

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2022 Impact Snapshot

Success Metric 2022 Changes

User awareness	68m/9.4% unique users have visited the revamped Screen Time page (formerly Digital Wellbeing)
User adoption	Total STM DAU: 1.2m --> 19.2m/2.2% (+16x) (Douyin = 4% DAU) - Daily screen time limit: 1.2m --> 7.7m (+6.4x) +3.4x increase in L12 usage one month after launching [\h] - Screen time breaks: 0 --> 5.7m (June launch) - Weekly screen time updates: 0 --> 5.8m (June launch)
External awareness / trust	"From June 9 - 12, we've seen 1,991 mentions on social media in relation to TikTok's screen time & well-being announcement, amassing 3,846 engagements and reaching 102 million people across the globe." [HYPERLINK]

Commented [3]: [REDACTED] Here's a high level data snapshot for our screen time management releases over the past year

Commented [4]: @Jordan Furlongthank you - what are the dates for these figures and is this globally?

Commented [5]: [REDACTED] Dates are over this past year and yes they are globally launched



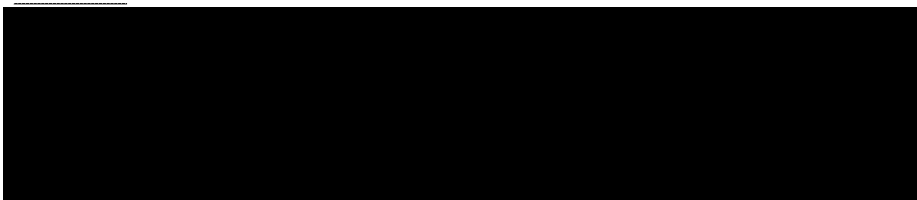
* *For comparison, this is a similar amount of coverage that TikTok LIVE subscription and Effect House had combined

**Success defined as mindfulness and reduction in screen time. Screen time impact analysis still in progress.*

FAQ

- * Impact to core metrics?
 - On feature basis, only very slight downtick in stay duration within acceptable range
 - Acceptable range ~=5% for minors and extreme usage
- * What end state/benchmark are we targeting?
 - Roughly benchmarked to Douyin as they have made much more progress
- * How does this align with the minor safety charter?
 - We've always prioritized minors but need to update plan
- * What do we do now?
 - With all these new touch points with our users, can better understand target audience for wellbeing features
 - Feature retention analysis and enhancement
 - Hard-lined restrictions? Other problem areas?

References



What problems are we solving?

1. Safety

User safety is at the [HYPERLINK

[REDACTED]
[REDACTED] of wellbeing and this is a core responsibility of the broader TnS organization, yet there are still important opportunities that this initiative is obligated to invest in. A recently conducted [HYPERLINK [REDACTED] and follow on [HYPERLINK [REDACTED]

[REDACTED]
[REDACTED] has provided clear improvements that takes into account different key markets ([HYPERLINK [REDACTED]
[REDACTED] HYPERLINK "https://www.ofcom.org.uk/__data/assets/pdf_file/0025/217825/children-and-parents-media-use-and-attitudes-report-2020-21.pdf" \h]):

Problem Area

Content: Respondents' primary concerns about TikTok centered on its content.

Solution

- * Restricted Mode (enhancements planned)
- * [HYPERLINK [REDACTED] (in progress)

Commented [6]: I think attaching metrics where possible would help anchor these solutions to their intended outcome
Jordan Furlong : [THUMBSUP] 2022-07-06 01:36:14

Data Privacy: Many respondents were also concerned about the safety of their teens' personal information.

- * Family Pairing (enhancements planned)
- * Privacy by Default:[TikTok_Privacy & Safety Under 18.pdf]

Wellbeing: Many respondents were concerned that TikTok negatively affected their teens' well-being.

