

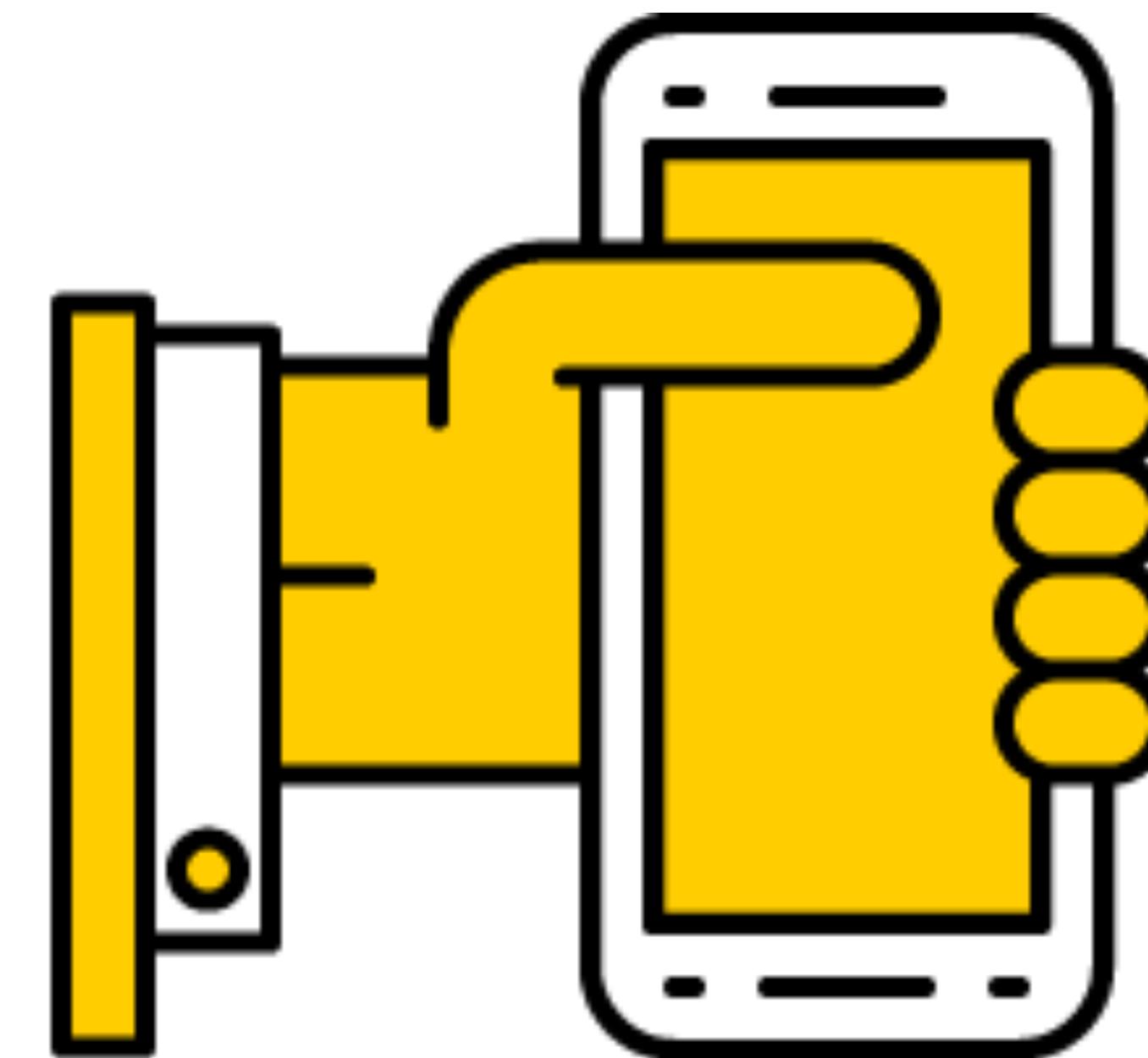
Яндекс

Мобильный веб - из лягушек в принцы

Мышов Александр, Яндекс.Маркет

О чём поговорим?

1. История
2. Особенности разработки
3. Полезные API

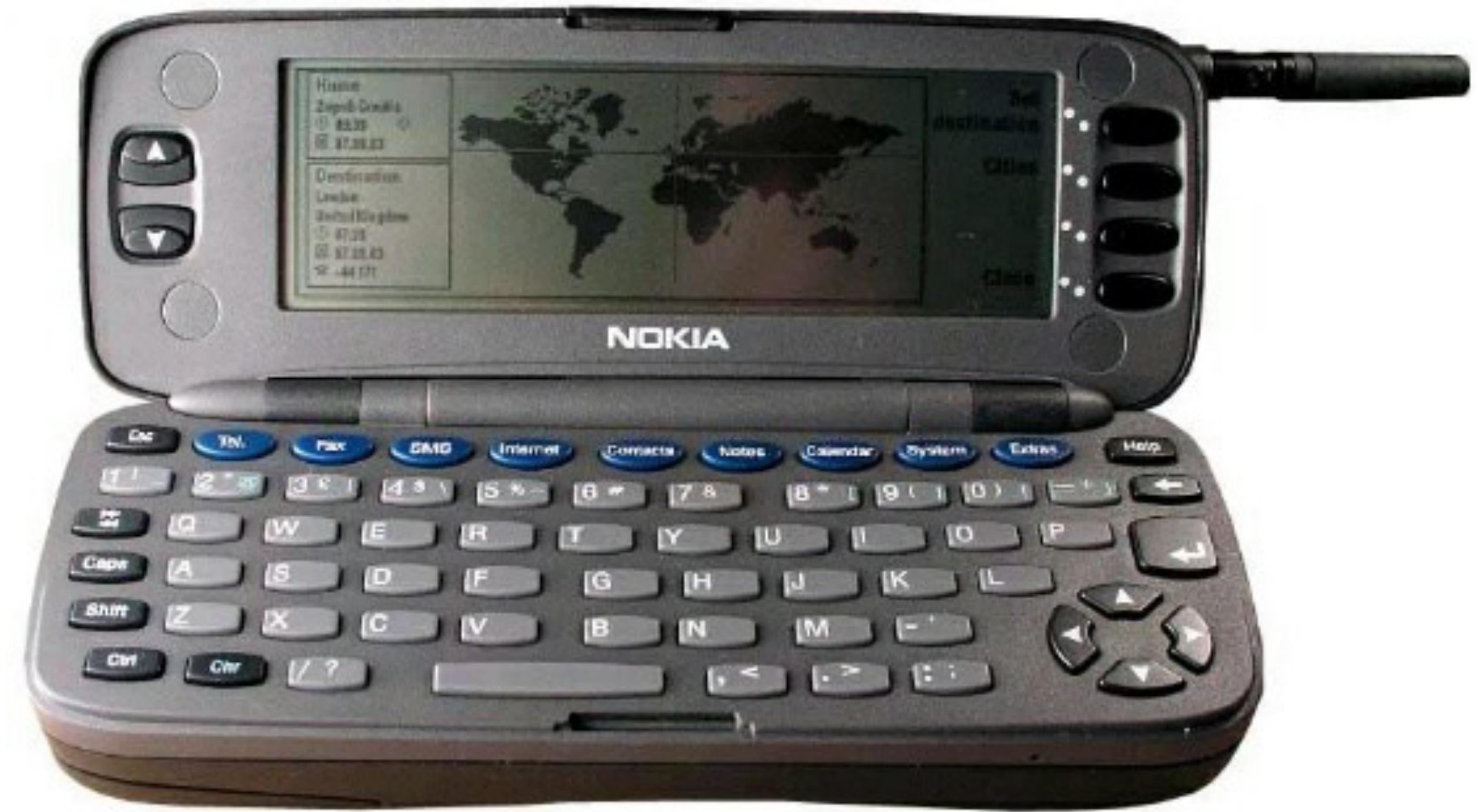


История

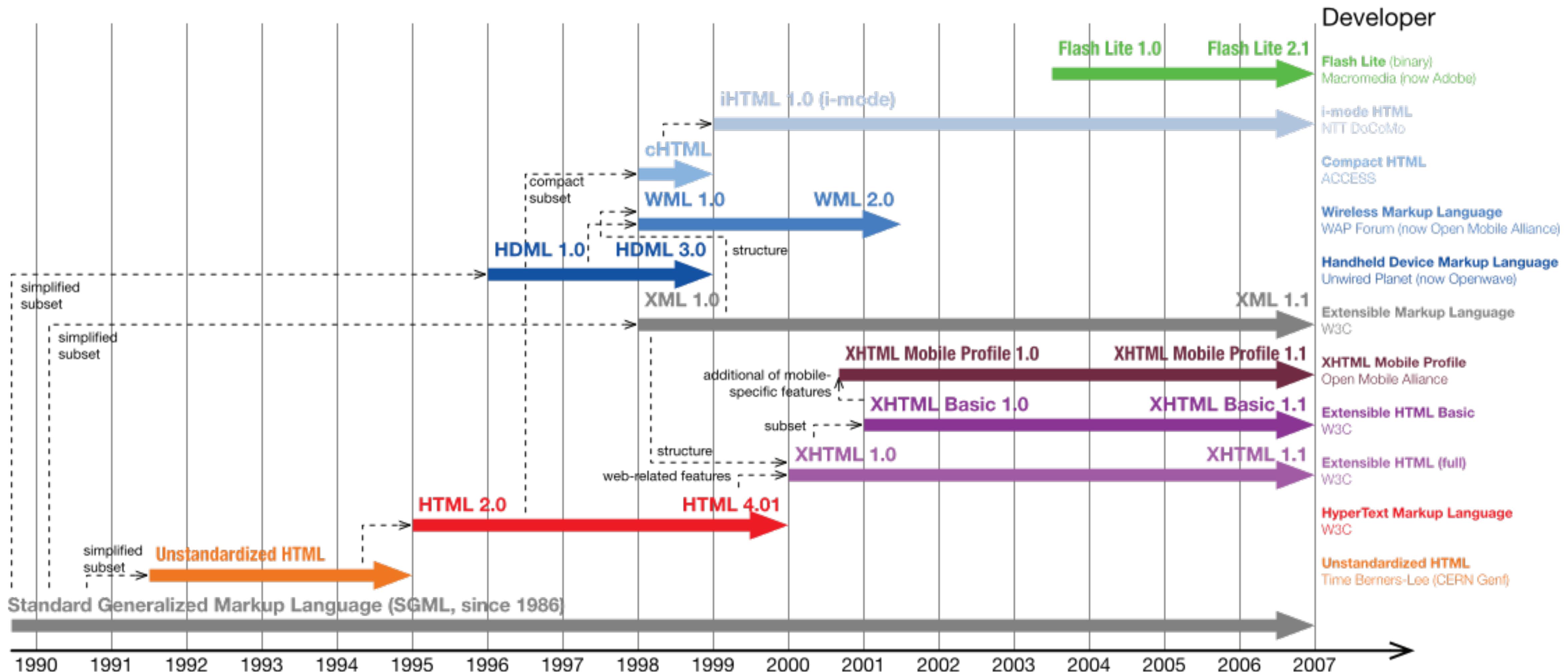


1996 год

Nokia 9000



Evolution of Mobile Web–Related Markup Languages



2002 год

Nokia 7650



2005 год



W3C Launches "Mobile Web Initiative"

Industry Leaders Join Effort to Improve Mobile Web User Experience

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(also available in [French](#) and [Japanese](#); see also [translations in other languages](#))

[Testimonials](#) are also available.

