



В ПОГОНЕ

за

ПРОИЗВОДИТЕЛЬНОСТЬЮ

КОНВЕРСИЯ

Walmart 

1 СЕКУНДА

**УВЕЛИЧЕНИЯ
ПРОИЗВОДИТЕЛЬНОСТИ**



+2%

КОНВЕРСИЯ

Walmart 

1 СЕКУНДА

УВЕЛИЧЕНИЯ
ПРОИЗВОДИТЕЛЬНОСТИ

|
\$482.2

миллиарда

КОНВЕРСИЯ



2,2 СЕКУНДЫ

**УВЕЛИЧЕНИЯ
ПРОИЗВОДИТЕЛЬНОСТИ**

A large white circle containing a green wedge-shaped segment at the top. In the center of the circle, the text "+15,4%" is displayed in a bold green font.

+15,4%

КОНВЕРСИЯ



2,2 СЕКУНДЫ

**УВЕЛИЧЕНИЯ
ПРОИЗВОДИТЕЛЬНОСТИ**



КОНВЕРСИЯ



1 СЕКУНДА

**СНИЖЕНИЯ
ПРОИЗВОДИТЕЛЬНОСТИ**

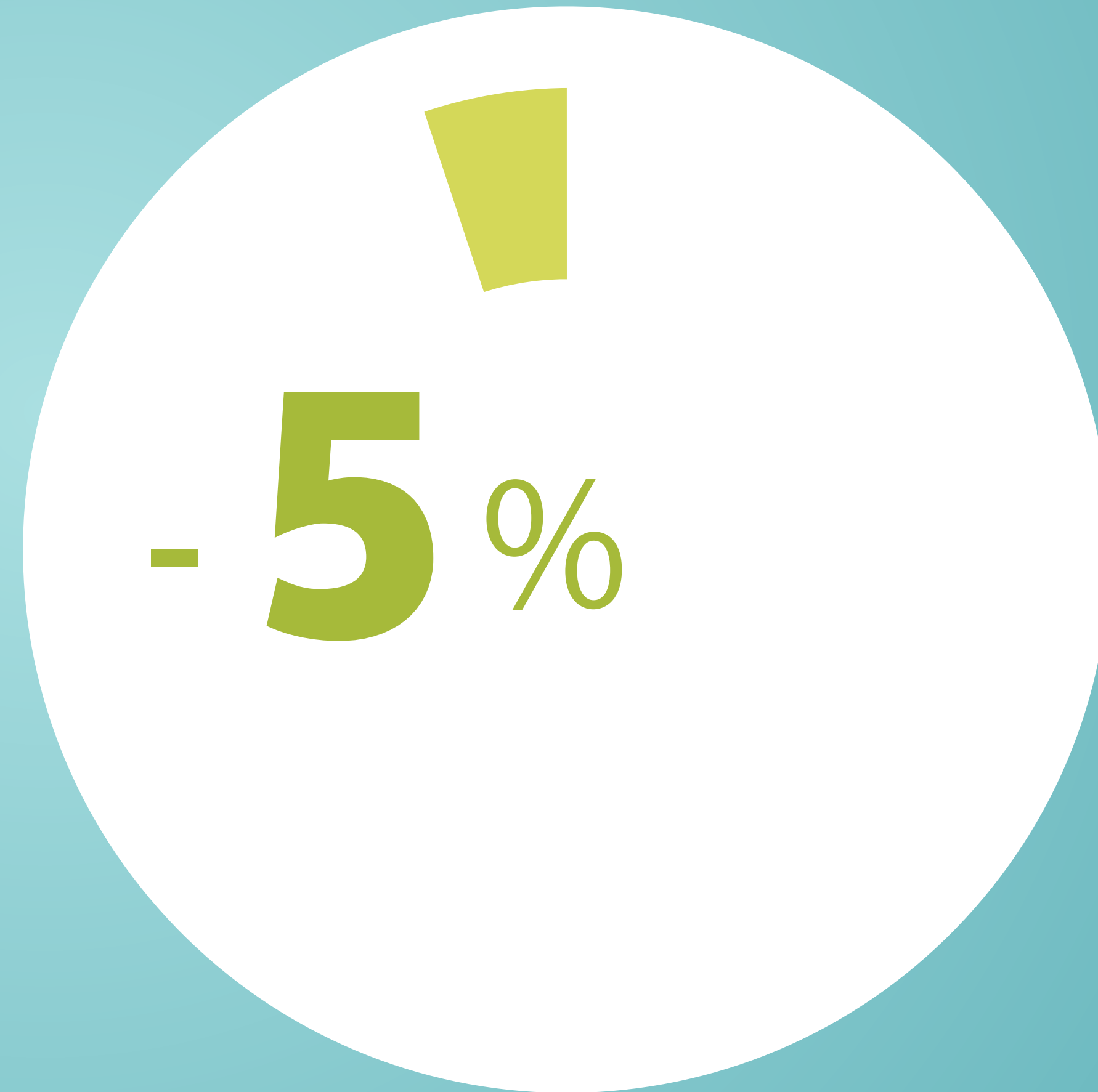
A white circular gauge with a green needle pointing to the top. The text '-4,6%' is displayed in green inside the gauge.

КОНВЕРСИЯ



2 СЕКУНДЫ

**СНИЖЕНИЯ
ПРОИЗВОДИТЕЛЬНОСТИ**



КОНВЕРСИЯ



3 СЕКУНДЫ

**СНИЖЕНИЯ
ПРОИЗВОДИТЕЛЬНОСТИ**





Wikipedia 
@Wikipedia



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Cut page load by 100ms and you save
Wikipedia readers 617 years of wait annually.
Apply as Web Performance Engineer:
[boards.greenhouse.io/wikimedia/jobs ...](https://boards.greenhouse.io/wikimedia/jobs)

RETWEETS

246

LIKES

149



11:07 PM - 6 Apr 2015



Web Page Performance Test for

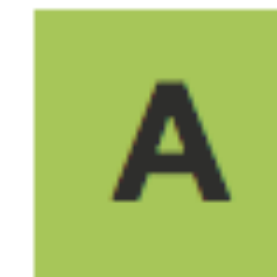
[amazon.com](#)

From: Moscow, Russia - Chrome - Cable
4/11/2016, 8:20:23 PM

[Need help improving?](#)



First Byte
Time



Keep-alive
Enabled



Compress
Transfer



Compress
Images



Cache
static
content



Effective
use of CDN

Tester: WIN-32VTGRUNTNO-188.120.233.22

[Export HTTP Archive \(.har\)](#)

Load Time	First Byte	Start Render	Visually Complete	<u>Speed Index</u>	DOM Elements	Result (error code)	Document Complete			Fully Loaded		
							Time	Requests	Bytes In	Time	Requests	Bytes In
10.009s	0.975s	3.146s	19.800s	3644	1709	99999	10.009s	74	3,735 KB	17.725s	185	6,328 KB

RUM First Paint	<u>domInteractive</u>	<u>domContentLoaded</u>	<u>loadEvent</u>
3.117s	2.167s	2.167s - 2.168s (0.001s)	9.828s - 9.855s (0.027s)

Waterfall View

DNS Lookup	Initial Connection	SSL Negotiation	Time to First Byte	Content Download	3xx response	4xx+ response
------------	--------------------	-----------------	--------------------	------------------	--------------	---------------

