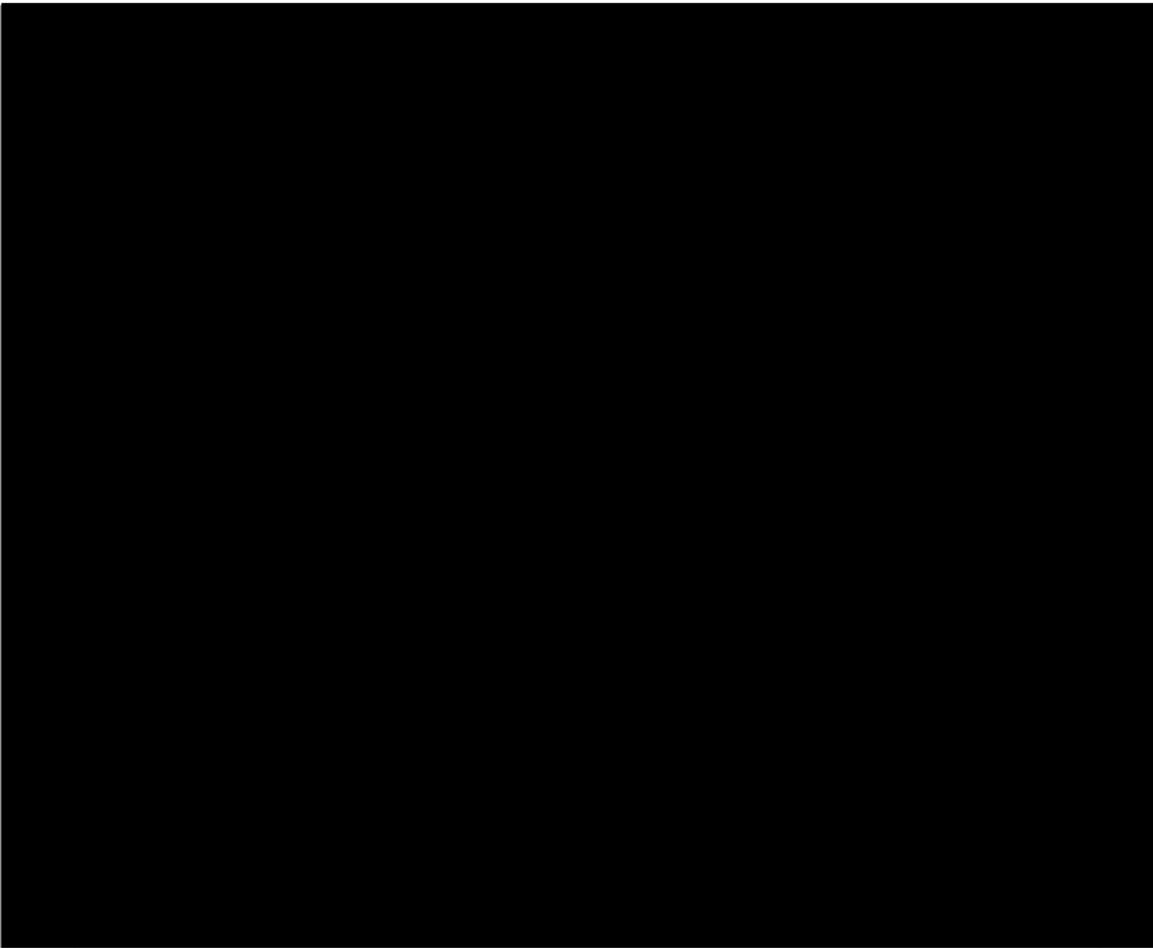


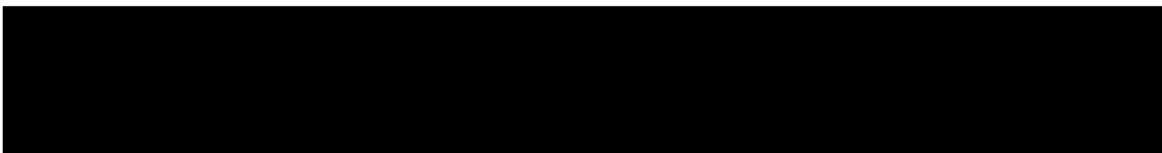
# Exhibit 78





Visibility	External
Patent review	
Privacy Master Tracking Bug	
Location Platform	
Privacy Launch Document	
Security attributes	
Needs security review	No
Security Justification	
Security ticket(s)	
Production attributes	
Production Ticket ID	
LCE status	None
SREs	

GWS SRE	
Search consulting	
LCE tracking	
Risky reason	
LCE notes	
<b>Latency attributes</b>	
Latency data	
<b>Logs attributes</b>	
Logs Ticket Link	



--

You received this message because you are subscribed to the Google Groups [REDACTED]  
[REDACTED] " group.