- * Screen Time Management (enhancements planned)
- * Algorithm Management

Awareness: Parents have insufficient knowledge of existing protections

- * Improve feature visibility in product experience
- * Work with MKT/Comms to spread awareness

2. Agency

Agency is the capacity of individuals to act independently and to make their own free choices. We know that user agency is very limited on TikTok due to the problems we see related to addictive behavior and algorithm distrust. Investing in user agency is critical to

helping our users effectively manage their quantity and quality of time spent on TikTok so that it is a healthy and sustainable experience in the long run.

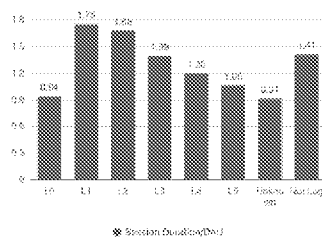
Screen Time Management

We have learned from [HYPERLINK

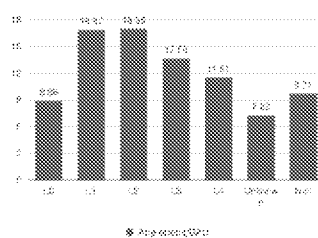
[REDACTED] that our users' biggest usage deterrent is that they think the platform is addictive, but this problem is also validated from various other sources. An internal study indicates that 50% of inactive TikTok users cited time management as an issue, 24% reported too many notifications, and 23% reported too much time spent on TikTok ([HYPERLINK

[REDACTED] We also see many app store reviews that echo the following sentiment, "Do not download this app unless you're able to spend at least two hours a day on it. It's addicting!". This compulsive usage correlates with a slew of negative mental effects like loss of analytical skills, memory formation, contextual thinking, conversational depth, empathy, and increased anxiety ([HYPERLINK "<https://www.pewresearch.org/internet/2018/04/17/the-future-of-well-being-in-a-tech-saturated-world/>" \h]). Various similar studies to Pew's also conclude that compulsive usage interferes with essential personal responsibilities like sufficient sleep, work/school responsibilities, and connecting with loved ones ([HYPERLINK "<https://europepmc.org/article/PMC/5380441>" \h]).

Session Duration in Hrs per day/DAU



App Open per day per DAU by Age Group



Source: [HYPERLINK [REDACTED]

Algorithm Management

While many of our users are happy with the personalized experience they get on TikTok, many have expressed concerns related to content quality, repetitiveness, echo chambers, rabbit holes, and more ([HYPERLINK

[REDACTED] Regulators echo these concerns by saying our algorithm is a black box that supports an "attention seeking" business model and can lead to harm by amplifying sensational content ([HYPERLINK [REDACTED]).

These concerns pose a great opportunity for us to invest in algorithm management as a way to build transparency, put controls in the hands of our users, and ultimately increase user agency on TikTok.

Research

- * [HYPERLINK [REDACTED]
- * [HYPERLINK [REDACTED]
- [REDACTED]
- * [HYPERLINK [REDACTED]
- * [HYPERLINK [REDACTED]
- [REDACTED]

Action Plan: See [HYPERLINK [REDACTED]

[REDACTED] section

3. Belonging

Harvard's almost 80 year old [HYPERLINK

"https://news.harvard.edu/gazette/story/2017/04/over-nearly-80-years-harvard-study-has-been-showing-how-to-live-a-healthy-and-happy-life/" \h] is one of the world's longest studies of adult life and reports that strong relationships is one of the most important indicators of health and happiness. With our mission of "inspire creativity and bring joy" in mind, it should be an utmost priority for us to facilitate strong relationships as a way to "bring joy" to our users.

