Annielytics Mini Course:
Google Analytics
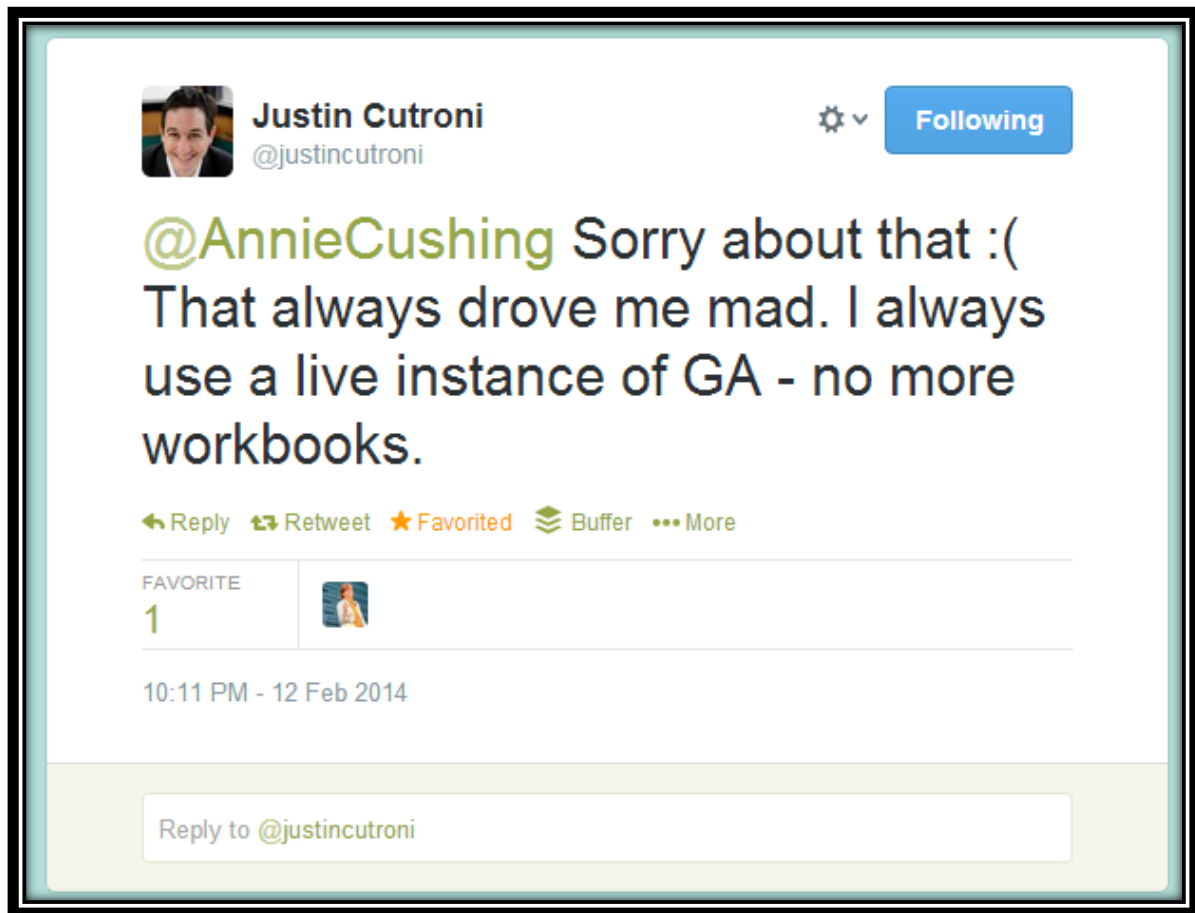

Annie Cushing

www.annielytics.com

annie@annielytics.com

@AnnieCushing

Table of Contents

Purpose of This Workbook

I subscribe to the Justin Cutroni method of doing a Google Analytics course: Live is better than following a workbook!


The only purpose of this workbook is to serve as a reference that you can use to look up tips and techniques covered in the seminar. I will try my best to keep it to just the essentials.

