

# Progressive Web Apps

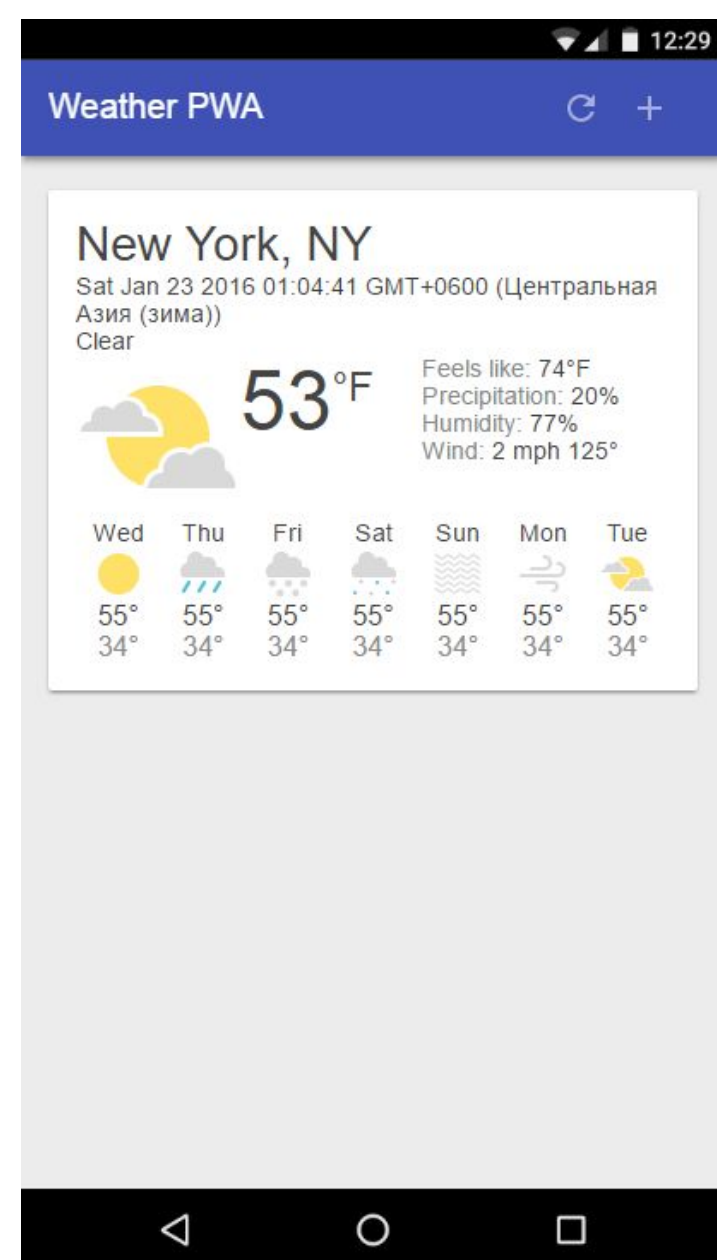
Максим Малов



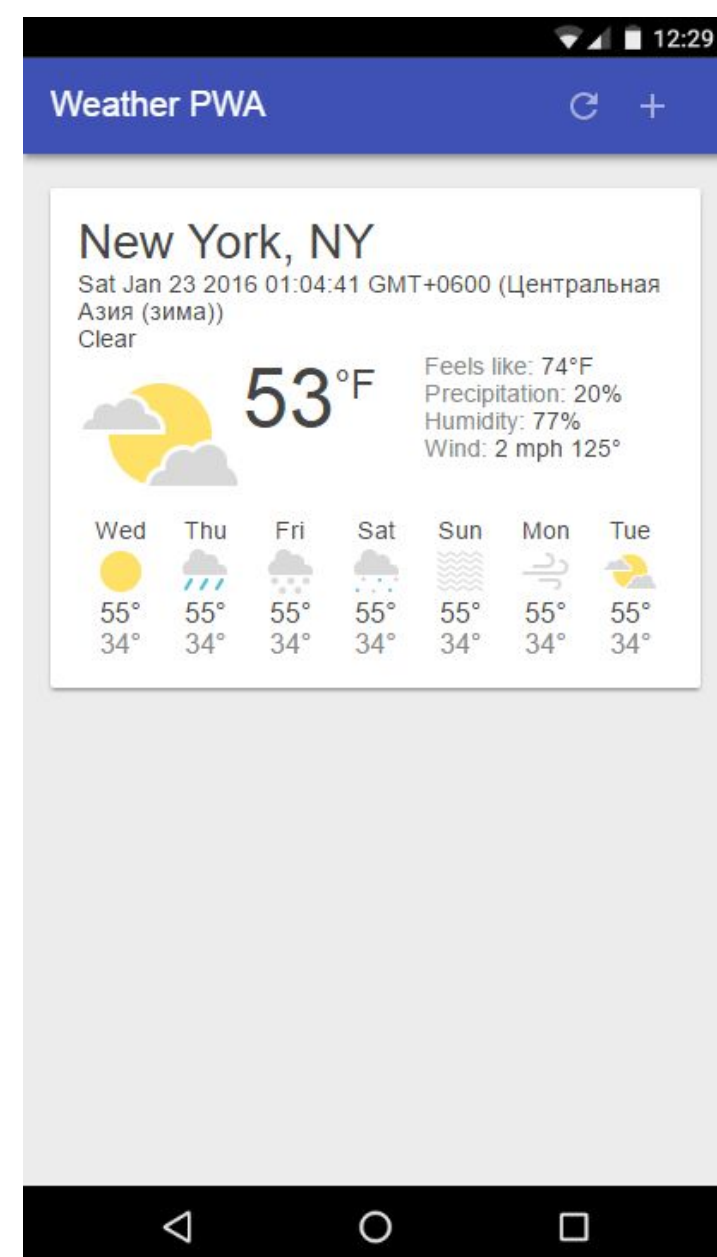
IT – Парк  
18 июня 2016

# Что ты такое?!

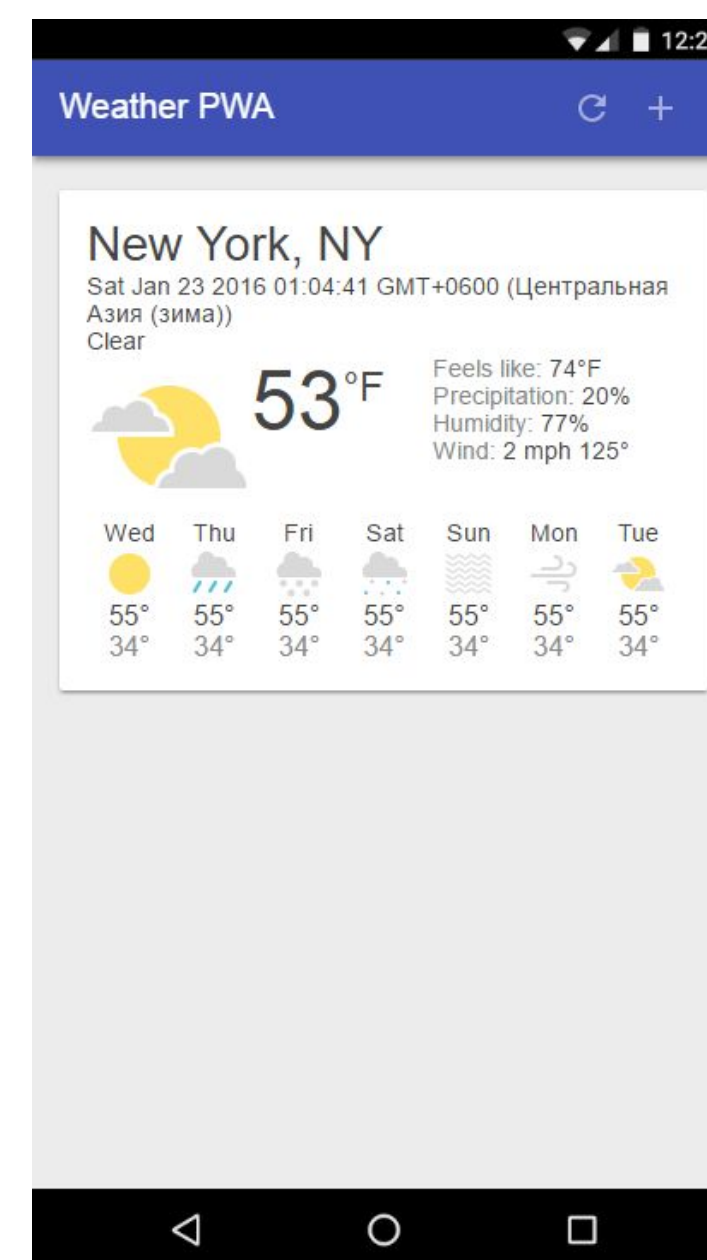
## Прогрессивность



+ Web Manifest



+ Service Worker




+ FTW



# Что ты такое?!

## Отзывчивость

 Firefox Platform Status

Search features

Feature or Keyword

asm.js

Background Sync API

Canvas Media Capture

CSS Shapes

CSS Variables

Custom Elements

Device Orientation

Fetch API

Fullscreen API

Gamepad API

Grid Layout

HTML Imports






HTML Templates






HTMLCanvasElement toBlob






HTTP/2






Indexed DB






Media Recorder


















































































 Firefox Platform Status  
Implementation & standardization roadmap for web platform features

Search features

Feature or Keyword






asm.js





Background Sync API

Canvas Media Capture






CSS Shapes



CSS Variables

 LANDED 22






 Docs  Specification  caniuse 57%  Complete




Strict & highly optimizable subset of JavaScript that can be used as low-level compile target.

