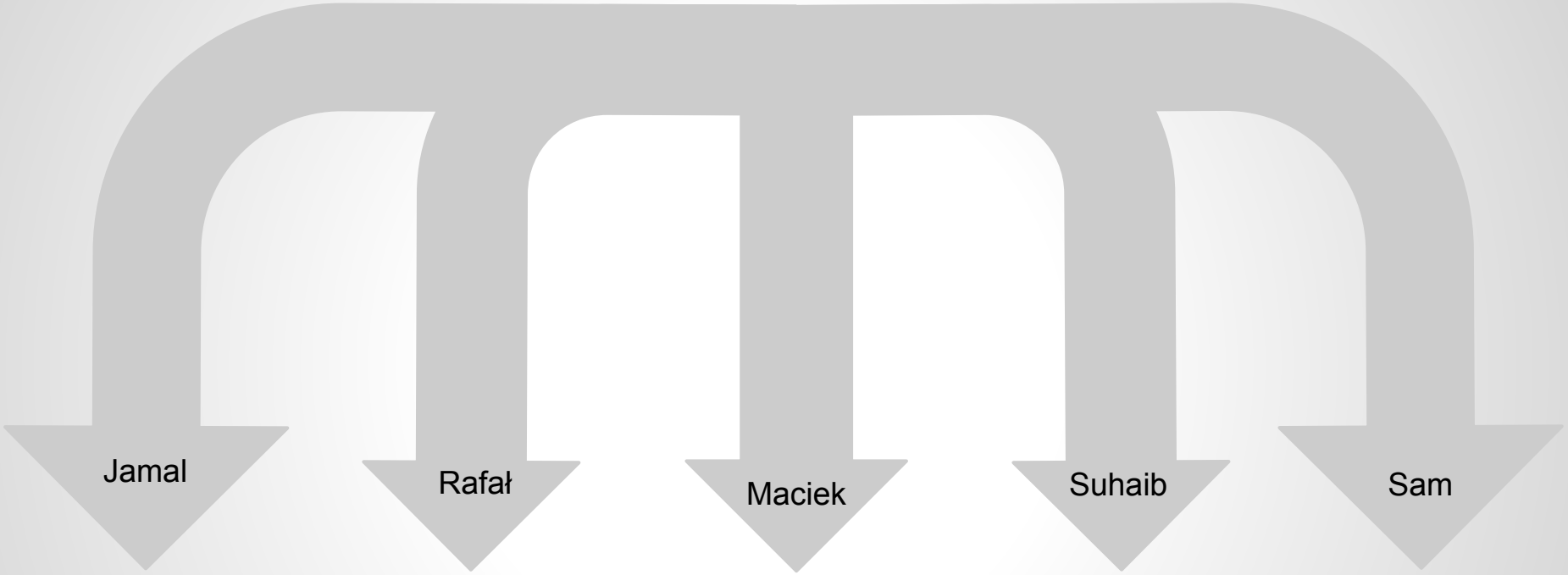
tanr

The A(wesome) Team



The big problem

Backend Technologies

UI Technologies

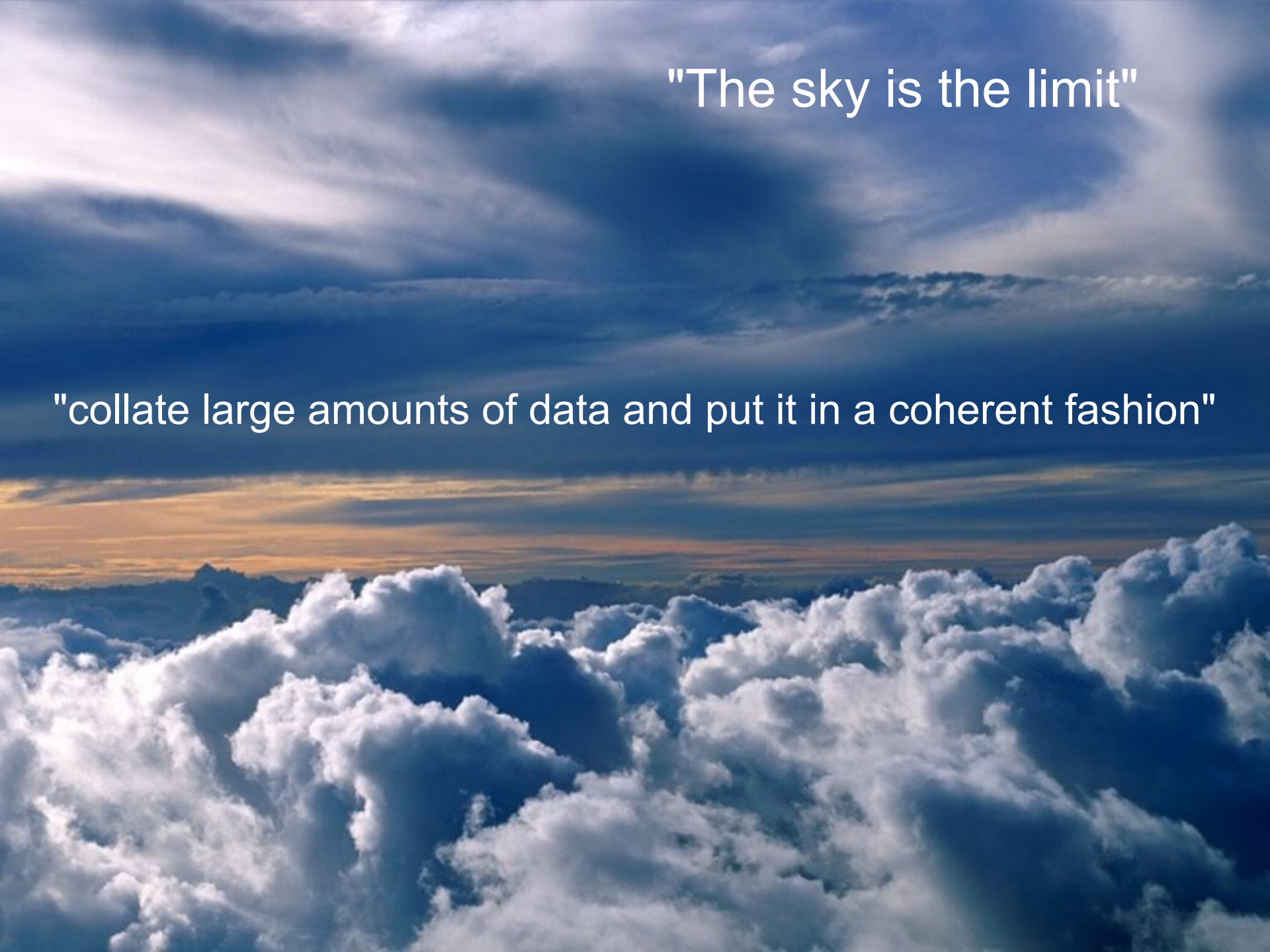
Architecture Overview &
Storage Solutions

Design

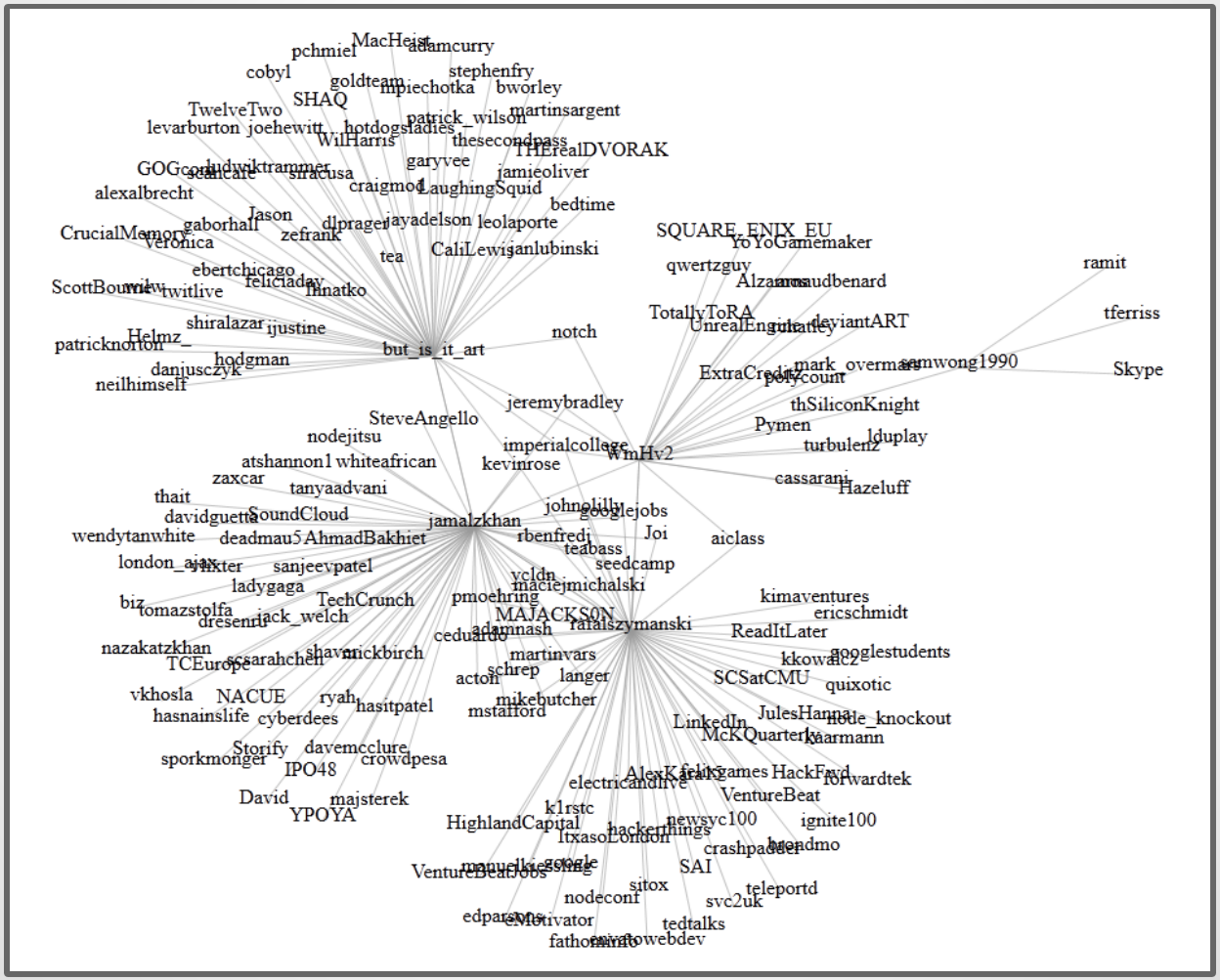
CELEBRITY
CONSUME!
SENSATIONALISM
SCANDAL!
SEX TAPES!
© ERIC DROOKER (WWW.DROOKER.COM)

WHO'S
AFRAID OF
TWITTER?!

