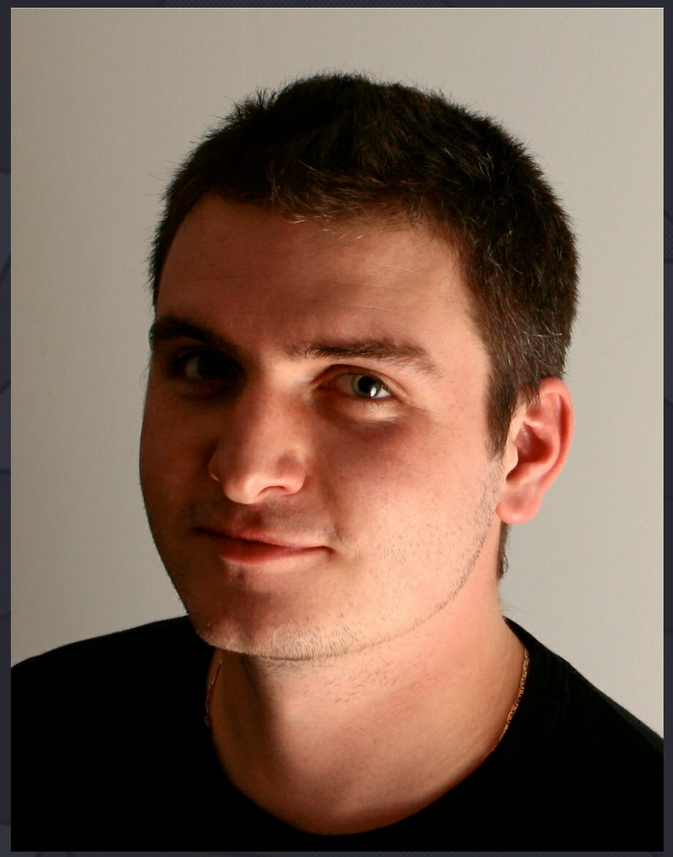
Beyond Rectangles in Web Design

CSS Shapes & CSS Masking



Hi, I'm Razvan.

Free-range developer, Adobe

CSS Shapes

CSS Masking

CSS Regions

@RazvanCaliman

A web developer and a graphic designer walk into a studio.

I have to teach her the limitations of web design.

— web developer

Travel Magazine on Behan

https://www.behance.net/gallery/2159303/Travel-Magazine

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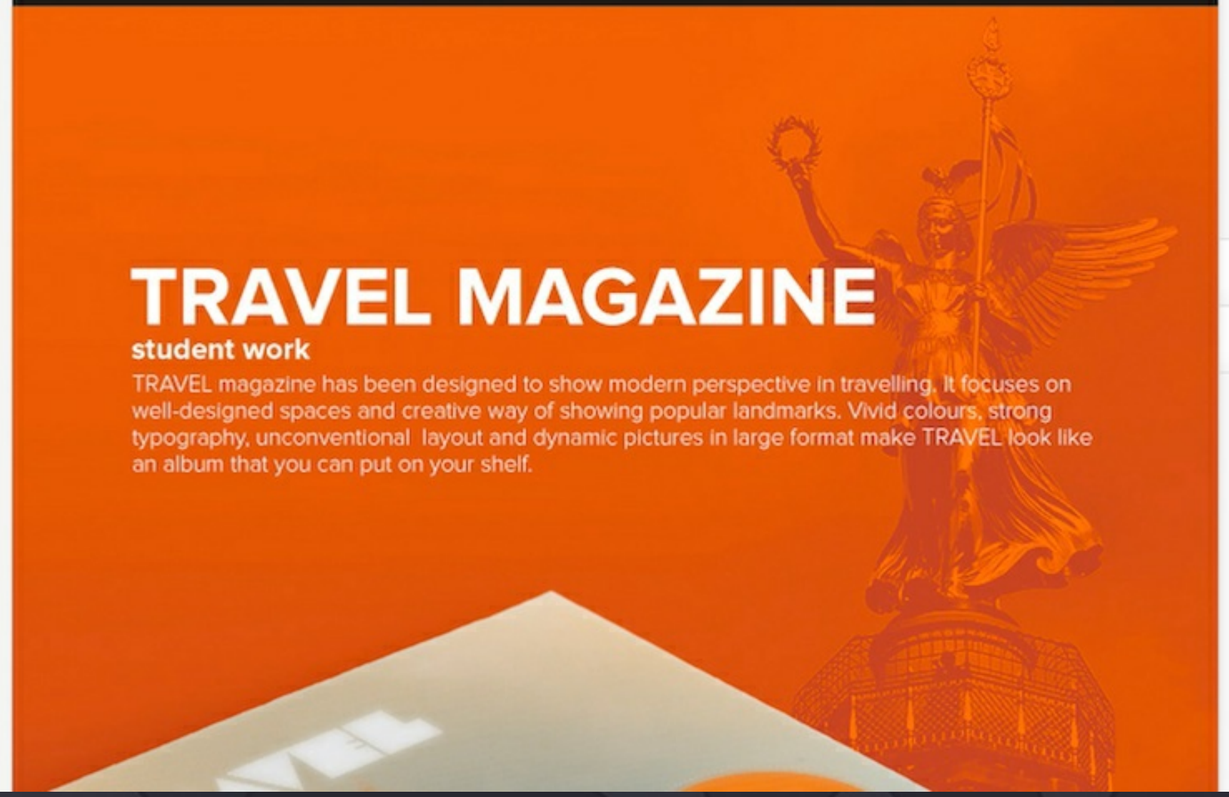
Discover → Bartosz Kwiecień → Travel Magazine

Travel Magazine

Illustration, Graphic Design



PROJECT BY

Bartosz Kwiecień

Warsaw, Poland

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ABOUT PROJECT

TRAVEL magazine has been designed to show modern perspective in travelling. It focuses on well-designed spaces and creative way of showing popula… Read More

Published: September 18, 2011

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Quiz!

॥पदाहदक्षवाहुदस्यिषप्रकर्षमाहव्यपनीत।दाहदा॥सुखंसुखेनगम्यतेनाबाधया आमश्रा
अयति आश्रयणीयंभवति॥ज्ञातनिद्रायाः॥तिष्ठत्यूर्द्ध॥निर्यादित्यामानश्रयर्नयनिनिद्रांवि

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णं।तेणंसमएणं।समणेभग वंमहावीर
डाइसिगिहाणं।पढामसमासं।ए डाइयाएक
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सनार्द्धाचंद्रायाम॥

नाग्रायांविन
रतिक्रहिम॥अ
हाणांचयुचाहा
नोश्रवंश्यर्कांशु

आश्यकाश्यसूत्र
कथाकल्पमीम
लिकोऽपिदिश
हनाशीविशाः

३६

A. Ancient text

A. Ancient text

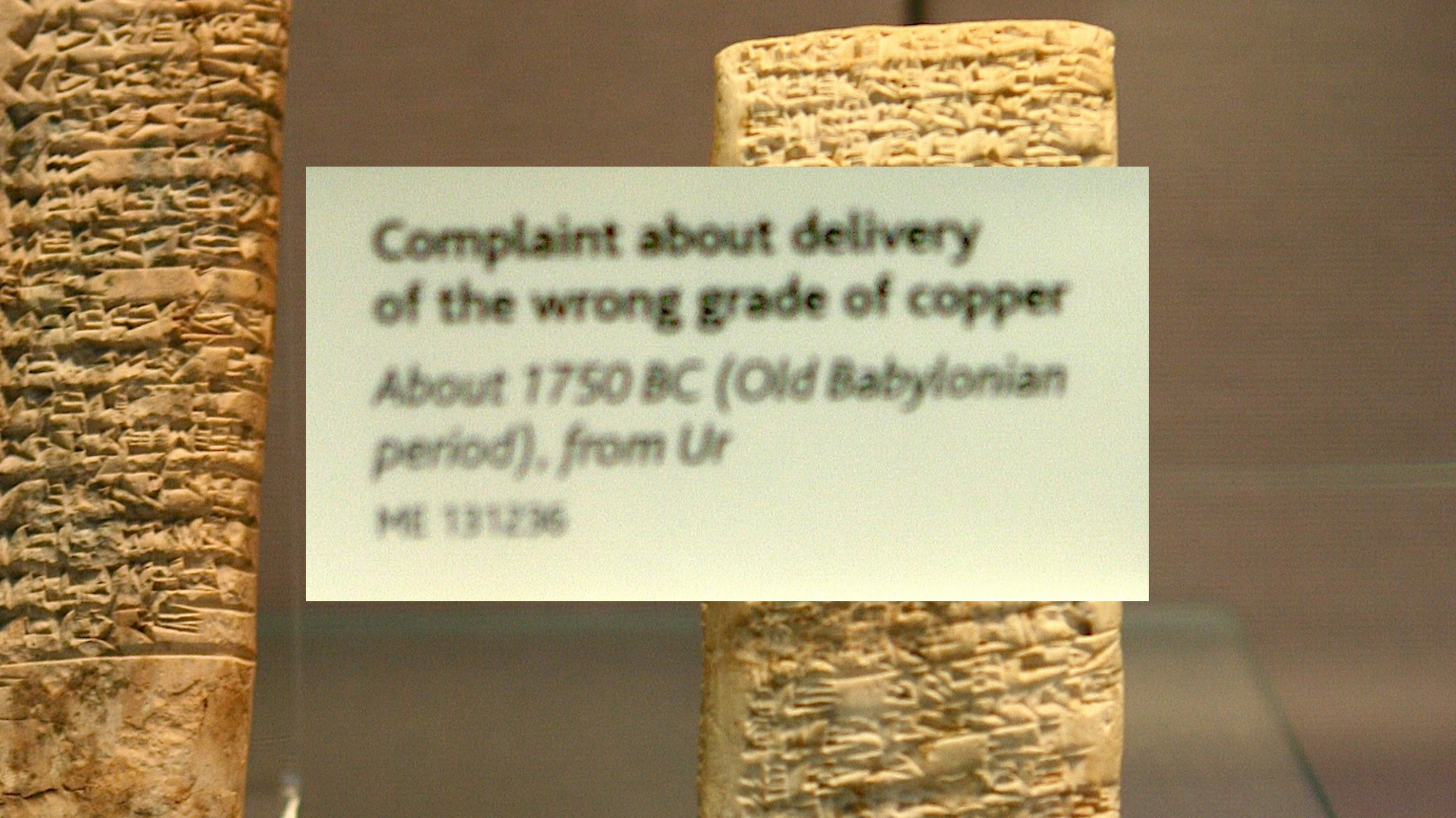
B. Next Big Thing ™

18

A. Ancient text

A. Ancient text

B. Next Big Thing™


Complaint about delivery
of the wrong grade of copper
About 1750 BC (Old Babylonian
period), from Ur
ME 131236