Chiba, Japan -- 11 May 2005 -- Today, at the WWW2005 Conference, the World Wide Web Consortium ([W3C](#)) announced the launch of the [Mobile Web Initiative \(MWI\)](#) - an endeavor to make Web access from a mobile device as simple, easy, and convenient as Web access from a desktop device.

"Mobile access to the Web has been a second class experience for far too long," explained Tim Berners-Lee, W3C Director. "MWI recognizes the mobile

2007 год

Apple iPhone

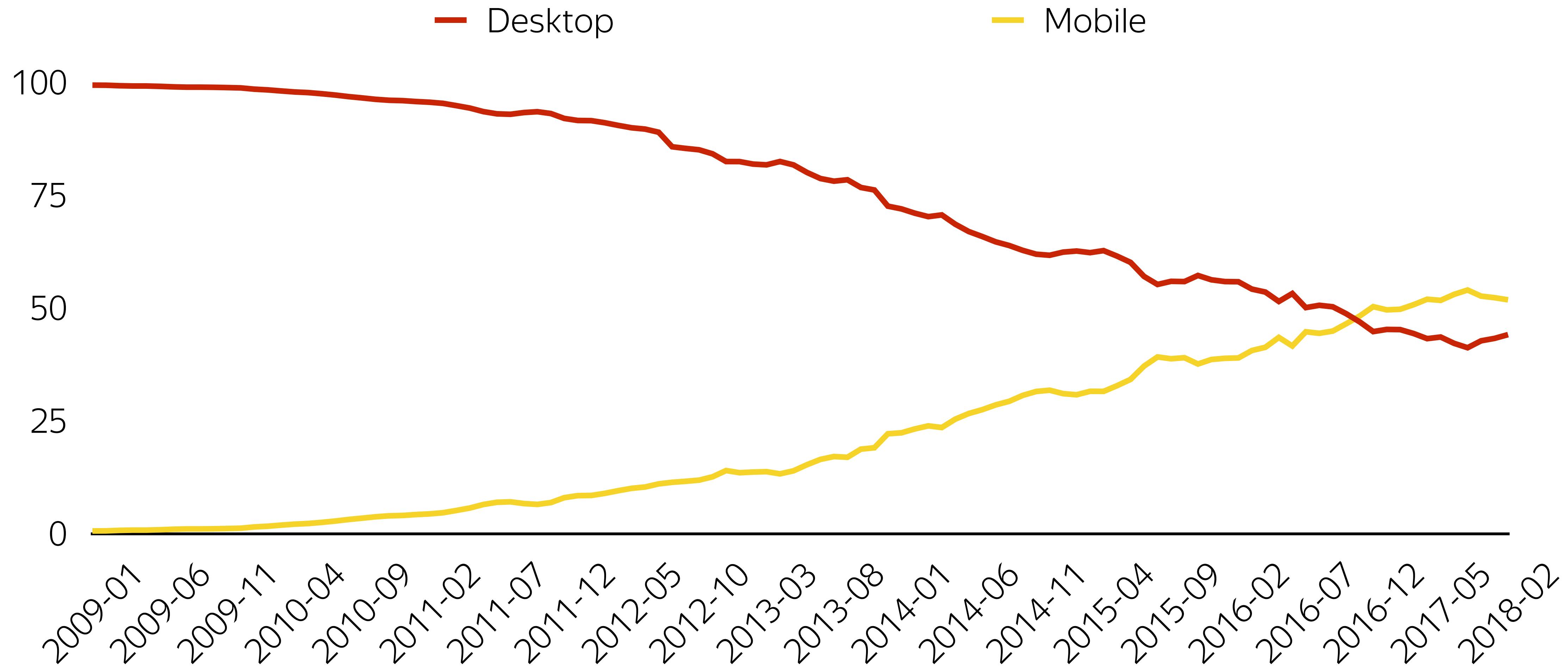


2008 год

Android



Наши дни (Desktop vs Mobile)