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[REDACTED].

To post to this group, send email to [REDACTED]

Visit this group at [REDACTED]

For more options, visit [REDACTED]

--

# Exhibit 79



	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
Creator	[REDACTED]

Approvers:

App and Product Infrastructure: Identity	Status	Owners
[REDACTED]	Approved	[REDACTED]
[REDACTED]	Approved	[REDACTED]
[REDACTED]	Approved	[REDACTED]
[REDACTED]	FYI	[REDACTED]
[REDACTED]	Approved	[REDACTED]
[REDACTED]	FYI	[REDACTED]
[REDACTED]	REDACTED - PRIVILEGE	[REDACTED]
[REDACTED]	FYI	[REDACTED]
[REDACTED]	FYI	[REDACTED]
[REDACTED]	FYI	[REDACTED]
[REDACTED]	Approved	[REDACTED]

Launch Attributes:

Global attributes	
PM	[REDACTED]
TL	[REDACTED]
Design Document	[REDACTED]
UI mockups	
Privacy Design Document	[REDACTED]



Launch Stage Full Launch

L-Team No

Privacy Master Tracking Bug

Houston: Launch Experiment Name

Houston: Affected Actions

Houston: Min Build Version

Identity attributes

Privacy Launch Document

Countries N/A

Languages N/A

Launch Bug

Demo

Impact





ry	
<b>Security attributes</b>	
Needs security review	No
Security Justification	<p>No change to existing systems. This launch uses existing paths for disabling an on-device bit to also allow for enabling of the on-device bit. Previous approvals under these three launches: [REDACTED] is the nacho release with complete list of reviews on initial [REDACTED] launch where these settings were created [REDACTED] 0 is the manchego launch which include app indexing (the feature being enabled at the account level by [REDACTED] settings above [REDACTED] - Manchego security reviews - linked to section [REDACTED] is the Google Now launch that featured the new opt-in flows with the new settings. Additional references:</p> <p>[REDACTED]</p>
Security ticket(s)	
<b>Production attributes</b>	
Production Ticket ID	
LCE status	None
SREs	
GWS SRE	
Search consulting	
LCE tracking	
Risky reason	
LCE notes	
<b>Logs attributes</b>	
Logs Ticket	

Link	
Latency attributes	
Latency data	No change to existing systems

Recipients



# Exhibit 84

[REDACTED]

If there is no location in the [REDACTED] and none in location history, then the Feed backend [REDACTED] never calls [REDACTED] k and never snaps the user to anything (including home/work). This is implemented in [REDACTED].

This has nothing to do with whether an inferred or explicit home/work exists for the user. The [REDACTED] team [REDACTED] and there might be an [REDACTED] based on previous data, even if the user has since turned off location history. You need to confirm that with the [REDACTED] team.

On Sun, Sep 30, 2018 at 11:27 PM [REDACTED] > wrote:

[REDACTED], did this ever launch?

[REDACTED]

It looks like it's set in a launch layer, but that it expires tomorrow:

[REDACTED]

[REDACTED]

On Fri, Sep 28, 2018 at 8:24 PM [REDACTED] [REDACTED] [REDACTED] wrote:

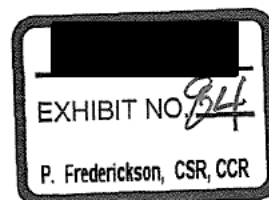
[REDACTED] [REDACTED] for confirmation.

>> In proactive, we read [REDACTED] and try to match the device location in the request OR a location history point

>> If it is within 50m of the location in [REDACTED] column, we snap them to that location. Otherwise, we call the [REDACTED] and trust that response.>>

Frank, do you know where the above logic is called? If the device location is wiped out in the [REDACTED] (code), will the [REDACTED] never be called and there is no inferred home/work?

On Fri, Sep 28, 2018 at 6:15 PM, [REDACTED] > wrote:



Thanks [REDACTED] So this is before the [REDACTED] call, right? Meaning we never make the call to [REDACTED] because [REDACTED]  
[REDACTED]

On Fri, Sep 28, 2018 at 5:50 PM [REDACTED] wrote:

Hi [REDACTED]

We have wiped out the location in this code [REDACTED].

According to this, "this is the earliest place we see the [REDACTED] itself in our GWS plugin."

On Fri, Sep 28, 2018 at 5:42 PM, [REDACTED] wrote:

[REDACTED]

So my read after chatting with [REDACTED]:

- we compare the [REDACTED] data to what we think is actual user location, which we get from device location or Location History. Since for new devices with LH-off we have access to neither (we stopped sending up device location, and we can't check Location History), we do not check the [REDACTED] data.
- for old devices, we still send up device location but scrub in the logs [REDACTED] implemented the scrubbing of this location in the logs [REDACTED] - can you guys let us know where this scrubbing take place so we can figure out if this [REDACTED]

On Fri, Sep 28, 2018 at 4:45 PM [REDACTED] wrote:

Thanks for consolidating this into a single thread :)

[REDACTED] who is the expert on this computation.)