Google Analytics Interface

Deconstructing a Report

If you see a Customize option at the top of any standard report, you can select it to see how it is built. This is a great way to learn how to build your own.
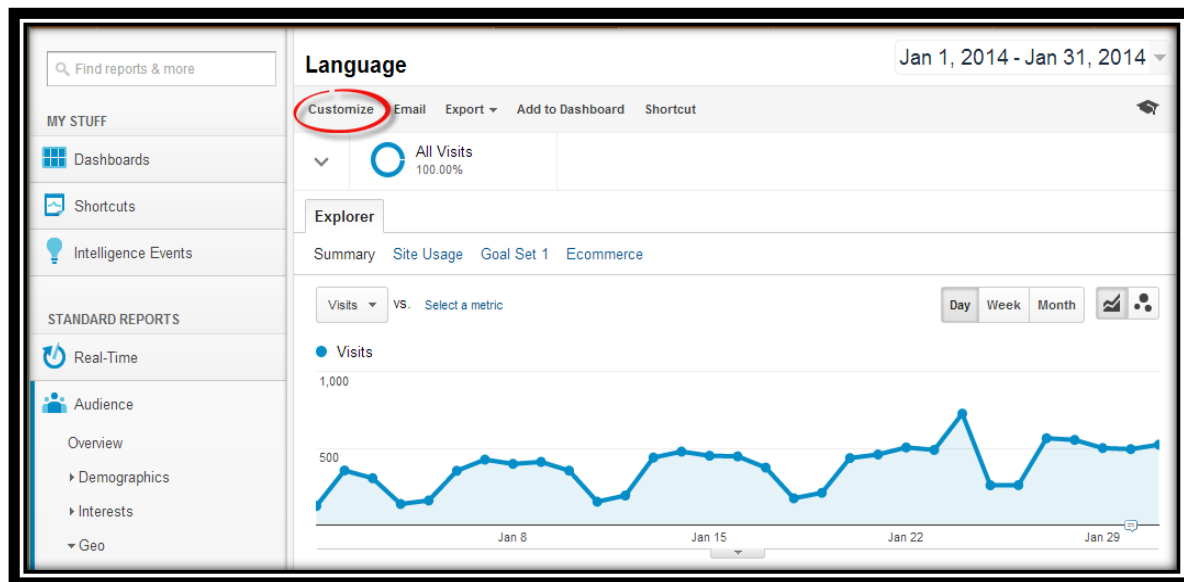
Create Your Own Custom Report

Custom reports provide you with much more flexibility than you get with standard reports. You can choose exactly which dimensions, metrics, filters, etc. you want to be in your report.

Custom Reports as a Training Tool

Playing with custom reports is also a great way to learn which dimensions and metrics work together. For example, if you choose Visitors as a metric, the number of dimensions you can choose from will be reduced significantly.

How to Create One

To create a custom report, choose Customization at the top of any report, then the New Custom Report button. You will be given a variety of options:

General Information

Title: Give your report an intuitive title

Report Content

Report tab: Break your reports into different tabs to satisfy different audiences
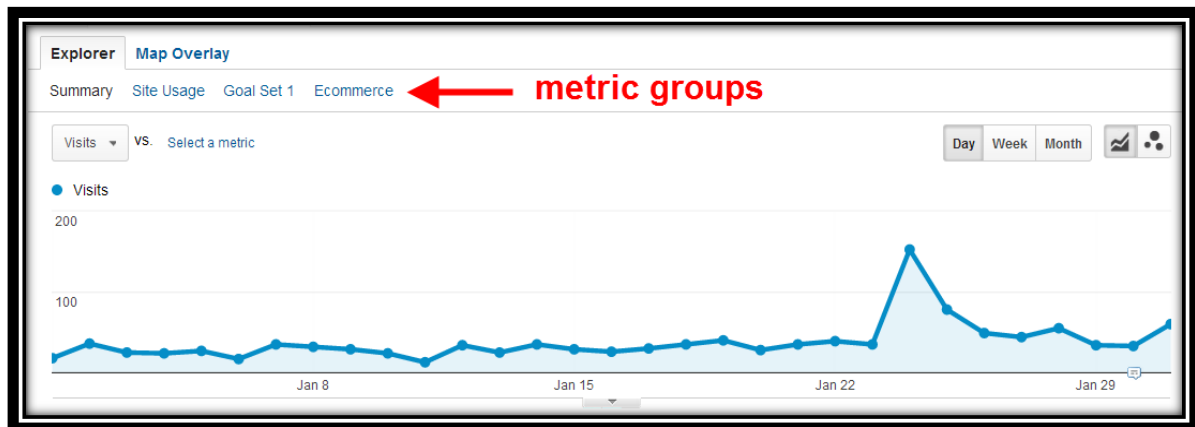
Caveat: Any filters you apply carry across all of the tabs. This nuance (more like nuisance) really limits the usefulness of report tabs. <kicks dirt>