While there are plenty of opportunities for TikTok to invest more in industry-standard social features, we must consider new approaches given the negative outcomes of first-generation social media companies:

- * "Evidence from past literature has [HYPERLINK "https://journals.sagepub.com/doi/full/10.1177/1745691617713052" \h]. This may be because online spaces are often oriented to [HYPERLINK "https://www.sciencedirect.com/science/article/pii/S0747563219303073" \h] (such as by posting only "happy" content and likes), and frowning on expressions of loneliness." - [HYPERLINK "https://www.uow.edu.au/media/2020/does-social-media-make-us-more-or-less-lonely-depends-on-how-you-use-it.php" \h]
- * "It is ironic, but perhaps not surprising, that reducing social media, which promised to help us connect with others, actually helps people feel less lonely and depressed." - [

HYPERLINK "https://penntoday.upenn.edu/news/social-media-use-increases-depression-and-loneliness" \h]

To accomplish the above, the first key problem area to address is social validation issues that stem from filters, effects, and even like counts. Aside from what we have seen from Instagram removing like counts, there are a variety of improvements proposed here: [

HYPERLINK [REDACTED]

The second opportunity we have identified is to facilitate more meaningful connections between users on the platform. Our research indicates that investing in social provides substantial improvements to UX and UG: [HYPERLINK [REDACTED]

Research

* [HYPERLINK " [REDACTED]

* [HYPERLINK [REDACTED]

* [HYPERLINK [REDACTED]

* [HYPERLINK [REDACTED]

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◦ [HYPERLINK [REDACTED]

◦ [HYPERLINK [REDACTED]

4. Creator Wellbeing

It is becoming more and more apparent, from our interactions with our managed creators and media coverage ([HYPERLINK "https://www.nytimes.com/2021/06/08/style/creator-burnout-social-media.html" \h]), that mental health and wellness is an area we need to focus on supporting further. Some of the top areas to better support creators are

- * Burnout: Pressure to post consistently and frequently, Pressure to fulfill followers' expectations, Pressure to achieve adequate content performance, Constant ideation, Large time investments
- * Negative Comments: Almost every participant received negative comments on their videos and described them as detrimental to their mental well-being

Research

- * [HYPERLINK " [REDACTED]
- * [HYPERLINK [REDACTED]
- * [HYPERLINK " [REDACTED]
- * [HYPERLINK " [REDACTED]

5. Compliance & Brand Risk

The past 2 years have been fraught with PR and GR issues for ByteDance and TikTok. This has reduced advertiser trust, user loyalty, investor confidence, and our ability to consistently hire top talent. Investing in our users is a socially and financially responsible investment for us to ensure long term success and health of the ByteDance ecosystem.

- * [HYPERLINK "https://www.forbes.com/sites/johnkoetsier/2020/01/18/digital-crack-cocaine-the-science-behind-tiktoks-success/?sh=55386bb278be" \h] - Forbes
- * [HYPERLINK "https://www.wired.co.uk/article/tiktok-nsfw" \h] - Wired
- * [HYPERLINK "https://www.theguardian.com/technology/2020/feb/14/first-quitting-tiktok-statement-shows-popular-app-has-come-of-age" \h] - The Guardian
- * [HYPERLINK "https://www.wsj.com/articles/tiktok-is-the-latest-reason-teens-are-addicted-to-their-phones-11556337610" \h] - The Wall Street Journal
- * [HYPERLINK "https://www.independent.co.uk/voices/tiktok-addict-60s-prank-b1856047.html" \h] - Independent

Opportunities

- * TikTok is a place to be your authentic self, and is content, rather than network-driven. This may mean that the risk of usage increasing feelings of envy may be lower than for some other platforms
- * Celebrate the progress people are making in improving their wellbeing instead of just highlighting problems
- * Many people find joy in the TikTok experience, which is a powerful unique aspect of our platform that we should work hard to preserve
- * Higher levels of active engagement than many other platforms (e.g. as measured by post and comment rates), which is positive given research that suggests passive use of social media is more harmful
 - "On TikTok in Q2, mega influencers had an average Engagement Rate of 11.83%—vs. 0.35% on Instagram, 2.75% on YouTube, 0.01% on Facebook and 0.01% on

Twitter" - [HYPERLINK "https://adage.com/article/datacenter/tiktoks-astronomically-high-engagement-revealed/2361161" \h]

◦ [HYPERLINK

* We have a relatively blank canvas and more information than our industry did as a second generation tech company, positioning us well to roll out more effective resources and experiences

Risks

* The advertising-based business model encourages optimization for time spent in the app. In a user [HYPERLINK of over 2,300 users in February 2020, when respondents were asked to give a score out of 5 to indicate strength of agreement with the statement 'I spend too much time on TikTok', the average response was 4.0.

