

Web on TV

THE JOY AND (MOSTLY) PAIN OF TV DEVELOPMENT

“web” on TV is nothing new











CE-HTML
XHTML 1.0, CSS 2.1, DOM Level 2,
Ajax, special APIs for TV

hbbtv.org



I'm the web



...and I'm web on TV



Patricks Amazon | Angebote | Gutscheine | Hilfe | Impressum

Verkaufen bei Amazon: 3 Monate gratis

Alle Kategorien ▾

Suche

Fernseher ▾ smart tv

Los

Hallo, Patrick
Mein Konto ▾Prime-Mitglied
werden ▾Einkaufs-
wagen ▾Wunscht-
zettel ▾

Heimkino, Fernseher & Video

Bestseller Fernseher Projektoren Blu-ray-Player & -Rekorder Satelliten- & TV-Receiver Heimkinosysteme Zubehör Sonderangebote

Kategorie

< Beliebige Kategorie

< Elektronik & Foto

< Heimkino, TV & Video

Fernseher

Displaygröße

- 51 cm (20") & kleiner (5)
- 53 - 59 cm (21-23") (21)
- 61 - 76 cm (24-30") (19)
- 79 - 99 cm (31-39") (140)
- 102 - 114 cm (40-45") (115)
- 116 - 120 cm (46-47") (93)
- 121 - 140 cm (48-55") (69)
- 142 cm (56") & mehr (24)

Displaytechnologie

- LCD (59)
- LED Backlight (356)
- Plasma (42)

HD-Format

- 1080p Full HD (182)
- 720p HD Ready (18)

Produktmerkmale

- 3D (257)
- Smart / Internet (248)

Marke

- Samsung (100)
- Philips (67)

Elektronik & Foto > Heimkino, TV & Video > Fernseher > "smart tv"

1-24 von 488 Ergebnissen

Sortieren nach Preis: absteigend ▾

Displaygröße

51 cm (20") & kleiner

(5)

53 - 59 cm (21-23")

(21)

61 - 76 cm (24-30")

(19)

79 - 99 cm (31-39")

(140)

Weitere ▾



LG 84LM960V CINEMA 3D 213 cm (84 Zoll) LED-Backlight-Fernseh...
Energieeffizienzklasse A (Ultra HD 4k, DLNA, WiDi...)

EUR 21.723,72

Gewöhnlich versandfertig in 3 bis 4 Tagen.

Andere Angebote

EUR 19.840,00 neu (2 Angebote)

Produktmerkmale

LG SMART TV & LG CINEMA 3D

Toshiba Cevo 55ZL2G 140 cm (55 Zoll) 3D LED-Backlight-Fernseh...
Energieeffizienzklasse D (Full-HD, 3D ohne Brille...)

EUR 7.999,00 EUR 7.499,00Nicht auf Lager. Bestellen Sie jetzt und wir liefern, sobald der Artikel verfügbar ist.
 Kostenlose Lieferung möglich.

Andere Angebote

EUR 7.499,00 neu (2 Angebote)

LG 72LM950V 183 cm (72 Zoll) Cinema 3D LED-Fernseher, Energieeffizienzklasse B (Full-HD, 1000Hz MCI, DVB-T/C/S2...)

EUR 6.999,00 EUR 5.499,00

Nur noch 4 Stück auf Lager - jetzt bestellen.

Andere Angebote

EUR 5.499,00 neu (6 Angebote)

**“Smart” TV = runs apps
(optionally, has a web browser)**

Apps

- native apps (Android, Apple TV, ...)
- packaged web apps (W3C widgets or similar)
- “in the cloud” (they’re URLs)

I've seen the
FUTURE
It's in my
BROWSER



BRAVIA

 Refresh Internet Content

Acquiring Internet content...

RETURN Back

SONY

BRAVIA



Home Theatre Control



Video Search



Music Search



Wi-Fi Direct Mode



Internet Browser

Access the Internet from your TV



Applications

SONY



Skype



Network



Internet Browser

Website display is available.



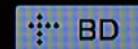
Facebook



Activate Enhanced Features



Opera TV Store



SAMSUNG

Enter a URL.

Press OPTIONS and select [URL entry] to display the software keyboard.

Support page : <http://support.sony-europe.com/hub/hub.html>

SAMSUNG

Internet Browser

Enter a URL.

Press OPTIONS and select IU

Support page: <http://support>

. @ / : 1

1

a b c 2

2

d e f 3

3

g h i 4

4

j k l 5

5

m n o 6

6

p q r s 7

7

t u v 8

8

w x y z 9

9

Clear

Space 0

0

Enter

← →

URL

A / a

Backspace

Input Mode

ABC

RETURN | Cancel

SAMSUNG





Opera TV Emulator version 3.4 [Running] - Oracle VM VirtualBox

Machine View Devices Help

MY APPS SEARCH

Opera TV Store Popular All categories Develop Watch

Now MON

15° 6°C

19° 2°

Times of clouds and sun with a shower or thunderstorm possible; warmer

2°C

Weather forecast ★★★★☆

PanoramaTV

Land: AUT
Bundesland: Oberösterreich
Ort: Fügen

Land: BEL
Bundesland: Flanders
Ort: Gavere

Land: CZE
Bundesland: Brno Region
Ort: Brno

Land: ESP
Bundesland: Valencia
Ort: Benidorm

Land: GER
Bundesland: Vorarlberg
Ort: Hörbranz

Land: ITA
Bundesland: Trentino-Südtirol
Ort: Riva del Garda

Land: LIE

Land: NED
Bundesland: Noord-Holland
Ort: Haarlem

Land: POL
Bundesland: Śląskie
Ort: Katowice

PanoramaTV ★★★★★

Zing TV

Zing TV ★★★★★

Math Knight

A knight in armor with a sword and a shield, standing next to a brown bull.