Type:

- Explorer: These are the model for the standard reports in Google Analytics. If dimension is a link, you can "drill down" to the next dimension, e.g., Medium > Source > Landing Page (screenshot: bit.ly/drilldown).
- Flat Table: Great for generating pivot table-friendly reports. I wrote a blog post on how to do this here: bit.ly/pt-reports.
- Map Overlay: Just like you see under Audience > Geo > Location.

Metric Groups

This is where you add metrics (e.g., visits, bounce rate, etc.). You can also group your metrics like you see in standard reports.
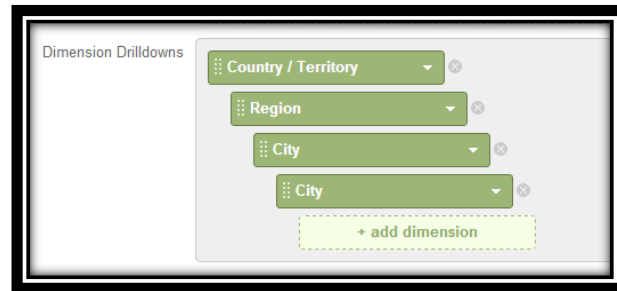

Dimension Drilldowns

The heading for this section assumed you're creating an explorer-style report. If you're creating a flat table-style report, you won't be able to drill down through your dimensions. In fact, you only get two. (Lame.) If you're creating an explorer-style report, you get up to five.

If you're creating an explorer-style report and you have another layer of dimensions below what you have selected, it will be clickable; if not, it will be static text.

Pro Tip: To be able to isolate a single dimension, choose it twice. For example, choosing Country/Territory > Region > City > City, you will be able to select a city to get just the metrics for that one city.

Look at the New vs Returning report (Audience > Behavior) to see an example of this inside the interface.

To get a full list of dimensions and metrics, go to bit.ly/api-help.

Filters

This is where you can create filters for your report. For example, if you want to just analyze organic traffic you would create a filter that includes traffic if the medium (or traffic type) matches organic. As you can see in the screenshot below, Google Analytics will offer suggestions.

You can also use regular expressions (more on regex in the next session). Just choose Regex from the drop-down that defaults to Exact. The example below will give me only visits that are tagged ppc or cpc and come from the United States or Canada.

Notice how I have those same dimensions selected in the Dimension Drilldown section. You want to do that when you first set up a filter, to make sure you're getting what you want. I will also set my filter(s) to Exclude to make sure I'm not leaving anything behind that should be included.

But once you've tested your filter, you can delete them from the Dimension Drilldown section. No need to drill down needlessly in your report. So if I wanted to look at the performance of my paid search landing pages from this segment, I'd delete County/Territory and Medium and select Landing Page.

Here's another example of a filter that captures only referral traffic from Google sites:

Note: The caret (^) says the source name has to start with google. This would be filter out referrals like allaboutgoogle.com.

Views

Google Analytics allows you to make your custom report available to as many views (fka profiles) as you have access to. This is very convenient if you manage multiple views.

Learn More with My Video Tutorial

You can view a video tutorial I did on creating custom reports here: bit.ly/custom-ga-reports.

