

Getting the Most Out of Web Inspector

Session 603

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These are confidential sessions—please refrain from streaming, blogging, or taking pictures









User Interface Changes

One Year Ago...

Web Inspector — iPhone Simulator — Safari — www.apple.com

DOM... > E html > E body#home.home

Computes Style
Style Attribute
HTML Attributes
No Style Properties
Style Rules
html, body {
background: □ #fff;
}
body {
font: ▶ 12px/18px "Lucida...
background color: □ transparent;
color: ■ #333;
-webkit-font-smoothing: ...
}
html, body, div, ul, ol,
li, dl, dt, dd, h1, h2, h3,
h4, h5, h6, pre, form, p,
blockquote, fieldset,
input, abbr, article,
aside, command, details,
figcaption, figure, footer,
header, hgroup, mark,
meter, nav, output,
progress, section, summary,
time {
margin: ▶ 0;
padding: ▶ 0;
}
Base Style Rules

<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en-US" lang="en-US">
 <head>...</head>
 <body id="home" class="home">
 <script type="text/javascript">var searchSection =
 'global'; var searchCountry = 'us';</script>
 <script src="http://images.apple.com/global/nav/
 scripts/globalnav.js" type="text/javascript"
 charset="utf-8"></script>
 <nav id="globalheader" class="apple globalheader-js
 ios globalheader-loaded svg globalheader-loaded">
 <!--googleoff: all-->
 <ul id="globalnav" role="navigation">...
 <!--googleon: all-->
 <div id="globalsearch">
 <form action="http://www.apple.com/search/"
 method="get" class="search empty" id="g-search">
 <div class="sp-label">...</div>
 <input id="search-section" type="hidden" name=
 "sec" value="global">
 </form>
 <div id="sp-magnify">
 <div class="magnify-searchmode"></div>
 <div class="magnify"></div>
 </div>
 <div id="sp-results"></div>
 </div>
 </nav>
 <document.body>
 <body id="home" class="home">...</body>
 <\$0 innerHTML
 16 innerText
> \$0.innertext

Web Inspector — www.apple.com

55 2 MB 3.98s 0 0 0

Search Resource Content

www.apple.com

Images

Scripts

- ac_base.js — images.a...
- ac_retina.js — images....
- apple_core.js — image...
- browserdetect.js — im...
- feedstatistics.js — ima...
- globalnav.js — images...
- home.js — images.app...
- promomanager.js — i...
- prototype.js — images...
- s_code_h.js — images....
- scriptaculous.js — ima...
- search_decorator.js — ...
- sizzle.js — images.app...

Stylesheets

XHRs

Cookies — www.apple.com

Local Storage — www.apple....

Filter Resource List

DOM Tree | html | body#home.home

Computed Rules Metrics

body#home.home — Style Attribute
No Properties — Click to Edit

+ New Rule

html, body — home.css:1
background: □ #fff;

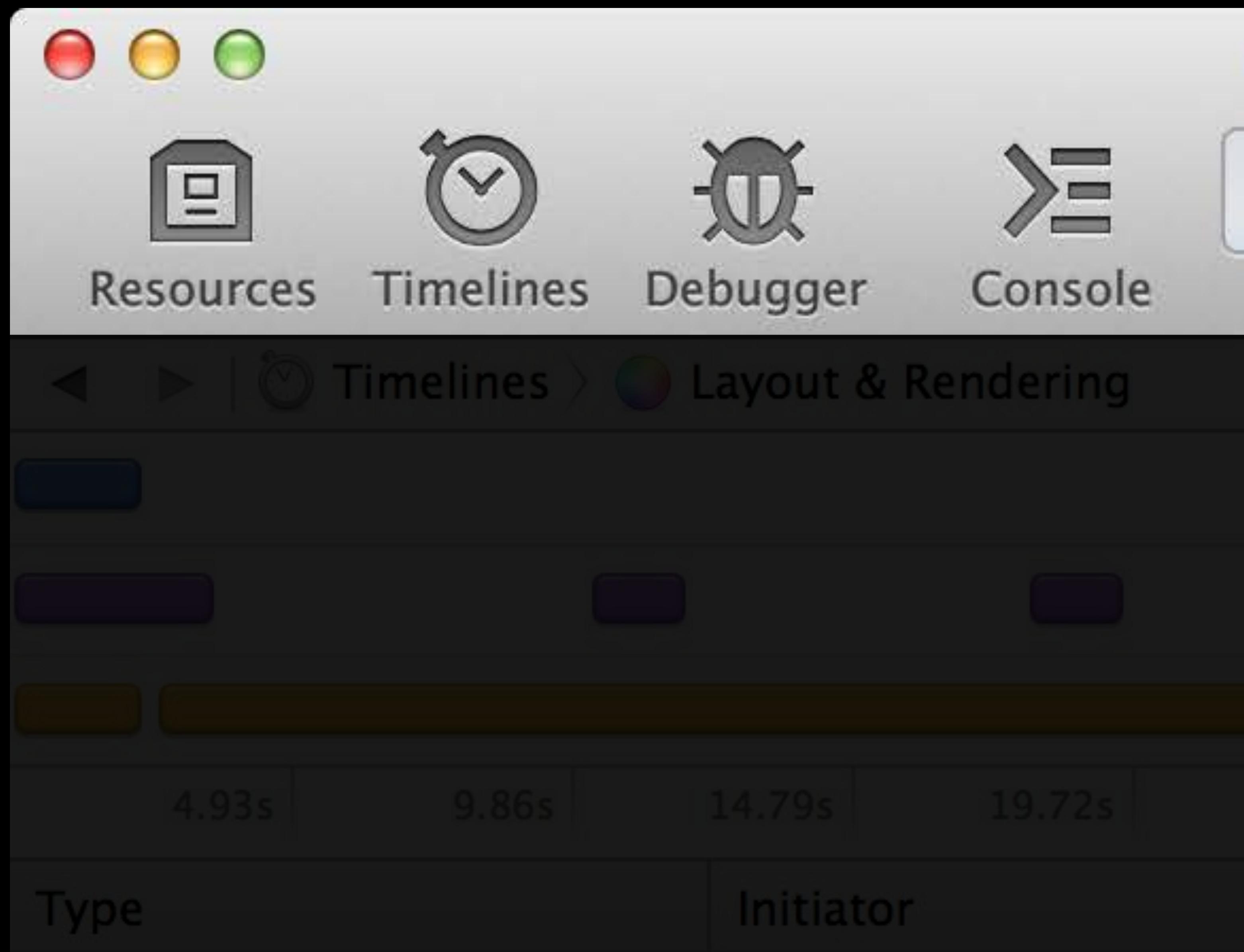
body — base.css:109
font: 12px/18px "Lucida Grande", "Lucida Sans Unicode", Helvetica, Arial, Verdana, sans-serif;
background-color: □ transparent;
color: □ #333;
-webkit-font-smoothing: antialiased;

html, body, div, ul, ol, li, dl, dt, dd, h1, h2, h3, h4, h5, h6, pre, form, p, blockquote, fieldset, input, abbr, article, aside, command, details, figcaption, figure, footer, header,

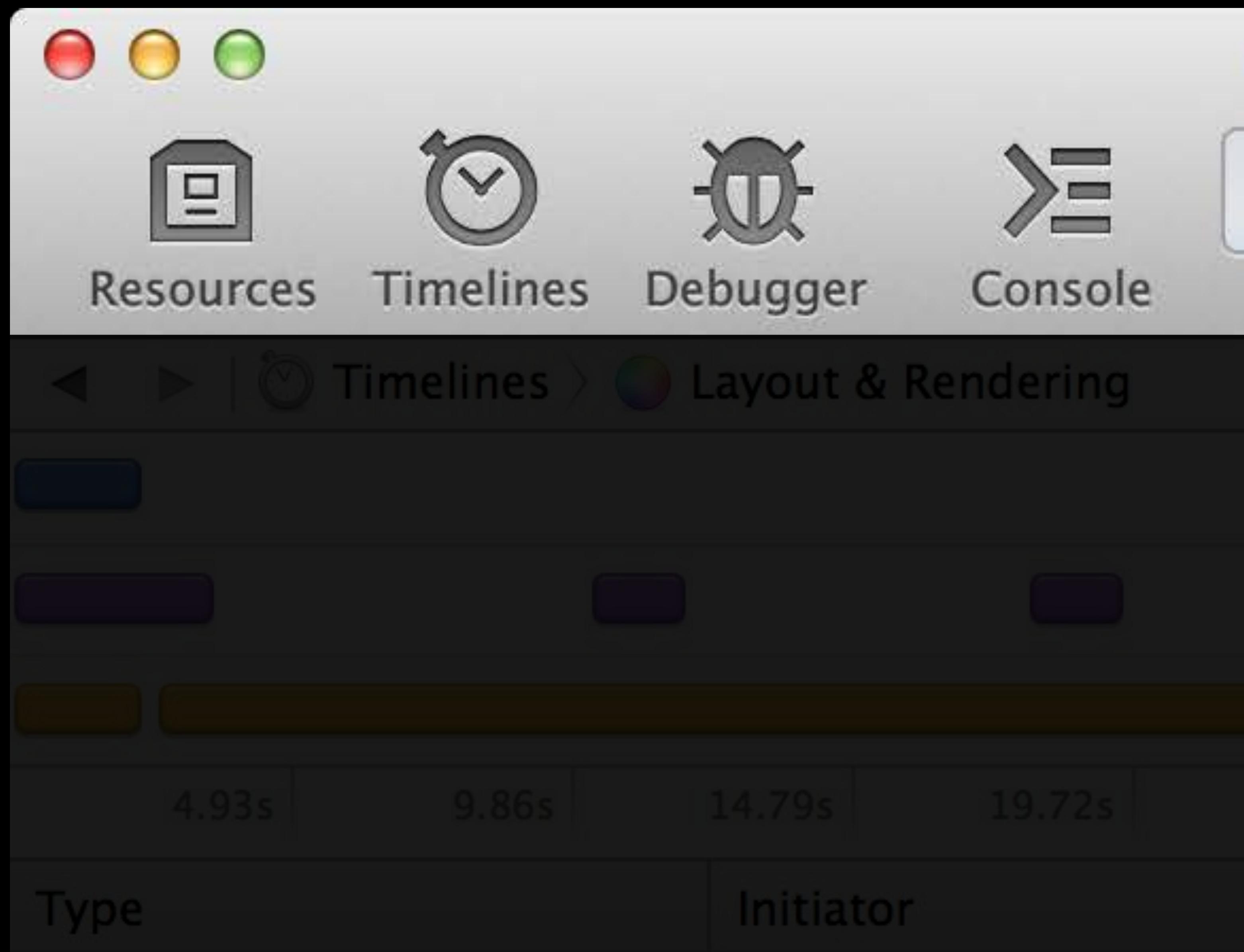
Filter Console Log | All Errors Warnings Logs

> document.body
< ► <body id="home" class="home">>...</body>
> \$0.innerHTML
< 1! innerText
> \$0.innerText

Toolbar

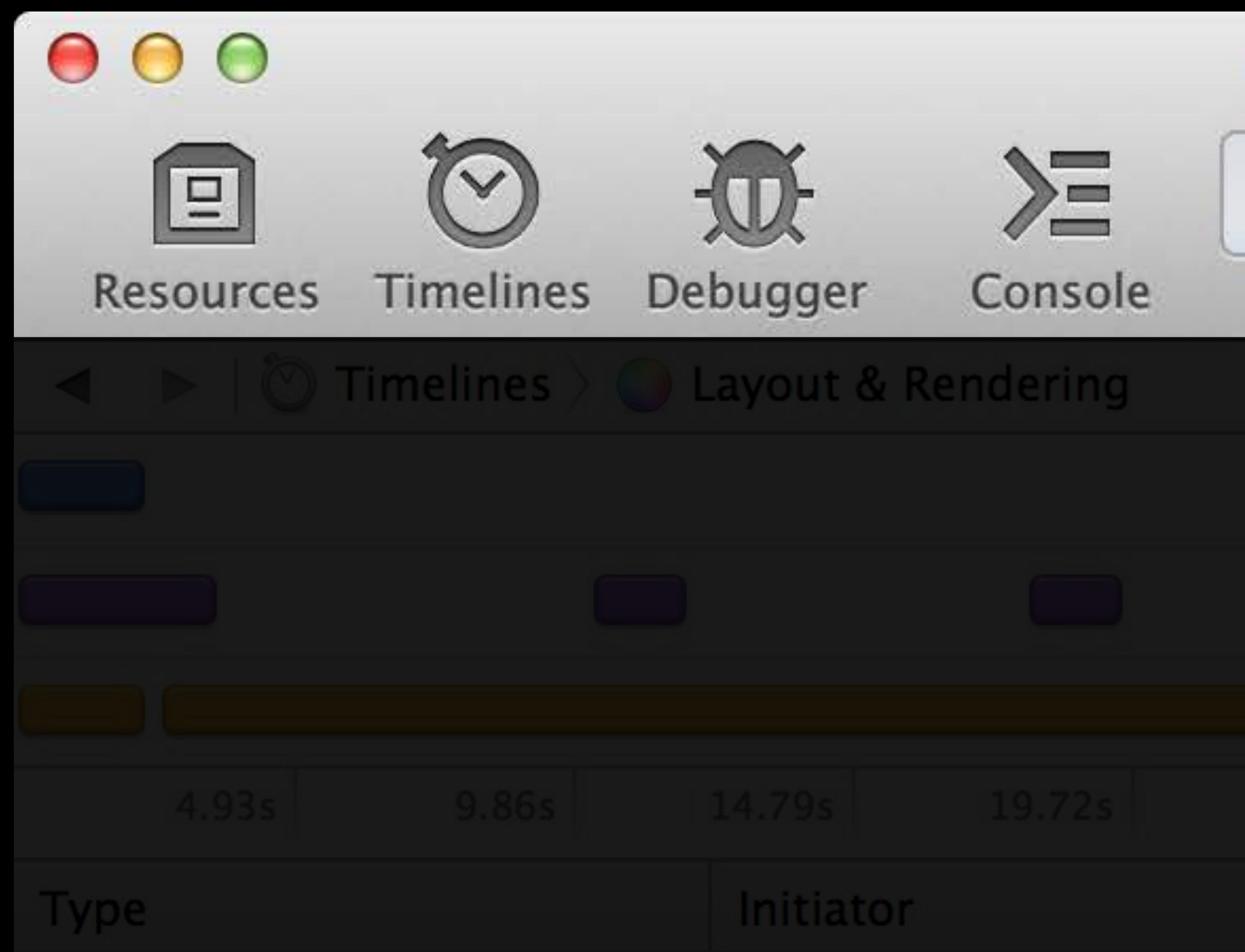


Toolbar



Toolbar

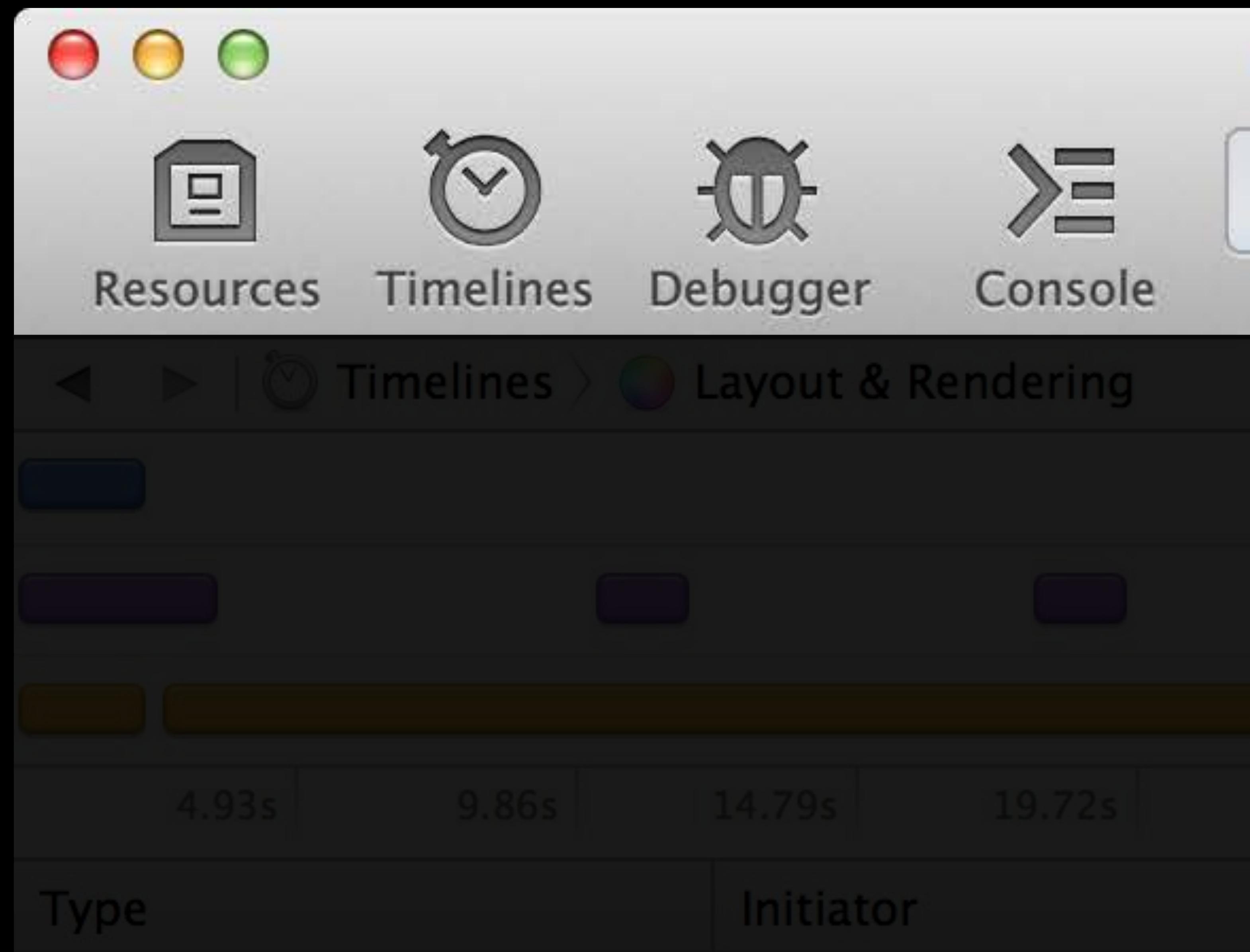
Big icons and labels



Toolbar

Big icons and labels

- Fully customizable
- Big icons
- Small icons
- Labels below
- Labels on the side
- No labels



Toolbar

Activity viewer

Web Inspector — www.apple.com — iphone



onsole

106

4 MB

847ms

10

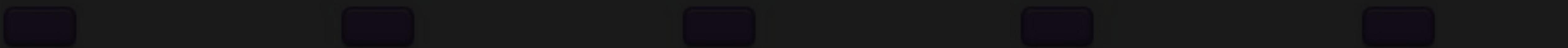
1

3



Inspect

dering



19.72s

24.65s

29.58s

34.52s

39.45s

44.38s

49.31s

54.2

X

Y

Width

Height

Toolbar

Activity viewer

Web Inspector — www.apple.com — iphone

Resources Count

onsole

dering

Inspect

19.72s 24.65s 29.58s 34.52s 39.45s 44.38s 49.31s 54.2

| X | Y | Width | Height |
|---|---|-------|--------|
| | | | |

106 4 MB 847ms 10 1 3

The screenshot shows the Web Inspector interface for an iPhone session. At the top, there's a toolbar with various icons and metrics: a document icon (106), a weight icon (4 MB), a clock icon (847ms), a speech bubble icon (10), an exclamation mark icon (1), and a warning triangle icon (3). An orange arrow points from the text 'Resources Count' down to the 'document' icon in the toolbar. Below the toolbar is a dark bar with the text 'Resources Count'. On the far left, there are 'onsole' and 'dering' buttons. On the far right, there's an 'Inspect' button with a target icon. At the bottom, there's a timeline with time markers from 19.72s to 54.2s. A table at the very bottom has columns for X, Y, Width, and Height, but no data is present.