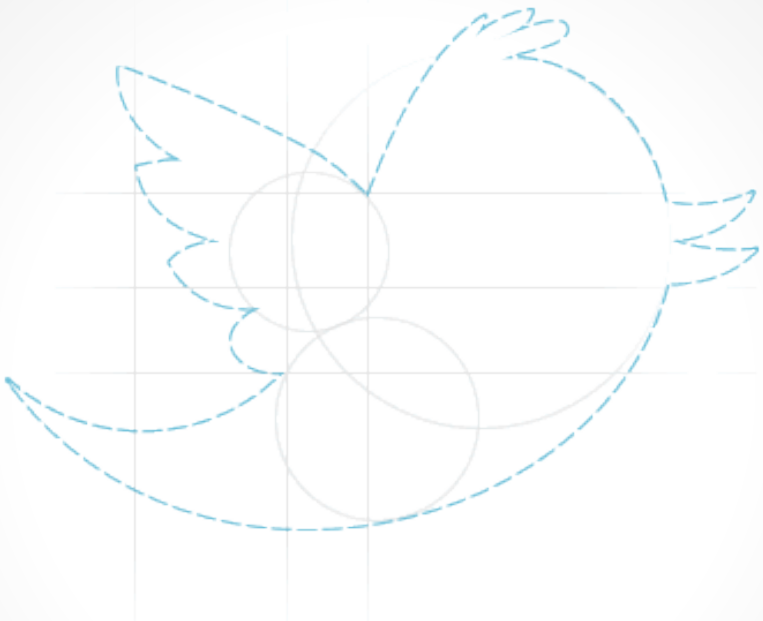
JUNE 15, 2009
Robert Wright: Decoding God's Changing Moods
Five Roadblocks To Health Care Reform
Should You Hold Stocks for the Long Haul?
TIME
twitter
stevenbjohnson
Following
I've written this week's TIME cover story about how Twitter is changing the way we live—and showing us the future of innovation. Buy a copy!
www.time.com


"The sky is the limit"
"collate large amounts of data and put it in a coherent fashion"

Initial Experimentation



Twitter API Limitations



"350 API requests per hour"

Twitter Augmented News Reader (TANR)

"A webapp that pairs current news
with relevant tweets"

Demo

Ooh, Aah!

tanr
Twitter Augmented News Reader
shared Obama readies major action on immigration enforcement · on Sunday
shared Living like 'Mad Men' · about a week ago
Lindsey Graham stands apart from other Republican senators on Kagan vote
1,488 people shared this.
Altered BP photo comes into question
2,200 people shared this.
Students disclose illegal status as part of push for immigration law reform
811 people shared this.
Firing of USDA official Shirley Sherrod now under review
UU access monitored
North Korea keeps door open for food-nuclear deal
Iran says bomb kills nuclear scientist, blames Israel

TANR Demo

The Help Tile

The Help Tile

tanr
Twitter Augmented News Reader
[redacted] shared Obama readies major action on immigration enforcement · on Sunday
[redacted] shared Living like 'Mad Men' · about a week ago
Lindsey Graham stands apart from other Republican senators on Kagan vote
1,488 people shared this.
Altered BP photo comes into question
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Students disclose illegal status as part of push for immigration law reform
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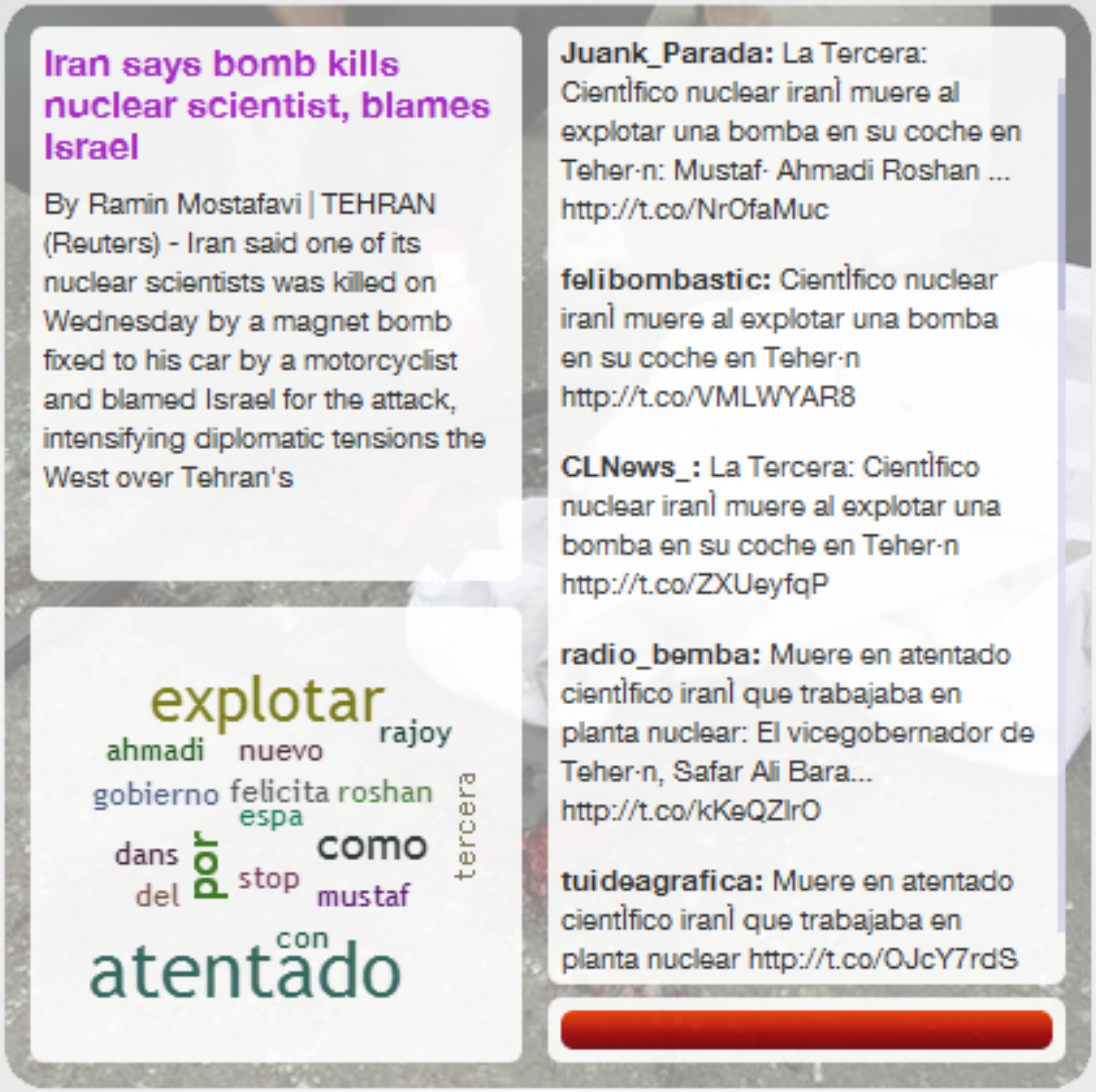
Firing of USDA official Shirley Sherrod now under review
UU access monitored
North Korea keeps door open for food-nuclear deal
Iran says bomb kills nuclear scientist, blames Israel
By Ramin Mostafavi | TEHRAN (Reuters) - Iran said one of its nuclear scientists was killed on Wednesday by a magnet bomb fixed to his car by a motorcyclist and blamed Israel for the attack, intensifying diplomatic tensions the West over Tehran's
explotar
ahmadi
nuevo
rajoy
gobierno
felicita
roshan
espa
dans
por
stop
como
mustaf
del
con
atentado
tercera
Juank_Parada: La Tercera: Científico nuclear iraní muere al explotar una bomba en su coche en Teherán: Mustafá Ahmadi Roshan ... http://t.co/NrOfaMuc
felibombastic: Científico nuclear iraní muere al explotar una bomba en su coche en Teherán http://t.co/VMLWYAR8
CLNews_: La Tercera: Científico nuclear iraní muere al explotar una bomba en su coche en Teherán http://t.co/ZXUeyfqP
radio_bemba: Muere en atentado científico iraní que trabajaba en planta nuclear: El vicegobernador de Teherán, Safar Ali Bara... http://t.co/kKeQZlrO
tuideagrafica: Muere en atentado científico iraní que trabajaba en planta nuclear http://t.co/OJcY7rdS

