Strategic Uses of Information Technology
/
Digital Marketing and Social Media Strategy
Session 1

Prof Param Vir Singh
Who am I?

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• PhD, Management Science and Information Systems, University of Washington

• Research
  – Web 2.0
  – Social Media
  – Social Networks
  – Enterprise 2.0
  – Open Source

• Industry
  – Microsoft, Giant Eagle, UPMC, Nordstorm, Cognizant, Warner Bros.
Who should take this course?

• **Marketing, Media, and Advertising Professionals:** this is a highly recommended course for you, whether you have experience in these areas or are targeting them for your career after B-School.

• **Entrepreneurs:** if you need to promote a new business venture and plan to use social media then you should take this course.

• **Consultants:** it depends on your industry focus, but it is likely that your future clients (and bosses) will expect you to know something about digital marketing and social media, which this course can help.
This course counts towards Information Systems and Marketing Requirement
Course Goals

• To appreciate and understand the technologies that are critical to business today
• To stimulate thinking of
  – What they enable
  – How to strategically use them for competitive advantage
• To develop a vision of what lies ahead
Course Overview

Blackboard

- [http://cmu.edu/blackboard](http://cmu.edu/blackboard)
  - Use your andrew username and password
  - Confirm that you can access the course as soon as possible

- Information about your classroom colleagues
- All assignment descriptions
- All assignment submissions
- All lecture slides
- Grades, announcements, etc
Key Objectives of Course

A. Understand Search engine optimization & Web analytics

Who are your customers? Where do they come from? How search engines discover and rank web pages? How can we identify issues and opportunities in a web site? Optimizing a website for organic and paid search.

B. Understand User generated content & Sentiment Analysis: Economining

Finding what customers are saying about you? Who are your influential customers? What types of comments by customers affect your sales? How much premium can you make due to customer reviews? Sentiment Analysis.

C. Harnessing the Wisdom of the Crowds, Crowdsourcing & Prediction Markets

What is the logic behind prediction markets? When are crowds accurate? How to design and run a prediction market? Leveraging wisdom of the crowd to predict future, solve problems, etc.

D. Social Media & Social Networks Marketing

What makes marketing campaigns viral? How social media effects perceptions of a company? What strategies can companies deploy in order to operate effectively when the power to craft messages and images is shared between marketer and consumer? How to create and capture value in a social network? How to do segmentation and targeting in social networks?

At its core: A hands-on, “how-to mentality” class
Course Overview

Class requirements

• 4 Assignments (group) [60%]
• Class Discussions/SM Presentation [15%]
• In Class Final Exam (open book & notes) /Google OMC [25%]

Students are expected to actively engage in class discussions, to have their assumptions challenged, and to bring their various backgrounds to class in order to make it a great experience for themselves and everybody else.

• GROUP SIZE [3 to 5]
• I do not allow PASS/FAIL or AUDIT
Course Overview

• Most of the assignments of this course will be hands-on, giving you real life experience of web analytics, search marketing campaigns, user generated content, and so on. All assignments will be accessible and doable by students without any programming background. Some sample assignments for this course:

  – Using User generated content develop a product development strategy for a Company.

  – Using real data optimize a search engine marketing campaign for a company.

  – Use Google Trends to build a predictor of product demand.

  – Use Quantcast to compare a website and its competitor and prepare a report on which one of them you expect to fare better over time.
This assignment will require you to develop and implement a viral marketing strategy.

In your group you will create a (hopefully) viral video aimed at promoting a particular product/brand.

You will then disseminate that content and try to make it “go viral.”

Your product/brand is the MBA program at Tepper School of Business. This is chosen for pragmatic reasons—it is a “brand” that you are intimately familiar with and don’t need to spend time researching in order to understand it before trying to market it.

Your broad marketing objective is to raise awareness and generate interest in the Tepper MBA.

You can chose the particular segment you want to target, the geographic focus, and the theme/message of your campaign.
Viral Marketing Campaign

- This project is meant to be fun while at the same time giving you the opportunity to put into practice many concepts you’ll learn in class. In that sense, it is just like a simulation you might have done in some of your other classes but it is actually real!

- The following steps must be followed:
  - Develop specific marketing objectives that you hope to achieve with this campaign that fit with the broad objective of building awareness and generating interest.
  - Come up with a theme for your campaign and specific message. E.g., it could be about a range of different kinds of experiences, or it could be about one type of experience, or something else.
  - Develop a preliminary concept for your video. Get this concept approved by me before going any further. **This is to be done no later than April 4th.**
  - Create the 3-4 minutes video content. **Get it approved by me by April 11.**
  - Develop a viral marketing plan for distributing/disseminating your video using social media. **Get approval from me and Upload the video by no later than April 16th.**
Almost all of the world’s top brands are utilizing social media marketing in one way or another. We will discuss some of the more successful campaigns in class. Some of the most successful campaigns are:

1. Nike +
2. Burger king: Subservient Chicken
3. Ford Fiesta Movement
4. Pepsi Refresh Project
5. Dove Social Media Campaign
6. Volkswagen Fun Theory
7. Old Spice Social Media Campaign
8. Ikea: Facebook Showroom
9. Blendtec: Will it Blend?
10. OfficeMax: Elf Yourself?
Each group will select one campaign and collect information about it and make a 15 minutes presentation on it on April 2nd.

All the information on these campaigns is available on the web and on company websites. These campaigns have been widely analyzed. Your presentation should include the following information at least:

1. What was the campaign and how it was managed (who participated, what were the incentives, who were the seeds)?

2. Analysis of the campaign
   a. Was it a good campaign to run.
   b. Why was the campaign successful?
   c. What are the key reasons that made the campaign viral?
   d. Is it easy to replicate?
   e. Would you have done anything different?
   f. Key take-away from this campaign.
Google Online Marketing Challenge (GOMC)

- Students can choose between doing GOMC and In-class final exam (open book and notes).
- **Project teams (3-5 people) participate in the** Google Online Marketing Challenge **for three consecutive weeks from April 2 to April 23.**
- Each team develops strategies to drive traffic to a real-world business site.
- Google offers $250 ad money for each team.
- A winning team will be selected globally based on performance metrics and project reports.
Google Online Marketing Challenge (GOMC)

Key deadlines for GOMC

• Choose between GOMC and In-Class Exam: **Today**
  – You should find at least 2 more people who are willing to join forces with you to do GOMC.
  – If you pick GOMC, send me an email with your team-member names.

• Find a business which has not used Google Adwords in the last 6 months & Set up Adwords account & Read GOMC student guide: **March 21**

• Get approval from the business: **March 26**

• Pre-campaign strategy report due: **March 28**

• Start GOMC: **April 2**

• GOMC final report due: **May 2**
Questions?
Search Engine Optimization

Online Advertising & Landing Page Optimization
If you know of a website

• Can you find it on Google?
  – If yes, how
  – If no, why?
Why is this important?

