Logcat professional study:

App Transitions:

2025-01-17 01:36:18.363 I: [Focus leaving cea0dc7 com.conena.logcat.reader/com.conena.logcat.reader.ui.main.MainActivity]

Show when the user stopped interacting with one app and moved to another.

Lock/unlock - Screen State Transitions:

Logs like `Screen on for display=Display id 0` indicate when the screen was turned on.

2025-01-17 01:36:12.822 D: Screen on for display=Display id 0

Screen off ?

2025-01-17 01:57:25.694 D: onBacklightChanged: change screen state 3(On) -> 0(Off)

Usage time :

By analyzing timestamps between `Screen on` logs and subsequent app interactions (`Focus entering`), we can estimate how long the user stays active after unlocking the screen.

So, we can study which apps were used, for how much time, and lock/unlock status and durations.

We CANNOT access GPS(location) details, and in depth activity of apps

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Logcat extreme study:

Application usage durations

Notification panel :
Example: `12-13 09:38:23.046 3006 4819 I notification_panel_revealed: 0`

App specific info : like playback of spotify app

Example: `12-13 09:38:45.473 3006 3006 I notification_enqueue: [10312,11636,com.spotify.music,2131430918,...category=transport]`
The Spotify playback notification (`category=transport`) confirms active listening.

Location : only tells that it's active, but no info on exact location

CANNOT get location details, and in depth details of apps like whatsapp, etc.

— if we want to do something novel, both these applications won't get to the level of granularity we need

Proposition :

We can build a new application, using existing APIs to measure the data we want :

- Apps usage, in depth
- Location
- Screen status
- Microphone, light sensors
- Call logs, etc.