

天津GDG I/O Redux 2016



#iob6

Google I/O 2016 Overview





Announcement

Google Assistant

Google Home

Allo / Duo

Android N Developer Preview 3

Android Studio Developer Preview 2.2

Android Wear 2.0

Firebase

Progressive Web Apps

Instant App

Google Assistant



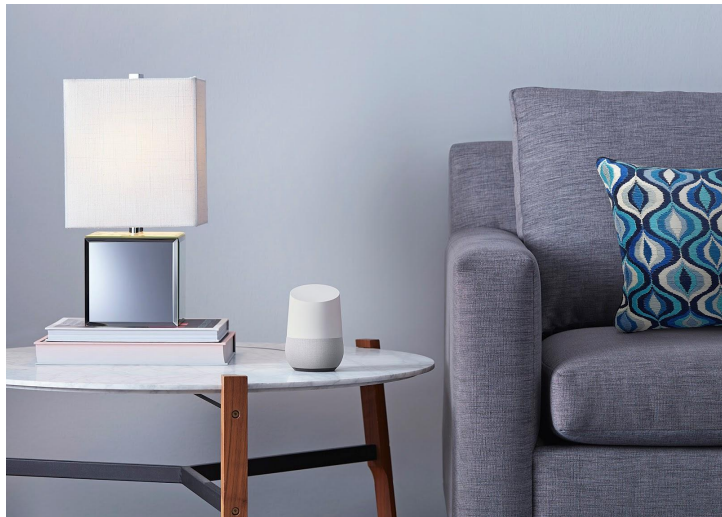
conversational—an ongoing two-way dialogue between you and Google that understands your world and helps you get things done.



Proprietary + Confidential

Google Home

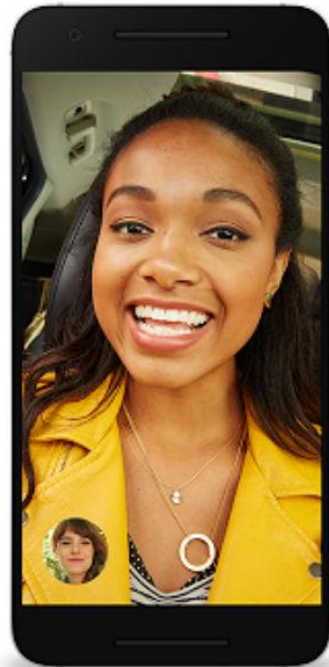
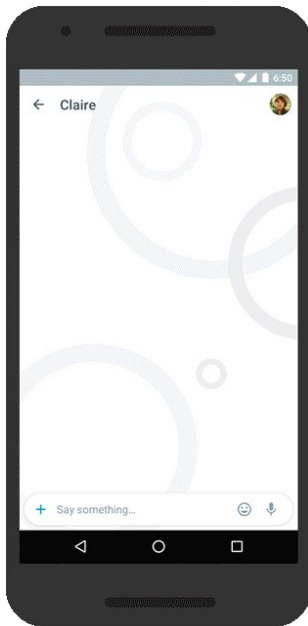
Google Home is a voice-activated product that brings the Google assistant to any room in your house. It lets you enjoy entertainment, manage everyday tasks, and get answers from Google





Allo / Duo

Available this summer!

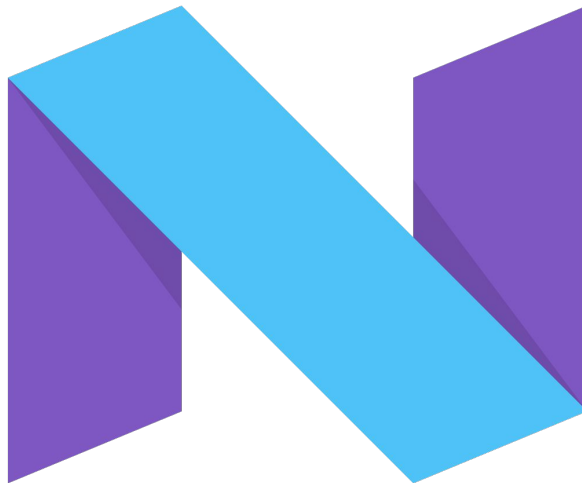


Android N Developer Preview 3

- Multi-Window
- Direct reply notifications
- Bundled Notifications
- Efficiency
- Java 8 language support

And more!!

