

data-driven innovation & design



datascoppe
analytics

2012.11.02

datascope analytics



Dean Malmgren
Engineering PhD



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Physics PhD



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MBA



Computer Scientist
Industrial Engineer
Electrical Engineer
Statistician

???

6 projects for 5 clients in 2011

Global management consulting firm
Global information services provider
Global e-discovery services company
U.S. non-profit foundation
U.S. university



6 projects for 6 clients in 1H2012

Global internet search provider
Global consumer packaged goods company
Global information services provider
Global e-discovery services company
Government
U.S. non-profit foundation

100% repeat business

Redefining the data science process

why focus on the last few data points?

91.00003%

Ask new questions

Take a step back and think about new innovative ways to attack the problem

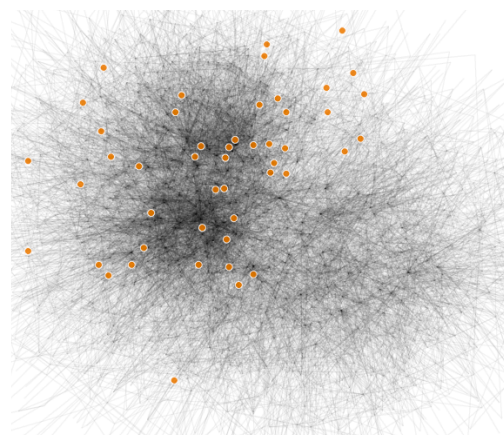
have you reframed the problem?

[illegible]

Large gains in short time

Recasting the problem allows you to explore new opportunities to find different solutions in a short period of time

can leadership understand
the results?