Toolbar

Activity viewer

Web Inspector — www.apple.com — iphone

The screenshot shows the Web Inspector toolbar with the following metrics:

- Resources: 106 (indicated by a document icon)
- Size: 4 MB (indicated by a lock icon)
- Performance: 847ms (indicated by a clock icon)
- Console: 10 messages (indicated by a speech bubble icon)
- Errors: 1 (indicated by a red exclamation mark icon)
- Warnings: 3 (indicated by a yellow warning sign icon)

A yellow arrow points from the text "Resources Size" to the "Size" metric in the toolbar.

Resources Size

onsole

dering

Inspect

| Time | Value |
|--------|--------|
| 19.72s | 24.65s |
| 29.58s | 34.52s |
| 39.45s | 44.38s |
| 49.31s | 54.2 |

| | X | Y | Width | Height |
|--|---|---|-------|--------|
| | | | | |

Toolbar

Activity viewer

Web Inspector — www.apple.com — iphone

The screenshot shows the Web Inspector's Activity viewer interface. At the top, there's a toolbar with various icons and metrics: a document icon with '106', a storage icon with '4 MB', a clock icon with '847ms' (highlighted by a yellow arrow), a speech bubble icon with '10', a red exclamation mark icon with '1', and a yellow warning icon with '3'. Below the toolbar is a dark grey timeline bar with several small rectangular markers. A large white text area in the center says 'Time to load Event'. At the bottom, there's a table with columns for time (19.72s, 24.65s, etc.), X, Y, Width, and Height.

onsole

dering

Time to load Event

| 19.72s | 24.65s | 29.58s | 34.52s | 39.45s | 44.38s | 49.31s | 54.2 |
|--------|--------|--------|--------|--------|--------|--------|------|
| X | Y | Width | Height | | | | |

Toolbar

Activity viewer

Web Inspector — www.apple.com — iphone

The screenshot shows the Web Inspector interface for an iPhone session. At the top, there's a toolbar with several icons and metrics: a document icon with '106', a memory icon with '4 MB', a clock icon with '847ms', a speech bubble icon with '10' (highlighted by a yellow arrow), a red exclamation mark icon with '1', and a yellow warning icon with '3'. Below the toolbar, the text 'Console Logs' is displayed. The bottom part of the screen shows a timeline with time markers from 19.72s to 54.2s, and a table with columns for X, Y, Width, and Height.

Console Logs

| 19.72s | 24.65s | 29.58s | 34.52s | 39.45s | 44.38s | 49.31s | 54.2 |
|--------|--------|--------|--------|--------|--------|--------|------|
| | | | | | | | |

| X | Y | Width | Height |
|---|---|-------|--------|
| | | | |

Toolbar

Activity viewer

Web Inspector — www.apple.com — iphone

The screenshot shows the Web Inspector interface for an iPhone session. At the top, there's a toolbar with several icons and metrics: a document icon with '106', a memory icon with '4 MB', a clock icon with '847ms', a speech bubble icon with '10', a red circle with a white exclamation mark and '1' (highlighted with an orange arrow), and a yellow triangle with '3'. Below the toolbar, the word 'Console' is visible on the left, and 'Inspect' is on the right. In the center, the text 'Console Errors' is displayed. At the bottom, there are two rows of timestamped data and a row of headers.

| 19.72s | 24.65s | 29.58s | 34.52s | 39.45s | 44.38s | 49.31s | 54.2 |
|--------|--------|--------|--------|--------|--------|--------|------|
| | | | | | | | |

| X | Y | Width | Height |
|---|---|-------|--------|
| | | | |

Toolbar

Activity viewer

Web Inspector — www.apple.com — iphone

The screenshot shows the Web Inspector interface for an iPhone session. At the top, there's a toolbar with several icons and metrics: a document icon with '106', a memory icon with '4 MB', a clock icon with '847ms', a speech bubble icon with '10', a red exclamation mark icon with '1', and a yellow warning icon with '3'. An orange arrow points from the text 'Console Warnings' to the yellow warning icon. Below the toolbar, the word 'Console' is partially visible on the left, and 'Inspect' is on the right. The main area is dark, with some blurred UI elements and a timeline at the bottom.

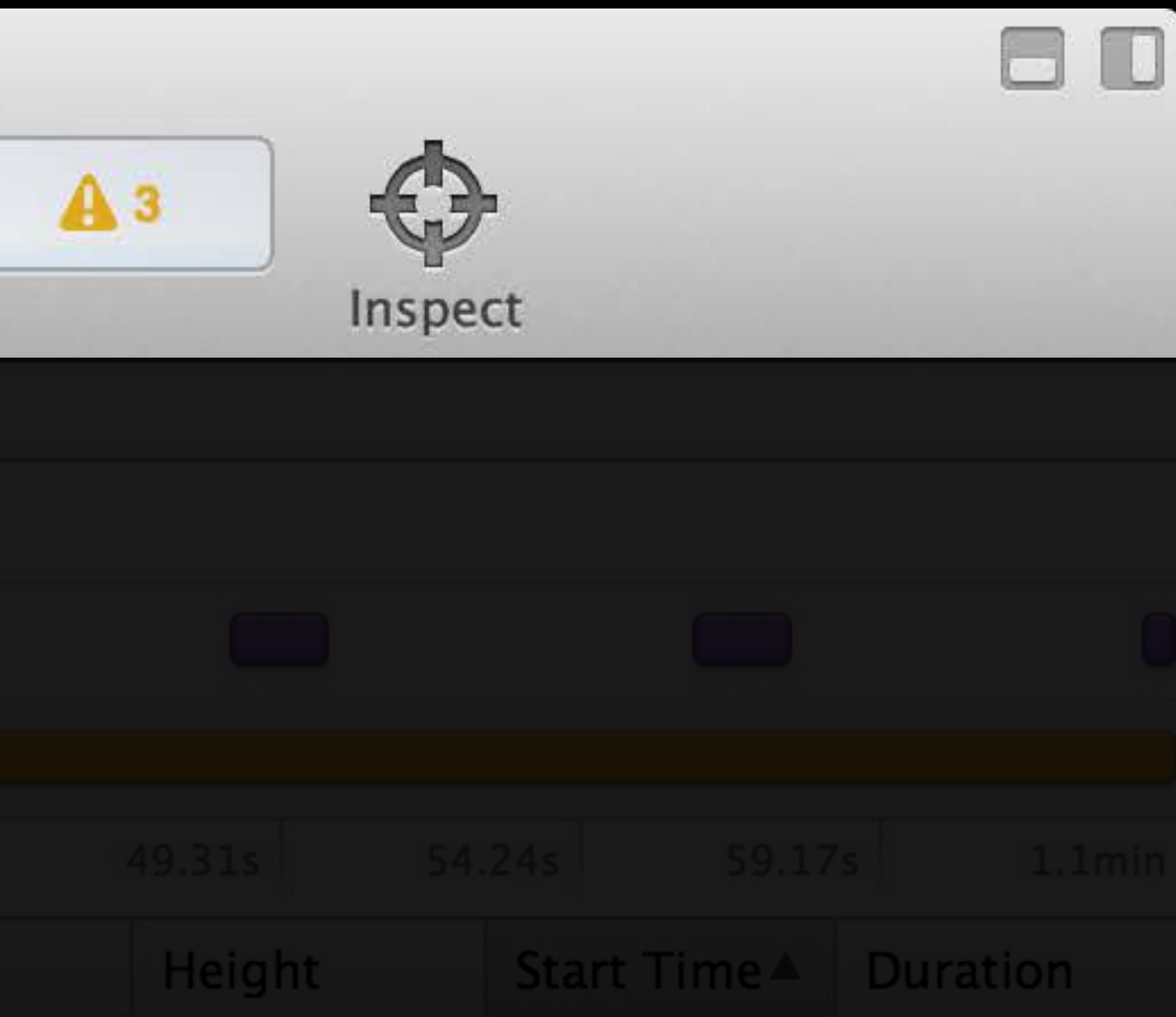
Console Warnings

19.72s 24.65s 29.58s 34.52s 39.45s 44.38s 49.31s 54.2

| X | Y | Width | Height |
|---|---|-------|--------|
|---|---|-------|--------|

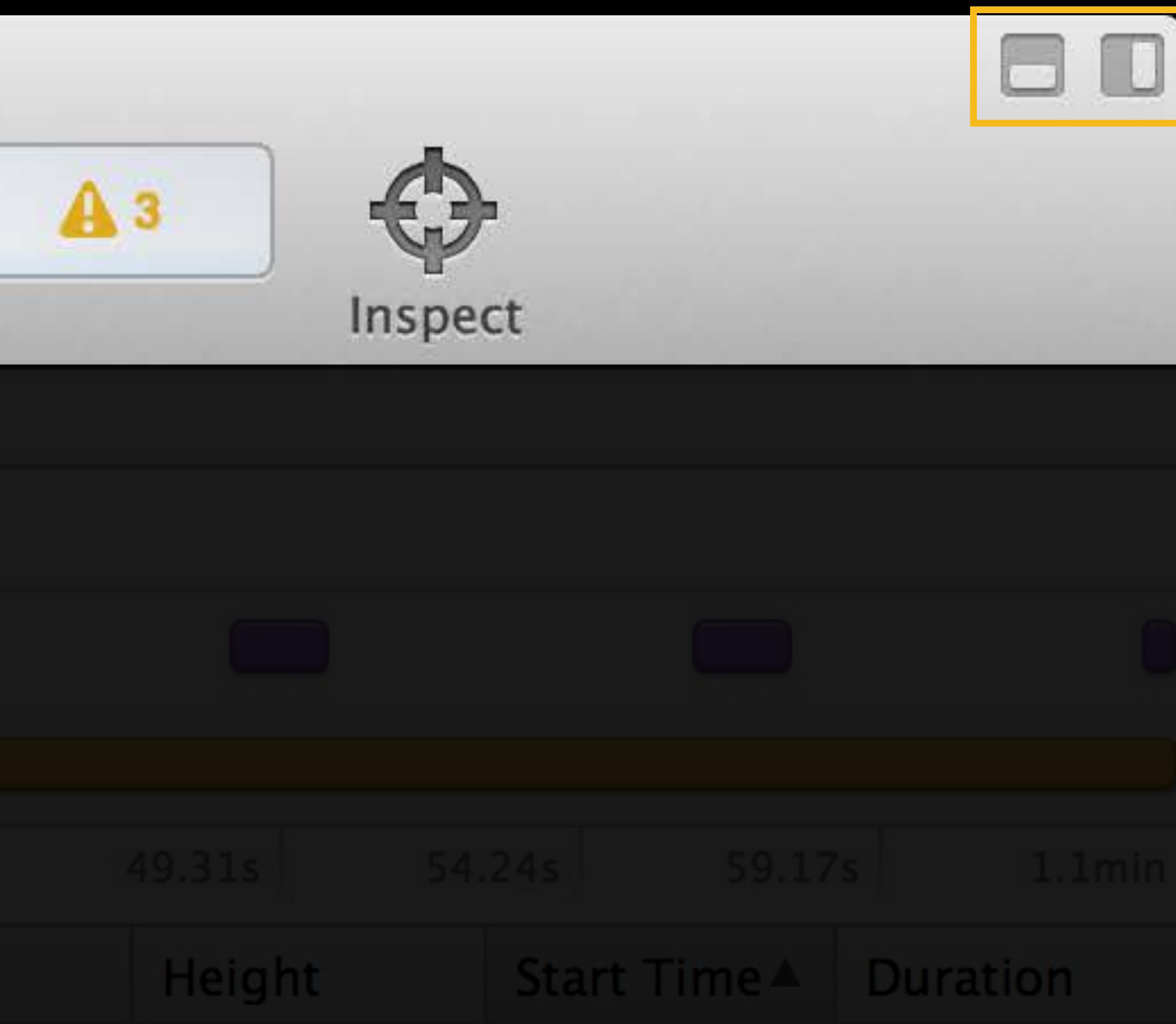
Toolbar

Docking modes



Toolbar

Docking modes



Screenshot of a web browser showing a photo grid and its corresponding developer tools.

Favorite Photos

Shuffle

88 photos

DOM Tree

```

<div>
  <div class="photo-wrapper" style="width: 205px; height: 136px; -webkit-transform: translate(820px, 0px);">
    ...
  </div>
  <div class="photo-wrapper comments" style="width: 205px; height: 136px; -webkit-transform: translate(1025px, 0px);">
    ...
  </div>
  <div class="photo-wrapper" style="width: 205px; height: 136px; -webkit-transform: translate(1230px, 0px);">
    ...
  </div>
  <div class="photo-wrapper comments" style="width: 205px; height: 136px; -webkit-transform: translate(0px, 136px);">
    ...
  </div>
  <div class="photo-wrapper" style="width: 205px; height: 136px; -webkit-transform: translate(205px, 136px);">
    ...
  </div>
  <div class="photo-wrapper" style="width: 205px; height: 136px; -webkit-transform: translate(410px, 136px);">
    ...
  </div>
  <div class="photo-wrapper" style="width: 205px; height: 136px; -webkit-transform: translate(615px, 136px);">
    ...
  </div>
  <div class="photo-wrapper" style="width: 205px; height: 136px; -webkit-transform: translate(820px, 136px);">
    ...
  </div>
  <div class="photo-wrapper" style="width: 205px; height: 136px; -webkit-transform: translate(1025px, 136px);">
    ...
  </div>
  <div class="photo-wrapper comments" style="width: 205px; height: 136px; -webkit-transform: translate(1230px, 136px);">
    ...
  </div>
  <div class="photo-wrapper" style="width: 205px; height: 136px; -webkit-transform: translate(0px, 272px);">
    ...
  </div>
  <div class="photo-wrapper" style="width: 205px; height: 136px; -webkit-transform: translate(205px, 272px);">
    ...
  </div>
  <div class="photo-wrapper" style="width: 205px; height: 136px; -webkit-transform: translate(410px, 272px);">
    ...
  </div>
  <div class="photo-wrapper" style="width: 205px; height: 136px; -webkit-transform: translate(615px, 272px);">
    ...
  </div>

```

Computed Rules Metrics

- div.photo-wrapper — Style Attribute**

```

width: 205px;
height: 136px;
-webkit-transform: translate(615px, 136px);

```
- New Rule**
- .photo-wrapper — index.css:51**

```

margin: 0;
width: 20%;
position: absolute;
display: inline-block;
background-color: lightGray;
border: 1px solid white;
box-sizing: border-box;
overflow: hidden;
opacity: 1;

```
- div — User Agent Stylesheet**

```

display: block;

```
- Inherited From: body**
- body — index.css:1**

```

font-family: "Helvetica Neue", Helvetica,

```

http://demo.local/

Favorite Photos

Shuffle

88 photos

Resources Timelines Debugger

Console

99 5 MB 433ms

Inspect Layers Styles Node Resource

Computed Rules Metrics

Active Focus Hover Visited

E div.photo-wrapper — Style Attribute

```
width: 399px;
height: 266px;
-webkit-transform: translate(0px, 266px);
```

+ New Rule

i .photo-wrapper — index.css:51

```
margin: 0;
width: 20px;
position: absolute;
display: inline-block;
background-color: lightGray;
border: 1px solid black;
box-sizing: border-box;
overflow: hidden;
opacity: 1;
```

i div — User Agent Stylesheet

```
display: block;
```

Inherited From: body

i body — index.css:1

```
font-family: "Helvetica Neue",
Helvetica, sans-serif;
margin: 0;
```

New Features at Work

New Features at Work

- Inspection and tweaking

New Features at Work

- Inspection and tweaking
- Performance analysis

New Features at Work

- Inspection and tweaking
- Performance analysis
- Debugging

New Features at Work

- Inspection and tweaking
- Performance analysis
- Debugging

Inspection and Tweaking

Styles

Styles

Dramatically refreshed Styles sidebar

The screenshot shows a modernized 'Styles' sidebar interface. At the top, there are four tabs: 'Layers' (represented by a stack icon), 'Styles' (represented by a paintbrush icon), 'Node' (represented by a double arrow icon), and 'Resource' (represented by a document icon). Below these tabs, there are three sub-tabs: 'Computed', 'Rules' (which is currently selected and highlighted in bold), and 'Metrics'. Under the 'Rules' tab, there are several sections listing CSS rules:

- body::before — iphone.css:10**
content: '.';
display: block;
height: 0;
clear: both;
visibility: hidden;
- E body#overview.iphone.overview.responsive — Style Attribute**
No Properties — Click to Edit
- + New Rule**
- body:nth-child(1n) — iphone.css:9**
border:none;
- Media: only screen and (max-width: 1023px) — iphone.css:34**
- body — iphone.css:35**
overflow:auto;

At the bottom of the sidebar, there are filter checkboxes for 'Active', 'Focus', 'Hover' (which is checked), and 'Visited'.