Search Engines Influence Consumers

Needs DVD Player

Search: Best Buy 9%
Search: Panasonic 28%
Search: DVD Player

Click/bot/portal/email/ads 18%
Type in URL 23%
Off-line ads / recommend 11%

How Online Consumers Most Often Find Stores

Search Engine >40%

Amazon.com
Panasonic.com
BestBuy.com
CircuitCity.com
DealTime.com
Let’s cover the basics

• **Internet** and **Web** are **not** synonymous

• Internet is a global communication network connecting millions of computers

• World Wide Web (WWW) is one **component** of the Internet, along with e-mail, chat, etc
Publishing on the Web

1. You create the web page on your computer

- Random Web User
- CMU Web Server
- CMU Student
- Internet
2. You send the files to the CMU Web server
3. A web user requests your home page URL
4. The CMU Web server serves up your page.
When anyone can publish, how do we find what we need?

- The information is spread across multiple autonomous computers
- With millions of choices, how do we find what we need?
Three main parts:

i. Gather the contents of all web pages (using a program called a **crawler** or **spider**)  

ii. Organize the contents of the pages in a way that allows efficient retrieval (**indexing**)  

iii. Take in a query, determine which pages match, and show the results (**ranking** and **display** of results)
How do Search Engines Discover Information?

- How do crawlers find web pages?
  - Start with a list of domain names, visit the home pages there.
  - Look at the hyperlink on the home page, and follow those links to more pages.
  - Keep a list of URLs visited, and those still to be visited.
  - Each time the program loads in a new HTML page, add the links in that page to the list to be crawled.
Standard Web Search Engine Architecture

Crawler machines → Send discovered pages to mothership → Google Document Storage

User query

Search engine servers → Create an “inverted index”

Inverted index → For each word, the pages that contain the word

Show results to user
Crawler behavior varies

• **Parts** of a web page that are indexed
  – Until recently, only the first few parts of the page were retrieved/stored

• How **deeply** a site is indexed
  – Google/Yahoo/MSN get only the first top levels

• How **frequently** the site is crawled
  – Can be few minutes (news), hours (blogs), days, or weeks (my site 😊)

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What are the implications?
Indexing

Record the following information about each page

• List of words
  – Is the word in the title?
  – How far down in the page?
  – Was the word in boldface?

• URLs of pages pointing to this one

• Anchor text on pages pointing to this one

• Clickthrough measurement
  – How often users click on your URL, when they see it
  – How long do they stay (using toolbars!)

• …many other “secret ingredients”
SellingLTC.com’s LTCi Cafe Offers New Webinar
“Demystifying the Close - 5 Steps That Will Make You a Stronger Closer”

ATLANTA, Nov. 11, 2009 — SellingLTC.com, LLC, the leader in providing long-term care insurance sales, marketing, and presentation solutions for insurance sales professionals, today announced the eleventh webinar in their LTCi Cafe Power Lunch Webinars Series. The LTCi Cafe is a free LTCi resource center available to all financial professionals who desire a deeper knowledge of how to better serve consumers when it comes to long-term care insurance.

The next webinar will be held November 18, 2009 at 1:00 pm EST. The session is entitled: “Demystifying the Close - Five Steps That Will Make You a Stronger Closer.” Attendees will learn how to take the pressure off both themselves and the client, making the “close” feel like the next natural step in the presentation process. “Many salespeople have a misconception about what

The anchor text summarizes what the website is about.
Measuring Importance of Linking

PageRank Algorithm

• Idea: important pages are pointed to by other important pages

• Method:
  – Each link from one page to another is counted as a “vote” for the destination page
    • The number of incoming links is important!
    • But it is not enough!
  – But each “vote” is different! Pagerank places more importance to votes that come from pages with large number of votes (and so on, and so on)

• Compare, for example, the cases for the circled page in cases A and B
How PageRank is used

1. Locate the pages that contain the query text
2. Weight the “text score” with the “link score”
3. Rank results

Lesson: PageRank of competitors matters!
Do not obsess (only) about your PageRank
Cool! Let’s Get some PageRank

• Obvious incentives to game the system

• Or at least to speed up the process of going up in the results
Gaming PageRank: Link spam

• Link spam: Inflating the rank of a page by creating nepotistic links to it
  – From own sites: Link farms
  – From partner sites: Link exchanges
  – From unaffiliated sites (e.g. blogs, guest books, web forums, etc.)

• The more links, the better
  – Generate links automatically
  – Use scripts to post to blogs
  – Synthesize entire web sites

• The more important the linking page, the better
  – Buy expired highly-ranked domains
  – Post links to high-quality blogs
PageRank and Trust

TrustRank Algorithm

- Votes from trusted pages are weighted much higher compared to others.

- Compare, for example, the cases for the circled page in cases A and B

- The main reason behind the initial success of Google

- Get links from trusted, quality sites!
Case Study 1: BMW

• In 2006, BMW used thousands of doorway pages to direct traffic to their German Website.

• For example, one doorway page had “Gebrauchtwagen” (meaning “used car”) appear 42 times on it whereas on the “real” page this word only appeared twice.

  Did this work?

• For “Gebrauchtwagen” the “real” page showed up as the top result.

• BMW gets caught and Google gives it a “death sentence.”
Case Study 2: JC Penney

• In 2010, JC Penney used link spam to boost up its page ranking.

• For example, there were 2,015 pages with phrases like “casual dresses,” “evening dresses,” “little black dress” or “cocktail dress.” Click on any of these phrases on any of these 2,015 pages, and you were bounced directly to the main page for dresses on JCPenney.com.

  Did this work?

• For several months JC Penney showed as the first result for thousands of very common keywords.

• JC Penney gets caught and the penalty for getting caught is a pair of virtual concrete shoes: the company sinks in Google’s results.
How to Rank High in the Results

• Position your keywords (title, headings, early on page)
• Make text visible
• “Alt text” for images: Accessibility + search engines

• Have relevant content
• Do not change topics frequently on a page
• Build links (nice to build a real community)
• Just say no to search engine spamming

• Submit your key pages and sitemap to Google
• [http://www.google.com/addurl/?continue=/addurl]
Going Beyond Existing Traffic

– Pay-per-Click Advertising
What is Search Engine Marketing (SEM)?

- **Search Engine Optimization (SEO)**
  - Improve “organic” result rankings on search engines
  - Adjust elements important to search engine algorithms

- **Pay Per Click Advertising (PPC)**
  - Also known as “sponsored results”, advertising that appears to the top, bottom, or side of search engine natural results
  - Typically cost is generated on a “pay-per-click” model, where advertiser pays for each click a searcher makes on an ad, vs. the traditional online marketing method of “cost per impression”.