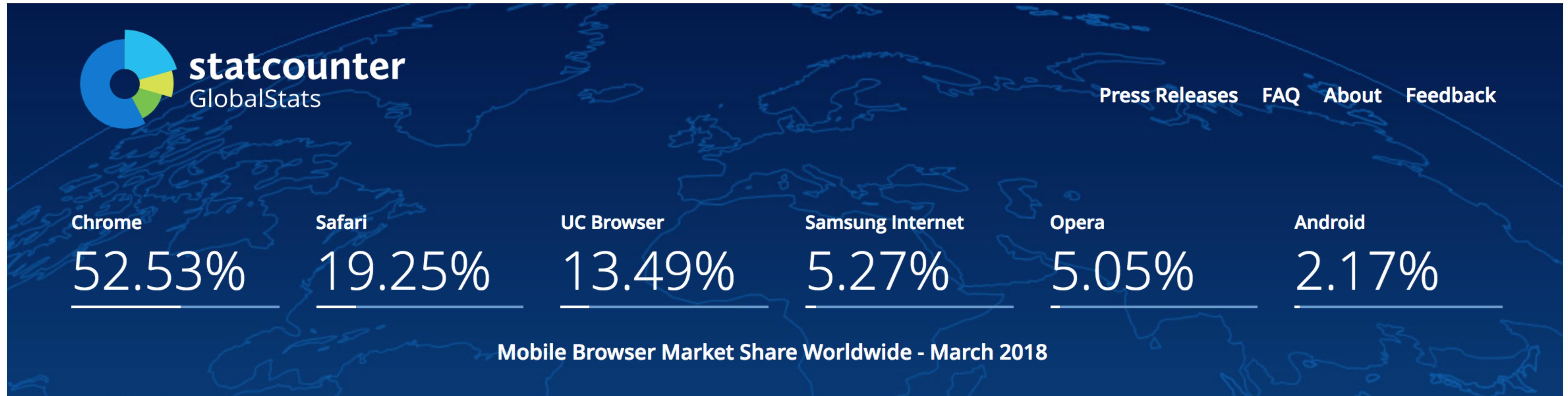
Особенности разработки



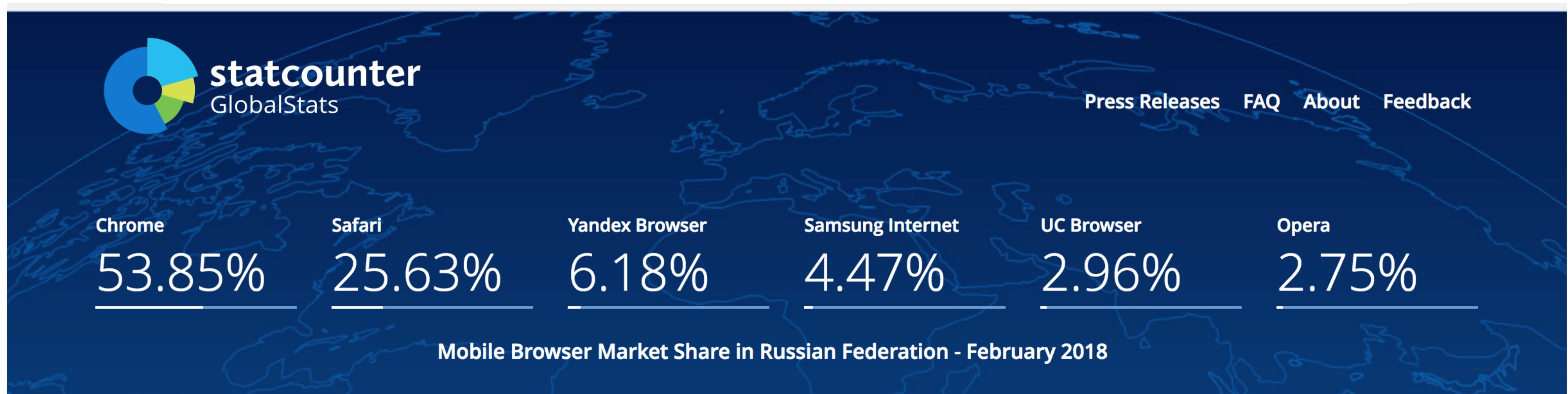


Поддержка браузеров

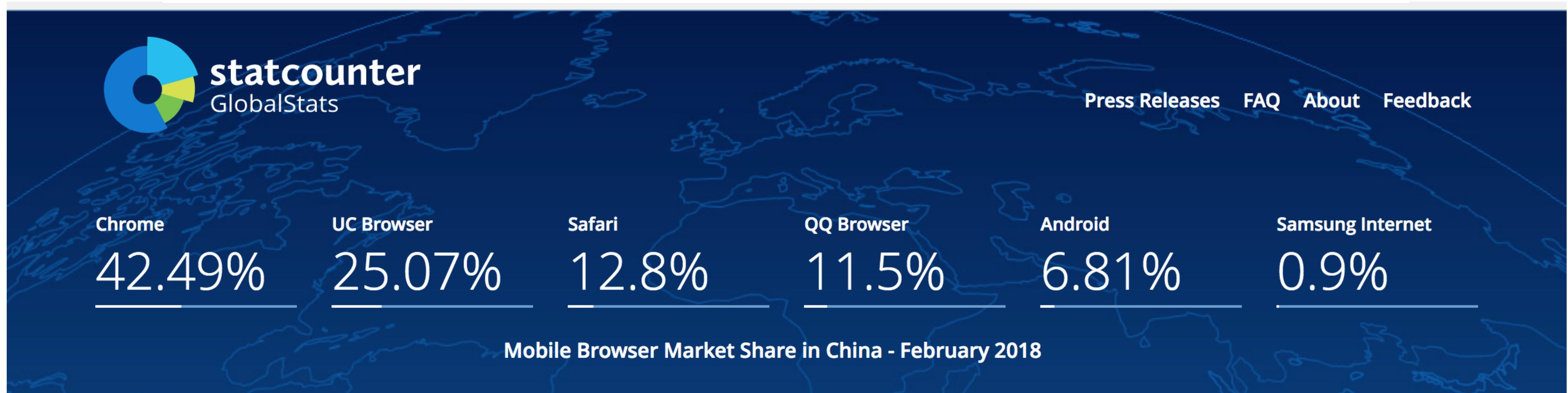
Браузеры во всем мире



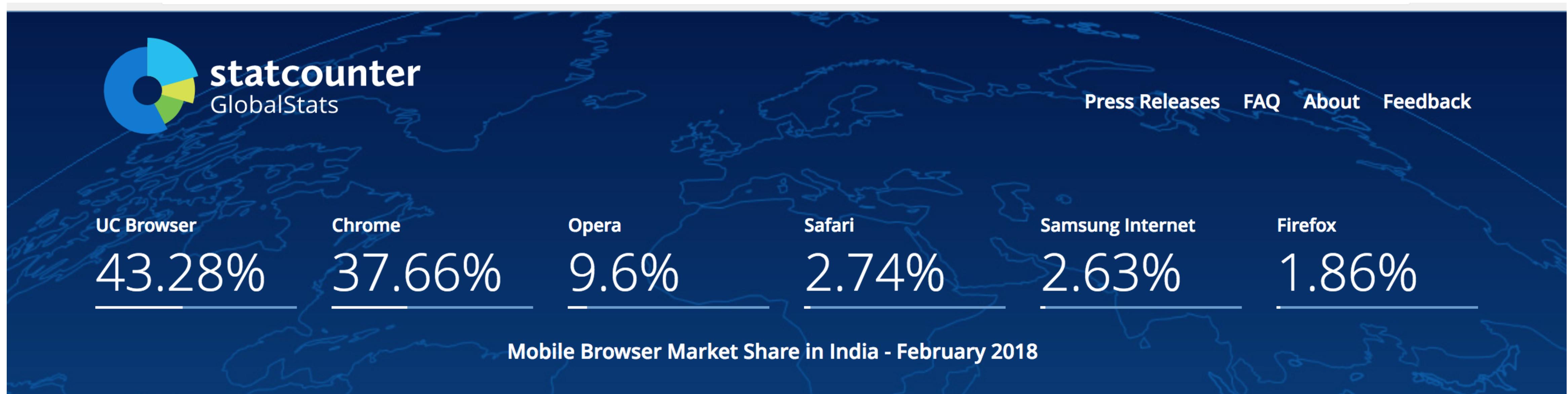
Браузеры в России



Браузеры в Китае



Браузеры в Индии





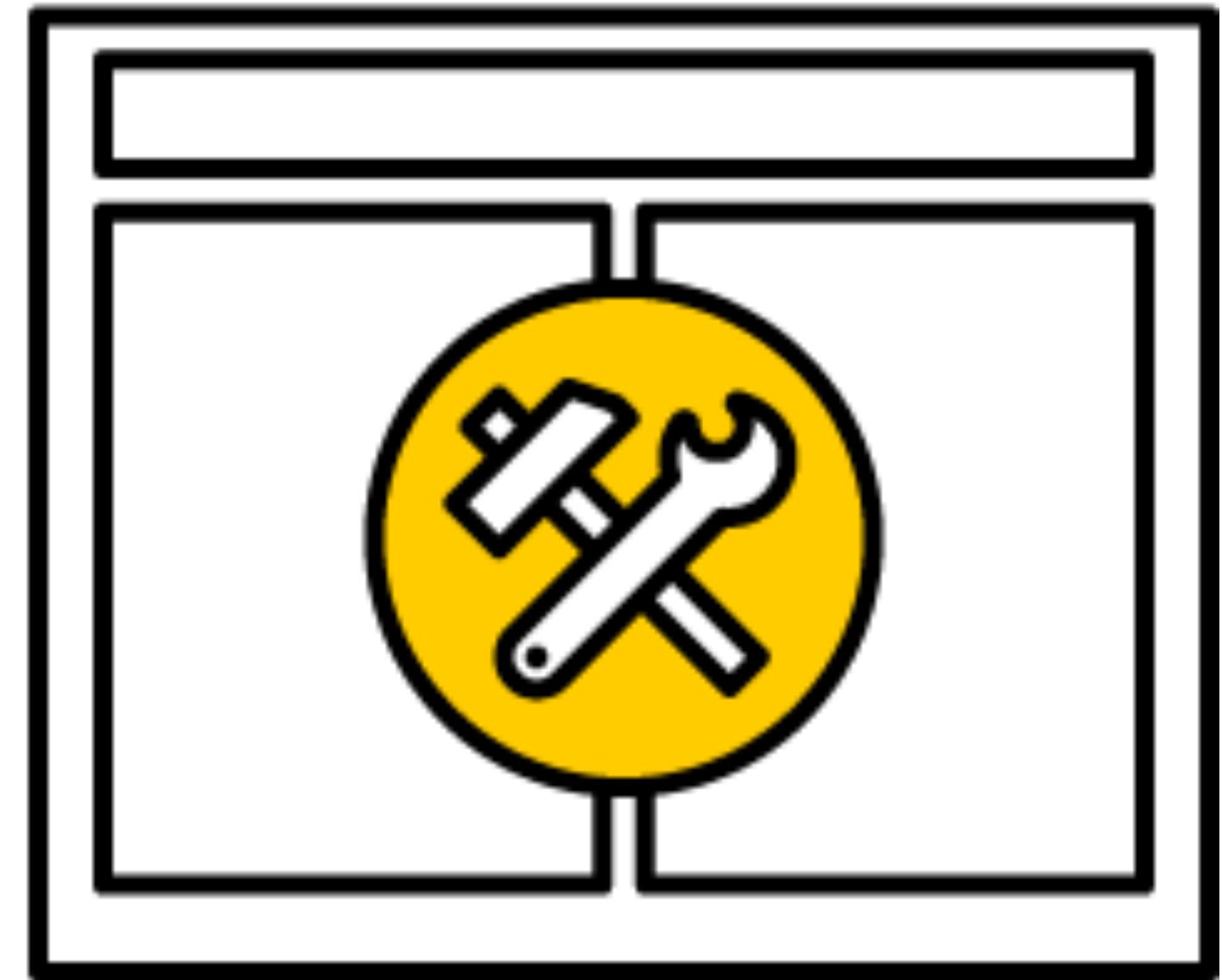
А что у нас там на
айфонах?

iOS (Safari + Chrome + Ya.Browser + Firefox + ...)



Отладка

Эмуляция в DevTools
iOS (macOS + Safari)
Android Remote Debugging
Эмуляторы
Weinre



Эмуляция в DevTools

The screenshot shows the Yandex Market website for a hanging toy, with various developer tools open. A red arrow points to the emulation toolbar at the top left, which is set to 'iPhone 7' with dimensions 375x667. Another red arrow points to the DevTools tab bar, where 'Elements' is selected. The main content area displays the product page for a hanging toy named 'Филипп'.

Emulation Toolbar: iPhone 7 ▾ 375 x 667 92% ▾ Online ▾

DevTools Tabs: Elements (selected), Console, Sources, Network, Performance, Memory, etc.

Product Page Content:

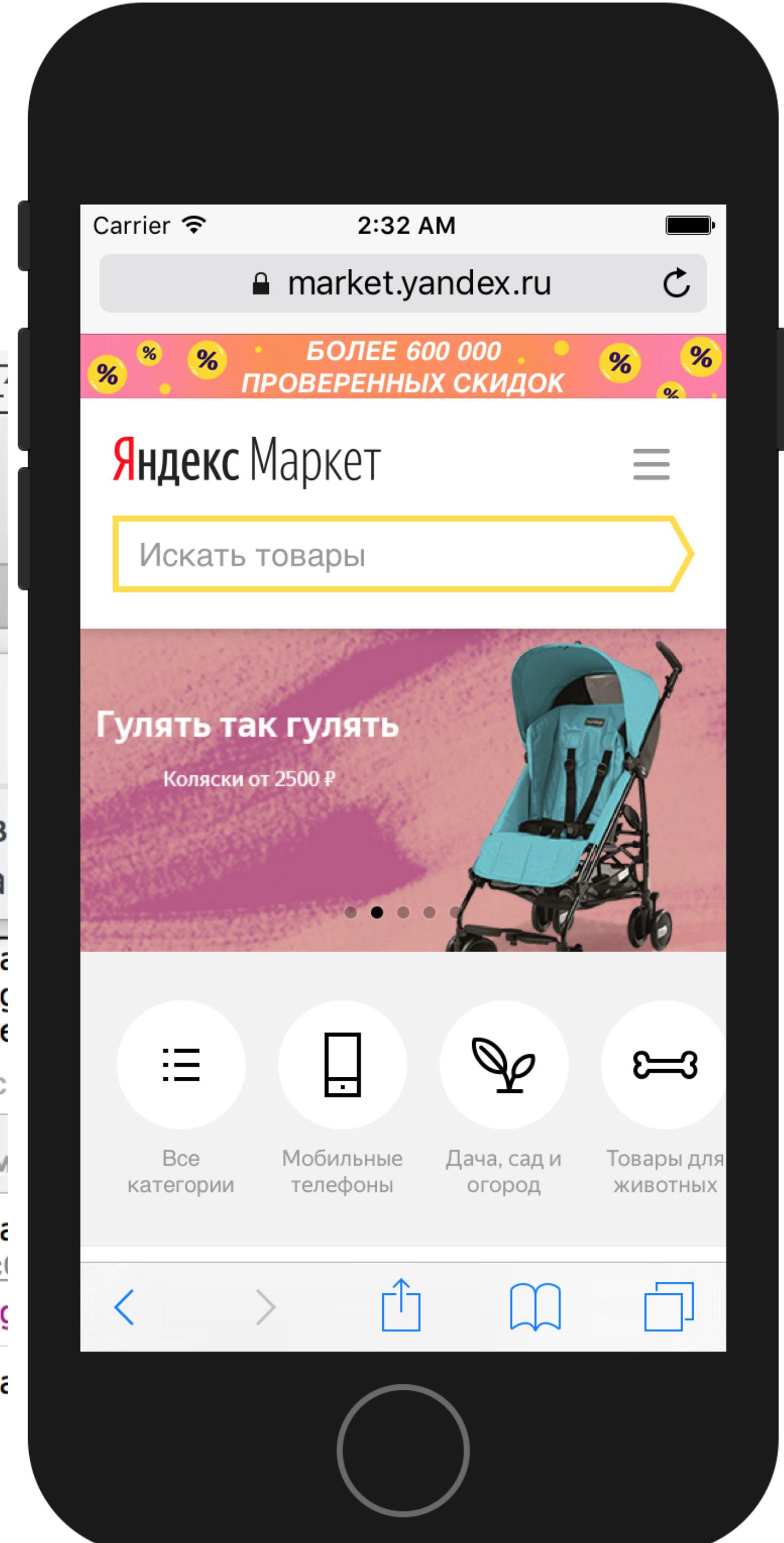
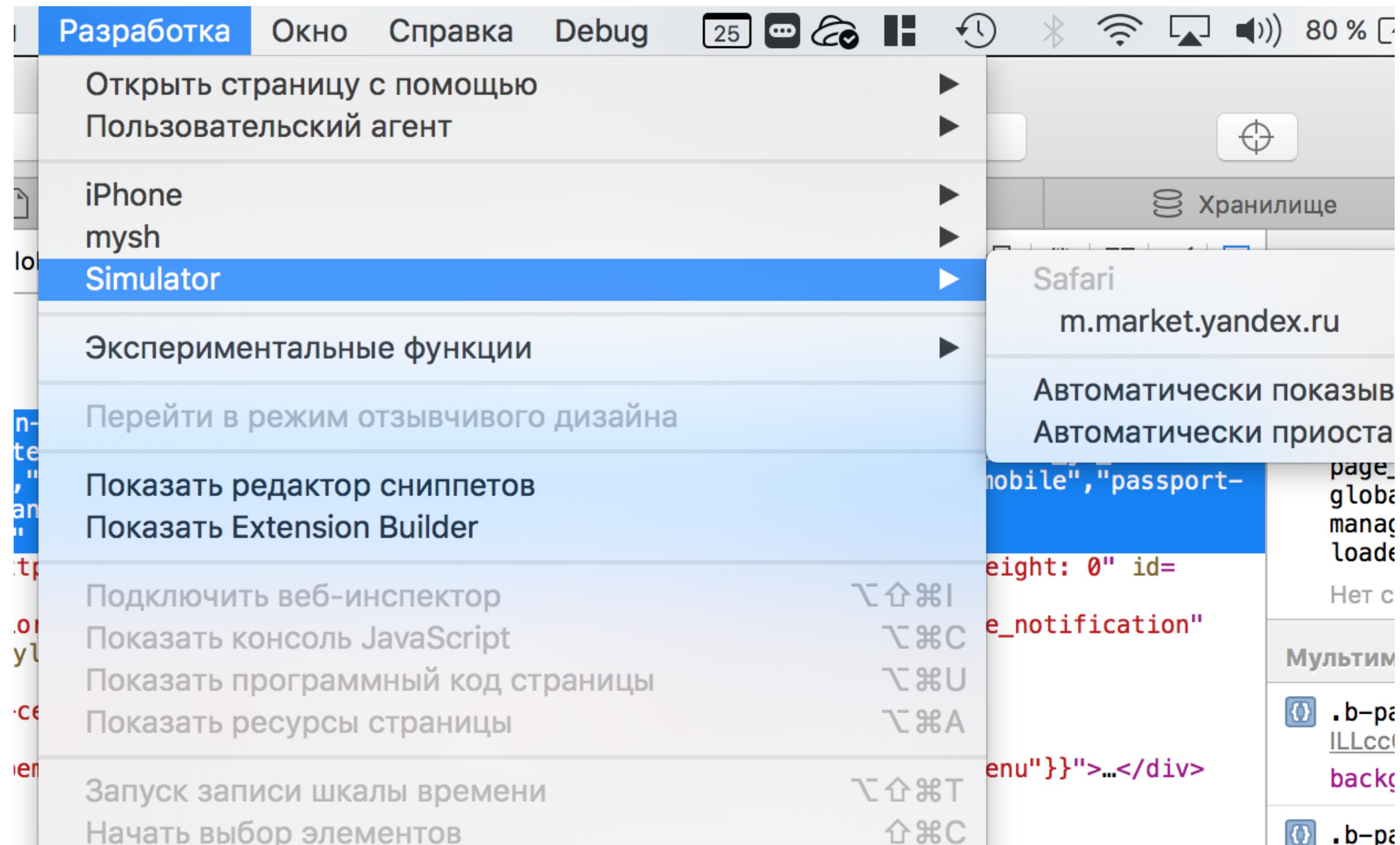
- BANNER: БОЛЕЕ 600 000 ПРОВЕРЕННЫХ СКИДОК
- Yandex Market logo
- Search bar: Искать товары
- Breadcrumbs: < Детские товары • Подвески
- Product Title: Подвесная игрушка - Пеликанчик ФИЛИПП
- Image of the hanging toy (a yellow parrot-like character).
- Heart icon for favoriting.

Elements Panel:

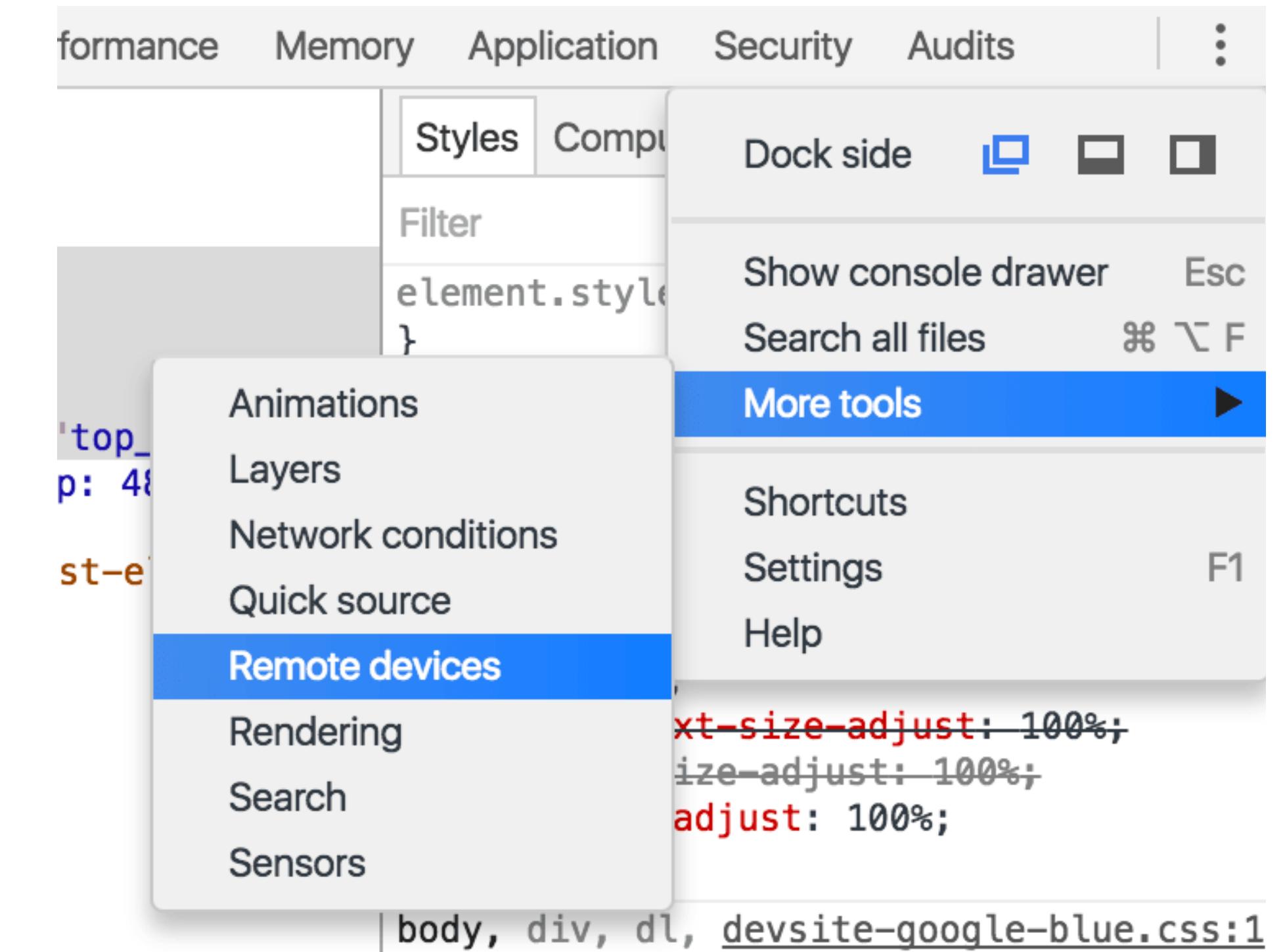
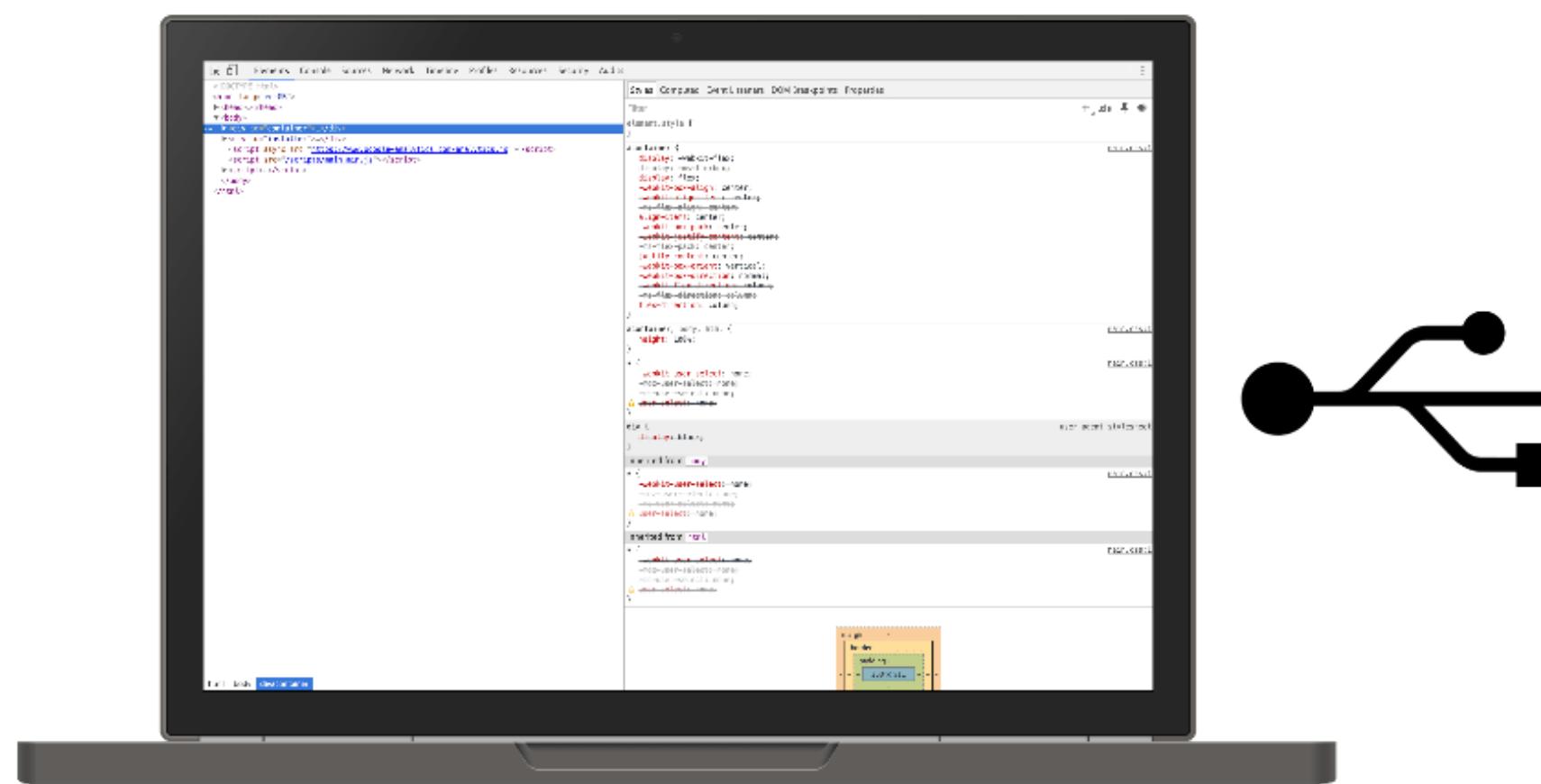
- Selected element: <label class="w-wishlist-tumbler checkbox i-bem product-card_wishlist checkbox_js_init w-wishlist-tumbler_js_init" for="iduniqu238586209635393" data-bem="{ "w-wishlist-tumbler": "", "checkbox": "" }" ...>
- Styles Tab content:

```
element.style {  
}  
.product-card_wishlist {  
    float: right;  
    margin-right: -8px;  
}  
.checkbox {  
    -webkit-tap-highlight-color: transparent;  
}  
.w-wishlist-tumbler {  
    display: block;  
    width: 48px;  
    height: 48px;  
    padding: 12px;  
}
```
- Computed Box Model on the right side.