MATHKNIGHT

Math Knight ★★★★★

Vkontakte

vKontakte ★★★★★

Right Windows

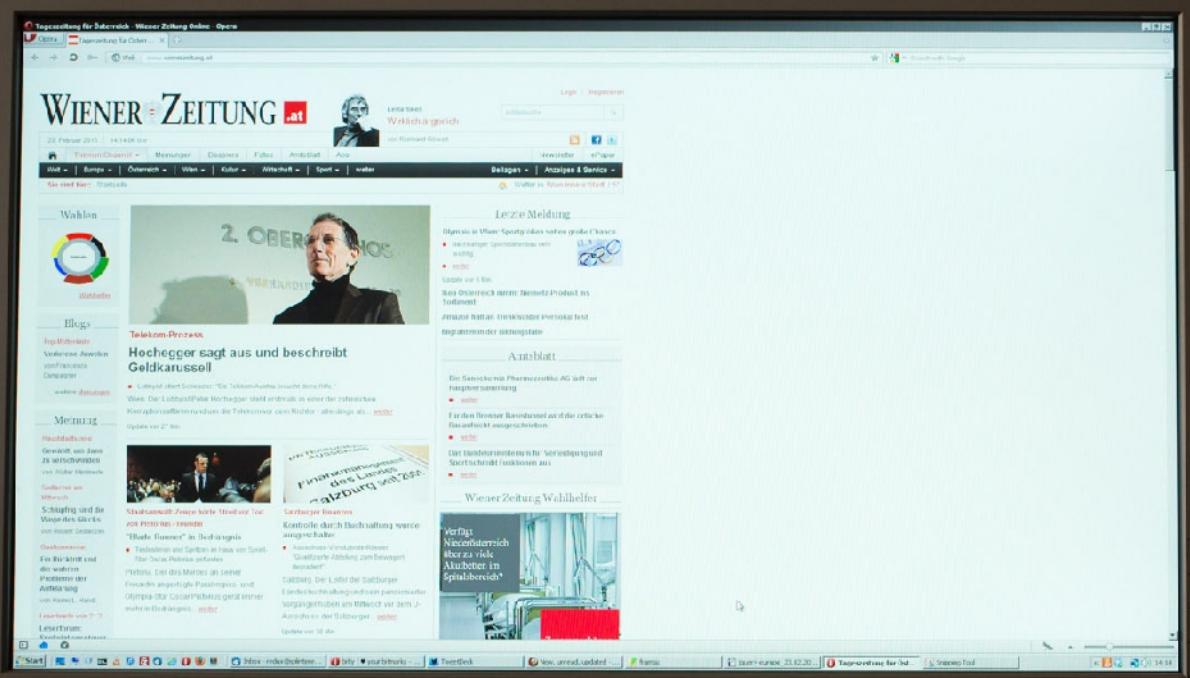
developing for **TV**

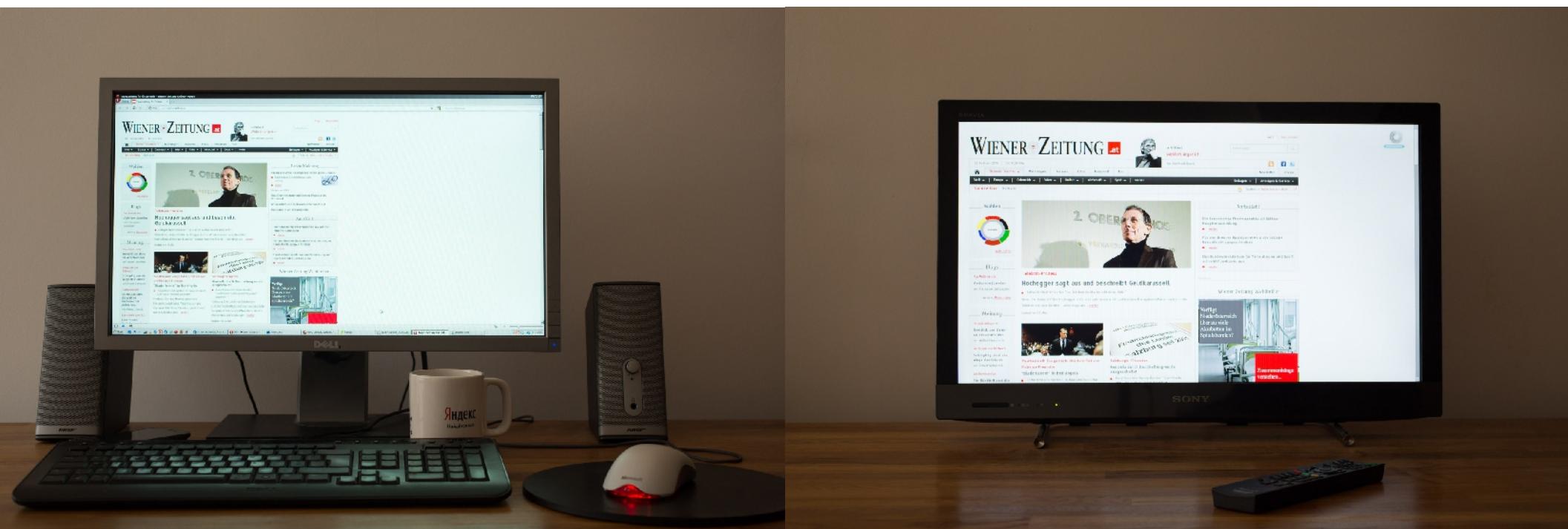
Danger
415

1. display size
2. input mechanisms
3. features/performance

1. display size
2. input mechanisms
3. features/performance









20. Februar 2013 14:20:12 Uhr

Wiener Zeitung.at

Leiterkäfig Wirklich ärgerlich von Helmut Gasser

Home | Berge | Österreich | Wien | Kultur | Wirtschaft | Sport | weiter

Wahlen | Belegan - | Anzeigen & Services -

Wetter in Wien Insekt Stadtpark / 5°

Sie sind hier: Startseite

Wahlen

Blogs

Telekom-Prozess

Hochegger sagt aus und beschreibt Geldkarussell

Foto: Peter Hochegger steht erstmals in einer der zahlreichen Konzertsaale rund um die Telekom vor dem Richter - allerdings als ... weiter

Update vor 42 Min.

Stadtewelt Zusage blieb Strecke vor Tod von Flötisten-freunde "Blade Runner" in Oberösterreich

Foto: Der Salzburger Star Oscar Pistorius öffnete Portofino, der den Mundes am Unner Freunden angeklagte Paralympics- und Olympia-Star Oscar Pistorius geht immer mehr in Bedrängnis - weiter

Update vor 59 Min.

Gut zu lesen

Messe für Denkmalfpflege, Architektur, Interior- und Gartendesign

Leiterkäfig Wirklich ärgerlich von Helmut Gasser

Arbeitsblatt

Die Sarotherin Phamazetteka AG lädt zur Hauptversammlung

Der Brünner Rastatturm wird die örtliche Bebauung ausschließen

Der Bundesministerium für Verteidigung und Sport schreibt Funktioni aus

Update vor 42 Min.

Wiederholung

Wiener Zeitung Wahlhelfer

Verfüg Niederösterreich über zu viele Aktenbücher im Spülasperich?

Kontrolle durch Buchhaltung wurde ausgeschafft!

Ausschuss-Vorstande Roser "Qualifizierte Anhörung zum Dringend benötigt"

Salzburg: Der Leiter der Salzburger Landeskliniken und sein persönlicher Vorgesetzter haben am Mittwoch vor dem Ausschuss der Salzburger ... weiter

Update vor 59 Min.