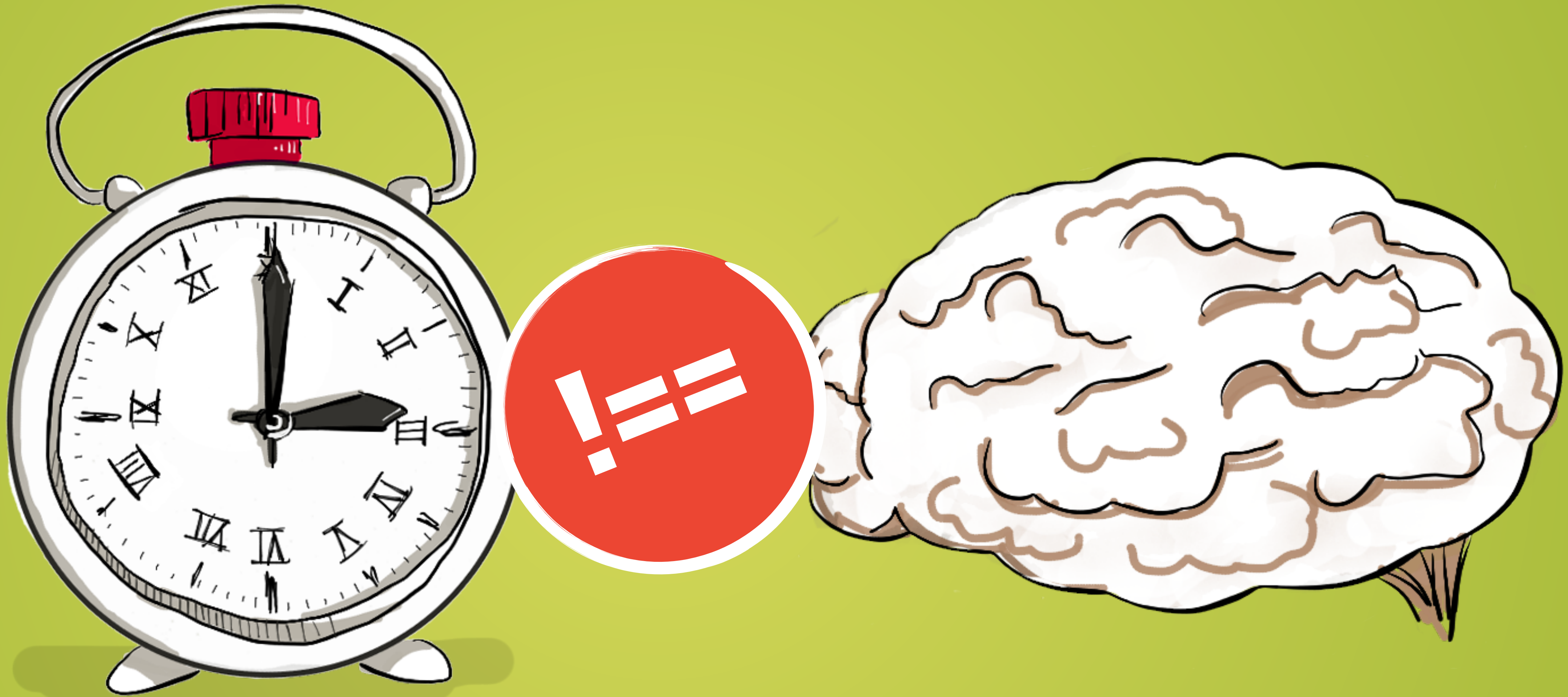
Start Render	msFirstPaint	DOM Interactive	DOM Content Loaded	On Load	Document Complete
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- www.amazon.com - Amazon.com: Online Shopping for Electronics, Apparel, Computers, Books, DVDs & more
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ПРОИЗВОДИТЕЛЬНОСТЬ

ЭТО **НЕ**

МАТЕМАТИКА

ПРОИЗВОДИТЕЛЬНОСТЬ

ЭТО

ВОСПРИЯТИЕ

“

The **perception of performance**
is just as **effective** as actual
performance in many cases

”









“

Мы не воспринимаем то, что вокруг нас.
Мы воспринимаем только то что говорит
нам наш мозг...

Наше сознание отстает от самих событий
примерно на **80 миллисекунд** и когда вам
кажется что событие только происходит,
оно уже свершилось.

”

David Cagleman

JND

(just noticeable difference)