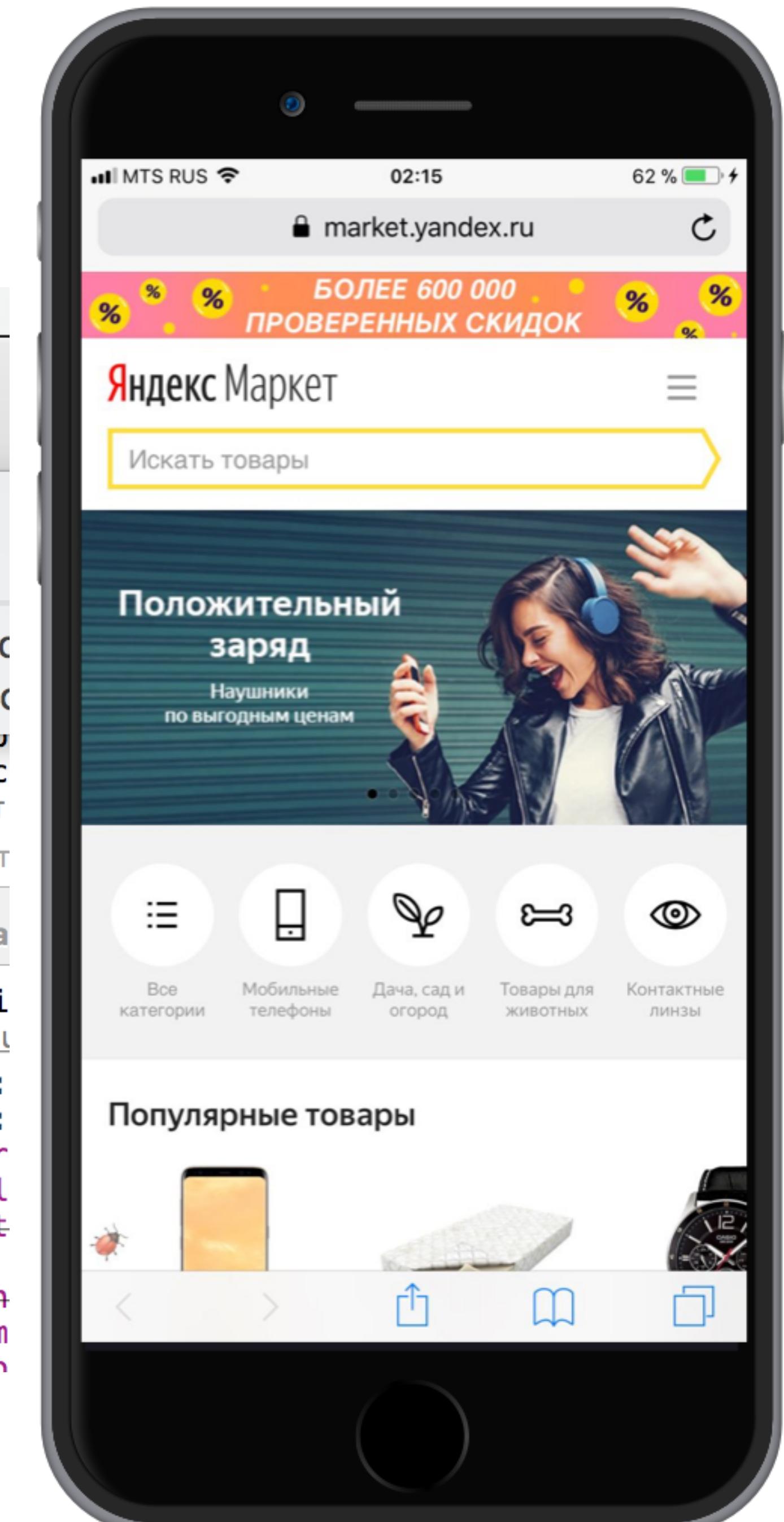
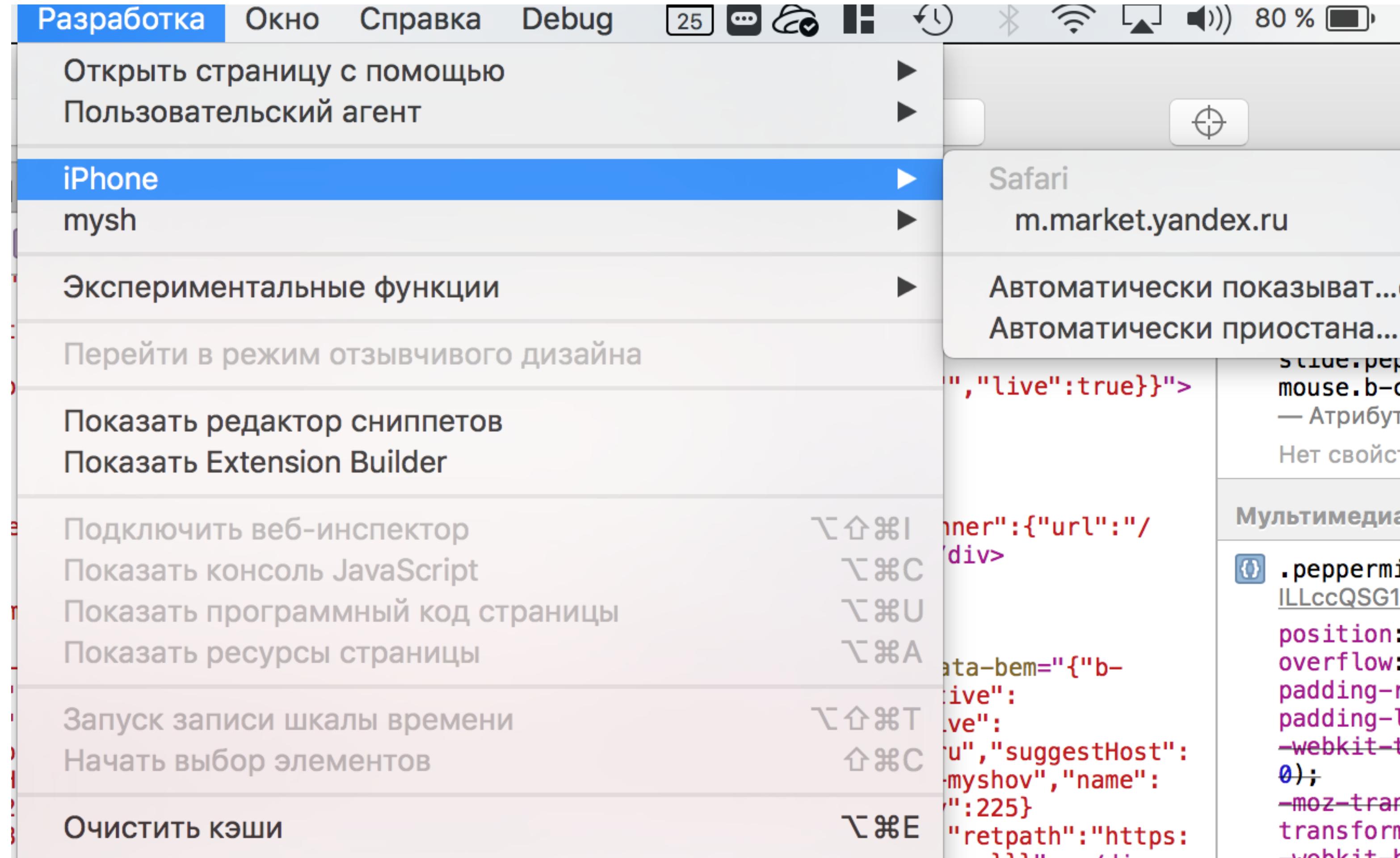
Эмуляторы