Styles

Dramatically refreshed Styles sidebar

- Syntax highlighting

The screenshot shows a developer tool's sidebar interface for managing styles. At the top, there are four tabs: 'Layers' (with a stack icon), 'Styles' (with a paintbrush icon), 'Node' (with a double arrow icon), and 'Resource' (with a document icon). Below these are three sub-tabs: 'Computed', 'Rules' (which is selected and highlighted in blue), and 'Metrics'. Under the 'Rules' tab, there are several style rules listed:

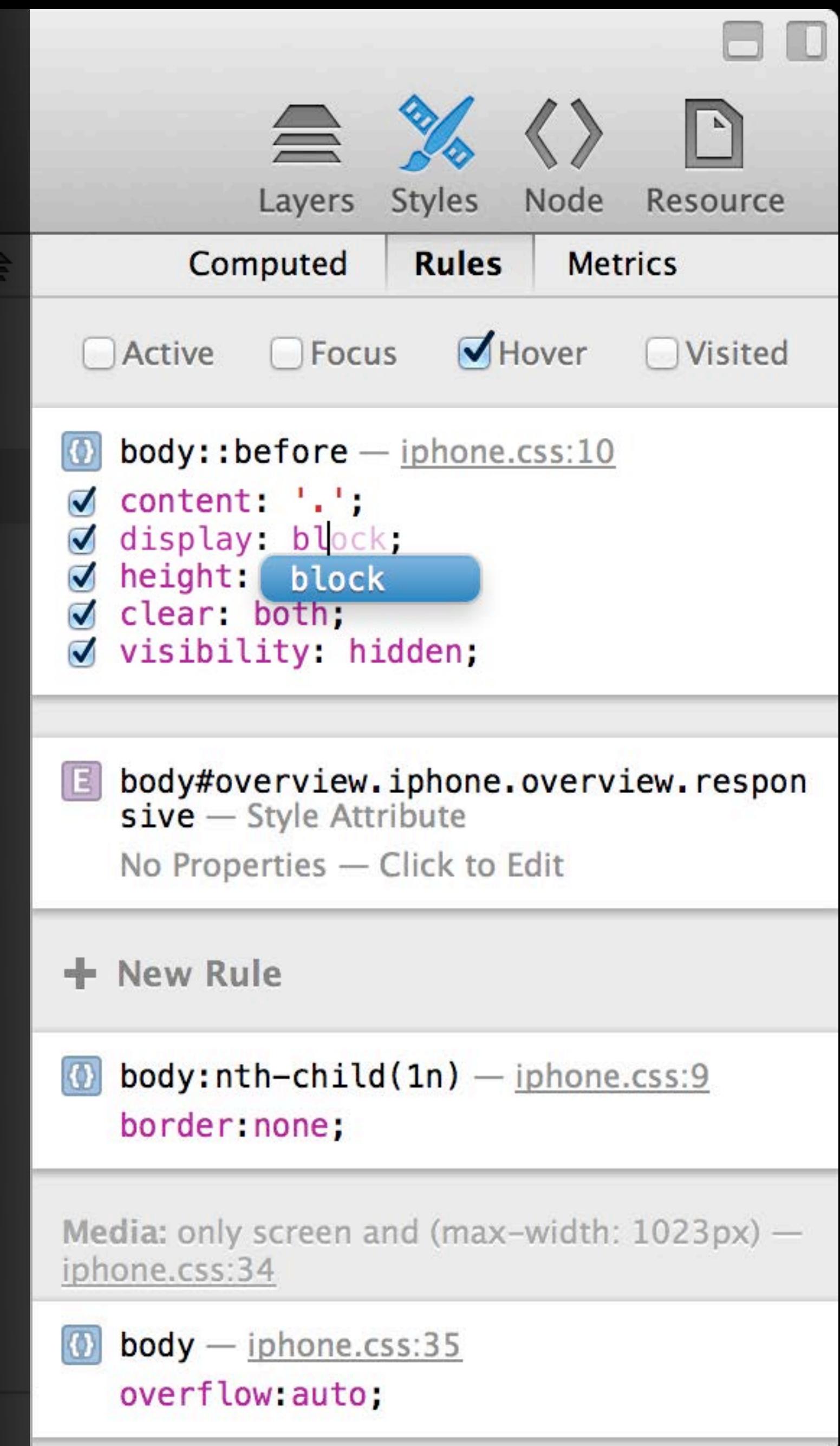
- body::before** — [iphone.css:10](#)
content: '.';
display: block;
height: 0;
clear: both;
visibility: hidden;
- E body#overview.iphone.overview.responsive** — Style Attribute
No Properties — Click to Edit
- + New Rule**
- body:nth-child(1n)** — [iphone.css:9](#)
border:none;
- Media: only screen and (max-width: 1023px)** — [iphone.css:34](#)
- body** — [iphone.css:35](#)
overflow:auto;

At the bottom of the sidebar, there are four filter checkboxes: 'Active' (unchecked), 'Focus' (unchecked), 'Hover' (checked), and 'Visited' (unchecked).

Styles

Dramatically refreshed Styles sidebar

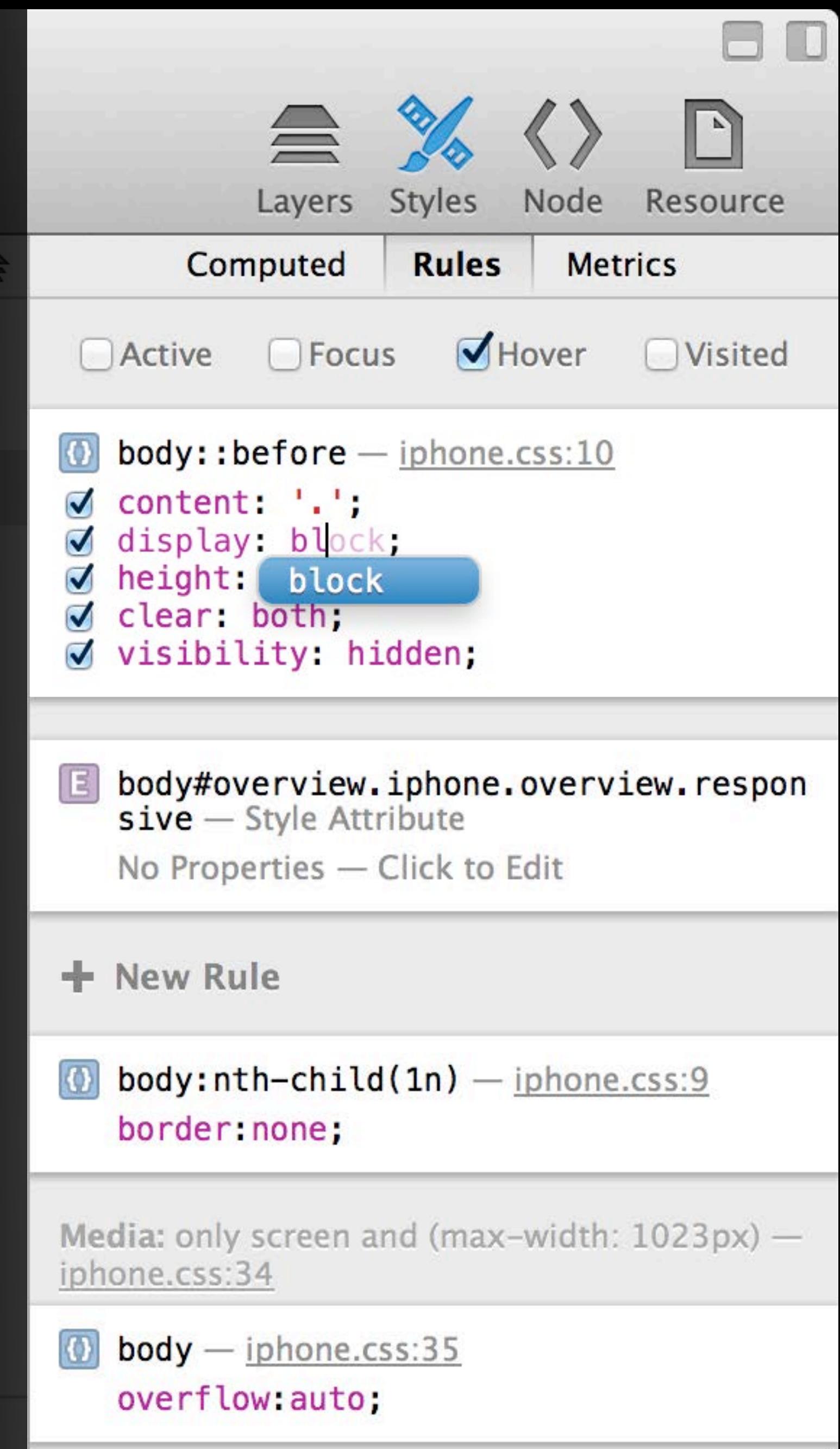
- Syntax highlighting
- Autocompletion



Styles

Dramatically refreshed Styles sidebar

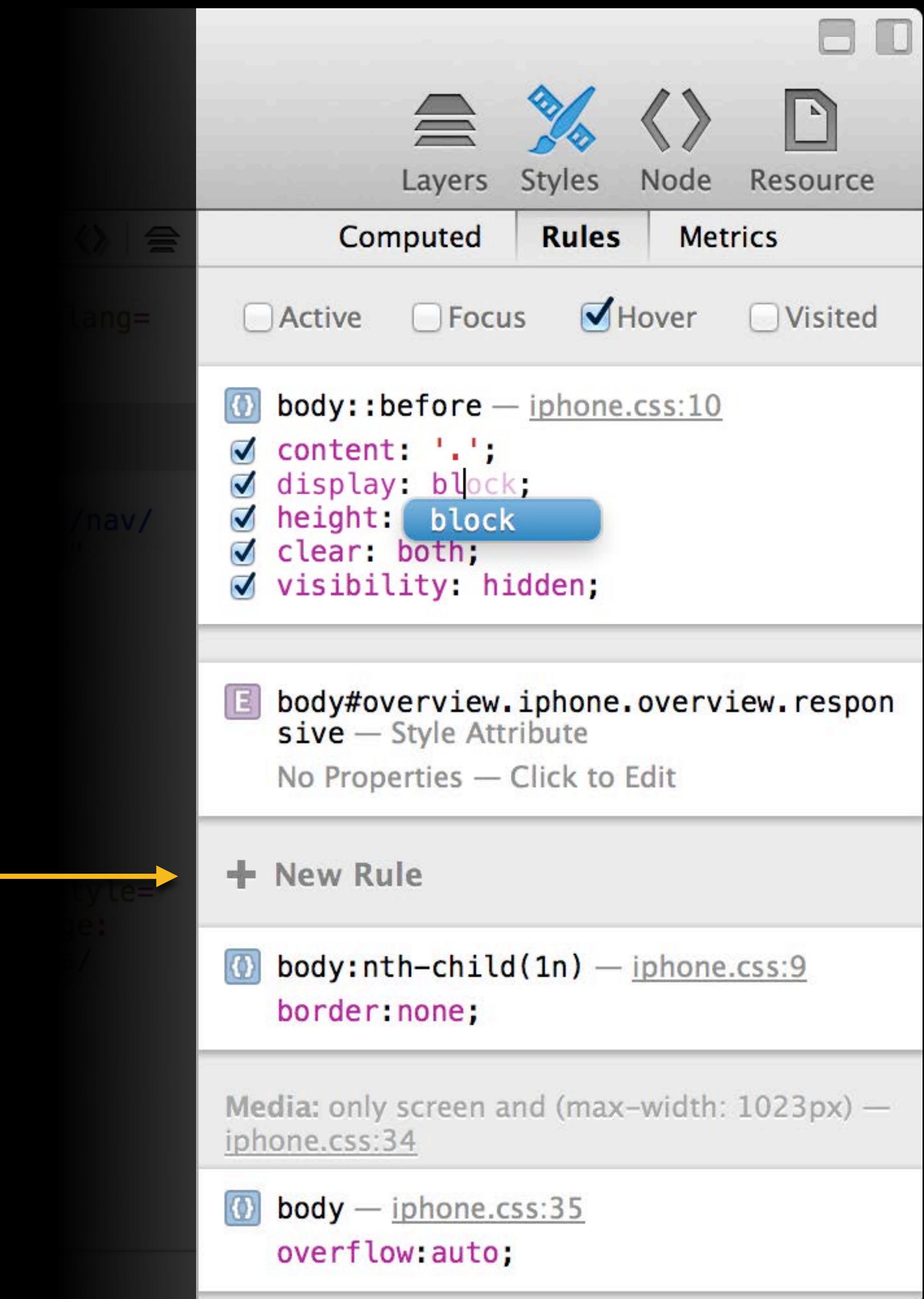
- Syntax highlighting
- Autocompletion
- Freeform CSS editing



Styles

Dramatically refreshed Styles sidebar

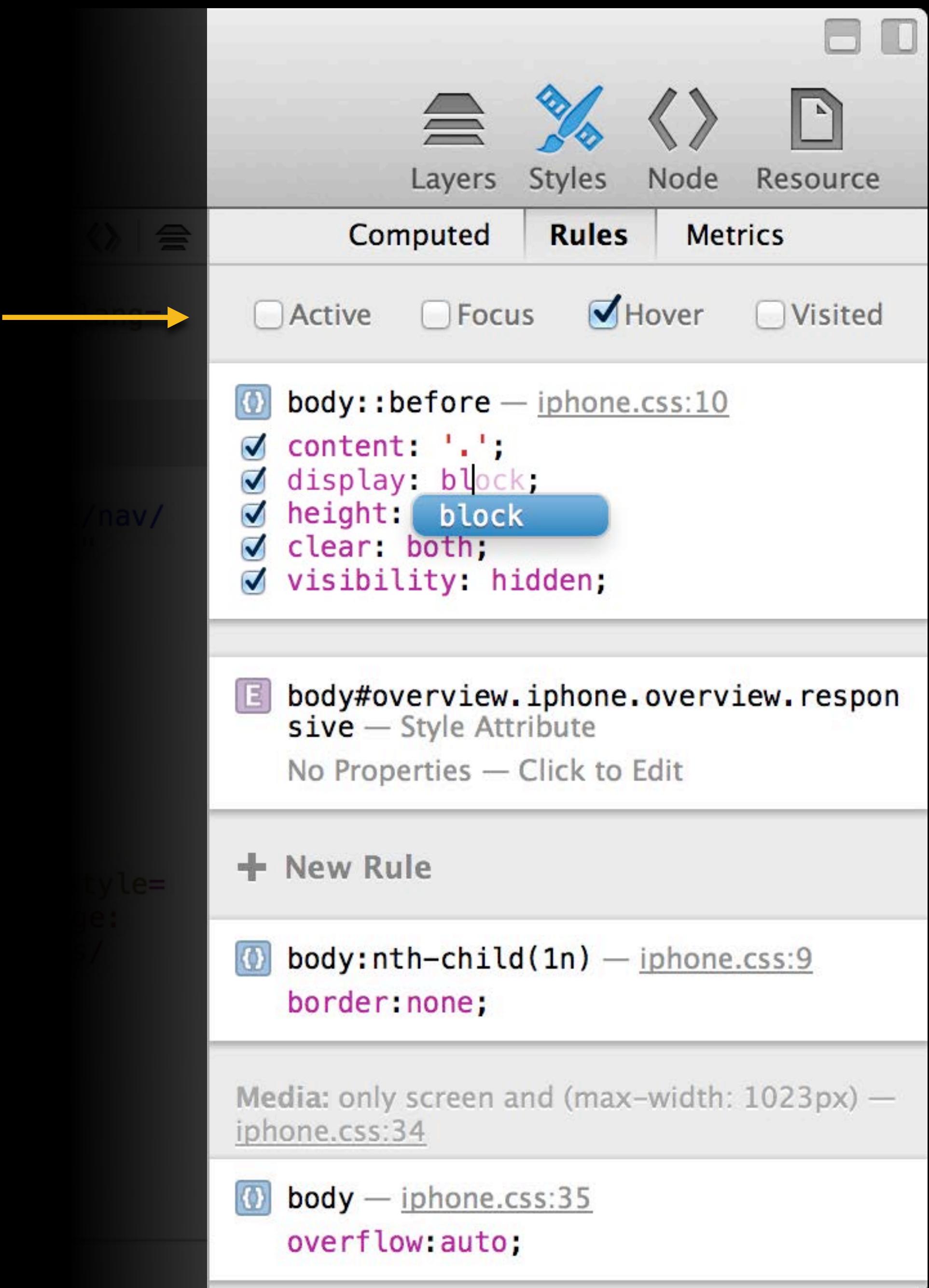
- Syntax highlighting
- Autocompletion
- Freeform CSS editing
- Easily create new rules