On Fri, Sep 28, 2018 at 4:44 PM [REDACTED] wrote:

In proactive, we read [REDACTED] and try to match the device location in the request OR a location history point [REDACTED]. [REDACTED] of the location in that [REDACTED] column, we snap them to that location. Otherwise, we call the [REDACTED] and trust that response.

Newer client versions do not send a device location in the request for LH off users.

On Fri, Sep 28, 2018 at 3:56 PM [REDACTED] wrote:

Hey [REDACTED], et. al.,  
[REDACTED] (cc'ed) and I were discussing location usage in Search just now, and had a few points we wanted to confirm with you about [REDACTED] behavior for users with Location History paused:

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

Thanks so much!

[REDACTED]  
--

[REDACTED]  
[REDACTED]  
Google  
[REDACTED]



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This email is confidential. If you are not the right addressee, please inform the sender and please erase this email including any attachments.

# Exhibit 201

From: [REDACTED]  
To: [REDACTED]  
Sent: Mon, 6 Aug 2018 11:12:19 -0700  
Subject: Fwd: [REDACTED]

----- Forwarded message -----

From: [REDACTED]  
Date: Mon, Aug 6, 2018 at 11:11 AM  
Subject: Re: [REDACTED]  
To: [REDACTED]  
Cc: [REDACTED]

On Mon, Aug 6, 2018 at 8:37 AM, [REDACTED] wrote:

[REDACTED]

Thanks [REDACTED]

Non-authoritative answers:

1) AFAIK, yes, IIRC, [REDACTED]  
[REDACTED]

(which I don't)

1b) Yes, but you need to flash a no-google-services build and install a 3P location services provider. Location is an API that apps use, and Google's location service uses more than just your raw GPS data, and is a Google service. If you're asking a Google service to determine location, you're asking Google to determine location.

[REDACTED]  
[REDACTED]

2) I believe these two articles cover the topic:  
[REDACTED]  
[REDACTED]

*We collect information about your location when you use our services, which helps us offer features like driving directions for your weekend getaway or showtimes for movies playing near you.*

*Your location can be determined with varying degrees of accuracy by:*

- GPS



- IP address
- Sensor data from your device
- Information about things near your device, such as Wi-Fi access points, cell towers, and Bluetooth-enabled devices

*The types of location data we collect depend in part on your device and account settings. For example, you can turn your Android device's location on or off using the device's settings app. You can also turn on Location History if you want to save and manage your location information in your account.*

[REDACTED]

AFAIK, if you turn location history off, and location services off, there will be no location data obtained by Google from the device, except for your IP if you use a Google service in a browser.

[REDACTED]

My personal phone is a heavily modified image, based on a LineageOS image. It's G-Free. That is why I'm playing on a loaner corp phone.

Curiosity: Does anyone know what SMS messages the phone tries to send right when it comes up after a reboot? My security catches and blocks them (No SMS without manual verification, including the OS). I've not sniffed them.

-----

[REDACTED]

[REDACTED]

And an implementation example here:

[REDACTED]

The `paymentRequestButton` Element gives you a single integration for [Apple Pay](#), [Google Pay](#), [Microsoft Pay](#), and the [Payment Request API](#) —a browser standard that gives your customers the ability to quickly provide you payment and address information they've stored with their browser.

Using this Element, your customers are shown either an Apple Pay button or Payment Request button, depending on what is supported by their device and browser combination. If neither is available, the button is not displayed.

For customers who don't use Apple Pay, the Payment Request button supports browser-saved cards, Google Pay, and Microsoft Pay.

On Fri, Aug 3, 2018 at 3:36 PM [REDACTED] > wrote:

Playing with a loaner corp phone to learn more about android features ...

Enabling location services enables location for "Google Play Service", with the statement that Google Play Service provides the service.

Two questions, assuming location has been disabled for every other app on the locations permissions screen.

1) Does Google get the phone location?

If Yes

1a) Does Google store the location, if the user is not logged in?

1b) Is there a way to enable GPS other than Google Phone service, that can be used by third party apps? In this case, I'm experimenting with trying to use Lyft, who needs the location data. Google does not.

2) Where was I supposed to find this information? My web searches, on google, and moma failed to find the answer. Does this indicate a missing help page somewhere?

The phone I'm playing with is a Nexus5 running 8.1.0

--

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Visit this group at [REDACTED]

To view this discussion on the web visit [REDACTED]

[REDACTED]

[REDACTED]

--

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[REDACTED]

To post to this group, send email to [REDACTED]

Visit this group at [REDACTED]

To view this discussion on the web visit [REDACTED]

[REDACTED]