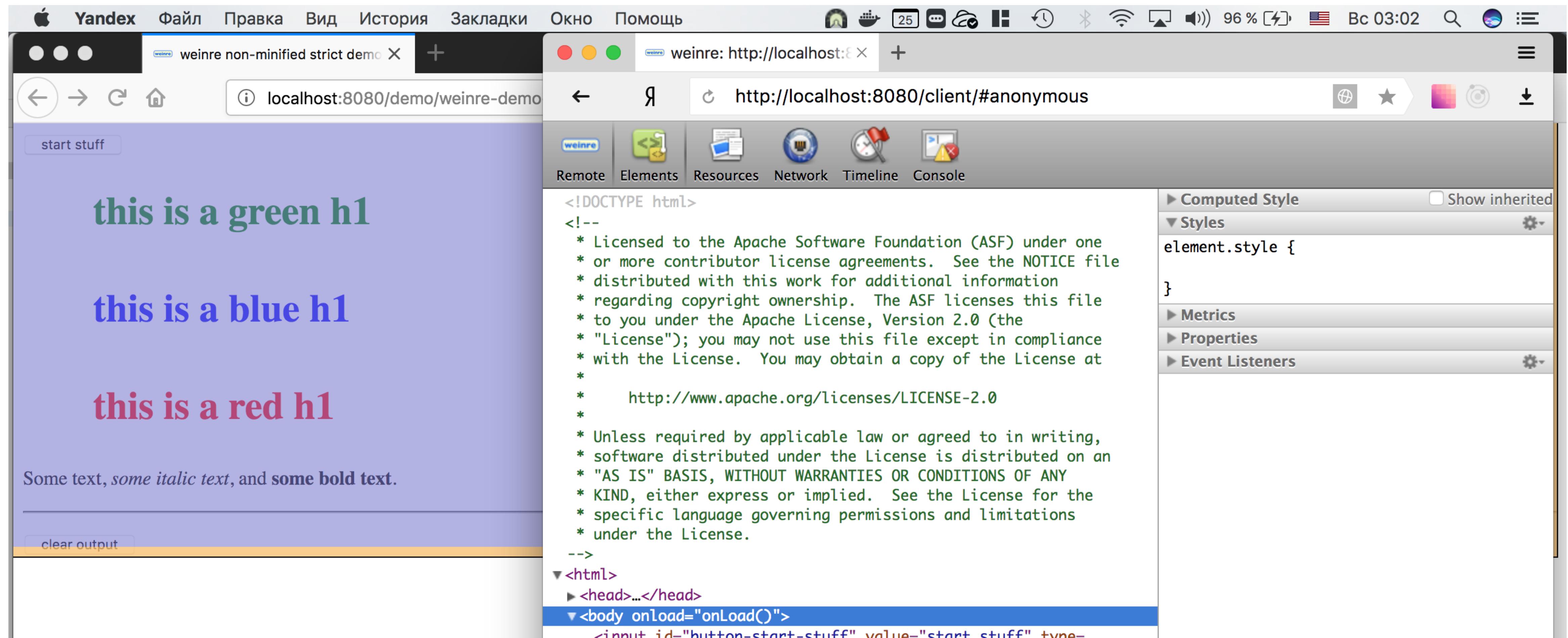
Android Remote Debugging



iOS (macOS + Safari)



Weinre - Web Inspector Remote





Best practices

Лучшие практики от Mobile Web Initiative

Mobile Best Practices (2008)

<https://www.w3.org/TR/mobile-bp/>

Mobile Web Applications Best Practices (2010)

<https://www.w3.org/TR/mwabp/>

На что обратить внимание

Маленькие экраны

Слабые процессоры

Неустойчивая сеть

Оптимизируйте отдачу первого экрана

Делите приложение на бандлы



Полезные API



Богатство современных API

Geolocation API

Device Orientation API

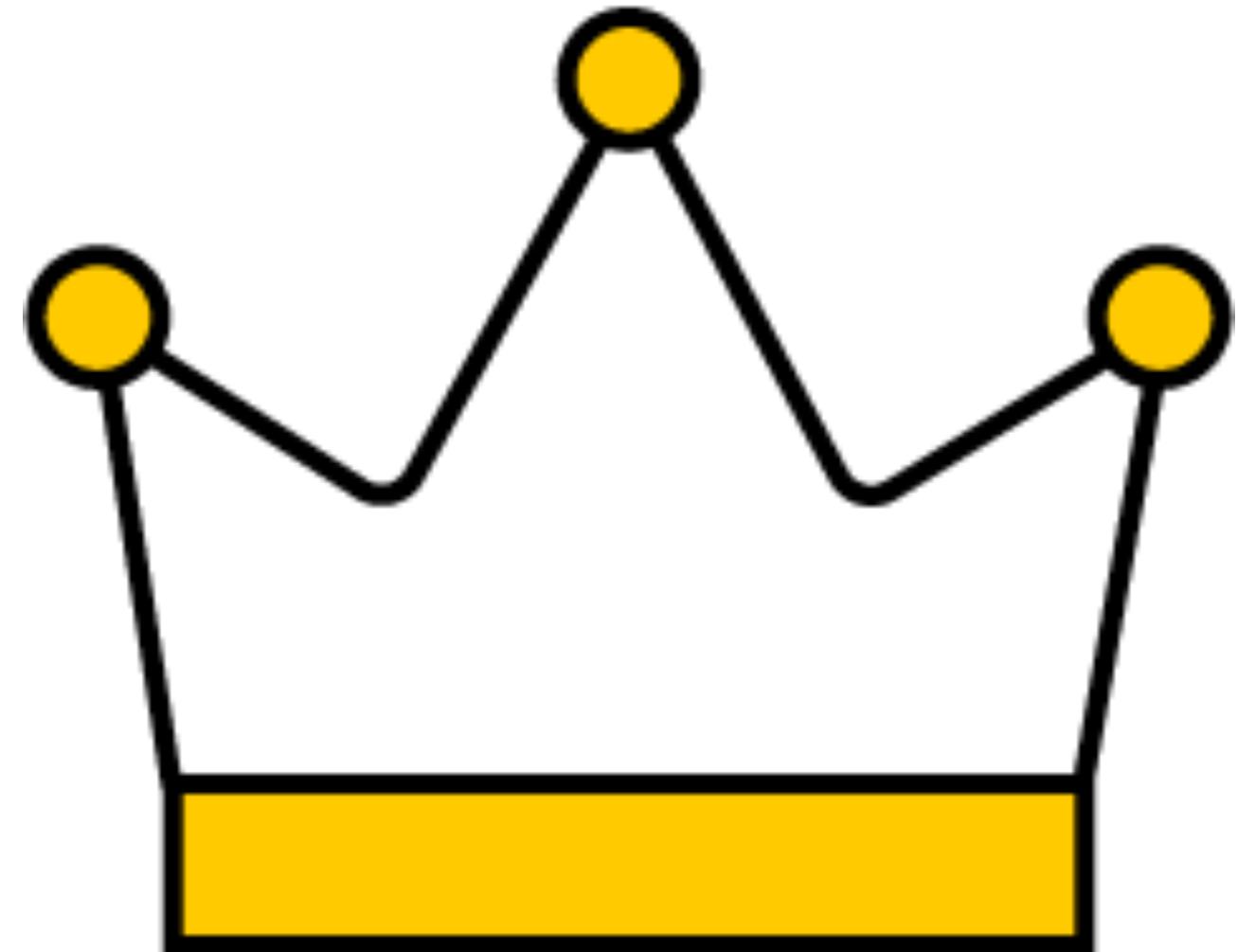
Battery Status API

Connection API

Payments Request API

Service Worker API

...



Geolocation API

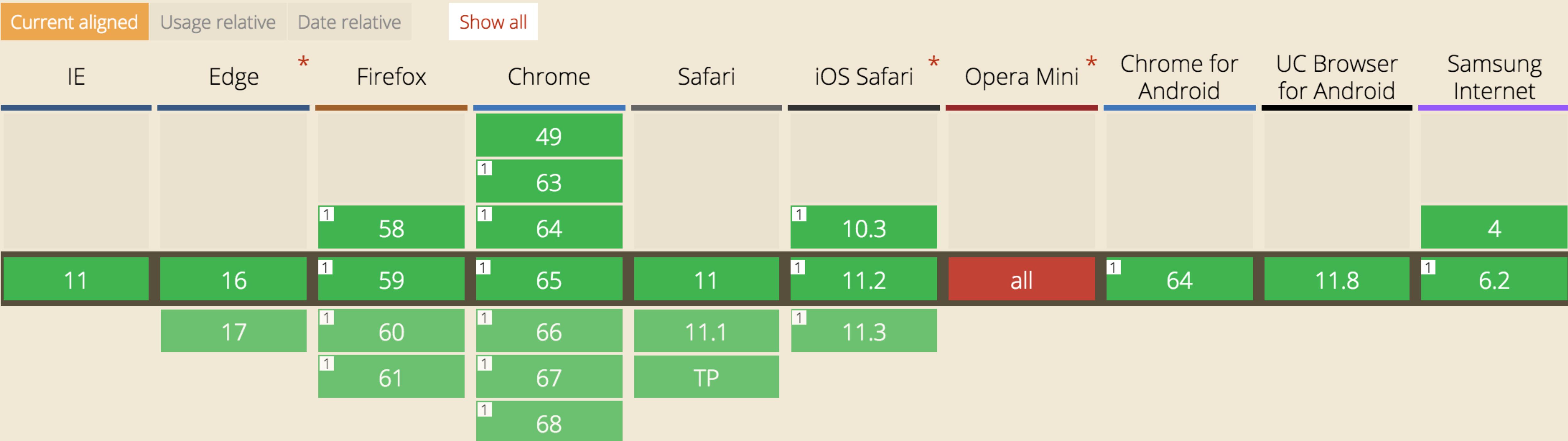
```
function showMap(position) {  
    // Show a map centered at  
    // (position.coords.latitude, position.coords.longitude)  
}  
  
// One-shot position request.  
navigator.geolocation.getCurrentPosition(showMap);
```



Geolocation - REC

Usage
Global
% of all users
95.19%

Method of informing a website of the user's geographical location



Notes

Known issues (4)

Resources (6)

Feedback

¹ Only works on secure (<https://>) servers

Device Orientation API

```
window.addEventListener('deviceorientation',  
    handleOrientation, true);
```

```
function handleOrientation(event) {  
  
    var absolute = event.absolute;  
    var alpha     = event.alpha;  
    var beta      = event.beta;  
    var gamma     = event.gamma;  
  
    // Do stuff with the new orientation data  
}
```



DeviceOrientation & DeviceMotion events

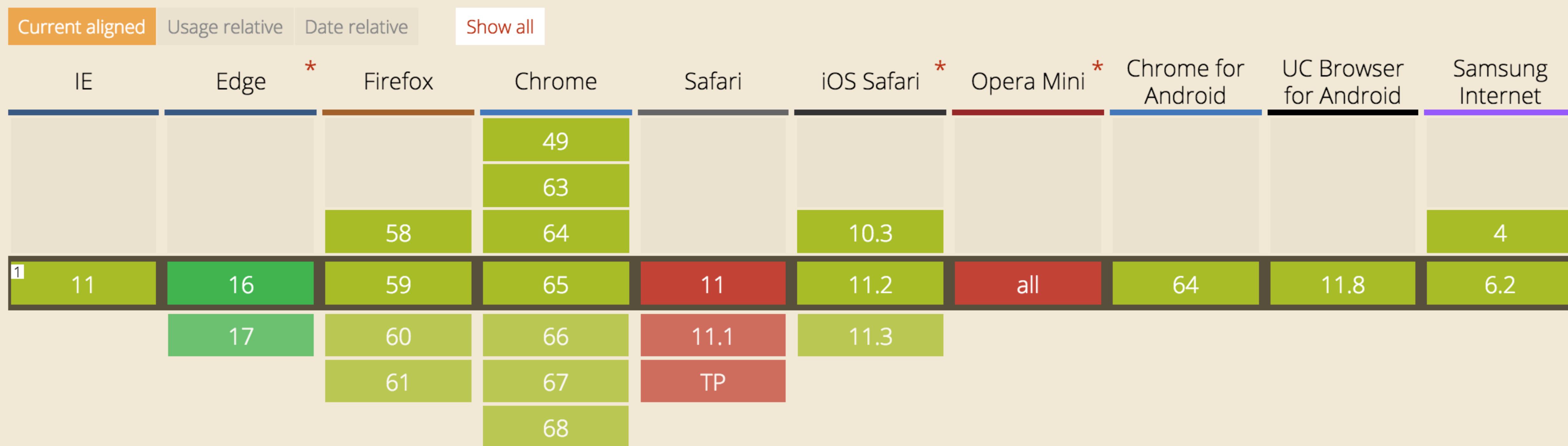
Usage

Global

% of all users

2.06% + 90.41% = 92.47%

API for detecting orientation and motion events from the device running the browser.