Anatomy of Search Results: Google

PPC Ads

Organic Web Results
Anatomy of Search Results: Yahoo!

PPC Ads

1. Presentations.com
   Tips, techniques and technology for creating and delivering effective, dynamic presentations.
   Category: Business Magazines
   www.presentations.com - 32k - Cached - More from this site - Save - Block

2. Internet Research Presentations
   Our Internet research training materials consist of presentations, exercises, tips, and more. ...
   Home > Internet Trainers > Internet Research Presentations. Internet Research ... Internet Research Presentations and Teaching Webs ...
   www.virtualchase.com/trainers/presentations.html - 29k - Cached - More from this site - Save - Block

Organic Web Results

PPC Ads
What percent of searchers do not search past the first page of results?
- 87%

What percent of searchers believe that the **top ranking** is also the **top brand** of the industry?
- 37%

For retailers what percent of **their total orders** come from PPC advertising?
- 10-40%

What percent of users **do not know** the difference between **paid vs. natural listings**?
- 62%

(source: Pew Search Engine Users Study)
A Typical PPC AD

- **Headline:**
  
  “Search keyword insertion”

- **Ad Text:**

  - We Design Presentations
    Impress your audience, save time
    Professional PowerPoint services
    www.propointgraphics.com

  - Presentation Software
    Make 3d page turning presentations
    embed or steam video, flash, QT-VR+
    www.DeskTopAuthor.com

  - Video Presentations
    Create stunning video presentations
    in minutes. Free trial available
    www.seriousmagic.com

  - The Marketing Depot
    Integrated marketing & advertising
    for growing businesses, St. Louis.
    www.themarketingdepot.com
    St. Louis, MO

- **Landing URL:**

  What matters?
PPC Terminology

• **PPC**: Pay Per Click

• **CTR**: Click Through Rate
  – Percentage of clicks to impressions

• **CPC**: Cost Per Click
  – Price an advertiser pays for each click on his/her ad

• **Daily Budget**
  – Amount advertiser is willing to spend, each day, on PPC ads
How does a search engine decide which ad to show for a user query?
How PPC Works

User enters query

Engine runs auction and displays winning ads

Surfer clicks on an ad

Search Engine Server

Advertiser's place bids

Surfer "lands" on website

Advertiser's Website/Landing Page

Advertiser

Millions of auctions executed every day

Once the daily budget is reached, the ad will no longer be shown.
The PPC Auction Model

• Basic model
  – Highest bidder gets highest slot
  – Winner pays winning bid
  – Not ideal! Why?

• Vickrey-Clarke-Groves (VCG) auction
  – Second price auction
  – Optimal for single slot
  – Reveals true willingness to pay, no need to be strategic
  – Winner for slot \( i \) pays maximum bid of bidder that get \( i+1 \) slot

• Still not the best for Google, Yahoo, MSN etc.
  – Why?
Ad Quality Score + Landing Page Quality

• Search engine needs repeat customers

• Needs to improve user experience for long term

• Bid transformation:
  
  – (Bid $ amount) x (Ad Quality Score)
  
  ~ (Bid $ amount) x (CTR rate + relevance)

  In other words, rank by expected revenue for Google

• High quality ads → Lower bid amount
  
  (incentive compatibility)

Details for quality score: https://adwords.google.com/support/bin/answer.py?answer=10215
Let us take a look at Google Adwords
**AdWords Structure**

<table>
<thead>
<tr>
<th>Account</th>
<th>Campaign (1)</th>
<th>Campaign (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique email address</td>
<td>Daily budget</td>
<td>Daily budget</td>
</tr>
<tr>
<td>Password</td>
<td>Target keywords or sites</td>
<td>Target keywords or sites</td>
</tr>
<tr>
<td>Billing information</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Think of this as your company.

If your client has a good Website, you can model your campaigns off the major sections of the Website!

Think of this as individual Products or Services.

Link each AdGroup to a specific Webpage on your client’s Website!
Campaign Settings

Search and the New Economy

Basic Settings
- Campaign name: Search and the New Economy
- Start date: Jan 14, 2008
- Will run until: No end date

Budget Options
- Budget: $5.00 / day
  - View Recommended Budget
- Delivery method: Standard: Show ads evenly over time

Advanced Options
- Keyword Bidding: Maximum CPC bidding
- Ad scheduling: Off. Ads running at all times. Turn on ad scheduling
- Position preference: Enable position preferences
- Ad serving: Optimize: Show better-performing ads more often

Networks
- Show my ads on:
  - Google search
  - Search network
  - Content network
  - Content bids

Target Audience
- Languages: English, Chinese (simplified), Chinese (traditional), Danish, Dutch
- Locations: Canada (Country), United States (Country)

“Roadblock”

Daypart Targeting

Geo-targeting

Rank Targeting
Keyword Selection
Keyword Types

• **Broad Match: keyword**
  – Allows your ad to show on similar phrases and relevant variations

• **Phrase Match: “keyword”**
  – Allows your ad to show for searches that match the exact phrase

• **Exact Match: [Keywords]**
  – Allows your ad to show for searches that match the exact phrase exclusively

• **Negative Match: -keyword**
  – Ensures your ad doesn't show for any search that includes that term

<table>
<thead>
<tr>
<th>Broad match keyword:</th>
<th>Ads may show on searches for:</th>
</tr>
</thead>
<tbody>
<tr>
<td>tennis shoes</td>
<td>tennis shoes</td>
</tr>
<tr>
<td></td>
<td>shoes</td>
</tr>
<tr>
<td></td>
<td>buy tennis shoes</td>
</tr>
<tr>
<td></td>
<td>tennis shoe photos</td>
</tr>
<tr>
<td></td>
<td>running shoes</td>
</tr>
<tr>
<td></td>
<td>tennis sneakers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phrase match keyword:</th>
<th>Ads may show on searches for:</th>
<th>Ads will not show on searches for:</th>
</tr>
</thead>
<tbody>
<tr>
<td>“tennis shoes”</td>
<td>red tennis shoes</td>
<td>shoes for tennis</td>
</tr>
<tr>
<td></td>
<td>buy tennis shoes</td>
<td>tennis shoe</td>
</tr>
<tr>
<td></td>
<td>tennis shoes photo</td>
<td>tennis sneakers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exact match keyword:</th>
<th>Ads may show on searches for:</th>
<th>Ads will not show on searches for:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[tennis shoes]</td>
<td>tennis shoes</td>
<td>shoes for tennis</td>
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<tr>
<td></td>
<td></td>
<td>tennis shoe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>tennis sneakers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Negative match keywords:</th>
<th>Ads may show on searches for:</th>
<th>Ads will not show on searches for:</th>
</tr>
</thead>
<tbody>
<tr>
<td>tennis shoes -used</td>
<td>tennis shoes</td>
<td>Used tennis shoes</td>
</tr>
<tr>
<td></td>
<td>Tennis</td>
<td>Shoes used for tennis</td>
</tr>
<tr>
<td></td>
<td>Buy tennis shoes</td>
<td></td>
</tr>
</tbody>
</table>
How to come up with all relevant keywords?
How much to bid on each keyword?
Keyword Selection: What keywords to bid on?