 DEVELOPING






 Specification  0/2 Resolved





Provides one-off and periodic synchronization for Service Workers with an `onsync` event.

 LANDED 43






 Docs  Specification  Complete





Allows real-time video capture of the surface of the canvas.

 CONSIDERING


 Docs  Specification  caniuse 57%  1/5 Resolved

Wrap document content around non-rectangular shapes, or constrain content to a holding shape.

 LANDED 31

 Docs  Specification  caniuse 60%  Complete

A way to define and use variables that can be used in place of any CSS property.

 Firefox Platform Status  
Implementation & standardization roadmap for web platform features

Search features

Feature or Keyword

asm.js

Background Sync API

Canvas Media Capture

CSS Shapes






CSS Variables





Custom Elements

Device Orientation






Fetch API



Fullscreen API

 LANDED 22






 Docs  Specification  caniuse 57%  Complete




Strict & highly optimizable subset of JavaScript that can be used as low-level compile target.

 DEVELOPING






 Specification  0/2 Resolved





Provides one-off and periodic synchronization for Service Workers with an `onsync` event.

 LANDED 43






 Docs  Specification  Complete





Allows real-time video capture of the surface of the canvas.

 CONSIDERING






 Docs  Specification  caniuse 57%  1/5 Resolved





Wrap document content around non-rectangular shapes, or constrain content to a holding shape.

 LANDED 31






 Docs  Specification  caniuse 60%  Complete





A way to define and use variables that can be used in place of any CSS property.

 DEVELOPING






 Docs  Specification  caniuse 48%  1/12 Resolved





Define a custom HTML tag and associate it with an ES6 class.

 LANDED 6






 Docs  Specification  caniuse 86%  Complete





Provides access to device's physical orientation.

 LANDED 39

 Docs  Specification  caniuse 54%  Complete

Low level API for fetching network resources that is more powerful and flexible than XMLHttpRequest.

