

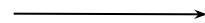
# Инсталлируемые Веб приложения

Service Workers, Cache API, WebRTC

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Дата: 14 мая 2016 года



# Краткая история одного стартапа



2007



# Инсталляция

# Инсталляция

iOS

```
<meta name="apple-mobile-web-app-capable"  
content="yes">
```

```
<meta name="apple-mobile-web-app-status-bar-style"  
content="black">
```

```
<link rel="apple-touch-icon" sizes="72x72"  
href="/apple-touch-icon-72x72.png">
```

```
<link rel="apple-touch-startup-image"  
href="/splash-startup.png">
```

2008



THE NEW WAY TO WATCH TV p.136  
THE COOLEST GADGET PROTOTYPES OF ALL TIME! p.128  
THE MOST TOXIC TOWN IN AMERICA p.152

**WIRED**

</www> | sep.2010

# The Web is dead.

**WHAT  
HAPPENED**

BY CHRIS ANDERSON

**AND  
WHY**

BY MICHAEL WOLFF

# Проблемы приложений

- Нет поискового трафика
- Нет трафика с емейл рассылок
- Нет кроссплатформенности





APACHE  
CORDOVA™

# Progressive Web Apps

**Progressive** - Work for every user, regardless of browser choice because they're built with progressive enhancement as a core tenet.

**Responsive** - Fit any form factor: desktop, mobile, tablet, or whatever is next.

**Connectivity independent** - Enhanced with service workers to work offline or on low quality networks.

**App-like** - Feel like an app to the user with app-style interactions and navigation because it's built on the app shell model.

**Fresh** - Always up-to-date thanks to the service worker update process.

# Progressive Web Apps

**Safe** - Served via HTTPS to prevent snooping and ensure content hasn't been tampered with.

**Discoverable** - Are identifiable as “applications” thanks to W3C manifests and service worker registration scope allowing search engines to find them.

**Re-engageable** - Make re-engagement easy through features like push notifications.

**Installable** - Allow users to “keep” apps they find most useful on their home screen without the hassle of an app store.

**Linkable** - Easily share via URL and not require complex installation.

# Инсталляция

<https://www.w3.org/TR/appmanifest/> Working Draft 26 April 2016

Chrome +

Mozilla +

Opera +

Edge Under Consideration

Safari -

# Инсталляция

```
<link rel="manifest" href="/manifest.json">
```

# Инсталляция

Название приложения

```
{
```

```
name: "My totally awesome photo app"
```

```
short_name: "Photos"
```

```
}
```

# Инсталляция

## Иконки

```
{
```

```
  "icons": [{
```

```
    "src": "icon/lowres",
```

```
    "sizes": "64x64",
```

```
    "type": "image/webp"
```

```
  ]
```

```
}
```

# Инсталляция

## Режим отображения и ориентация

```
{  
  
  "display": "fullscreen",  
  
  "orientation": "landscape"  
}
```

fullscreen, standalone, minimal-ui, browser



# Инсталляция

## Стартовая страница

```
{
```

```
start_url: "/start_screen.html"
```

```
}
```

# Инсталляция

## Score

```
{
```

```
  "scope": "/myapp"
```

```
}
```

# Инсталляция

## Обнаружение инсталляции

```
@media all and (display-mode: standalone){ ...}
```

```
if (window.matchMedia("(display-mode:  
standalone)").matches) {
```

```
    /* Приложение установлено */
```

```
} else {
```

```
    /* Вывести пользователю надоедающий баннер */
```