ПРАВИЛО 20%

СОБЫТИЕ



ПРАВИЛО 20%

СОБЫТИЕ

20%

**5-10
СЕКУНД**



1

ACTIVE

PASSIVE

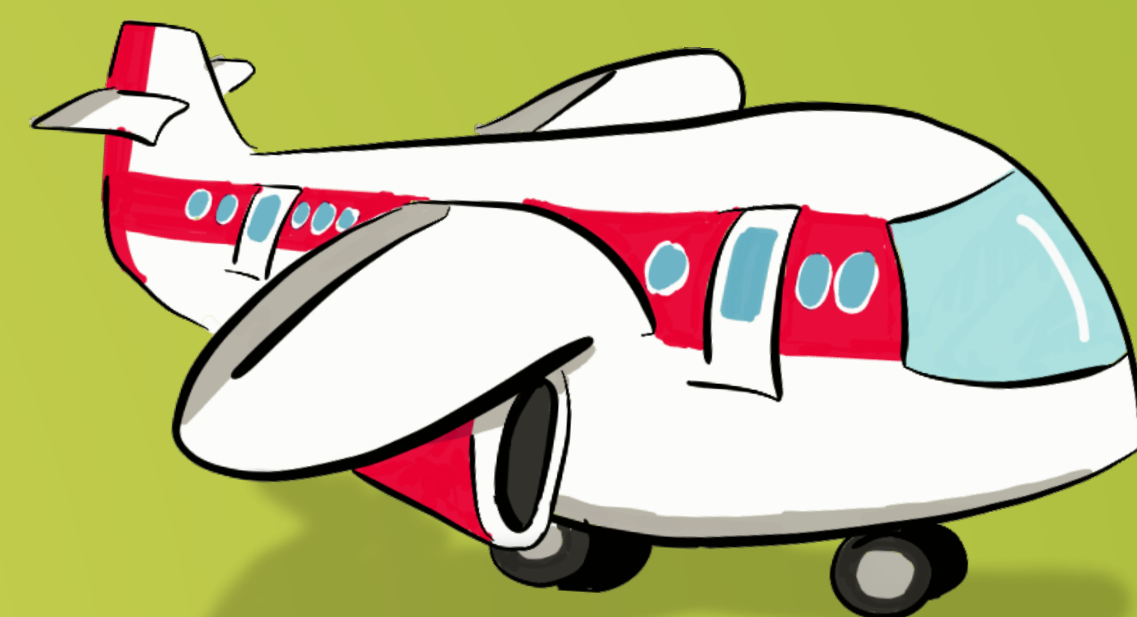


2

ACTIVE

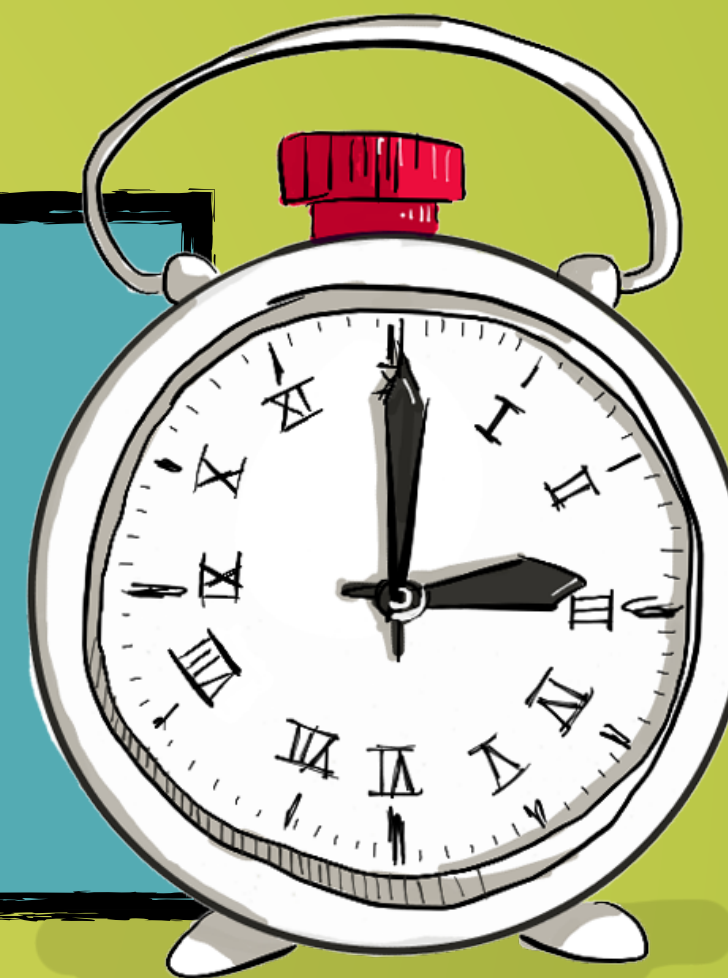
PASSIVE





ПРЕДВАРИТЕЛЬНЫЙ СТАРТ

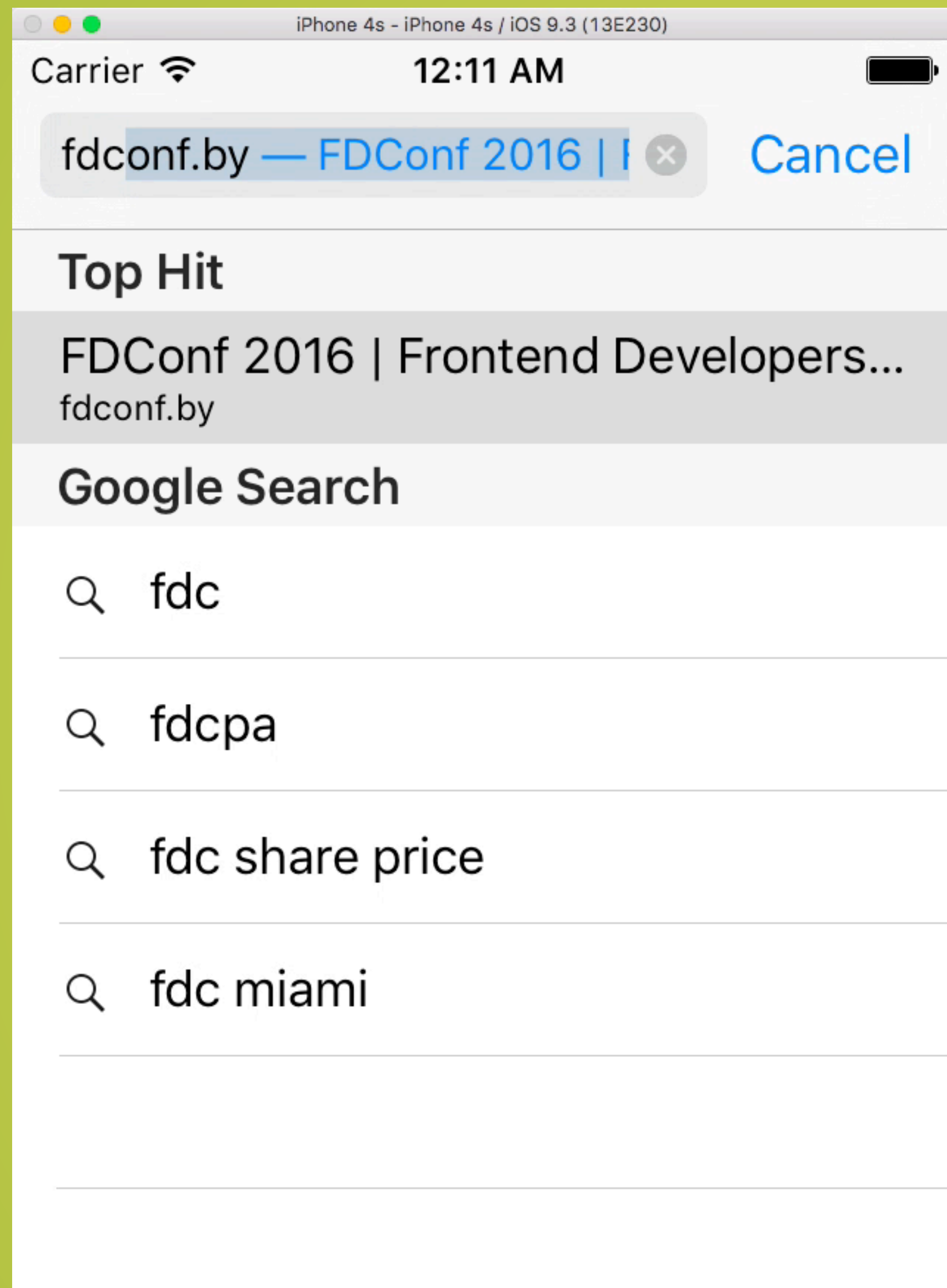
СОБЫТИЕ



АКТИВНАЯ
ФАЗА

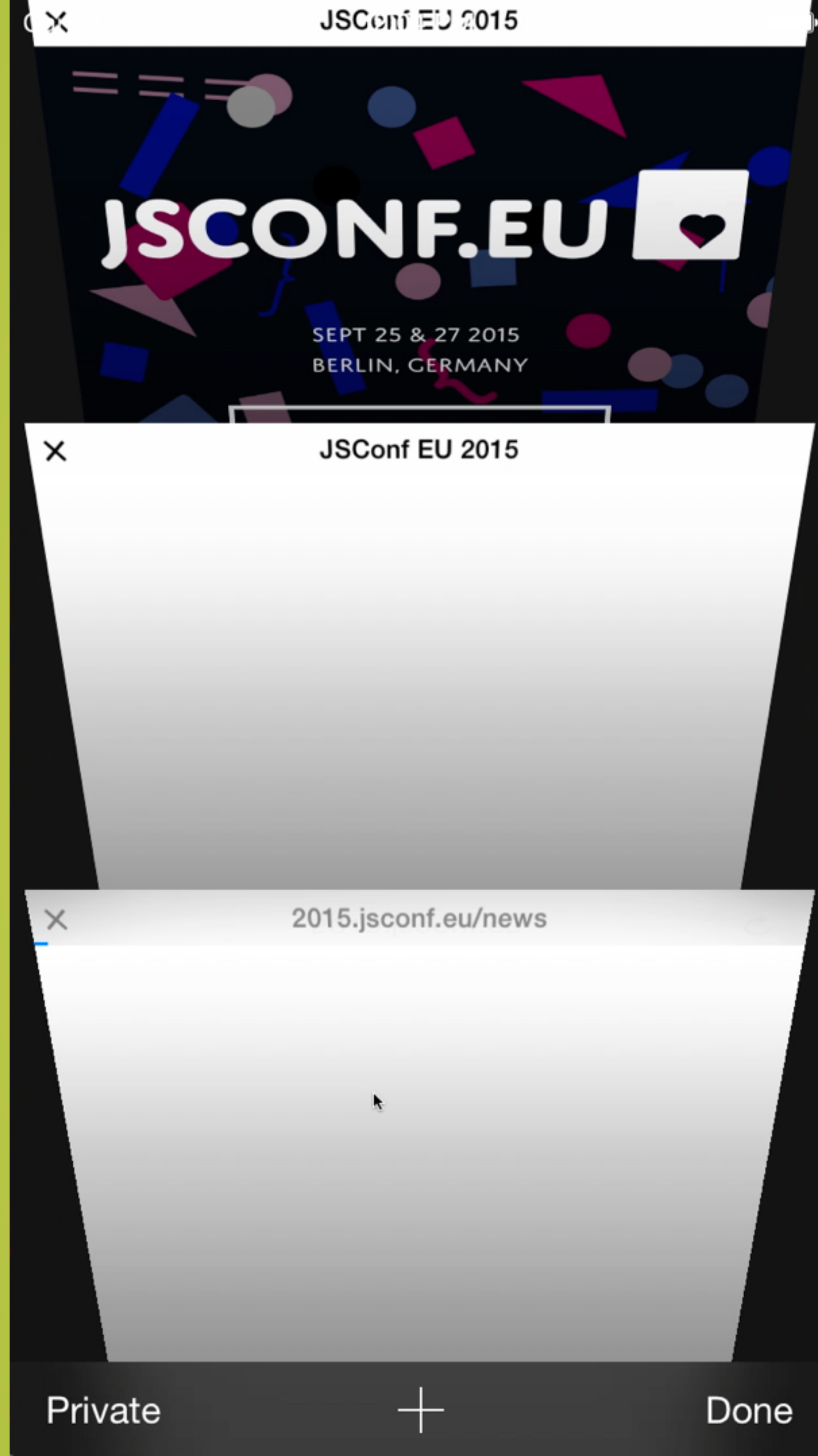
СОБЫТИЕ





ЗАГРУЗКА TOP HITS

Settings / Safari / Preload Top Hits



ОТКРЫТИЕ В НОВОЙ ВКЛАДКЕ



ОТКРЫТИЕ В НОВОЙ ВКЛАДКЕ

