

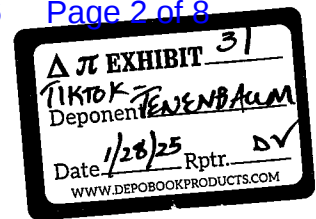
AMENDED Exhibit 488

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/B Analysis] Enable Weekly Screen Time Updates for Minors

1. Executive Summary

monkey_face

- * The feature update for Enable Weekly Screen Time Updates for Minors could improve minor visibility of Screen Time Management, and increase feature adoption rate.
 - The 7-days Screen Time Management Page View Rate for the variant group is 5.95%, significantly higher than the control group at 4.25%.
 - The Feature adoption rate for screen time management for variant group is 0.46%, significantly higher than the control group at 0.37%.
- * Default enablement could significantly improve the feature adoption rate, and users are willing to keep the feature enabled after default enablement.
 - Without the default enablement, the feature adoption rate for the feature is as low as 0.91%
 - The Opt-out rate for default enabled users is only 1.32%.
- * While improving visibility and adoption of screen time management, the update does not have a negative effect on DAU, Stay Duration, and Retention. The metric discrepancies are light(<0.5%) and non-statistical significant.

Next Steps:

Based on the experiment result. We recommend launching the feature globally.

2. Background

This analysis is for the AB test on Enable Weekly Screen Time Updates for Minors.

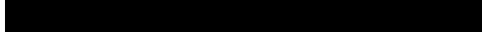
PRD

[HYPERLINK



AB Test Design

[HYPERLINK



Libra Link

[HYPERLINK

Group	Traffic Allocation	Volume	Treatment
Control	50%	1,033,894	Feature will not be enabled defaulty
Treatme nt	50%	1,032,249	Feature will be enabled defaulty

What are we building?

Enable *Weekly screen time updates* toggle in Settings-->Digital Wellbeing for all new users and U18 users who have not visited the Digital Wellbeing page in order to

1. Provide younger users with additional screen time management support
2. Externally demonstrating our considerations for what is 'developmentally optimal' for our users
3. Address our critics' concerns about the addictive nature of our platform

3. Analysis

3.1 Expectation

By the update of this feature, we have the following expectations:

- Increasing the Minor visibility of Screen Time Management Page(aka digital wellbeing page).
- Increasing feature adoption for Screen Time Management on Minor Users.

3.2 Core Metrics

We selected a cohort of users who participated in the experiment to build our analysis:

Cohort: Users from control and variant group joined the test from 2022-12-14 to 2023-01-05

User's event data within 7 days since they joined are used to calculate the metrics
[sheet-shtus4voovDy5KJZSDLSpxysj9e_enNDSe]

What metrics are we testing?

3.2.1 Feature Impaction metrics

- % of UV who entered digital wellbeing within 7 days of joining the test
 - Using it to measure the visibility of Screen Time Management Page
 - Within the 7 days since the user joined the experiment, how many users visited the screen time management page at least once
- % of UV who enabled screen time management
 - Within the 7 days since the user joined the experiment, adoption rate for enable screen time management feature.

Commented [1]: [REDACTED] Aside from the adoption rate, we wanted to see the increase in minor feature adoption. Can you please add that here too?

Commented [2]: The adoption rate and increase were already filtered to Minors for this analysis.

From the test results:

bulb

- The 7-days Screen Time Management Page View Rate for the variant group is 5.95%, significantly higher than the control group at 4.25%.
- The Feature adoption rate for screen time management for variant group is 0.46%, significantly higher than the control group at 0.37%.
- The feature update could significantly improve minor visibility of Screen Time Management Page.
- The feature update could significantly improve feature adoption rate of Screen Time Management Page.

3.2.2 Feature-User interaction metrics

umbrella_on_ground

- Without the default enablement, the nature adoption rate for the feature is as low as 0.91%
- Users are willing to keep the feature enabled after default enablement. The Opt-out rate for default enabled users is only 1.32%.