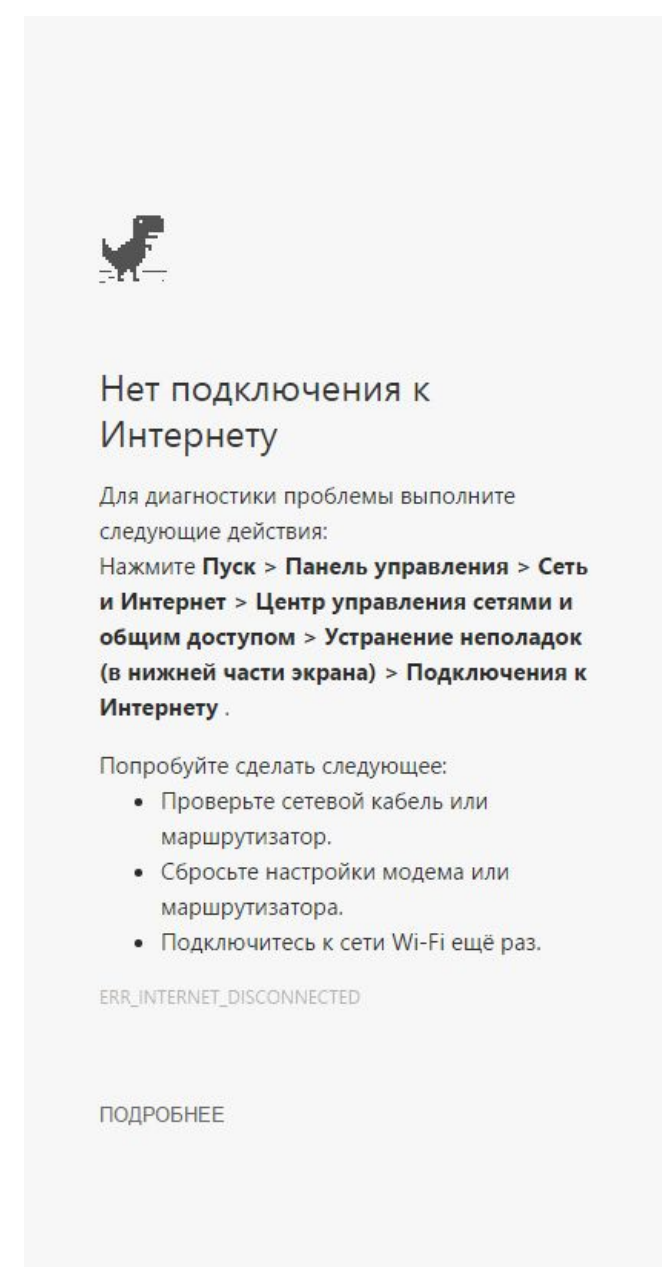
 LANDED 9

 Docs  Specification  caniuse 54%  Complete

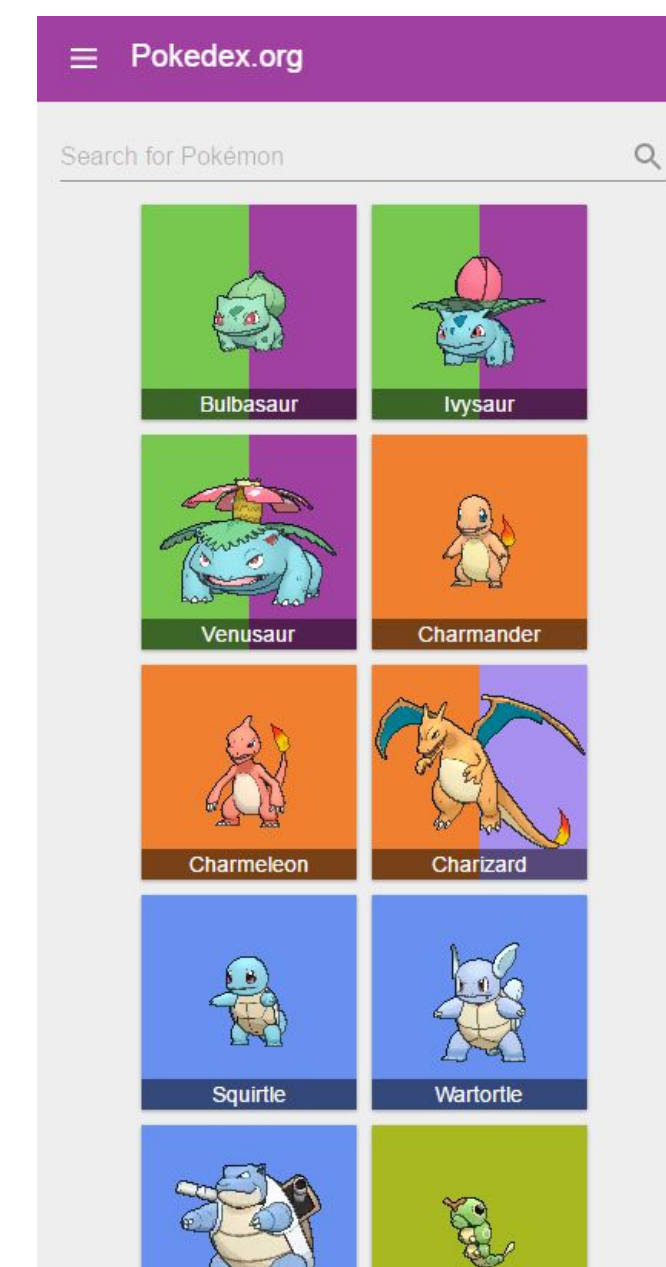
Low level API for fetching network resources that is more powerful and flexible than XMLHttpRequest.