▶ ▶

4,300 years

Shapes in CSS

Shapes in CSS

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Shapes in CSS

Shapes in CSS

Shapes in CSS

Shapes in CSS

The Shapes of CSS

css-tricks.com/examples/ShapesOfCSS/

CSS-TRICKS

← Back to Article
More Demos →

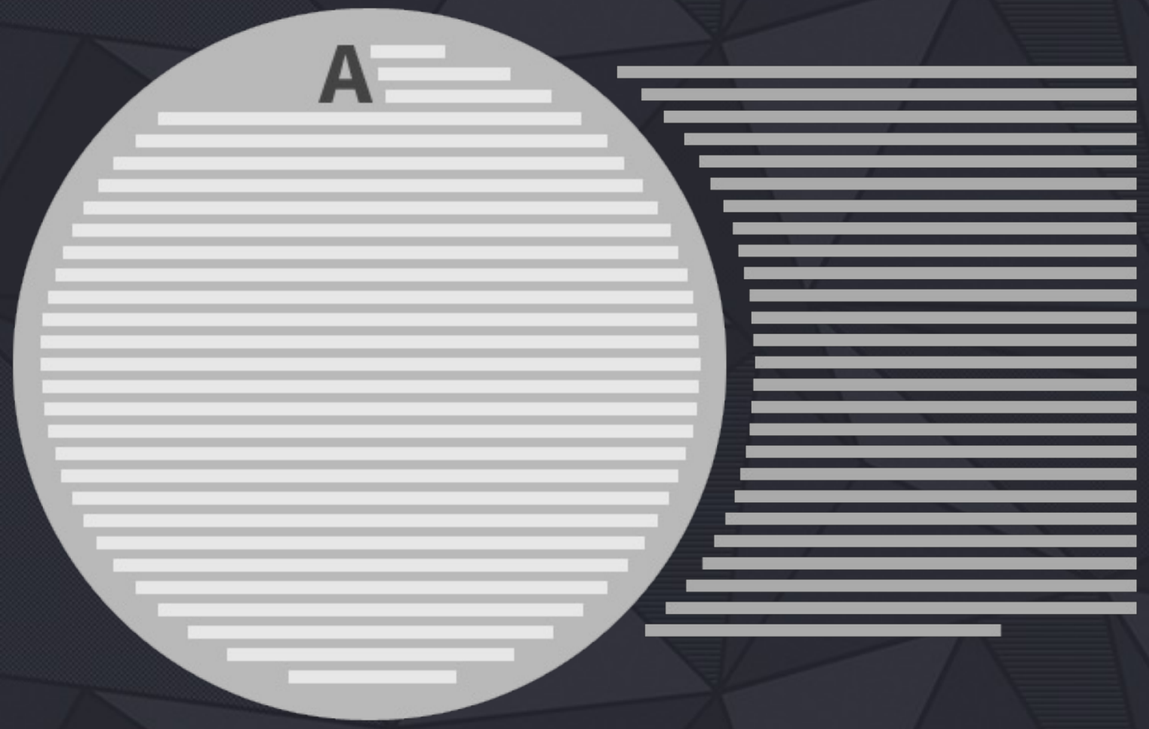
The Shapes of CSS

All of the below use only a single HTML element. Any kind of CSS goes, as long as it's supported in at least one browser.

Triangle Right

```
#triangle-right {
        width: 0;
        height: 0;
        border-top: 50px solid transparent;
        border-left: 100px solid red;
        border-bottom: 50px solid transparent;
```

CSS Shapes



Espresso is coffee brewed by forcing a small amount of nearly boiling water under pressure through finely ground coffee beans. Espresso is generally thicker than coffee brewed by other methods, has a higher concentration of suspended and dissolved solids, and has crema on top (a foam with a creamy consistency).

Tamping down the coffee promotes the water's even penetration of the grounds. This process produces an almost syrupy beverage by extracting both solid and dissolved components. The "crema" is produced by emulsifying the oils in the ground coffee into a colloid, which does not occur in other brewing methods.

```
.element {
  float: left;
  shape-outside: url(image.png);
  shape-image-threshold: 0.5;
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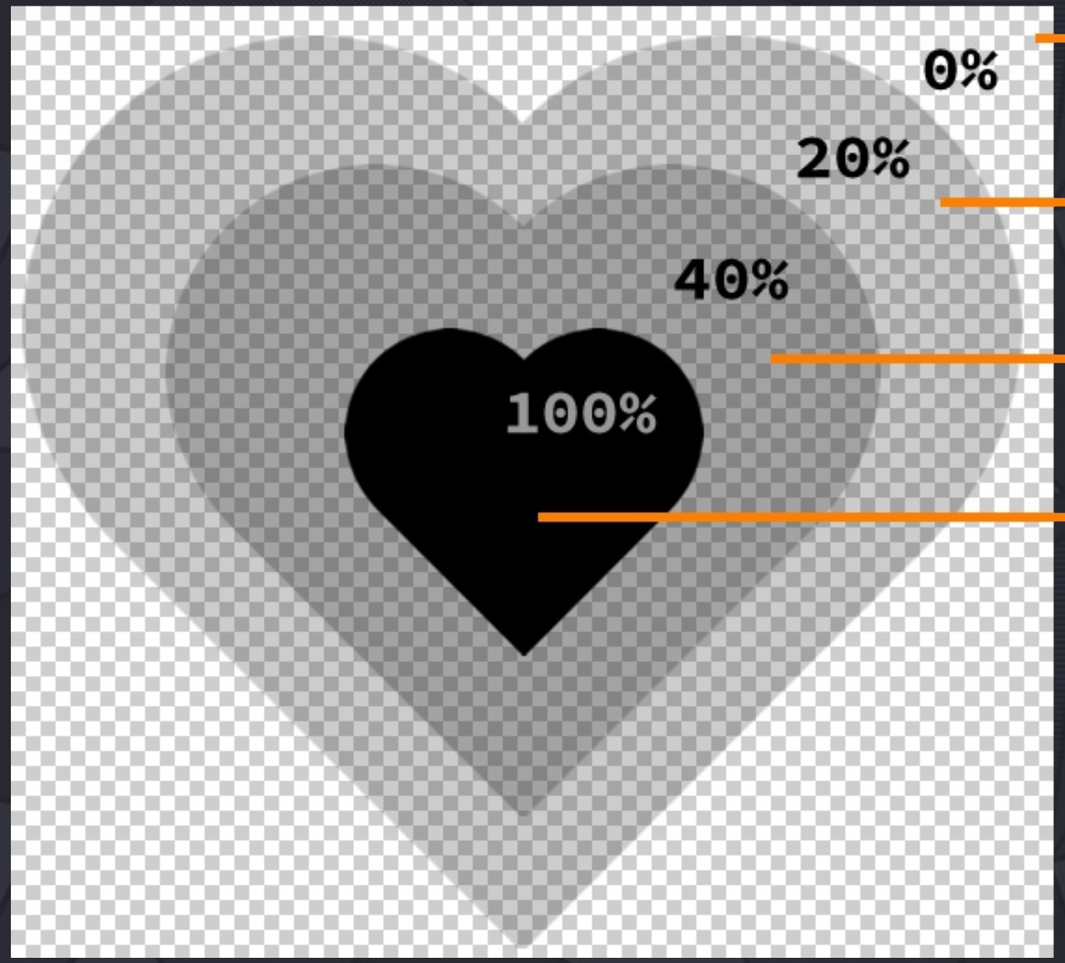

shape-image-threshold:

- **0** *anything not transparent*
- **0.2** *and above*
- **0.4** *and above*
- **1** *only fully opaque*

Shape functions

`circle()` `ellipse()` `polygon()` `inset()`

circle()

It's time for CSS Shapes. You can use them to create complex layout which goes much beyond simple rectangles. It's about time for CSS Shapes. You can use them to create complex layout which goes much beyond simple rectangles. It's about time for CSS Shapes. You can use them to create complex layout which goes much beyond simple rectangles. It's about time for CSS Shapes. You can use them to create complex layout which goes much beyond simple rectangles.

```
.element{
  shape-outside: circle(150px at 50% 50%)
}
```

circle()

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```
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}
```

ellipse()

Fingerprint login on phones? I don't know about you, but that freaks me out. I don't want a thief running off with my phone and a finger. Phones are relatively easy to come by; replacement body parts, not so much.

Plus, I like all of my fingers. I've had them for a long time and I got used to them being there. I don't have a favorite one, they're all useful.

Can you imagine the trouble of tacking on a different finger? I mean, where do you even go to get replacement fingers?

```
.element{
  shape-outside: ellipse(150px 300px at 50% 50%)
}
```

ellipse()

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```
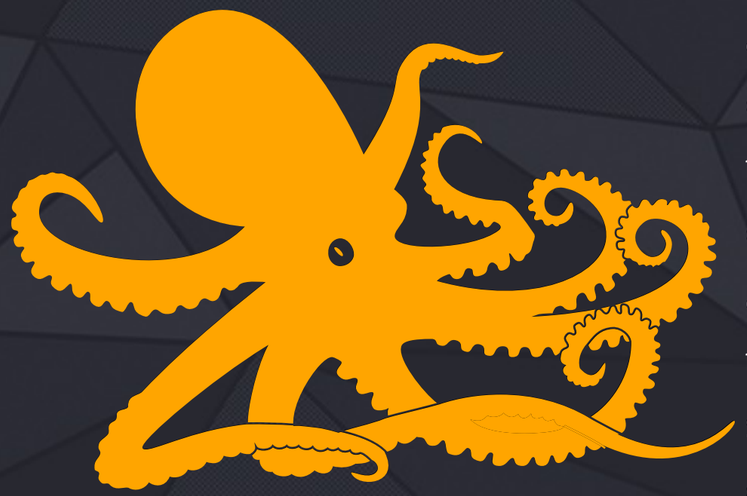
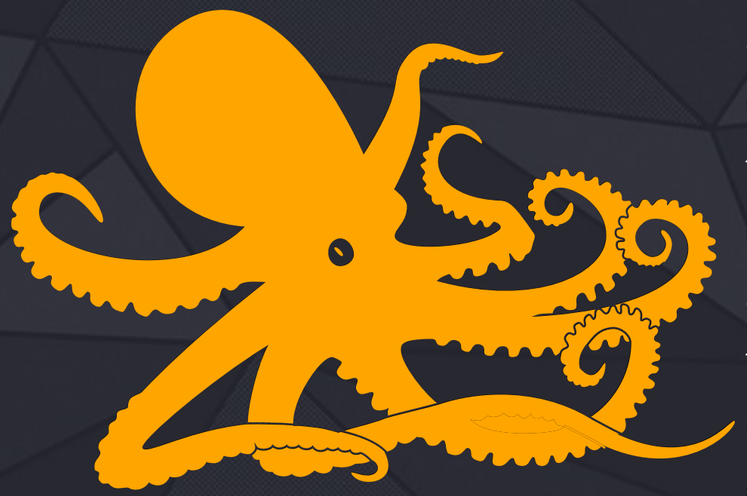

polygon()



The octopus is a very intelliget sea creature. Most of its neurons are not loctated in its head, like with other animals, but in its arms. You could say that each of its eight arms has a mind of its own. In fact, when threatened, some ocotopi ("octopuses" sounds nicer), can break off one of their arms, which will squiggle around and confuse the predator. That would confuse the hell out of me. The octopus does not have a skeleton. Its body is mostly water and soft cartilage. The only solid part is its bird beek-like mouth. This means that the octopus can squeeze through anything large enough to fit its mouth.

```
.element{
  shape-outside: polygon(111px 239px, 23px 222px
, 4px 175px ...)
}
```

polygon()



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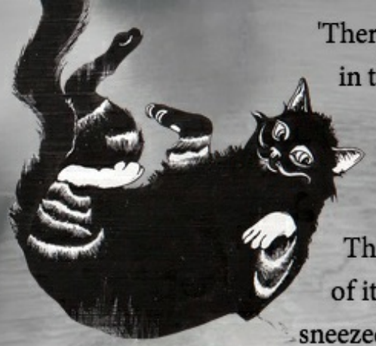
Alice in Wonderland

Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it had no pictures or conversations in it, 'and what is the use of a book,' thought Alice 'without pictures or conversation?'

So she was considering in her own mind whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran close by her.

In another moment down went Alice after it, never once considering how in the world she was to get out again.



'There's certainly too much pepper in that soup!' Alice said to herself, as well as she could for sneezing.

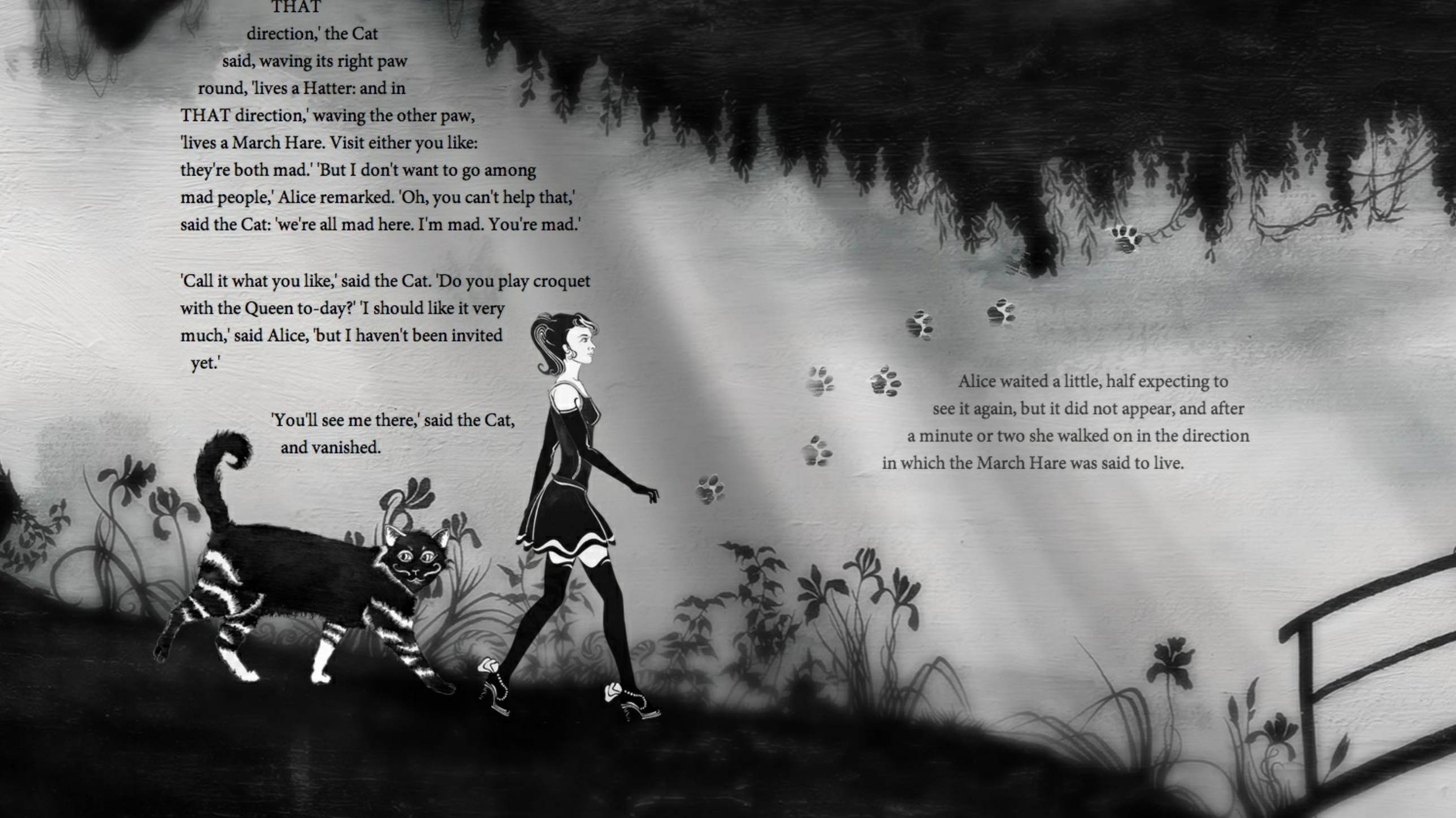
There was certainly too much of it in the air. Even the Duchess sneezed occasionally; and as for the baby, it was sneezing and howling alternately without a moment's pause. The only things in the kitchen that did not sneeze, were the cook, and a large cat which was sitting on the hearth and grinning from ear to ear.

'Please would you tell me,' said Alice, a little timidly, for she was not quite sure whether it was good manners for her to speak first, 'why your cat grins like that?'

'It's a Cheshire cat,' said the Duchess, 'and that's why. Pig!'

'I didn't know that Cheshire cats always grinned; in fact, I didn't know that cats COULD grin.' 'They all can,' said the Duchess; 'and most of

'You!'
said the Caterpillar
contemptuously. 'Who are
YOU?'
I—I hardly know, sir, just
at present—at least I know
who I WAS when I got up this
morning, but I think I must have been
changed several times since
then.

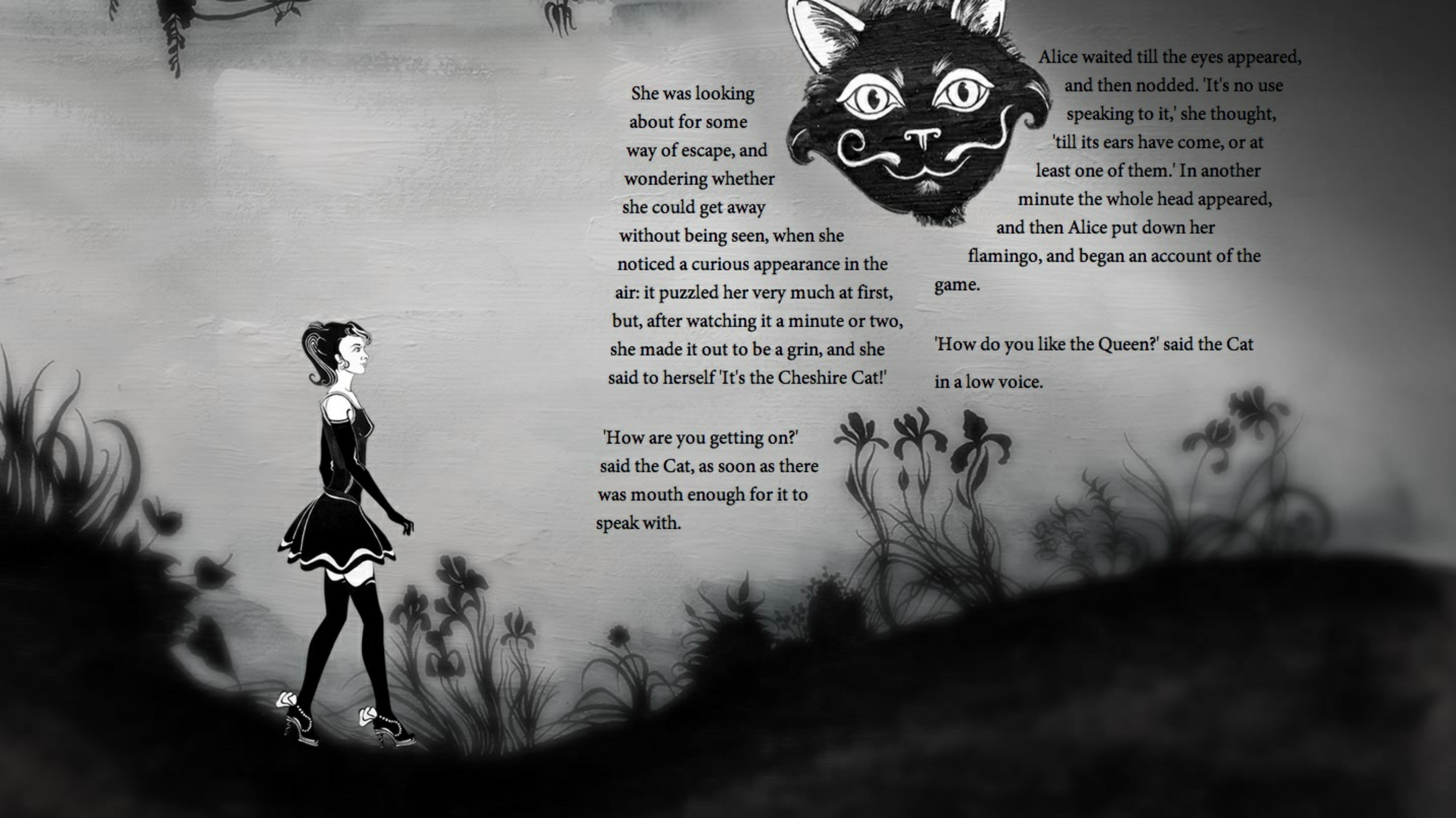


THAT direction,' the Cat said, waving its right paw round, 'lives a Hatter: and in THAT direction,' waving the other paw, 'lives a March Hare. Visit either you like: they're both mad.' 'But I don't want to go among mad people,' Alice remarked. 'Oh, you can't help that,' said the Cat: 'we're all mad here. I'm mad. You're mad.'

'Call it what you like,' said the Cat. 'Do you play croquet with the Queen to-day?' 'I should like it very much,' said Alice, 'but I haven't been invited yet.'

'You'll see me there,' said the Cat, and vanished.

Alice waited a little, half expecting to see it again, but it did not appear, and after a minute or two she walked on in the direction in which the March Hare was said to live.

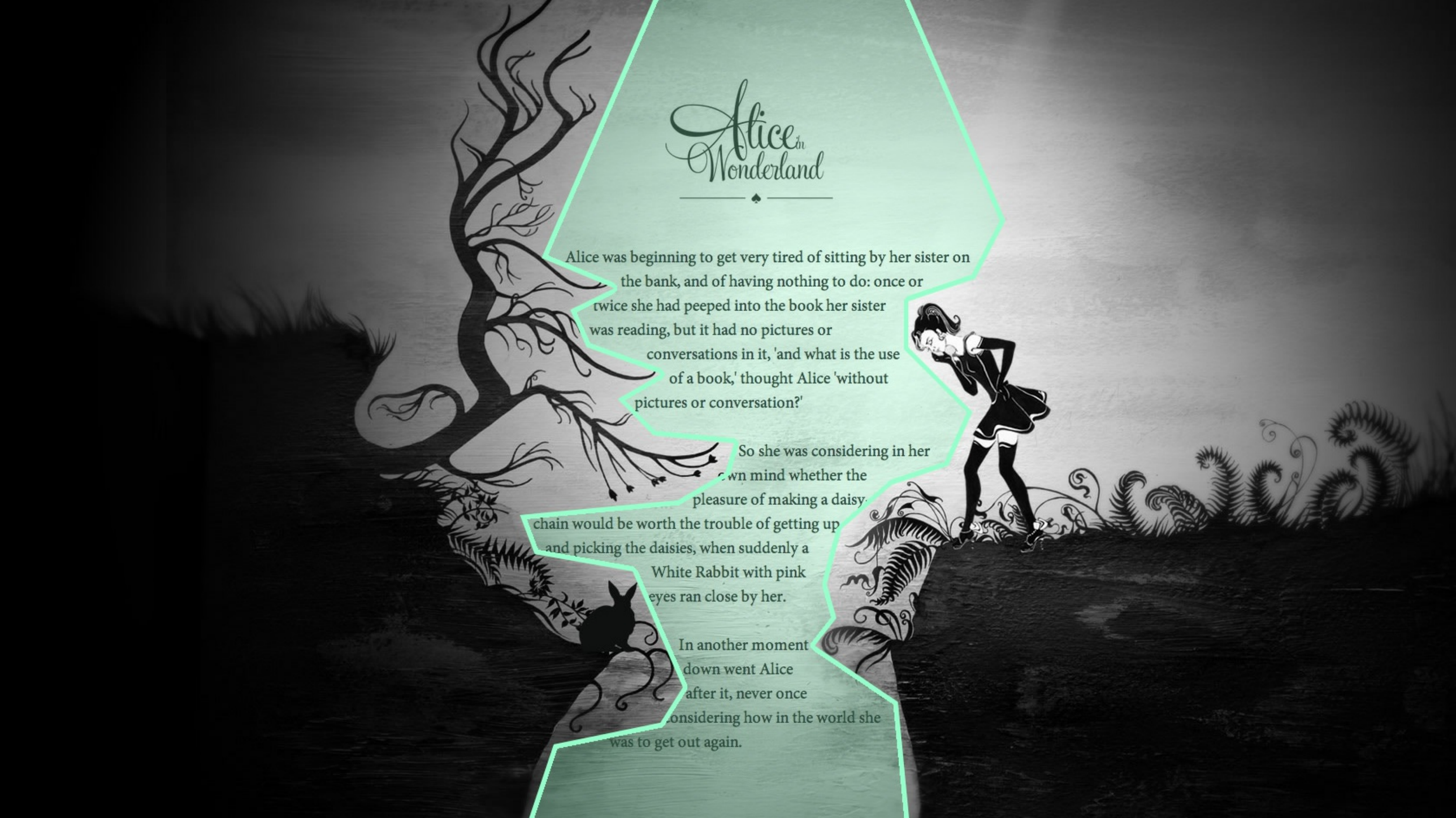


She was looking about for some way of escape, and wondering whether she could get away without being seen, when she noticed a curious appearance in the air: it puzzled her very much at first, but, after watching it a minute or two, she made it out to be a grin, and she said to herself 'It's the Cheshire Cat!'

'How are you getting on?' said the Cat, as soon as there was mouth enough for it to speak with.

Alice waited till the eyes appeared, and then nodded. 'It's no use speaking to it,' she thought, 'till its ears have come, or at least one of them.' In another minute the whole head appeared, and then Alice put down her flamingo, and began an account of the game.

'How do you like the Queen?' said the Cat in a low voice.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shape-inside workaround

```
<div class="left">
<div class="right">
Alice was beginning to get very tired ...

.left{
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  shape-outside: polygon(0 0, ...);
}
.right{
  float: right;
  shape-outside: polygon(50% 0, ...);
}
```

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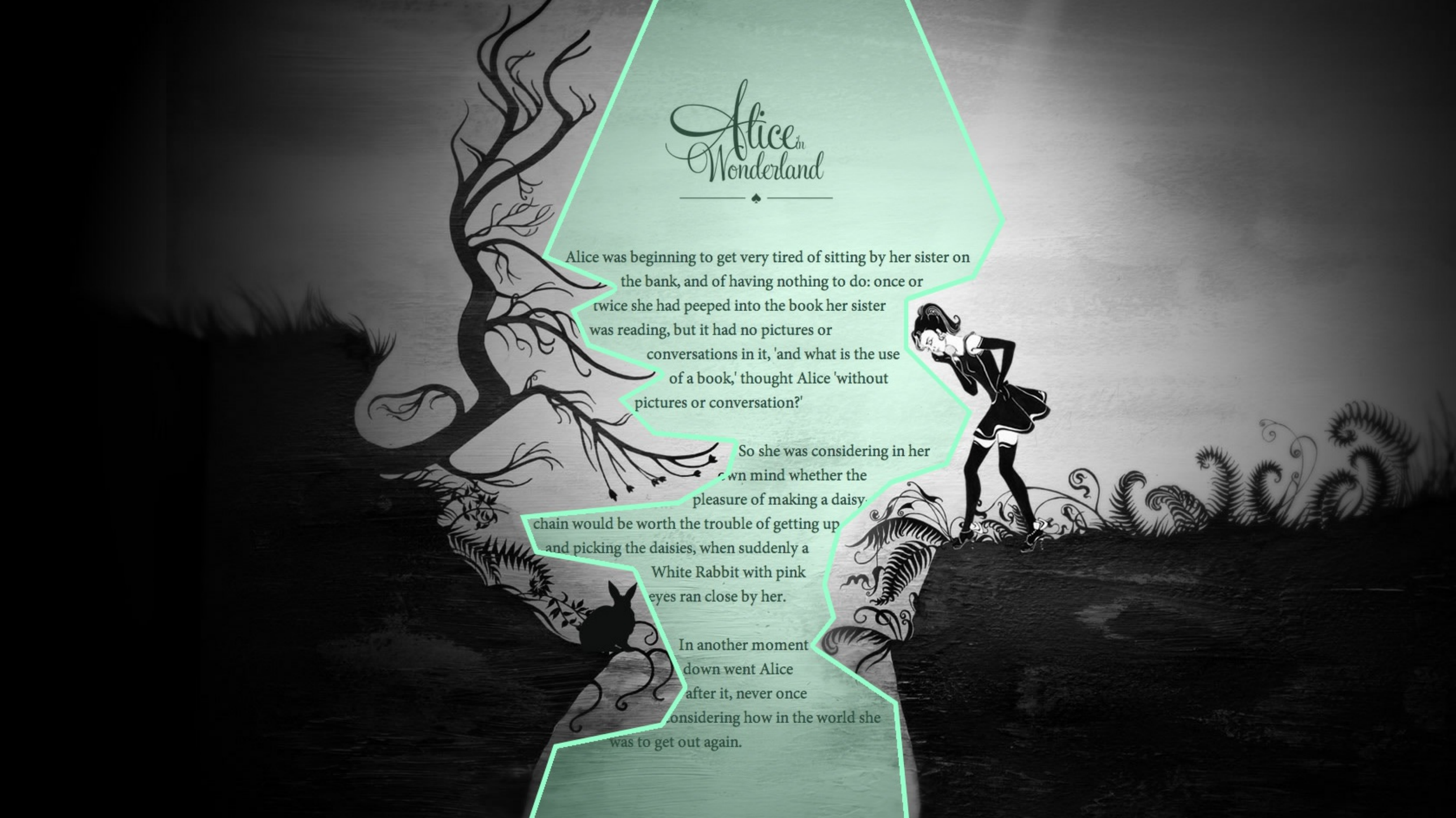
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CSS Shapes Editor - Chrom

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chrome web store

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Extensions

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Features

Runs Offlin

By Google

Free

Available f

CSS Shapes Editor

★★★★★ (18) | Developer Tools | from Razvan Caliman | 8,568 users

+ FREE

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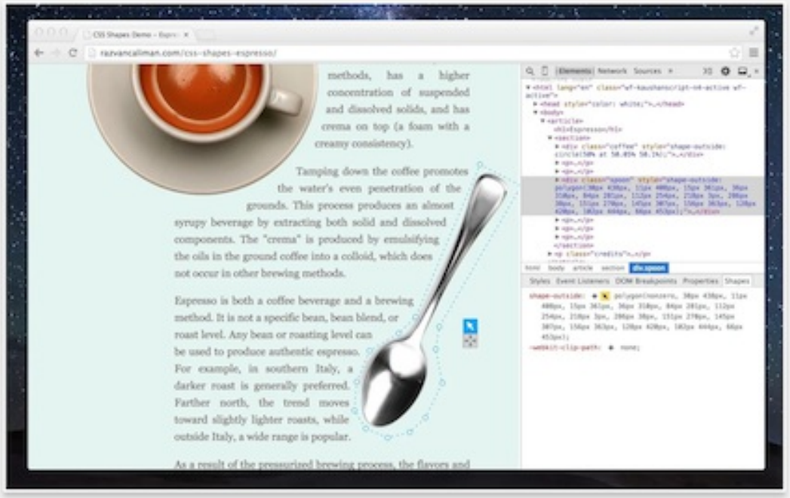
+1 262



Interactive editor for CSS Shapes.

Create and adjust CSS Shapes values with an interactive editor overlapping the selected element.

Requires Chrome 37+

Shapes sidebar:
The extension adds a new sidebar to the DevTools Elements panel called "Shapes". It offers controls to create and edit CSS Shapes values like polygon(), circle() and ellipse() on the selected element.

Polygons:
Click the edges of the shape to add new points. Drag points to change the shape. Double-click an existing point to remove it. Select the transform tool to move, scale and rotate the polygon shape.

Circles & ellipses:
Drag the shape to move it around. Pull on the edges and corners to scale and resize.

USERS OF THIS EXTENSION HAVE ALSO USED

SEOquake ★★★★½ (801)

Window Resizer ★★★★☆ (1551)

Unblock Youku ★★★★½ (12434)

Google Analytics Debugger ★★★★☆ (288)

+ FREE

Developer Tools

★★★★★ (18)

+ FREE

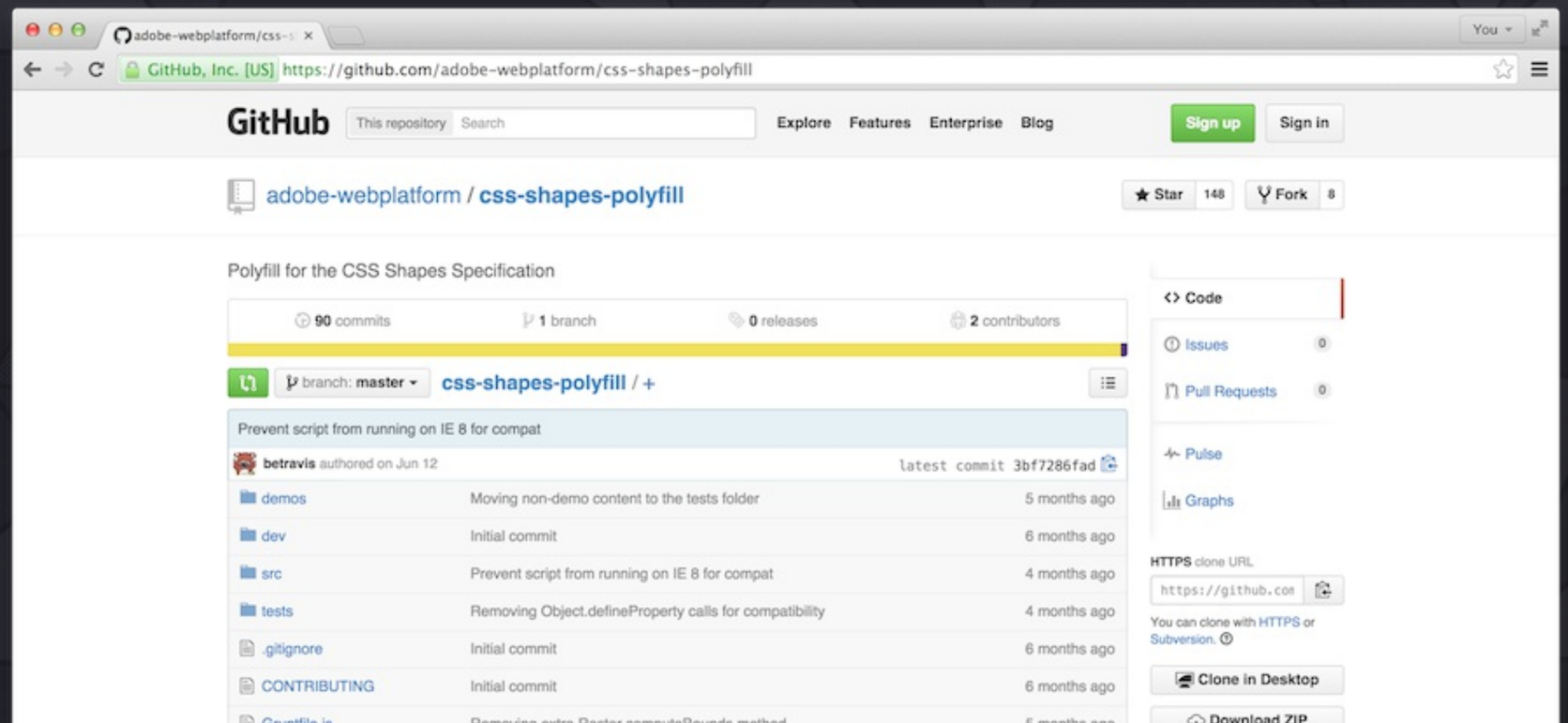
Developer Tools

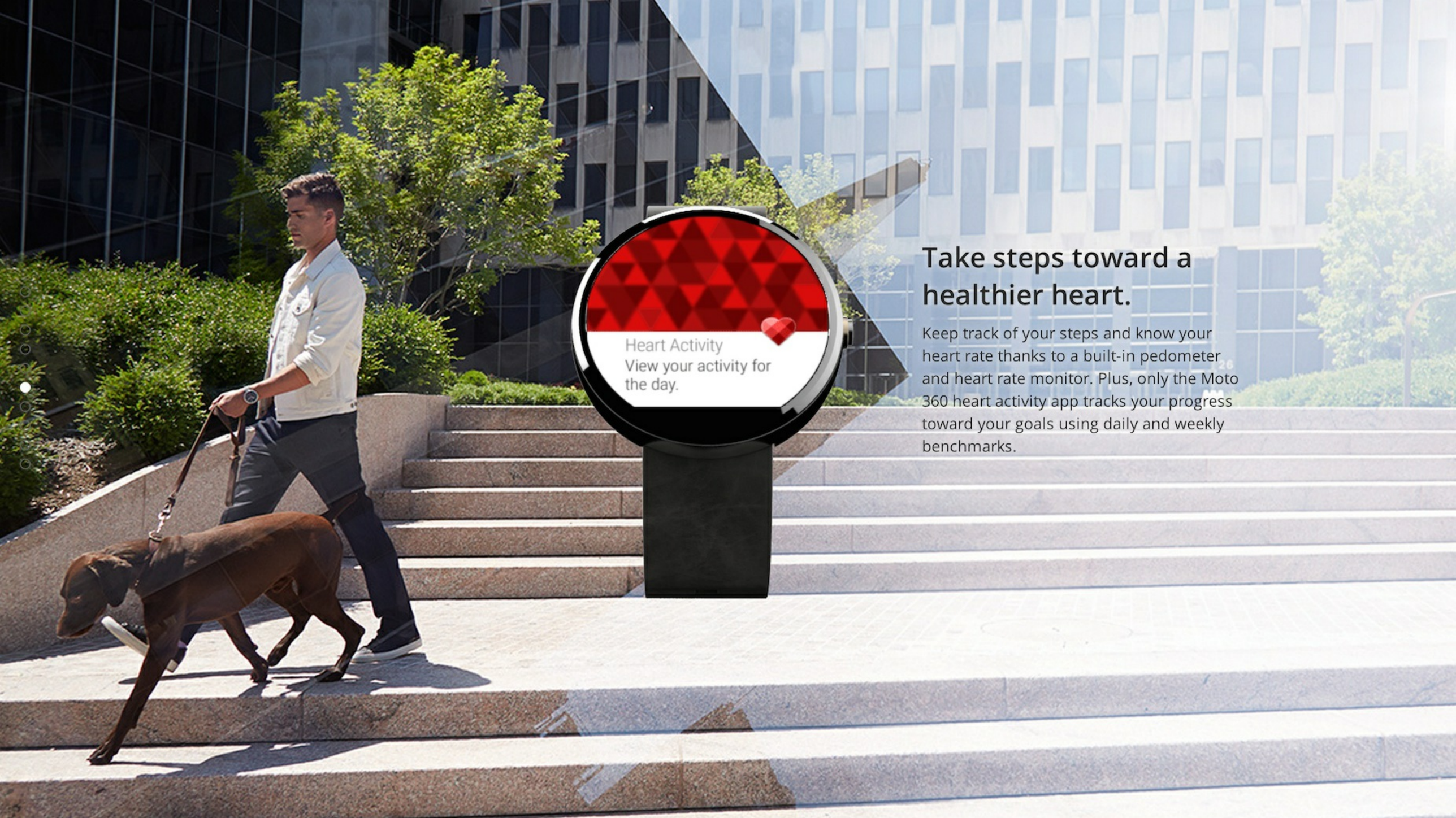
★★★★☆ (103)

Tooling

Browser Support

Browser Support

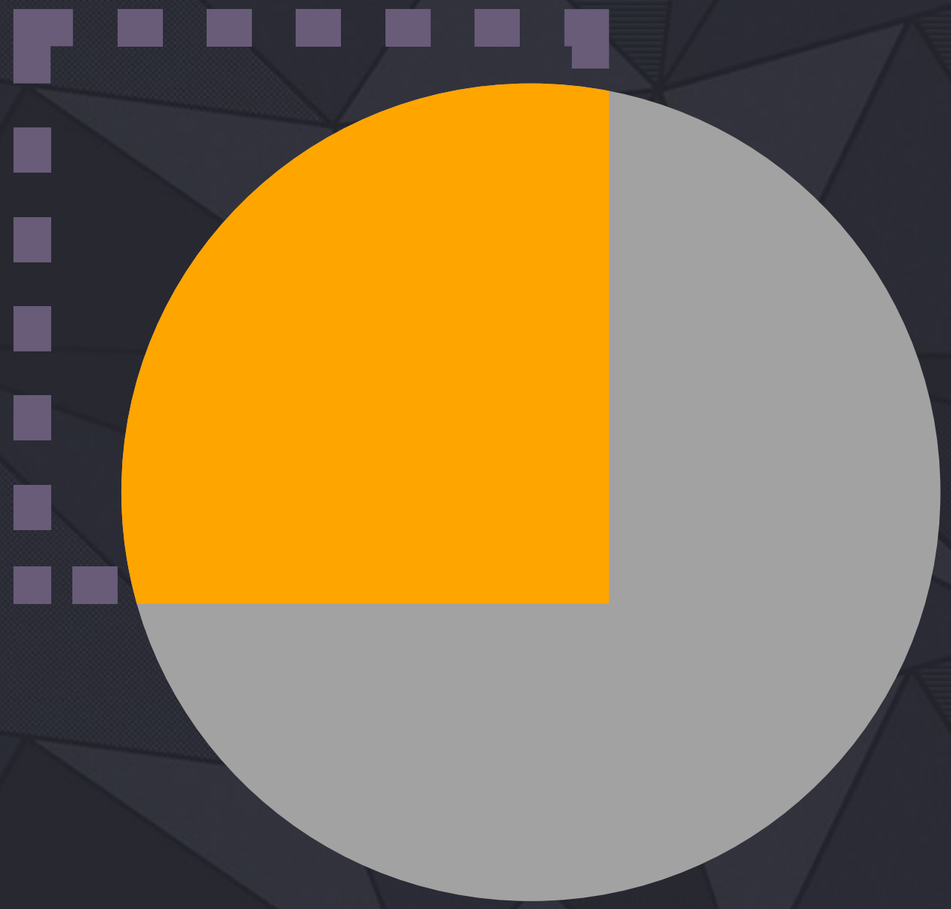




Take steps toward a healthier heart.

Keep track of your steps and know your heart rate thanks to a built-in pedometer and heart rate monitor. Plus, only the Moto 360 heart activity app tracks your progress toward your goals using daily and weekly benchmarks.