- Match by topic/relevance:
  - Google Keyword Tool (Tools → Keyword tool)

- Analyze keyword demographics [more in next class]
  - (quantcast)

- Identify Negative Keywords
  - E.g., “Dove” (soap) vs. Dove chocolates vs. Lonesome Dove (book) vs. Rita Dove (poet)
Keyword Selection: How much?

Tools > Traffic Estimator

Traffic Estimator

Get quick traffic estimates for new keywords without adding them to an account or using the AdWords sign-up wizard.

1. Enter keywords, one per line.

Set optional individual CPCs using this format:

```
keyword = broad match
*keyword*= match exact phrase
[keyword]= match exact term only
-keyword= don't match this term
```

2. Choose a currency. Enter a specific Max CPC for your estimates, or leave the field blank and we'll provide estimates based on our suggested Max CPC.*

   *Suggested value should deliver ads in the top position 85% of the time.

3. Choose daily budget (optional). See estimates for the amount you want to spend each day, or leave field blank to see all available clicks.

4. Select targeting.
   a. Language
   b. Location Targeting
      - Countries and territories - choose
      - Regions and cities - choose
      - Customized - enter a radius and

   c. Countries

Available Countries and Territories

- All Countries and Territories
- Australia
- Austria
- Belgium
- Brazil
- Canada

Maximum CPC: 20  Daily budget: 50000  Get New Estimates

<table>
<thead>
<tr>
<th>Keywords</th>
<th>Search Volume</th>
<th>Estimated Avg. CPC</th>
<th>Estimated Ad Positions</th>
<th>Estimated Clicks / Day</th>
<th>Estimated Cost / Day</th>
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</thead>
<tbody>
<tr>
<td>car</td>
<td></td>
<td>$3.22 - $4.68</td>
<td>1 - 3</td>
<td>8,447 - 10,564</td>
<td>$27,180 - $49,400</td>
</tr>
<tr>
<td>honda element</td>
<td></td>
<td>$2.17 - $2.73</td>
<td>1 - 3</td>
<td>13 - 18</td>
<td>$40 - $50</td>
</tr>
<tr>
<td>suv</td>
<td></td>
<td>$3.07 - $4.14</td>
<td>1 - 3</td>
<td>107 - 134</td>
<td>$330 - $560</td>
</tr>
</tbody>
</table>

Search Network Total

- $3.21 - $4.67
- 1 - 3
- 8,568 - 10,716
- $27,540 - $50,000

« Revise settings  Download as .csv
Should one go for keywords or key-phrases?
Improving PPC ROI
The “Long Tail” Concept

- “The Long Tail” by Chris Anderson
  - An aggregate of less popular products can sell more in the “long tail” than the most popular products

- Same applies to PPC
  - An aggregate of specific, less searched terms can provide better ROI than highly searched terms

Think "specific keyword phrases" not just "keywords".
Why Key Phrases and Not Just Key Words?

- Key phrases with 2 - 3 words generate the most traffic.
- Key phrases reduce ambiguity (e.g., keyword “bed”- can mean “bed of roses”, “bed and breakfast”, “water bed”, and much more)

Length of queries in terms  
Source: onestat.com, July 2005
Long Tail Keywords

- Long tail keywords are keyword terms which are less popular, less competitive and less searched for, but when taken collectively, long tail keyword phrases can be responsible for driving significant levels of website traffic.
  - Example: Doing a phrase match search for “web hosting” shows that there are 297,000,000 Google results (Head). But doing a phrase match search for “web hosting orlando FL” only shows 314 results (Long Tail)!
  - The benefit of using long tail keywords in your Search Engine Marketing is the reduced cost per lead with a higher conversion rate.
Keywords: Embracing the Long Tail

- How thick is your “head”? (Explains potential risk.)
- What is the distribution of Branded & Non-Branded keywords?
## PPC Cycle

<table>
<thead>
<tr>
<th>Keywords</th>
<th>Discover/Research</th>
<th>Compare</th>
<th>Purchase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad, approximately 50</td>
<td>Broad, approximately 50 keywords</td>
<td>Medium, approximately 100 keywords</td>
<td>Specific, approximately 1,000 keywords</td>
</tr>
<tr>
<td>ex: shoes</td>
<td>ex: running shoes</td>
<td>ex: Asics 2010 running shoes</td>
<td></td>
</tr>
<tr>
<td>Medium, approximately 100</td>
<td></td>
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<td>ex: running shoes</td>
<td></td>
<td></td>
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<tr>
<td>Specific, approximately 1,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ex: Asics 2010 running shoes</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Search Volume</th>
<th>High, typically high cost per click, more competition</th>
<th>Medium, average cost per click, medium competition</th>
<th>Low, low cost per click, very little competition</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Frame the buying decision; establish credibility</th>
<th>Compete on more specific criteria; capitalize on customer preferences</th>
<th>Obtain a ready sale now; acquire a customer who knows what he/she wants</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Conversion Rate</th>
<th>Lower</th>
<th>Medium</th>
<th>Higher</th>
</tr>
</thead>
</table>
Does It Really Work? YES.

• Major athletic retailer case study
  – 80% of PPC sales come from long tail keywords
  – Specific, product-name keywords
  – Only 20% of sales come from broad terms, like “BRAND shoes” or “BRAND jacket”

• Most “long tail” keywords are inexpensive
  – [web hosting] $8.30
  – [freebsd web hosting] $0.10

• Targeted at customers with specific needs, closer to purchase
More Keyword Tips

- **Plural and singular forms**
  - car, cars

- **Verb forms, related nouns, related idioms**
  - fix, fixing, fix up, fixing up, how to fix up, fix-it-, fixer upper, fixer

- **Spelling mistakes or spelling variations**
  - address, adress; email and e-mail; UK and U.K.
  - sub, submarine, sandwich, grinder, hoagie, poor boy

- **Numbers and codes**
  - years, product numbers, other weird uses

- **Hyphenated and unhyphenated versions**
  - soup ladle, soup-ladle

- **One word versus two words**
  - teacup, tea cup

- **Abbreviations and acronyms**
  - Carnegie Mellon University, CMU, Tartans

- **Phrases with who, what, when to capture people who type a question into a search engine.**
  - For example, how do I repair a kite or how to launch a new online business might be common queries and might convert well.

