

MOZCON

2014

WELCOME!



ARCHITECTING GREAT EXPERIMENTS

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#MozCon



MEANS
WRITE IT DOWN
OR
TWEET IT

EXPERIMENT CONCEPTS

SIGNIFICANCE

The risk of encountering a false positive.

95% = out of 100 a/a tests, 5 will inaccurately report a difference.

POWER

The risk of encountering a false negative.

80% = out of 100 a/b tests, 20 winners will not be reported.

ONE-TAIL VS. TWO TAIL

One tail = is the variation better?

Two tail = is the variation better OR worse?

MDE

Minimum detectable effect

SAMPLE SIZE

How many subjects are in your experiment.



Always use a sample size calculator to calculate sample size
before starting an a/b test.

bit.ly/VUBti8

SAMPLE SIZE CALCULATOR

bit.ly/SWR3YC

EXAMPLE

Absolute lowest MDE

CONVERSION RATE: 4%

MDE: 1%

POWER: 80%

SIGNIFICANCE: 5%

TAILS: ONE

2,972,435

Visitors per branch

EXAMPLE

Focus on time

1 month = 170,000 unique visitors

CONVERSION RATE: 4%

MDE: 6%

POWER: 80%

SIGNIFICANCE: 5%

TAILS: ONE

83,230

Visitors per branch

EXAMPLE

Small startup

1 month = 3,000 unique visitors

CONVERSION RATE: 4%

MDE: 45%

POWER: 80%

SIGNIFICANCE: 5%

TAILS: ONE

1,567

Visitors per branch



Sample size calculators tell you how many subjects,
but not which subjects should be in your experiment.

SAMPLING

- can be really hard
- week day vs. weekend traffic
- campaign vs. organic traffic
- returning vs. new visitors

WHERE SHOULD I TEST?

EXAMPLE

E-commerce website

Order before 1pm PST for **FREE Next Business Day** shipping on all **Clothing**. [Learn More](#)

24/7 Customer Service (800) 927-7671

Help



Log In or Register

My Account

My Favorites



Shoes, Clothing, Bags, etc.

SEARCH

CLEARANCE
SHOP NOW »

FREE
SHIPPING & RETURNS



SEARCH BY: [Size](#), [Narrow Shoes](#), [Wide Shoes](#), [Popular Searches](#)

SHOES

CLOTHING

BAGS & HANDBAGS

AT HOME

BEAUTY

ACCESSORIES

SHOP BY...

WOMEN'S

MEN'S

KIDS'

ALL DEPARTMENTS

ALPHABETICAL BRAND INDEX

• A • B • C • D • E • F • G • H • I • J • K • L • M • N • O • P • Q • R • S • T • U • V • W • X • Y • Z

SHOP WOMEN'S

Clothing

Shoes

Sandals

Sneakers & Athletic Shoes

Dresses

SHOP MEN'S

Clothing

Shoes

Sneakers & Athletic Shoes

Sandals

Jeans

SHOP KIDS'

Girls' Clothing

Boys' Clothing

Girls' Shoes

Boys' Shoes

SHOP GIFT CARDS



SANDALS

SHOP NOW »

BACKPACKS

SHOP NOW »



ENTER FOR
A CHANCE TO

WIN

A FREE PAIR OF SHOES

HOMEPAGE ASSUMPTIONS

1. Lots of traffic
2. Relatively few conversions

Let's estimate:

- 2.5% conversion rate
- 100,000 monthly unique visitors

RUN EXPERIMENT FOR 1 MONTH (100K VISITORS)

CONVERSION RATE: 2.5%



POWER: 80%

SIGNIFICANCE: 5%

TAILS: ONE

MDE: 10%

YOUR ORDER SUMMARY

YOUR ITEM	ITEM PRICE	QUANTITY	PRICE
 <p>John Varvatos Commuter Cap Toe Derby SKU: #8413525 COLOR: CHARCOAL SIZE: 12 WIDTH: D - MEDIUM</p>	\$228.00 ONLY 3 LEFT! This item may become unavailable if someone else purchases it.	1  Remove	\$228.00
SUBTOTAL (1 ITEM):			\$228.00
NEXT DAY SHIPPING:			FREE
* TAX TO BE COLLECTED:			\$0.00
STORE CREDIT FOR KYLE RUSH:			-\$45.99
GRAND TOTAL:			\$182.01

COMPLETE YOUR ORDER

By placing your order, you agree to Zappos.com's [Privacy Policy](#) and [Terms of Use](#).

[Shipping and Returns Policy](#)

SUBMIT MY ORDER

CHECKOUT PAGE ASSUMPTIONS

1. Lower traffic
2. Relatively high conversion rate

Let's assume:

- 50% conversion rate
- 10,000 monthly unique visitors

RUN EXPERIMENT FOR 1 MONTH (10K VISITORS)

CONVERSION RATE: 50%

POWER: 80%

SIGNIFICANCE: 5%

TAILS: ONE

MDE: 5%



Start by focusing a/b tests on the last step in your conversion funnel.

WHAT SHOULD I TEST?

Depends on MDE and time.

LANDING PAGE OPTIMIZATION

(MOZCON 2013)

bit.ly/1wkpgye

GOING BEYOND THE LOW HANGING FRUIT

(CONVERSION CONFERENCE 2014)

bit.ly/1kU4sZ0

BE FEARLESS

EXPERIMENT

Terse vs verbose

[Home](#)
[Features & Benefits](#)
[Pricing](#)
[Customers](#)
[Resources](#)
[Jobs](#)

A/B testing you'll actually use.

Website optimization made easy.

Watch it in action

Type in a URL, to try it out

Test it Out

REGISTRATION NOW OPEN FOR OPTICON 2014

Over 6,000 Happy Customers

Track what matters to you

Use our trackers to see how your business. Optimizely's custom goal tracking provides an endless range of measurable actions that you can define. Just tell Optimizely what to measure, and we'll do the rest.

Say goodbye to technical bottlenecks and hello to actionable data

When it's time to take action and make changes to your site, there is no measurement for dedicated technical resources - in most organizations, these resources are hard to come by and typically demand waiting in line. Optimizely acts as your on-demand technical team, with technology that turns your creative changes into instantly generated and deployed code.

Revenue now, deploy later

When you find winning variations, you can immediately allocate 100% of your visitors to those variations, until your technical team can deploy those changes to your live site. This means you never have to wait to react to the performance insights your tests uncover, and the results they yield.

Try Optimizely FREE for 30 days!

Sign Up Today

In the News

APRIL 1, 2013

One Entrepreneur's Favorite Start-Up Tools

Read the Story

APRIL 26, 2013

Optimizely Raises \$28 Million To Expand To Custom Website Service

Read the Story

APRIL 26, 2013

Website Testing Service Optimizely Raises \$28M Round Led By Benchmark, Plans Global Expansion

Read the Story

APRIL 26, 2013

The A/B Test: Inside the Technology That's Changing the Rules of Business

Read the Story

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Optimizely

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Product Features & Benefits: Plans and Pricing, Benefits, Optimizely for Agencies, Optimizely for Developers, Optimizely for E-commerce, Optimizely for Enterprises, Optimizely for Publishers, Optimizely for Small Business

Customers: Customer List, Customer Stories

Resources: What is A/B Testing?, What is Split Testing?, Getting Started, Webinar Signup, FAQ, Knowledge Base, API Documentation, Blog

About: About, Jobs, Press, Events, Contact

Other: Certified Partners, Request a Demo, Opt Out

Deutsch, English, Español, Français, Italiano, 日本語, Nederlands, Português, Svenska

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[Implementation](#)
[kyle@optimizely.com](#)

A/B testing you'll actually use.

Type in a URL to try it out

Test it Out

Optimizely

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Product Features & Benefits: Plans and Pricing, Benefits, Optimizely for Agencies, Optimizely for Developers, Optimizely for E-commerce, Optimizely for Enterprises, Optimizely for Publishers, Optimizely for Small Business

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Deutsch, English, Español, Français, Italiano, 日本語, Nederlands, Português, Svenska

RESULT

+31% LEADS

99.9% CONFIDENCE

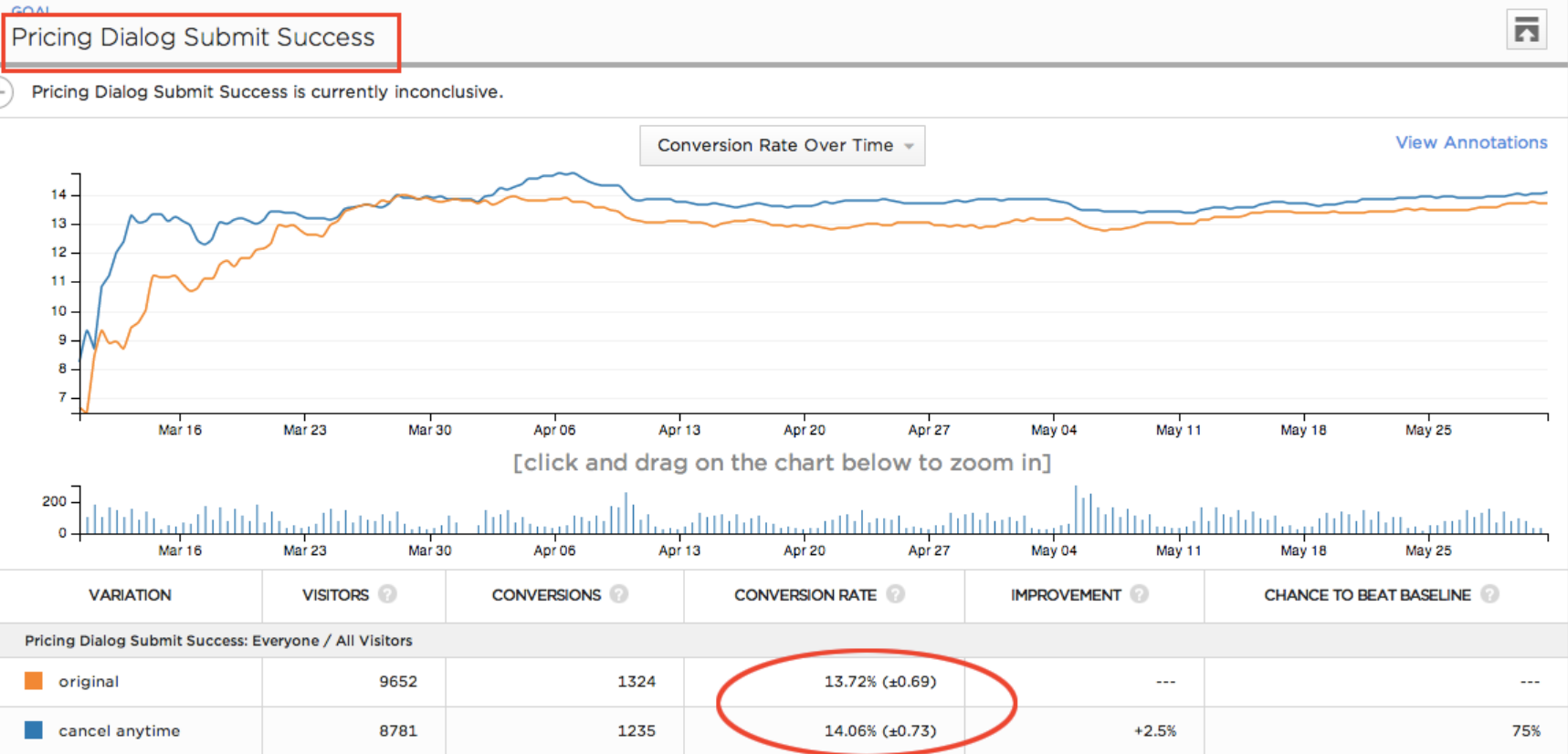
BEFORE YOU TEST

GOALS

- Measure as many goals as possible
 - micro: form field errors, time on page
 - macro: purchase, revenue
- Choose a primary goal
- Don't forget about down the funnel goals
 - Repeat purchase
 - Save payment information

EXAMPLE

Success vs. submit



13.72% CONVERSION RATE

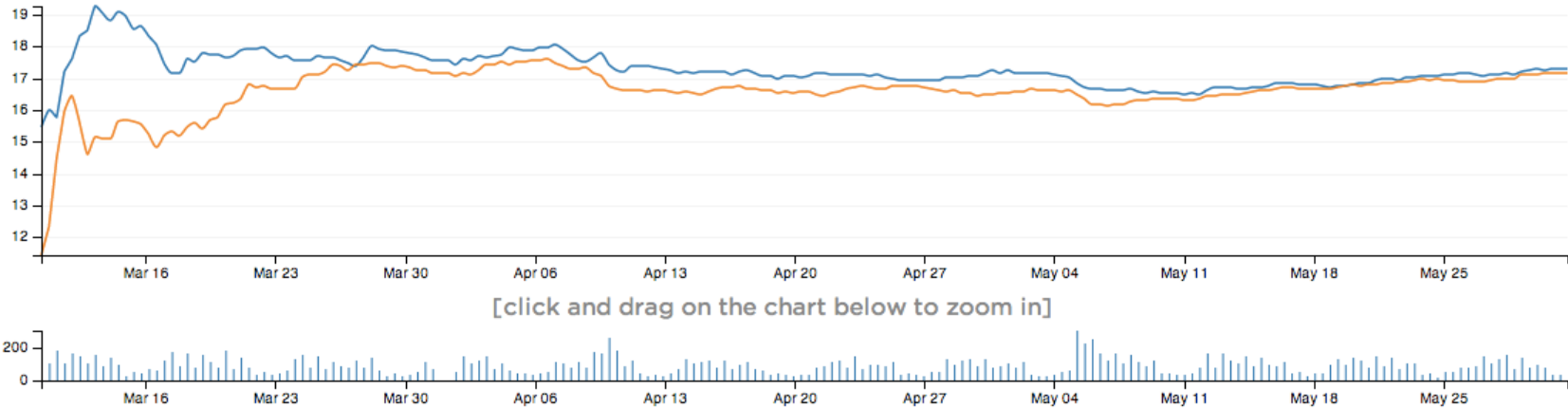
GOAL

Pricing Dialog Submit



Pricing Dialog Submit is currently inconclusive.

Conversion Rate Over Time ▾

[View Annotations](#)

VARIATION	VISITORS ?	CONVERSIONS ?	CONVERSION RATE ?	IMPROVEMENT ?	CHANCE TO BEAT BASELINE ?
Pricing Dialog Submit: Everyone / All Visitors					
original	9652	1655	17.15% (± 0.75)	---	---
cancel anytime	8781	1520	17.31% (± 0.79)	+1.0%	62%

17.15% CONVERSION RATE

25% DIFFERENCE



Measure as many goals as possible for every experiment.

QUALITY ASSURANCE

- No bugs in the variation
- No bugs in the control
- Tracking works correctly

ELIMINATING BIAS

Double blind experiments

EXPERIMENT BRIEF

- Hypothesis
- Audience description
- Goals tracked
- Stopping conditions
- Screenshots
- QA summary

EXPERIMENT BRIEF TEMPLATE

bit.ly/1nvNJjx

AFTER YOU TEST

STATISTICAL TIE

Not enough data to conclude that there is a difference.



The overwhelming majority of
experiments results are a statistical tie.

EXAMPLE

Statistical tie

control

Start your free trial today


Billing Country

United States

First name

Last Name

Credit Card Number



Security Code (CVV)

Postal/Zip Code

Expiration Date

1 / 2014

You will be billed \$204 (12 x \$17/mo) annually after your trial ends.
You can cancel any time during the free trial.

Start Trial

Cancel

variation

Now, start your free 30 day trial

You won't be charged until after your trial ends and you can cancel anytime.


Billing Country

United States

First name

Last Name

Credit Card Number



Security Code (CVV)

Postal/Zip Code

Expiration Date

1 / 2014

You will be billed \$204 (12 x \$17/mo) annually after your trial ends.
You can cancel any time during the free trial.

Start Trial

Cancel

RESULT

VARIATIONS	VISITORS	CONVERSIONS	CONVERSION RATE	IMPROVEMENT	CHANCE TO BEAT BASELINE ?
cancel anytime	10,239	1,469	14.3% (±0.68%)	+2.7%	78.4%
original <small>BASELINE</small>	11,165	1,560	14.0% (±0.64%)	---	---

RETESTING

EXAMPLE

Retesting

FIRST TEST

<div>Secure</div> <h2>How much would you like to donate today?</h2>	<div>Secure</div> <h2>How much would you like to donate today?</h2>
<p>Select amount</p> <div><div>\$15</div><div>\$25</div><div>\$50</div></div> <div><div>\$100</div><div>\$250</div><div>\$500</div></div> <div><div>\$1,000</div><div>Other amount</div></div> <div><div>CONTINUE</div></div>	<p>Select amount</p> <div><div>15</div><div>25</div><div>50</div></div> <div><div>100</div><div>250</div><div>500</div></div> <div><div>1,000</div><div>Other amount</div></div> <div><div>CONTINUE</div></div>

+36% revenue

SECOND TEST

<div>Secure</div> <h2>How much would you like to donate today?</h2>	<div>Secure</div> <h2>How much would you like to donate today?</h2>
<p>Select amount</p> <div><div>\$15</div><div>\$25</div><div>\$50</div></div> <div><div>\$100</div><div>\$250</div><div>\$500</div></div> <div><div>\$1,000</div><div>Other amount</div></div> <div><div>CONTINUE</div></div>	<p>Select amount</p> <div><div>15</div><div>25</div><div>50</div></div> <div><div>100</div><div>250</div><div>500</div></div> <div><div>1,000</div><div>Other amount</div></div> <div><div>CONTINUE</div></div>

statistical tie

THIRD TEST

<div>Secure</div> <h2>How much would you like to donate today?</h2>	<div>Secure</div> <h2>How much would you like to donate today?</h2>
<p>Select amount</p> <div><div>\$15</div><div>\$25</div><div>\$50</div></div> <div><div>\$100</div><div>\$250</div><div>\$500</div></div> <div><div>\$1,000</div><div>Other amount</div></div> <div><div>CONTINUE</div></div>	<p>Select amount</p> <div><div>15</div><div>25</div><div>50</div></div> <div><div>100</div><div>250</div><div>500</div></div> <div><div>1,000</div><div>Other amount</div></div> <div><div>CONTINUE</div></div>

Statistical tie

SHARE YOUR RESULTS



Always, always record detailed
experiment results in an archive.

EXPERIMENT ARCHIVE

- experiment date
- audience/url
- screenshots
- hypothesis
- results
- link to experiment
- link to result csv

EXPERIMENT ARCHIVE TEMPLATE

bit.ly/1q9tRWI

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2014

THANK YOU!

SESSION Q&A



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