# Что ты такое?!

## Работа в оффлайне



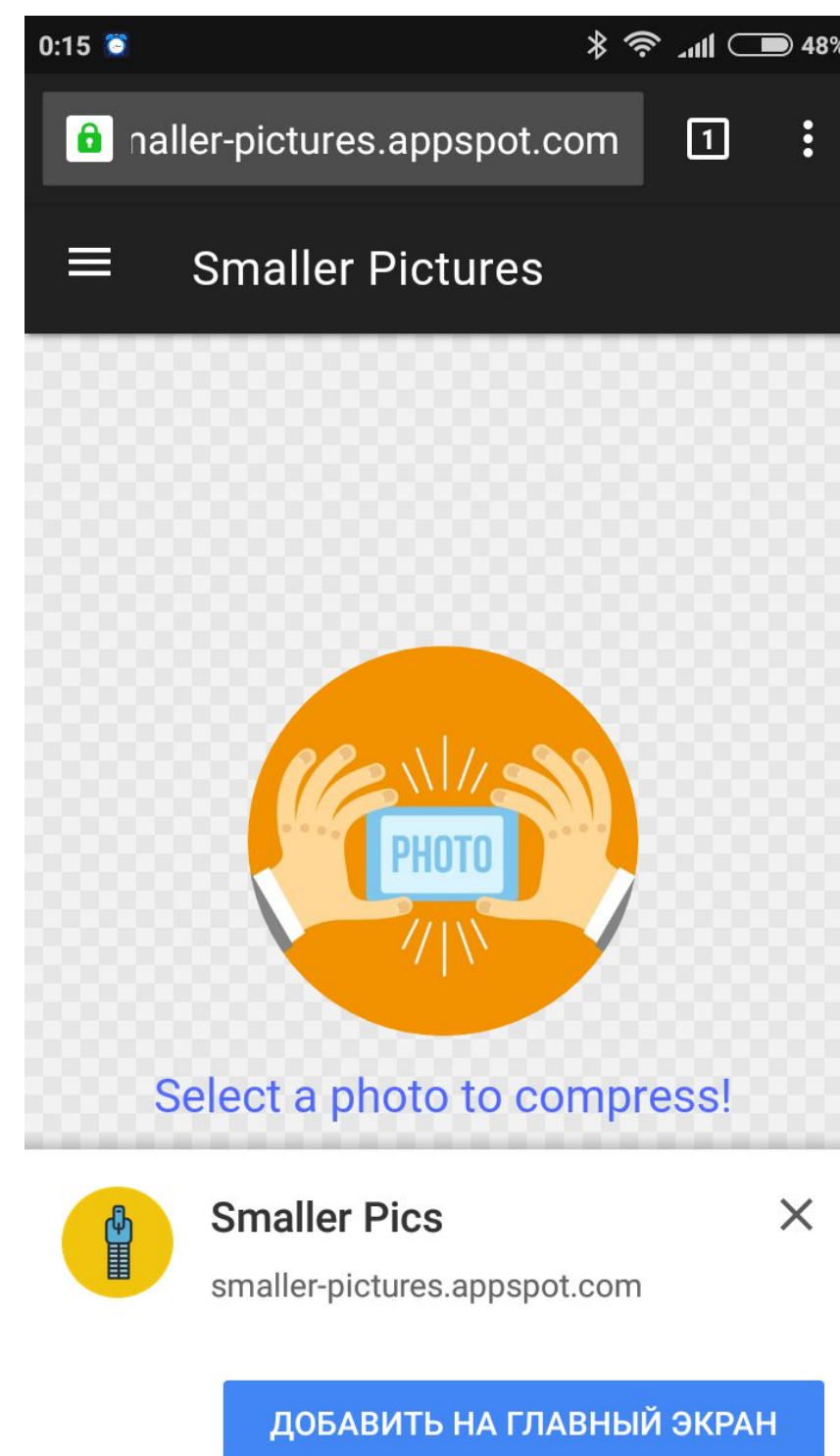
Service Worker FTW





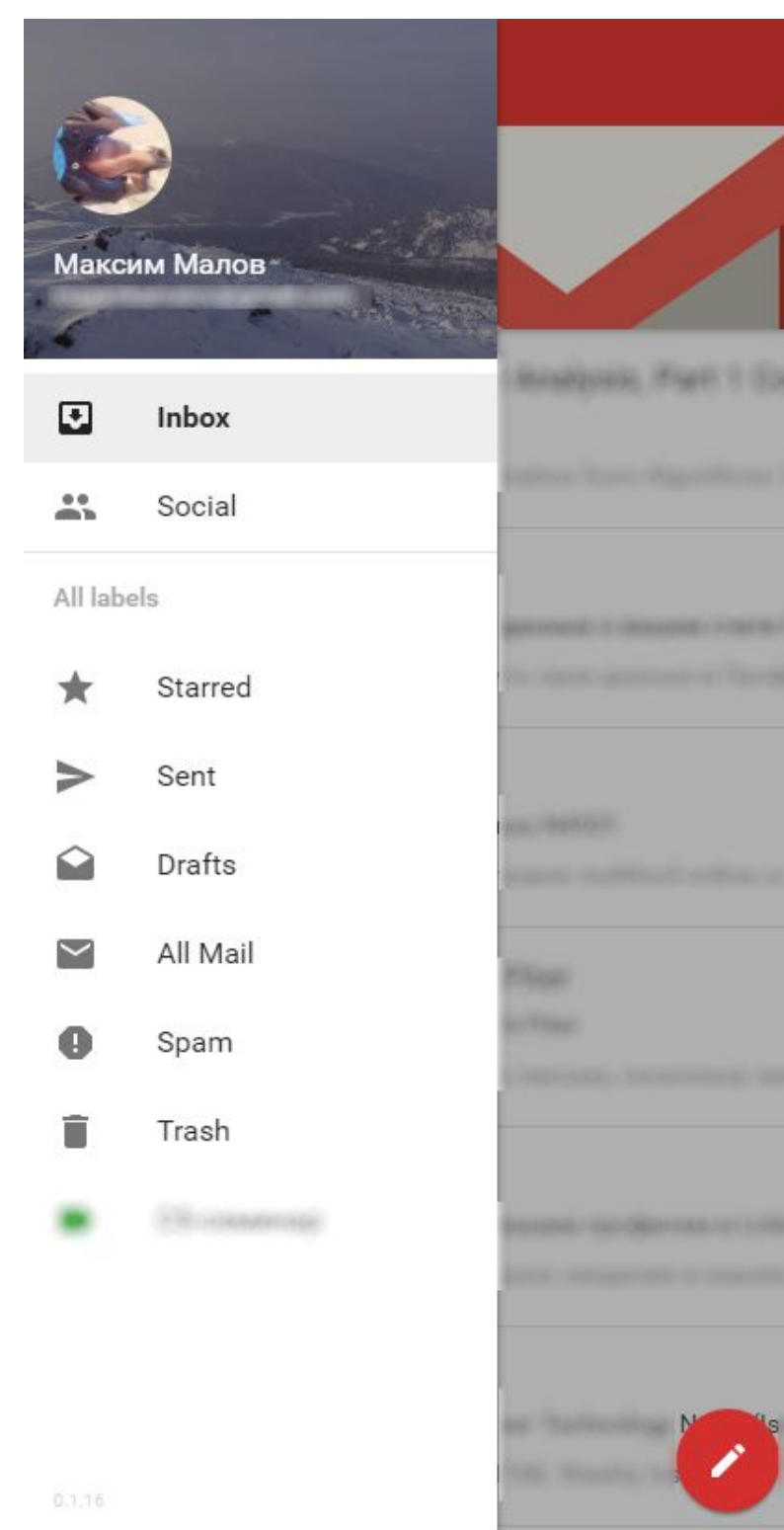
# Что ты такое?!

## Простота в установке



# Что ты такое?!

Схожесть с нативным приложением



# Что ты такое?!

А также

- Безопасность
- Свежесть
- Определяемость
- ...
- RIA, ARIA

# Web App Manifest

Почти как package.json, только...

```
{
  "background_color": "#232323",
  "theme_color": "#232323",
  "name": "My super cool PWA. It rocks!",
  "short_name": "My PWA",
  "display": "standalone",
  "icons": [
    {
      "src": "YOU-NEED-TO-HAVE-A-144-x-144-ICON.png",
      "sizes": "144x144",
      "type": "image/png"
    }
  ]
}
```



# Service Worker

... ииии Cache API (CacheStorage)

# Service Worker

... ииии Cache API (CacheStorage)

Service Worker умеет перехватывать http запросы вашего приложения  
И...

# Service Worker

... ииии Cache API (CacheStorage)

Service Worker умеет перехватывать http запросы вашего приложения

И...



# Service Worker

... ииии Cache API (CacheStorage)

Service Worker умеет перехватывать http запросы вашего приложения  
И...



# Оффлайн

Поставляем App Shell с [sw-precache](#)

```
$ sw-precache --config=path/to/sw-precache-config.json
```

```
{  
  "staticFileGlobs": [  
    "app/css/**/*.css",  
    "app/**/*.html",  
    "app/images/**/*.*",  
    "app/js/**/*.js"  
  ],  
  "stripPrefix": "app/"  
}
```