Beliebte Inhalte

Angelesen | Kommentar | Ideas |

Sony liefert Gehäuse um die PS4

Mark wird für Kundenhersteller halten

... weiter

Browser Setup

Window List

Bookmark List

URL entry

Previous page

Next page

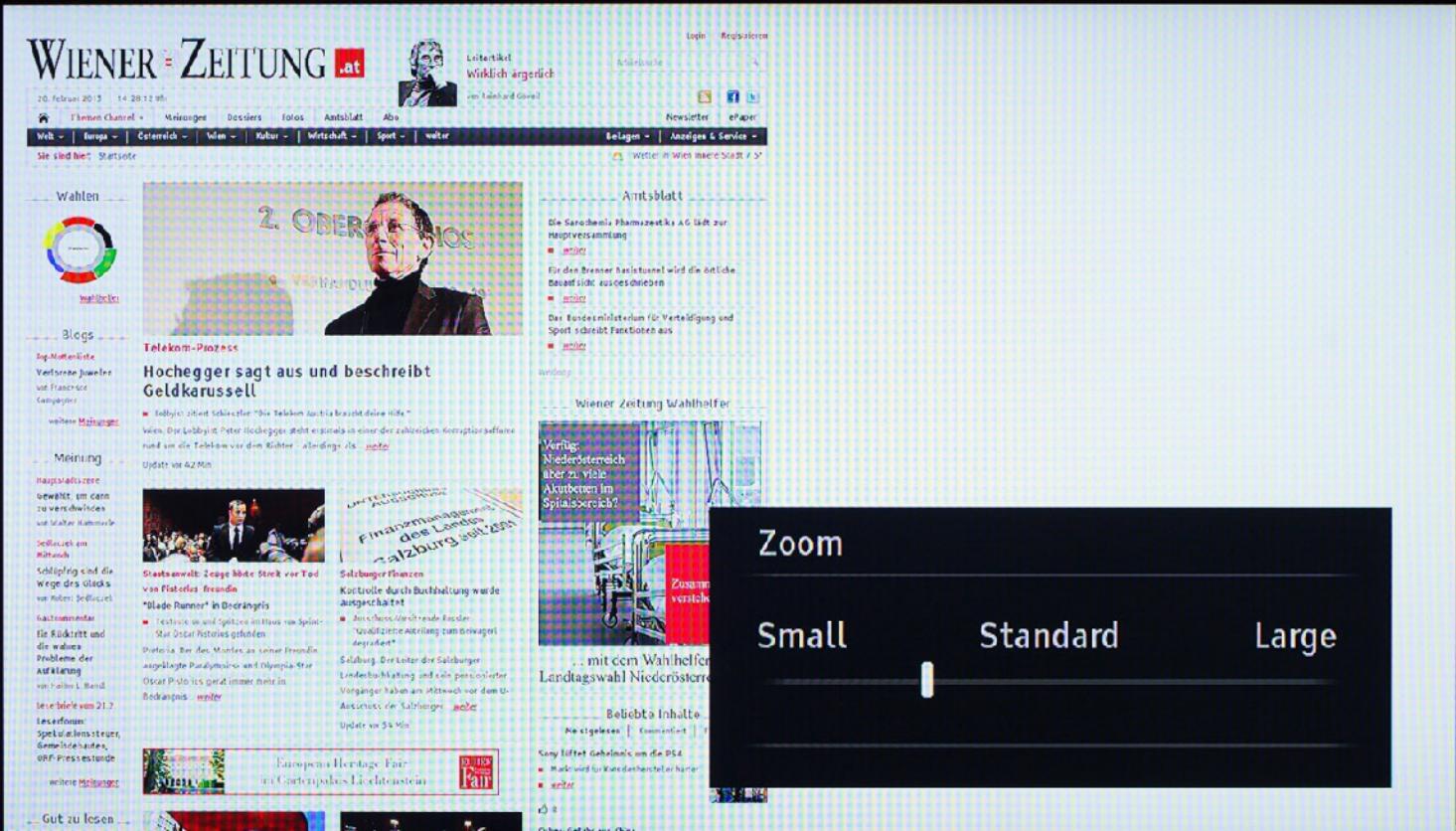
Cancel loading

Reload

Add to Bookmark

Set as start page

Open in new window



SAMSUNG

Wiener Zeitung .at

Leitartikel
wirklich ärgerlich

von Reinhard Göweil

Artikelsuche

20. Februar 2013 14:28:12 Uhr

Welt | Europa | Österreich | Wien | Kultur | Wirtschaft | Sport | weiter

Newsletter

Bellagen | Anzeigen & Se

Sie sind hier: Startseite

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Wahlhelfer

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Pop-Mottenkiste

Verlorene Juwelen von Francesco Campanier

Telekom-Prozess

Hochegger sagt aus und bei Geldkarussell

Zoom

Small Standard Large

Wiener Zeitung Wahlhelfer

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www.wienerzeitung.at



Leitartikel
Wirklich ärgerlich

von Rainhard Gösser

Login | Registrieren

Artikelsuche



14:44



2. OBERSTANNOHOS

Telekom-Prozess

Hochegger sagt aus und beschreibt Geldkarussell

Letzte Meldung

Olympia in Wien: Sportgrößen sehen große Chance



- Nachhaltiger Sportstättenbau sehr wichtig
- weiter

Update vor 21 Min.

Rosa Österreich nimmt Niemetz-Produkt ins Sortiment

Amazon hält an Trenkwalder-Personal fest

Migranten in der Bildungsfaile

Amtsblatt

Blogs

Pop-Metrikiste
Verlorene Juwelen



720×576

960×540

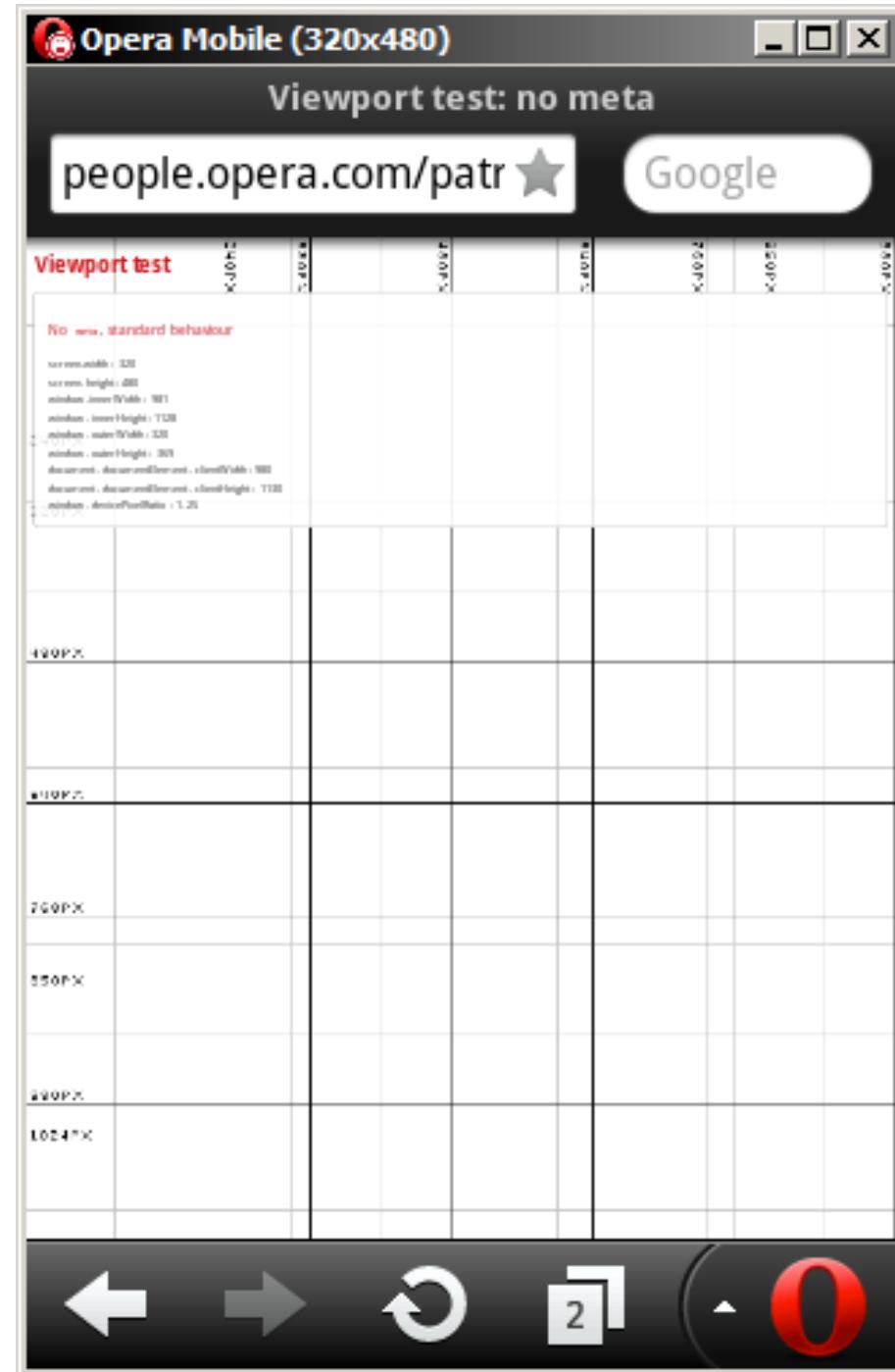
1280×720

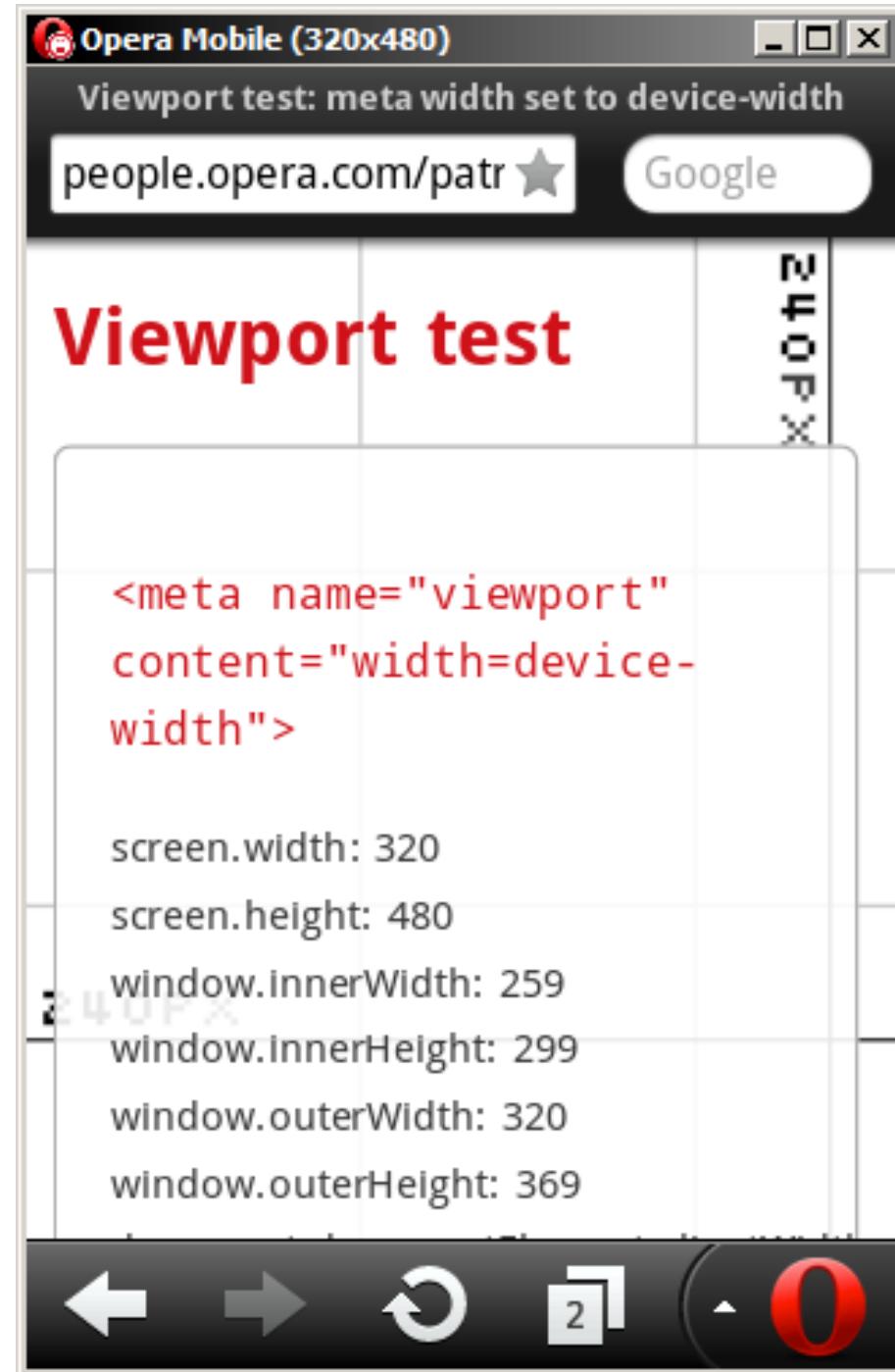
1920×1080

CSS 2 Media Types?

