

AMENDED Exhibit 643

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

Options for changes to Push notifications for younger users

Background

There is significant concern among policymakers, parents and the media about the impact of screens on young people's wellbeing (see Appendix). In March 2020 TikTok produced a [HYPERLINK ██████████] exploring the evidence on this topic, followed by an [HYPERLINK ██████████]

██████████ in April. One of our conclusions was that when assessing and addressing TikTok's potential wellbeing impacts, we should consider not just how long children are using TikTok for but also when in the day they are doing so.

The [HYPERLINK "https://europepmc.org/article/PMC/5380441" \h](2016) of the effect of access and use of media devices on sleep outcomes found that bedtime access and use of a cell phone or tablet was significantly associated with inadequate sleep quantity, poor sleep quality, and excessive daytime sleepiness, which presents health concerns. There is still some uncertainty about relationships of cause and effect with respect to bedtime screen use and low sleep quality, with some suggesting the possibility that those unable to sleep are gravitating to screens and then reporting lower sleep quality and duration. **However, given that sleep is critical for the healthy physical, cognitive and emotional development of children, and given the poor ability of children to self-regulate, there are grounds to err on the side of caution.** [HYPERLINK "https://www.nhs.uk/live-well/sleep-and-tiredness/how-much-sleep-do-kids-need/" \h] promoted by the UK NHS suggests teenagers need nine hours of sleep.

In addition, it seems intuitive that use of TikTok during the school day could risk influencing educational outcomes.

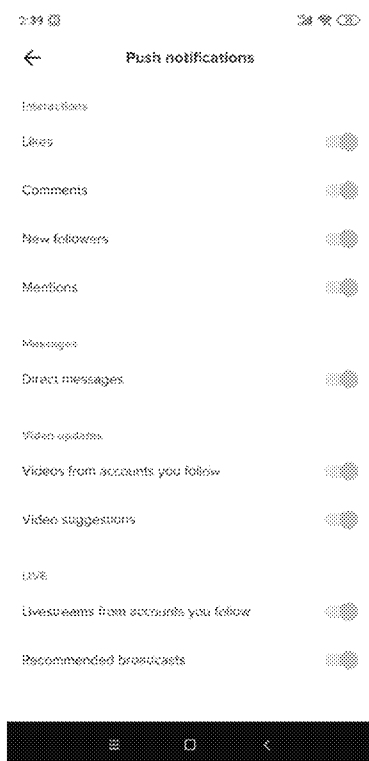
In May-June one of TikTok's sub-OKRs is to finalise a framework for age appropriate design, in order to **become an industry leader in children/minor protection**. Revising our approach to Push notifications for younger users can be seen as an important part of this process.

Current Approach

Commented [1]: This is from Millpond Children's Sleep Clinic via NHS, but stops at 16. Some variation across sources, e.g. CDC says 8-10hrs for 13-18yr olds
https://www.cdc.gov/sleep/about_sleep/how_much_sleep.html

Commented [2]: In addition to sleep time, kids also need settle time - when they've put their screens down and are winding down so they can sleep so any Do Not Disturb window needs to be wider than the nine hours.

Currently, several different types of Push notifications are sent to users. These can be categorised as follows:



Most types of notification can be sent outside of the hours 00:00-08:00 (local time), with a couple of exceptions:

- * The latest time an interest push (a kind of video suggestion) can be sent is 22:00 (with some markets stopping interest pushes at 20:00 or 21:00)
- * Live pushes cannot be sent between 22:00 and 08:00.

There are various rules in place to avoid excessive push frequency.

Under 13 users of TikTok Kids do not receive notifications. Users can turn off each type of notification via Settings, but cannot adjust the time at which they receive notifications. For more information see [[HYPERLINK](#)]

Desired Outcome(s)

1. Reduce risk to young users of TikTok use displacing sleep time and interfering with the school day
2. Increase credibility of our efforts to position TikTok as an industry leader in minor protection
3. Avoid affecting engagement of older users who have greater ability to self-regulate

Options (Pros/Cons)

Options discussed below are all intended to have global scope.