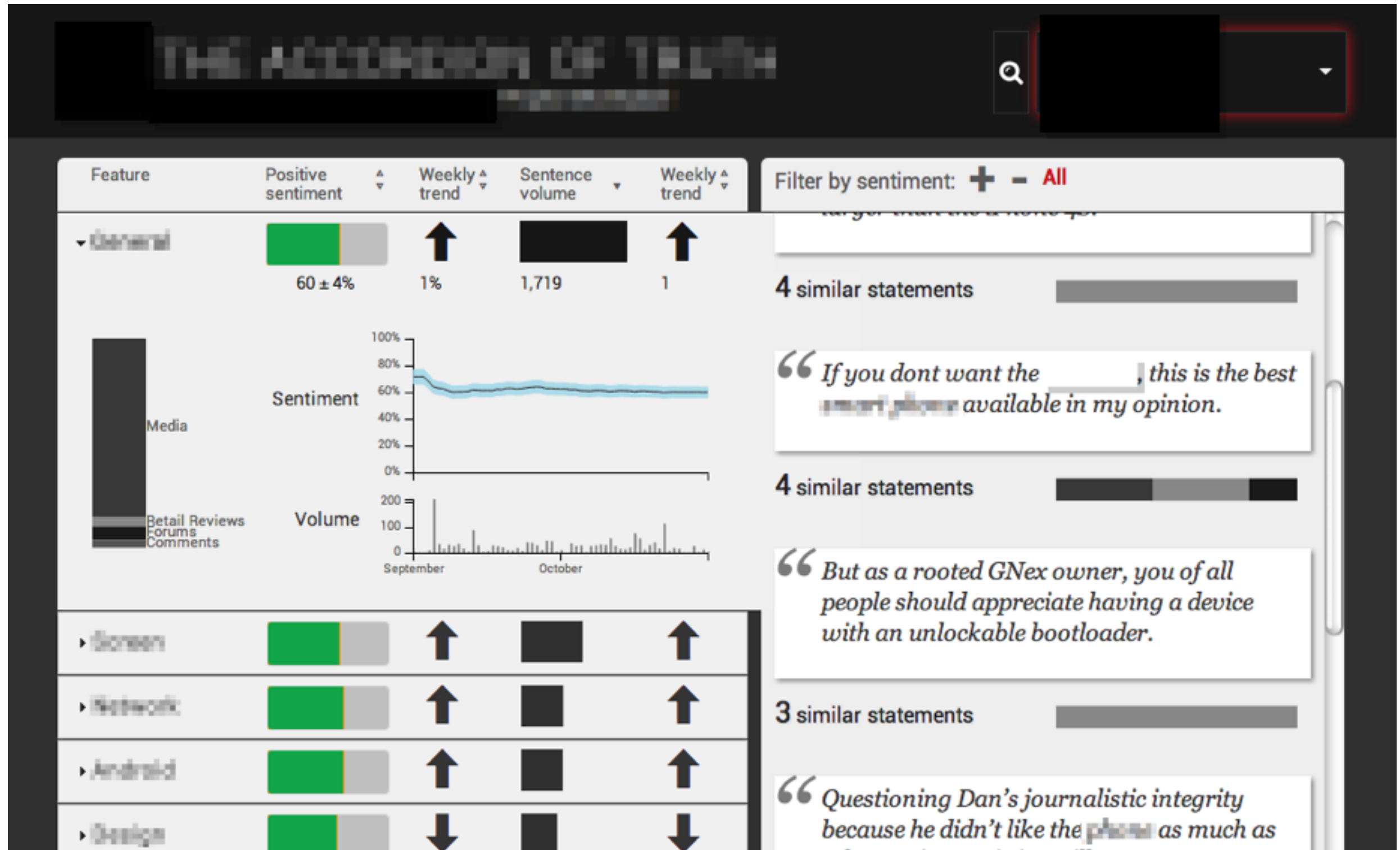
Always focus on the end user

Incorporate a rapid iterative process to ensure the user understands the nuts and bolts of the analysis and most importantly, the deliverable is useful

Visual candy

data-driven market research

major cell-phone provider



data-driven e-discovery

daegis

CURRENT ACCURACY

47%

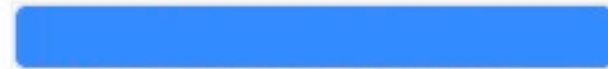
Recall ?



92% of goal achieved (51%)

99%

Precision ?



181% of goal achieved (55%)

64%

F1 ?



120% of goal achieved (53%)

[edit goal](#)

[where do these numbers come from?](#)

COST CALCULATOR

1,081

total documents

4,100

eyes-on reviews so far

\$-2,868

savings over linear review

\$94

cost of last 1.9% gain in F1

0

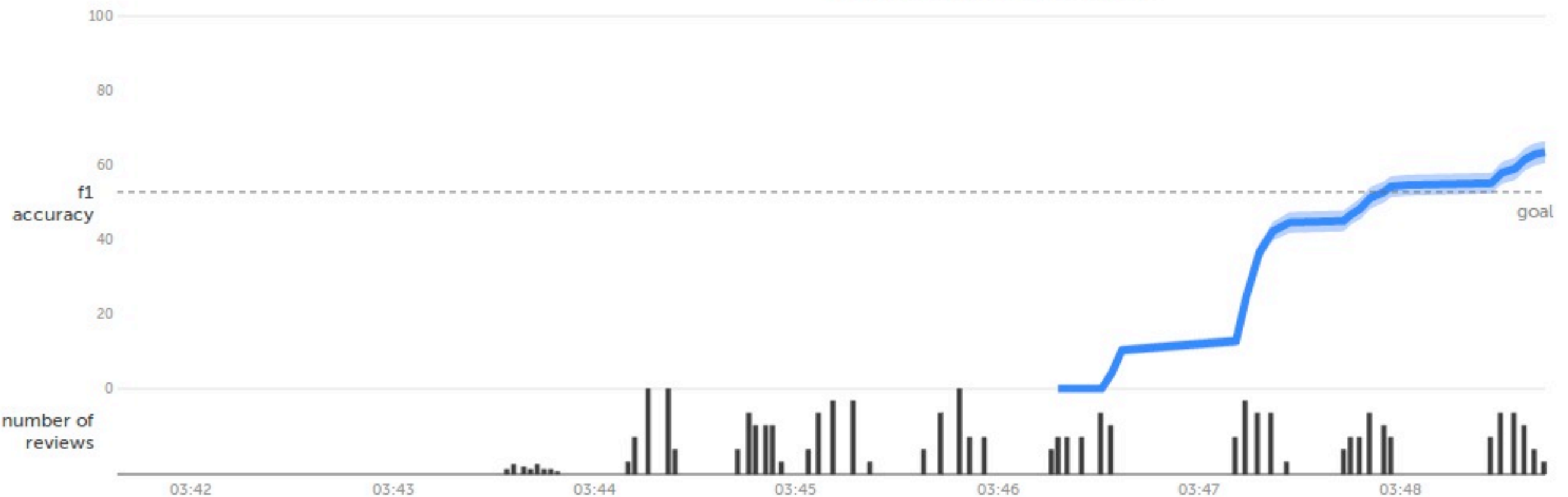
additional eyes-on reviews ?

\$1.25

per eyes-on review ?