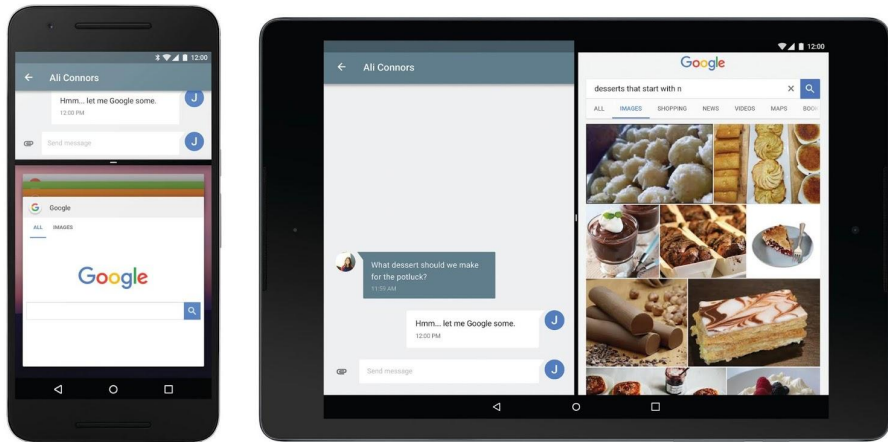
Android Beta Program : android.com/beta



Android N Developer Preview 3

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- Java 8 language support

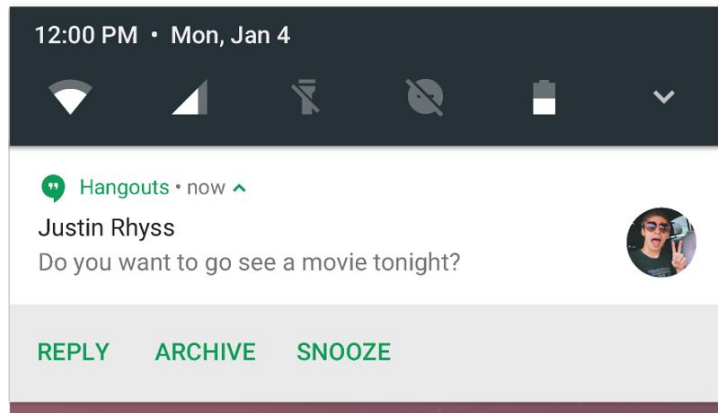
And more!!



Android N Developer Preview 3

- Multi-Window
- [Direct reply notifications](#)
- Bundled Notifications
- Efficiency
- Java 8 language support

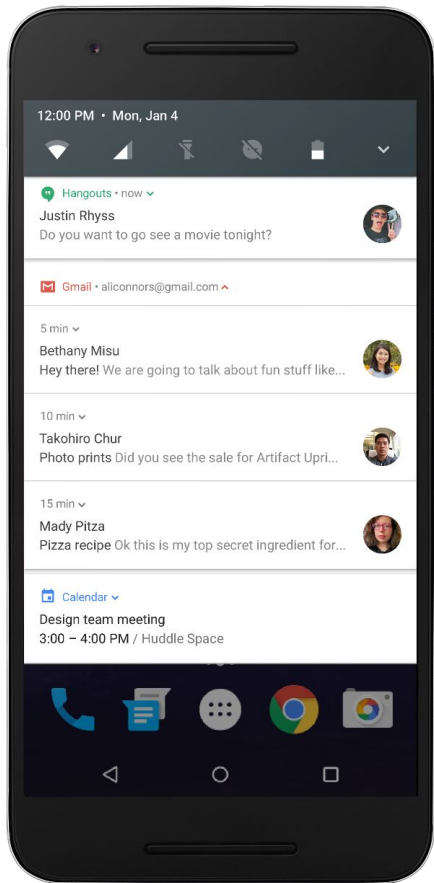
And more!!



Android N Developer Preview 3

- Multi-Window
- Direct reply notifications
- **Bundled Notifications**
- Efficiency
- Java 8 language support

And more!!