Styles

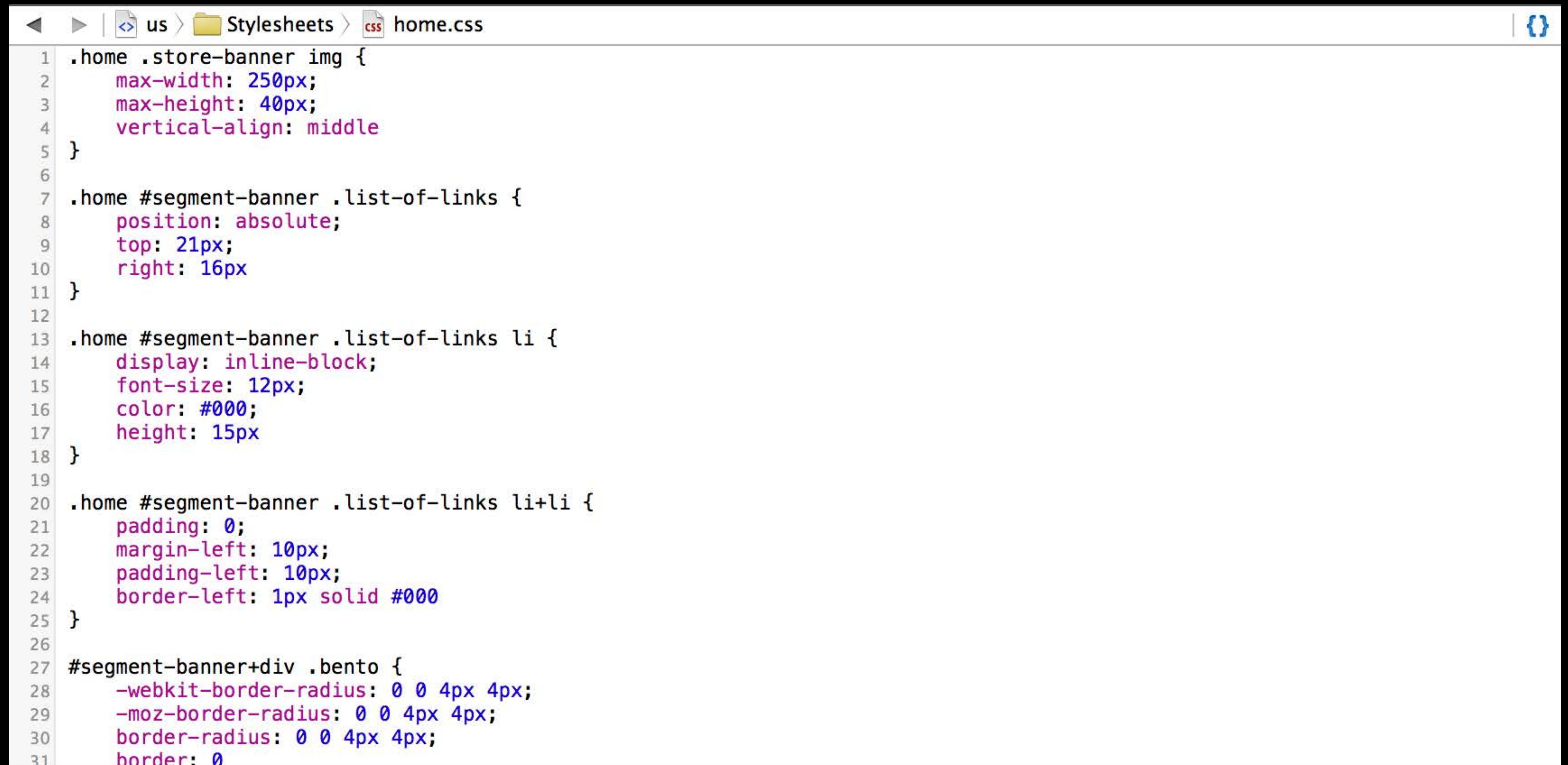
Dramatically refreshed Styles sidebar

- Syntax highlighting
- Autocompletion
- Freeform CSS editing
- Easily create new rules
- Force pseudo-classes (:hover, etc.)



Styles

Pretty printing



A screenshot of a code editor window displaying a CSS file named 'home.css'. The file path in the title bar is 'us > Stylesheets > home.css'. The code is presented in a clean, readable format with syntax highlighting and line numbers. The CSS rules define styles for various elements on a page, including a store banner image and a list of links.

```
1 .home .store-banner img {
2     max-width: 250px;
3     max-height: 40px;
4     vertical-align: middle
5 }
6
7 .home #segment-banner .list-of-links {
8     position: absolute;
9     top: 21px;
10    right: 16px
11 }
12
13 .home #segment-banner .list-of-links li {
14     display: inline-block;
15     font-size: 12px;
16     color: #000;
17     height: 15px
18 }
19
20 .home #segment-banner .list-of-links li+li {
21     padding: 0;
22     margin-left: 10px;
23     padding-left: 10px;
24     border-left: 1px solid #000
25 }
26
27 #segment-banner+div .bento {
28     -webkit-border-radius: 0 0 4px 4px;
29     -moz-border-radius: 0 0 4px 4px;
30     border-radius: 0 0 4px 4px;
31     border: 0
```

Styles

Pretty printing



A screenshot of a code editor interface displaying a CSS file named 'home.css'. The file path is shown in the top bar as 'us > Stylesheets > home.css'. The code itself is well-formatted with line numbers on the left and color-coded syntax highlighting. A yellow box highlights the brace matching tool icon in the top right corner of the editor window.

```
1 .home .store-banner img {  
2     max-width: 250px;  
3     max-height: 40px;  
4     vertical-align: middle  
5 }  
6  
7 .home #segment-banner .list-of-links {  
8     position: absolute;  
9     top: 21px;  
10    right: 16px  
11 }  
12  
13 .home #segment-banner .list-of-links li {  
14     display: inline-block;  
15     font-size: 12px;  
16     color: #000;  
17     height: 15px  
18 }  
19  
20 .home #segment-banner .list-of-links li+li {  
21     padding: 0;  
22     margin-left: 10px;  
23     padding-left: 10px;  
24     border-left: 1px solid #000  
25 }  
26  
27 #segment-banner+div .bento {  
28     -webkit-border-radius: 0 0 4px 4px;  
29     -moz-border-radius: 0 0 4px 4px;  
30     border-radius: 0 0 4px 4px;  
31     border: 0
```

Styles

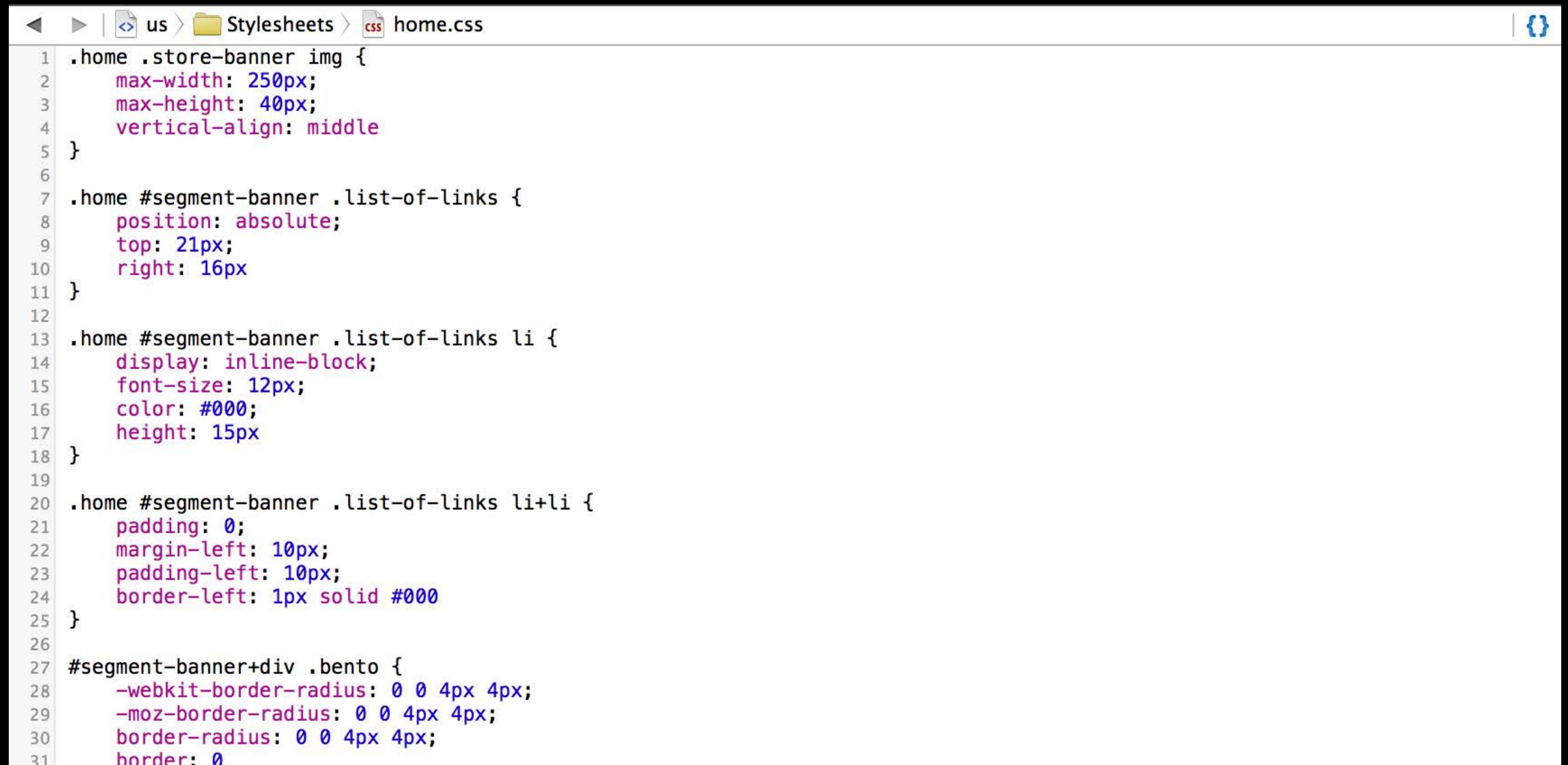
Pretty printing

```
< > us > Stylesheets > home.css | {}

1 .home .store-banner img{max-width:250px;max-height:40px;vertical-align:middle}.home #segment-banner .list-of-links{position:absolute;top:21px;right:16px}.home #segment-banner .list-of-links li{display:inline-block;font-size:12px;color:#000;height:15px}.home #segment-banner .list-of-links li+li{padding:0;margin-left:10px;padding-left:10px;border-left:1px solid #000}#segment-banner+div .bento{-webkit-border-radius:0 0 4px 4px;-moz-border-radius:0 0 4px 4px;border-radius:0 0 4px 4px;border:0}body{background-color:#f1f1f1}.home-nav{margin-bottom:0}.home-product-shelf{margin-bottom:9px}.home-product-shelf .lateral-navbar{-webkit-border-bottom-left-radius:0;-moz-border-radius-bottomleft:0;border-bottom-left-radius:0;-webkit-border-bottom-right-radius:0;-moz-border-radius-bottomright:0;border-bottom-right-radius:0;margin-bottom:0}.home-product-shelf .box>.box-content{border:0;-webkit-box-shadow:none;-moz-box-shadow:none;box-shadow:none;width:978px}.home-product-shelf .product-shelf-ribbon{-webkit-box-shadow:-1px 0 0 0 #d2d2d2,-1px 0 0 0 #e6e6e6,1px 0 0 0 #d2d2d2,2px 0 0 0 #e6e6e6,0 2px 0 0 rgba(241,241,241,0.3),0 1px 0 0 #b1b1b1;-moz-box-shadow:-1px 0 0 0 #d2d2d2,-1px 0 0 0 #e6e6e6,1px 0 0 0 #d2d2d2,2px 0 0 0 #e6e6e6,0 2px 0 0 rgba(241,241,241,0.3),0 1px 0 0 #b1b1b1;box-shadow:-1px 0 0 0 #d2d2d2,-1px 0 0 0 #e6e6e6,1px 0 0 0 #d2d2d2,2px 0 0 0 #e6e6e6,0 2px 0 0 rgba(241,241,241,0.3),0 1px 0 0 #b1b1b1;-webkit-border-bottom-left-radius:4px;-moz-border-radius-bottomleft:4px;border-bottom-left-radius:4px;-webkit-border-bottom-right-radius:4px;-moz-border-radius-bottomright:4px;border-bottom-right-radius:4px;width:978px;margin-left:1px}.banners,.home-page-banners{margin:0 0 8px}.banners li,.home-page-banners li{float:left}.banners li.middle,.home-page-banners li.middle{margin:0 8px}.banners li a,.banners li a img,.home-page-banners li a,.home-page-banners li a img{display:block}.special-deals-lead-in{margin:5px 10px;position:relative;display:inline-block;padding-top:10px}div.special-deals-lead-in+div.special-deals-lead-in{border-top:1px #ccc solid}.special-deals-lead-in h3{margin-bottom:3px}.special-deals-lead-in span{color:#666;float:left}.special-deals-lead-in ul{float:left}.special-deals-lead-in ul li{line-height:1.6em}.special-deals-lead-in ul li a{color:#333}.special-deals-lead-in ul li a:hover{color:#0085cf}.special-deals-lead-in img{float:right;top:10px;position:relative}div.special-deals-lead-in:last-of-type{margin-bottom:15px}.tile-alt{background:url("data:image/gif;base64,R0lGODlhAABAJEAAAAAP///9bW1tXV1SwAAAAApAABAAACJIyPosvjLuCIM1oFl8QU70dV3sVNkgmapfqIaPdmZEWDC4IHQA7") no-repeat scroll 0 0 transparent;padding:0;text-align:left;margin-top:10px;margin-bottom:15px\9}.tile-alt:first-child{margin-top:5px}.tile-alt:last-child{padding-bottom:15px}.tile-alt h3{font-size:11px;font-weight:bold;line-height:15px;padding:15px 0 0 0;margin:0 10px 5px 10px}.tile-alt div{margin:5px auto;text-align:center}.tile-alt div img{display:inline-block;margin:0}.tile-alt div.left{text-align:left}.tile-alt div.right{text-align:right}.tile-alt div.bottom{margin-bottom:0}.tile-alt p{color:#666}.tile-alt .footnote{color:#999;font-size:9px}.tile-alt .more{display:inline;margin:0}.tile-alt strong{color:#000}.tile-alt p{text-align:right;float:right;padding:0 10px 0 0;clear:both}.tile-alt p.text-left{width:85px;float:left;padding:0 0 0 10px;clear:both}.footerblock .email_notification fieldset{padding-top:0}.email_notification form{padding-top:9px}.email_notification form label{position:absolute;left:-9999px}.email_notification form .notify_email{width:150px}.email_notification .notify_wait{text-indent:-9000px;width:16px;height:16px;background-image:url(..../source/store/features/home/css/bg/email_spinner.gif);background-repeat:no-repeat;background-position:center center;display:none}.email_notification .notify_format b,.email_notification .notify_on b{color:red}.email_notification .notify_submit{margin-top:10px}.loading .notify_wait{display:block}.loading .notify_submit{display:none}input.placeholder{color:#ccc}
```

Styles

Pretty printing



The screenshot shows a code editor window with a dark theme. The title bar indicates the file is named "home.css". The code itself is a series of CSS rules, each preceded by a line number. The CSS is well-formatted with proper indentation and line breaks. The code defines styles for various elements on a page, including a banner image and a list of links.

```
1 .home .store-banner img {
2     max-width: 250px;
3     max-height: 40px;
4     vertical-align: middle
5 }
6
7 .home #segment-banner .list-of-links {
8     position: absolute;
9     top: 21px;
10    right: 16px
11 }
12
13 .home #segment-banner .list-of-links li {
14     display: inline-block;
15     font-size: 12px;
16     color: #000;
17     height: 15px
18 }
19
20 .home #segment-banner .list-of-links li+li {
21     padding: 0;
22     margin-left: 10px;
23     padding-left: 10px;
24     border-left: 1px solid #000
25 }
26
27 #segment-banner+div .bento {
28     -webkit-border-radius: 0 0 4px 4px;
29     -moz-border-radius: 0 0 4px 4px;
30     border-radius: 0 0 4px 4px;
31     border: 0
```

Demo

Brian Kadar
Safari and WebKit Engineer

Web Inspector — index.html

99 5 MB 799ms 0 0 0

Computed Rules Metrics

Active Focus Hover Visited

img — Style Attribute

opacity: 1;

New Rule

.photo-wrapper:hover img — index.css:87

-webkit-transform: scale(1.3);

.photo-wrapper img — index.css:80

width: 100%;

opacity: 0;

transition: opacity 0.25s ease-in-out, -webkit-transform 0.25s ease-in-out;

Inherited From: body

body — index.css:1

font-family: "Helvetica Neue", Helvetica, sans-serif;

margin: 0;

HTML Tree:

- <html>
- <head>...
- <body>
- <header>...
- <div id="photos" style="height: 3146px;">
- <div class="photo-wrapper comments" style="width: 215px; height: 143px; -webkit-transform: translate(0px, 0px);">
-
- </div>
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(215px, 0px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(430px, 0px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(645px, 0px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(0px, 143px);">...
- <div class="photo-wrapper comments" style="width: 215px; height: 143px; -webkit-transform: translate(215px, 143px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(430px, 143px);">...
- <div class="photo-wrapper comments" style="width: 215px; height: 143px; -webkit-transform: translate(645px, 143px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(0px, 286px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(215px, 286px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(430px, 286px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(645px, 286px);">...

