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P R O D U C T & E N G I N E E R I N G

**Mic exists to help our audience make sense of a rapidly changing world. By informing our generation about the issues of our time, we're serving as a catalyst for people to make an impact.**

# PRODUCT & ENGINEERING

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**TO DESIGN AND DEPLOY THE BEST REPORTING  
TOOLS AND NEWS EXPERIENCE IN THE WORLD.**

# A LITTLE BIT OF SCALE TO CONSIDER

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- 25 Million Uniques Per Month
- Upwards of 50,000 concurrents during peak traffic
- Half a billion data points



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WHAT WE ARE WORKING ON

# DESKTOP & MOBILE



# LEXICON - INTERNAL SEARCH



## Lexicon

Elon Musk WITHIN  HEADLINE  BODY

OCT 31, 2010 - OCT 12, 2015 DATE RANGE SECTIONS ALL ARTICLES

SEPTEMBER, 2010

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

OCTOBER, 2010

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

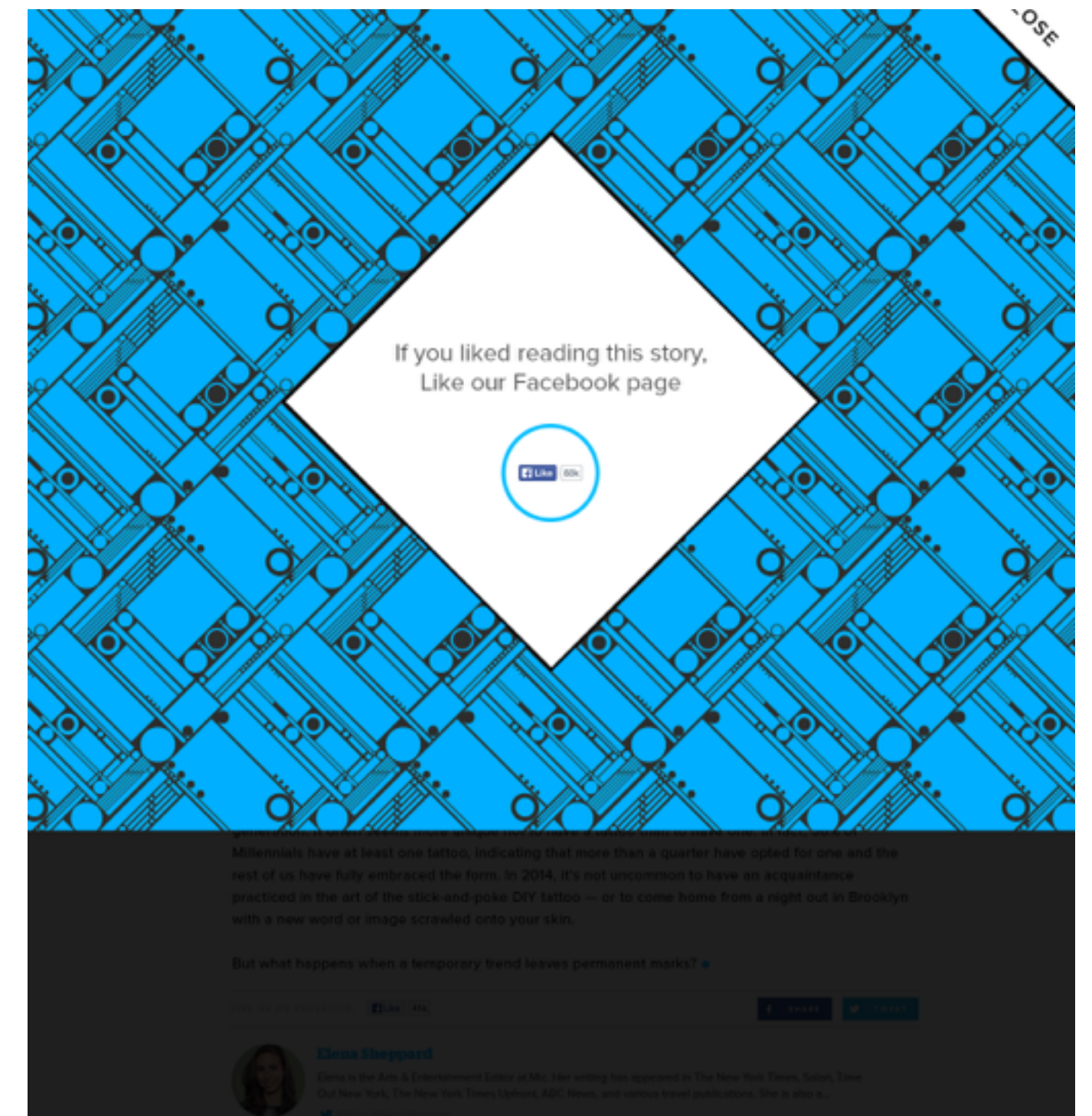
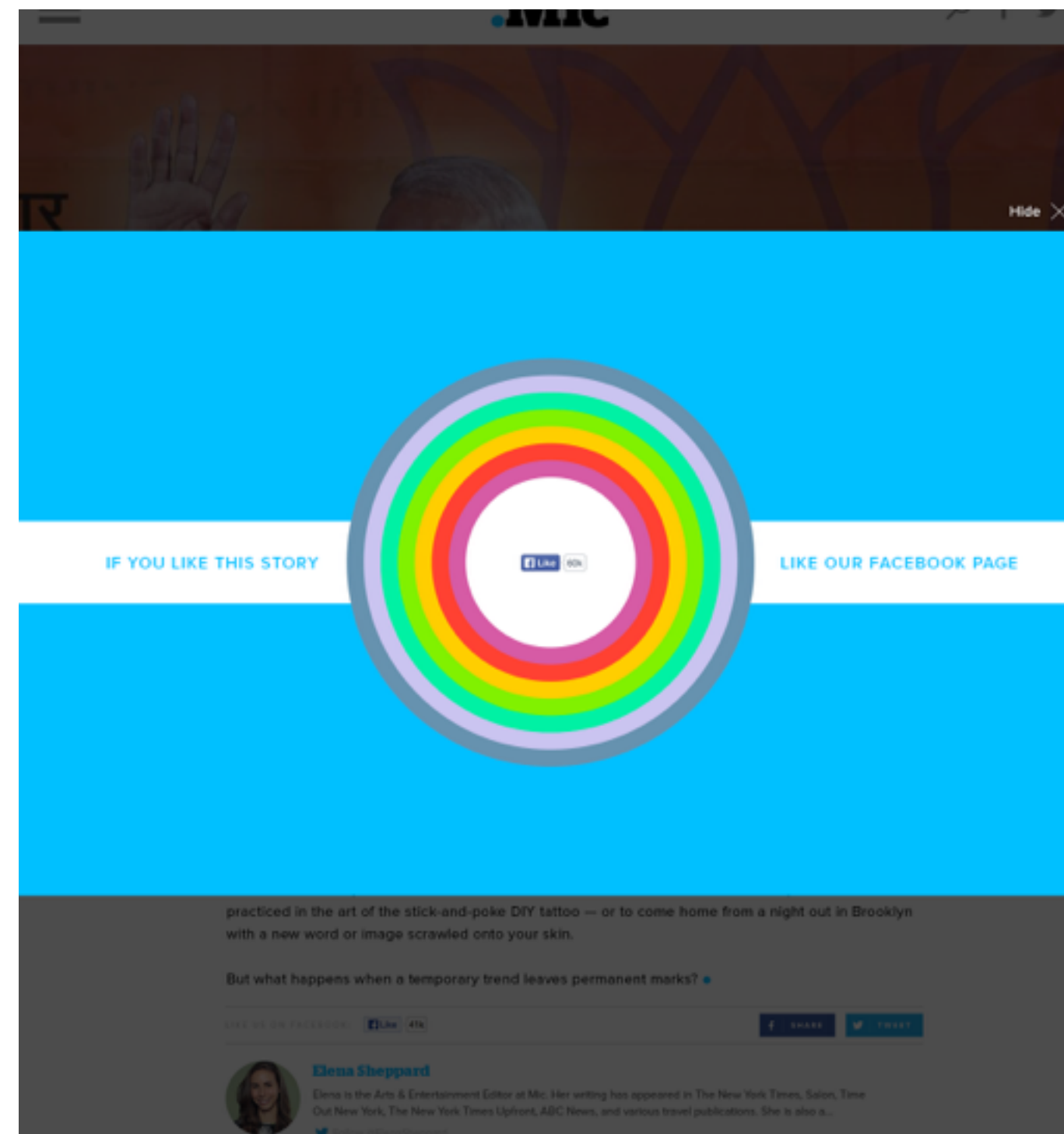
NOVEMBER, 2010