Android N Developer Preview 3

Preview Updates

Final Release



Android Beta Program : android.com/beta



android.com/beta



Android Studio 2.2 Preview

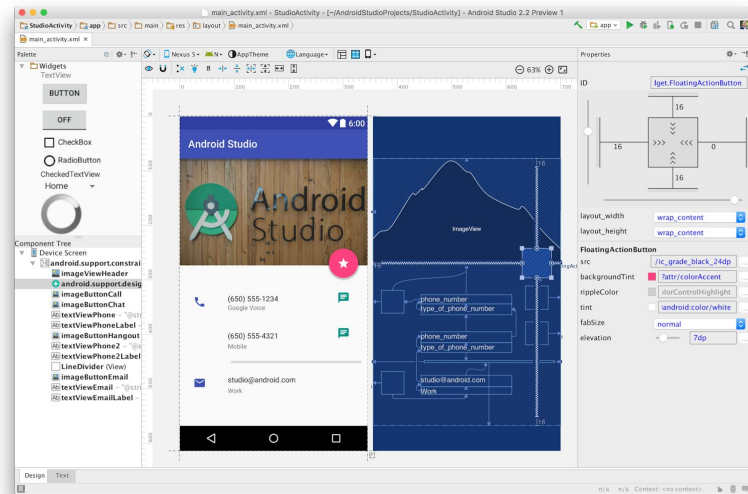
- New Layout Editor
- Constraint Layout
- Firebase Plugin
- Sample Browser
- APK Analyzer

And more...!!



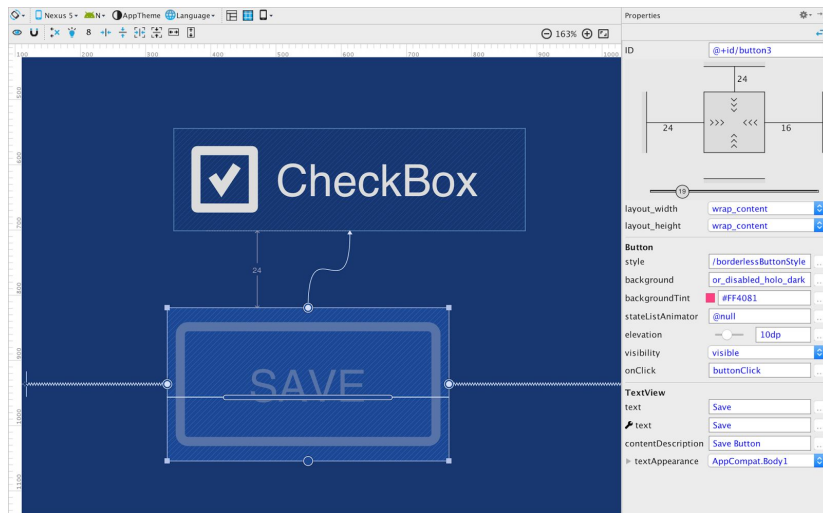
Android Studio 2.2 Preview

- New Layout Editor
 - Drag-and-drop widgets from the palette to the design surface or the component tree view of your app.
 - Design surface has a blueprint mode to inspect the spacing and arrangement of your layout.
 - Properties panel now shows a curated set of properties for quick widget edits with a full sheet of advanced properties one click away.
 - UI builder can edit menu and system preference files.