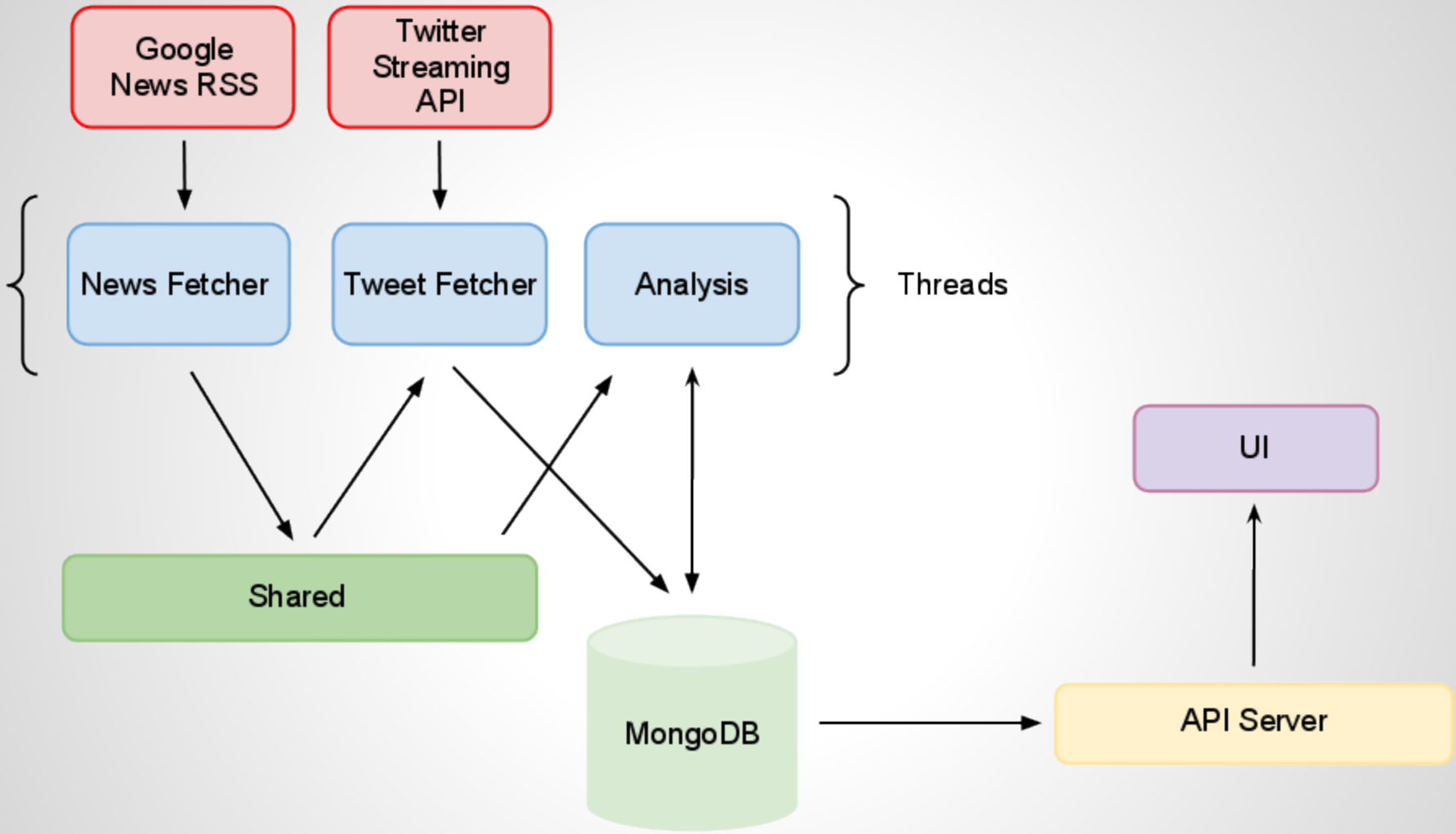
A News Tile™

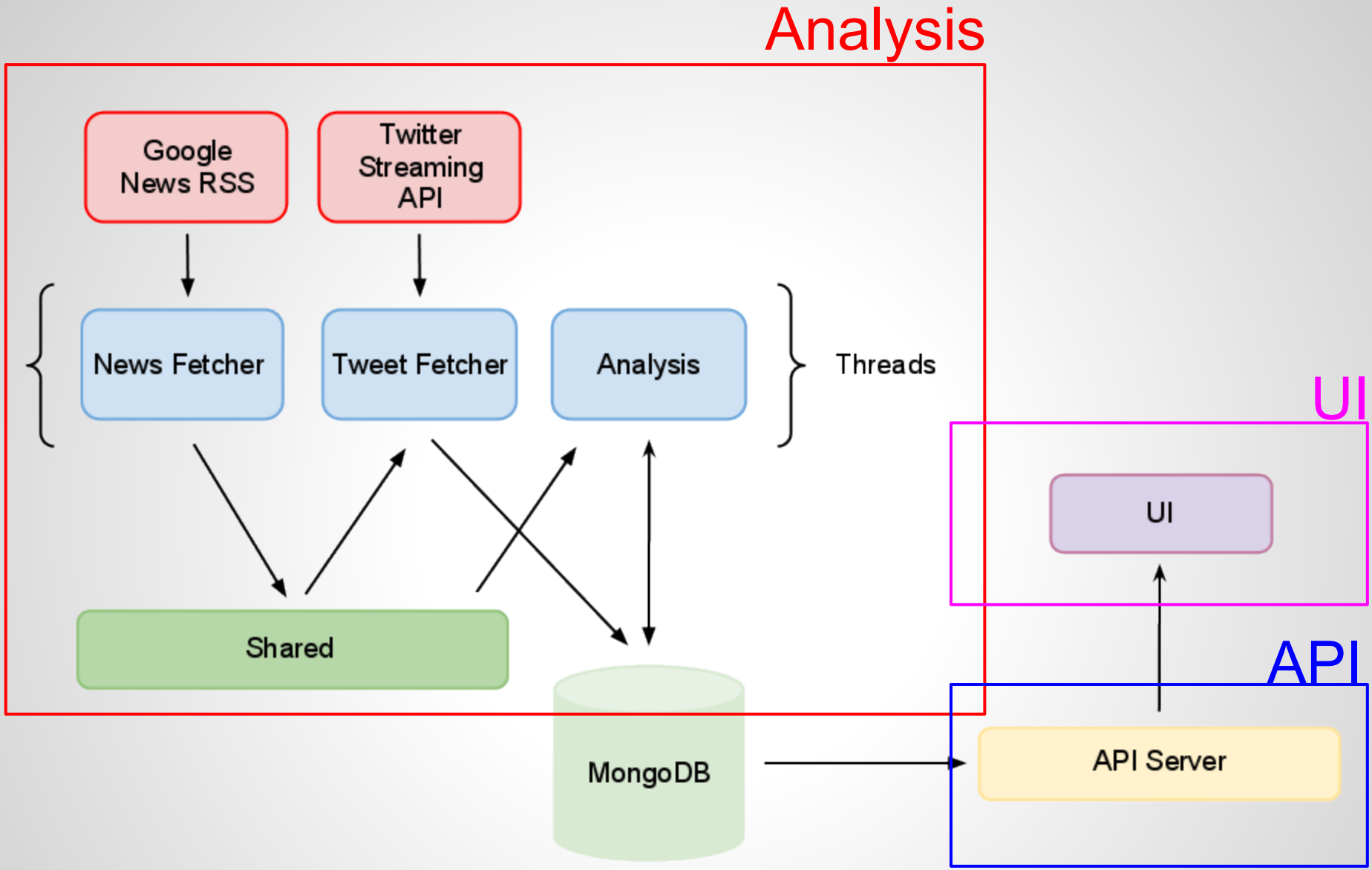

Iran says bomb kills nuclear scientist, blames Israel
By Ramin Mostafavi | TEHRAN (Reuters) - Iran said one of its nuclear scientists was killed on Wednesday by a magnet bomb fixed to his car by a motorcyclist and blamed Israel for the attack, intensifying diplomatic tensions the West over Tehran's
explotar
rajoy
ahmadi
nuevo
gobierno
felicita
roshan
espa
dans
por
como
tercera
del
stop
mustaf
con
atentado
Juank_Parada: La Tercera: Cientìfico nuclear iranì muere al explotar una bomba en su coche en Teher·n: Mustaf· Ahmadi Roshan ... http://t.co/NrOfaMuc
felibombastic: Cientìfico nuclear iranì muere al explotar una bomba en su coche en Teher·n http://t.co/VMLWYAR8
CLNews_: La Tercera: Cientìfico nuclear iranì muere al explotar una bomba en su coche en Teher·n http://t.co/ZXUeyfqP
radio_bemba: Muere en atentado cientìfico iranì que trabajaba en planta nuclear: El vicegobernador de Teher·n, Safar Ali Bara... http://t.co/kKeQZIrO
tuideagrafica: Muere en atentado cientìfico iranì que trabajaba en planta nuclear http://t.co/OJcY7rdS

A News Tile™

How Does It Work?