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Shares	Share rate	FB post
283	0.41%	7/28/2015 3:20pm
193	0.81%	5/7/2015 10:10pm

NEWS NASA Blew Up That Antares Rocket on Purpose by Tom McKay	10/31/2014 9:13am	19,313	n/a	475	2.46%	10/31/2014 1:25pm
POLITICS Elon Musk Has a Radical Plan to Finally Turn Around America's Energy Crisis by Tom McKay	6/23/2014 2:12pm	17,167	n/a	587	3.42%	6/23/2014 9:45pm
NEWS Elon Musk Just Raised His Company's Value by \$1	3/31/2015					3/31/2015

# A/B UI & UX TESTING





# A/B UI & UX TESTING - LEVERS

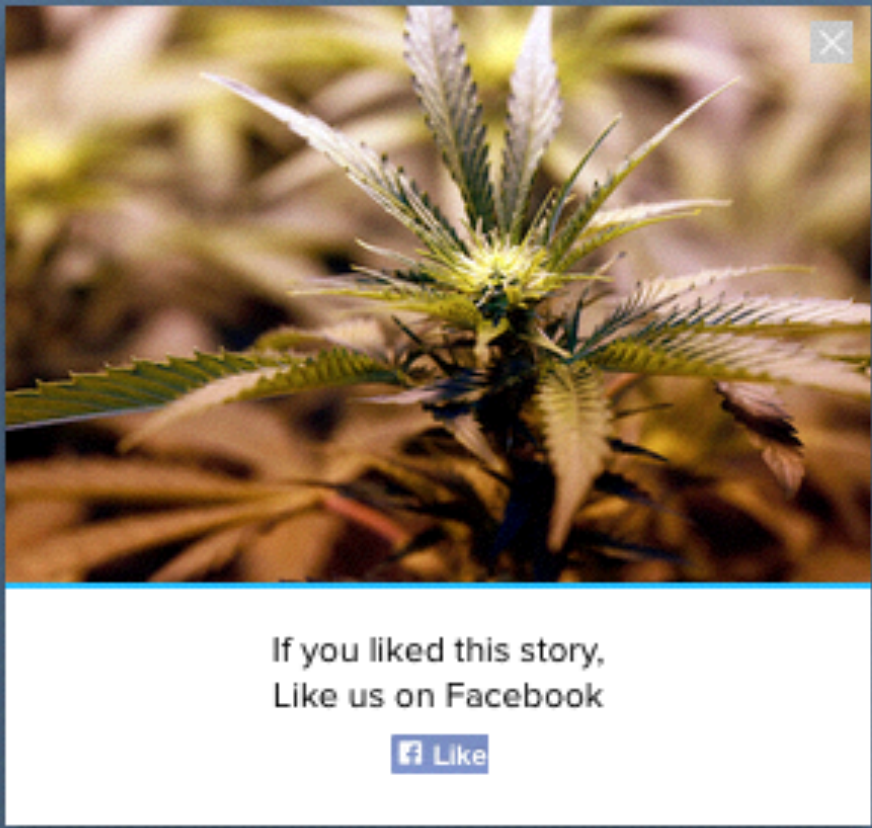
SHOW SITE-WIDE MODAL

COPY DEFAULT MODAL TO EDITOR

New User Modal for `9 Reasons We Should Never, Never, Never, Ever Legalize Marijuana` SAVE NEW VERSION