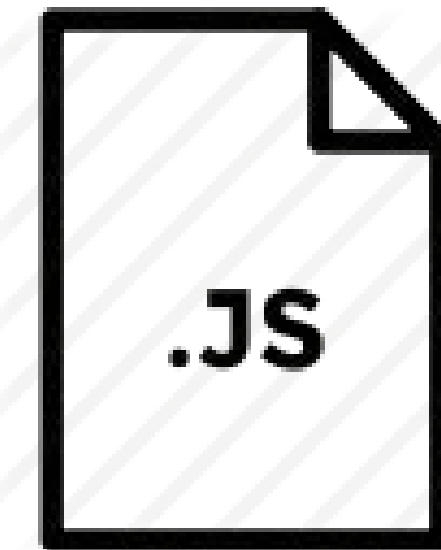
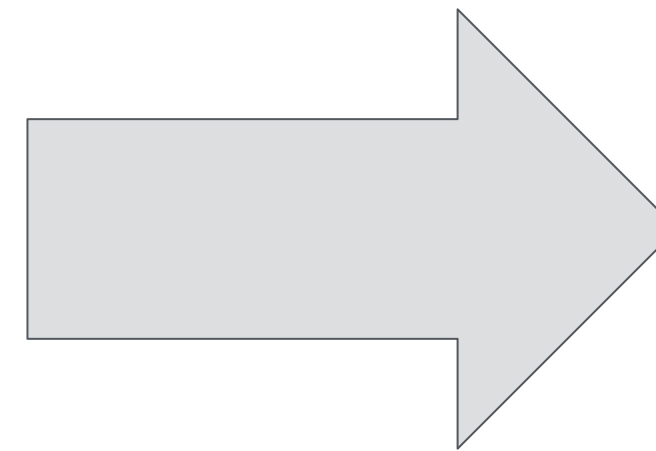


# Оффлайн

Поставляем App Shell с [sw-precache](#)

```
$ sw-precache --config=path/to/sw-precache-config.json
```

```
{  
  "staticFileGlobs": [  
    "app/css/**/*.css",  
    "app/**/*.html",  
    "app/images/**/*.*",  
    "app/js/**/*.js"  
  ],  
  "stripPrefix": "app/"  
}
```



Service Worker script

# Оффлайн

Кэшируем ресурсы с [sw-toolbox](#)

```
global.toolbox.router.get(/\.yting\.com\/\/, global.toolbox.cacheFirst, {  
  cache: {  
    name: 'youtube-thumbnails',  
    maxEntries: 10,  
    maxAgeSeconds: 30  
  }  
});
```

# Оффлайн

Кэшируем ресурсы с [sw-toolbox](#)

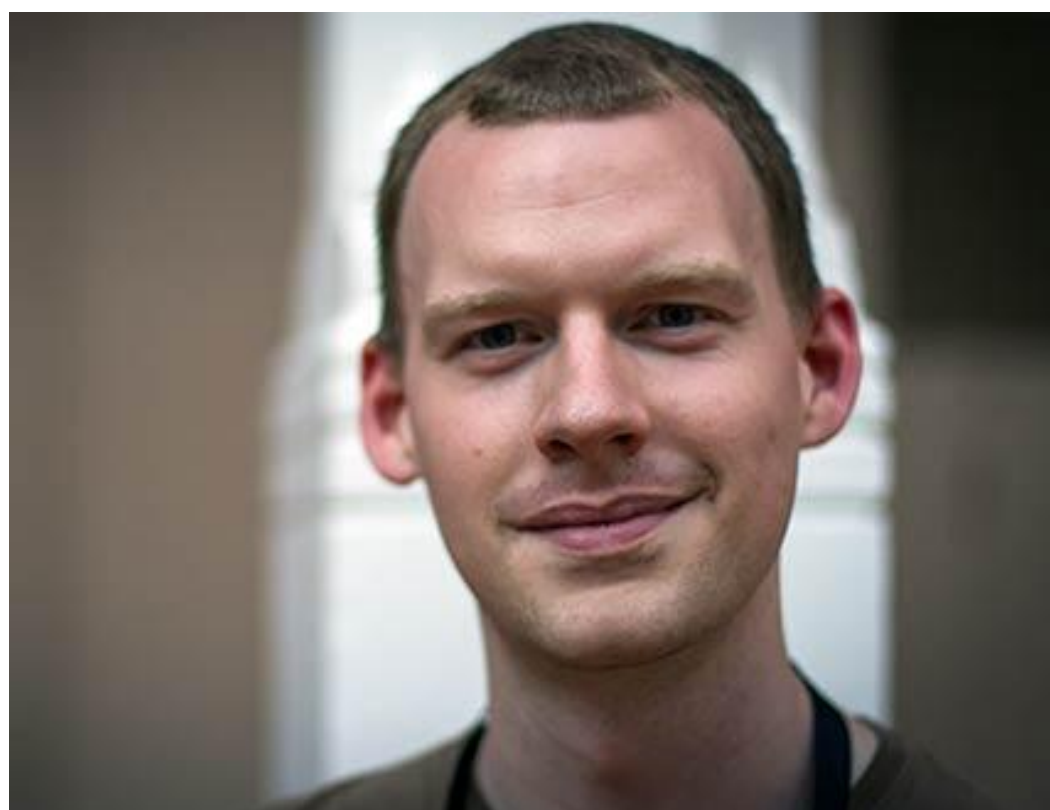
```
global.toolbox.router.get(/\.yting\.com\/\/, global.toolbox.cacheFirst, {  
  cache: {  
    name: 'youtube-thumbnails',  
    maxEntries: 10,  
    maxAgeSeconds: 30  
  }  
});
```