Notes: Custom Reports

Understanding the Terminology

Learning what everything means in Google Analytics can be intimidating. There's a lot of geek speak.

Here are a few terms I will be using throughout the course that you should be familiar with. These definitions are simplified by design. You don't have to understand all of the nuances to get started in Google Analytics.

Metric: Anything that can be measured with a number

Dimension: How you want the report to drill down

Primary Dimension: The main dimension in a particular view of the interface

Secondary Dimension: A way to slice and dice your first dimension

URI: The part of a URL sans the domain, e.g., /blog/ (as opposed to www.annielytics.com/blog/)

Path: Another word for URI, e.g., entrance page path, referral path

Hostname: The subdomain of the site with your tracking code (for my site all would be www.annielytics.com because I only have one subdomain; for a site with multiple subdomains, they might be www.example.com, blog.example.com, store.example.com)

Source: The subdomain of the referring site

Pro Tip: If you want to know the full URL, concatenate source + referral path for visits from other sites or hostname + page (or pagePath in the API) for pages on your own site

Bounce Rate: Percentage of visitors who leave the site after viewing only one page

View: Google's new name for a profile

Regex: Short for *regular* expression, it's a sequence of characters that forms a search pattern, mainly for use in pattern matching with strings. (I wrote a post for newbies on how to use them in GA: bit.ly/regex-for-newbies.)

(none): You'll see this under the Acquisition report quite a bit. It just means direct traffic.

(not set): You'll see this most frequently with filtered views (previously called profiles). With a filtered profile, data gets lobbed off according to your profile's filters. So, for example, if you have a separate profile for each of your subdomains (boo) and a visitor visits the subdomain for the view you're looking at but then moves to another subdomain and returns to the original subdomain, the previous page will show up as (not set) because all of the data for the second subdomain is filtered out.

(not provided): If a search engine (like Google) has encrypted searches, the specific keywords a visitor searches for will not be passed on to the site's analytics account. The keyword shows up as (not provided). Do not even bother analyzing keyword data from organic search reports.

Standard Reports

This section is mostly a live demo of the standard reports Google Analytics offers.

There are a couple notes I'll point though, for posterity's sake.

Plot Rows

Google Analytics gives you the ability to choose specific rows to view on the timeline. To do this, select the check box to the left of each line item you want to display (up to six) and click the Plot Rows button.

Get More Rows

Google Analytics will allow you to export up to 5,000 rows. But you can get more with a hack: Increase the number of rows to 25 > look for *explorer-table.rowCount%3D25/* at the end of the URL > change the 25 to the number of rows you need.

Sampling

Sampling Defined

Sampling is the selection of a subset of from within a statistical population to estimate characteristics of the whole population.

Causes

Google Analytics starts sampling at 250,000 visits in a property (not in a view/profile). This is one reason it's not a good idea to put more than one website in a single property.

How to Detect It

Look for this yellow alert box:
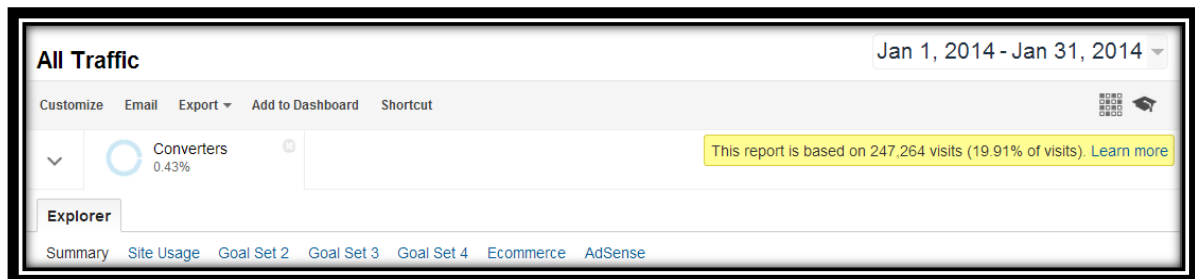
This pops up if there are more than 250,000 visits to the property. To find out how many visits your property has received for the selected time period, go to your dashboard by clicking the Home link at the top of any report.