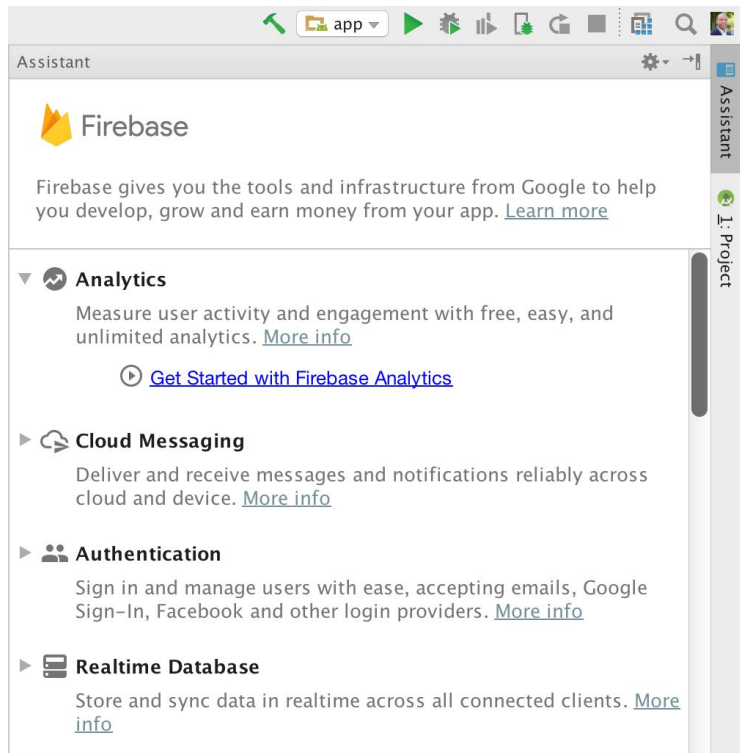
Android Studio 2.2 Preview

- Constraint Layout
 - New layout efficiently express your app design
 - Designed to be used in Studio
 - Backwards compatible to API Level 9
 - Early preview in Android Studio 2.2



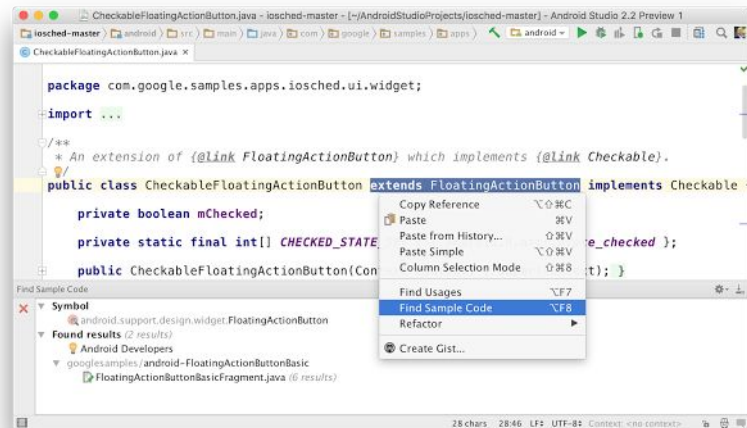
Android Studio 2.2 Preview

- Firebase Plugin
 - Adding Firebase to a new or existing Android app with the new Assistant window
 - <http://tools.android.com/tech-docs/firebase-plugin>



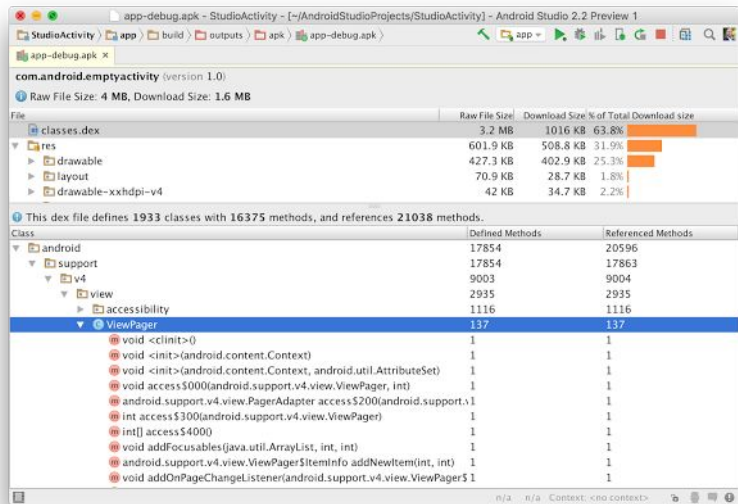
Android Studio 2.2 Preview

- Code Sample Browser
 - Find high-quality, Google-provided Android code samples based on the currently highlighted symbol in your project



Android Studio 2.2 Preview

- APK Analyzer
 - Analyze the contents and the sizes of different components in your APK
 - Can use to avoid 64K referenced method limit
 - Shows both the raw file size and download size of APK



Android Wear 2.0

- Standalone Apps
- New System UI
- Material Design for wearables
- Complication API
- Input Method
- New MessagingStyle notification
- Google Fit platform
- Support for Android N



Android Wear 2.0

- Standalone Apps
 - Access the internet directly over Bluetooth, Wi-Fi, or cellular, without relying on the Data Layer APIs.
 - App can receive push messages via Google Cloud Messaging.
 - App can access AccountManager directly.