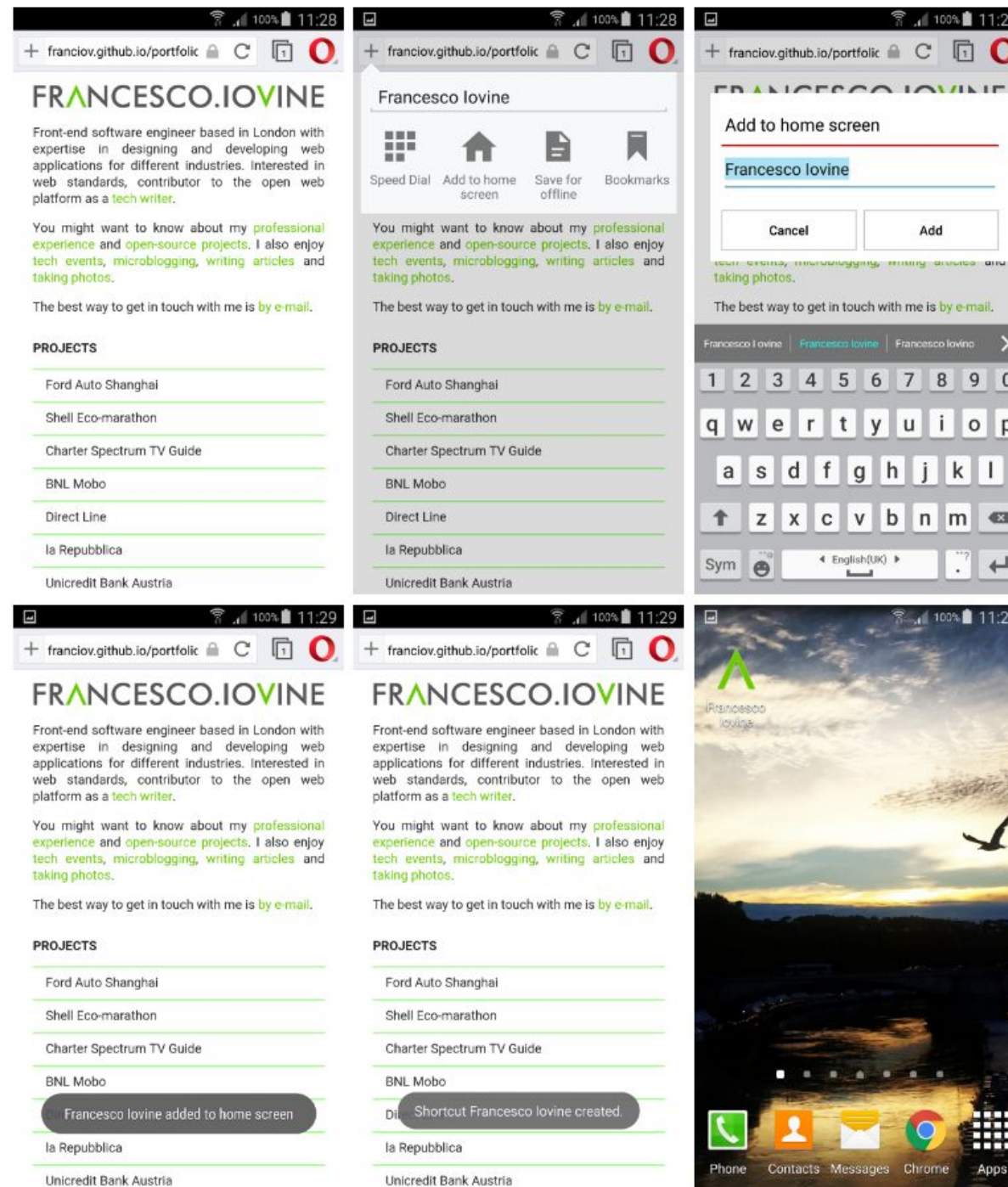
```
}
```

# Инсталляция

## Момент инсталляции

```
function handleInstall(ev){  
  
    const date = new Date(ev.timeStamp / 1000);  
  
    console.log(`Yay! Our app got installed at  
    ${date.toTimeString()}`);  
  
}  
  
window.oninstall = handleInstall;  
  
// Using .addEventListener()  
  
window.addEventListener("install", handleInstall);
```

# Инсталляция



# Camera

getUserMedia/Stream API - WD

Global 9.34% + 58.09% = 67.43%

unprefixed: 1.24%

Method of accessing external device data (such as a webcam video stream). Formerly this was envisioned as the <device> element.