1. Additional limitations on notifications sent to 18- users

In this scenario, we could impose additional limitations on notifications sent to registered 13-17 year old users. This could be done with various degrees of intervention, for example:

- a) Silent notifications between 22:00 and 00:00 for 18- users, with no vibration (this is inspired by [[HYPERLINK](https://support.google.com/youtube/answer/9012950?hl=en&utm_source=wellbeing.google&utm_medium=referral&utm_campaign=wellbeing)

"https://support.google.com/youtube/answer/9012950?hl=en&utm_source=wellbeing.google&utm_medium=referral&utm_campaign=wellbeing" \h], which is to disable sounds and vibrations for all notifications between 22:00 and 08:00)

- b) No notifications for 18- users between 22:00 and 08:00

- c) No notifications for 18- users between 22:00 and 08:00 or between 09:00 and 16:00 on weekdays during term time.

Commented [3]: Ideally, we would ask kids and parents which of the three options they prefer and perhaps ask them to come up with others for us to consider.

Commented [4]: [REDACTED] would be great if we could include questions on this in the next parent/child focus group.

Commented [5]: Absolutely agree with the principle but wonder if we could break it down differently. For example: 16+ option (a) and 13-15 option (b). Agree (c) is tricky, perhaps we could have a 'school week' on/off in settings to allow kids (parents?) to adjust it really easily.

Commented [6]: [REDACTED] could you help us please estimate what the impact of this option would be on business metrics? It would be fairly similar to the current approach, just extending the time at which Under 18s cannot receive notifications by two hours

The changes would not affect adult users because they have greater agency to decide how they spend their time, and do not need as much sleep as children.

* Pros:

- Reduces the risk of notifications interfering with sleep and/or school, to an increasing extent as you progress from (a) to (c)
- GR and PR benefits (for Option 1c in particular, which could help position TikTok as an industry leader)

* Cons:

- Negative impact on business metrics, increasing as you progress from (a) to (c)
- Option 1c could be challenging to localize as term dates vary in different markets

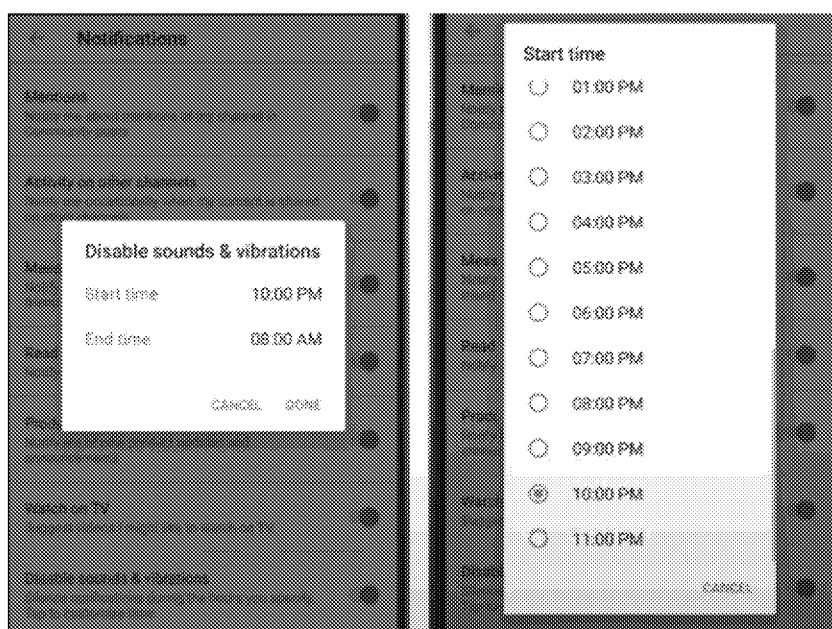
Commented [7]: We could definitely do modeling around it - the Push team should be able to quantify it.

* Summary:

- This option does most to achieve the desired outcomes. Recommend testing 1a, 1b and 1c (in that order) to gain a clear comparison of their impacts.

2. Give all users the ability to adjust when notifications can be sent to them

This could be done either instead of or in addition to changing the default times at which notifications cannot be sent. In the 'Push notifications' section of the app (see screenshot in 'Current Approach', for any user who allows at least one type of notification, we could present an option to block out all notifications during set times of the day. This could use a similar UI to what YouTube uses to allow users to disable sounds and vibrations for notifications during set times of the day (see screenshots below).