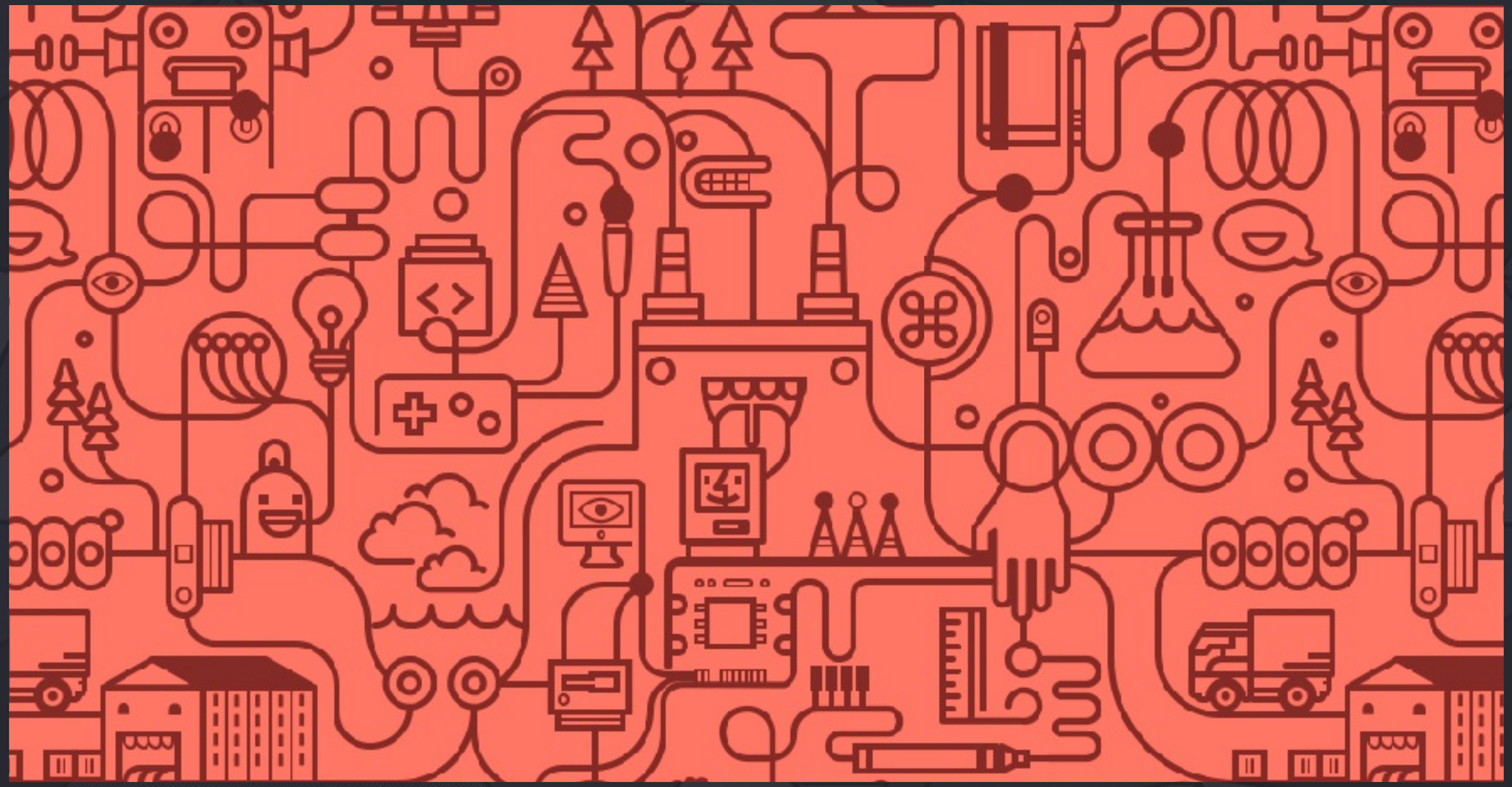
CSS Masking



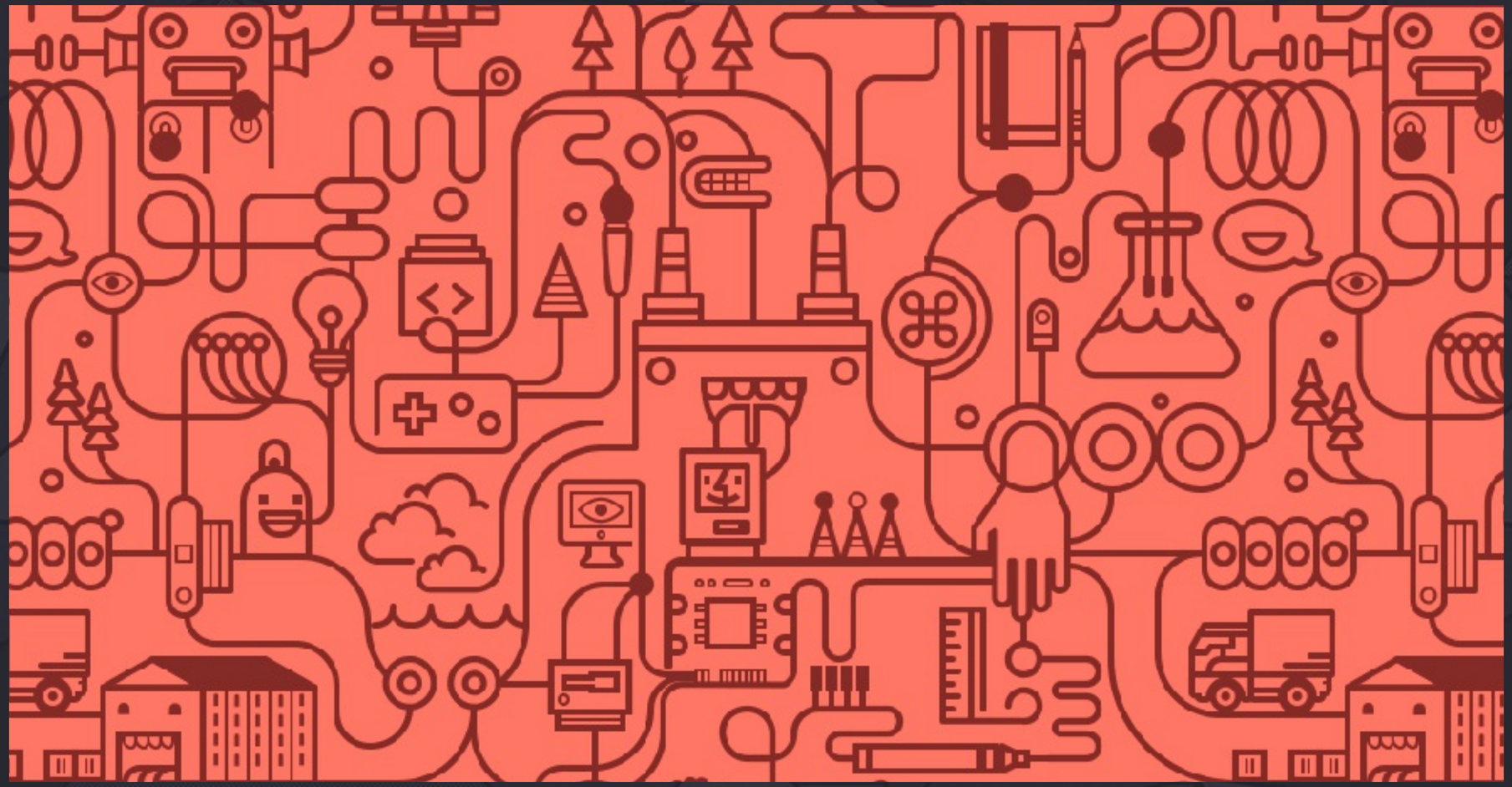
CLIPPING

MASKING

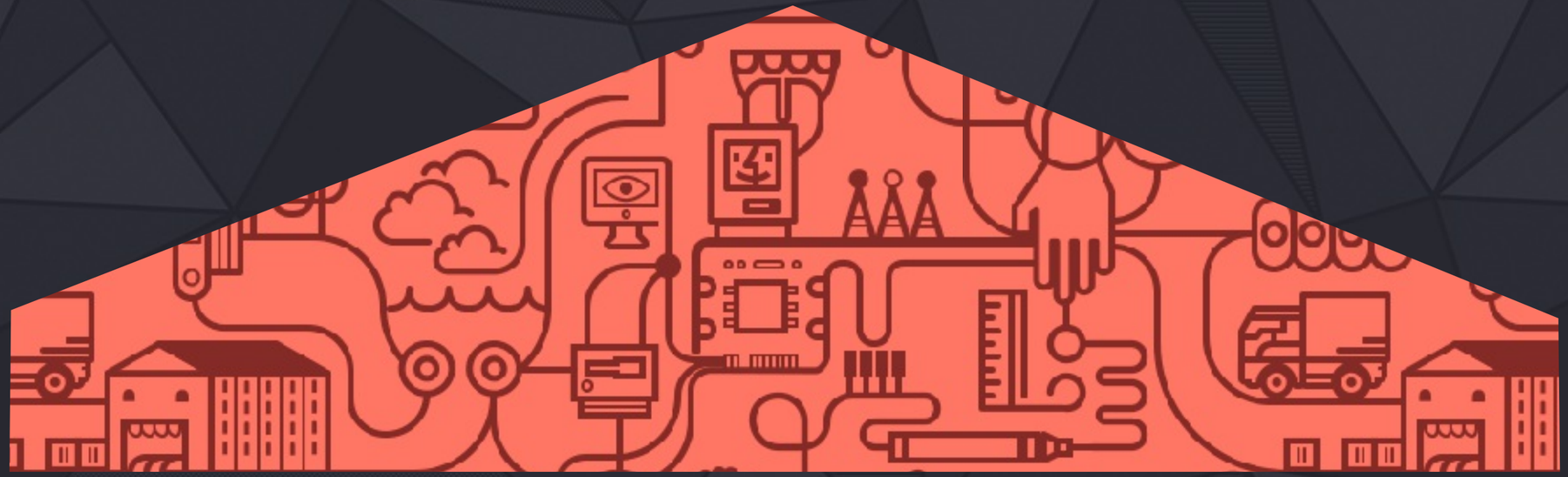
CLIPPING



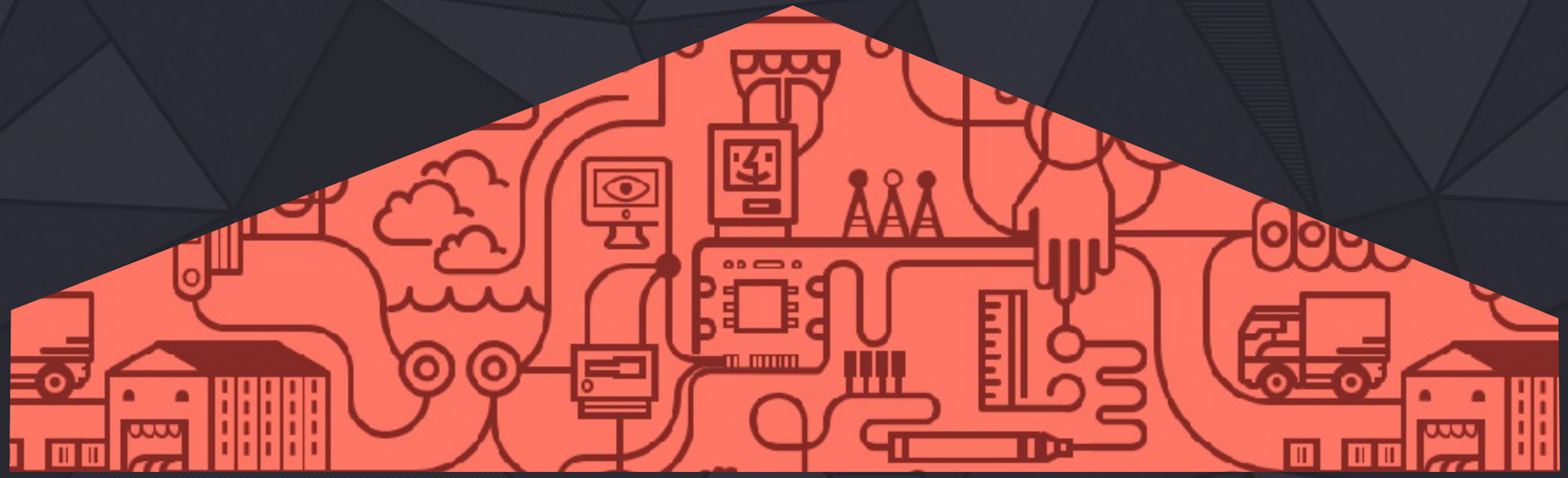
```
.element{
  -webkit-clip-path: circle(200px at 50% 50%)
}
```



```
.element{
  -webkit-clip-path: ellipse(150px 250px at 50%
50%);
}
```



```
.element{
  -webkit-clip-path: polygon(nonzero, 955px 405p
x, 483px 212px, 1px 400px, 0px 500px, 956px 500p
x);
```



```
.element{
  -webkit-clip-path: polygon(nonzero, 955px 405px, 483px 212px, 1px 400px, 0px 500px, 956px 500px);
```

SVG

- Scalable
- Scriptable
- Small footprint
- Decent support

SVG

- Scalable
- Scriptable
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SVG

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- Scriptable
- Small footprint
- Decent support

SVG

- Scalable
- Scriptable
- Small footprint
- Decent support

<clipPath>

clipping HTML with SVG

```
<style>
.element{
  -webkit-clip-path: url(#shape);
}
</style>

<svg>
 <defs>
  <clipPath id="shape">
        ...
  </clipPath>
 </defs>
</svg>
```

clipping HTML with SVG

```
<style>
.element{
  -webkit-clip-path: url(#shape);
}
</style>

<svg>
 <defs>
  <clipPath id="shape">
        ...
  </clipPath>
 </defs>
</svg>
```

clipping HTML with SVG

```
<style>
.element{
  -webkit-clip-path: url(#shape);
}
</style>

<svg>
 <defs>
  <clipPath id="shape">
        ...
  </clipPath>
 </defs>
</svg>
```

```
<clipPath id="shape">

</clipPath>
```

```
<clipPath id="shape">
  <circle r="100" cx="400" cy="200" />

</clipPath>
```

```
<clipPath id="shape">
  <circle r="100" cx="400" cy="200" />
  <path d="M24.527,11.121c-0.227-0.226 ..." />
</clipPath>
```

```
<clipPath id="shape">
  <text>New York</text>
</clipPath>
```

```
<textPath xlink:href="#circle">
  New York, Los Angeles...
</textPath>
<path id="circle" d="M230,250a250,250,0,0,0,500,0,0,0
```

```
<textPath xlink:href="#circle">
  New York, Los Angeles...
</textPath>
<path id="circle" d="M230,250a250,250,
```

```
<textPath xlink:href="#circle">
  New York, Los Angeles...
</textPath>
<path id="circle" d="M230 250a250 250 ... " />
```

