

# Exhibit 209

**From:** [REDACTED]  
**To:** [REDACTED]  
**Sent:** Mon, 06 Feb 2017 21:02:51 +0000  
**Subject:** Re: user location product excellence  
**Cc:** [REDACTED]  
[REDACTED]

[illegible]

On 2 February 2017 at 20:00, [REDACTED] wrote:

On Thu, Feb 2, 2017 at 1:56 PM [REDACTED] wrote:

hey [REDACTED], I'll go ahead and schedule a 1:1 to get some guidance as to how to package all of this discussion in one item that's presentable to [REDACTED]. To be clear - Platform Excellence, as I initially conceived of it, is not a Critical User Journey. It's a client-facing excellence for [REDACTED] org is in the same boat, so to speak. I think I'll follow that track separately from what the CUJs that [REDACTED] is our task force is looking at. (unless you guys think we should have a Platform Excellence as an entry in that list and focus on internal "users" a la Geo as a Platform). I didn't get the sense that the task force is particularly passionate about platforms.

I have the same sense. I'm not sure if I have very good ideas about platform excellence either.

That said, we have Location as a product umbrella that includes Location History, [REDACTED] and a bunch of other stuff that's super messy. And it's a Critical User Journey to make sense

out of this mess. This is what I'd like to pursue as part of the task force (and I need help from [REDACTED] por favor :) ).

[REDACTED]

[REDACTED]

On Thu, Feb 2, 2017 at 8:55 AM, [REDACTED] wrote:

[REDACTED], regarding your last point, what do you feel we should put together as a vehicle for persuasion to the PE task force?

Should it be questions, answers/proposal, or a sad story about our current state?

On Thu, Feb 2, 2017 at 08:52 [REDACTED] wrote:

Very good points. Thanks for caring about it!

I'm adding [REDACTED] and [REDACTED] who have been helping build a robust PE story around user location.

Also, take a look at [REDACTED] - work in progress, trying to rein in the overall mess that we have with regards to data collection, consent, and storage.

I hope we could land on [REDACTED] top 5 as "make user location work and make it simple".

On Thu, Feb 2, 2017 at 08:32 [REDACTED] wrote:

I wrote this note on the main thread with [REDACTED]

"User location issues. I have trouble framing exactly the CUJ here. I believe users mostly expect that Google knows their precise location when they are using GMM or searching from a mobile device. Yet we often don't know where they are. How can we provide a good location for every user who wants it? How can we be clear and transparent when we don't know precisely where they are? How can we do a great job of respecting people's privacy when they don't want to share their location. Tests: This one feels pretty broad. In fact there's a team in local that has been working across 3 PAs to make progress on the issue."

I think these issues are kind of related to your platform excellence ideas. As I think about it:

- Users expect we know where they are right now almost all of the time.
- Do users with significant privacy concerns understand what data we are saving? Do they know how to control when we store location information?

- Can we have a foreground only model? Lots of users don't care about location history.
- Do users understand how their apps location usage connects to system-settings or resource usage?

Perhaps we should talk about this 1:1 and see if we can figure out how to be most persuasive in the larger task force.

[REDACTED]

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[REDACTED]

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[REDACTED]

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[REDACTED]

# Exhibit 215

**From:** [REDACTED]  
**To:** [REDACTED]  
**Sent:** Mon, 15 Apr 2019 16:23:20 -0700  
**Subject:** Re: [REDACTED] Tracking Phones, Google Is a Dragnet for the Police  
**Cc:** [REDACTED]  
[REDACTED]  
[REDACTED]

On Mon, Apr 15, 2019, 4:16 PM [REDACTED] > wrote:

If a taxi driver's path was deemed 'good enough' for law enforcement to ask for & us to release their personal information, that's enough for me to want to ask some questions.

Sure, you should reach out to our lawyercats with questions about how we respond to warrants.

I doubt anyone is going to give you an answer on industryinfo, and I for one will surely not speculate.

I feel like erring on the side of validating people's expectations for keeping their information away from potentially unreasonable uses by the government is anyone's job who works here.  
[REDACTED]

On Apr 15, 2019, at 3:46 PM, [REDACTED] > wrote:

> They did randomly search for people in the area though, in my opinion.

I don't have enough information, from the article or otherwise, to assess that :)

On Mon, Apr 15, 2019 at 3:42 PM [REDACTED] > wrote:

They did randomly search for people in the area though, in my opinion. The initial phase of the warrant provides anonymized locations of many devices in a given region over an asked-for period of time.

From the article:

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"Often, Google employees said, the company responds to a single warrant with location information on dozens or hundreds of devices."

"This year, one Google employee said, the company received as many as 180 requests in one week. Google declined to confirm precise numbers."

"The new orders, sometimes called 'geofence' warrants, specify an area and a time

period, and Google gathers information from Sensorvault about the devices that were there. It labels them with anonymous ID numbers, and detectives look at locations and movement patterns to see if any appear relevant to the crime. Once they narrow the field to a few devices they think belong to suspects or witnesses, Google reveals the users' names and other information."