- Pros:

- Gives users greater agency

- Cons:

- Adoption likely to be low unless we actively promote this functionality to users, so the change may have minimal impact.
- Younger users are bad at self-regulation so are particularly unlikely to make use of this functionality, unless there is parental intervention.
- More development resource needed

Commented [8]: Really good point.

- Summary:

- Could be a nice-to-have add-on in the longer term but implementing Option 1 is a quicker and more impactful solution.

3. Do nothing

We could maintain the status quo set out in 'Current Approach'.

- * Pros:

- Protects DAU and retention metrics

- * Cons:

- Sending young users notifications up until midnight risks negatively affecting their sleep and therefore their health and wellbeing.
- There is also a risk of interfering with their study at school.
- We may face pressure to adjust the status quo when the Age Appropriate Design Code comes into force in 2021. Waiting until that point would put us in a reactive position and miss the opportunity for positive messaging around the change

- * Summary:

- Not recommended. Does not comply with the TikTok platform principle to 'Put our users first.'

Recommendation and Next Steps

We recommend first doing data analysis to model the impact of Option 1b, and then (depending on results) running tests of Options 1b and 1c (in that order) on minors in a few key markets. This would give us a better understanding of the expected impact of each option before finalizing a decision.

Appendix 1: Policy Context

Concerns about the impact of screen time on study and sleep are part of wider concern among [[HYPERLINK "https://www.health.harvard.edu/blog/latest-dangerous-addiction-parents-need-worry-mobile-devices-201605109680"](https://www.health.harvard.edu/blog/latest-dangerous-addiction-parents-need-worry-mobile-devices-201605109680) \h], teachers, [[HYPERLINK "https://www.nbcnews.com/health/health-news/more-teens-addicted-social-media-say-they-re-wise-distractions-n908126"](https://www.nbcnews.com/health/health-news/more-teens-addicted-social-media-say-they-re-wise-distractions-n908126) \h] and governments that digital technologies and social media are addictive, exacerbate feelings of anxiety and depression, lead to cyber-bullying and distort body image.

In response to these and other concerns, some countries are taking or considering action. Selected responses are:

- * In Korea, children can only play games after midnight [[HYPERLINK "https://www.straitstimes.com/asia/east-asia/south-korea-to-allow-children-to-play-online-games-after-midnight" \h](https://www.straitstimes.com/asia/east-asia/south-korea-to-allow-children-to-play-online-games-after-midnight)]
- * The UK Information Commissioner's Office's '[[HYPERLINK "https://ico.org.uk/for-organisations/guide-to-data-protection/key-data-protection-themes/age-appropriate-design-a-code-of-practice-for-online-services/5-detrimental-use-of-data/" \h](https://ico.org.uk/for-organisations/guide-to-data-protection/key-data-protection-themes/age-appropriate-design-a-code-of-practice-for-online-services/5-detrimental-use-of-data/)]' which will have legislative force when approved by Parliament, said that the use of "data-driven features which make it difficult for children to disengage with your service is likely to breach the Article 5(1)(a) fairness principle of the GDPR"
- * In the US, a [[HYPERLINK "https://www.hawley.senate.gov/sen-hawley-introduces-legislation-curb-social-media-addiction" \h](https://www.hawley.senate.gov/sen-hawley-introduces-legislation-curb-social-media-addiction)] has been proposed trying to ban certain features that are designed to be addictive and give users the power to monitor their time spent on social media. [[HYPERLINK "https://www.congress.gov/bill/115th-congress/senate-bill/3286/text?format=txt" \h](https://www.congress.gov/bill/115th-congress/senate-bill/3286/text?format=txt)] would authorize a research program on children and the media within the National Institutes of Health.

Moreover, the idea of requiring platforms to go beyond mitigating harm to a rights-based approach to the design of services accessed by children is likely to become more influential once the UN Committee on the Rights of the Child publishes its [[HYPERLINK "https://www.ohchr.org/EN/HRBodies/CRC/Pages/GCChildrensRightsRelationDigitalEnvironment.aspx" \h](https://www.ohchr.org/EN/HRBodies/CRC/Pages/GCChildrensRightsRelationDigitalEnvironment.aspx)].

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Email BCC:

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Sent Date:

TIMEZONE:

Subject:

Case 4:22-md-03047-YGR

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Page 9 of 9

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