Media types

all	braille
embossed	handheld
print	projection
screen	speech
tty	tv





<!-- mobile/tablet viewport sanity -->

<meta name="viewport"
content="width=device-width">

<!-- but TVs don't support viewport -->

A photograph of two dogs, one brown and one black, sniffing each other's rear ends. They are standing on a bed of wood chips. A semi-transparent gray rectangular box covers the middle portion of the image, containing the text.

old-school browser sniffing

```
/* Still make it responsive/adaptive */

/* Full HD */
@media screen and (min-width: 1920px) { ... }

/* HD-Ready */
@media screen and (min-width: 1280px)
    and (max-width: 1920px) { ... }

/* Smaller */
@media screen and (max-width: 1280px) { ... }
```

- **large text and images**
- **large UI elements for interaction**
- **minimise scrolling**

1. display size
2. **input mechanisms**
3. features/performance

- **mouse pointer** (“magic” remotes)
- **spatial navigation** (Opera only?)
- **D-pad key events**



- not very precise (giant mouse pointer)
- scrolling can be an issue

```
overflow:auto;
```



Opera-specific: spatial navigation

Shift + cursor keys

focusable elements and elements with mouseover / click

don't lose your focus

a :focus , button :focus { ... }



```
blah.addEventListener("keydown", function(e) {  
    ...  
  
    switch (e.keyCode) {  
        case 37:  
            // left  
            break;  
        case 38:  
            // up  
            break;  
        case 39:  
            // right  
            break;  
        ...  
    }  
}, useCapture);  
  
// Fun fact: key codes can vary between devices!
```

```
blah.addEventListener("keydown", function(e) {  
    ...  
    e.preventDefault(); // prevent Opera's spatnav  
}, useCapture);
```

var VK_ENTER	=	13;	var VK_RED	=	403;
var VK_PAUSE	=	19;	var VK_GREEN	=	404;
var VK_PAGE_UP	=	33;	var VK_YELLOW	=	405;
var VK_PAGE_DOWN	=	34;	var VK_BLUE	=	406;
var VK_LEFT	=	37;	var VK_REWIND	=	412;
var VK_UP	=	38;	var VK_STOP	=	413;
var VK_RIGHT	=	39;	var VK_PLAY	=	415;
var VK_DOWN	=	40;	var VK_FAST_FWD	=	417;
var VK_0	=	48;	var VK_INFO	=	457;
var VK_1	=	49;	var VK_BACK	=	461;
var VK_2	=	50;			
var VK_3	=	51;			
var VK_4	=	52;			
var VK_5	=	53;			
var VK_6	=	54;			
var VK_7	=	55;			
var VK_8	=	56;			
var VK_9	=	57;			

```
// abstracted VK_ globals ... better?  
  
blah.addEventListener("keydown", function(e) {  
    ...  
  
    switch (e.keyCode) {  
        case VK_LEFT:  
            // left  
            break;  
        case VK_UP:  
            // up  
            break;  
        case VK_RIGHT:  
            // right  
            break;  
        ...  
    }  
}, useCapture);
```

Document Object Model (DOM) Level 3 Events Specification

Web www.w3.org/TR/DOM-Level-3-Events/#events-keyboardevents dom 3 key events

6.1.2.3 Media Remote Controls

Many keyboards contain special keys to control media functions. Increasingly, many media devices, especially televisions, are Web-enabled. Hybrid keyboard/remote-control devices are becoming more common. To meet the needs of these hybrid Web/media devices, this specification defines keys that are common as remote control buttons, in addition to traditional keyboard keys.

Because of the smaller form factor, keys (or buttons) on a remote control will often be modal, with one key performing different functions based on the context of the on-screen content. Additionally, many keys serve as toggles, to change back and forth between two or more states (see toggling keys).

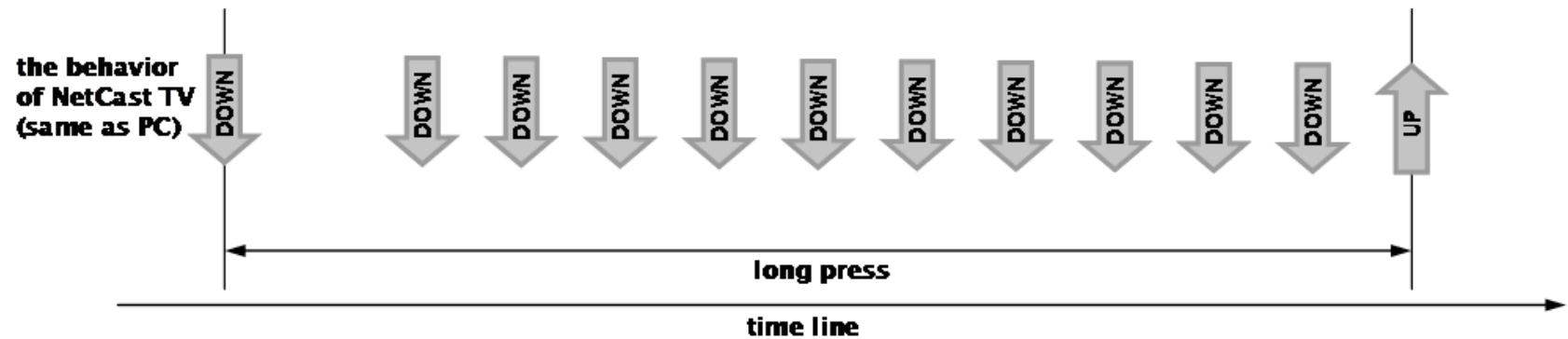


Figure 5: A graphical depiction of a media remote control, with buttons mapped to specific key values

w3.org/TR/DOM-Level-3-Events

// DOM Level 3 ... better?

```
blah.addEventListener("keydown", function(e) {  
    ...  
  
    switch (e.key) {  
        case 'Left':  
            // left  
            break;  
        case 'Up':  
            // up  
            break;  
        case 'Right':  
            // right  
            break;  
        ...  
    }  
}, useCapture);
```



key repeats and lag

[**keydown**] + > **keyup**

[**keydown** > **keyup**] +

minimise form input / text entry

URL entry

http://www.LOLWUT]

• @ / : ,
1

g h i
4

a b c
2

p q r s >
7

j k l
5

d e f
3

Clear

t u v
8

m n o
6



Space 0

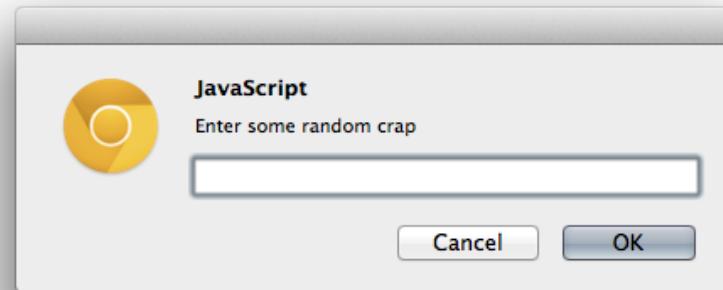
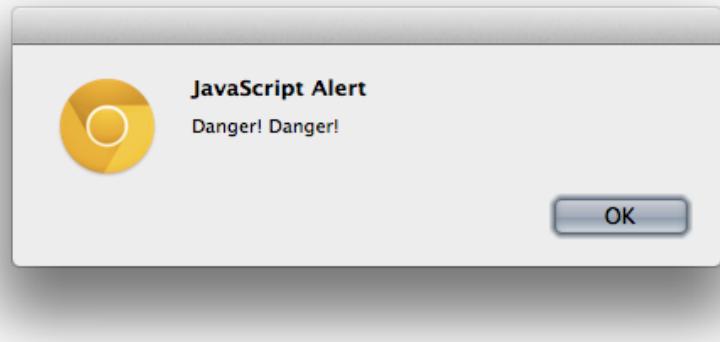
w x y z
9

Enter

Backspace

Were you wondering how

desktop browser - new



1. display size
2. input mechanisms
3. **features/performance**

tl;dr

design like for mobiles ... 5 years ago

If the JavaScript in this page continues to run, the page may crash.