"The areas they targeted ranged from single buildings to multiple blocks, and most sought data over a few hours. In the Austin case, warrants covered several dozen houses around each bombing location, for times ranging from 12 hours to a week. It wasn't clear whether Google responded to all the requests, and multiple officials said they had seen the company push back on broad searches."

--

I am dubious that 180 times in one week, law enforcement officers had amazingly specific information that would allow them to precisely identify one person's path in a way that wouldn't accidentally ensnare others.

Here's just one instance mentioned in passing of accidentally ensnaring someone looks like: "In Minnesota, for example, the name of an innocent man was released to a local journalist after it became part of the police record. Investigators had his information because he was within 170 feet of a burglary. Reached by a reporter, the man said he was surprised about the release of his data and thought he might have appeared because he was a cabdriver. "I drive everywhere," he said."

████

On Apr 15, 2019, at 3:29 PM, ██████████ wrote:

My point was that the warrant requires some initial evidence to obtain, which in this case is footage of the person's vehicle linked with the crime; it's not like they were fishing for any random person who happened to be in the area, which I agree would've been far more scary.

On Mon, Apr 15, 2019 at 3:19 PM ██████████ wrote:

I don't think the headline is what's scary here though. It's the geofence warrant.

████

On Apr 15, 2019, at 2:48 PM, ██████████  
██████████ wrote:

Something no one in this thread has mentioned yet is the fact that the crime

was committed with the person's car, and the police had actual footage putting the car in that location. The explanation given here is:

> Last month, the police arrested another man: his mother's ex-boyfriend, who had sometimes used [REDACTED] car.

What makes this even stranger is, if the ex-boyfriend was driving the car, then why was his location in the area? To that, they give the following answer:

> his investigation found that [REDACTED] had sometimes signed in to other people's phones to check his Google account.

While it's easy to see a headline like this and reach directly for the panic button, I think the actual circumstances here are fairly unique.

On Monday, April 15, 2019 at 2:37:07 PM UTC-7, [REDACTED] wrote:

Moving to [REDACTED] for the GMM release process.

On Mon, Apr 15, 2019 at 2:31 PM [REDACTED] > wrote:

[REDACTED]

Cross-posting this thread to the Google Maps Mobile discussion group for visibility.

On Mon, Apr 15, 2019 at 2:23 PM [REDACTED] wrote:

Merely carrying a cell phone enters you into that territory, as the police have been using cell-tower location data for many years. Specifically with Google, #2 "location history" is what you are concerned about. NYT has a discussion on how to disable it:

<https://www.nytimes.com/2019/04/13/technology/google-sensorvault-location-tracking.html>

On Monday, April 15, 2019 at 2:19:00 PM UTC-7, [REDACTED] wrote:

I think this is where the problem lies.  
I'd want to know which of these options (some?



all? none?) enter me into the wrongful-arrest lottery.

And I'd want that to be very clear to even the least technical people.

████

On Apr 15, 2019, at 2:13 PM, █████  
████ wrote:

It looks to me you're mixing a few things:

- 1) **Device-level location**: that's the "Location" on the quick settings or "Location Services", that enables your device to use GPS & other info to obtain the device's location. Naturally, if you turn that off, you can get the phone's location, and can't use navigation, or find your location on Maps.
- 2) **Google account Location History**: this is the "Location history" toggle you find in your Google account settings, and enables recording of your location history in your Google Activity. If you disable this, everything still seems to work (expect products/features that use your location history, naturally).
- 3) **Your Timeline**: this is the Google Maps feature that takes your location history and converts to your "itinerary", with places you visited and activities. Turning this off has no impact on your Location History

Google Maps doesn't need (1) enabled to work (I just tested it), but it does need (1) enabled to (duh) have your location. It doesn't need (2) enabled to work, or (3).

> What else won't work without Location services? Navigation? Play store? Netflix? GPS tracking?

Location services IS GPS tracking. I just tested and all of that work with location services disabled,

except for navigation as, naturally,  
you won't have your location to be  
able to navigate.

In practice, only (1) and (2) matter.

On Mon, Apr 15, 2019 at 2:00 PM [REDACTED]  
[REDACTED] wrote:

On Mon, Apr 15, 2019 at 4:13 PM  
[REDACTED]  
[REDACTED] > wrote:

>  
> > Is there an internal document anywhere that lists all of the cases  
where location information is  
recorded when the user has opted-out  
of location sharing?  
>  
> If you disable the Location toggle on Android (it's available in Quick  
Settings), there are no such cases.  
The phone doesn't localize, so no  
location data is stored, because no  
location data is generated.  
>

Speaking as a user, WTF? More specifically I **\*\*thought\*\*** I had  
location tracking turned off on my phone. However the location toggle  
in the quick settings was on. So our messaging around this is enough  
to confuse a privacy focused Google-SWE. That's not good.