Notes

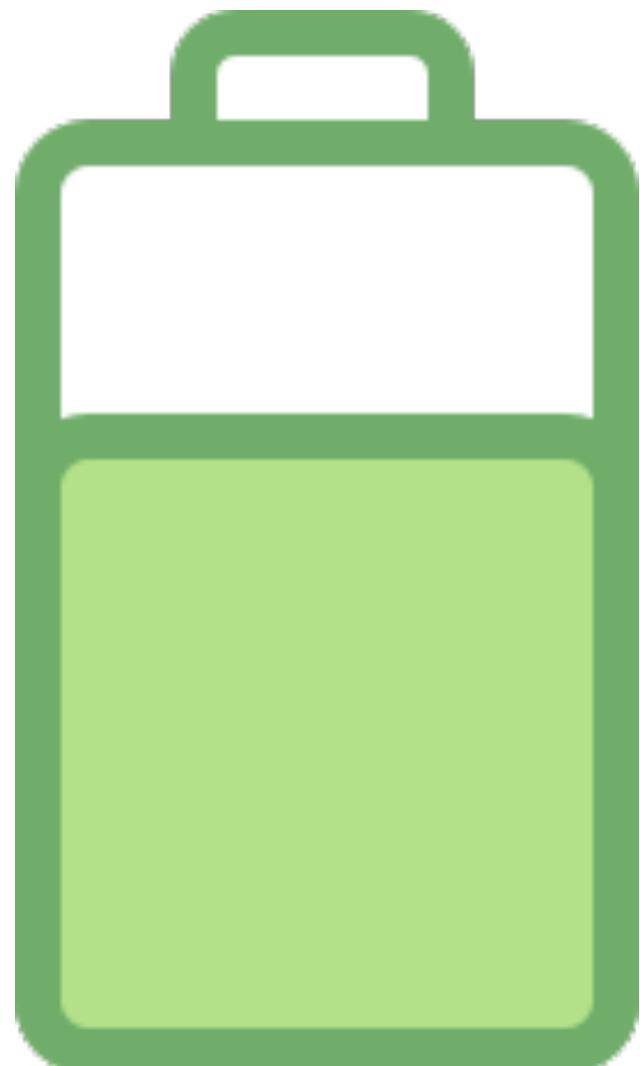
Known issues (2)

Resources (11)

Feedback

Battery Status API

```
navigator.getBattery().then(function(battery) {  
  console.log(battery.level);  
  
  battery.addEventListener('levelchange', function() {  
    console.log(this.level);  
  });  
});
```

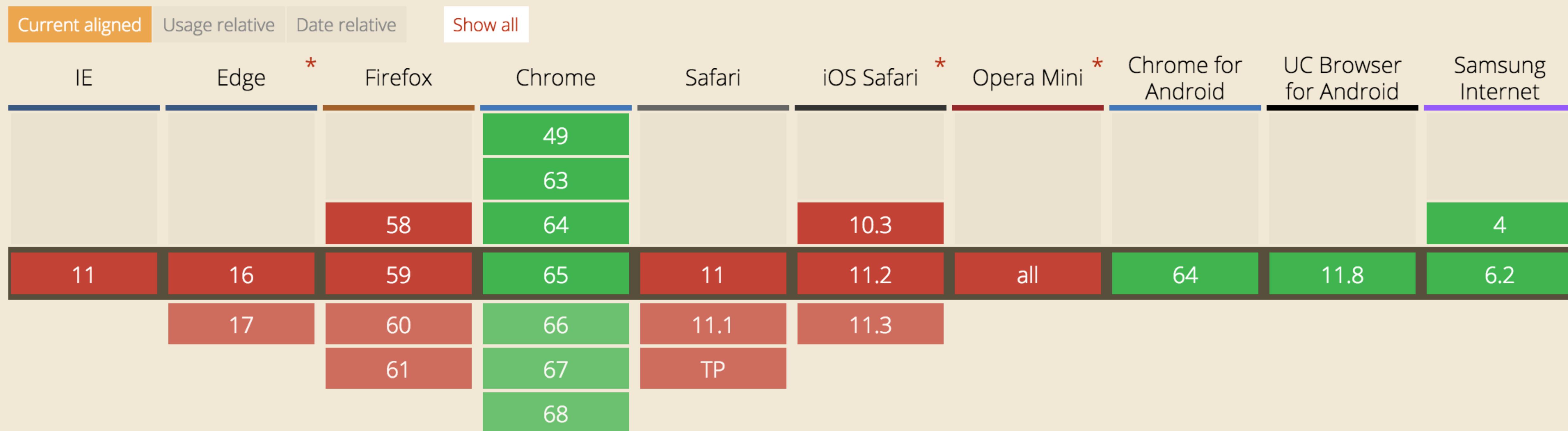


Battery Status API - CR

Method to provide information about the battery status of the hosting device.

Usage
Global
unprefixed:

% of all users
70.27% + 0.25% = 70.52%
70.27% + 0.22% = 70.49%



Notes

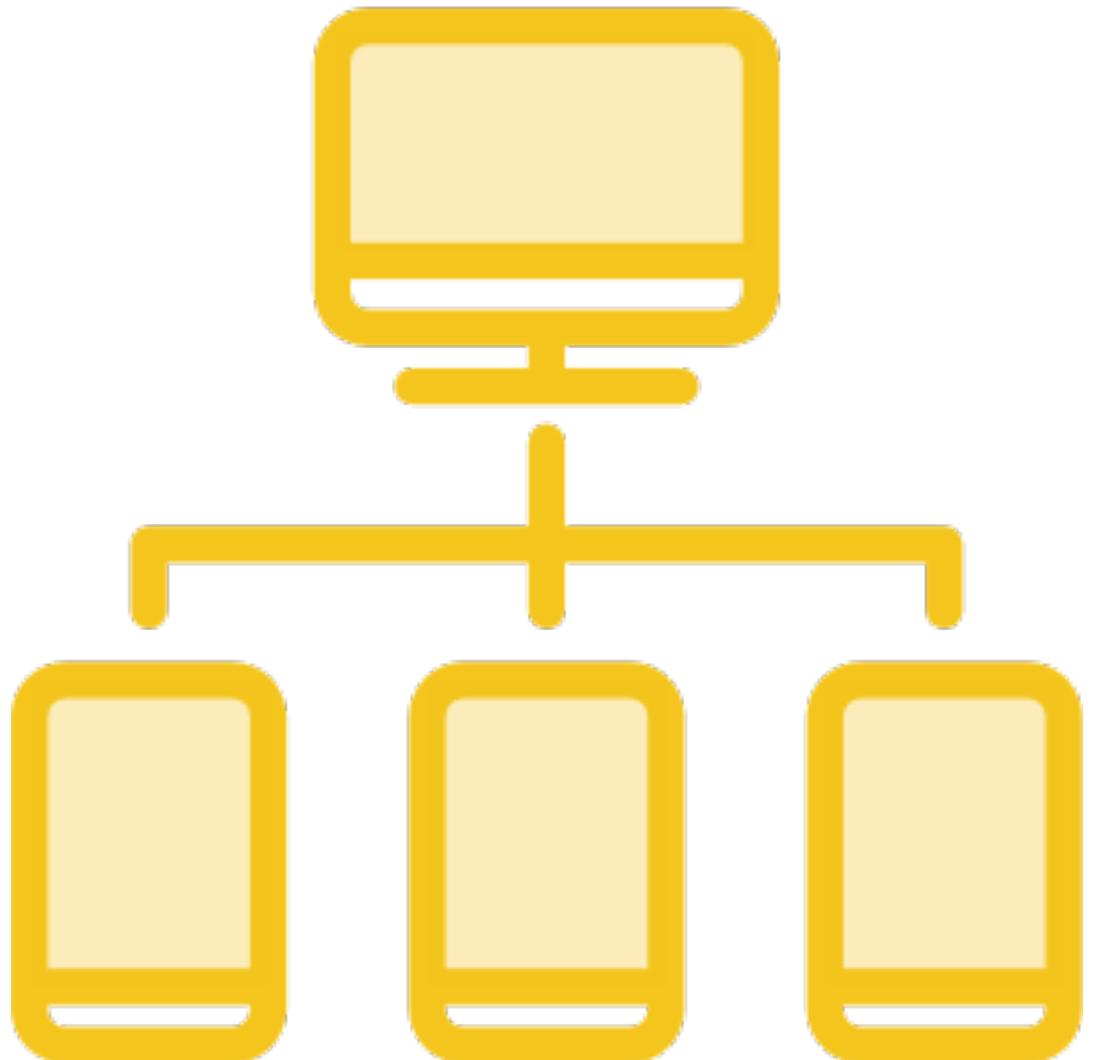
Known issues (0)

Resources (6)

Feedback

Network Information API

```
var connection = navigator.connection;  
  
function onConnectionTypeChange() {  
    console.log("Connection type is " + connection.type);  
}  
  
connection.addEventListener('typechange',  
    onConnectionTypeChange);
```



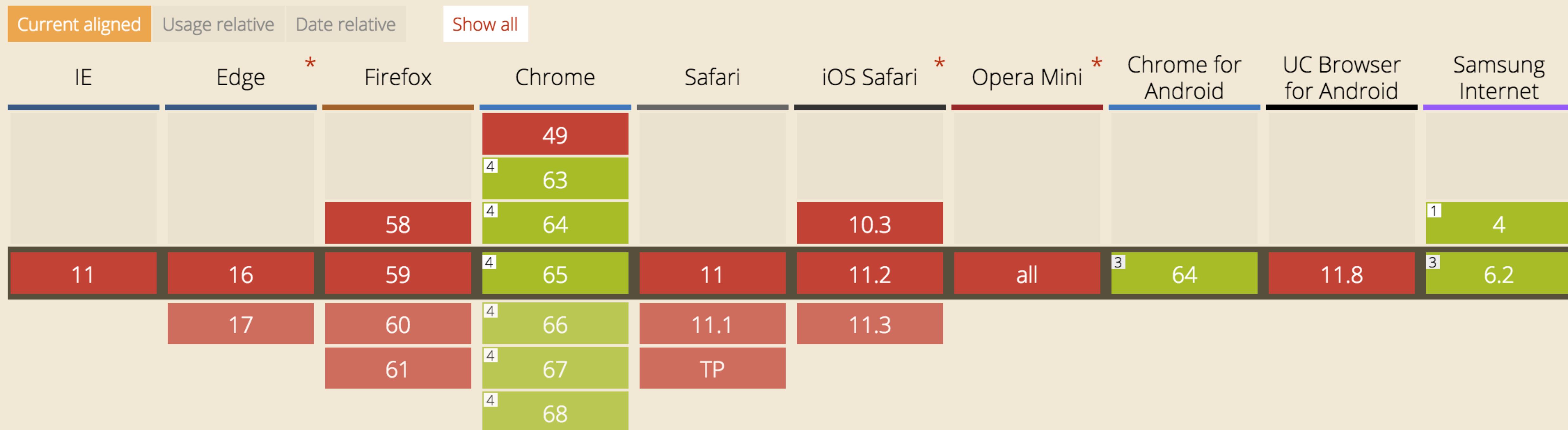
Network Information API

- UNOFF

Usage
Global

% of all users
0% + 59.92% = 59.92%

The Network Information API enables web applications to access information about the network connection in use by the device.