- **Do NOT use competitors’ trademarks! … or at least not in the Challenge! 😊**
  - Don’t use “Nike” if you are not Nike, but you can use “Nike” if you are a distributor of Nike products.
A few online tools to help with the development of a pool of key phrases

- Keyword Discovery by Trellian – [http://www.keyworddiscovery.com](http://www.keyworddiscovery.com)
  - Free trial limits you to 10 results; paid version gets 100 results
- Word Tracker (free trial) - [http://www.wordtracker.com](http://www.wordtracker.com)
- Addme Keyword Suggestion - [http://www.addme.com/keywordsuggest.htm](http://www.addme.com/keywordsuggest.htm)
- Google Keyword Tool - [https://adwords.google.com/select/KeywordTool](https://adwords.google.com/select/KeywordTool)
  - Shows advertiser competition and search volume
  - Great for localization efforts
  - You can compare searches by separating with commas.
    - Example: florida restaurants, orlando restaurants
Ads
Ad Generation

- Headline: Static
  “Search keyword insertion”

- Ad Text: Well Written(describing product)
  Poorly Written (vague, generic, dull)

- Landing URL

What matters?
Keyword Advertising Exercise

1. Think of a product that you would like to purchase.
2. Let us go to Google and search for this product.
3. Review the first five results.
4. Find an ad that you believe is well written. Be prepared to discuss why.
5. Find an ad that you believe is not well written. Be prepared to discuss why.
Writing Key Words Ads

• You get 4 lines of 25, 35, 35, and 35 characters
• Line 1 (headline): Make the *potential customer* read the second and third lines
• Line 2 and 3: Set expectations for what is on the landing page
• Line 4: Points to a relevant landing page and establishes trust
Look at it this way ...

For a given ad ...

~ 2 inches = 1 square inch

~ 1/2 inch

"2009 Diet Of The Year"
The #1 Ranked Diet To Lose Weight!
As Seen On CNN, NBC, CBS & Fox News
www.AcaiBurnMax.com

= 1 second

... to get a potential customer’s attention
Successful Keyword Advertising

1. Clear and well written.
2. Keywords in the title.
3. An action verb (i.e., a call to action).
4. Include some details (i.e. price, sales, etc.).
5. Capitalize keywords in the URL (i.e., www.CMU.edu).
6. Choose destination URL that points to good landing page.
Ads (Some Advanced Stuff)
What about the URLs?

Each keyword can point to a unique URL.
Dynamic Keyword Insertion is an advanced feature
Will insert individual keywords into the same ad text
A user sees a distinct ad for their keyword search, if their keyword triggers one of your ad group keywords.
This minimizes the work you'll need to do to manage larger ad groups and campaigns.
Let's see an example …
Example (Say this is an ad you create in AdWords)

{keyword:default text}

Quality {KEYWORD:Bikes}
Selection of {KeyWord:Bikes} in stock. Free shipping!
http://www.example.com/?kw={keyword:nil}

Say the query is: mountain bikes

Quality MOUNTAIN BIKES
Selection of Mountain Bikes in stock. Free shipping!
http://www.example.com/?kw=mountain bikes
Example (Say this is an ad you create in AdWords)

Quality {KEYWORD:Bikes}
Selection of {KeyWord:Bikes}
in stock. Free shipping!
http://www.example.com/?kw={keyword:nil}

Say the query is: Cannondale

The user would see this ad ->

Quality CANNONDALE
Selection of Cannondale
in stock. Free shipping!
http://www.example.com/?kw=cannondale
There are variations you can use to capitalize your dynamically inserted keyword as follows:

- **keyword** - No capitalization, all word(s) are in lower case
- **Keyword** - The first word is capitalized
- **KeyWord** - Every word is capitalized
- **KEYword** - Every letter in first word is capitalized
- **KEYWord** - Every letter in the first word AND the first letter of the second
- **KEYWORD** - Every letter is capitalized
Campaign Budget

• Use very specific keywords in the beginning to build up your CTR.
• Google uses CTR for determining your bid amount for top position.
• Use small budget for the first few days (3-4).
• Once your CTR is decent broaden your keywords.
Local Business Ads

Image 5-1: Local results for search ‘dentist Palo Alto, CA.’

Local business ads are eligible to appear in two places:

- On Google Maps (maps.google.com) in the enhanced manner shown in Image 5-2.
- In the regular text-only format on Google.com and other sites in the Google search network.
Local Business Ads

- Above or below organic results
- Highlighted in a blue background
- Up to 4

Information window
- A headline (25-character maximum)
- Two lines of creative text (35-character maximum per line)
- A small, eye-catching image (125 x 125 pixels)
- A display URL
- The business name and address
Creating local business ads

- **Google Local Business Center**
  - [www.google.com/local/add](http://www.google.com/local/add)
  - Free listing!

- **Two steps:**
  - 1. create a local business center listing
  - 2. create local business ads within an Adwords account
    - Campaign Summary ➔ Create New Local Business Ad
Some Good Readings and Other Things


• Google Local Business - https://www.google.com/local/add/login

• Google Checkout - https://checkout.google.com/seller/?hl=en&gl=GB
Where (Online), Where (in the Real World), and When to Display Your Ad
Special Targeting

- Geo-targeting (i.e., where do my ads appear)
- Time target (i.e., when do my ads appear)
- Note: both are at the campaign level (not account and not AdGroup)
Geo-targeting

• Target your ads to specific locations and languages.
• Default setting is by country
• Can target by regions and cities
• Customized Options
  – Circular
  – Multi-point
Here is an example of a multi-point geo-targeted campaign around the city of Charlottesville, Virginia.
Time Targeting

• Target your ads to show for specific days and times
• or conversely, pause your ads for specific days and times
• Default is 24/7
• Can change bids based on time
Here is an example of a 24/7 time targeted campaign.
How do I get to this stuff?

At the campaign level.
Examples of Winning Plays

• Daytime targeting: Budweiser

• Roadblock + daytime: HollowMan DVD
  – Ads in as many sites visited by target demographic
  – Ads run during lunch time, and prime time of Friday

• Geo-targeting: Multichannel play (many customers shop online, but buy offline)
  – CompUSA: Displays inventory levels at local stores
  – Luxury cars: Specific zip-codes + telephone of local dealer
  – 40% of car rentals ads, convert offline
  – 30% of job applicants saw online ad, submitted offline
LANDING PAGE OPTIMIZATION
Landing Page

- A **landing page** is the page where visitors arrive at after clicking on your promotional creative.