Name of version:   Show only for facebook referral traffic

Description:



```

22 </style>
23 
26 <div class="modal-close"></div>
27 <h6 class="modal-header">If you liked this story, <br>Like us on
28 Facebook</h6>
29 <p class="modal-subheader"></p>
30 <div class="modal-prompt-cont clearfix">
31 <div class="social-prompt-thin-border">
32 <div class="social-prompt-button-facebook" >
33 <div class="fb-like"
34 <div class="fb-like"
35 data-href="http://facebook.com/MicMedia"
36 data-layout="button" data-action="like"
37 data-show-faces="false"
38 data-share="false" data-callback-id="genmodalfb"
39 data-keen-tracking-name="newUserModalV1" data-keen-social-
40 channel="facebook" data-keen-custom="Share image + Like us on
41 Facebook"></div>
42 </div>
43 </div>
44 </div>
                
```

Lookup by article ID  LOOKUP SHOW SITE-WIDE MODAL

All Versions SHOW CONVERSION RATE SHOW HIDDEN

Version	FB only	Date Created	Conversions
Share image + Like us on Facebook Like us on Facebook <span>COPY TO EDITOR</span> <span>HIDE</span> <span>ACTIVE</span>		03/24/2015 2:38pm	<b>1.32%</b> 479 of 36101
Share image + article specific Rethink Marijuana <span>COPY TO EDITOR</span> <span>HIDE</span> <span>ACTIVE</span>		03/24/2015 2:37pm	<b>1.28%</b> 466 of 36275

# CONTENT TESTING

Facebook

Twitter

## Facebook Preview & A/B Testing

URL preview: <http://www.mic.com/articles/kanye-west-is-a-true-genius-in-every-way-but-one>

No Test Running

⊕ ADD NEW VARIATION

VARIATION 5276 | Paused

RESUME VARIATION

5/7/2015 4AM

STARTED

15391

IMPRESSIONS

881

CLICKS

5.72%

CLICK THROUGH RATE

Desktop

Mobile



Barack Obama via David Björklund

7 hrs

Please read this!



Kanye West Is a True Genius in Every Way but One

The truth at last.