Notes

Known issues (0)

Resources (3)

Feedback

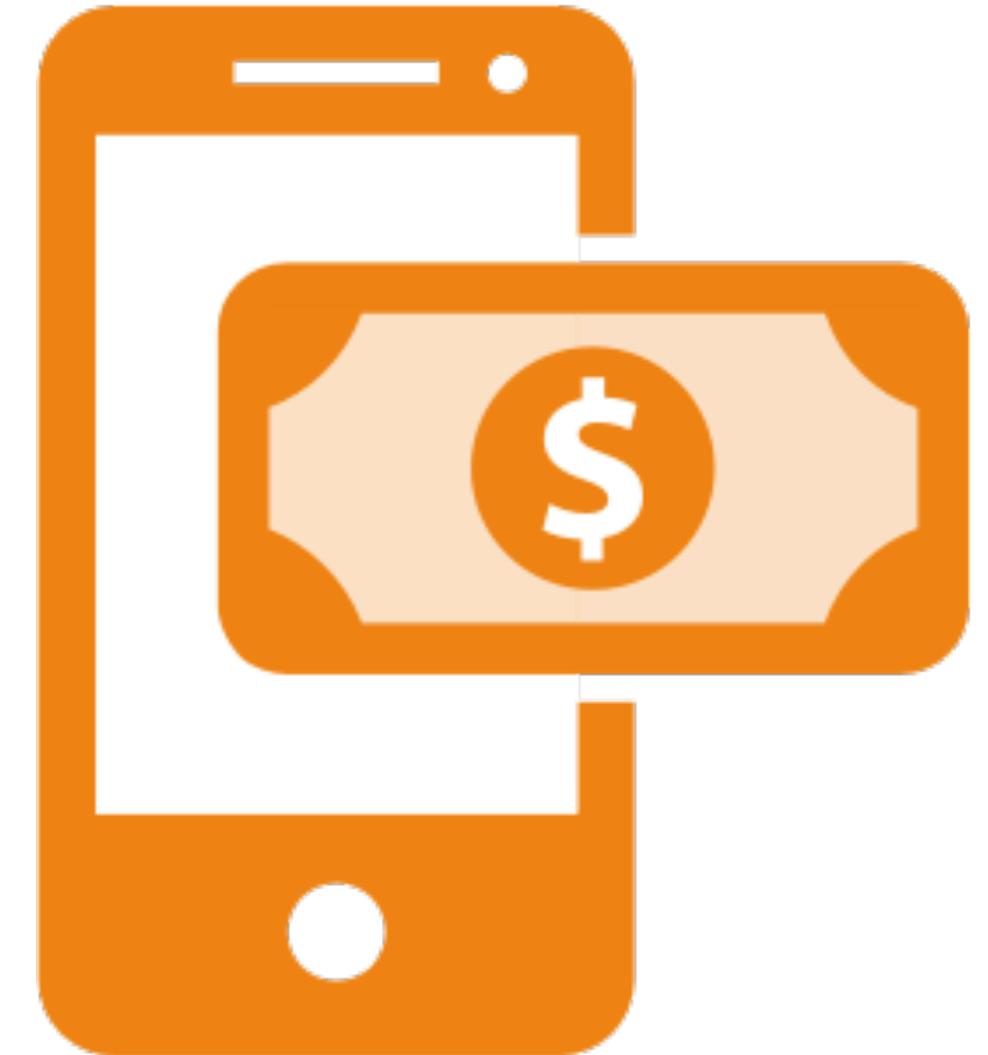
Wake Lock API

```
navigator.getWakeLock("screen").then(function(wakeLock) {  
  var request = wakeLock.createRequest();  
  setTimeout(function() {  
    request.cancel();  
  }, 1000);  
});  
  
// https://github.com/richtr/NoSleep.js
```



Payment Request API

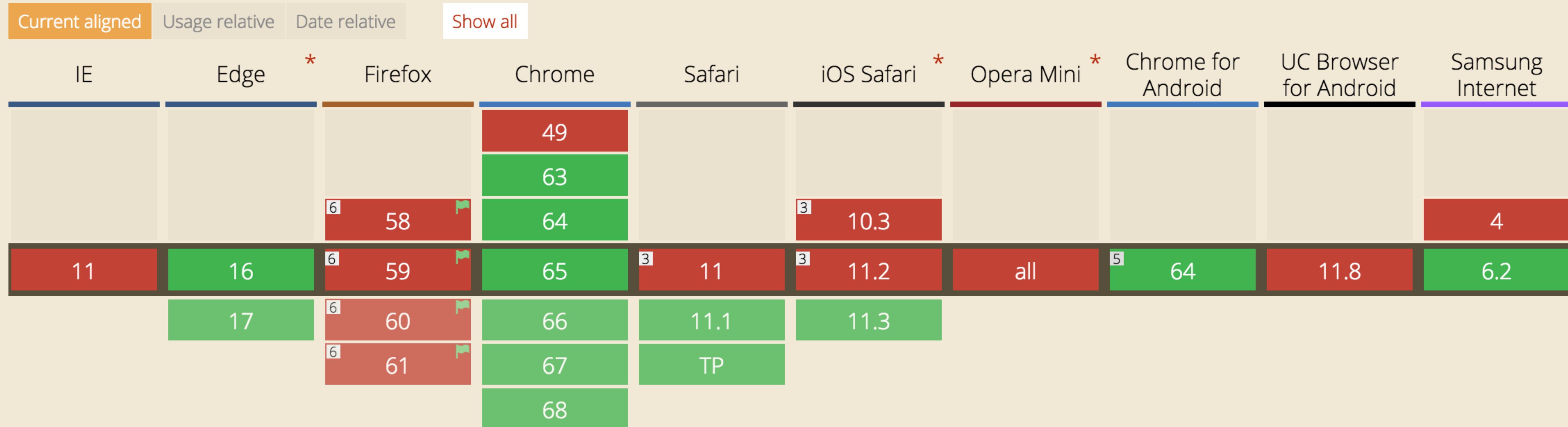
```
const request = new PaymentRequest(  
    supportedPaymentMethods,  
    paymentDetails,  
    options  
);  
  
request  
    .show()  
    .then(...)  
    .catch(...);
```



Payment Request API - WD

Usage
Global
% of all users
60.19%

Payment Request is a new API for the open web that makes checkout flows easier, faster and consistent on shopping sites.



Notes

Known issues (0)

Resources (11)

Feedback

Service Worker API

```
navigator.serviceWorker.register('/sw-test/sw.js')
  .then(function(reg) {
    // registration worked
    console.log('Registration succeeded. Scope is ' + reg.scope);
  }).catch(function(error) {
    // registration failed
    console.log('Registration failed with ' + error);
});
```



Service Workers

WD

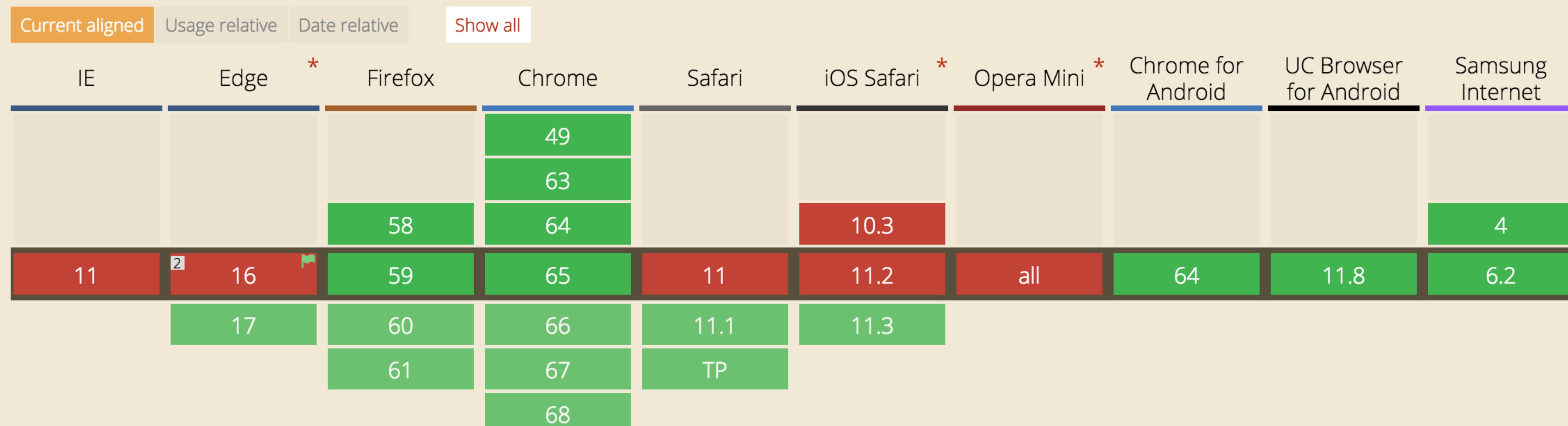
Usage

Global

% of all users

74.42% + 0.18% = 74.59%

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



Notes

Known issues (0)

Resources (8)

Feedback

Итоги

Рынок мобильных устройств огромен

Отладка не так страшна как о ней говорят

Тестируйте на реальных устройствах

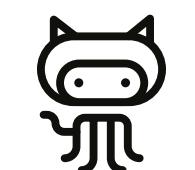
Знайте о современных API

Разрабатывайте удобные мобильные веб приложения

Мышов Александр
Яндекс.Маркет



myshov@yandex-team.ru



github.com/myshov/awesome-mobile-web-development