◦ This is an issue common for many platforms. However, some elements of persuasive design may be unique to TikTok; for instance, the fact that when you click the back button on your phone to leave the For You feed/app, you get a prompt saying, 'Tap again to exit,' which can be seen as increasing friction for users seeking to leave the app.

* The TikTok product experience utilizes many coercive design tactics that detract from user agency such as infinite scroll, constant notifications, and the "slot machine" effect

* TikTok is particularly popular with younger users, who are particularly sensitive to reinforcement in the form of social reward and have minimal ability to self-regulate effectively

* Not being able to cross functionally align on goals and metrics

Execution

H2 Goals & Success Metrics

Commented [7]: [HYPERLINK

Problem Area	Goals	Success Metrics
<u>Wellbeing North Star</u> : Improve overall user wellbeing	Once the DW survey is complete, evaluate whether it can be used for	* Survey to complement quantitative metrics below * Retention - due to healthier boundaries set with TikTok

	our north star	Brand safety
1. <u>Safety</u> = safety by design; recognizing harms and maintaining safety	N/A	[HYPERLINK [REDACTED] = how much violating content users see - Report penetration
2. <u>Agency</u> = The extent to which users feel in control of their use of TikTok.	Build out industry leading screen time management offering based on [HYPERLINK [REDACTED]	- Quantity of time spent - Decrease time spent on device during common sleeping hours (align with AADC) - Decrease 90th percentile of app opens + screen time - Quality of time spent - Increase Active engagement = % of unique vv a user likes/comments/shares/favorites [HYPERLINK "https://www.gainsight.com/blog/when-why-and-how-often-to-use-nps/" \l ":~:text=Since%20NPS%20is%20a%20measure,completed%20the%20on%20boarding%20process." \h] ([HYPERLINK [REDACTED] - Intentional usage - Increase % of DW feature DAU / total DAU - Increase % of real time spent < time limit set - Decrease STM modal

bypasses / day / STM DAU

- | | | |
|---|---|--|
| <p>3. <u>Belonging</u>
= facilitate meaningful interactions and relationships between TikTok users (long term goal)</p> | <p>Conduct research, establish roadmap for this section, and begin execution [HYPERLINK
[REDACTED]</p> | <ul style="list-style-type: none"> * [WIP] MSI - meaningful social interactions * Increase MUF * Community engagement |
|---|---|--|

(Background research: [HYPERLINK
[REDACTED]

Tradeoff Expectations

- * Decrease stay duration, especially for excessive users
- * Increase in retention due to increased user and ecosystem health generated by healthier behaviors
- * Increase in DAU from people who have not downloaded TikTok or deleted it because they are concerned about excessive usage
 - Look at sign up attribution

The most efficient way to test this is simply by rolling out features, observing their effects, and updating metrics accordingly. We can use previous T&S / Algo collaboration as a reference point [HYPERLINK [REDACTED]
\h]

H2 Roadmap

Prioritization Inputs

- * **Reach:** How many potential users would be able to use this feature?
 - * **Impact:** How much value can we deliver for our target users and product lines?
 - * **Confidence:** What industry, market, and other data signals can we use to increase confidence?
 - * **Effort:** How quickly can we test the hypotheses?
- [REDACTED]

Resources Needed to Accelerate Progress

Challenge	Additional Resource Ask	Priority
Engineering is extremely busy with various requirements already, so there is not much bandwidth for all the features we plan to build	TBD	P0
Feature release pace, given the aggressive goals in this proposal	1-2 PMs	P0
We don't have time to do proactive data analysis for prioritization and features	.5 DA	P0

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Appendix

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Competitor Landscape

Screen Time Management

Key Takeaways

- There is a common but inconsistent set of features across other large competitors, indicating a lack of creativity and authentic investment. This should be a helpful input for us, but we should be brutally honest in prioritizing what features will drive the most impact for our users
 - "Contemporary digital wellbeing apps are **mainly focused on supporting self-monitoring**, i.e.,tracking user's behavior and receiving feedback, but are not grounded in habit formation nor social support literature. Habit formation, in particular, could play an important role in digital wellbeing apps, support-ing behavior change **towards a more conscious use of technology, and ensuring the long-term effects of the new behavior**" - Lufan

- * These features are often at level 3/4+ in the information hierarchy, limiting users' ability to find and take advantage of these features. If this is actually an important problem to solve, we should make our entry points more prominent
- * Users like these features' ability to provide transparency
- * Users dislike when these features have unintuitive design, high price, and when they are bypassable

Apple (OS), Android (OS), Facebook, Instagram, YouTube:

[figma]([HYPERLINK

	TikTok	Instagram	Facebook	YouTube	Netflix
Daily Time Reminder	✓	✓	✓	✓	□
Session Time Reminder	✓	✗	□	✗	[HYPERLINK K "https://www.theverge.com/2021/1/29/22256308/netflix-timer-test-feature-android-global-sleep-kids-ios-tv-desktop"\h] ([HYPERLINK K "https://www.theverge.com/2

					021/1/29/ 22256308 /netflix- timer- test- feature- android- global- sleep-kids- ios-tv- desktop" (h)
Quiet Mode (Bedtime)	✗	□	✓	✓	✗
Usage Dashboard	✓	✓	✓	✓	✗
Feed Preferences	□	✗	✓	✗	✗
[HYPERLINK [REDACTED]	✓	✗	✗	✓	✓([HYPERLIN K "https://h elp.netflix. com/en/n ode/264" (h)

Commented [8]: What does yellow dot represent?

Commented [9]: [REDACTED] Partial solution
[REDACTED] : [THUMBSUP] 2022-07-06 01:37:26

Previous Analyses

- * [HYPERLINK [REDACTED]
[REDACTED]
- * [HYPERLINK [REDACTED]
[REDACTED]

Algorithm Management

[HYPERLINK [REDACTED]

Companies focus on both ethics work and communication.

- * Ethics Work

- Responsible AI Teams: All the competitors have created dedicated teams that research and develop tools for responsible AI. Google's and Facebook's have around 200 people each.
- Focus on preventing biases: The key a focus for responsible AI Teams has been the development of datasets and tools to mitigate biases against certain subgroups, and to mitigate harmful content.
- Product reviews: Most companies have dedicated product review teams, and processes to ensure responsible development, however, these processes are not mandatory.
- User controls & transparency: Facebook has been the company most active in giving users more control over the feed, and in providing transparency what users see.
- * Communication
 - Blogposts: Companies have been more frequently publishing blogposts by CEOs on the general approach towards responsible AI, and on product changes impacting user experience, integrity, and control & transparency.
 - Recommendation guidelines: Companies have published recommendation guidelines, with Google providing the highest transparency (100 page document). Facebook seeing the need for more transparency followed Google in 2020.
 - Government workshops: For government relationship building, esp. Facebook & Google, have been active in organizing workshops with policymakers around the world.

Partnerships

External Inputs

- * [HYPERLINK "https://www.aspeninstitute.org/programs/aspendigital/" \h] - [HYPERLINK [REDACTED]]
- * [HYPERLINK "https://www.pewresearch.org/" \h] - [The Future of Wellbeing in a Tech Saturated World.pdf]
- * [HYPERLINK "https://www.humanetech.com/" \h] - [HYPERLINK "https://www.humanetech.com/technologists" \l "principles" \h]
- * [HYPERLINK "https://www.common sense media.org/" \h] - [Media Use by Tweens and Teens.pdf]

* [HYPERLINK

* [HYPERLINK

See more extensive list here: [HYPERLINK

Internal Research

* [HYPERLINK

(November 2021, 15k respondents)