Android Wear 2.0

- Input Method
 - Supports Android Input Method Framework (IMF).
 - On-screen keyboard
 -



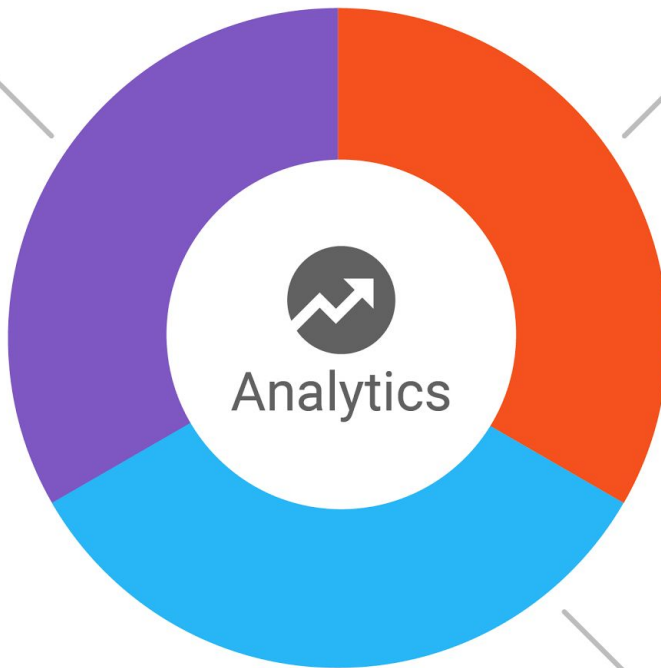
Develop

Backend Services

Realtime Database
Authentication
Hosting
Storage
Cloud Messaging
Remote Config

App Quality Services

Test Lab for Android
Crash Reporting



Grow

Acquisition

Dynamic Links
Invites
AdWords

Re-Engagement

Notifications
App Indexing

Earn

In-app Ads

AdMob

1 BILLION
USERS ON MOBILE
EACH MONTH

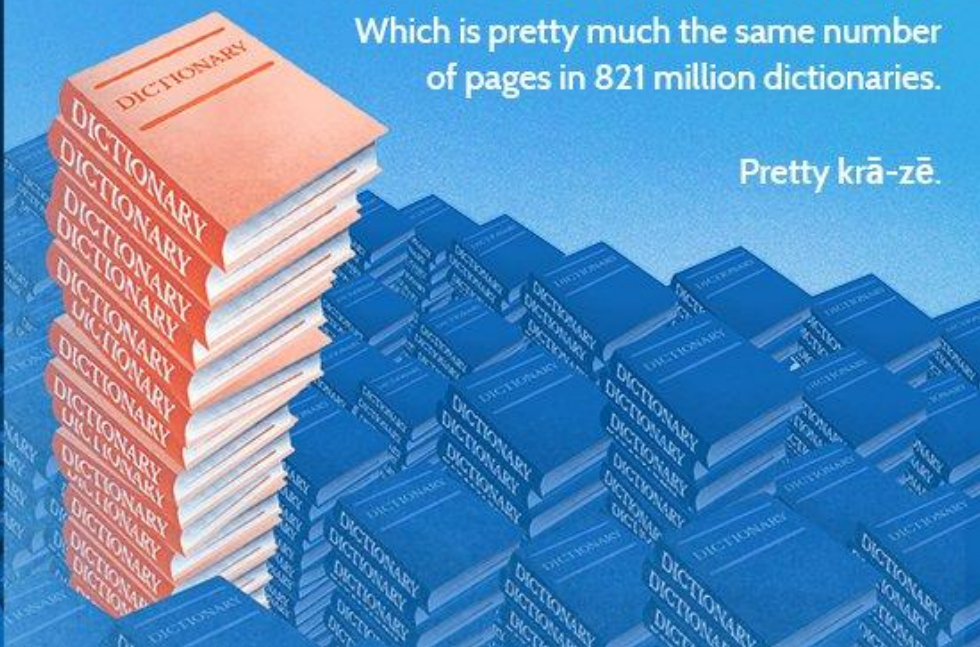
That's about 118 times
the population of New York City.

We ❤️ all of you.

771 BILLION
PAGES LOADED EACH MONTH

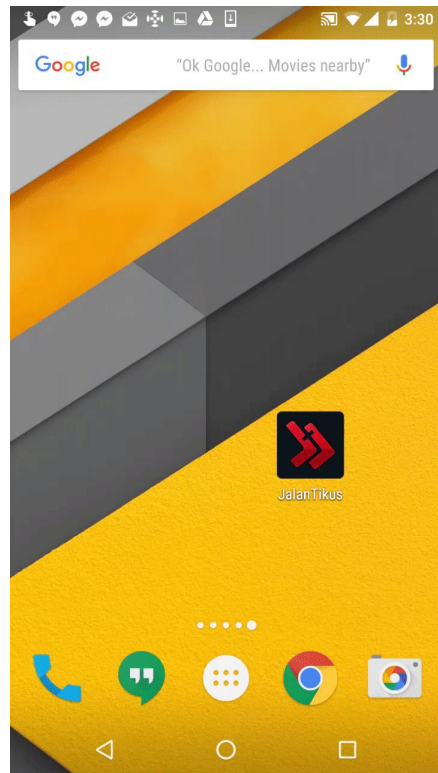
Which is pretty much the same number
of pages in 821 million dictionaries.

Pretty krā-zē.



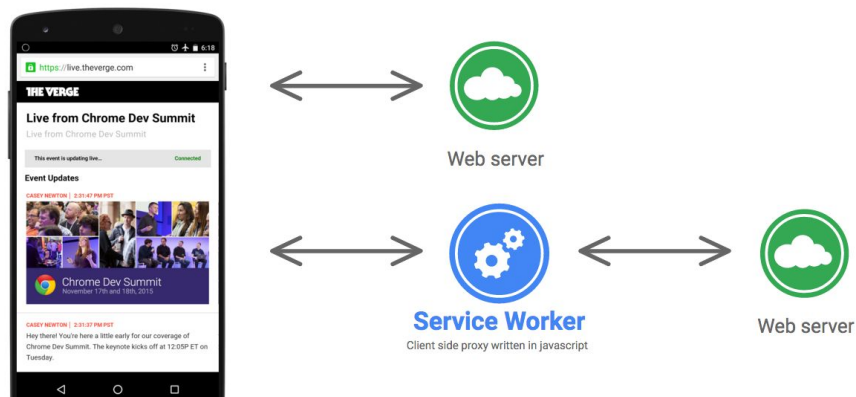
Progressive Web Apps

- App-like experience on the web
- **Reliable:** Fast loading, works on flaky networks
- **Fast:** Smooth animation, scrolling and nav
- **Engaging** and integrated
- On the home screen, no URL bar, icons, splash
- Re-engaging with push notifications
- *Consistent experience across browsers*
- *(still in progress, though)*
-

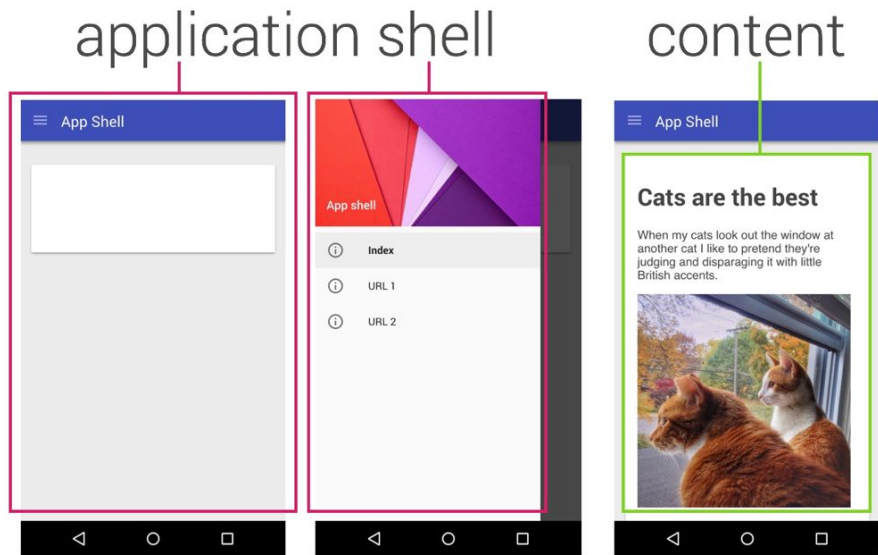


Progressive Web Apps

- Service Worker
 - Client-side proxy in JavaScript
 - Net requests, but also push & sync



Progressive Web Apps



Cached shell loads **instantly** on repeat visits.