For my site, the account is Pied Piper Interactive (my umbrella company), the property is http://annielytics.com, and the views (formerly known as profiles) are Annielytics and Annielytics – Raw. To get to this page, click the Home icon in the top navigation bar.

If you have multiple sites set up under one property, you will need to add up the visits from each of the sites to get the total number of visits. (Visits for different views of a single site don't count against that threshold.)

If you only have one website in a property (as you should), you can also see overall visits for a date range from the Overview report under Audience or Acquisition.
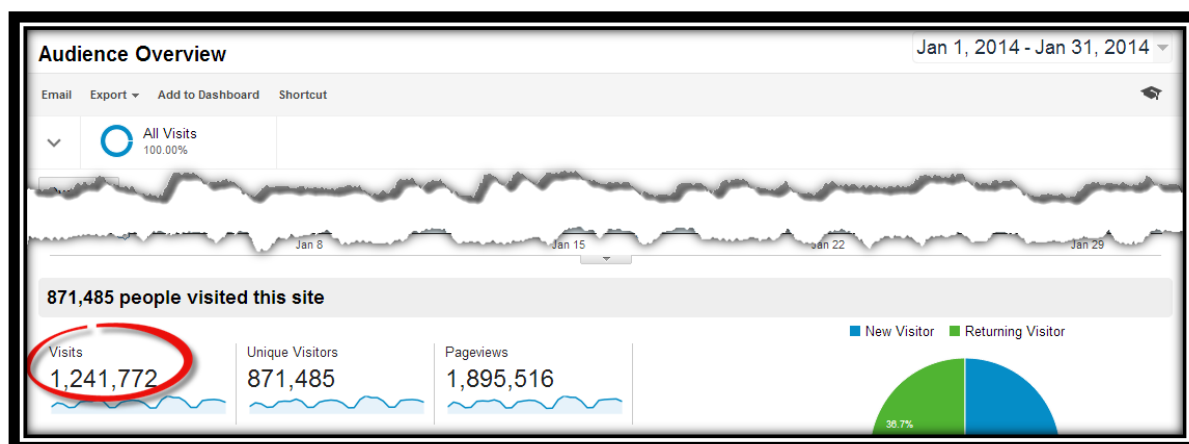
How Much Is Too Much

Rule of thumb: data sampling = confidence in the data

- 20% of visits sampled, 20% confidence in the data
- 80% of visits sampled, 80% confidence in the data
- 3% of visits sampled, throwing spaghetti against a wall might be more accurate

How to Minimize Its Impact

Double the Threshold

Google Analytics will allow you to bump the threshold up to 500,000 visits with a hidden slider, but it's not apparent how to do that. To access the slider, click the grid icon above the warning and move the dot all the way to the right. This will double the percentage that you originally saw, so if Google Analytics was previously only processing 20% of your traffic, it will recalculate using 40%.
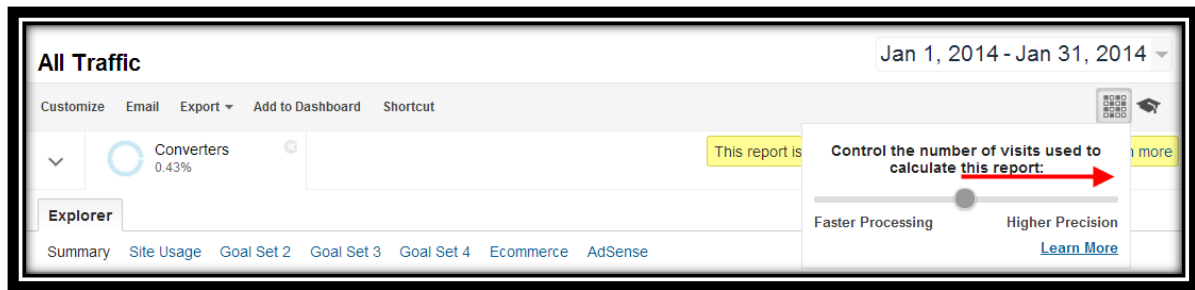
Obviously, any sampling rates greater than 50% will result in the eradication of sampling for the time period you have chosen once you've moved the slider. So you need to train yourself, like Pavlov's dog, to move the slider any time you see that yellow warning box.