Second, after turning off the Location toggle, I go to maps. Now it  
can't find my location and prompts me to turn location services back  
on. That's **\*\*two\*\*** fails:

Fail #1: Maps refuses to take No for an answer. Although I turned off  
location services 20 seconds earlier, Maps is trying to make me second  
guess my conscious decision. This is the "Not Now, maybe later"  
antipattern that we still can't seem to wean ourselves off of. What  
else won't work without Location services? Navigation? Play store?  
Netflix? GPS tracking?

Fail #2: \*I\* should be able to get \*my\* location on \*my\* phone  
without  
sharing that information with Google. This may be how Apple is  
eating  
our lunch. I'm not an iOS expert by any means, but it seems Apple  
does  
not rely nearly as heavily as we do on transmitting user-identified  
information into the cloud into order to work with it. They're much  
more likely to leave the user's data on the user's devices.

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[REDACTED]  
[REDACTED]

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For more options, visit this group at  
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# Exhibit 218

From: [REDACTED]  
To: [REDACTED]  
Sent: Thu, 23 Jun 2016 03:08:03 +0000  
Subject: Re: [REDACTED] privacy review  
Cc: [REDACTED]  
[REDACTED]

Ok, I will add another team for the second half.  
[REDACTED]

On Wed, Jun 22, 2016 at 5:53 PM [REDACTED] wrote:

I don't think I'll need the whole hour, the group chat section is left.

On Wed, Jun 22, 2016 at 8:28 PM, [REDACTED] wrote:

Hi guys, just want to get peoples opinion on whether we need the whole hour to continue this discussion?  
[REDACTED]

On Mon, Jun 20, 2016 at 9:27 AM [REDACTED] wrote:

On it.

On Mon, Jun 20, 2016 at 7:50 AM [REDACTED] wrote:

[REDACTED], can you add [REDACTED] to the deep dive meeting this Friday so we can cover the group conversation features?

On Wed, Jun 15, 2016 at 8:42 PM, [REDACTED] wrote:

On Wed, Jun 15, 2016 at 7:19 PM [REDACTED] wrote:

I think most of the relevant bugs I would have listed were all covered by bullets in those slides, so should be sufficient for starting the discussion.

Random musings off the top of my head:

[REDACTED]  
[REDACTED]

This is notifications, I added a slide on it in the group section so we can talk about it

There is a concern that [REDACTED]  
[REDACTED]

[REDACTED]. For example [REDACTED] is wanting to use [REDACTED]  
[REDACTED] Similarly, I'm sure we are [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]  
[REDACTED] [REDACTED] [REDACTED]  
(Search normally stores precise locations for signed-in WAA users)

[REDACTED] [REDACTED]  
[REDACTED] [REDACTED] [REDACTED]  
[REDACTED]

I think the intricacies of when to show preview warrants a lot of discussion. "The user must know what is being shared" sharing tenet should be applied pretty liberally.

Yep, it's complicated

It's also worth a lot of discussion on the group memory model. In theory it all sounds reasonable, but I imagine there are some crazy edge cases that are going to crop up.

It is indeed crazy. If you want more documentation, there's some here: [REDACTED]  
[REDACTED]

Looking forward to the discussion on Friday; it looks like [REDACTED] has come a long way recently!

Cheers,  
[REDACTED]

On Wed, Jun 15, 2016 at 3:42 PM, [REDACTED] wrote:

I'll be the one giving the overview. I have some mostly done slides here: [REDACTED]  
[REDACTED]

There's a less complete PDD, but I think the slides are a better place to start.

On Wed, Jun 15, 2016 at 6:26 PM, [REDACTED] wrote:

The only thing I have at the moment is random bugs and thoughts going through my head, but I can try to aggregate some of it before the meeting and send it out.

Cheers,  
[REDACTED]

On Wed, Jun 15, 2016 at 3:19 PM, [REDACTED] wrote:

Just updated the cal entry.

do you have any links, slides, or does you want to share ahead of time so I can add them to the calendar and give people the chance to go over them ahead of time?

On Wed, Jun 15, 2016 at 2:02 PM wrote:

Nothing else on the docket so we can use the whole hour :-).

Regards,

On Tuesday, 14 June 2016, wrote:

+1 to a full hour if possible.

On Tue, Jun 14, 2016 at 5:44 PM wrote:

Oh, and I'm not sure what else is on the docket, but it wouldn't surprise me if we needed the whole hour. There's a lot to cover.

On Mon, Jun 13, 2016 at 12:45 PM, wrote:

Thanks for bringing this up.

Hey

Friday's 10am deep dive is typically a good time scheduling wise. I will add you to the invite for this Friday. If we end up needing to bring it forward, we can coordinate when the best time will be :-).

Regards,

On Monday, 13 June 2016, wrote:

I'm happy to join in at Friday's pwg, or if there is another time that works for everyone this week, I'm happy to do it earlier if that helps.

Cheers,

On Mon, Jun 13, 2016 at 7:43 AM, wrote:

Hi, the launch is coming up, and I think it would be useful to have another privacy review sooner rather than later. Can we add it to this Friday's pwg-k deep dive?