* [HYPERLINK
2021, 1222 parents)

◦ [HYPERLINK

(May 2021)

* [HYPERLINK

](March 2020) - Internal research report

* [HYPERLINK

2021, 1050 respondents)

* [HYPERLINK

(November 2020, 10 interviews)

* [HYPERLINK

"OpXh1c" \h] (January 2020, 311 inactive users)

* EU Policy Listening Project - [HYPERLINK

(Nov 2021, 25 families)

◦ [HYPERLINK

(internal brainstorm)

* Algorithm Management: [HYPERLINK

[[HYPERLINK](#)]

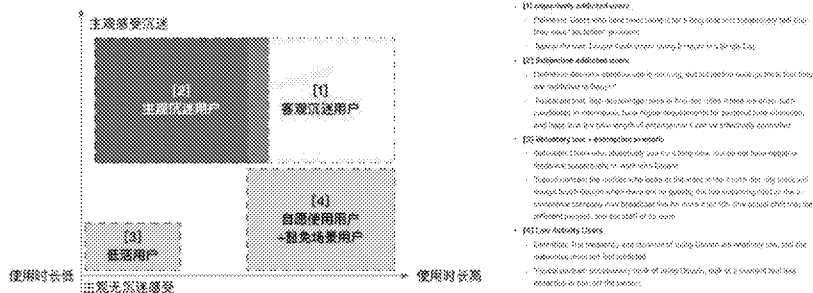
[HYPERLINK

[[HYPERLINK](#)

ore extensive list here: [[HYPERLINK](#)

Douyin's Lessons Learned

[HYPERLINK] = strategy brainstorm and alignment document, using different user segregation approaches (by age/by absolute time use per day) to design intervention strategies.



[HYPERLINK

= Collection of the product designs they have tried or are trying, together with experiment result

- ✧ Time management tools: dashboard, controls
- ✧ Reminder video = Take a Break
- ✧ Toast reminder
- ✧ Mask reminder - clickthrough
- ✧ Mask reminder - mandatory 15 min break

- * Mask reminder - can't be scratched away

Industry Shift Preparation

Mistakes made by first generation social media companies have become clear as we have uncovered that ad-based business models create incentives for companies to grow at the expense of their users. Infinite scroll, video auto-play, and constant notifications are some of the powerful coercive design tactics that we are realizing tend to benefit companies and advertisers more than users. People are therefore thinking about their tech usage in new ways and TikTok is uniquely positioned to build innovative new experiences that people are asking for. We still have a relatively blank canvas since we are behind our competitors ([HYPERLINK [REDACTED], allowing us to capitalize on this opportunity.

As a first step, we are already kicking off relationships with these external experts that are reimagining how tech can promote human strengths and avoid exploiting human vulnerabilities:

- * [HYPERLINK "https://www.aspeninstitute.org/programs/aspendigital/" \h] - Empowers policy-makers, civic organizations, companies, and the public to be responsible stewards of technology and media in the service of an informed, just, and equitable world
- * [HYPERLINK "https://www.humanetech.com/" \h] - From the group that created The Social Dilemma, CHT is a nonprofit working toward re-imagining our digital infrastructure to better support wellbeing, democracy, and shared information
 - [HYPERLINK "https://www.thesocialdilemma.com/" \h] - A documentary about the dangers of traditional social networking products that received 7 Emmy nominations, >190m views in 190 countries, and was translated into 30 languages
 - *We know this org is publicly critical of TikTok and that there are flaws in their research
- * [HYPERLINK "https://newpublic.org/" \h] - A community of thinkers, designers, and technologists building the digital public spaces of the future.

2021

[9-10] Minor Safety, Screen Time Management, Metrics, Bugs

Our current digital wellbeing offering is still at an immature stage with numerous P0 bugs and UX issues. Without a good faith effort in these foundational features, it is difficult for us to collect meaningful feedback on how to approach these subsequent, more complex phases.

[REDACTED]

DOCUMENT METADATA

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