Reduce Date Range

Reducing the date range will reduce the number of visits, getting you closer to 500,000.

Use Standard Reports

The standard reports in Google Analytics aren't subject to sampling. Custom reports are. However, if you apply an advanced segment to a standard report, you'll get sampling.

It's better to apply report filters over using advanced segments for this reason. For example, here is a report that isolates *(not provided)* traffic using an advanced segment:
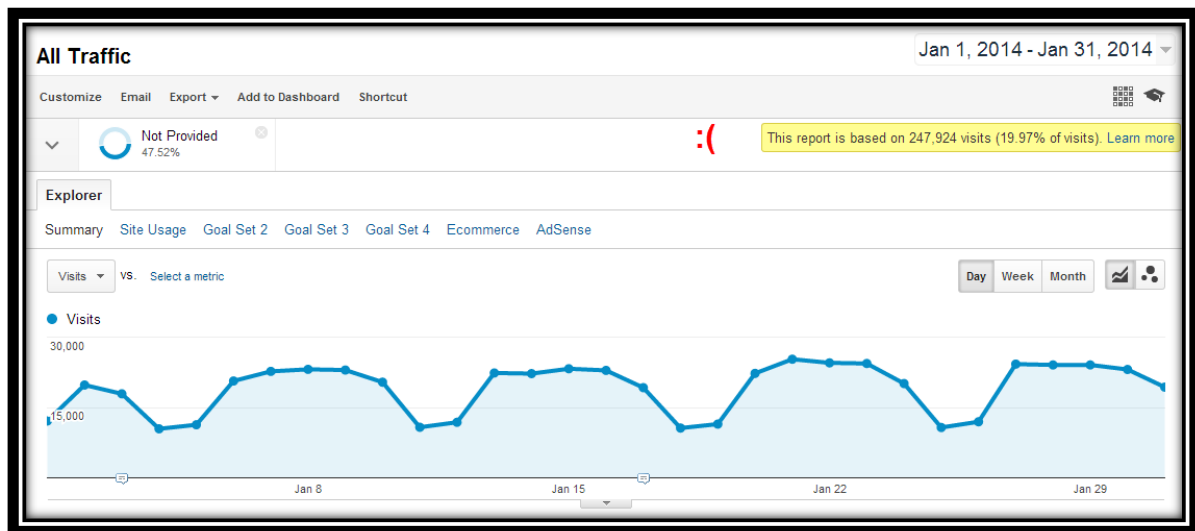
And here's one that uses a report filter:
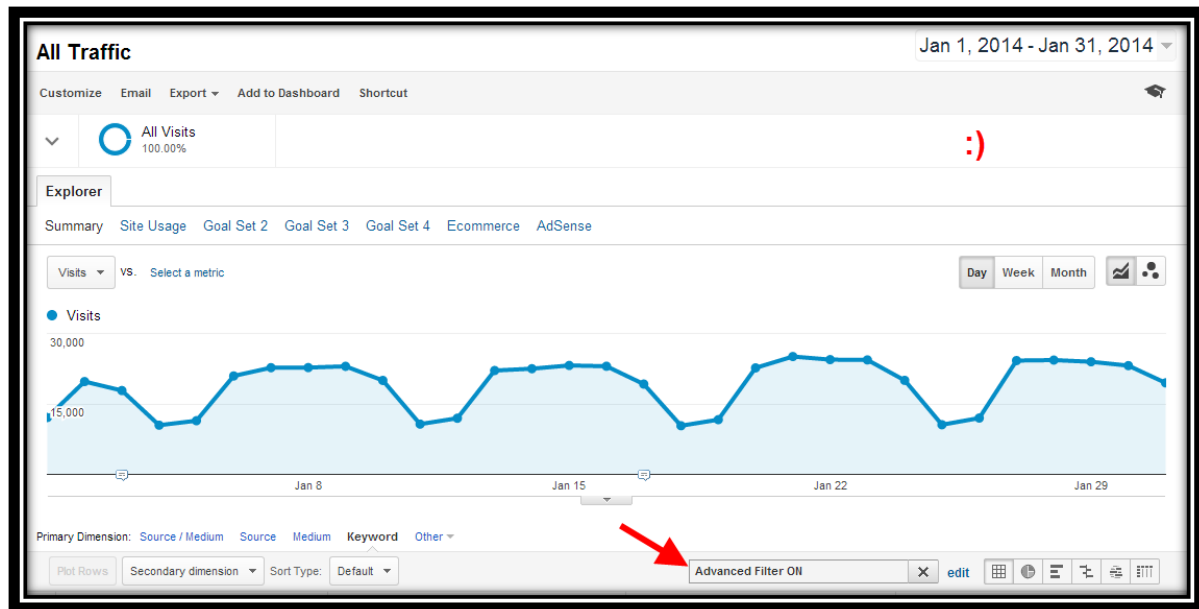
Google Analytics Premium