- **Optimized landing page** is the page where visitor arrive after clicking your promotional creative and get convinced to Convert.
Purpose of Landing Page Optimization

• Fill out a form- But people hate filling forms
• Provide personal details- But people hate getting spammed
• Buy something- But people hate getting scammed
• Read a lot of information- But people really hate reading

This is the purpose of landing page to convince people to do things they hate
Case Study - RealAge.com

- **Conversion action**: Completion of free RealAge Test registration
- **Test Size**: 552,960 unique “recipes”
Before

The RealAge Test

1. Test Questions
2. Results
3. My Plan

Privacy and Personalization

What's YOUR RealAge?

Your RealAge is the biological age of your body, based on how well you've maintained it. Are you as young as you can be? Complete the patented, one-of-a-kind RealAge test today!

As you answer the questions, watch your RealAge grow younger... or older! When you finish the test, you'll get a personalized RealAge plan, developed by MDs and PhDs.

Privacy and Personalization

What is your e-mail address?

We will not share your address or send you e-mail without your permission.

Password

If you don't have a password, make one up.

Remember password

Switch to secure sockets (SSL)

Continue

After

The RealAge Test

As seen on:

Your RealAge is the "biological age of your body, based on how well you've maintained it."

Privacy and Personalization

E-mail

We will not share your address or send you e-mail without your permission.

Password

If you don't have a password, make one up.

Remember password

Submit

Switch to secure sockets (SSL)

40% lift in conversion rate

$3,285,000 annual profit improvement
Case Study – Uniblue Registry Booster

- Conversion Action: Free software download
- Test Size: 3,110,400 unique “recipes”
Before

Free System Scan

How many .exe related Errors does your Computer have?

You no longer need to guess...this Free System Scan will give you a complete diagnosis and deep scan of your registry for Errors and Conflicts.

94% increase in conversion

$182,000 annual profit improvement

The Problem

You no longer need to guess...this Free System Scan will give you a complete diagnosis and deep scan of your registry for Errors and Conflicts.

24% increase in conversion

$182,000 annual profit improvement

The Solution

Registry Booster is the easy answer to registry problems. It conducts deep scans of your registry to check for errors and conflicts, then repairs and optimizes the registry to peak performance and stability. Periodic scans will keep your registry “clean” and will greatly enhance your system’s performance and stability. You’ll see immediate increases in speed and decreases in system conflicts.

2 minutes can save you months of frustration and crashes.

After

Free System Scan

How many .exe related Errors does your Computer have?

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2 minutes can save you months of frustration and crashes.
Avoiding The Pitfalls
### Before

Professor Param Vir Singh

---

Celebrate Mom for Who She Is!
Order Early and SAVE 40% on select Flowers and Gifts

### Shop Now

1-800-flowers.com

---

**Mother's Day**
- Occasions
- Flowers
- Plants
- Gift Baskets & Food
- Exclusives
- Price
- Martha Stewart
- Same-Day

**Sign in now**
- To register, click here.
- Remember our site? (CTRL D)

---

**Roses**

**Rose Elegance™ Premium Dozen Roses**

**Expertly Designed by a Florist**
- These flowers are hand-delivered by a local florist.

**Check for Availability**
- Tell us where and when you need it delivered.

1. **Select your item**
   - Red Roses ($59.99)
   - Peach Roses ($59.99)
   - Pink Roses ($59.99)
   - Yellow Roses ($59.89)
   - White Roses ($59.99)

2. **Enter recipient zip/postal code**
   - Sign in now to access your address book

3. **Select location type**
   - **Select Location Type**

**Questions?**
- Visit our Online Help for assistance

**Product Code:** 1120

**Description**
- For the one you cherish, the one you can trust, the one who loves you above all else and knows your heart inside out. Give the ultimate expression of romance—our stunning Rose Elegance™ arrangement of one dozen fully ready-to-send. Our floral designers will select 12 of the freshest long-stem roses and artistically arrange them just for her in a classic glass vase to create a gift of love that she will always remember—and so will you. Choose from red, pink, peach, yellow, and white. If your first color choice is not available, the second choice will be multicolored roses. Arrangement measures approximately 22” x 16”.

**Shop the Full Collection of Roses**

---

The first online florist to offer a Seven-Day Freshness Guarantee.
What am I supposed to do on this page?

Common issues:

• Spend precious time deciding what to do
• Get confused and frustrated
After
146 clickable links!
What am I supposed to do first?

Common issues:

• Takes a long time to find information
• May not make the right choice
• Overwhelms visitor
... Focus on Visitor’s Goals
• Title matches search term
• Promise of relevant expert reviews
Over 56 digital camera models tested. Which are top-rated?

Roadblock – must pay money

NO direct access to promised info.
#3 - Lack of Upstream Ad Continuity

Does your landing page keep the promise that your ad makes?

Common issues:

• Page title does not match user intent
• No access to the info promised
• Difficult to find ad-related content on page
Where am I supposed to look?

Common issues:

• Visual assault is extremely annoying
• “Gratuitous graphics” unrelated to product/service
• No clear separation of content and navigation
• Time wasted on looking at the wrong stuff
Canyon Tours offers over 180 tours and activities at the Grand Canyon. Tours by bus, airplane, helicopter, train, raft, Jeep, SUV, van, and more. Tours from Las Vegas, Williams, Flagstaff, Sedona, Phoenix, Tuscon, and Los Angeles.

See the Grand Canyon by Air.
Canyon Tours offers a variety of options for visiting the Grand Canyon by air.

Train Only - Ride the train from Williams to the Grand Canyon and back - depart Williams in the morning and return to Williams in the afternoon. Choose the class of service - coach, club, first class, observation car, or luxury parlor car.

Overnight Package - Enjoy a special overnight package that includes hotel and meals as well as the train. Choose from one night in Williams, two nights in Williams, one night in Williams and one night at the Grand Canyon, or two nights in Williams and one night at the Grand Canyon.

Classes of Service:

- Five classes of service are available - Coach, Club Car, First Class Cars, Observation Car, and Luxury Parlor Car. Be sure to pick the class of service that you will most enjoy!

General Information:
The Grand Canyon Railway train departs Williams, Arizona every morning. We suggest you arrive early for breakfast at Max & Thelma's Restaurant and so you will have time to look around the beautiful old depot and see the gondola ride that takes a half hour before boarding time.

It's a relaxing 2 hour 15 minute train ride to the Grand Canyon. You'll enjoy the scenery, the information provided by your passenger services attendant, and the on-train entertainment (fiddlers, guitarists, and gunfighters provide some of the entertainment you may see in your car).

When the train arrives, we suggest that you walk straight to the rim of the Grand Canyon for an unbelievable sight. It's an amazing sight. Then take the shuttle bus that goes along the rim and ride to one of the last scenic overlooks. Work your way back to the train depot stopping at as many of the overlooks as you choose. There are different sights to see at each stop.