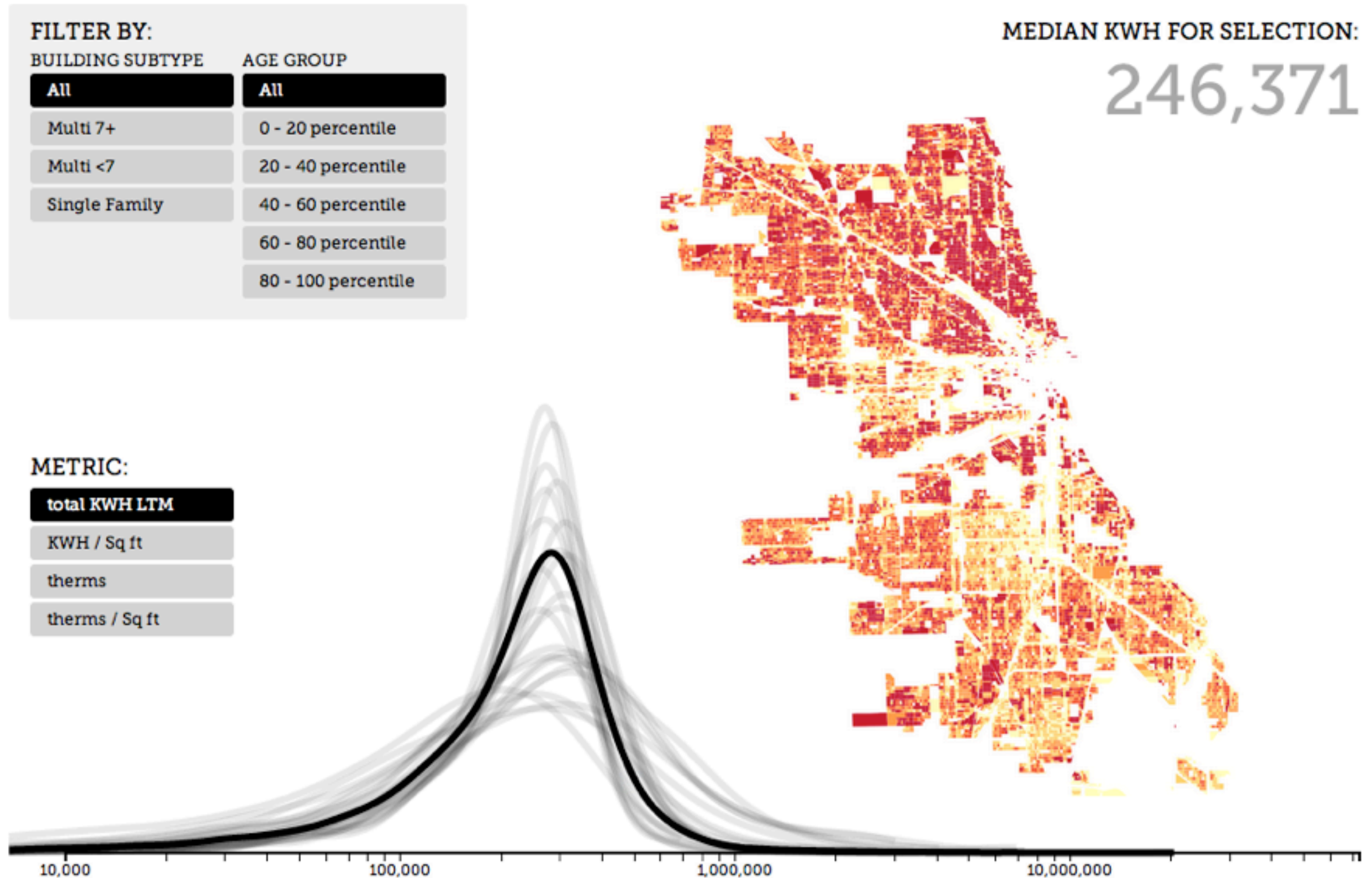
\$0.30

per unreviewed document ?



data-driven energy policy

city of chicago / ideo



d3.js Data-Driven Documents

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A JavaScript tool for visualization on the web

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The successor to our *Protovis* framework

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BSD-licensed; now widely adopted & deployed