## Стратегии обработки

- `toolbox.networkFirst`, `toolbox.networkOnly`
- `toolbox.cacheFirst`, `toolbox.cacheOnly`
- `toolbox.fastest`

# Оффлайн

Jake Archibald [@jaffathecake](https://twitter.com/jaffathecake)



Рецепты для приготовления оффлайн приложений:

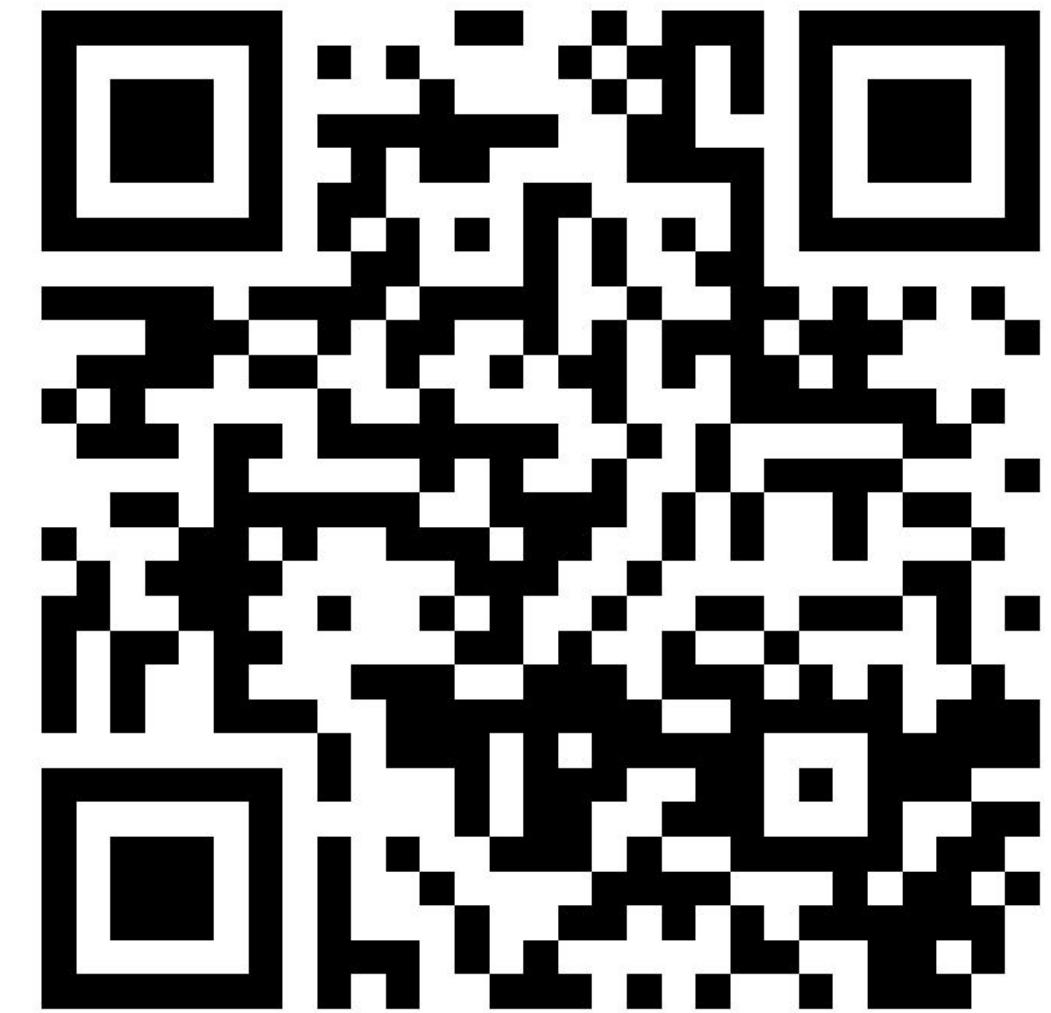
<https://jakearchibald.com/2014/offline-cookbook/>

# Push Notifications

Подписка: `PushManager.subscribe`

Перехват: `ServiceWorkerGlobalScope.onpush`

Вывод: `ServiceWorkerRegistration.showNotification`



<https://goo.gl/71ltm0>



# Нужно больше крутых штук!

- Background Sync
- Web Bluetooth
- Vibration API
- Media Capture and Streams
- Geolocation
- Device Orientation/Motion
- Ambient Light Sensor
- ...

# Будем прогрессивными!

<https://pwa.rocks>