Do you want to disable JavaScript?

To validate the JavaScript,
set "JavaScript Setup" in the browser
settings to "Valid."

Yes

No

SAMSUNG

0 SunSpider 0.9.1 JavaScript Benchmark Results (sunspider-0.9.1 test suite) - Opera

Opera SunSpider 0.9.1 JavaScript Benchmark Results - www.webkit.org

Web www.webkit.org/perf/sunspider-0.9.1/sunspider-0.9.1/ Search with Google

 **SunSpider 0.9.1 JavaScript Benchmark Results**

Content Version: sunspider-0.9.1

[Run Again](#)

0,21,20,20,20,21%5D,%22string-validate-input%22:%5B20,20,20,20,19,20,20,21,20,20%5D%7D
(You can bookmark this results URL for later comparison.)

To compare to another run, paste a saved result URL in the text field below and press enter:

=====

RESULTS (means and 95% confidence intervals)

Total: 327.2ms +/- 0.6%

3d: 42.0ms +/- 1.1%
cube: 11.5ms +/- 3.3%
morph: 16.8ms +/- 1.8%
raytrace: 13.7ms +/- 2.5%

access: 41.0ms +/- 2.2%
binary-trees: 3.2ms +/- 9.4%
fannkuch: 20.4ms +/- 3.4%
nbody: 11.8ms +/- 2.6%
nsieve: 5.6ms +/- 6.6%

www.webkit.org/perf/sunspider/

 SunSpider 0.9.1 JavaScript Benchmark Results

Content Version: sunspider-0.9.1

[Run Again](#)

<http://www.webkit.org/pdfs/sunspider-0.9.1/results.html%20%22%32%20%23sunspider-0.9.1%27,%20%23d-cube%22%50159,143,154,153,156,135,150,155,157%50,%22%50169,170,167,167,166,165,168,165,167,168%50,%22%50>
(You can bookmark this results URL for later comparison.)

To compare to another run, paste a saved result URL in the text field below and press enter.

RESULTS (means and 95% confidence intervals)

Test	Mean	95% CI
Total	3495 ms	+/- 1.5%
2d	479 ms	+/- 1.2%
cabs	136 ms	+/- 1.4%
memh	167 ms	+/- 0.9%
raytrace	175 ms	+/- 1.9%
access	270 ms	+/- 2.5%
binary-refs	28 ms	+/- 5.1%
farukh	99 ms	+/- 2.9%
memd	88 ms	+/- 4.5%
memr	98 ms	+/- 6.0%
bites	0.1 ms	+/- 4.5%
3bit-blits-in-byte	9.2ms	+/- 3.3%
bits-in-byte	13 ms	+/- 3.3%
bitwise-and	11 ms	+/- 3.3%
naive-bit	56 ms	+/- 7.5%
controlflow	24 ms	+/- 9.9%
recursive	24 ms	+/- 9.9%
crypto	257 ms	+/- 2.7%
aes	152 ms	+/- 2.3%
md5	50 ms	+/- 4.4%
sha1	35 ms	+/- 10.3%
date	158.7 ms	+/- 4.4%
format-to-to	209.7 ms	+/- 4.4%
format-printf	337.1 ms	+/- 7.0%
math	251 ms	+/- 15.5%
cosine	54 ms	+/- 5.2%
partial-sums	166 ms	+/- 22.9%
special-matrix	30 ms	+/- 2.5%
regexp	84.7 ms	+/- 2.2%
sin	84.7 ms	+/- 2.2%
string	1400 ms	+/- 2.1%

CSS3 transitions / animations vs JS

The screenshot shows a web browser window displaying a blog post. The title bar says "Functional key handling in ..." and "Why moving elements with ...". The address bar shows the URL "paulirish.com/2012/why-moving-elements-with-translate-is-better-than-posabs-topleft/". The main content area has a dark header with "Paul Irish" and "I make the www fun.". Below the header are navigation links for "Blog", "Archives", "About", and "Contact", along with a search bar and a RSS feed icon. The date "DEC 20TH, 2012" is visible above the main article. The article title is "Why Moving Elements With Translate() Is Better Than Pos:abs Top/left". The text discusses two methods for moving elements: using CSS 2D transforms with `translate()` or using `position: absolute` with `top / left`. It mentions Chris Coyier's response and the logical nature of using `translate()` for design purposes. To the right, there is a sidebar with a bio for Paul Irish, mentioning his roles as a front-end developer, Google Chrome dev relations guy, jQuery Team member, lead developer of Modernizr, Yeoman, CSS3 Please, and HTML5 Boilerplate, curator of HTML5 Rocks, creator of HTML5 Please, mother effing textshadow, mother effing hsl, Move the Web Forward, Mother effing Animated GIF, W3Fools, chromestatus.com, HTML5 Readiness, Front-end Coding Standards, Type Rendering Project, infinite-scroll.com, jQuery plugin staff, a former host on the yayQuery Podcast, and an mp3 blogger at Aurqasm.

Heyo, I'm Paul Irish.

I'm a front-end developer, a Google Chrome dev relations guy, a jQuery Team member, a lead developer of [Modernizr](#), [Yeoman](#), [CSS3 Please](#) and [HTML5 Boilerplate](#), a curator of [HTML5 Rocks](#), a creator of [HTML5 Please](#), [mother effing textshadow](#), [mother effing hsl](#), [Move the Web Forward](#), [Mother effing Animated GIF](#), [W3Fools](#), [chromestatus.com](#), [HTML5 Readiness](#), [Front-end Coding Standards](#), [Type Rendering Project](#), [infinite-scroll.com](#), [jQuery plugin staff](#).

a former host on the [yayQuery Podcast](#), and an mp3 blogger at [Aurqasm](#).

paulirish.com/2012/why-moving-elements...

BRAVIA



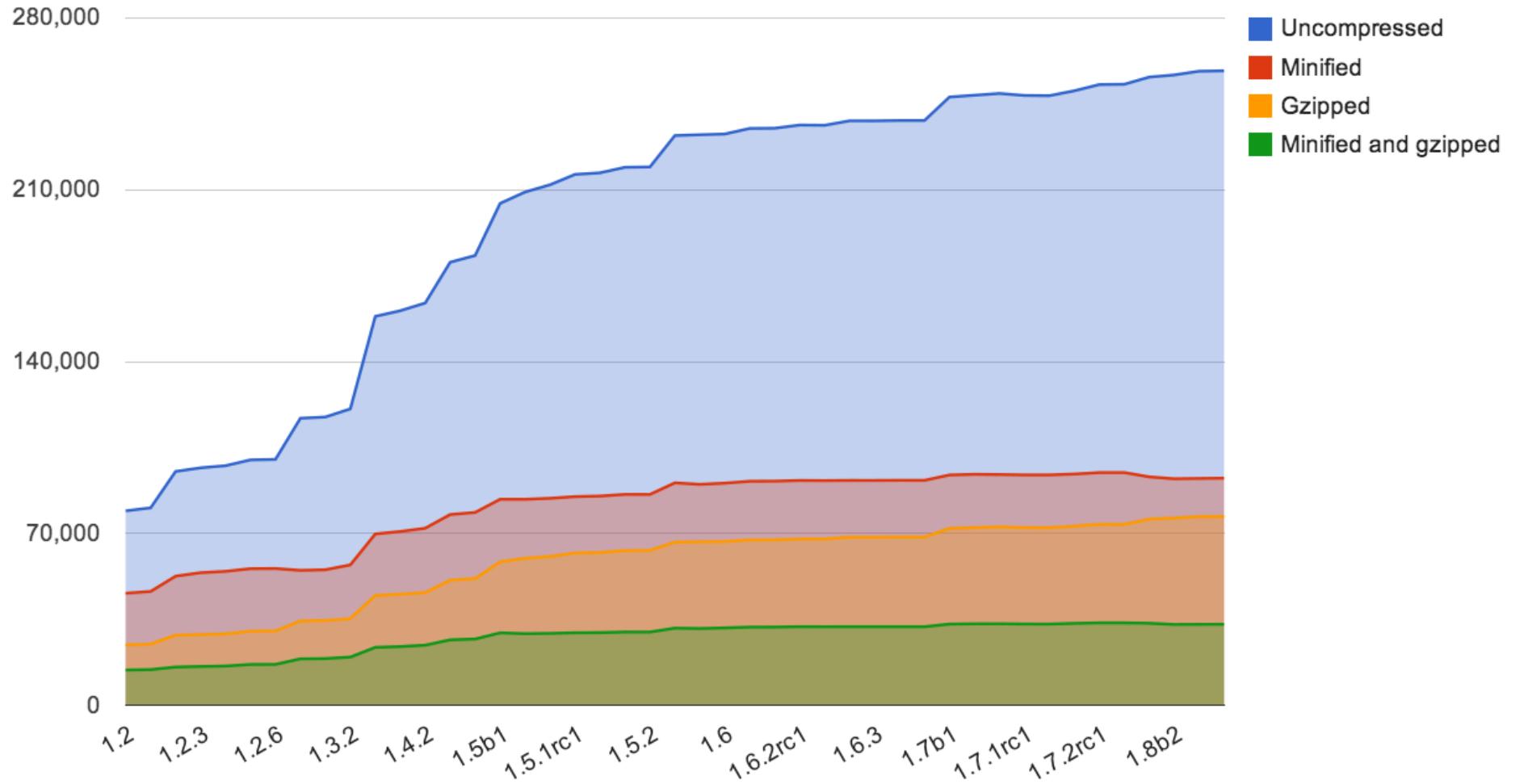
Memory Limitation Error

<http://www.webkit.org/perf/sunspider-0.9.1/su...>

Too much memory is required to display this
page.