MIC.COM | BY MIC

Like · Comment · Share



Barack Obama

7 hrs

Please read this!— via David Björklund



Kanye West Is a True Genius in Every Way but One

mic.com

# ANALYTICS

## Facebook Shares

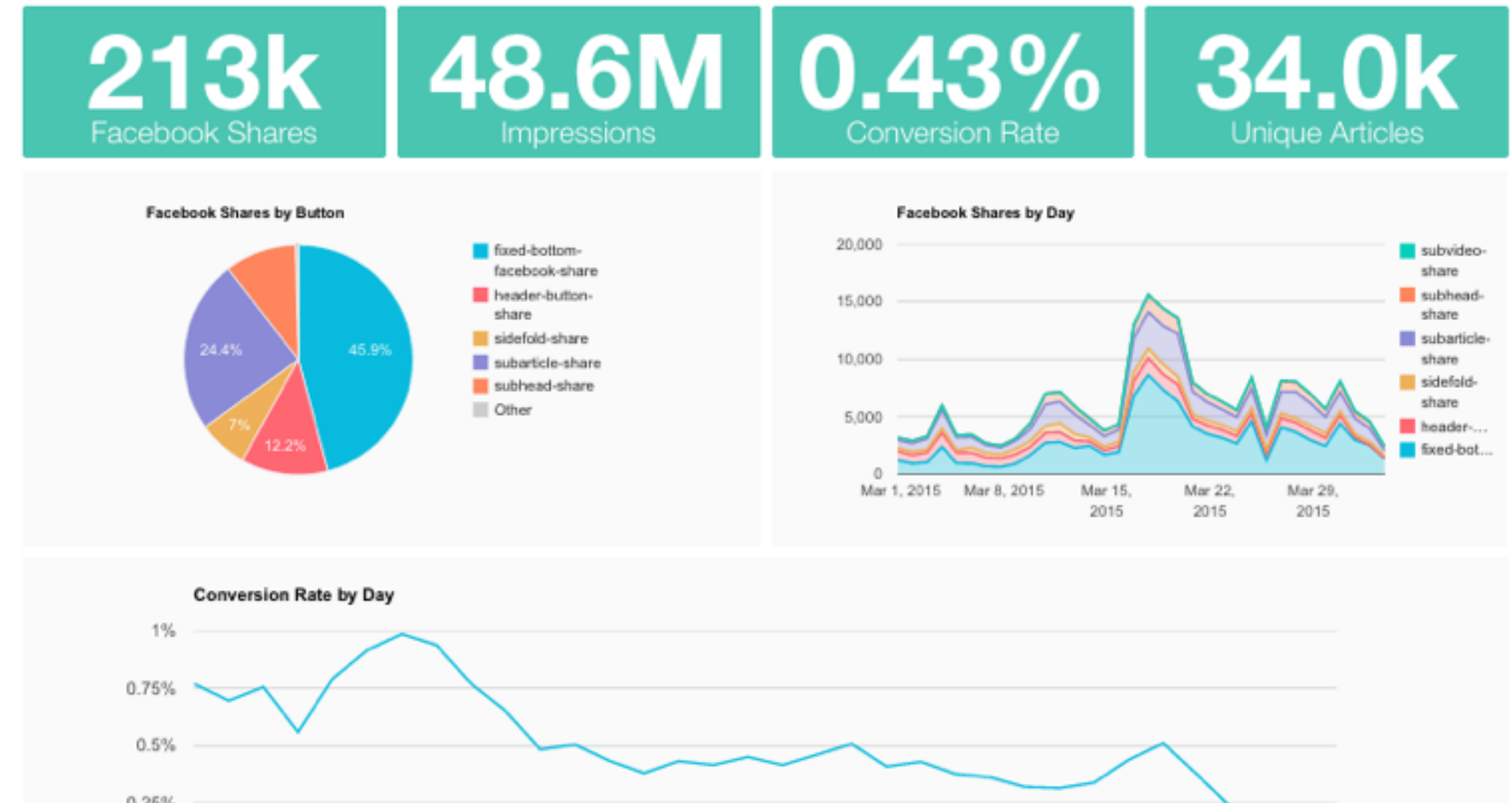


Timeframe of events: 03/01/2015 - 04/03/2015

Social Channel: Facebook

Devices: Desktop + Mobile

Event Type: Click



## Facebook Shares by Article



Articles published between: 03/01/2015 - 04/03/2015

Devices: Desktop

Event Type: Click

Sort by: Conversions

Article	Shares
<p>12 Women With Perfect Responses for Why They Don't Have Kids</p>	<p><b>0.56%</b> 5598 of 991691</p>
<p>Listen to the Incredible New Instrument That Made \$80,000 on Kickstarter in Just Six Hours</p>	<p><b>1.42%</b> 3724 of 261905</p>
<div style="display: flex; justify-content: space-around;"> <div style="width: 45%;"> <p><b>Facebook Shares by Button</b></p> </div> <div style="width: 45%;"> <p><b>Facebook Shares (Last 30 Days)</b></p> </div> </div>	
<p>Everyone's Trying Really Hard Not to Call the Germanwings Co-Pilot a Terrorist</p>	<p><b>0.66%</b> 2966 of 446938</p>
<p>Forget Your Team: Your Online Violence Toward Girls and Women Is What Can Kiss My Ass</p>	<p><b>1.23%</b> 2483 of 201230</p>

# CUSTOM VIDEO PLAYER



# MACHINE VISION


**.Mic + DEXTRO**   [Logout](#)

**Trends**

- CBS News 1
- Mia Love 3
- Jeremy Corbyn 4
- Love 84
- Spike 1
- Paris Jackson 1
- Jessie J 1
- Jerry Lee Lewis 1
- Eric Taylor 1
- LL Cool J 1
- Chideo 1
- Benghazi 1
- Arsenal Fans 4
- Tina Fey 1
- Iron Dome 1
- PlayStation Store 2
- Ted Turner 1
- Iker Casillas 1
- Disclosure 3
- The Revenant 1
- Android Wear 1
- Pittsburgh Steelers 1
- Randy Bullock 1
- Nick Novak 1
- Porto 2
- FC Porto 1

[View Feature Groups](#)

**Videos**



All Detections: Dialogue people region men mutual interest Time opinion America

Trends: [Jeremy Corbyn](#) |


Laughter at Israel event as Jeremy Corbyn says he has "neutral opinions on lots of things" <http://t.co/TeM2B8Chqg>