The magic behind TANR


Google News RSS
Twitter Streaming API
News Fetcher
Tweet Fetcher
Analysis
Threads
UI
Shared
MongoDB
API Server


Analysis
Google News RSS
Twitter Streaming API
News Fetcher
Tweet Fetcher
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Threads
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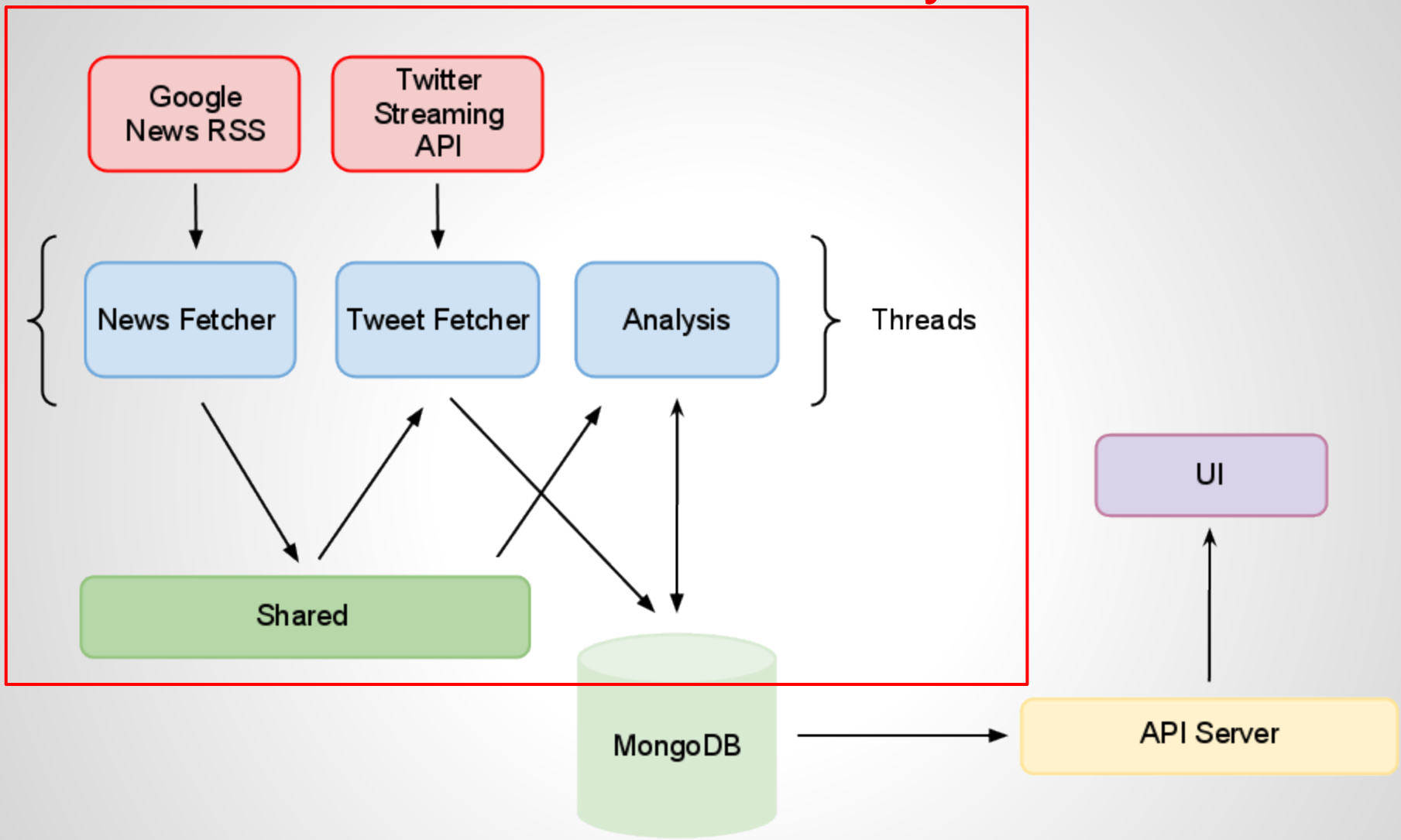
UI
UI
API
API Server

Analysis

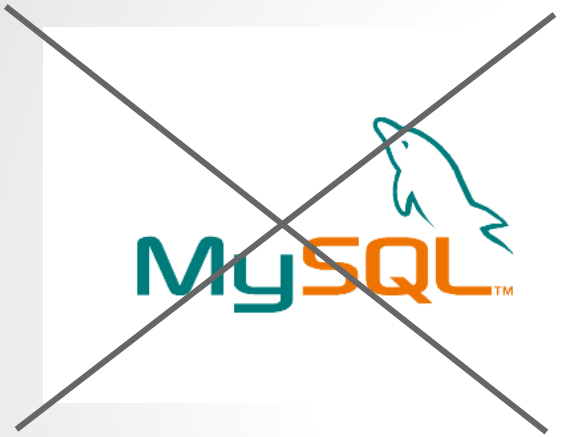

Google News RSS
Twitter Streaming API
News Fetcher
Tweet Fetcher
Analysis
Threads
Shared
MongoDB
API Server
UI

MySQL™

PostgreSQL

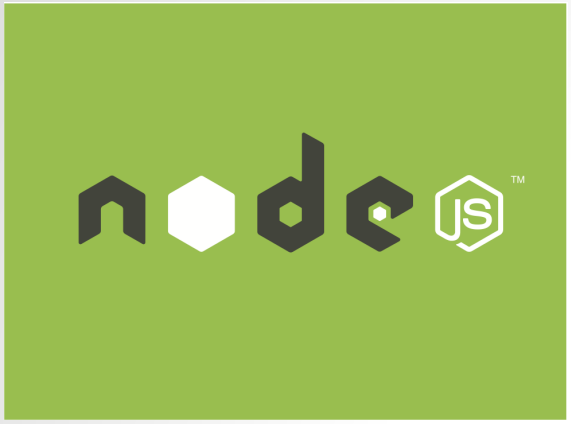
mongoDB

- Hard to store JSON
- Required predefined structured data

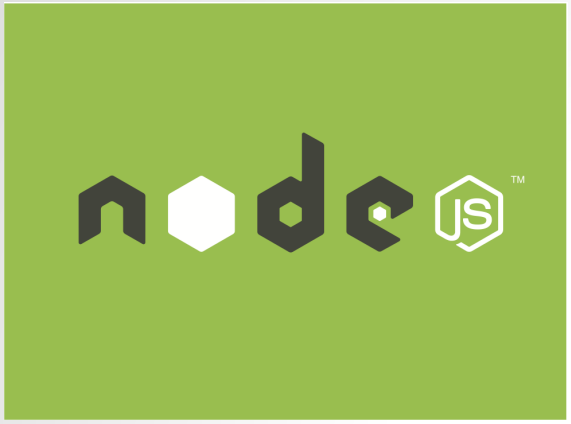


- Hard to store JSON
- Required predefined structured data

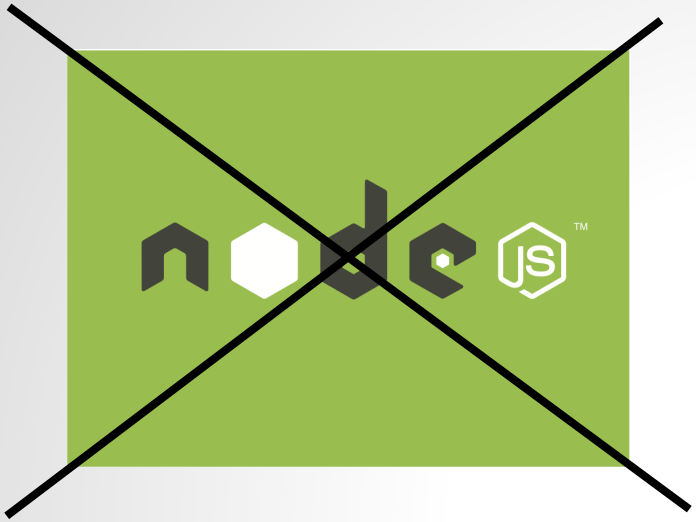
NoSQL, NoWorries
Easily save Twitter's JSON