RETURN **Back**

SONY



microjs

I need ...

 Tweet 4,064

yepnope

👁 1,379 ⏺ 115 🐦 1,311

yepnope is an asynchronous conditional resource loader that allows you to load only the scripts that your users need.

1.7 kB

Pjs

👁 75 ⏺ 5 🐦 18

A teensy class system. It's just prototypes, but without the nasty parts.

0.3 kB

Fayer

👁 28 ⏺ 4 🐦 10

Easily kick-off page specific JavaScript.

0.5 kB

microjs.com

JSON 3

👁 199 ⏺ 11 🐦 104

A modern JSON implementation compatible with nearly all JavaScript platforms.

2.8 kB

Help - LG Smart TV Document - Opera

Opera Help - LG Smart TV Doc... Help - LG Smart TV Doc... +

Web developer.lgappstv.com/TV_HELP/index.jsp Search with Google

Search: Go Scope: All topics

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Quick Start Guide

App Development Guide

LG Web Application Overview

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- Web Engine
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 - userAgent String[1]
 - The Accept-Language Header
 - Protocols
 - CODEC & Container
- DRM
 - OSD Resolution
 - Subtitle
 - Images
 - Cascading Style Sheets
- Streaming Method
 - Play List (ASX)
 - Local File Play

Tips for Web Application Development

- Annex A Complete List of Supported MIME Types
- Annex B Complete List of Supported Codecs and Co
- Annex C ISO 639 Code Conversion Table[3][8]
- Annex D Differences in Media Devices
- Annex E HTTPS Server and Client Certificated
- Annex F References

Supported HTML5/CSS3 Standard for the NetCast Plat

Sample Tutorials: LG WebAPI Tutorials

Sample Tutorials: Interactions, Advertisements

XMLHttpRequest (AJAX) Yes

JSON Yes

Java No

* Partly: a level of satisfying some of specification (60~90%).

[!] Refer to [Supported HTML5/CSS3 Standard for the NetCast Platform and Emulator](#) for detailed information.

Cookie and Cache Support of LG Web Browser Engine

The LG web browser engine supports cookies and provides a cache for enhanced performance. The cache is used only when the web browser engine is running and no more used if the application is terminated.

userAgent String[1]

The LG web browser engine supports a userAgent String as shown below.

```
Mozilla/5.0 ( operating system information ) AppleWebKit/WebKit version; LG Browser/LG Browser version(capabilities; LGE; modelName; softwareVersion; hardwareVersion;); LG_NetCastVersion
```

A JavaScript application can get the string from the HTML DOM property, navigator.userAgent. The same string will be included in the HTTP request User-Agent header. The following shows an example of the userAgent string of LG browser engine.

```
<NetCast 2.0>
Mozilla/5.0 (DirectFB; U; Linux mips; en) AppleWebKit/531.2+ (KHTML, like Gecko, Safari/531.2+);
LG Browser/4.0.9(+mouse+3D+SCREEN+TUNER; LGE; 42LE7500-ZA; 03.05.04; 0x00000001); LG
NetCast.TV-2011
```

```
<NetCast 3.0>
Mozilla/5.0 (DirectFB; Linux armv7l) AppleWebKit/534.26+ (KHTML, like Gecko) Version/5.0
Safari/534.26+ LG Browser/5.00.00(+mouse+3D+SCREEN+TUNER; LGE; GLOBAL-PLAT4; 09.00.00;
0x00000001); LG NetCast.TV-2012
```

```
<NetCast 4.0>
Mozilla/5.0 (Unknown; Linux armv7l) AppleWebKit/537.1+ (KHTML, like Gecko) Safari/537.1+ LG
Browser/6.00.00(+mouse+3D+SCREEN+TUNER; LGE; CIORN-PLAT5; 03.07.01; 0x00000001); LG
NetCast.TV-2013
```

The following table illustrates the fields in userAgent string and User-Agent HTTP header. The "capabilities" field identifies

developer.lge.com

I've seen the
FUTURE
It's in my
BROWSER



A screenshot of a web browser displaying the 'The HTML5 Test' website. The page title is 'The HTML5 test – How well does your browser support HTML5?'. The main content area shows the user's browser score as '468' with '13 BONUS POINTS', achieved 'out of a total of 500 points'. A message at the bottom indicates the user is using 'Chrome Nightly 27.0.1420.0 on Mac OS X 10.8.2'. To the right, there's a summary box for 'your browser scores' with a large '468' icon, social sharing links for Twitter, Facebook, and Google+, and a 'Correct?' button with a checkmark and an 'X'. A sidebar on the right explains the score is an indication of how well the browser supports the HTML5 standard. The HTML5 logo is shown as a stylized '5' inside an orange hexagon.

html5test.com

BRAVIA

THE HTML5 TEST - HOW WELL DOES YOUR BROWSER SUPPORT HTML5?

your browser

other browsers

compare

news

about the test

your browser scores

217
AND 6 BONUS
POINTS

out of a total of 500 points

8,960



10k

Tweet



Like

The HTML5 test score is an indication of how well your browser supports the upcoming HTML5 standard and related specifications. Even though the specification isn't finalized yet, all major browser manufacturers are making sure their browser is ready for the future. Find out which parts of HTML5 are already supported by your browser today and compare the results with other browsers.



You are using Opera Devices 2.5 on a Sony Internet TV

Parsing rules

0/10

<!DOCTYPE html> triggers standards mode

Yes

HTML5 tokenizer

No

HTML5 tree building

No

HTML5 defines rules for embedding SVG and MathML inside a regular HTML document. Support for SVG and MathML is not required though, so bonus points are awarded if your browser supports embedding these two technologies.

SVG in text/html

No

MathML in text/html

No

Canvas

20

SPONSORS



SONY

Storage

10/20

Session Storage

Yes

LocalStorage

Yes

IndexedDB

No

The Web SQL Database specification is no longer being updated and has been replaced by IndexedDB. Because at least 3 vendors have shipped implementations of this specification we still include it in this test.

Web SQL Database

No

```
// Feature detect?

var hasStorage = (function() {
    try {
        localStorage.setItem(mod, mod) ;
        localStorage.removeItem(mod) ;
        return true;
    } catch(e) {
        return false;
    }
}());
```

The screenshot shows a web browser window with the title bar "Web Storage Support Test". The address bar contains the URL "dev-test.nemikor.com/web-storage/support-test/". The main content area has a yellow header bar with the text "Web Storage Support Test". Below it, the text reads: "This page will test whether your browser supports localStorage, sessionStorage or globalStorage. The tests will also determine if there is a storage limit for any storage system that is supported." A button labeled "Run Web Storage Tests" is visible. The results section shows three entries: "localStorage: limited to 2551 k characters" (with an orange progress bar), "sessionStorage: limited to 2551 k characters" (with an orange progress bar), and "globalStorage: not supported" (with a white progress bar).

This page will test whether your browser supports localStorage, sessionStorage or globalStorage.

The tests will also determine if there is a storage limit for any storage system that is supported.

Run Web Storage Tests

localStorage: limited to 2551 k characters

sessionStorage: limited to 2551 k characters

globalStorage: not supported

These tests may take several minutes to run.
There may be periods when the tests seem frozen (especially in Firefox); they're not.
Your browser may pause the tests if the window becomes inactive.
A dialog will appear to inform you when the tests have completed.

Results from previous test runs

dev-test.nemikor.com/web-storage/support-test

BRAVIA

Web Storage Support Test

This page will test whether your browser supports localStorage, sessionStorage or globalStorage.