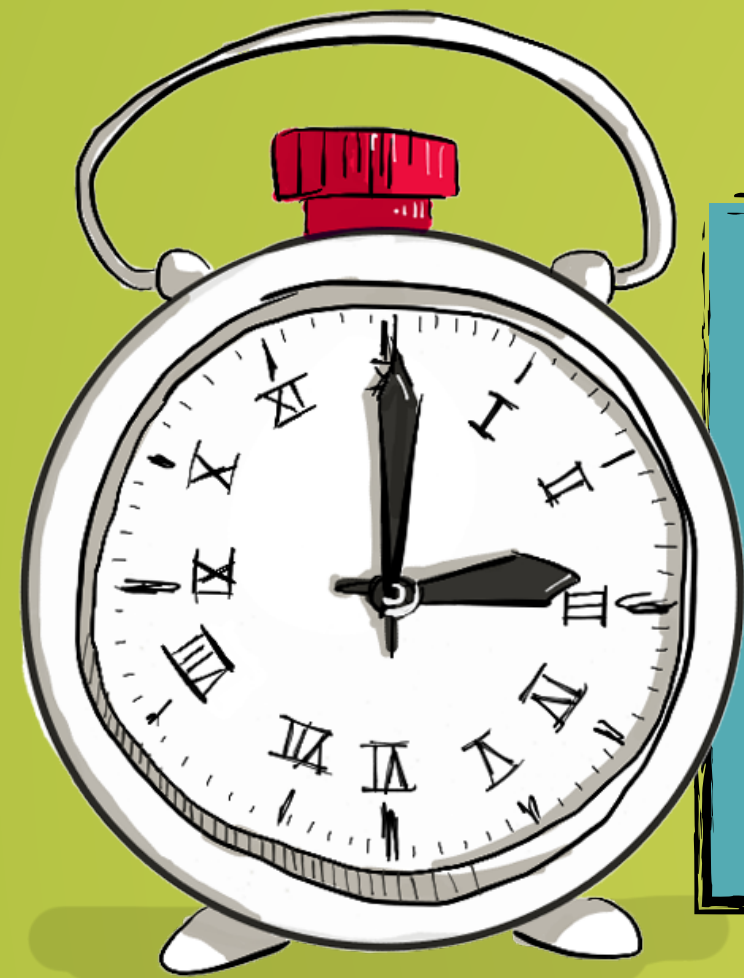
rel=**“DNS-PREFETCH”**

rel=**“PRECONNECT”**

rel=**“PREFETCH”**

rel=**“PRERENDER”**

РАННЕЕ ЗАВЕРШЕНИЕ



СОБЫТИЕ

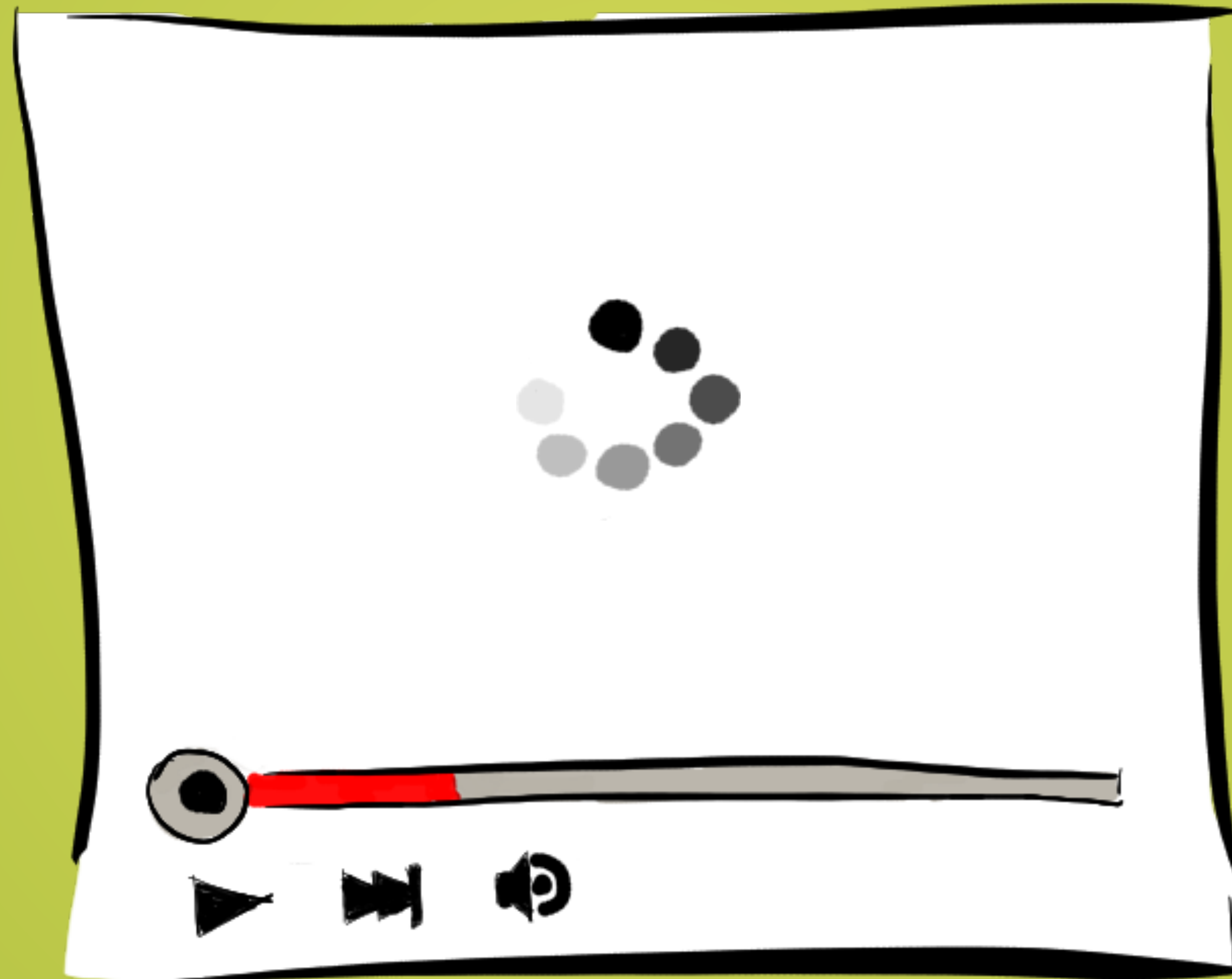


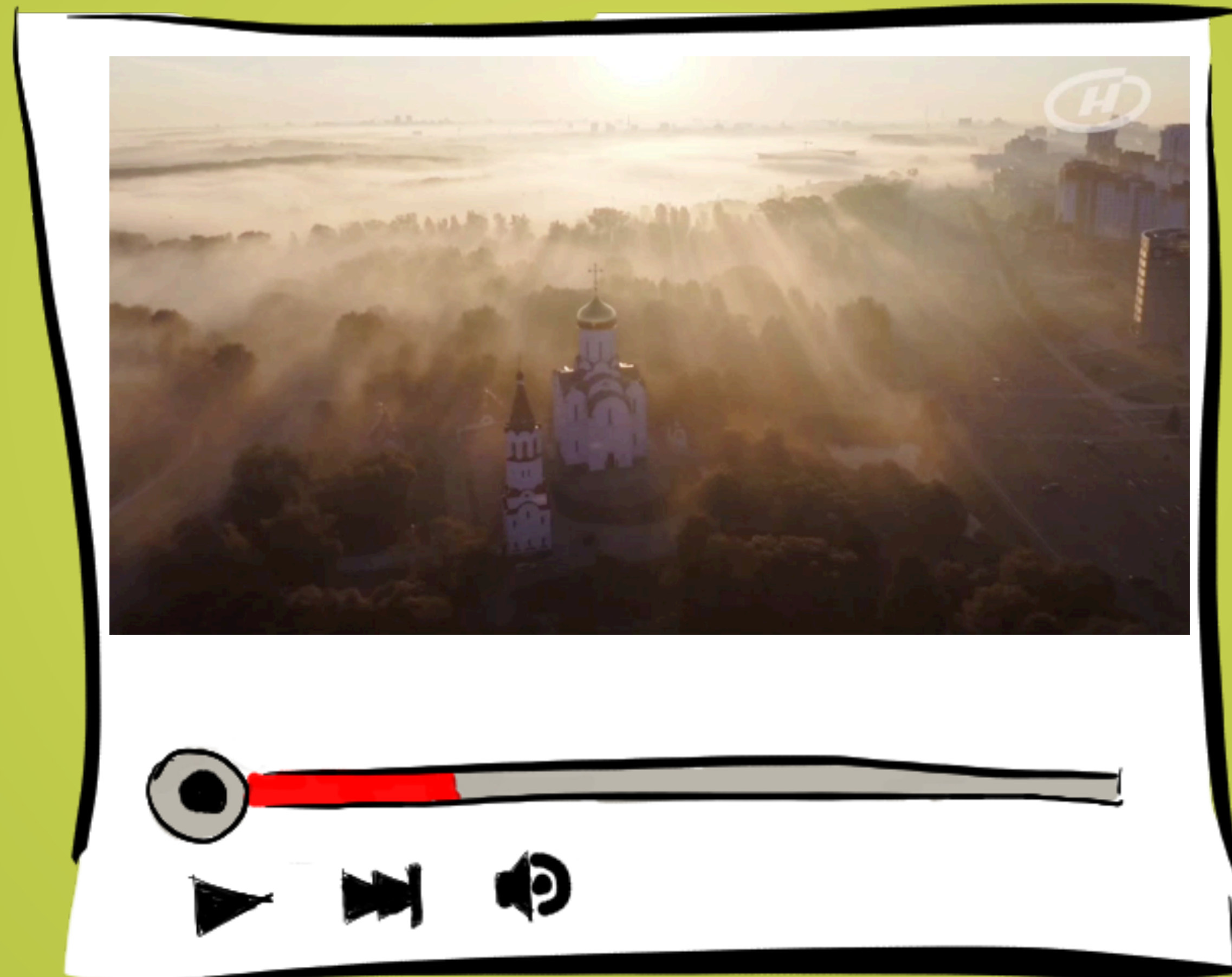
СОБЫТИЕ

АКТИВНАЯ
ФАЗА

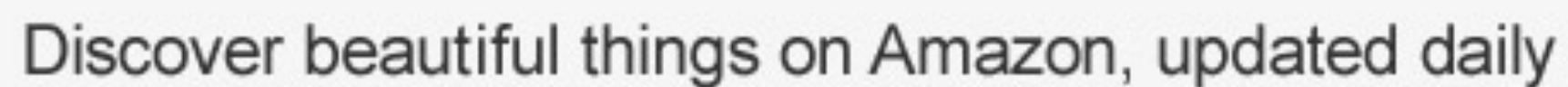


**PASSIVE
PHASE**





**ACTIVE
PHASE**



SHOP

Shop by
Department ▾

MISHUNOV's Amazon.com

Today's Deals

Gift Cards

Sell

Help

Hello, MISHUNOV

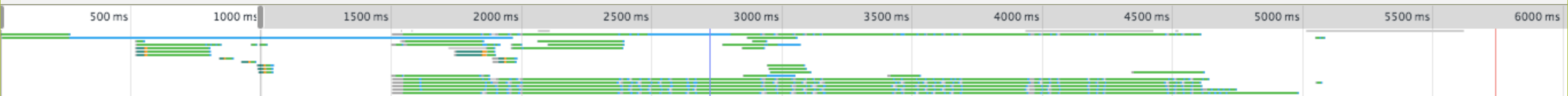
Your Account ▾

Try
Prime ▼

Wish
List ▼

Cart

AMAZON ORIGINAL SERIES



× Headers

Preview

Response Timing

01-06_amazonglobal_ss_ver4_UX533_S...

GW_Transparent2015EmmyWin-FINAL_1...

global-sprite_bluebeacon-32-v1_V3275...

☐ transparent-pixel_V386942464.gif

AmazonUI-91ff7fc385224097472b71c9...

GenericObservableJS-01e038760277ea2...

 PC_1x_Fall15_T1_V311610114.jpg

AmazonUI-babcc5a7fc2adfcfc21be8f1f2...