node
JS
TM

python
TM



+	-
• Known • New & Hip • Fast	• Known • New & Hip • No Threads

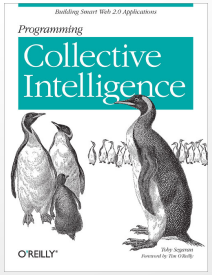

node
JS
TM

python
TM

python™

- Great Web Languages
- Thriving Communities
- Lots of Libraries

- Argument from Authority



3 Threads

News Fetcher

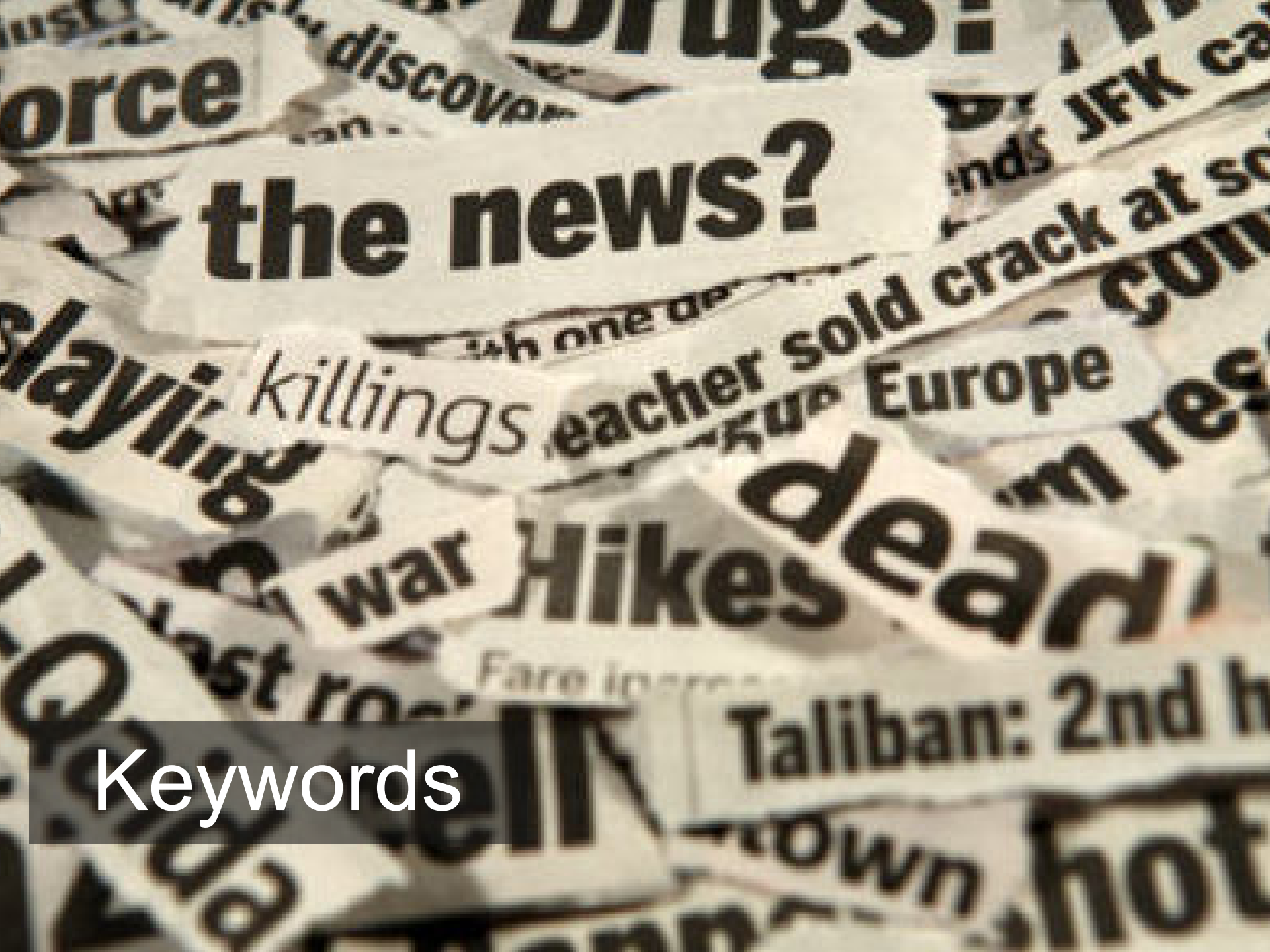
- Fetch Rss Feed
- Extract Info
- Generate Keywords
- Save Into Shared Storage
- Repeat

Tweet Fetcher

- Fetch Tweets
- Save Into DB

Analysis

- Match Tweets with Stories
- Generate Word Clouds
- Calculate Sentiment
- Save Into DB
- Repeat


Drugs!
the news?
killings
sold crack at
Europe
war
Hikes
dead
Taliban: 2nd

Keywords

Should we do it ourselves?

... no it's really hard!

to the RESCUE

Still Need to Verify & Filter

Sentiment

Should we do it ourselves?

... no it's really hard!

Twitter Sentiment

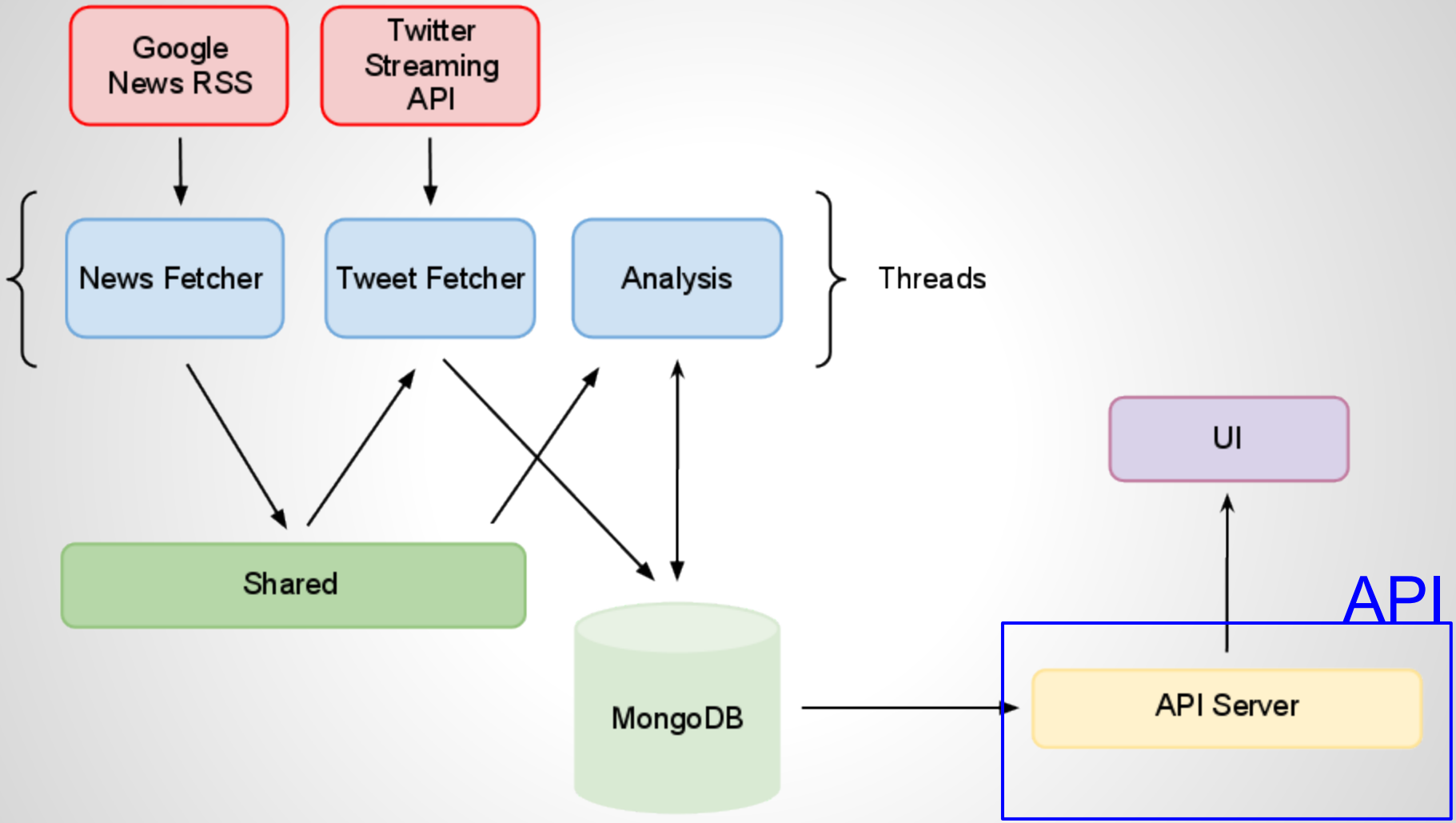
to the RESCUE

Still Need to Collate the Results

"Good coders code, great coders reuse"

- Anonymous

- Not the core of our project
- Complicated
- Time consuming


Google News RSS
Twitter Streaming API
News Fetcher
Tweet Fetcher
Analysis
Threads
UI
Shared
API
MongoDB
API Server

python™

~~
~~

Flask

web development,
one drop at a time

~~
~~

API

/api/news

{"news": ["4f0e28be3cd38a469000010b", "4f0e27273cd38a469000010a"]
"requesttime": 1326383256.394702, "bottomtimestamp": 1326326439.71205,
"toptimestamp": 1326327975.796081}