The tests will also determine if there is a storage limit for any storage system that is supported.

Run Web Storage Tests

localStorage: limited to 380 k characters



sessionStorage: limited to 504 k characters



globalStorage: not supported

These tests may take several minutes to run.

There may be periods when the tests seem frozen (especially in Firefox), they're not.

Your browser may pause the tests if the window becomes inactive.

A dialog will appear to inform you when the tests have completed.

Results from previous test runs

SONY

Web Storage Support Test

This page will test whether your browser supports localStorage, sessionStorage or globalStorage.

The tests will also determine if there is a storage limit for any storage system that is supported.

Run Web Storage Tests

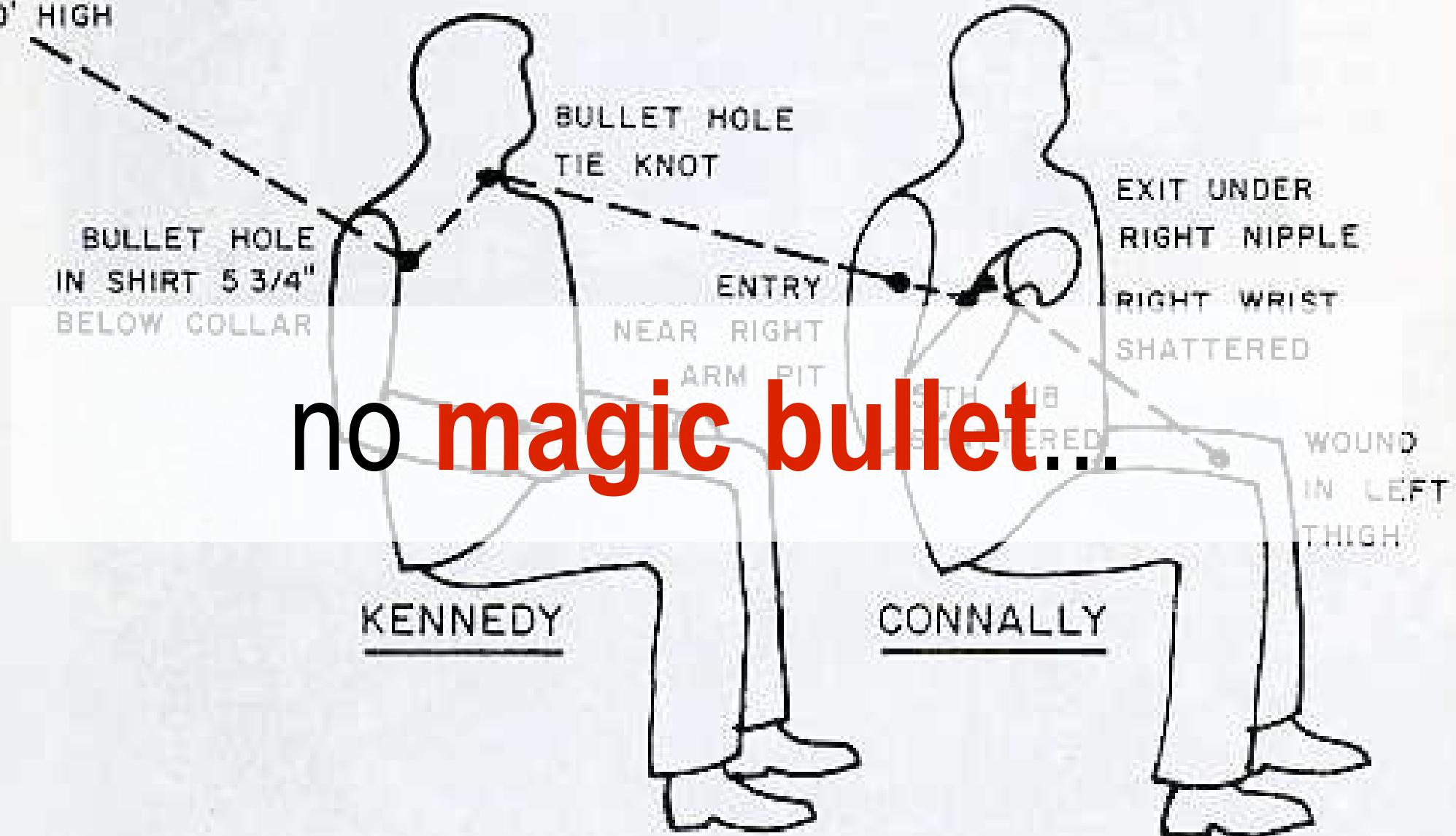
localStorage: limited to 47 k characters

sessionStorage: limited to 504 k characters

globalStorage: not supported

SAMSUNG

BULLET FROM
ASSASSIN'S GUN
60' HIGH

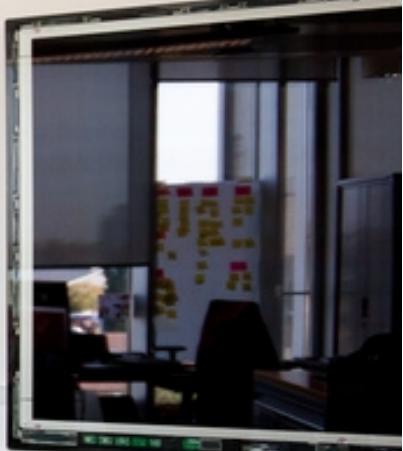


THE REMARKABLE PATH OF
THE PRISTINE BULLET,
ACCORDING TO WARREN COMMISSION

testing and debugging

A collection of mobile devices and a laptop are arranged on a wooden desk. In the foreground, a red smartphone case with white text is prominently displayed. The text reads "Love your browser" followed by the website "www.opera.com". Behind the phone cases, several smartphones and a laptop are visible. The laptop screen shows a webpage with text and images. The overall scene suggests a workspace or a technology-themed environment.

Love
your
browser
www.opera.com



LG Developer :: developer.lge.com/main/Intro.dev

Login Register Search

Getting Started Resource Center Distribution Community Support

LG Smart TV SDK 3.0 Updated

This update includes new features and tools. Using this update, you can more easily develop apps that are optimized for LG Smart TV.

[Download the SDK Now >>](#)



Smart TV Resources

Technical resources for developing apps and contents for LG Smart TV

- Overview
- SDK
- Documentation
- Forums

Android Resources

Technical resources for developing apps for LG smartphones

- Overview
- SDK & Tools
- Documentation
- Forums

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developer.lge.com

Support | Developers | VIERA Connect Developers - Opera

Opera Support | Developers | V... +

Web developer.vieraconnect.com/developers/support Search with Google

VIERA Connect DEVELOPERS Home News Intro FAQ Support Login Register

Support

Name * Patrick H. Lauke

Company Name

Country * United Kingdom

E-mail * redux@splintered.co.uk

Project Type * HTML5

Category * Application Development

Sub Category * Test and develop application

Title *

Contents *

Submit Cancel

 **FAQ**
Frequently asked questions.

Info Currently only Commercial Development account is able to access Development Environment and test/develop application.

Technical Evaluation account can access Development Environment (*VIERA Connect DEVELOPERS Application*) AFTER upgrade the account type to Commercial Development.

More details please visit [Getting Started](#)

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developer.vieraconnect.com



Support

Name *

Company Name

Country *

E-mail *

Project Type *

Category *

Sub Category *

Title *

Contents *



FAQ

Frequently asked questions.

We currently do not provide emulator or other alternatives to test VIERA Connect Apps.

Assuring you the best performance of your App, you need to test your App on your development device through VIERA Connect Developers Application.

SDK Archives - SAMSUNG SMART TV APPS Developer Forum - Opera

Opera SDK Archives - SAMSUN... +

Web www.samsungdforum.com/Devtools/SdkArchive

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SAMSUNG TV Developers FORUM News & Event SDK Guide Forum Support My Work Q

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SDK Archives

You can download any other versions of SDK other than latest version of SDK.
Please use the latest version of SDK unless you have specific purpose.
Please go to [Spec & Features menu](#)

Message

Please sign-in first to download the SDK.
Would you like to sign-in now?

OK Cancel

Version	Release	Release Note	Size	Download
SDK 4.0	2013-01-24	Release Note	475 MB	2582
	2013-01-24	SDK Download for Windows XP	475 MB	468
	2013-01-24	SDK Download for Linux	263 MB	379
	2013-01-24	SDK Download for Mac OS	269 MB	762
	2013-01-04	SDK Emulator Image for Virtual Box	728 MB	1921
	2013-01-04	SDK for Smart TV Development Environment	1641 MB	561

samsungdforum.com

A screenshot of a web browser window displaying the Google Developers website at <https://developers.google.com/tv/>. The page title is "Google TV — Google Developers". The navigation bar includes links for Home, Products, Conferences, Showcase, Live, Groups, and a search bar. A sidebar on the left lists links such as Build an Android App, Optimize your Website, Build a Second-screen App, Submit a Video Sitemap, Case Studies, Blog, YouTube Channel, Google TV Website, Developer Office Hours, Issue Tracker, Ask Questions, and FAQs. The main content area features a section titled "How to develop for Google TV?" with a sub-section about building multi-screen apps using Android and Chrome. It also highlights "Video Discovery" for making video content available on Google TV.