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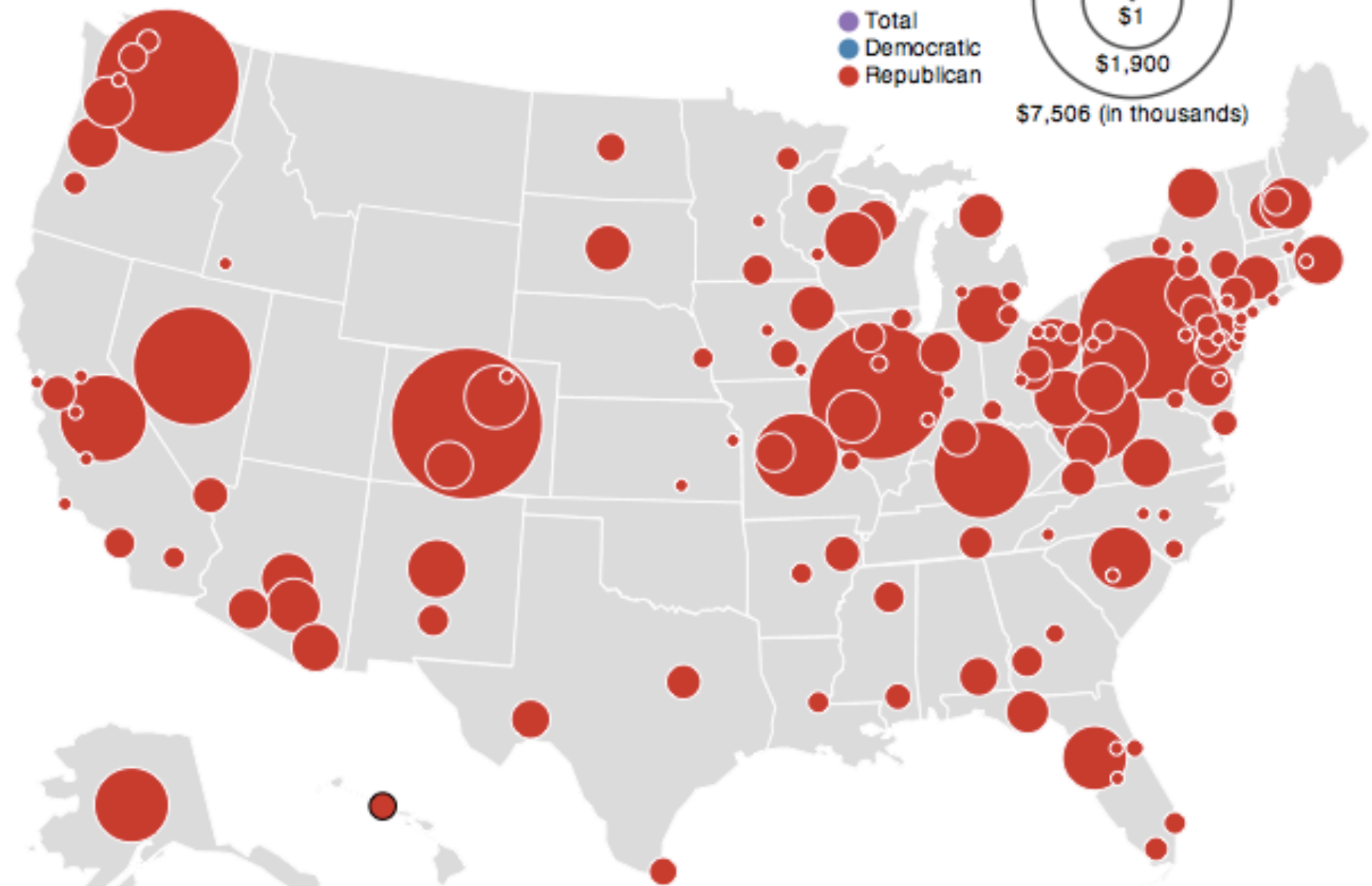
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The Washington Post

Four Ways to Slice Obama's 2013 Budget Proposal

Explore every nook and cranny of President Obama's federal budget proposal.

All Spending

Types of Spending

Changes

Department Totals

Mandatory

\$2.5 trillion

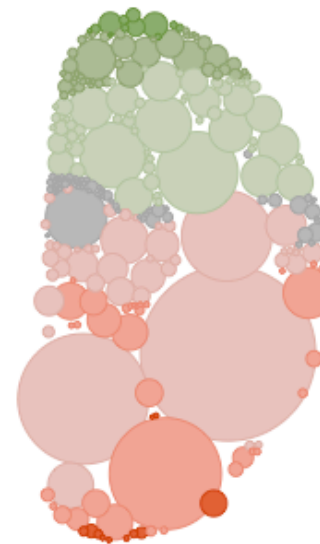
About 70 percent of budgetary spending is controlled by existing laws, including entitlements like Medicare, Medicaid and Social Security.



Discretionary

\$1.1 trillion

Only about 30 percent of the budget is controlled by the annual budget process. Last August, the White House and Congress agreed to a cap on this spending.



The New York Times

Chart shows \$3.7 trillion authorized to be spent in 2013. (Total spending is estimated to be \$3.8 trillion, including funds authorized in other years). Negative budget authority, which results from fees or other collections, is shown only on the department totals tab, but is included in other totals.

By SHAN CARTER | [Send Feedback](#)

Office of Management and Budget

stamen design



stamen design



Class information

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Github repository:

www.github.com/ahwolf/d3_tutorial

Class survey:

<http://goo.gl/fcM5U>