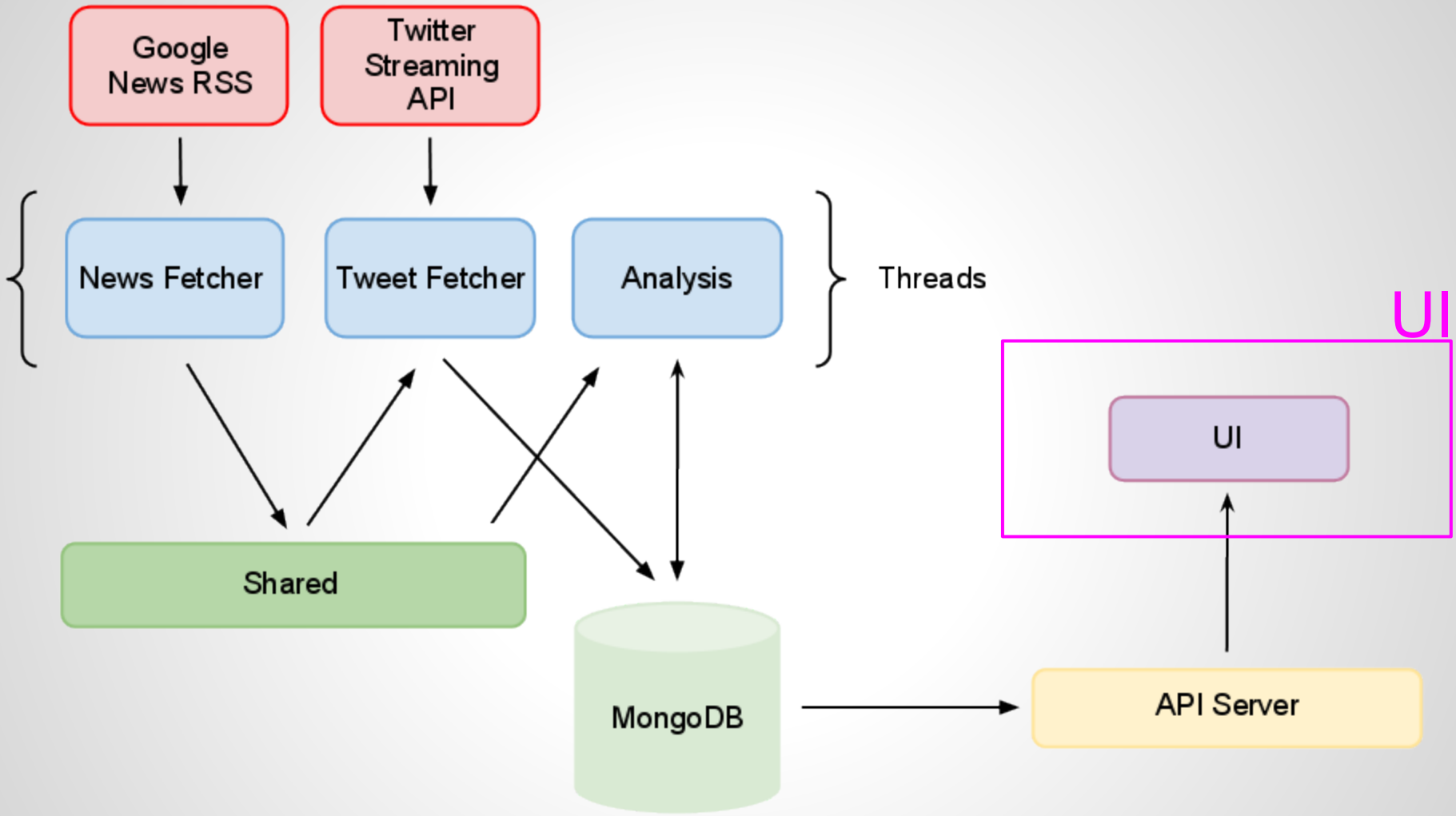
/api/news/before/<timestamp>

{"news": ["4f0e28be3cd38a469000010b", "4f0e27273cd38a469000010a"]
"requesttime": 1326383256.394702, "bottomtimestamp": 1326326439.71205,
"toptimestamp": 1326327975.796081}

/api/news/after/<timestamp>

{"news": ["4f0e28be3cd38a469000010b", "4f0e27273cd38a469000010a"]
"requesttime": 1326383256.394702, "bottomtimestamp": 1326326439.71205,
"toptimestamp": 1326327975.796081}

/api/story/<story_id>


Google News RSS
Twitter Streaming API
News Fetcher
Tweet Fetcher
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Threads
UI
UI
Shared
MongoDB
API Server

What TANR Looks Like

And how it got there...

After several days of initial proposals and discussion

And many, many pieces of scrap paper later, we came up with something we all agreed on...

Twitter UI Test

hello

hello

hello

hello

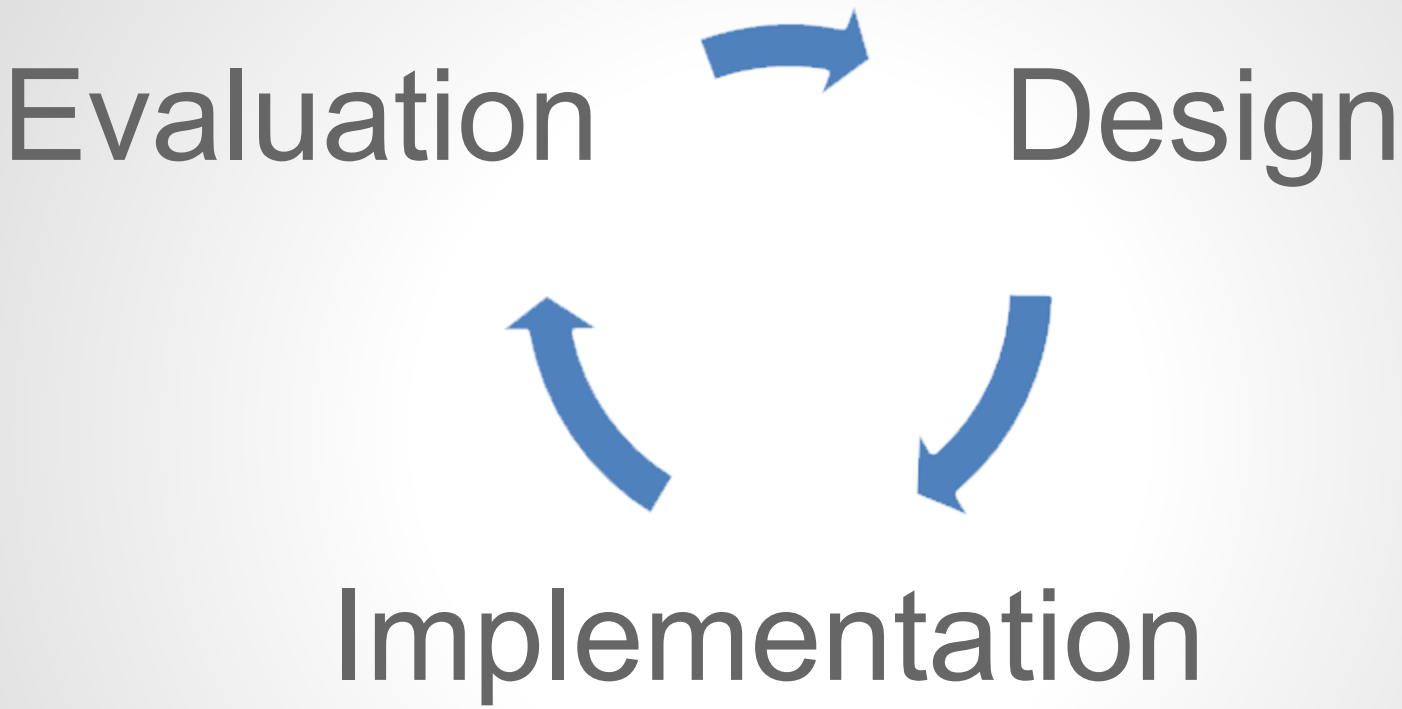
hello

hello

hello

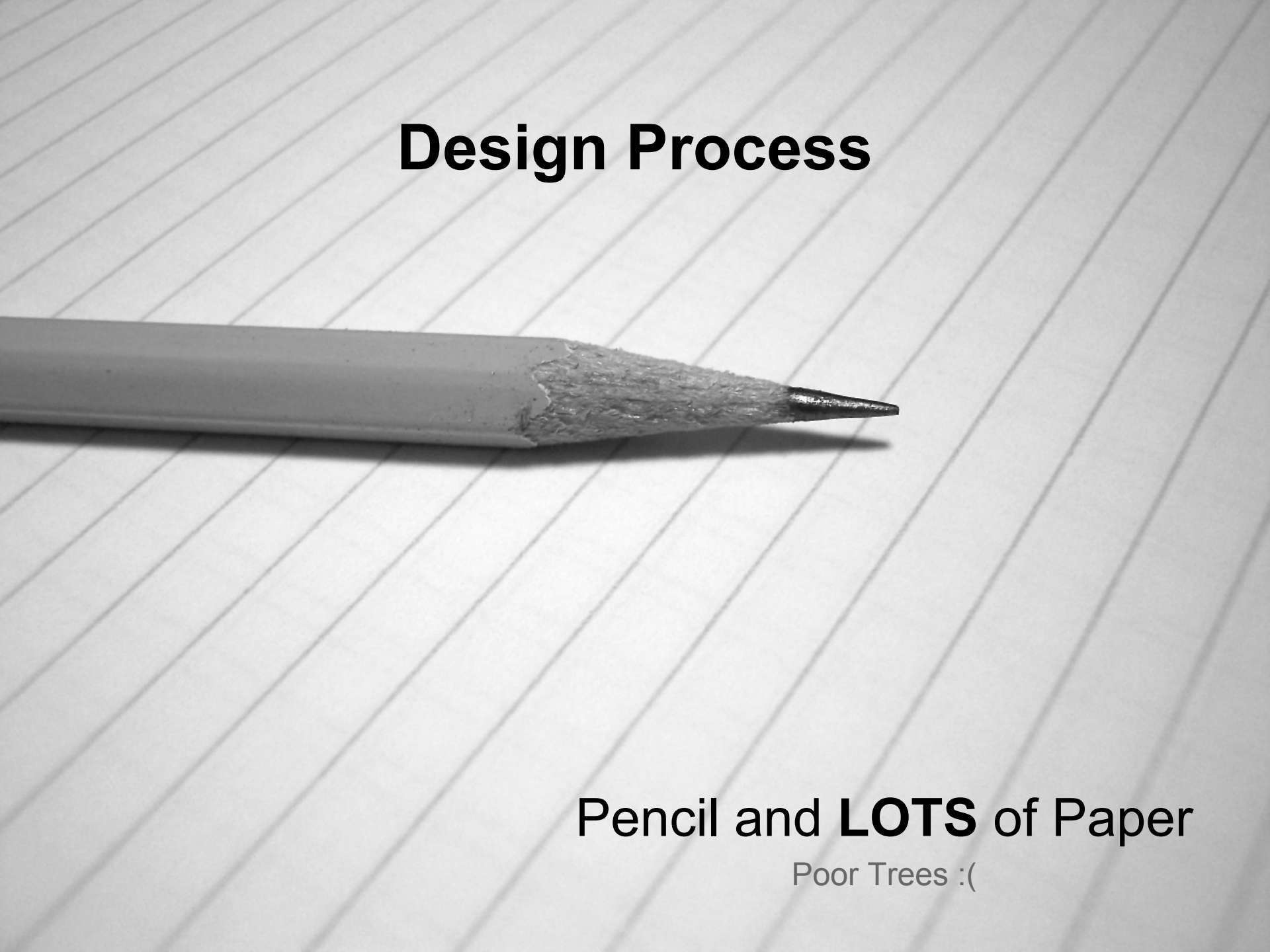
hello

hello



Iteration process for the UI

Design Process



Pencil and **LOTS** of Paper

Poor Trees :(

Implementation Process

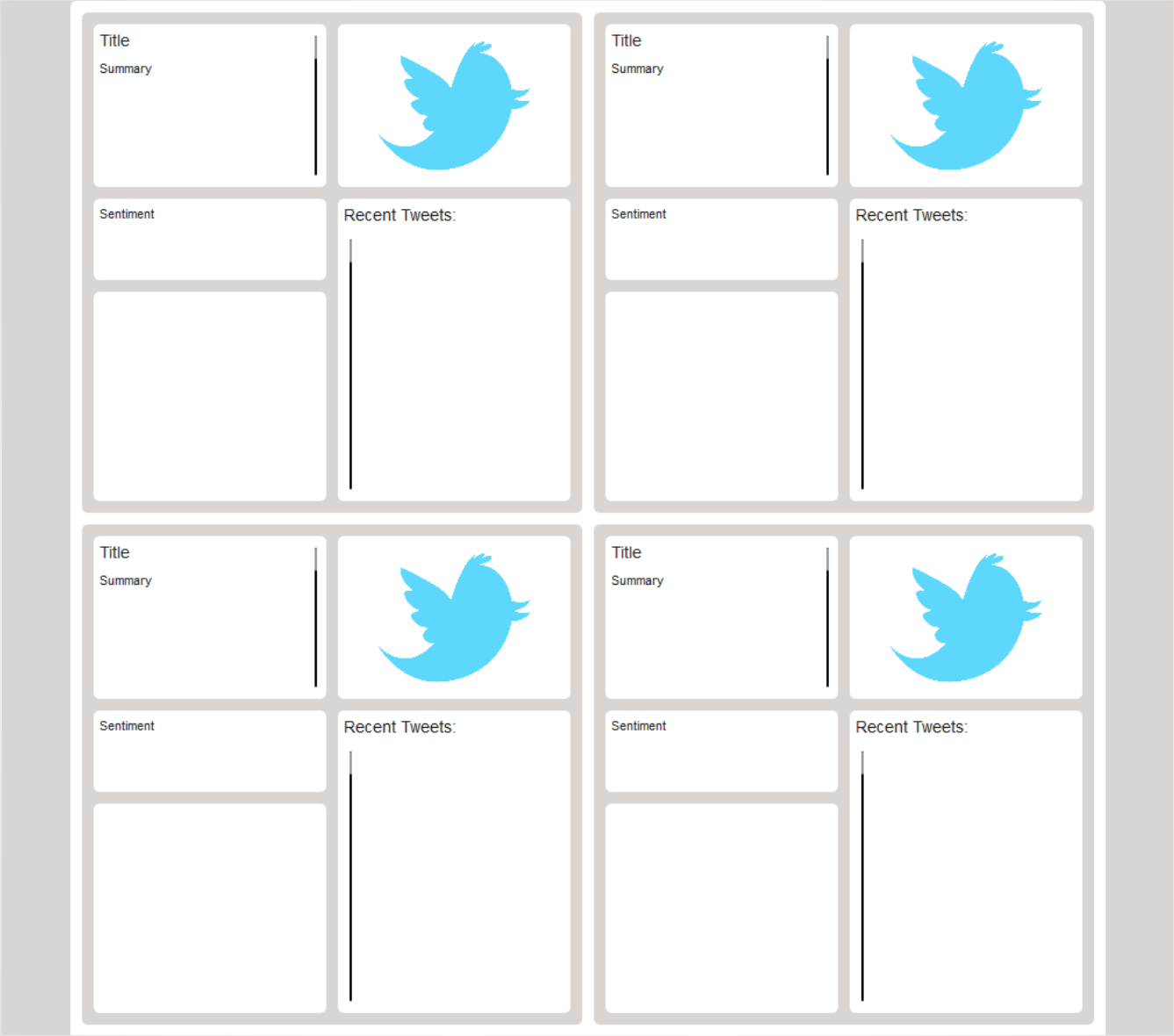
- Research into tools available
- Testing
- Integrate/Update previous UI
- Tweaking
- More tweaking
- Yep, more tweaking
- Browser compatibility (as much as possible)

Evaluation Process

Evaluation Process

- Initial testing and feedback amongst group
- Your users are your best friends!
  - New users
  - Users who tested a previous iteration
- Observe how users interact with UI
- Collect feedback and suggestions

News Tiles™ v2 (incorporation of various API elements)



News Tiles™ v3 (after some user feedback)

After some more user feedback (thank you users!)

And countless hours of tweaking, testing and battling with various browsers...

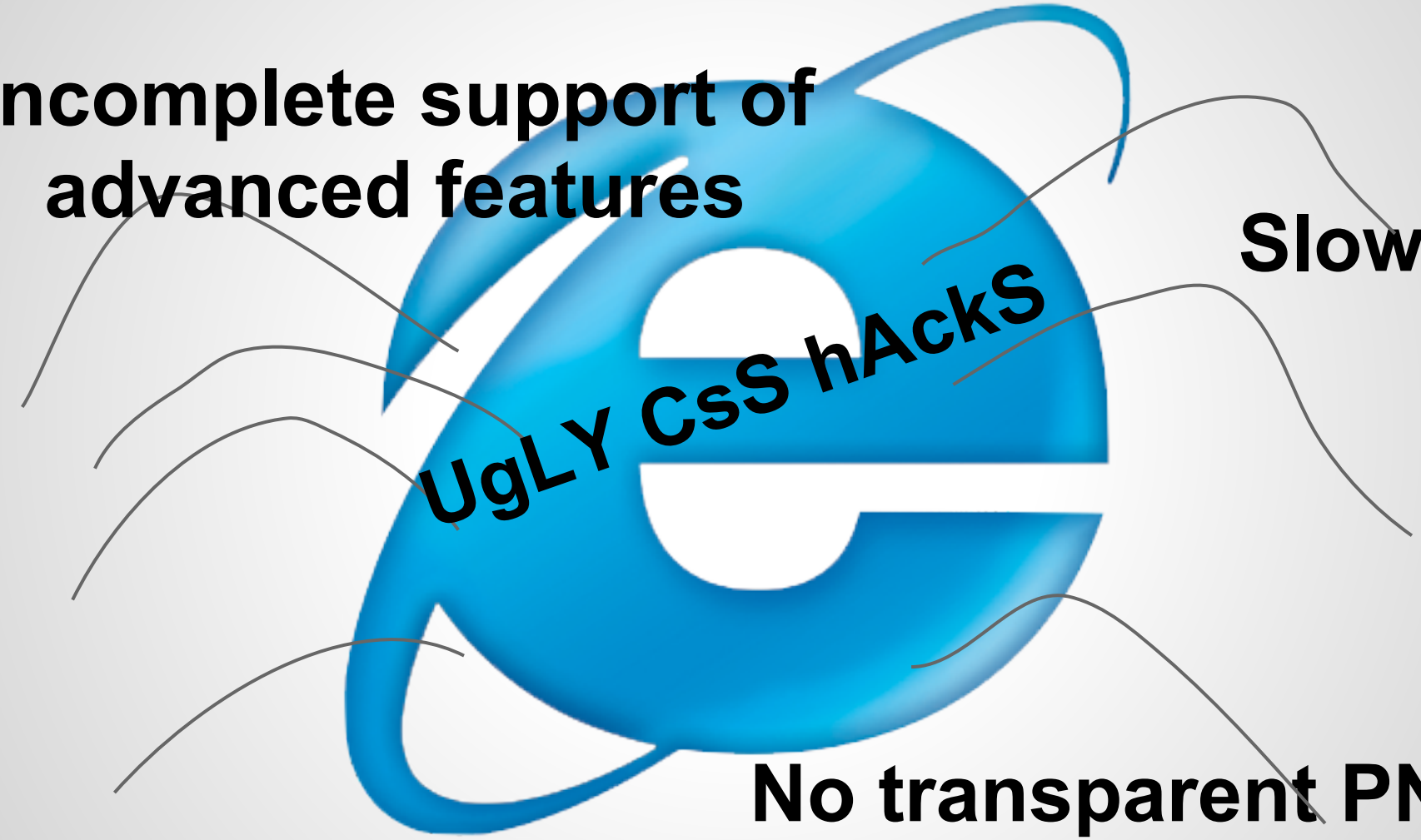
News Tiles™ vLostCount

From paper prototypes to working webpages...

There was one slooow giant that was stopping us from rapid prototyping

Can you guess who?

The IE6(and above, and below) Monster



sizable market share, but none of us had a copy

The perfect solution

Welcome to the family, caveman

With less reponsibility comes great power...

HTML

CSS

not perfect, but no surprises.

```
switch(browserType){
	case 'webkit':
		$('#refresh').css('background',
			'-webkit-linear-gradient(right , rgb(222,222,55) '+bottom+'%, rgb(255,255,255) '+ top
		+'%)');
		break;
	case 'mozilla':
		$('#refresh').css('background',
			'-moz-linear-gradient(right , rgb(222,222,55) '+bottom+'%, rgb(255,255,255) '+ top
		+'%)');
		break;
	case 'opera':
		$('#refresh').css('background',
			'-o-linear-gradient(right , rgb(222,222,55) '+bottom+'%, rgb(255,255,255) '+ top
		+'%)');
		break;
	case 'ie':
		$('#refresh').css('background',
			'-ms-linear-gradient(right , rgb(222,222,55) '+bottom+'%, rgb(255,255,255) '+ top
		+'%)');
		break;
	default:
		$('#refresh').css('background',
			'linear-gradient(right , rgb(222,222,55) '+bottom+'%, rgb(255,255,255) '+ top +'%)');
}
```

X-browser made easy

and LOTS of plugins and libraries

Getting in touch

Sample Json...

api/news

```
"news": [
    "4f0f46433cd38a3e5a000002",
    "4f0f48163cd38a3e5a000003",
    "4f0f4a713cd38a3e5a000004",
    ... (omitted)
 ],
... (other state-tracking details)
```

api/story/{storyid}

```
"sentiment": {
      "positive": 2, ...
 },
"title": ...(title)
"summary": ...(the article),
"tweets":
      [...(array of author-tweets)]
"wordcloud":
      { ...(all the word-weight pairs)
},
...(other state-tracking details)
}
```

Simple,
but how simple?

Aaaah, JQuery...❤

So simple that the code is readable on ONE slide!

```
$.getJSON("api/news", function(data)
    for(i = 0; i < data.news.length; i++)
        $.getJSON
        (
            "api/story/" + data.news[i],
            populateBox(data.news[i], i*600, 'append')
        )
```

Note: Removed some brackets to reduce eye-strain.

Title ✔

Short summary ✔

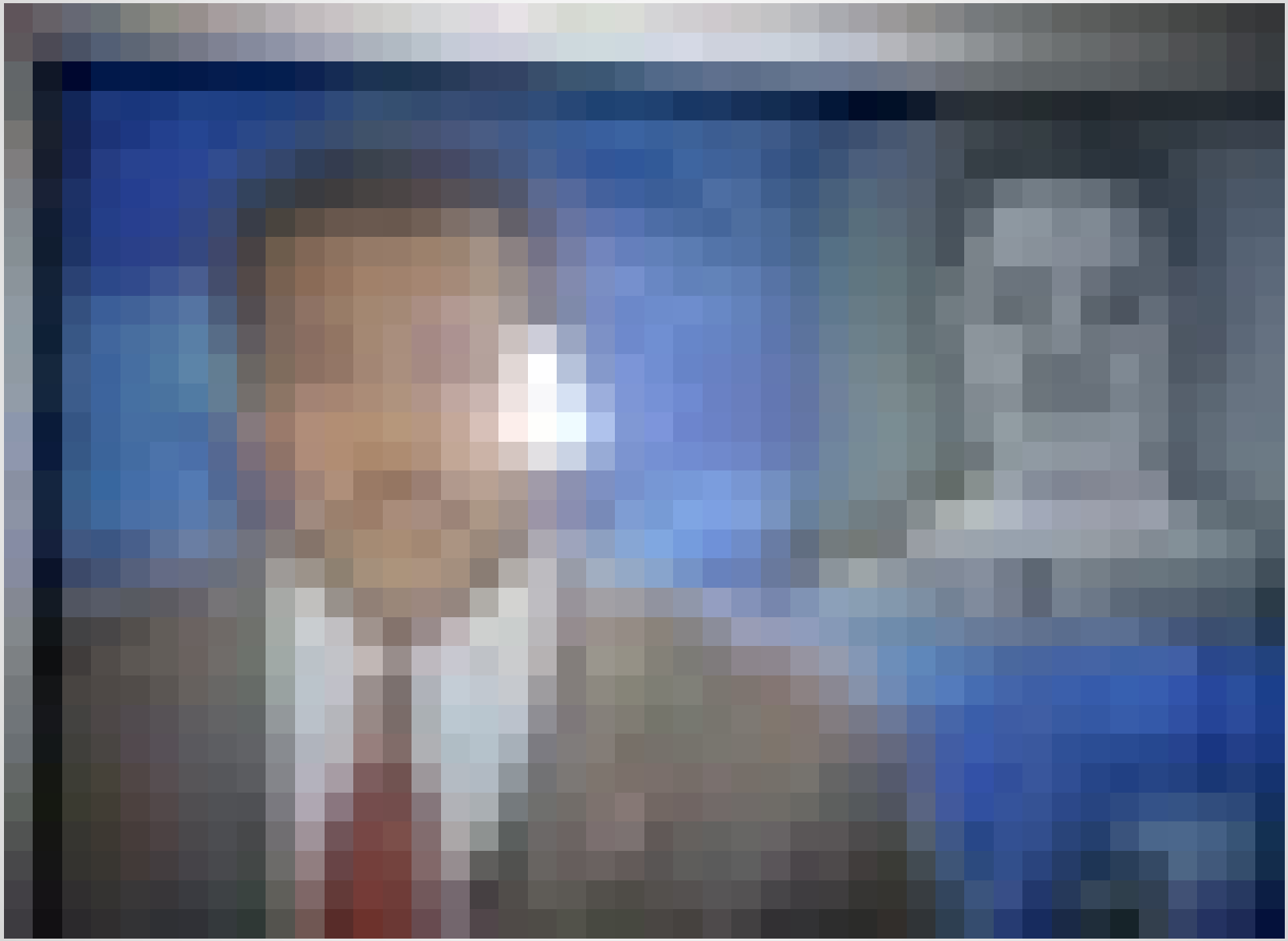
Link to the story ✔

Tweets ✔

functional, but not pretty.

Let's beautify it

Getting their faces



Getting high res faces that match the stories

Naive approach

BBC Mobile | News | Sport | Weather | iPlayer | TV

NEWS BEDS, HERTS & BUCKS

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10 January 2012 Last updated at 12:53

2 Share

Whipsnade Zoo begins annual stocktake

Keepers at Whipsnade Zoo in Be fordshire have begun their annual stocktal f every

Just grab this!
How hard can it be?

Baby elephant George is added to the list by an elephant keeper

The compulsory annual count is required for the zoo to retain its licence.

The data is collated so it can be shared with zoos around the world to assist with breeding programmes for endangered species.

"The annual stocktake is an important, albeit mammoth, task," said curator Malcolm Fitzpatrick.

Related Stories

Whipsnade Zoo gets new giraffe

No backup chute

Bad

Naive approach

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Related Stories

Whipsnade Zoo gets new giraffe

Results

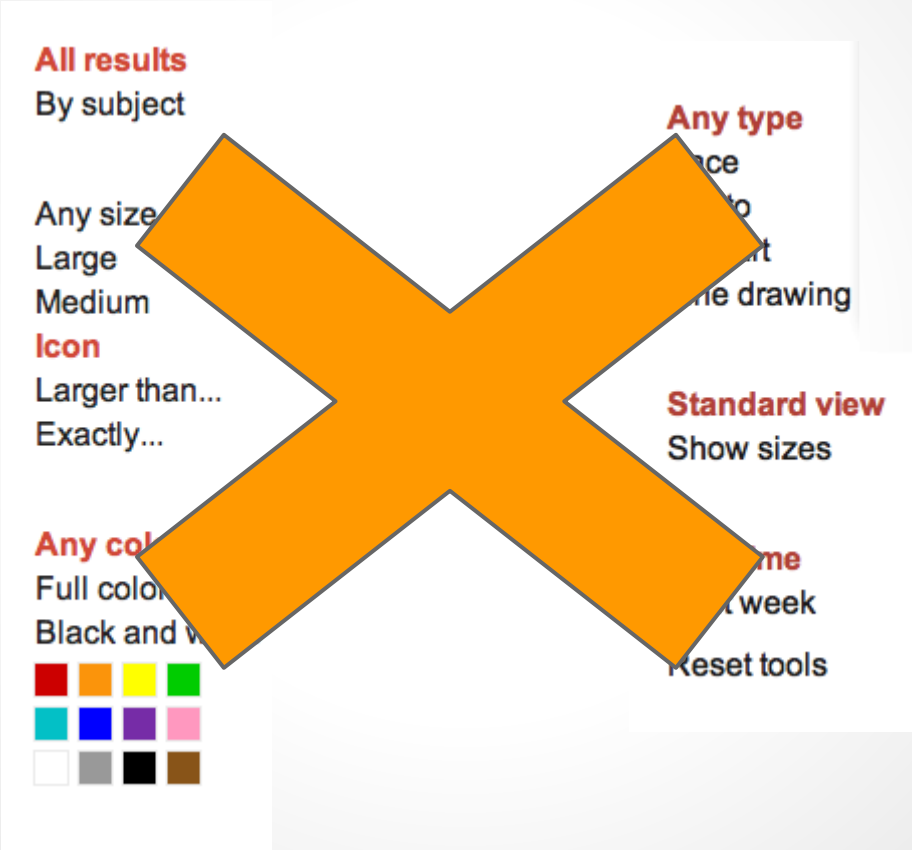
Ideal situation: pick our favourite image from sea of images

Where can we find them?

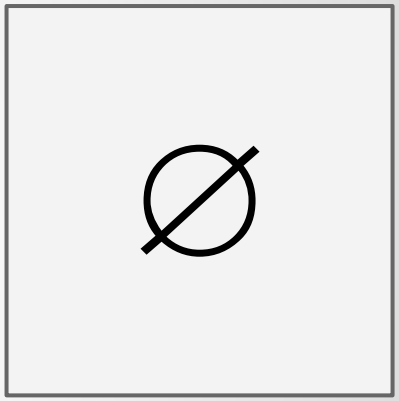
When in doubt...

Google™

But


All results
By subject
Any size
Large
Medium
Icon
Larger than...
Exactly...
Any type
Standard view
Show sizes
Reset tools

Can one size fit all?



Answer:
Get sufficiently large ones
Then pick one

bonus: They are ordered!

Just a metaphor,
Doll size represents <u>relevance</u>

The end result?

An awesome, new kind of news reader:

Some insights

Questions?

No? Great!