How to develop for Google TV?

The big screen is a huge developer opportunity with billions of viewers. Developing for Google TV is familiar and easy. Google TV is built on tools you already know how to use: Android & Chrome. Develop applications on a single platform across TV, mobile, and tablet without investing significant extra resources.



Android Apps

Optimize your existing Android application or create something unique for the TV.



Web Apps

Learn how to optimize your website for the 10-foot user experience.



Multi-screen Apps

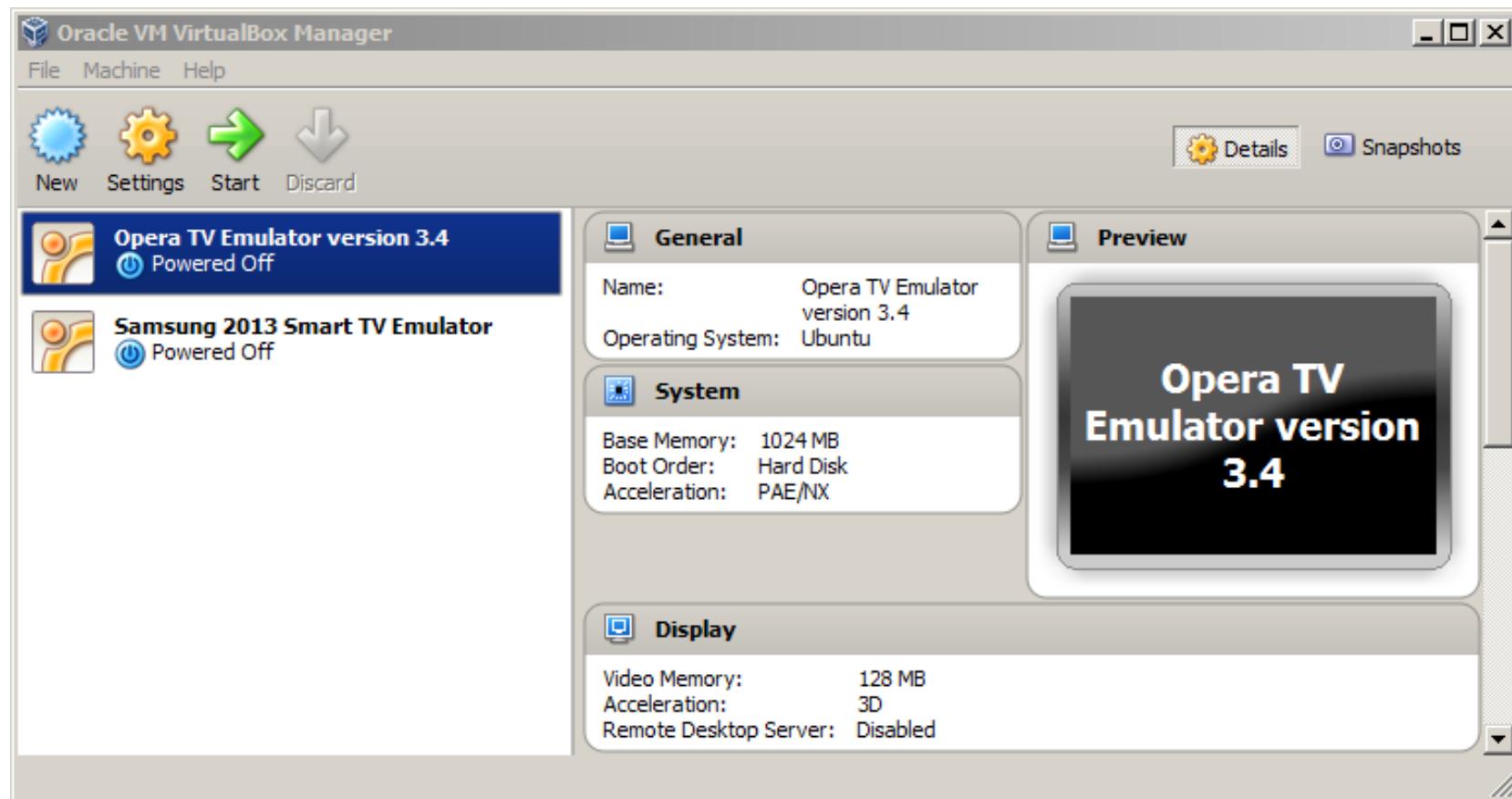
Create your own remote control or integrate the functionality into another app.



Video Discovery

Make your video content available on Google TV.

developers.google.com/tv/



Opera TV Emulator version 3.4 [Running] - Oracle VM VirtualBox

Machine View Devices Help

Opera TV Store

MY APPS SEARCH

All categories Watch

Pipemania2 ★★★★★

Mine Sweeper ★★★★★

vKontakte ★★★★★

Fly and Coup ★★★★★

Zing TV ★★★★★

Redux ★★★★★

Five in a row ★★★★★

Load the Opera TV Store

http://www.opera.com

Instant makeover! Download Opera 17 to try the new themes.

Download Opera 17.00 for Linux

Opera TV Store

Get support for Opera

Browser add-ons

Business solutions

Opera Device SDK browser

H.264 CODEC

H.264 codec required to view media content.

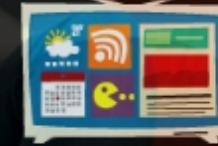
Install

Navigate with the keyboard. F1 to toggle the browser bar.
For further control, use the web-based remote
localhost:5555

opera.com/business/tv/emulator



Create web content for TV and the Opera TV Store



Opera's technology is used by manufacturers to provide web functionality and application environments for TVs, set-top boxes, Blu-ray and other media players. With the [Opera TV Store](#), end users can easily find and install TV-optimized web applications on their TVs. See our [Opera for TV product pages](#) for more information.

Learn how to [create web content for TV](#), [build your own Opera TV Store applications](#), and use tools like [Opera TV Emulator](#) for easy debugging and testing.



Creating web content for TV

By Patrick H. Lauke · Thursday, September 9, 2010 1

This guide is aimed at web developers wishing to optimize their web sites and applications for better compatibility with web-enabled/connected televisions, with a particular emphasis on the Opera Device SDK and its functionality.

[Read more...](#)

TV resources

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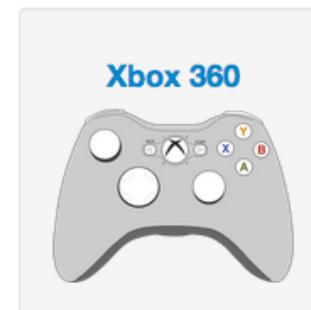
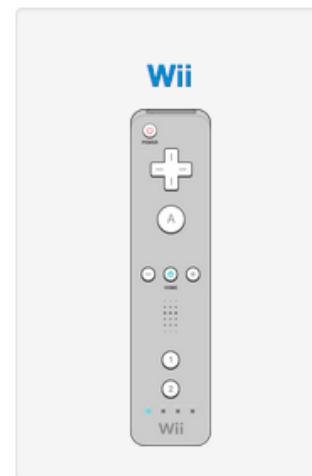
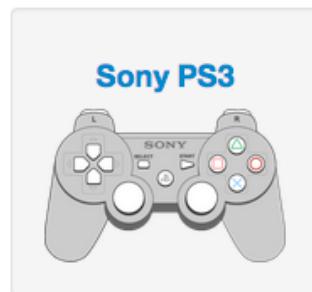
dev.opera.com/tv

By Daniel Davis · Wednesday, June 20, 2012 0

Since the launch of the Opera TV Store, we've seen a variety of apps published by creators and enjoyed by users. The fact that our TV apps are built using web standards means that web developers can use their existing skills to create content for the TV platform. Developing for TV can still feel unfamiliar, however, so to make it easier we've created a series of tutorials for common tasks for both web and tv developers.

A screenshot of a web browser window titled "Game Console Browsers". The address bar shows the URL "console.maban.co.uk". The page content includes a navigation bar with links for "Game console browsers", "Devices", and "Resources", and a user profile for "Anna Debenham".

TV consoles



console.maban.co.uk

DUE TO FCC RULES
WE MUST BLACKOUT

@patrick_h_lauke
slideshare.net/redux