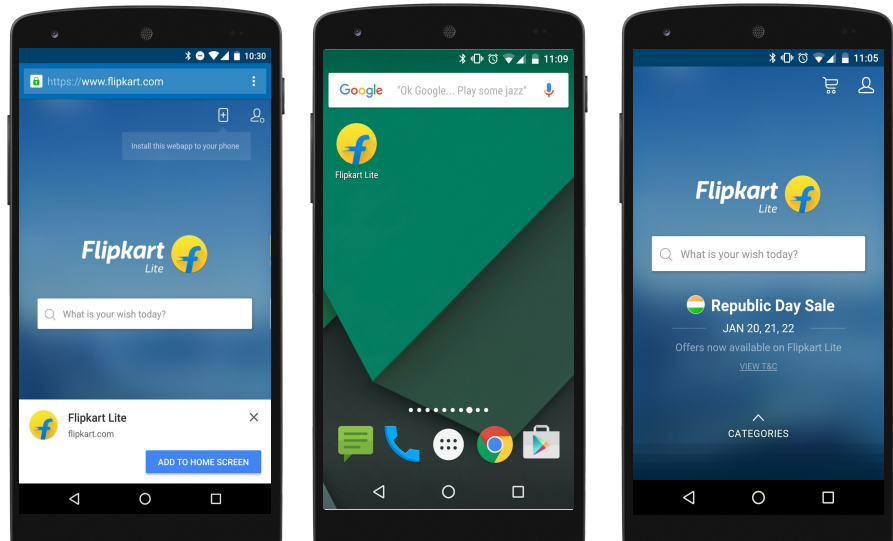
Dynamic content then populates the view

Add to Homescreen and launch in full-screen mode

User who visits 2x in a given time period will be prompted with “add to homescreen”

One tap to add to homescreen

Opens full screen (no URL bar)

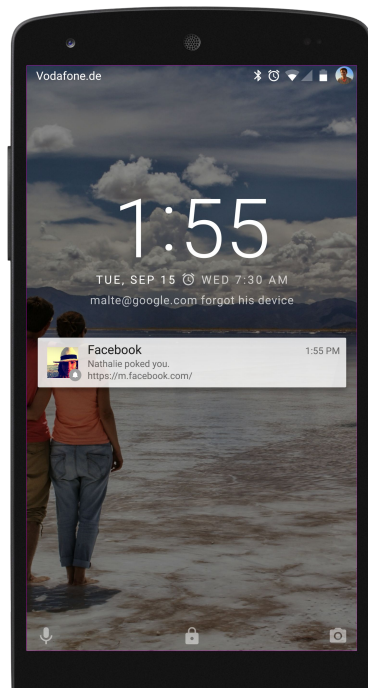


Web push notifications

System level notifications, like apps

Ask to notify users with specific information

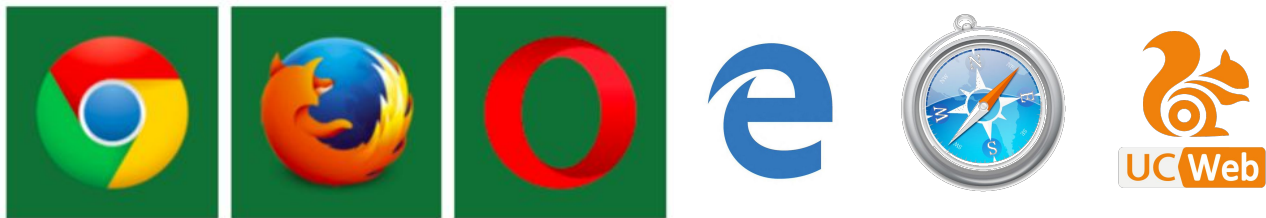
Can send notifications even when page closed



Progressive Web App technologies

Required	Recommended Features
Service Worker	Push notifications
Web App Manifest	Advanced Offline Support
App shell caching	
Splash screen	
Smooth navigation	
“Progressive enhancement” with cross browser support	

PWAs can work across browsers



PWAs should work across all modern browsers

Service Worker available in Chrome, Opera, and Firefox;
“High priority roadmap” for Microsoft Edge,
Safari and UC Web exploring