Web Inspector — index.html

99 5 MB 799ms 0 0 0

Computed Rules Metrics

Active Focus Hover Visited

Hover

img — Style Attribute

opacity: 1;

+ New Rule

.photo-wrapper:hover img — index.css:87

-webkit-transform: scale(1.3);

.photo-wrapper img — index.css:80

width: 100%;

opacity: 0;

transition: opacity 0.25s ease-in-out, -webkit-transform 0.25s ease-in-out;

Inherited From: body

body — index.css:1

font-family: "Helvetica Neue", Helvetica, sans-serif;

margin: 0;

HTML Tree:

- <html>
- <head>...
- <body>
- <header>...
- <div id="photos" style="height: 3146px;">
- <div class="photo-wrapper comments" style="width: 215px; height: 143px; -webkit-transform: translate(0px, 0px);">
-
- </div>
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(215px, 0px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(430px, 0px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(645px, 0px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(0px, 143px);">...
- <div class="photo-wrapper comments" style="width: 215px; height: 143px; -webkit-transform: translate(215px, 143px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(430px, 143px);">...
- <div class="photo-wrapper comments" style="width: 215px; height: 143px; -webkit-transform: translate(645px, 143px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(0px, 286px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(215px, 286px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(430px, 286px);">...
- <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate(645px, 286px);">...

Web Inspector — www.apple.com — iphone

106 4 MB 1.33s 0 0 0

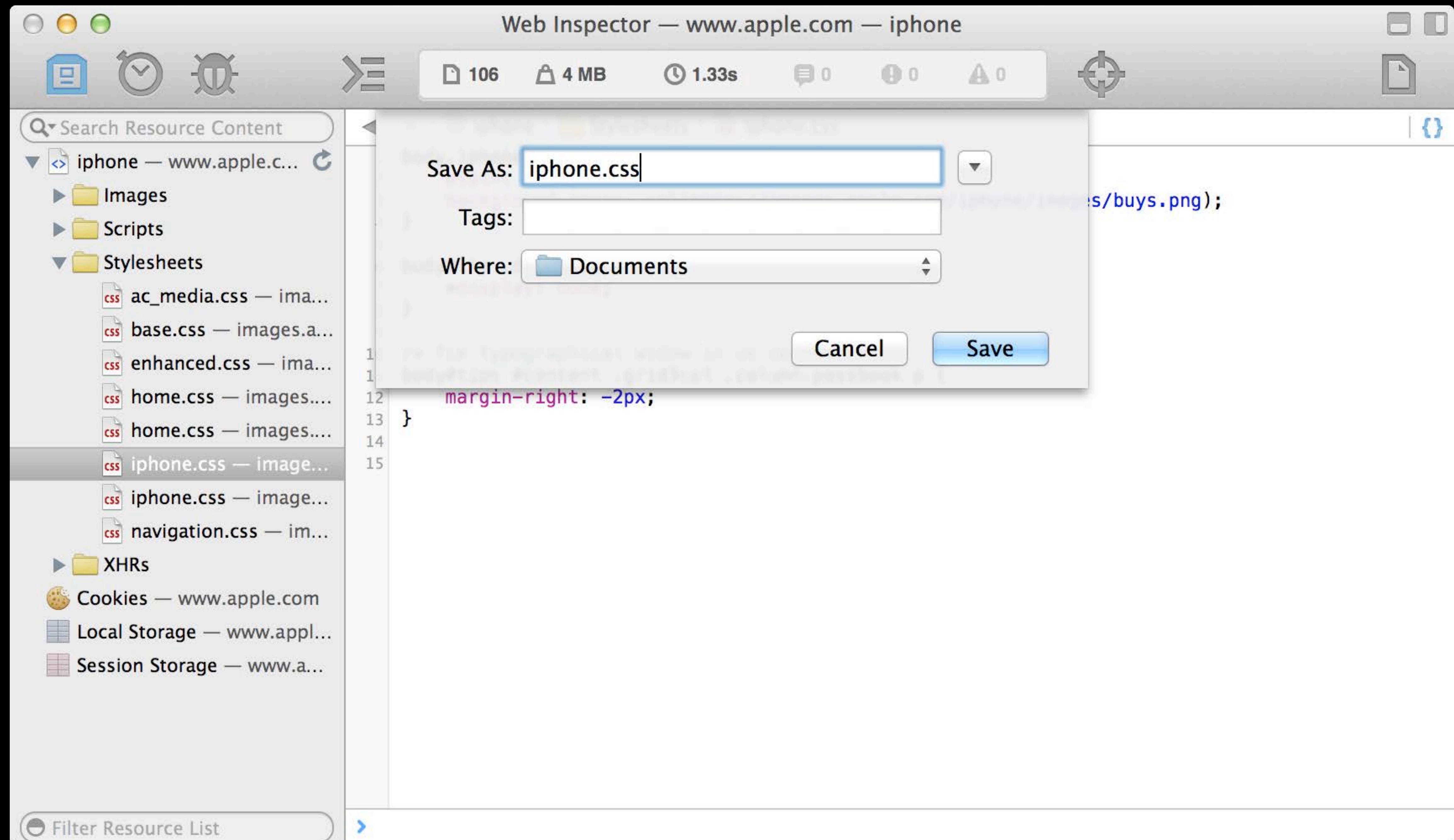
Search Resource Content

iphone — www.apple.c... □
Images
Scripts
Stylesheets
ac_media.css — ima...
base.css — images.a...
enhanced.css — ima...
home.css — images....
home.css — images....
iphone.css — image...
iphone.css — image...
navigation.css — im...
XHRs
Cookies — www.apple.com
Local Storage — www.appl...
Session Storage — www.a...

iphone > Stylesheets > iphone.css

```
1 body.iphone .buyiphones {  
2     width: 62px;  
3     background-image: url(http://images.apple.com/iphone/images/buys.png);  
4 }  
5  
6 body#lte .dropdown span {  
7     *display: none;  
8 }  
9  
10 /* fix typographical widow in us copy */  
11 body#tips #content .grid3col .column.passbook p {  
12     margin-right: -2px;  
13 }  
14  
15
```

Filter Resource List >



New Features at Work

- Inspection and tweaking
- Performance analysis
- Debugging

New Features at Work

- Inspection and tweaking
- Performance analysis
- Debugging

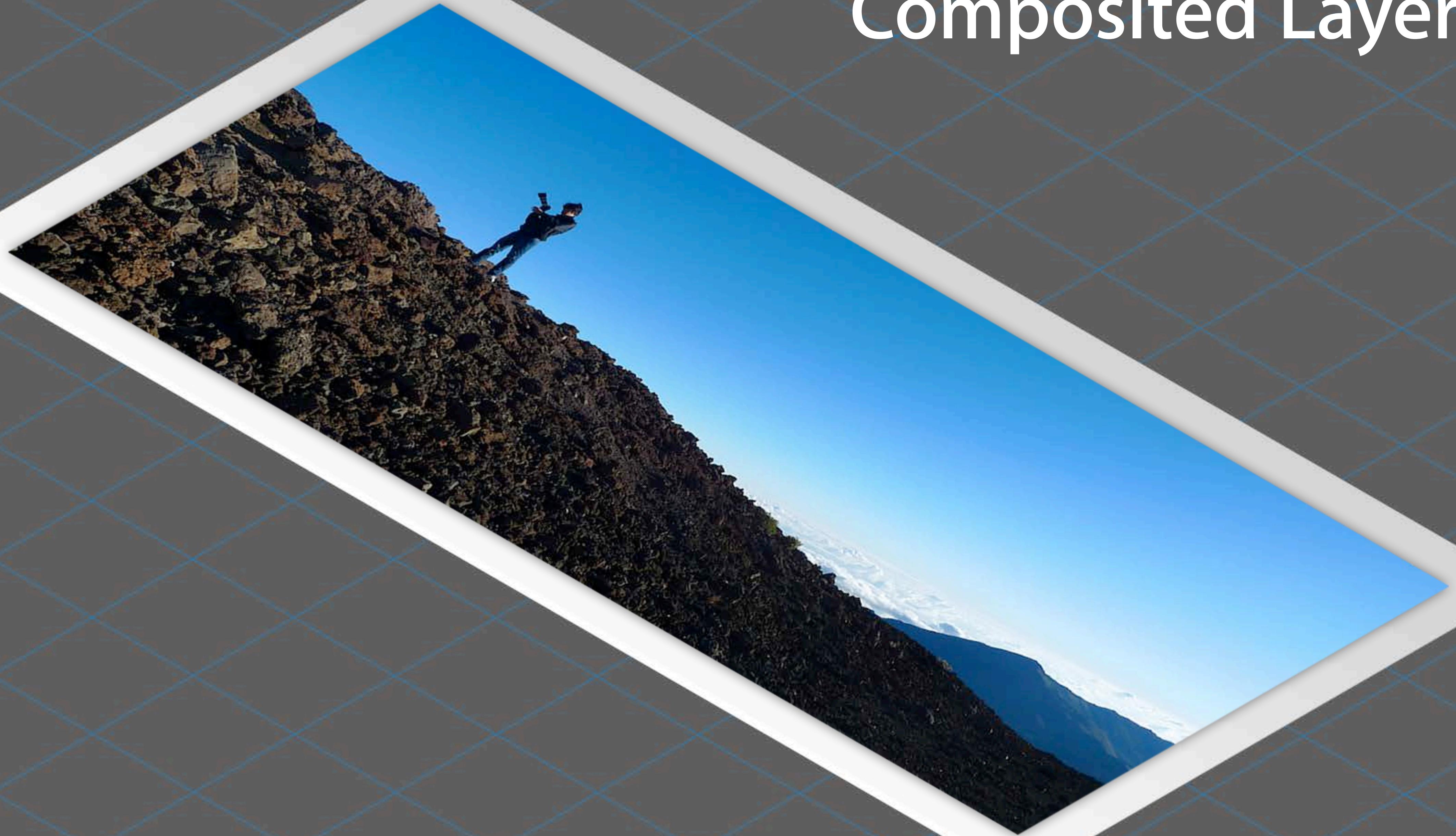
Performance Analysis

Composed Layers

Composed Layers



Composed Layers



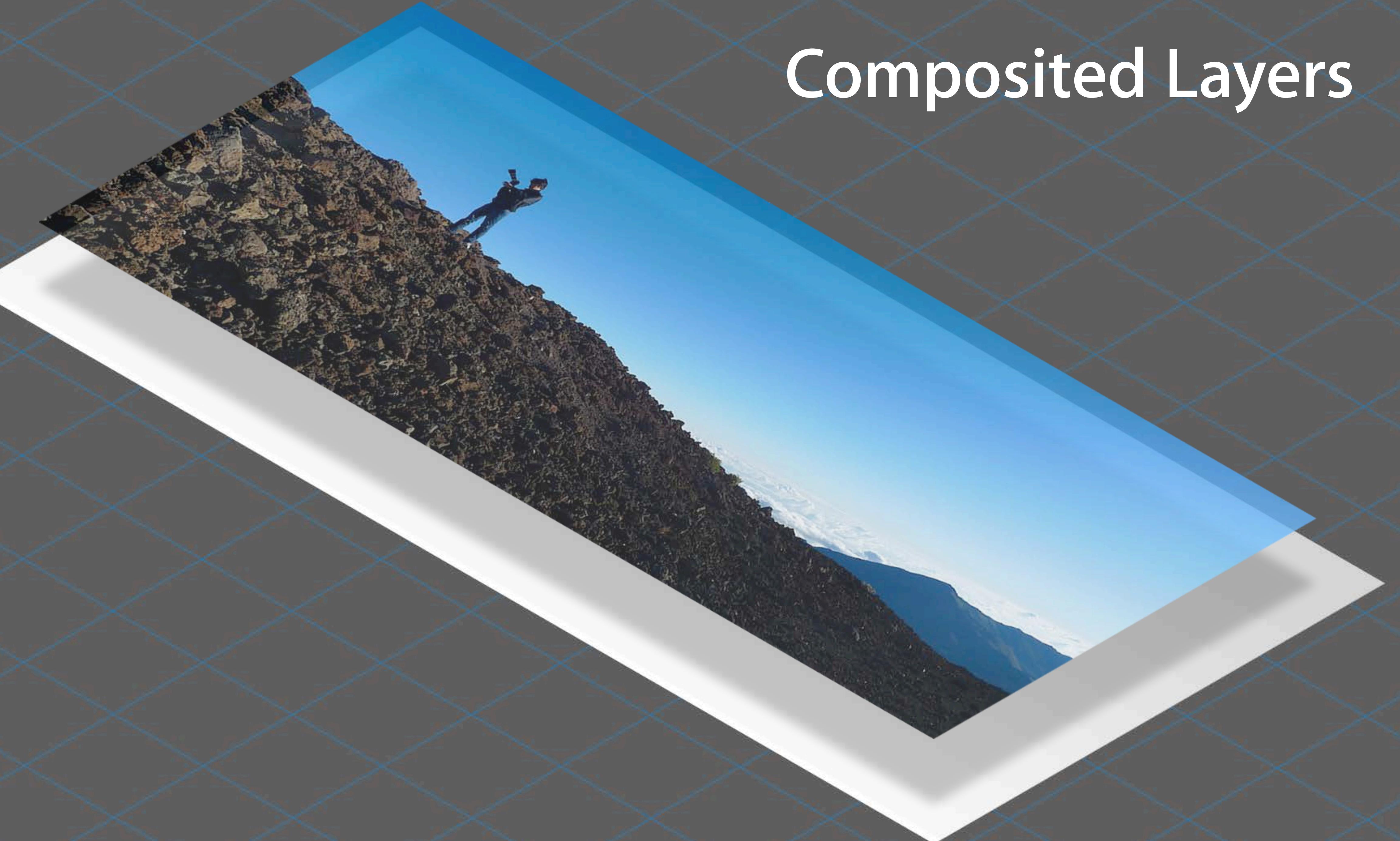
Composed Layers



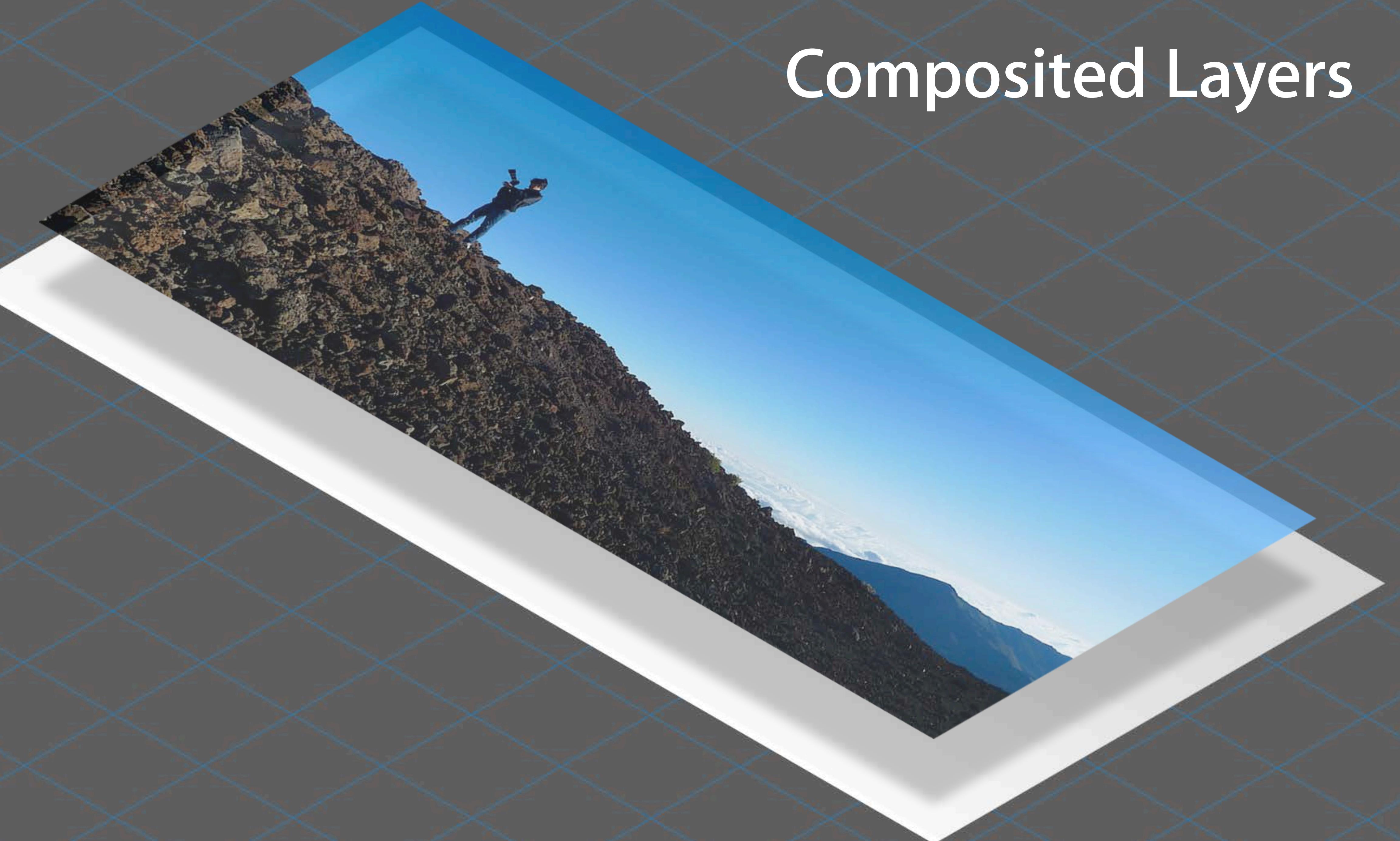
Composed Layers



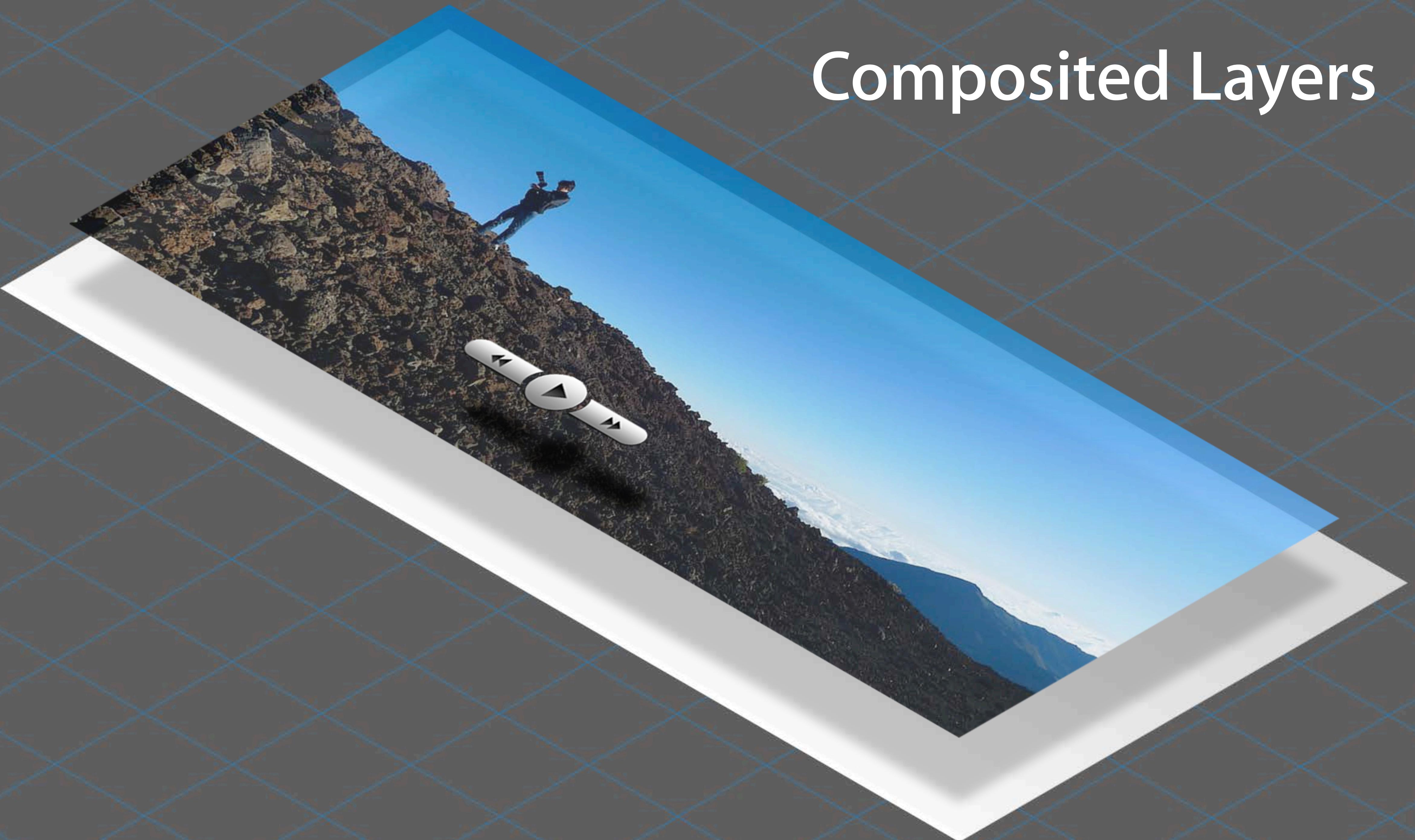
Composed Layers



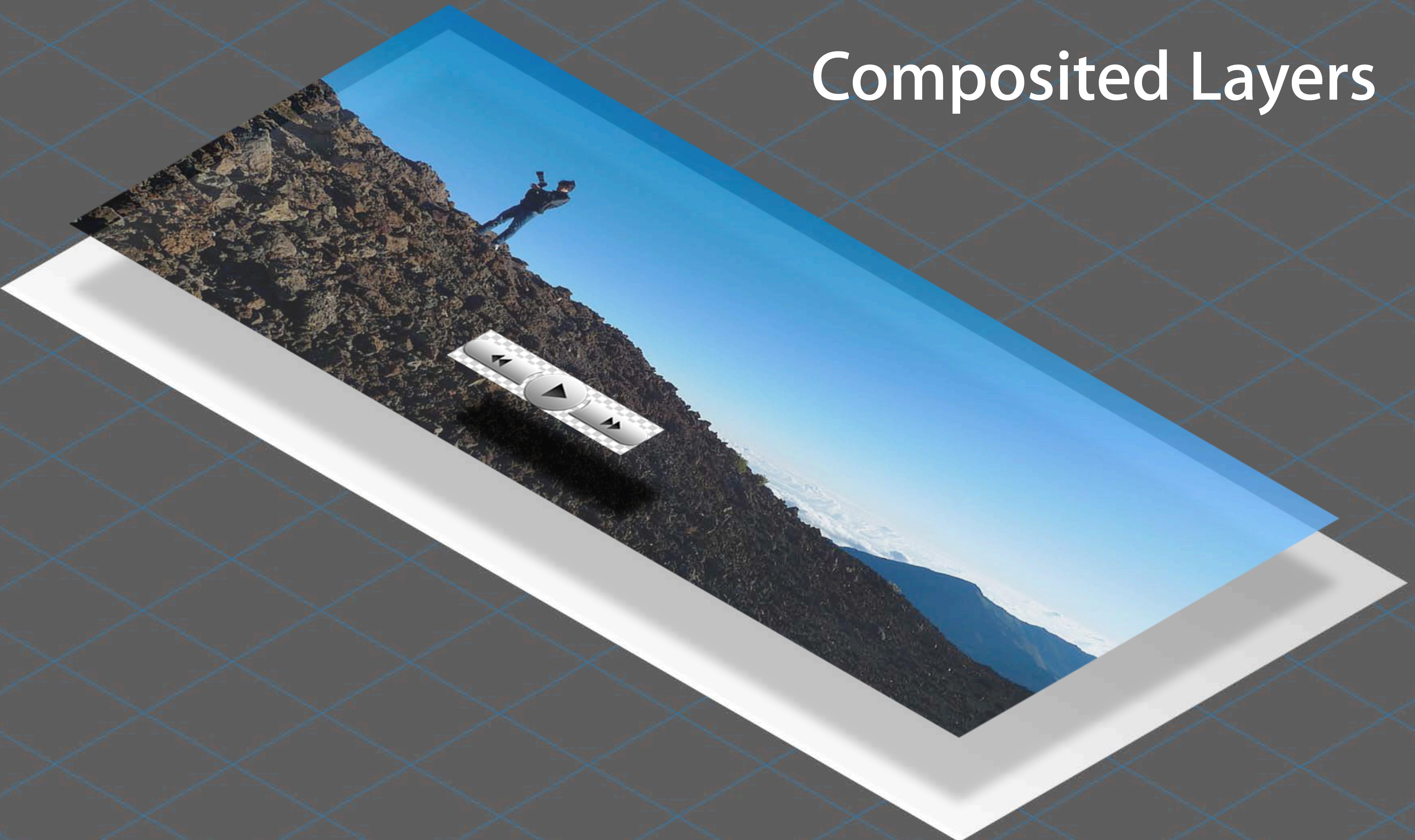
Composed Layers



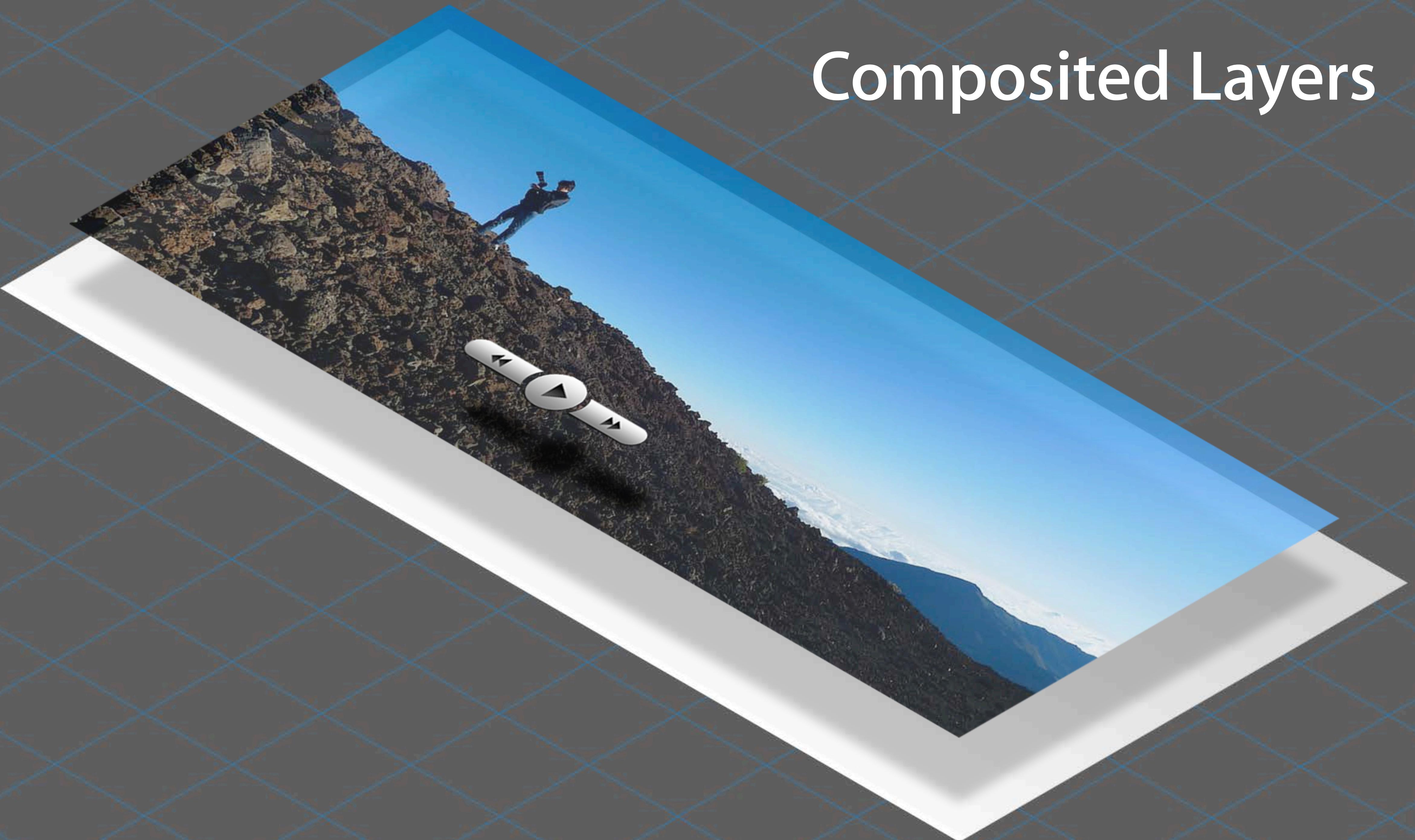
Composed Layers



Composed Layers



Composed Layers



Composed Layers



Composited Layers

- Optimizing web content in UIWebViews and websites on iOS
 - Session 601, WWDC 2012

Composed Layers

Composited Layers

Layers sidebar

The screenshot shows the Chrome DevTools Layers sidebar. At the top, there are four tabs: Layers (selected), Styles, Node, and Resource. Below the tabs, the title "Layer Info" is displayed. The sidebar provides detailed information about the current layer, including its dimensions (Width: 844px, Height: 3000px), paint count (102), and memory usage (13.19 MB). A table titled "Child Layers" lists the layers contained within the main layer, ordered by memory usage. The table includes columns for Node, Paints, and Memory. The "Memory" column is currently sorted in descending order. The listed child layers include:

| Node | Paints | Memory |
|------------------------------|--------|----------|
| R video — Reflection | — | 6.21 MB |
| P div#generated::before | 46 | 39.06 KB |
| R div#generated::after — ... | — | 9.77 KB |
| P div#generated::after | 46 | 9.77 KB |
| P p::first-letter | 46 | 2.81 KB |
| E video | — | 0 B |
| E div#overlap | — | 0 B |
| E div | — | 0 B |
| E div#opacity-container | — | 0 B |
| E div#composited | — | 0 B |

At the bottom of the sidebar, it indicates a total of 11 layers and a total memory usage of 19.46 MB.

Composited Layers

Layers sidebar

- Info for selected element's layer

The screenshot shows the Chrome DevTools Layers sidebar. At the top, there are four tabs: Layers (selected), Styles, Node, and Resource. Below the tabs, the title "Layer Info" is displayed. Under "Layer Info", the following details are shown:

- Width: 844px
- Height: 3000px
- Paints: 102
- Memory: 13.19 MB

Below this, the "Child Layers" section is shown, containing a table with the following data:

| Node | Paints | Memory |
|------------------------------|--------|----------|
| R video — Reflection | — | 6.21 MB |
| P div#generated::before | 46 | 39.06 KB |
| R div#generated::after — ... | — | 9.77 KB |
| P div#generated::after | 46 | 9.77 KB |
| P p::first-letter | 46 | 2.81 KB |
| E video | — | 0 B |
| E div#overlap | — | 0 B |
| E div | — | 0 B |
| E div#opacity-container | — | 0 B |
| E div#composited | — | 0 B |

At the bottom of the sidebar, the text "Layer count: 11" and "Memory: 19.46 MB" are displayed.

Composited Layers

Layers sidebar

- Info for selected element's layer
- List all child layers

The screenshot shows the Chrome DevTools Layers sidebar. At the top, there are four tabs: Layers (selected), Styles, Node, and Resource. Below the tabs, there are two main sections: "Layer Info" and "Child Layers".

Layer Info:

| | |
|--------|----------|
| Width | 844px |
| Height | 3000px |
| Paints | 102 |
| Memory | 13.19 MB |

Child Layers:

| Node | Paints | Memory |
|------------------------------|--------|----------|
| R video — Reflection | — | 6.21 MB |
| P div#generated::before | 46 | 39.06 KB |
| R div#generated::after — ... | — | 9.77 KB |
| P div#generated::after | 46 | 9.77 KB |
| P p::first-letter | 46 | 2.81 KB |
| E video | — | 0 B |
| E div#overlap | — | 0 B |
| E div | — | 0 B |
| E div#opacity-container | — | 0 B |
| E div#composited | — | 0 B |

At the bottom of the sidebar, it says "Layer count: 11" and "Memory: 19.46 MB".

Composited Layers

Layers sidebar

- Info for selected element's layer
- List all child layers
- Track and sort by paints and memory

The screenshot shows the Chrome DevTools Layers sidebar. At the top, there are four tabs: Layers (selected), Styles, Node, and Resource. Below the tabs is a 'Layer Info' section containing width, height, paints, and memory statistics. The main area is a table titled 'Child Layers' with columns for Node, Paints, and Memory. The table lists various elements (video, div#generated::before, div#generated::after, p::first-letter, etc.) along with their paint counts and memory usage.

| Node | Paints | Memory |
|------------------------------|--------|----------|
| R video — Reflection | — | 6.21 MB |
| P div#generated::before | 46 | 39.06 KB |
| R div#generated::after — ... | — | 9.77 KB |
| P div#generated::after | 46 | 9.77 KB |
| P p::first-letter | 46 | 2.81 KB |
| E video | — | 0 B |
| E div#overlap | — | 0 B |
| E div | — | 0 B |
| E div#opacity-container | — | 0 B |
| E div#composited | — | 0 B |

Layer count: 11 Memory: 19.46 MB

Composited Layers

Layers sidebar

- Info for selected element's layer
- List all child layers
- Track and sort by paints and memory

The screenshot shows the Chrome DevTools Layers sidebar. At the top, there are four tabs: Layers (selected), Styles, Node, and Resource. Below the tabs, there are two sections: 'Layer Info' and 'Child Layers'.
Layer Info:
Width: 844px
Height: 3000px
Paints: 102
Memory: 13.19 MB
Child Layers:

| Node | Paints | Memory |
|------------------------------|--------|----------|
| R video — Reflection | — | 6.21 MB |
| P div#generated::before | 46 | 39.06 KB |
| R div#generated::after — ... | — | 9.77 KB |
| P div#generated::after | 46 | 9.77 KB |
| P p::first-letter | 46 | 2.81 KB |
| E video | — | 0 B |
| E div#overlap | — | 0 B |
| E div | — | 0 B |
| E div#opacity-container | — | 0 B |
| E div#composited | — | 0 B |

At the bottom right, there is a summary: Layer count: 11 and Memory: 19.46 MB.

Composited Layers

Layers sidebar

- Info for selected element's layer
- List all child layers
- Track and sort by paints and memory
- Distinguish layer types

The screenshot shows the Chrome DevTools Layers sidebar. At the top, there are four tabs: Layers (selected), Styles, Node, and Resource. Below the tabs, the "Layer Info" section displays the following details for the selected element:

| | |
|--------|----------|
| Width | 844px |
| Height | 3000px |
| Paints | 102 |
| Memory | 13.19 MB |

Below the info section is a table titled "Child Layers" with the following data:

| Node | Paints | Memory |
|------------------------------|--------|----------|
| R video — Reflection | — | 6.21 MB |
| P div#generated::before | 46 | 39.06 KB |
| R div#generated::after — ... | — | 9.77 KB |
| P div#generated::after | 46 | 9.77 KB |
| P p::first-letter | 46 | 2.81 KB |
| E video | — | 0 B |
| E div#overlap | — | 0 B |
| E div | — | 0 B |
| E div#opacity-container | — | 0 B |
| E div#composited | — | 0 B |

At the bottom of the sidebar, it says "Layer count: 11" and "Memory: 19.46 MB".

Composited Layers

Layers sidebar

- Info for selected element's layer
- List all child layers
- Track and sort by paints and memory
- Distinguish layer types
 - Pseudo-classes

The screenshot shows the Chrome DevTools Layers sidebar. At the top, there are four tabs: Layers (selected), Styles, Node, and Resource. Below the tabs, there are two sections: 'Layer Info' and 'Child Layers'. A yellow arrow points from the 'Pseudo-classes' bullet point in the list above to the 'Child Layers' section.