3.3 Guardrail Metrics

chestnut

- Test results of DAU, Stay Duration, and Retention metric discrepancies between the control and variant group are light(<0.5%) and not statistically significant.
- The feature impactions on DAU, Stay Duration, and Retention are neutral.

DAU Impact

Core-Active Days (CUPED)		At baseline from control	significant level 5%	Relative difference	Chart	Key
Experimental group	Day	Last 1-day Active Days	Last 3-day Active Days	Last 7-day Active Days		
v1 Control	1,033,804	0.385493	1.15988	2.08238		
v2	-0.159%	-0.095%	-0.143%	-0.632%		
	No significant diff	±0.357%	±0.507%	±0.281%		
	1673219	0.19973	1.16761	2.08117		

Stay Duration Impact

Core-Key Metrics (CUPED)		At baseline from control	significant level 5%
Experimental group	StayDurationAll	User	
v1 Control	3,034,897	1,033,894	
v2	-0.198%	-0.159%	
	±0.381%	No significant diff	
	15786293	15833379	

Stay Duration Percentile		At baseline from control	significant level 5%	
Experimental group	stay_duration_pct_25	stay_duration_pct_50	stay_duration_pct_75	stay_duration_pct_99
v1 Control	299.243	1,388.714	4,077.839	8,314.639
v2	-0.545%	-0.275%	-0.301%	-0.141%
	±1.152%	±0.633%	±0.484%	±0.489%
	526497	1.06e07	4.05e01	6.26e04

Retention Impact

> Retention By Experiment

Experiment time series

📄 Data output

Experimental group	1 Day Retention	1 Day Retention	3 Day Retention	7 Day Retention	14 Day Retention
+ 1st Cohort	1,033,304	64.4486%	50.862%	43.8122%	37.723%
- 2nd Cohort	-13,159%	-0.131%	-0.0562%	-0.0165%	-0.0093%
1st Cohort (N=100)	1,033,304	64.4486%	50.862%	43.8122%	37.723%
2nd Cohort (N=100)	-13,159%	-0.131%	-0.0562%	-0.0165%	-0.0093%

4. Appendix

Queries:

Test users information:

[REDACTED]

Group Summary for screen time management page view & adoption:

[REDACTED]

Feature adoption & Opt-out

[REDACTED]

[REDACTED]

DOCUMENT SLIPSHEET

Bates Number: TIKTOK3047MDL-099-LARK-04557708-TIKTOK3047MDL-099-LARK-04557712

BEGATTACH: TIKTOK3047MDL-099-LARK-04557703

ENDATTACH: TIKTOK3047MDL-099-LARK-04557810

Attachment Count: 0

PRODVOL: MDL-099

Custodian: CRIMMINS, CHRISTINA; [REDACTED] FURLONG, JORDAN;
[REDACTED] LINTHICUM, RYN; [REDACTED] TENENBAUM,
MATTHEW; [REDACTED]

File Path: /VFHYDQTJNO2PBMXBEVWUFHWTSEC.DOCX

Confidentiality Designation: CONFIDENTIAL

HASHVALUE: F0A427E52822B7EFC3A98A18A34AD6A7

DocType: URL LINK DOCUMENT

Author:

Create Date: 11/22/2022 12:00 AM

Last Modified Date: 11/22/2022 12:00 AM

LAST MODIFIED BY:

TRACK CHANGES:

COMMENTS:

HASHIDDENDATA:

Filename: VFHYDQTJNO2PBMXBEVWUFHWTSEC.DOCX

Title: [A/B ANALYSIS] ENABLE WEEKLY SCREEN TIME UPDATES FOR MINORS

DOCEXT: DOCX

Email From:

Email To:

Email CC:

Email BCC:

Received Date:

Sent Date:

TIMEZONE:

Subject:

THREADID:

REDACTIONS:

REDACTION TYPE: