

# **Bridging the feature gap between Native and the Mobile Web**

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# Three arguments against the Mobile Web

1. Performance
2. Platform conventions
3. Capabilities

# Capabilities: the obvious ones

- Expose optimized, platform-common UX for user interaction.
- Exposing sensors. Touch, location, motion, orientation, light, temperature, humidity, proximity, fingerprinting, ...
- Exposing hardware. Vibration, indicator lights, battery, front and rear cameras, ...

# Capabilities: the operating system

- Add to home screen
- Android: Events and timers, contacts, sms, general connectivity, ...
- Google Play Services: Push messaging, Geofencing, movement, payments, ...

# Challenge: the Web is Safe

- The ephemerality of a website.
- *“Can I show you notifications, either now or at some point in the future? Just in case?”*
- Asking for all the permissions?

# Challenge: interoperability

- Vast differences between platforms.
- John Doe's telephone number? Or also his address? And job title? And spouse?



by [Eline Muijres](#)

# Four projects

- Background synchronization
- Geofencing
- Notifications
- Push messaging

Each depending on Service Workers.



# Background synchronization

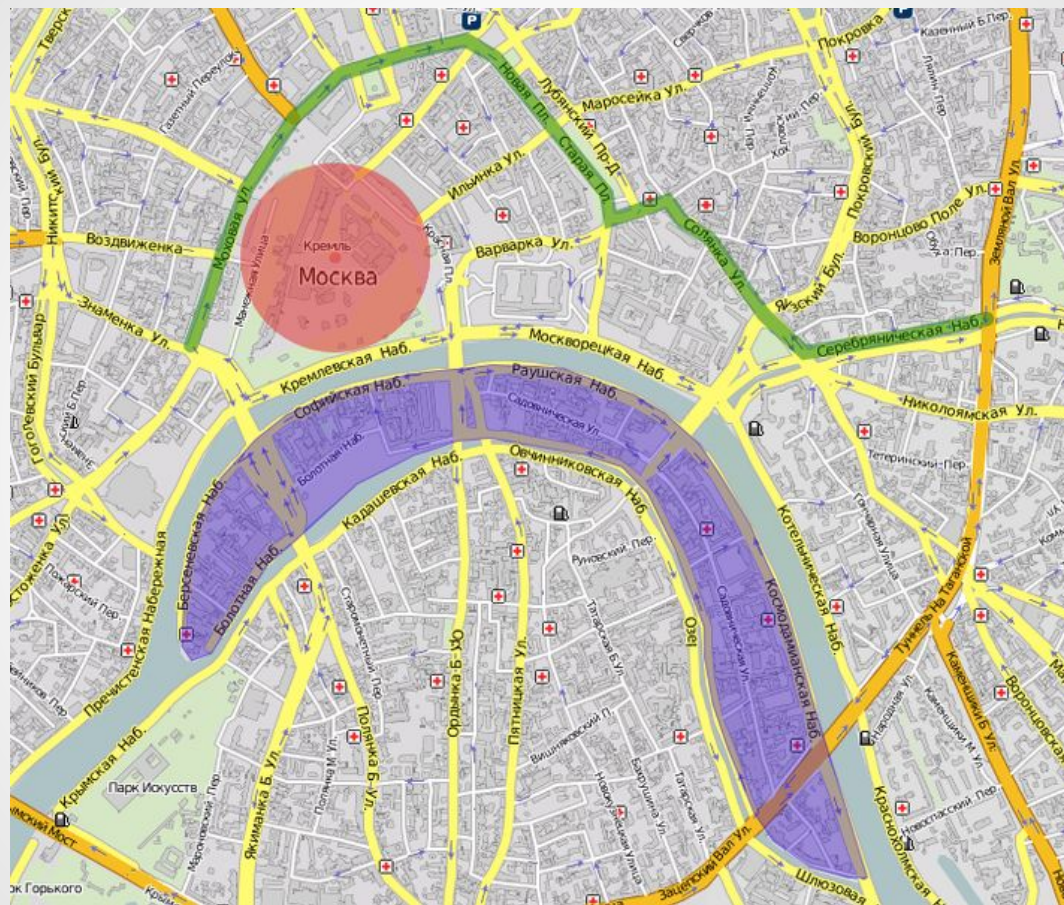
*“There are 113 new tweets on your timeline.”*

1. Page indicates that it wants to synchronize files in the background.
2. Browser *may* wake up the Service Worker and invoke the `onsync` event.

# Geofencing

*“You’ve left your house but kept the heating on”*

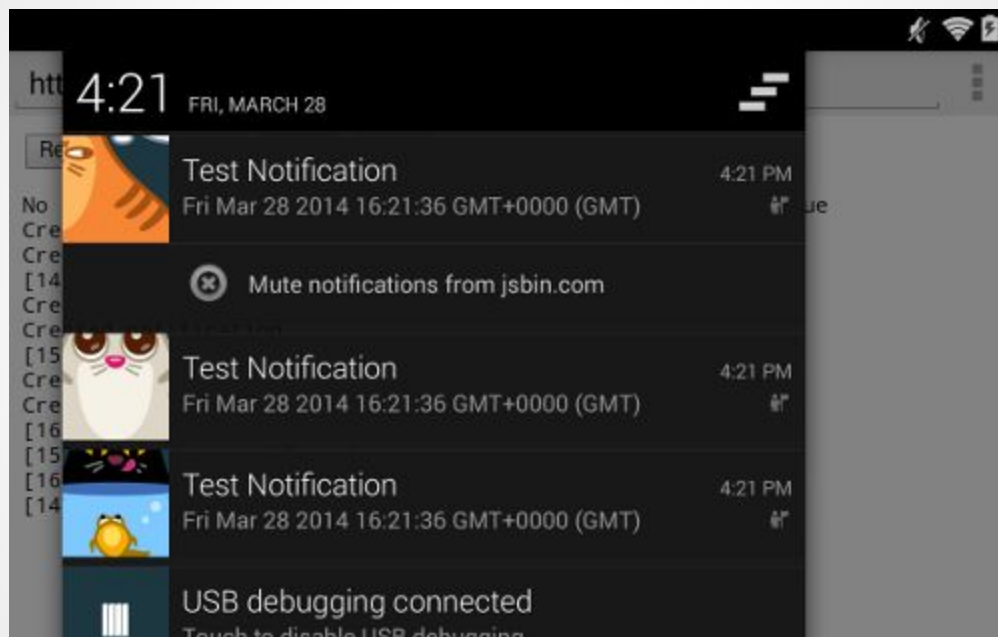
1. Page registers interesting ranges/areas.
2. User moves, is now in range of one of them.
3. Service Worker wakes up, event invoked.



# Notifications

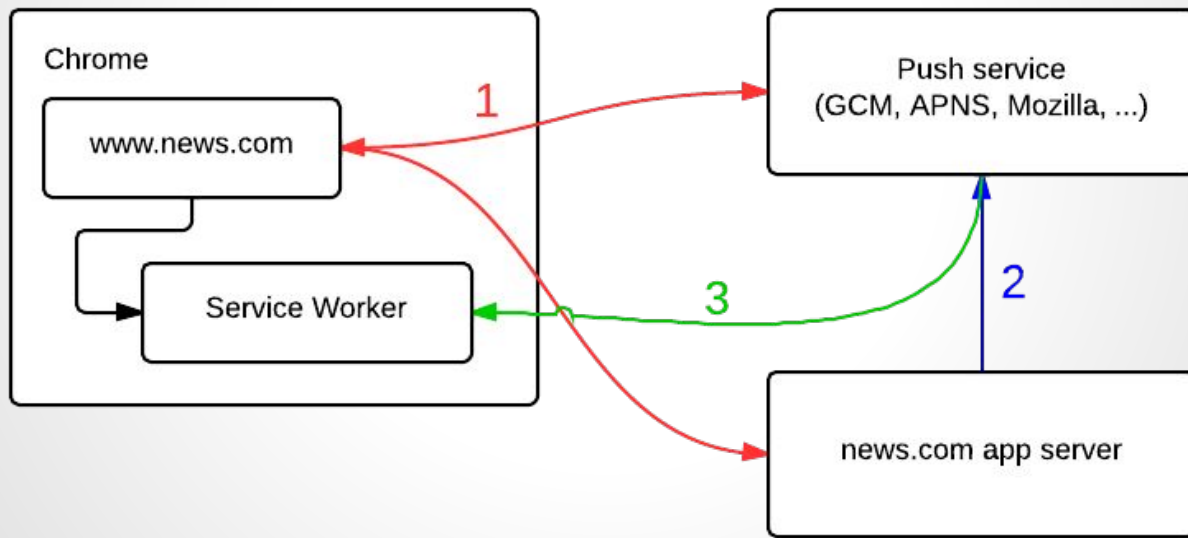
*“Something has happened!”*

1. Page or Service Worker creates a notification.
2. *[clicked]* Service Worker wakes up, `onnotificationactivated` event invoked.



# Push messaging

*“There’s a new bid on your eBay auction.”*



[Specification](#) | [Design document](#)

# The Future

- Early stages, no idea when shipping!
- This is just the beginning.
- The Web is a Platform.

# Thanks!

Want to know or discuss more? Let's plan a breakout session on these topics!

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