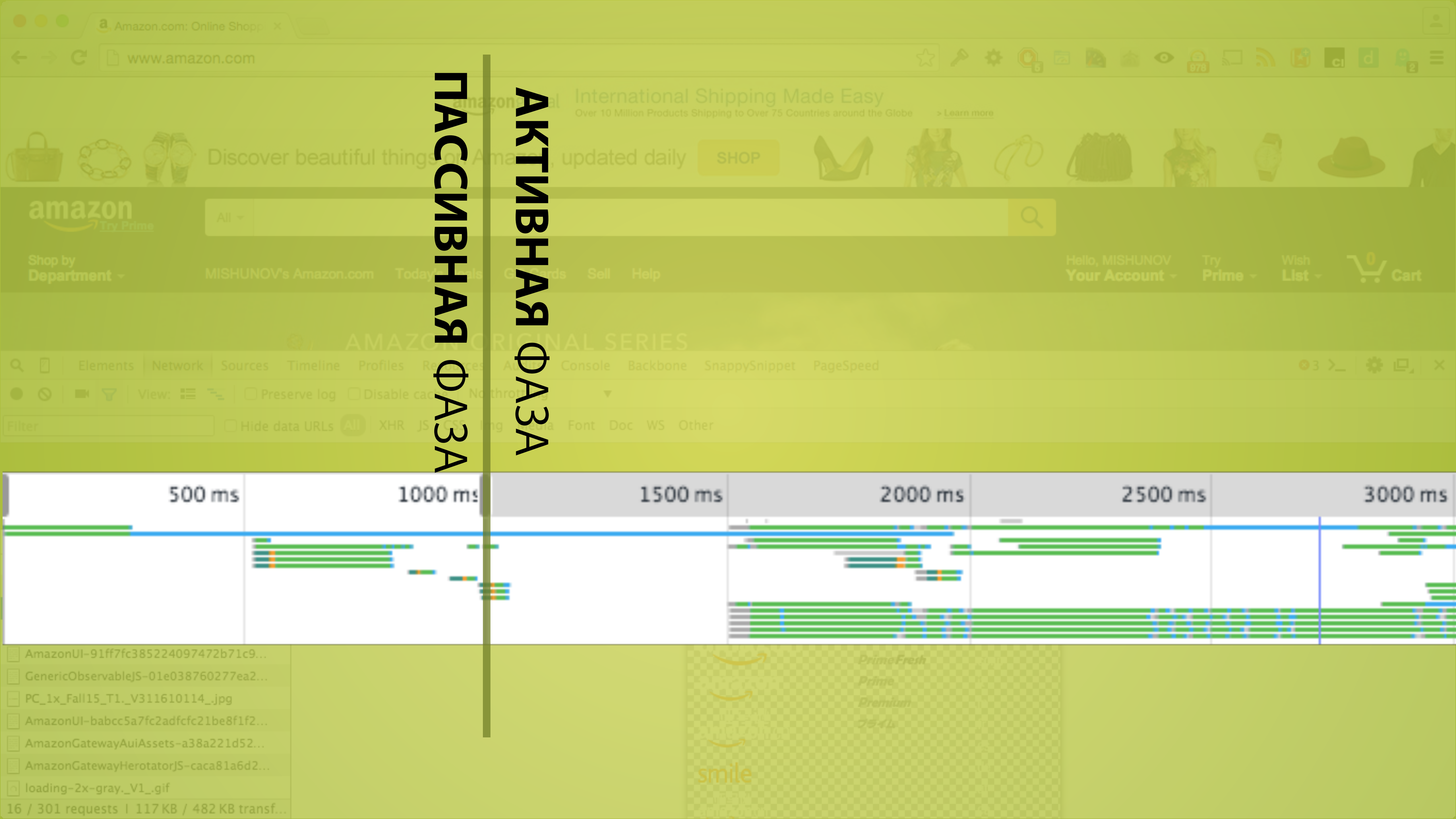
AmazonGatewayAuiAssets-a38a221d52...

AmazonGatewayHerotatorIS-caca81a6d2...

☐ loading-2x-gray. V1 .gif

16 / 301 requests | 117 KB / 482 KB transf...





1

OCCUPIED TIME FEELS **SHORTER**
THAN UNOCCUPIED TIME.



БАЛАНС МЕЖДУ **АКТИВНОЙ** И
ПАССИВНОЙ ФАЗАМИ.

2

PEOPLE WANT **TO GET STARTED**



ПРЕДВАРИТЕЛЬНЫЙ СТАРТ.

3

ANXIETY MAKES WAITS SEEM
LONGER.



СУБЪЕКТИВНЫЙ ПАРАМЕТР.
СЛОЖНО КОНТРОЛИРОВАТЬ В ВЕБ.

4

UNCERTAIN WAITS ARE LONGER
THAN KNOWN, FINITE WAITS.



ПРОГРЕСС-ИНДИКАТОРЫ.

5

UNEXPLAINED WAITS ARE LONGER
THAN EXPLAINED WAITS.



ПРОГРЕСС-ИНДИКАТОРЫ.

6

UNFAIR WAITS ARE **LONGER** THAN
EQUITABLE WAITS.



СООТВЕТСТВУЙТЕ ОЖИДАНИЯМ
ПОЛЬЗОВАТЕЛЯ.

7

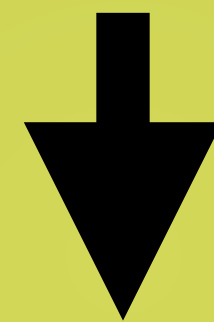
THE MORE **VALUABLE** THE SERVICE,
THE LONGER THE CUSTOMER
WILL WAIT.



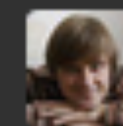
БИЗНЕС-ЗАДАЧА.

8

SOLO WAITS FEEL LONGER
THAN GROUP WAITS.



НЕ ПОДДАЕТСЯ КОНТРОЛЮ В ВЕБ.



Reach more than **70 million** people when you upload and share

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Select files to upload

or drag and drop

or upload files from the cloud

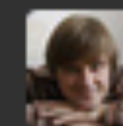


Create from scratch

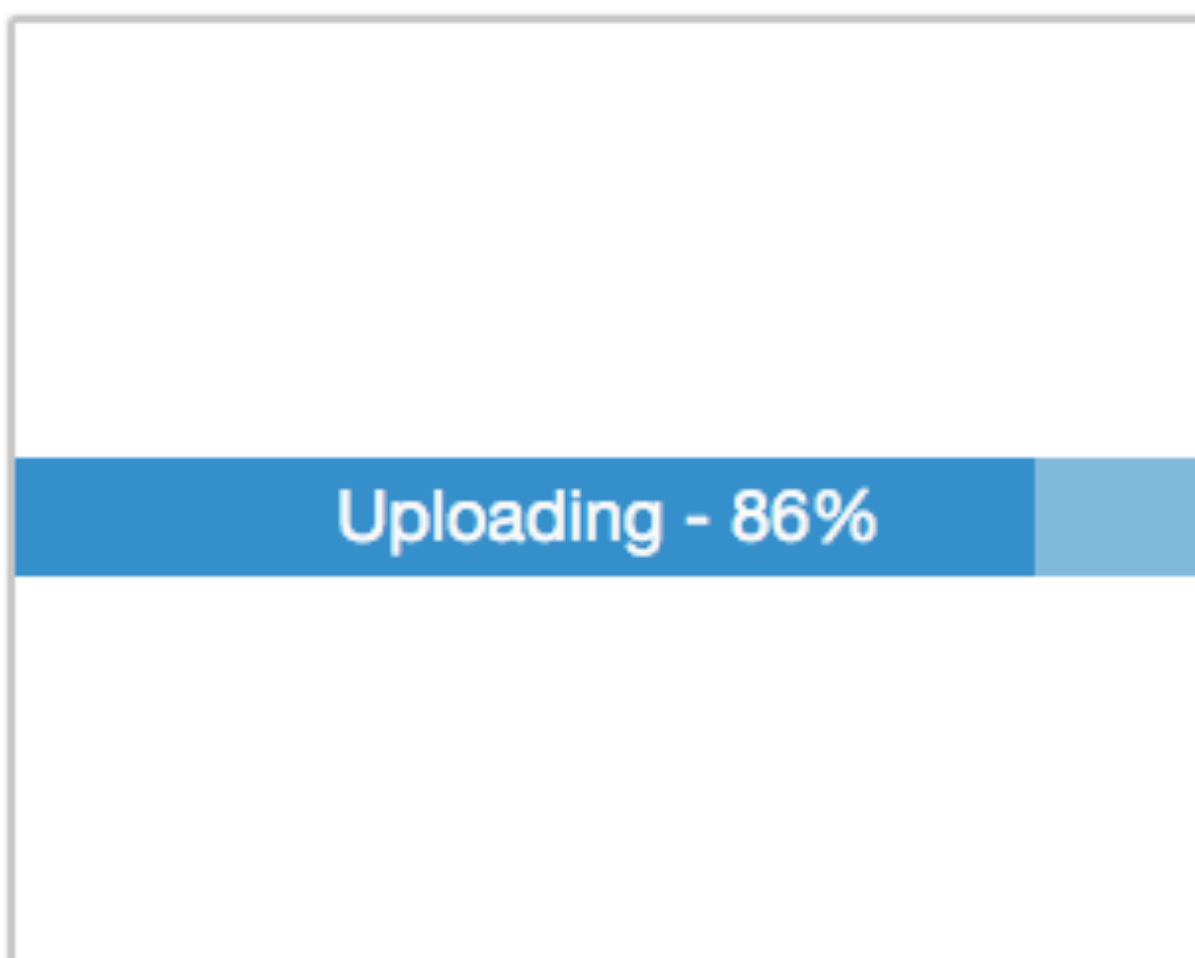
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Create a presentation