Layer Info

| | |
|--------|----------|
| Width | 844px |
| Height | 3000px |
| Paints | 102 |
| Memory | 13.19 MB |

Child Layers

| Node | Paints | Memory |
|------------------------------|--------|----------|
| R video — Reflection | — | 6.21 MB |
| P div#generated::before | 46 | 39.06 KB |
| R div#generated::after — ... | — | 9.77 KB |
| P div#generated::after | 46 | 9.77 KB |
| P p::first-letter | 46 | 2.81 KB |
| E video | — | 0 B |
| E div#overlap | — | 0 B |
| E div | — | 0 B |
| E div#opacity-container | — | 0 B |
| E div#composited | — | 0 B |

Layer count: 11 Memory: 19.46 MB

Composited Layers

Layers sidebar

- Info for selected element's layer
- List all child layers
- Track and sort by paints and memory
- Distinguish layer types
 - Pseudo-classes
 - Reflections

A screenshot of the Chrome DevTools Layers sidebar. At the top, there are four tabs: 'Layers' (selected), 'Styles', 'Node', and 'Resource'. Below the tabs, there are two sections: 'Layer Info' and 'Child Layers'. A yellow arrow points from the 'Child Layers' section towards the list of layers in the screenshot.

Layer Info

| | |
|--------|----------|
| Width | 844px |
| Height | 3000px |
| Paints | 102 |
| Memory | 13.19 MB |

Child Layers

| Node | Paints | Memory |
|------------------------------|--------|----------|
| R video — Reflection | — | 6.21 MB |
| P div#generated::before | 46 | 39.06 KB |
| R div#generated::after — ... | — | 9.77 KB |
| P div#generated::after | 46 | 9.77 KB |
| P p::first-letter | 46 | 2.81 KB |
| E video | — | 0 B |
| E div#overlap | — | 0 B |
| E div | — | 0 B |
| E div#opacity-container | — | 0 B |
| E div#composited | — | 0 B |

Layer count: 11 Memory: 19.46 MB

Composited Layers

Layers sidebar

- Info for selected element's layer
- List all child layers
- Track and sort by paints and memory
- Distinguish layer types
 - Pseudo-classes
 - Reflections
- Jump to element

The screenshot shows the Chrome DevTools Layers sidebar. At the top, there are four tabs: Layers (selected), Styles, Node, and Resource. Below the tabs is a section titled "Layer Info" which displays the following data:

| | |
|--------|----------|
| Width | 844px |
| Height | 3000px |
| Paints | 102 |
| Memory | 13.19 MB |

Below the "Layer Info" section is a table titled "Child Layers" with the following data:

| Node | Paints | Memory |
|------------------------------|--------|----------|
| R video — Reflection | — | 6.21 MB |
| P div#generated::before | 46 | 39.06 KB |
| R div#generated::after — ... | — | 9.77 KB |
| P div#generated::after | 46 | 9.77 KB |
| P p::first-letter | 46 | 2.81 KB |
| E video | — | 0 B |
| E div#overlap | — | 0 B |
| E div | — | 0 B |
| E div#opacity-container | — | 0 B |
| E div#composited | — | 0 B |

At the bottom of the sidebar, it says "Layer count: 11" and "Memory: 19.46 MB".

Composited Layers

Layers sidebar

- Info for selected element's layer
- List all child layers
- Track and sort by paints and memory
- Distinguish layer types
 - Pseudo-classes
 - Reflections
- Jump to element

The screenshot shows the Chrome DevTools Layers sidebar. At the top, there are four tabs: Layers (selected), Styles, Node, and Resource. Below the tabs is a section titled "Layer Info" which displays the following data:

| | |
|--------|----------|
| Width | 844px |
| Height | 3000px |
| Paints | 102 |
| Memory | 13.19 MB |

Below the "Layer Info" section is a table titled "Child Layers" with the following columns: Node, Paints, and Memory. The table lists several elements, each with a color-coded icon indicating its type (e.g., R for reflection, P for pseudo-class, E for element). The "Memory" column shows values such as 6.21 MB, 39.06 KB, and 0 B. A yellow box highlights the "div#overlap" row, which has a small circular arrow icon in the "Memory" column.

| Node | Paints | Memory |
|------------------------------|--------|----------|
| R video — Reflection | — | 6.21 MB |
| P div#generated::before | 46 | 39.06 KB |
| R div#generated::after — ... | — | 9.77 KB |
| P div#generated::after | 46 | 9.77 KB |
| P p::first-letter | 46 | 2.81 KB |
| E video | — | 0 B |
| E div#overlap | — | 0 B |
| E div | — | 0 B |
| E div#opacity-container | — | 0 B |
| E div#composited | — | 0 B |

At the bottom of the sidebar, it says "Layer count: 11" and "Memory: 19.46 MB".

Composited Layers

Layers sidebar

- Info for selected element's layer
- List all child layers
- Track and sort by paints and memory
- Distinguish layer types
 - Pseudo-classes
 - Reflections
- Jump to element
- Reveal reason for compositing

The screenshot shows the Chrome DevTools Layers sidebar. At the top, there are four tabs: Layers (selected), Styles, Node, and Resource. Below the tabs is a section titled "Layer Info" which displays the following data:

| | |
|--------|----------|
| Width | 844px |
| Height | 3000px |
| Paints | 102 |
| Memory | 13.19 MB |

Below the "Layer Info" section is a table titled "Child Layers" with the following data:

| Node | Paints | Memory |
|------------------------------|--------|----------|
| R video — Reflection | — | 6.21 MB |
| P div#generated::before | 46 | 39.06 KB |
| R div#generated::after — ... | — | 9.77 KB |
| P div#generated::after | 46 | 9.77 KB |
| P p::first-letter | 46 | 2.81 KB |
| E video | — | 0 B |
| E div#overlap | — | 0 B |
| E div | — | 0 B |
| E div#opacity-container | — | 0 B |
| E div#composited | — | 0 B |

At the bottom of the sidebar, it says "Layer count: 11" and "Memory: 19.46 MB".

Composited Layers

Layers sidebar

- Info for selected element's layer
- List all child layers
- Track and sort by paints and memory
- Distinguish layer types
 - Pseudo-classes
 - Reflections
- Jump to element
- Reveal reason for compositing

Reasons for compositing:

Element overlaps other compositing element

The screenshot shows the Chrome DevTools Layers sidebar. At the top, there are four tabs: 'Layers' (selected), 'Styles', 'Node', and 'Resource'. Below the tabs is a 'Layer Info' section with the following details:

- Width: 844px
- Height: 3000px
- Paints: 102
- Memory: 13.19 MB

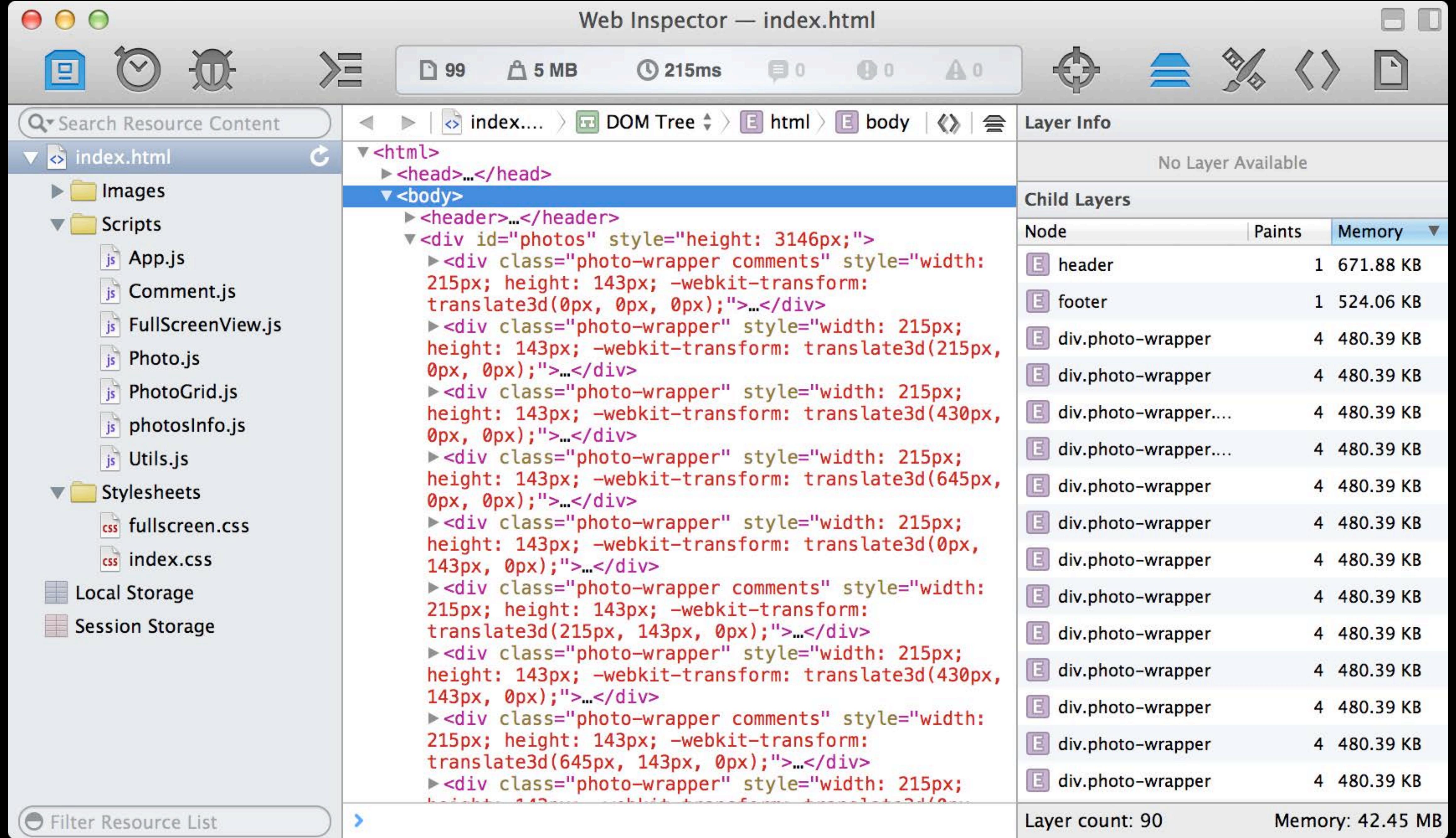
Underneath this is a 'Child Layers' section, which is a table with the following data:

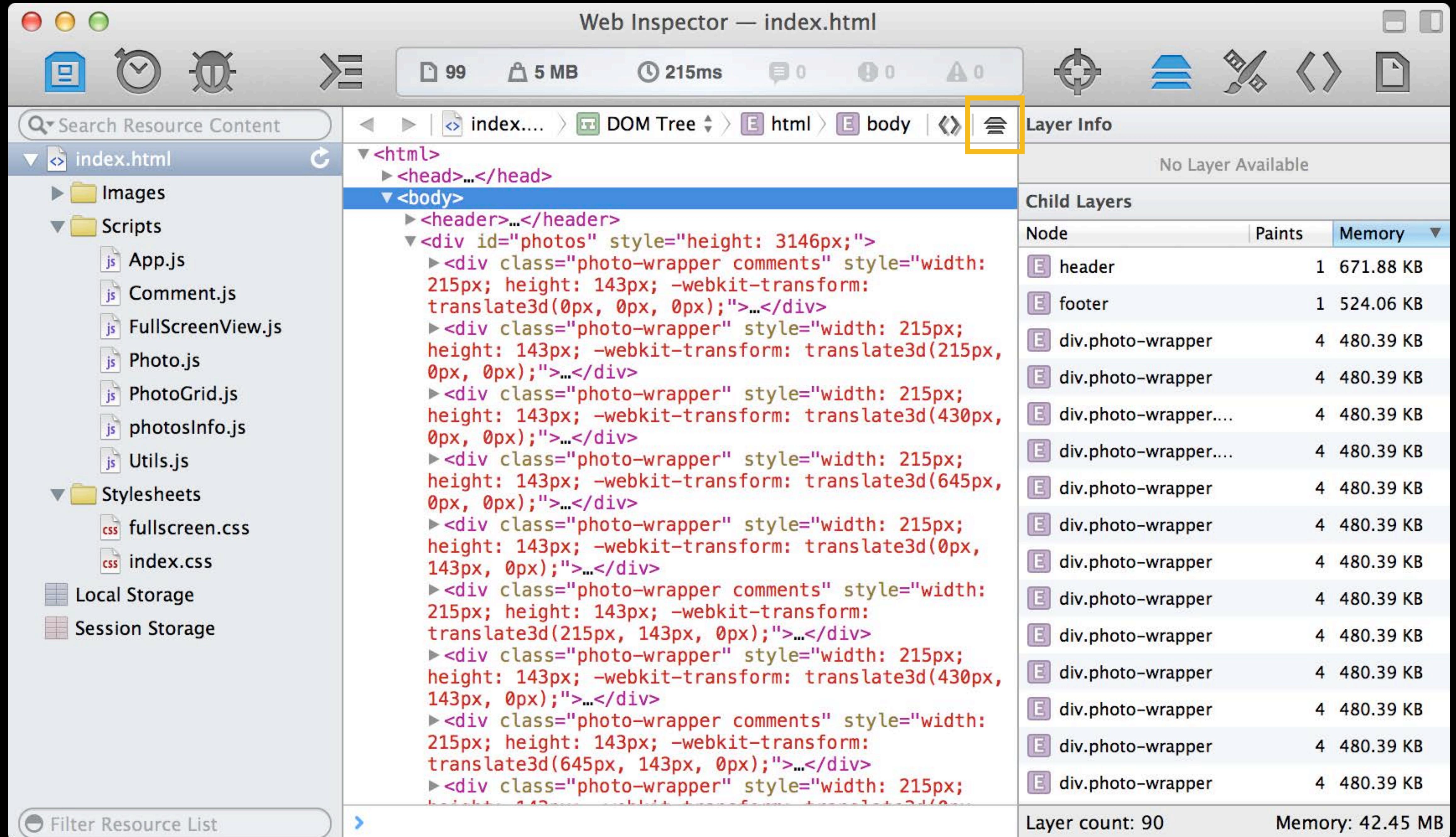
| Node | Paints | Memory |
|------------------------------|--------|----------|
| R video — Reflection | — | 6.21 MB |
| P div#generated::before | 46 | 39.06 KB |
| R div#generated::after — ... | — | 9.77 KB |
| P div#generated::after | 46 | 9.77 KB |
| P p::first-letter | 46 | 2.81 KB |
| E video | — | 0 B |
| E div#overlap | — | 0 B |
| E div | — | 0 B |
| E div#opacity-container | — | 0 B |
| E div#composited | — | 0 B |

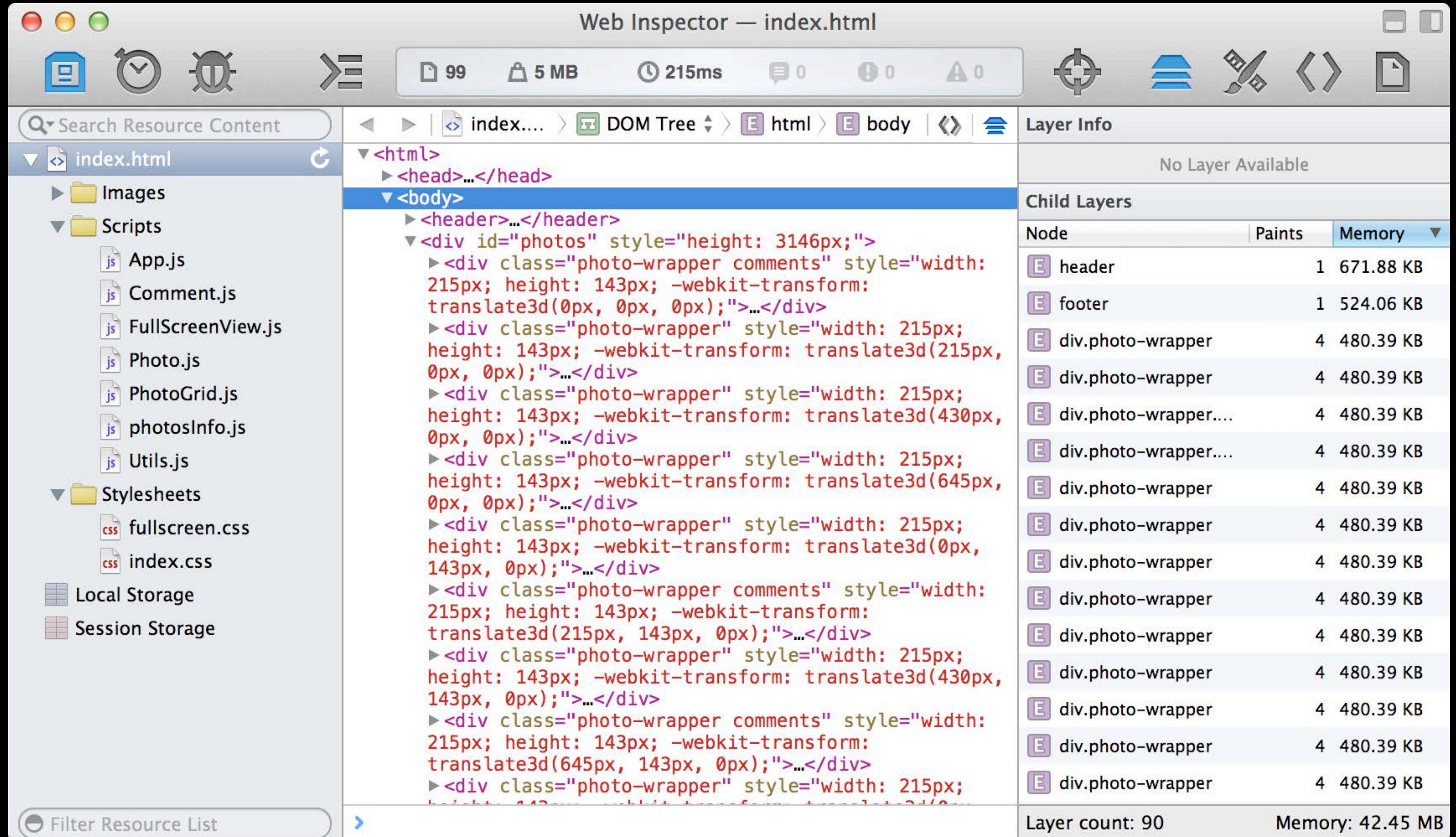
At the bottom of the sidebar, it says 'Layer count: 11' and 'Memory: 19.46 MB'.