— [Tweet URL](#)


Request\_id: [1443564915.8460Y9LP2TKN](#)

Blacklisted: false [Blacklist](#)

[Video URL](#) | [Transcript URL](#)



[Manage](#) [Manage](#) [Manage](#)



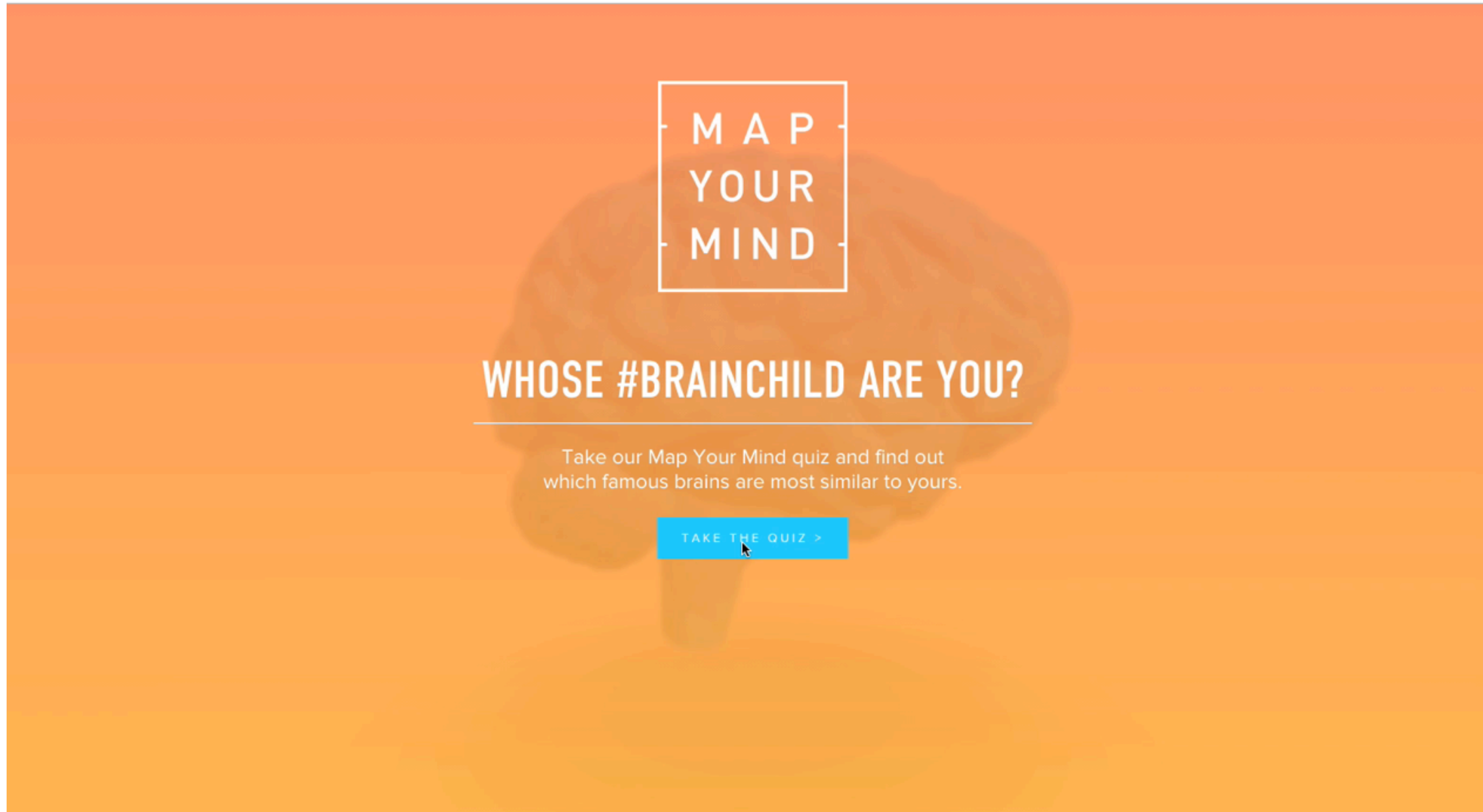
All Detections:

Trends: [Jeremy Corbyn](#) |

# SALES STUFF

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**Brain.Mic**



The image shows a landing page for a quiz on the Brain.Mic website. The background is a solid orange color with a faint, light-colored brain silhouette in the center. At the top, the Brain.Mic logo is displayed. Below it, a white square contains the text 'MAP YOUR MIND' in all caps. Underneath the square, the main heading reads 'WHOSE #BRAINCHILD ARE YOU?'. A short paragraph of text follows, and at the bottom, there is a blue button with the text 'TAKE THE QUIZ >'.

MAP  
YOUR  
MIND

WHOSE #BRAINCHILD ARE YOU?

Take our Map Your Mind quiz and find out which famous brains are most similar to yours.

TAKE THE QUIZ >

# CYPRESS

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Verticals ▼ + Add New Topic

Title

---

Anthony Sessa

Write your story



ANTHONY SESSA


ADD TEASER

SAVE



SUBMIT FOR PUBLICATION



 GO TO QUEUE

# DISTRIBUTED TEAM



**David Björklund**  
kesla

📍 Stockholm, Sweden  
✉ [david.bjorklund@gmail.com](mailto:david.bjorklund@gmail.com)  
🌐 <http://davidbjorklund.com>  
🕒 Joined on Apr 15, 2009

**104** Followers   **809** Starred   **183** Following

<https://github.com/kesla>  
Sweden

<https://github.com/kesla/node-snappy>  
<https://github.com/kesla/node-leaky>



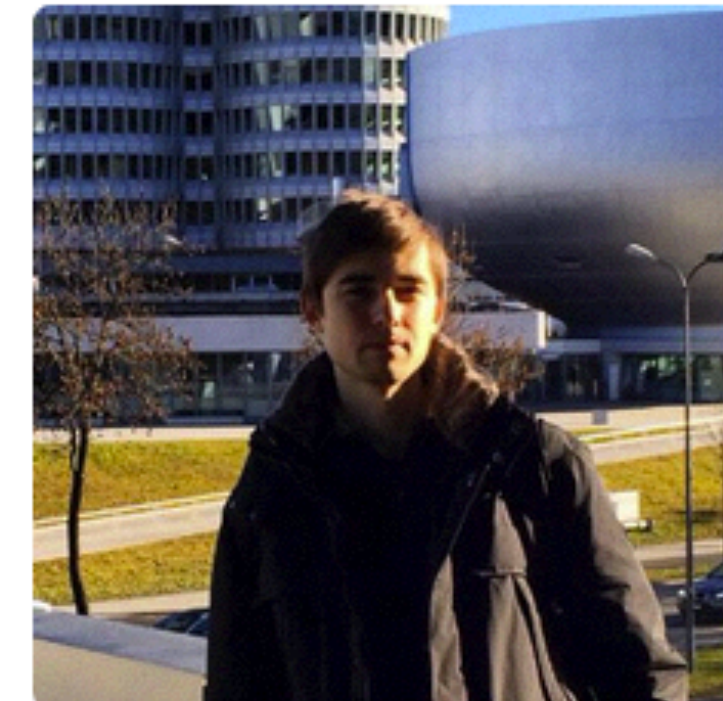
**Lisa Övermyr**  
ellell

📍 Stockholm, Sweden  
✉ [lisa.overmyr@gmail.com](mailto:lisa.overmyr@gmail.com)  
🌐 <http://ellell.github.io>  
🕒 Joined on Nov 22, 2011

**9** Followers   **81** Starred   **15** Following

<https://github.com/ellell>  
Sweden

<https://github.com/ellell/github-rsvp>  
<https://github.com/ellell/node-imsq>



**Serge**  
iefserge

🌐 mic.com  
📍 Ukraine  
🌐 <http://runtimejs.org>  
🕒 Joined on Nov 25, 2013

**46** Followers   **107** Starred   **15** Following

<https://github.com/iefserge>  
Ukraine

<https://github.com/runtimejs/runtime>  
<https://github.com/iefserge/eshttp>  
<https://github.com/micnews/hyperlevel-backup-to-s3>