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Title*

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Add tags to make your content more discoverable

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Upload 1 of 1



Title*

Illusion of Time [JSConfEU 2015 edition]

Description*

What is common for Walt Disney World, airports and magicians?
All of these are distorting user's perception to build illusions that
make us feel good even though we don't notice them so easily.

Category*

Choose category ▾

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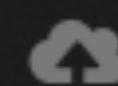
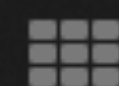
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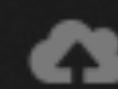
Description

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Edit the Details

Name

Illusion of Time. When 60 sec is not 1 minute

Description

What is common for Walt Disney World, airports and magicians? All of these are distorting user's perception to build illusions that make us feel good even though we don't notice them so easily. Those are time illusions. Developers, as magicians, can use the same

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Title *

Illusion of Time [JSConfEU 2015 edition]

Description *

What is common for Walt Disney World, airports and magicians? All of these are distorting user's perception to build illusions that make us feel good even though we don't notice them so easily.

Category *

Choose category ▼

Privacy

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Tags

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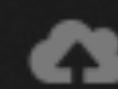
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Description

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Choose a Category

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Presentation updated successfully.



Denys Mishu...

11 Presentations

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Processing Your PDF into Slides

Illusion of Time [JSConfEU 2015 edition] by Denys Mishunov

Published September 25, 2015 in Technology

**ПОЛЕГЧЕ,
ПАРНИША**



“

Быстрее может быть лучше, но только если
скорость это именно то чего **хочет**
пользователь. Не каждый пользователь
желает закончить контакт с вашей
компанией со скоростью света.

”

William J. McEwen

6

UNFAIR WAITS ARE **LONGER** THAN
EQUITABLE WAITS.

7

THE MORE **VALUABLE** THE SERVICE,
THE LONGER THE CUSTOMER
WILL WAIT.



СООТВЕТСТВУЙТЕ
ОЖИДАНИЯМ
ПОЛЬЗОВАТЕЛЯ



SHOCKING DISCOVERY:
fnb.co.za PROGRESS BAR is a

PLACEBO

THIS BANK HAS A TOTALLY

FAKE

PROGRESS BAR!

THIS IS SOME NEXT-LEVEL

BULLSHIT



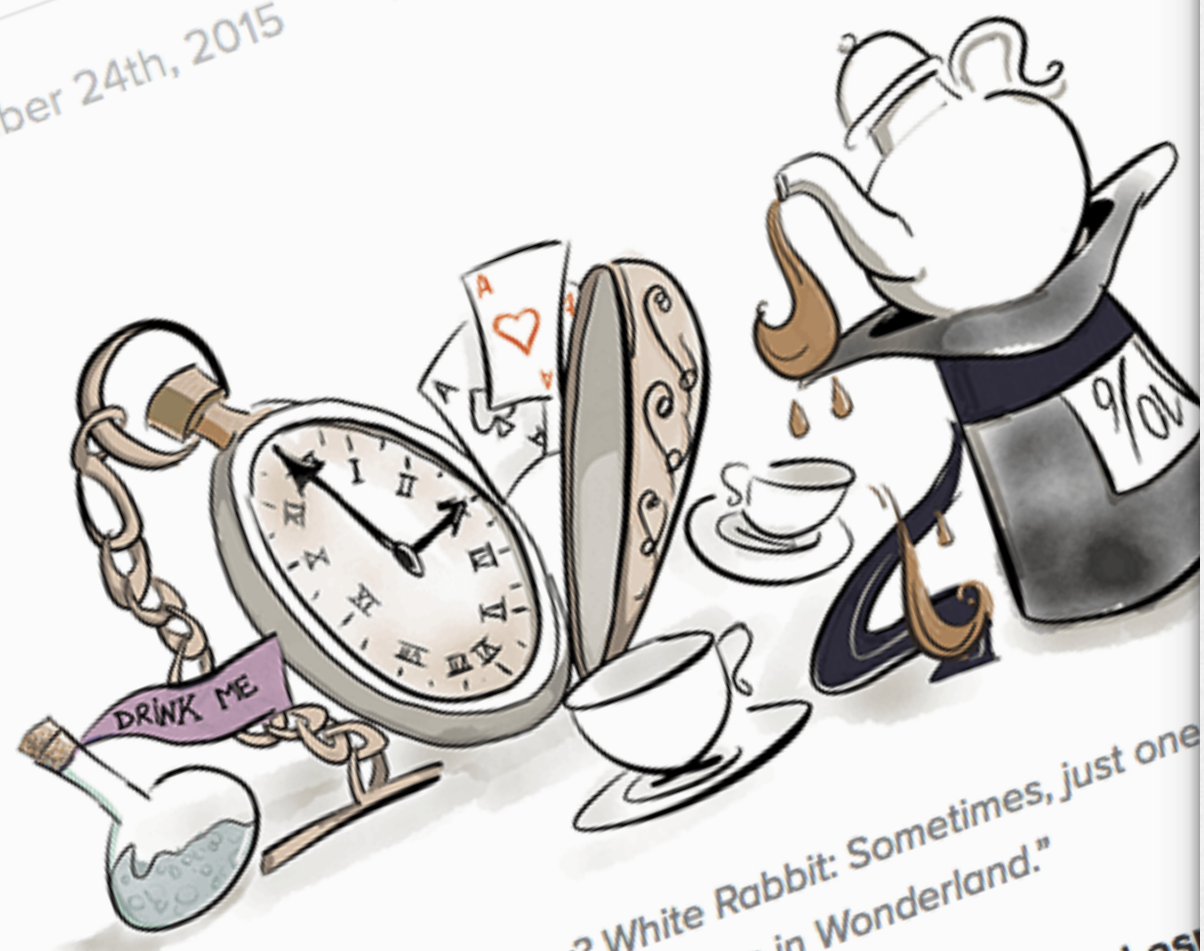
Why Performance Matters, Part 1: The Perception Of Time

By Denys Mishunov

September 24th, 2015

Psychology, UX

24 Comments



"Alice: How long is forever? White Rabbit: Sometimes, just one second."
— Lewis Carroll. "Alice's Adventures in Wonderland."