Be sure to be back at the depot in time to board the train for the return to Williams as there is only one train each day. There's even more entertainment on the return trip. The day ends when the train reaches Williams.

Each train engine and each train car has been painstakingly restored to its original state by a staff of mechanics who see their work as more a labor of love than a job. On the train, your crew is no less enthusiastic. Each is bursting with local and Grand Canyon folklore and history, as well as Grand Canyon Railway knowledge. Strolling musicians catch you up with what was hot way back when. And there's even fun recreations of an old fashioned shoot out and a train robbery.

How to Find the Tours and Activities that Interest You:
...
#5 – Too Much Text

Do you really expect me to read all of this?

Common issues:

• No much text in paragraph style
• No clear hierarchy or flow
• Inappropriate level of detail for a landing page
Before
Is the information you are asking for absolutely necessary to complete the current transaction?

Common Issues:

• Unnecessary fields
• Info not needed until later
• Requires supporting info that is not available
After

• 51% higher conversion
• $48,000,000/yr more revenue
Risk Reducers

SF Video - DVD Replication Experts

- Large volume DVD duplication/replication and packaging
- Custom quote to ensure the best possible price
- Proven capabilities to manage the entire process
- 100% Guarantee against any manufacturer defects
- Founded in 1990 - over 2400 satisfied clients

Instant Quote

* indicates a required field

<table>
<thead>
<tr>
<th>Quantity of DVDs *</th>
<th>Under 1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name *</td>
<td></td>
</tr>
<tr>
<td>Company *</td>
<td></td>
</tr>
<tr>
<td>Email Address *</td>
<td></td>
</tr>
<tr>
<td>Phone *</td>
<td></td>
</tr>
<tr>
<td>Packaging *</td>
<td>Select One</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
</tr>
</tbody>
</table>

Call 1-866-392-7872 for same day quotes
Why should I trust you? Do I feel safe?

Common issues:

• Trust symbols are “below the fold”

• Lack of endorsements (client/media logos)
Elements to tune

- Page structure
- Information architecture
- Presentation
- Emphasis
Tuning Methods
How do you tune? -- variables

Input variables → Tuning → Output variable(s)

V1: Headline
V2: Sales Copy
V3: Button Text
V4: Button Color

Optimize!!
Key Considerations

- Size of Test (total number of unique “recipes”)
- Need to consider variable interactions
Interactions are very important

- Best setting for variable depends on its context
- Interactions exist & can be very strong
- Ignoring interactions will lead to suboptimal results
- A/B Splits & Parametric Multivariate testing assume that there are no interactions
Variable interactions

“Ferraris are Really Fast”

Positive interaction between headline and picture
Variable interactions

“Ferraris are Really Fast”

Negative interaction between headline and picture
“Volvos Are Really Safe”

Positive interaction between headline and picture
Example Size of Test Calculation

- Page Header x 3
- Navigation Bar x 2
- Headline x 5
- Call to Action x 4
- Photo x 4
- Sales Copy x 4
- Endorsements x 2
- Question Labels x 2
- Question Delimiter x 3
- Question Explanations x 2
- Button Text x 3
- Button Format x 4

12 Variables, 38 different values

552,960 unique “recipes”
Redesign and Experimentation

After detecting problems or opportunities:

1. Make a hypothesis
2. Redesign
3. Test for performance

(Common error: Skipping step 1)

Two common approaches for testing

• A/B testing
• Multivariate testing
A-B Split Testing

- Test one variable at a time (with 2 or more values)
- Send equal traffic to all versions
- Very easy to design, implement, analyze, explain

Minimum Data Rate:

10 conversions / day

Typical Test Size:

1-10 recipes

- Limited # of recipes
- No variable interactions
A-B Split Testing

Version A

Image on the left
“add to shopping cart” bottom right

Version B

Image on the right
“add to shopping cart” top left

Run versions A and B and see which improves the target metric

Important Variation for Noise Measurement: A/A testing!
Multivariate Testing

Modularize page and test variations for each module (see Google Website Optimizer, Offermatica, Optimost, SiteSpect, Kefta, …)

Headline

Image

Text

Call to action
Multivariate Testing

Estimated Change from Original: +15%

Estimated Change from Original: +12%

Estimated Change from Original: -10%
Google Website Optimizer
Website Optimizer: Start Testing Today

Website Optimizer is an easy-to-use tool for testing site content that delivers actionable results. Below are just three of the many benefits that testing brings.

**Listen to your visitors**

Testing makes it easy to get direct feedback from your site visitors. [Our five minute demo](#) explains how.

**Increase conversions**

Testing makes it easy to [increase your site effectiveness and visitor satisfaction](#), which leads to higher conversion rates and a higher return on your investments.

**Eliminate guesswork**

With Website Optimizer, you can try any combination of content to find out what leads to the most conversions. [Clear reports](#) will tell you what worked the best.

[Get started »](#)
Design an A/B Test

- Identify the metric. *What* are you going to compare and contrast?
- Describe the metric. *How* will you compare and contrast the differences?
- Optimise the system based on comparison of two or more tested solutions.
**A/B Experiment - The simplest way to start testing fast**

This method compares the performance of entirely different versions of a page. Use it if the points below describe your desired experiment.

- You are able to publish a new page to test against an existing page
- You want to test a new layout or overall look of a page

**Multivariate Experiment - The most robust way to test lots of ideas**

This method compares the performance of content variations in multiple locations on a page. Use it if the points below describe your desired experiment.

- Your page receives more than ~1,000 views a week
- You want to try multiple content changes in different parts of the page simultaneously
The Test Setup

- For a simple A/B Test, the following scripts are placed on the relevant pages.

- Original Page
  - Control Script
  - Tracking Script

- Variation Pages
  - Tracking Script

- Conversion Page
  - Conversion Script
Before you start, make sure you complete the following:

1. **Choose the page you would like to test**
   Examples of potential test pages could be your homepage or a product detail page.

2. **Create alternate versions of your test page**
   Create and publish different versions of your test page at unique URLs so that Website Optimizer can randomly display different versions to your users. These URLs could be bookmarked by your users, so after your experiment finishes, you may want to keep these URLs valid.

   **How many alternate versions should you test?**
   Generally, we recommend around 100 conversions per page variation over the course of your experiment. For example, an experiment with 3 page variations will typically need around 300 conversions before drawing any conclusions.

3. **Identify your conversion page**
   This is an existing page on your website that users reach after they've completed a successful conversion. For example, this might be the page displayed after a user completes a purchase, signs up for a newsletter, or fills out a contact form.