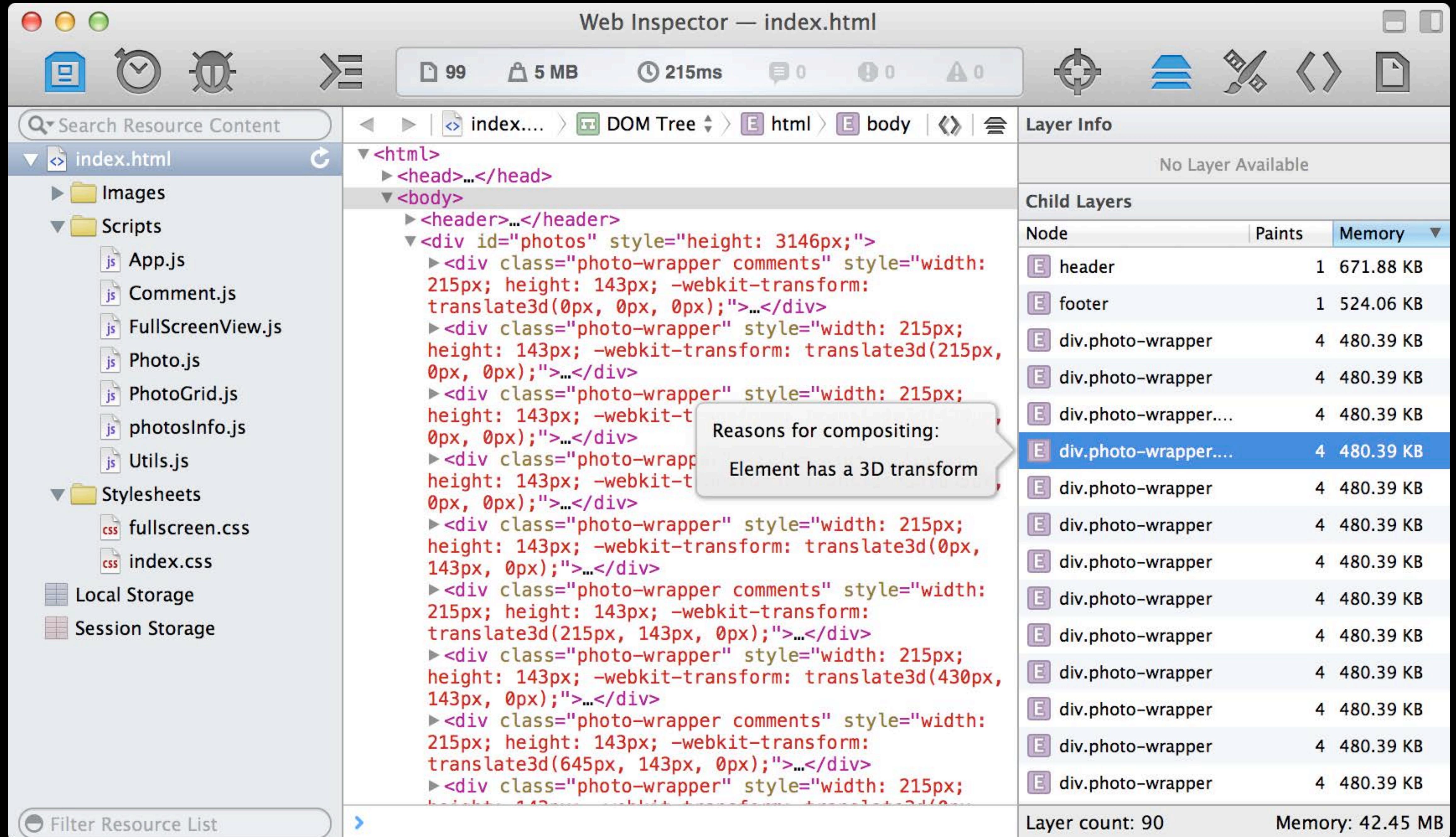
Demo

Andres Garza
Safari and WebKit Engineer









Web Inspector — index.html

99 5 MB 215ms 0 0 0

DOM Tree html body Layer Info

Search Resource Content index.html

Images Scripts App.js Comment.js FullScreenView.js Photo.js PhotoGrid.js photosInfo.js Utils.js Stylesheets fullscreen.css index.css Local Storage Session Storage

<html>
 <head>...</head>
 <body>
 <header>...</header>
 <div id="photos" style="height: 3146px;">
 <div class="photo-wrapper comments" style="width: 215px; height: 143px; -webkit-transform: translate3d(0px, 0px, 0px);">...</div>
 <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate3d(215px, 0px, 0px);">...</div>
 <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate3d(430px, 0px, 0px);">...</div>
 <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate3d(645px, 0px, 0px);">...</div>
 <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate3d(0px, 143px, 0px);">...</div>
 <div class="photo-wrapper comments" style="width: 215px; height: 143px; -webkit-transform: translate3d(215px, 143px, 0px);">...</div>
 <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate3d(430px, 143px, 0px);">...</div>
 <div class="photo-wrapper comments" style="width: 215px; height: 143px; -webkit-transform: translate3d(645px, 143px, 0px);">...</div>
 <div class="photo-wrapper" style="width: 215px; height: 143px; -webkit-transform: translate3d(860px, 143px, 0px);">...</div>
 </div>

No Layer Available

Child Layers

| Node | Paints | Memory |
|----------|--------|-----------|
| E header | 1 | 671.88 KB |
| E footer | 1 | 524.06 KB |

Layer count: 2 Memory: 1.17 MB

Web Inspector — index.html

Timelines Network Requests Layout & Rendering JavaScript & Events

Timelines > Layout & Rendering

99 5 MB 484ms 0 0 0

Profiles All Invalidate Styles Recalculate Styles Invalidate Layout Layout Paint

| Type | Initiator | Width | Height | Area | Start... | Duration |
|--------------------|----------------------------------|-------|--------|------|----------|----------|
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 203ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 204ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 205ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 205ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 207ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 207ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 208ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 208ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 210ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 210ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 211ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 211ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 213ms | 0ms |

No Recorded Profiles

Filter Profile List >

Web Inspector — index.html

Timelines Network Requests Layout & Rendering JavaScript & Events

Profiles All Invalidate Styles Recalculate Styles Invalidate Layout Layout Paint

| Type | Initiator | Width | Height | Area | Start... | Duration |
|--------------------|----------------------------------|-------|--------|------|----------|----------|
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 203ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 204ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 205ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 205ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 207ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 207ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 208ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 208ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 210ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 210ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 211ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 211ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 213ms | 0ms |

No Recorded Profiles

Filter Profile List >

Web Inspector — index.html

Timelines Network Requests Layout & Rendering JavaScript & Events

Timelines > Layout & Rendering

99 5 MB 484ms 0 0 0

Profiles All Invalidate Styles Recalculate Styles Invalidate Layout Layout Paint

| Type | Initiator | Width | Height | Area | Start... | Duration |
|--------------------|----------------------------------|-------|--------|------|----------|----------|
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 203ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 204ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 205ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 205ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 207ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 207ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 208ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 208ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 210ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 210ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 211ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 211ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 213ms | 0ms |

No Recorded Profiles

Filter Profile List >

Web Inspector — index.html

Timelines Network Requests Layout & Rendering JavaScript & Events Profiles

99 5 MB 484ms 0 0 0

Timelines > Layout & Rendering

187ms 374ms 561ms 747ms 934ms 1.12s 1.31s 1.49s 1.68s 1.87s

| Type | Initiator | Width | Height | Area | Start... | Duration |
|--------------------|------------------------------------|-------|--------|------|----------|----------|
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 203ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 204ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 205ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 205ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 207ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 207ms | 0.2ms |
| Invalidate Styles | f setSize — Ph...is:28 | — | — | — | 208ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 208ms | 0.2ms |
| Invalidate Styles | f PhotoGrid — PhotoGrid.js:23 | — | — | — | 210ms | 0ms |
| Recalculate Styles | f init — App.js:5 | — | — | — | 210ms | 0.2ms |
| Invalidate Styles | f (anonymous function) — App.js:51 | — | — | — | 211ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 211ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 213ms | 0ms |

No Recorded Profiles

Filter Profile List >

Web Inspector — index.html

Timelines Network Requests Layout & Rendering JavaScript & Events Profiles

99 5 MB 484ms 0 0 0

Timelines > Layout & Rendering

187ms 374ms 561ms 747ms 934ms 1.12s 1.31s 1.49s 1.68s 1.87s

| Type | Initiator | Width | Height | Area | Start... | Duration |
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| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 205ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 207ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 207ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 208ms | 0ms |
| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 208ms | 0.2ms |
| Invalidate Styles | f PhotoGrid — PhotoGrid.js:23 | — | — | — | 210ms | 0ms |
| Recalculate Styles | f init — App.js:5 | — | — | — | 210ms | 0.2ms |
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| Recalculate Styles | f layoutPhotos — PhotoGrid.js:78 | — | — | — | 211ms | 0.2ms |
| Invalidate Styles | f setSize — Photo.js:28 | — | — | — | 213ms | 0ms |

No Recorded Profiles

Filter Profile List >

Performance Analysis

Console API

Performance Analysis

Console API

- `console.time(name)` and `console.timeEnd(name)` time a code segment

Performance Analysis

Console API

- `console.time(name)` and `console.timeEnd(name)` time a code segment
- `console.markTimeline(label)` adds a green vertical dashed line in the timeline

Performance Analysis

Console API

- `console.time(name)` and `console.timeEnd(name)` time a code segment
- `console.markTimeline(label)` adds a green vertical dashed line in the timeline
- `console.profile(name)` and `console.profileEnd(name)` start a profile programmatically

New Features at Work

- Inspection and tweaking
- Performance analysis
- Debugging

New Features at Work

- Inspection and tweaking
- Performance analysis
- Debugging

Debugging

Demo

Brian Kadar
Safari and WebKit Engineer

Web Inspector — index.html

100 5 MB 799ms 0 0 0

Call Stack

- renderComments — FullSc...
- transitionInDidComplete ...
- handleEvent — FullScreen...

Breakpoints

- All Exceptions
- All Uncaught Exceptions

FullScreenView.js

Line 32

Local Variables

- arguments: Arguments[1]
- comment: undefined
- comments: Array[4]
- count: 4
- i: 0
- this: Object

Global Variables

```
15
16      if (this.transitionDirection === 1) {
17          this.transitionInDidComplete();
18      } else {
19          this.transitionOutDidComplete();
20      }
21  },
22
23  setData: function (data) {
24      this.data = data;
25      this.photo.src = 'images/full/' + data.src;
26  },
27
28  renderComments: function (comments) {
29      this.comments.innerHTML = '';
30
31      for (var i = 0, count = comments.length; i < count; i++)
32      {
33          var comment = new Comment();
34          this.comments.appendChild(comment.element);
35
36          comment.setInfo(comments[i]);
37          comment.setIndex(i);
38      }
39
40  transitionInFromTarget: function (item) {
41      this.delegate.fullScreenTransitionInWillStart();
42      this.transitionDirection = 1;
43}
```

Filter Breakpoint List

Web Inspector — index.html

100 5 MB 799ms 0 0 0

Call Stack

- renderComments — FullSc...
- transitionInDidComplete ...
- handleEvent — FullScreen...

Breakpoints

- All Exceptions
- All Uncaught Exceptions

FullScreenView.js

Line 32

Condition /too much fun/.test(comments[i].comment)

```
15
16      if (this.transitionDirection === 1) {
17          this.transitionInDidComplete();
18      } else {
19          this.transitionOutDidComplete();
20      }
21  },
22
23  setData: function (data) {
24      this.data = data;
25      this.photo.src = 'images/full/' + data.src;
26
27  }
28
29  renderComments: function () {
30      var comments = this.comments;
31      for (var i = 0, count = comments.length; i < count; i++) {
32          var comment = new Comment();
33          this.comments.appendChild(comment.element);
34
35          comment.setInfo(comments[i]);
36          comment.setIndex(i);
37      }
38  },
39
40  transitionInFromTarget: function (item) {
41      this.delegate.fullScreenTransitionInWillStart();
42      this.transitionDirection = 1;
43  }
44
```

Local Variables

- arguments: Arguments[1]
- comment: undefined
- comments: Array[4]
- count: 4
- i: 0
- this: Object

Global Variables

Filter Breakpoint List

Web Inspector — index.html

100 5 MB 799ms 0 0 0

Call Stack

- renderComments — FullSc...
- transitionInDidComplete ...
- handleEvent — FullScreen...

Breakpoints

- All Exceptions
- All Uncaught Exceptions
- FullScreenView.js
- Line 32

Local Variables

- arguments: Arguments[1]
- comment: undefined
- comments: Array[4]
- count: 4
- i: 0
- this: Object

Global Variables

index.html > Scripts > FullScreenView.js

```
15
16     if (this.transitionDirection === 1) {
17         this.transitionInDidComplete();
18     } else {
19         this.transitionOutDidComplete();
20     }
21 },
22 setData: function(data) {
23     this.data = data;
24     this.setProperty('data');
25 },
26 renderComments() {
27     this.comments = [];
28     this.delegate.fullScreenTransitionInWillStart();
29     this.delegate.fullScreenTransitionInDidStart();
30     this.delegate.fullScreenTransitionInDidStart();
31     for (var i = 0; i < this.comments.length; i++) {
32         var comment = new Comment();
33         this.comments[i].appendChild(comment.element);
34         comment.setIndex(i);
35         comment.setLastCommented();
36         comment.setIndex(i);
37     }
38 },
39 transitionInFromTarget: function(item) {
40     this.delegate.fullScreenTransitionInWillStart();
41     this.transitionDirection = 1;
42 }
```

Filter Breakpoint List

Web Inspector — index.html

100 5 MB 799ms 0 0 0

Call Stack

- renderComments — FullSc...
- transitionInDidComplete ...
- handleEvent — FullScreen...

Breakpoints

- All Exceptions
- All Uncaught Exceptions
- FullScreenView.js
- Line 32

Local Variables

- arguments: Arguments[1]
- comment: undefined
- comments: Array[4]
- count: 4

Object

Variables

```
15
16     if (this.transitionDirection === 1) {
17         this.transitionInDidComplete();
18     } else {
19         this.transitionOutDidComplete();
20     }
21 },
22
23 setData: function (data) {
24     this.data = data;
25     this.photo.src = data;
26 },
27
28 renderComments: function () {
29     this.comments = [];
30
31     for (var i = 0, len = this.comments.length; i < len; i++) {
32         var comment = document.createElement('div');
33         this.comments[i] = comment;
34         comment.setAttribute('class', 'comment');
35         comment.setAttribute('id', 'comment-' + i);
36         comment.setInnerHTML(this.comments[i].innerHTML);
37     }
38 },
39
40 transitionInFromTarget: function (item) {
41     this.delegate.fullScreenTransitionInWillStart();
42     this.transitionDirection = 1;
43 }
```

Filter Breakpoint List

Debugging

Command line API

Debugging Command line API

\$0 currently selected node in content view

Debugging Command line API

\$0 currently selected node in content view

\$1-4 last, second-to-last (etc.) selected node in content view

Debugging

Command line API

\$0 currently selected node in content view

\$1-4 last, second-to-last (etc.) selected node in content view

\$_ value of last evaluated expression

Debugging

Command line API

\$0 currently selected node in content view

\$1-4 last, second-to-last (etc.) selected node in content view

\$_ value of last evaluated expression

\$(selector) document.querySelector()

Debugging Command line API

\$0 currently selected node in content view

\$1–4 last, second-to-last (etc.) selected node in content view

\$_ value of last evaluated expression

\$(selector) document.querySelector()

\$(selector) document.querySelectorAll()

Debugging Command line API

\$0 currently selected node in content view

\$1–4 last, second-to-last (etc.) selected node in content view

\$_ value of last evaluated expression

\$(selector) document.querySelector()

\$(selector) document.querySelectorAll()

... full list in documentation

New Features at Work

- Inspection and tweaking
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Getting Involved

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- Try out new features with WebKit nightlies at nightly.webkit.org

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- Find us on the [irc.freenode.net channel #webkit-inspector](irc://irc.freenode.net/#webkit-inspector)
- Contribute to development as an open-source project

More Information

John Geleynse

Director, Technology Evangelism

geleynse@apple.com

Documentation

Safari Web Inspector Guide

<http://developer.apple.com/mac>

WebKit

WebKit Open Source Project

<http://webkit.org>

Apple Developer Forums

<http://devforums.apple.com>

Related Sessions

| | | |
|---|----------------------------------|--|
| Getting to Know Web Inspector | Russian Hill Tuesday 10:15AM | |
| What's New in Safari and WebKit for Web Developers | Mission Tuesday 9:00AM | |
| Power and Performance: Optimizing Your Website for Great Battery Life and Responsive Scrolling | Russian Hill Wednesday 9:00AM | |

Labs

| | | |
|------------------------------|----------------------------------|--|
| Safari and Web Tools Lab | Media Lab A Tuesday 12:45PM | |
| Web Content Optimization Lab | Media Lab A Wednesday 10:15AM | |
| Safari and WebKit Open Lab | Media Lab A Thursday 9:00AM | |
| Safari and WebKit Open Lab | Media Lab A Friday 9:00AM | |
| Safari and Web Tools Lab | Media Lab A Friday 2:00PM | |