In addition to these, **we will cover psychological aspects** of performance optimization of an existing project, how to improve the performance of a competitor's website and how to wait for your services. Hopefully, after understanding the importance of waiting, you will be ready to look outside of some structured "best practices" and will make your very own optimization process and will make your very own



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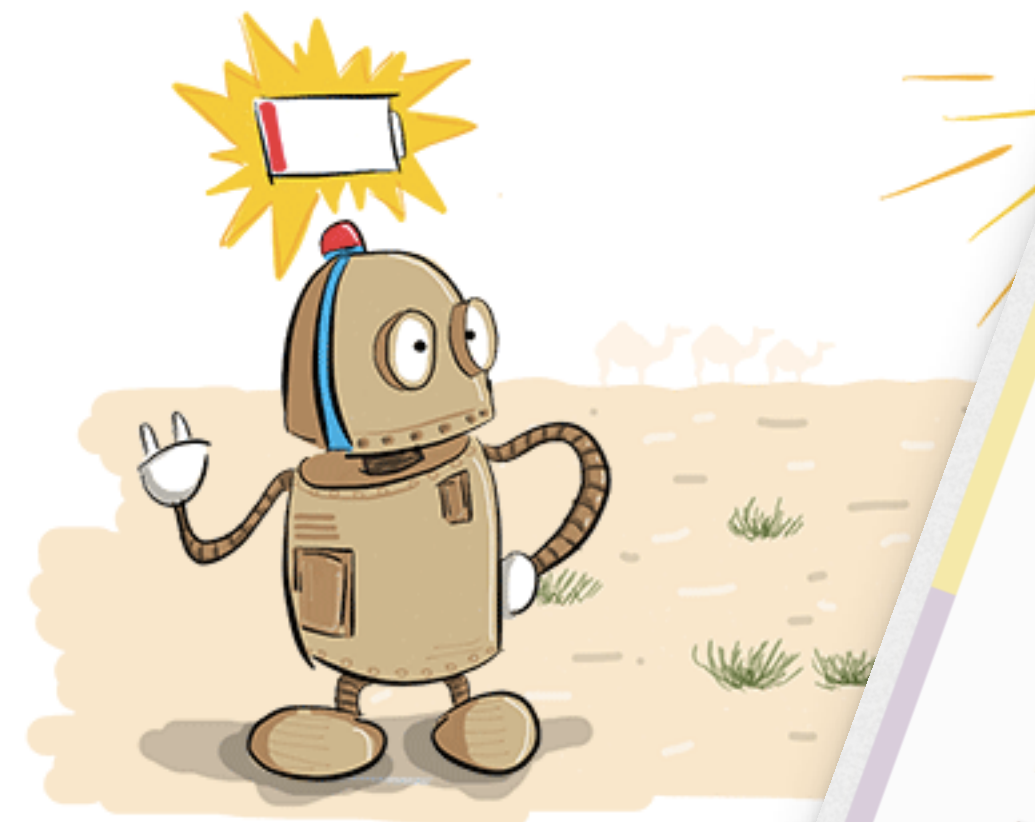
UX DESIGN

Why Performance Matters, Part 2: Management

By Denys Mishunov

November 5th, 2015

Psychology, UX



Every technical solution has its limits. (View large version)

In addition to technical limits, the most indispensable part of what we call "performance" is the user's perception of it. Users constitute a "performant" website on their own. They are not interested in absolute time values for a couple of websites. (To keep the article hidden for now.)



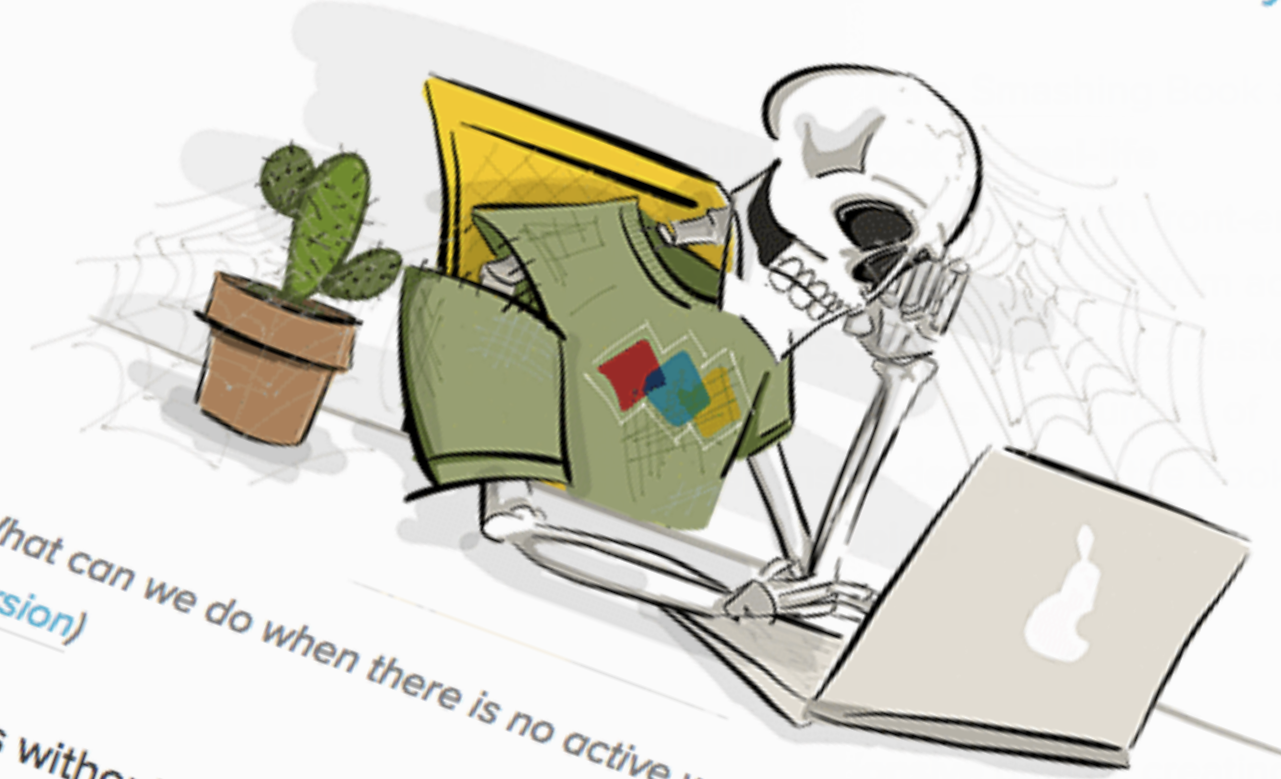
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Why Performance Matters, Part 3: Management

By Denys Mishunov

December 10th, 2015

Performance, Psychology, UX



What can we do when there is no active wait at all? (View large version)

Waits without an active phase happen quite often in the offline world: waiting in a checkout line to the till, waiting for a bus, queuing in an amusement park, waiting for a train. It is widely accepted that the longer the user has to wait, the more negative their reaction to the wait. User reaction to a wait online is **no different from that in the offline world**. Studies based on the analysis of more than a thousand cases identify 14 types of waiting situations on the web. Being dependent on our user's perception, we leave them facing a passive wait.

<https://goo.gl/DMLdZ1>