---

**Scripts added to test and conversion pages**

Professor Param Vir Singh

Tepper School of Business • William Larimer Mellon, Founder
# Test Results - Combinations

![Table of Test Results and Combinations](image.png)

- **View:** Best 23 Combinations, Worst 23 Combinations
- **Analysis for:** Aug 21 2006 - Aug 21 2006

<table>
<thead>
<tr>
<th>Combination</th>
<th>Estimated Conversion Rate Range</th>
<th>Chance to Beat Orig.</th>
<th>Chance to Beat All</th>
<th>Observed Improvement</th>
<th>Conversions / Impressions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original</td>
<td>31.2% ± 3.0%</td>
<td>—</td>
<td>0.41%</td>
<td>—</td>
<td>125 / 401</td>
</tr>
<tr>
<td>Combination 11</td>
<td>38.9% ± 3.1%</td>
<td>99.0%</td>
<td>85.4%</td>
<td>24.9%</td>
<td>160 / 411</td>
</tr>
<tr>
<td>Combination 4</td>
<td>33.6% ± 3.0%</td>
<td>76.8%</td>
<td>4.12%</td>
<td>7.74%</td>
<td>133 / 396</td>
</tr>
<tr>
<td>Combination 23</td>
<td>33.4% ± 2.8%</td>
<td>75.9%</td>
<td>2.82%</td>
<td>7.17%</td>
<td>153 / 458</td>
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<tr>
<td>Combination 16</td>
<td>32.7% ± 2.9%</td>
<td>67.8%</td>
<td>1.56%</td>
<td>4.75%</td>
<td>144 / 441</td>
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<tr>
<td>Combination 10</td>
<td>32.6% ± 2.9%</td>
<td>67.5%</td>
<td>1.69%</td>
<td>4.67%</td>
<td>139 / 426</td>
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<tr>
<td>Combination 8</td>
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<td>64.6%</td>
<td>1.30%</td>
<td>3.90%</td>
<td>137 / 423</td>
</tr>
<tr>
<td>Combination 22</td>
<td>32.0% ± 3.0%</td>
<td>60.0%</td>
<td>1.03%</td>
<td>2.69%</td>
<td>129 / 403</td>
</tr>
<tr>
<td>Combination 7</td>
<td>31.6% ± 2.8%</td>
<td>55.1%</td>
<td>0.45%</td>
<td>1.27%</td>
<td>143 / 453</td>
</tr>
<tr>
<td>Combination 14</td>
<td>31.4% ± 2.8%</td>
<td>52.2%</td>
<td>0.41%</td>
<td>0.57%</td>
<td>137 / 437</td>
</tr>
<tr>
<td>Combination 21</td>
<td>31.1% ± 2.9%</td>
<td>49.1%</td>
<td>0.40%</td>
<td>-0.20%</td>
<td>126 / 405</td>
</tr>
<tr>
<td>Combination 18</td>
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<td>39.1%</td>
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<td>-2.79%</td>
<td>130 / 429</td>
</tr>
</tbody>
</table>
Test Results – Page Sections

<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sort By:</td>
</tr>
<tr>
<td>Relevance Rating</td>
</tr>
<tr>
<td>Combinations</td>
</tr>
</tbody>
</table>

### Sort By: Relevance Rating

#### Section 2

<table>
<thead>
<tr>
<th>Variation</th>
<th>Estimated Conversion Rate Range</th>
<th>Chance to Beat Orig.</th>
<th>Chance to Beat All</th>
<th>Observed Improvement</th>
<th>Conversions / Impressions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original</td>
<td>29.1% ± 1.0%</td>
<td>0.11%</td>
<td>99.9%</td>
<td>11.9%</td>
<td>951 / 3273</td>
</tr>
<tr>
<td>Variation 2</td>
<td>32.5% ± 1.0%</td>
<td>99.8%</td>
<td>0.26%</td>
<td>1099 / 3380</td>
<td></td>
</tr>
<tr>
<td>Variation 1</td>
<td>29.1% ± 1.0%</td>
<td>0.13%</td>
<td>0.26%</td>
<td>975 / 3347</td>
<td></td>
</tr>
</tbody>
</table>

#### Section 3

<table>
<thead>
<tr>
<th>Variation</th>
<th>Estimated Conversion Rate Range</th>
<th>Chance to Beat Orig.</th>
<th>Chance to Beat All</th>
<th>Observed Improvement</th>
<th>Conversions / Impressions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original</td>
<td>28.3% ± 1.2%</td>
<td>0.02%</td>
<td>89.7%</td>
<td>15.2%</td>
<td>684 / 2417</td>
</tr>
<tr>
<td>Variation 1</td>
<td>32.6% ± 1.2%</td>
<td>100%</td>
<td>89.7%</td>
<td>15.2%</td>
<td>833 / 2555</td>
</tr>
<tr>
<td>Variation 3</td>
<td>30.9% ± 1.2%</td>
<td>10.1%</td>
<td>9.33%</td>
<td>0.26%</td>
<td>758 / 2450</td>
</tr>
<tr>
<td>Variation 2</td>
<td>29.1% ± 1.1%</td>
<td>0.18%</td>
<td>2.60%</td>
<td>750 / 2578</td>
<td></td>
</tr>
</tbody>
</table>

#### Section 1

<table>
<thead>
<tr>
<th>Variation</th>
<th>Estimated Conversion Rate Range</th>
<th>Chance to Beat Orig.</th>
<th>Chance to Beat All</th>
<th>Observed Improvement</th>
<th>Conversions / Impressions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original</td>
<td>30.8% ± 0.8%</td>
<td>89.4%</td>
<td>89.4%</td>
<td>-3.71%</td>
<td>1529 / 4960</td>
</tr>
<tr>
<td>Variation 1</td>
<td>29.7% ± 0.8%</td>
<td>10.6%</td>
<td>10.6%</td>
<td>-3.71%</td>
<td>1496 / 5040</td>
</tr>
</tbody>
</table>
Example – Add to Cart Buttons

- **Variables**
- Shape, Size, Color

- **Variations**
- Shape: Round, Square
- Size: Small, Medium and Large
- Colour: Red, Blue and Yellow

- **Hypotheses**
- Red buttons convert better than blue or yellow
- Large buttons convert better than small or medium
- Round buttons convert better than square
Example 1 (Not Recommended)

- 1,000 test combinations
- 10,000 page views per day
- 100% visitors in experiment
- 2.4% current conversion rate
- 20% expected improvement (from 2.4% to 2.9%)

- Duration of test: 3,515.9 days!
Example 2 (Recommended)

- 20 test combinations
- 10,000 page views per day
- 100% visitors in experiment
- 2.4% current conversion rate
- 20% expected improvement (from 2.4% to 2.9%. Focusing on key elements in the combinations should increase expectations above this figure)

- Duration of test: 37.8 days