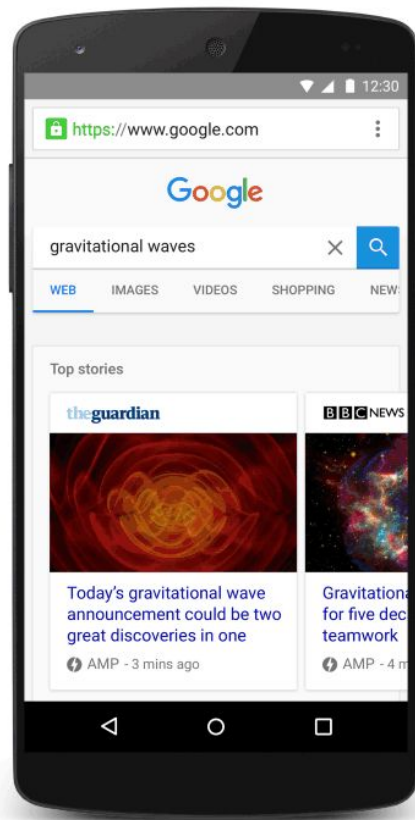
Accelerated Mobile Pages (AMP)

40% of users give up if web page takes 3+ seconds to load

- Less Javascript
- Asynchronous load
- Cache

Faster pages

⇒ More engagement



Instant App

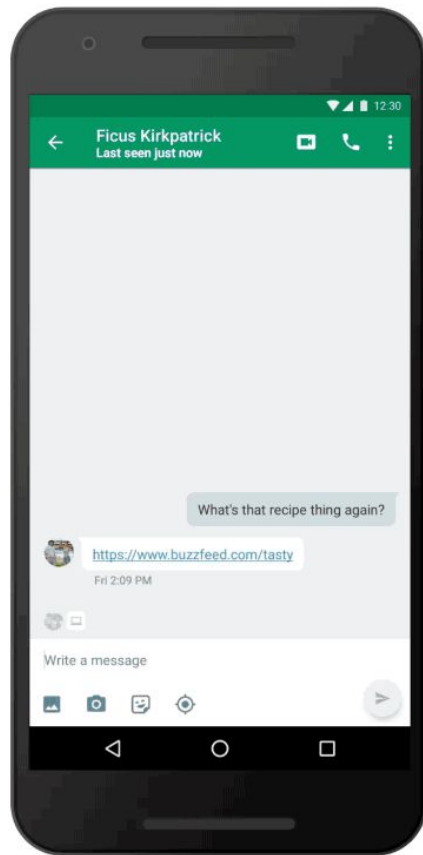
- Native Android App
- No Installation
- Seamless payment & authentications

Need to

- Upgrade to existing app
- Android APIs
- Build in Android Studio

Learn more at

g.co/InstantApps





The Power of Machine Learning & Artificial Intelligence

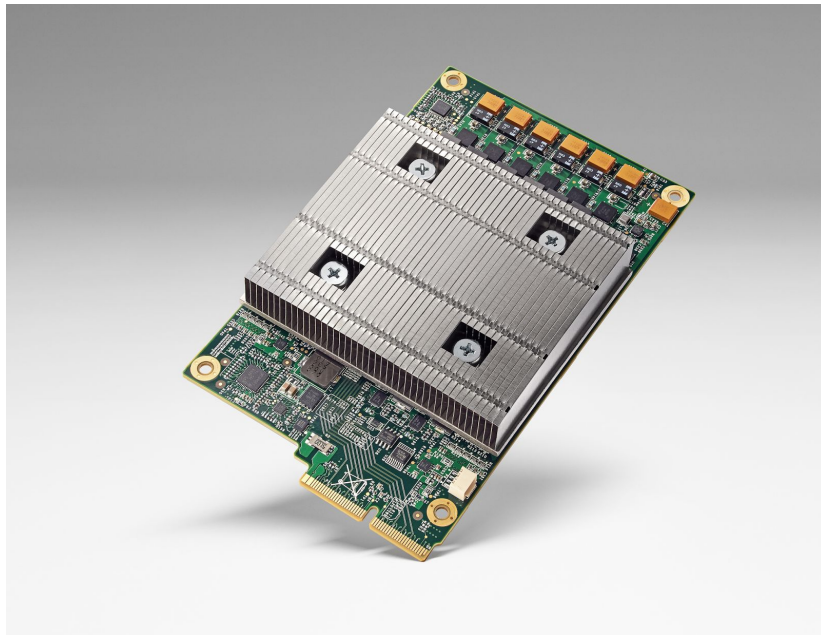




TensorFlow

Tensor Processing Unit (TPU)

Custom ASIC built specifically for machine learning



Thank You!