# DISTRIBUTED TEAM

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# THE STACK

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- Node + NPM
- Browserify
- PostCSS & SASS
- No MV\* Frameworks
- AWS
- MySQL
- Some NoSQL (Data)
- TravisCI
- Custom Deployment build w/ Node

# CONTENT IS KING (RENDER-ARTICLE-

```
Index.js
10 var endMarker = require('./lib/end-marker');
11 var deep = require('deep-access');
12 var htmlparser = require('htmlparser2');
13 var domutils = require('domutils');
14 var formatText = require('format-text');
15 var lazyYoutube = require('./lib/lazy-youtube');
16 var lazyEmbeds = require('./lib/lazy-embeds');
17 var lazyImages = require('./lib/lazy-images');
18 var cdnify = require('./lib/cdnify');
19 var gracefulGifs = require('./lib/graceful-gifs');
20 var shortArticleBody = require('./lib/short-article-body');
21 var resizeImages = require('./lib/resize-images');
22 var unwrapEmbeddableContainer = require('./lib/unwrap-embeddable-container');
23 var iframeEmbeds = require('./lib/iframe-embeds');
24 var customAttributes = require('./lib/custom-attributes');
25 var unifyYoutube = require('./lib/unify-youtube');
26 var supportedEmbeds = require('./lib/supported-embeds');
27 var unifyEmbedTypes = require('./lib/unify-embed-types');
28 var gifsToVideo = require('./lib/gifs-to-video');
29 var removeEmptyElements = require('./lib/remove-empty-elements');
30 var resizeGifs = require('./lib/resize-gifs');
31 var custom = require('./lib/custom');
32 var defaultMaxGifSize = {
33   width: 900,
34   height: 900
35 };
36
37 module.exports = function (article, opts) {
38   opts = opts || {};
39   assert(article, 'required: article');
40   assert(typeof (article.body) === 'string' || Array.isArray(article.list),
41     'required: .body or .list');
42   assert(!(opts.custom && opts.customAttributes),
43     '.custom & .customAttributes can not both be set');
44
45   // wrap body to be able to remove the outermost elements
46   var dom = htmlparser.parseDOM('<wrap>' + (article.body || '') + '</wrap>')[0].children;
47   // remove all comments
48   dom.forEach(function (elm) {
49     if (elm.type === 'comment') {
50       domutils.removeElement(elm);
51     }
52   });
53
54   if (opts.endMarker && dom.length > 0 &&
55     (!Array.isArray(article.list) || article.list.length === 0)) {
56     endMarker(dom);
57   }
58 }

rectangle-image-url.js
1 'use strict';
2
3 var Image = require('@mic/image-url-builder');
4
5 var rectangleImageUrl = function (image) {
6   if (!image.views || !image.views.rectangle) {
7     return image.original.src;
8   }
9
10  var view = image.views.rectangle;
11
12  var cropOptions = {
13    left: view.x,
14    right: view.x2,
15    top: view.y,
16    bottom: view.y2
17  };
18
19  if (cropOptions.right - cropOptions.left > 840) {
20    cropOptions.width = 840;
21    var originalWidth = cropOptions.right - cropOptions.left;
22    var originalHeight = cropOptions.bottom - cropOptions.top;
23    var newHeight = cropOptions.width * originalHeight / originalWidth;
24    cropOptions.height = Math.round(newHeight);
25  }
26
27  return (new Image(image.original.src, 'jpg')).getByCrop(cropOptions);
28 };
29
30 module.exports = rectangleImageUrl;
31
```

# A LITTLE MORE ABOUT OUR PROCESS

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- Lots of modules → Small iterations → Requires great process
- Combine Product & Engineering → Hire Technical Product Managers → Have Strong Values

# CHALLENGES AND THE FUTURE

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## Challenges

- Data collection & infrastructure
- We Need MOAR engineers

## The Future

- Microservices (@mic)
- Better Industry Metrics
- Distributed Content & Analytics
- Apps?

# THANKS!

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[@micproduct](#)

<https://medium.com/readme-mic>

[@anthony\\_sessa](#)