Current aligned

Usage relative

Show all

IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser *	Chrome for Android
			29						
			45					4.3	
8			48			8.4		4.4	
9		45	49	9	36	9.2		4.4.4	
11	13	46	50	9.1	37	9.3	8	50	50
	14	47	51	TP	38				
		48	52		39				
		49	53						

Notes

Known issues (1)

Resources (7)

Feedback

<sup>1</sup> Blink-based (and some other) browsers support an older version of the spec that does not use `srcObject`. See [Chromium issue 387740](#). Instead you need to convert a `MediaStream` object using ``UR`

# Camera

<https://webqr.com/>

[https://github.com/gasolin/qr\\_code\\_scanner](https://github.com/gasolin/qr_code_scanner)

<https://github.com/LazarSoft/jsqrcode>

<https://davidwalsh.name/demo/iphone-camera.php>

# Camera

G+ 180

## QR Code scanner

[Scan](#) | [Create](#) | [About](#) | [Contact](#)



- scanning -



# Camera

```
2
3 var p = navigator.mediaDevices.getUserMedia({ audio: true, video: true });
4
5 p.then(function(mediaStream) {
6     var video = document.querySelector('video');
7     video.src = window.URL.createObjectURL(mediaStream);
8     video.onloadedmetadata = function(e) {
9         // Do something with the video here.
10    };
11 });
12
13 p.catch(function(err) { console.log(err.name); });
14
```

# Camera

<https://github.com/LazarSoft/jsqrcode/blob/master/src/qrcode.js>

```
var canvas_qr = document.createElement('canvas');  
var context = canvas_qr.getContext('2d');  
var nheight = image.height;  
var nwidth = image.width;
```

# Camera

```
<form action="upload.htm" method="post" enctype="multipart/form-data">  
  <input type="file" accept="image/*" capture>  
  <input type="submit" value="Upload">  
</form>
```

# Service Workers

Service Workers - WD

Global

0% + 53.61% = 53.61%

Method that enables applications to take advantage of persistent background processing, including hooks to enable bootstrapping of web applications while offline.

Current aligned

Usage relative

Show all

IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser *	Chrome for Android
			29						
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8			48			8.4		4.4	
9		45	49	9	36	9.2		4.4.4	
11	13	46	50	9.1	37	9.3	8	50	50
	14	47	51	TP	38				
		48	52		39				
		49	53						

Notes

Known issues (0)

Resources (8)

Feedback

Details on partial support can be found on [is ServiceWorker Ready?](#)

MS Edge status: [Under Consideration](#)

WebKit status: [Under Consideration](#)

# Service Workers

```
35 if ('serviceWorker' in navigator) {
36   navigator.serviceWorker.register('/sw-test/sw.js', { scope: '/sw-test/' })
37   .then(function(reg) {
38     // registration worked
39     console.log('Registration succeeded. Scope is ' + reg.scope);
40   }).catch(function(error) {
41     // registration failed
42     console.log('Registration failed with ' + error);
43   });
44 };
```

# Кеширование файлов

```
var CACHE_NAME = 'app_serviceworker_v_1',  
  
    cacheUrls = [  
  
        '/test_serviceworker/',  
  
        '/test_serviceworker/index.html',  
  
        '/test_serviceworker/css/custom.css',  
  
        '/test_serviceworker/images/icon.png',  
  
        '/test_serviceworker/js/main.js'  
  
];
```

# Кеширование файлов

```
self.addEventListener('install', function(event) {  
  
    event.waitUntil(  
  
        // находим в глобальном хранилище Cache-объект с нашим  
        //именем. если такого не существует, то он будет создан  
  
        caches.open(CACHE_NAME).then(function(cache) {  
  
            // загружаем в наш cache необходимые файлы  
  
            return cache.addAll(cacheUrls);  
  
        })  
  
    );  
  
});
```

# Кеширование файлов

```
21 this.addEventListener('install', function(event) {
22     event.waitUntil(
23         caches.open('v1').then(function(cache) {
24             return cache.addAll([
25                 '/sw-test/',
26                 '/sw-test/index.html',
27                 '/sw-test/style.css',
28                 '/sw-test/app.js',
29             ]);
30         })
31     );
32 });
```



**Спасибо за внимание!**

Дмитрий Тинитилов