Browser Support for `clip-path`

	HTML	HTML←SVG	SVG
	✔	✔	✔
	✔	✔	✔
	✖	✔	✔
	✔	✔	✔
	✖	✖	✔

CLIPPING

MASKING

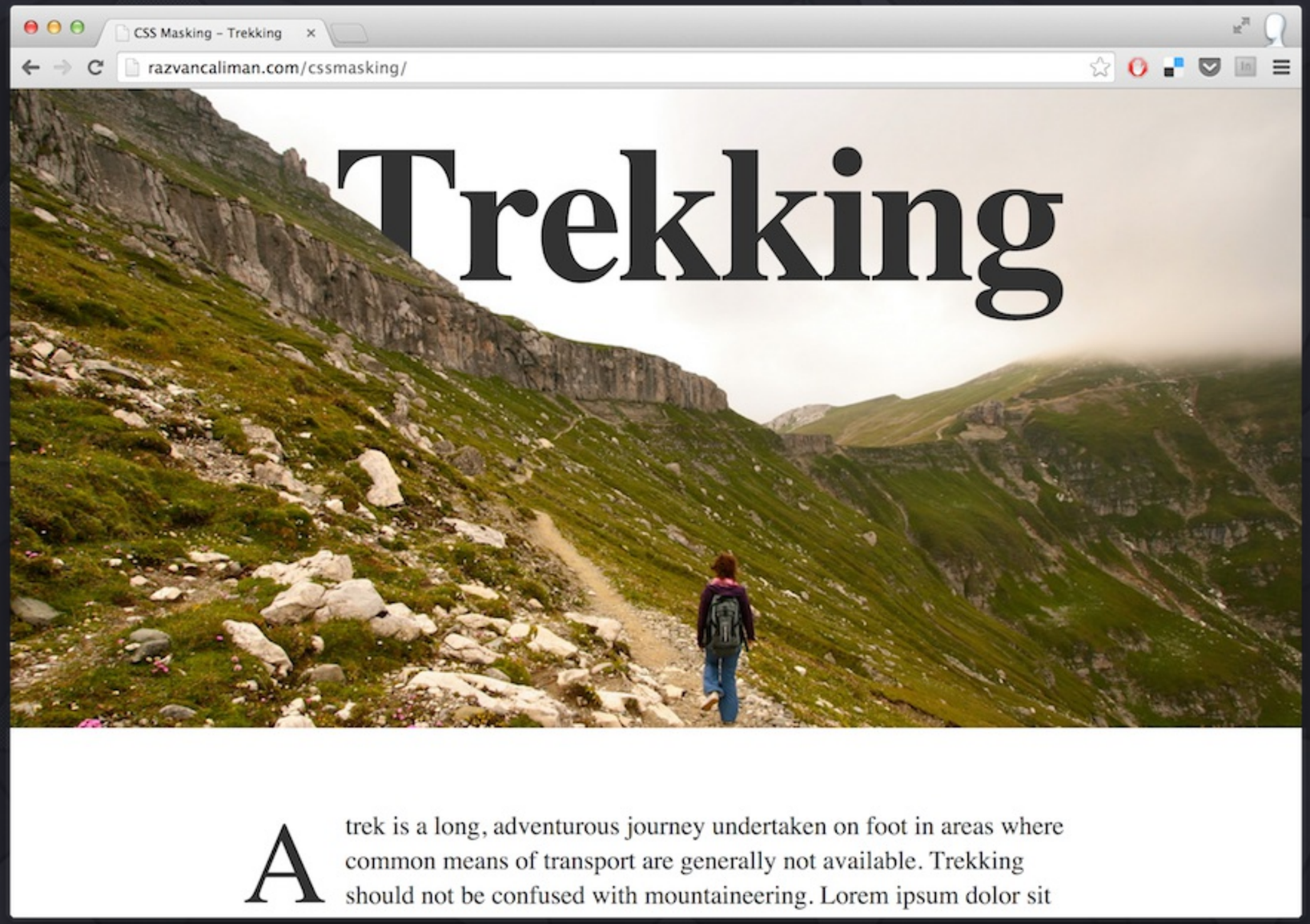
MASKING

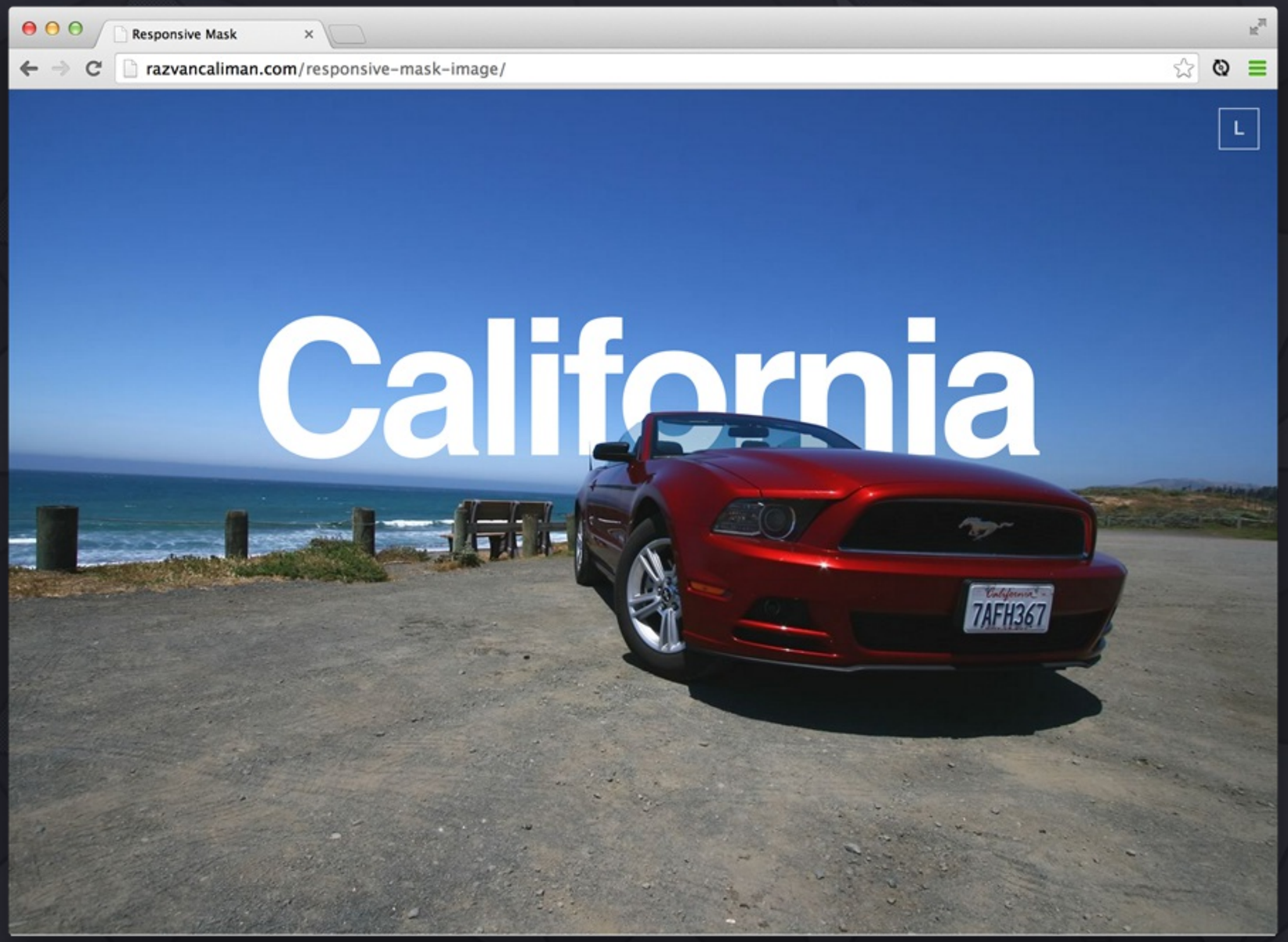
```
.element{
  -webkit-mask: url(mask.jpg);
}
```

Textures

for

Everything!


CSS Masking – Trekking
razvancaliman.com/cssmasking/
Trekking
A trek is a long, adventurous journey undertaken on foot in areas where common means of transport are generally not available. Trekking should not be confused with mountaineering. Lorem ipsum dolor sit


Responsive Mask
razvancaliman.com/responsive-mask-image/
L
California
7AFH367

<mask>

```
<mask id="shape">
  <circle cx="0" cy="0" r="70" fill="#fff" />
```

Photos: National Archives of Canada, 1944/Chris Helgren, 2013/Reuters. Source: The Atlantic

Browser Support for `mask`

	Image	Gradient	HTML←SVG	SVG←SVG
	✔	✔	✖	✔
	✔	✔	✖	✔
	✖	✖	✔	✔
	✔	✔	✖	✔
	✖	✖	✖	✔

	Image	Gradient	HTML←SVG	SVG←SVG
*	✔ †	✔	✖	✔
*	✔ †	✔	✖	✔
	✖ ‡	✖ ‡	✔	✔
*	✔	✔	✖	✔
	✖ ‡	✖ ‡	✖	✔

* prefixed with -webkit-

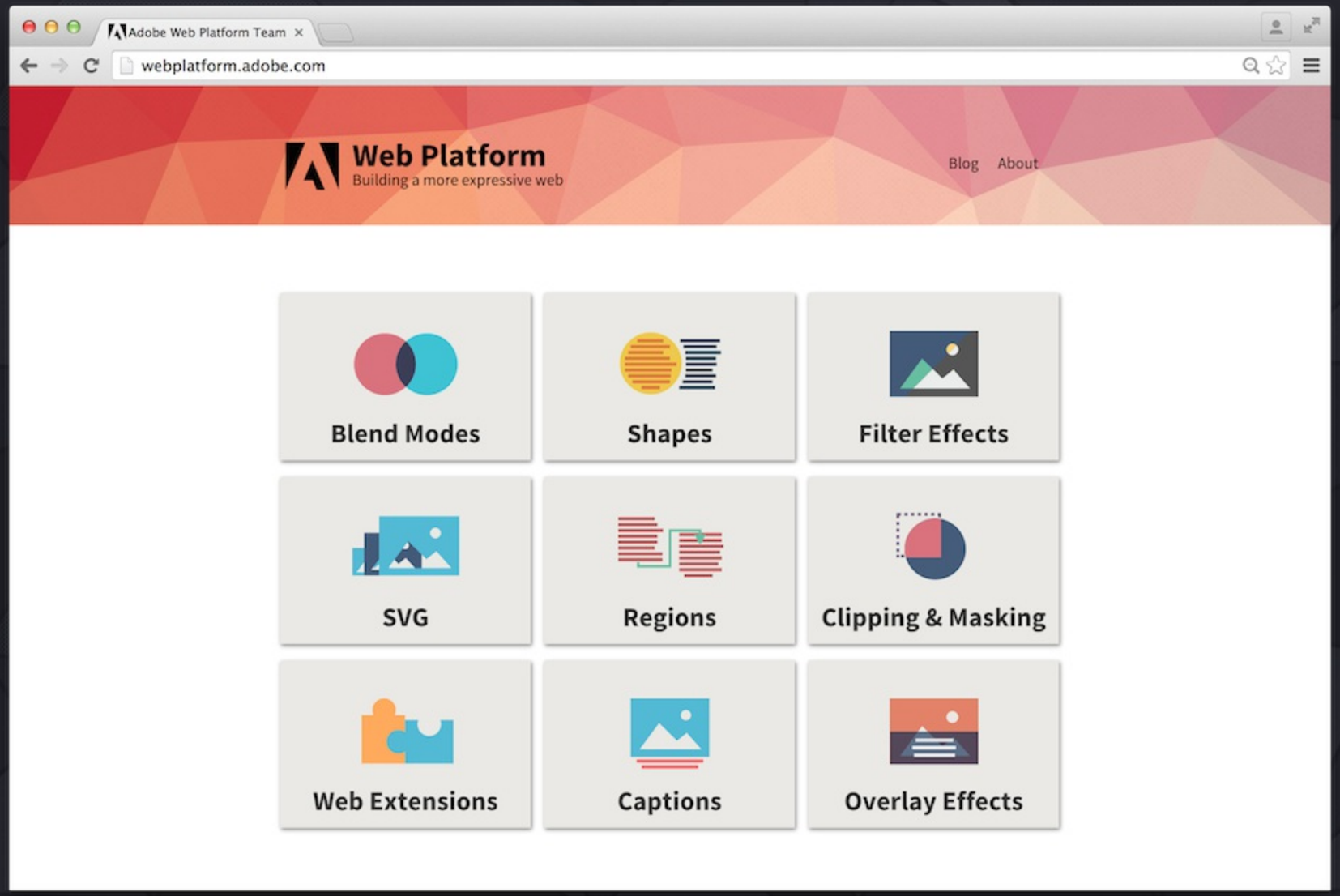
† luminance support behind flag (Chrome 37, Opera 24)

‡ may be polyfilled with SVG (IE 8-10 only gradient. IE 11 image & gradient)

Recap

- CSS Shapes
- CSS Masking (clip-path)
- CSS Masking (mask-image)

webplatform.adobe.com



I have to teach her the limitations of web design.

— web developer

End.

@RazvanCaliman

bitly.com/fowd2014-shapes

Credits

- Slides framework: Reveal.JS by Hakim El Hattab
- Shattered Island pattern by Julien Renvoye
- Science pattern by Fabricio Marques
- House by Michael Rowe from The Noun Project
- Traffic Cone by jon trillana from The Noun Project
- Clock by Desbenoit from The Noun Project
- Deer in the Headlights by Luis Prado from The Noun Project
- Fingerprint by Yaroslav Samoilov from The Noun Project
- Glasses by Okan Benn from The Noun Project
- Octopus by Christy Presler from The Noun Project
- Scissors by Edward Boatman from the Noun Project
- Scarf by Maurizio Fusillo from The Noun Project
- Boots picture by Amanda Sandlin
- Browser logos on GitHub
- Screenshots of Alice in Wonderland demo from Adobe
- Screenshot of Moto360 from Motorola
- Fonts: Open Sans, Open Sans Condensed, Source Code Pro, Montserrat, Fredericka the Great, Luckiest Guy
- D-Day Photos: National Archives of Canada, 1944/Chris Helgren, 2013/Reuters. Source: The Atlantic