Premium gives you up to 100 million visits before Google Analytics starts sampling.

Google Analytics API

By using the API, you can import all of your Google Analytics data into a database to retrieve it from there. Using the API alone won't solve your sampling issue, but it does give you the opportunity to pull the data you need to use later in your own system.

Analytics Canvas

Analytics Canvas (which we'll be learning more about on Day 3) has a functionality that reduces sampling significantly. You can't use this solution for visitor-level metrics since the data gets scrambled, but it works beautifully on session- and hit-level analysis.

Notes: Sampling
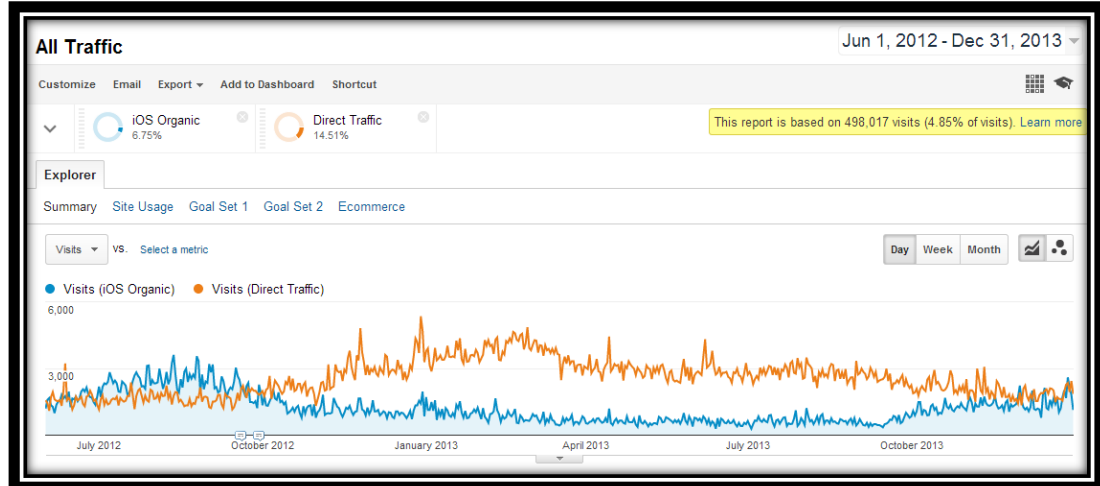
Advanced Segments

Caveat

As mentioned in the section on Sampling, advanced segments cause sampling in larger sites, so I'm very cautious with them. As a general rule, I mostly use advanced segments for forensic analysis. I use filters for reporting.

When to Use Advanced Segments

1. When your property receives well under the 500,000 visits allotted before sampling kicks in.
2. When you need to export a segment of visits or visitors you can't get from one report.

For example, when iOS 6 started reporting organic traffic as direct, I added a chart to clients' reporting dashboards that compared direct to organic for traffic coming from iOS devices to account for the sudden drop in organic traffic. I couldn't have gotten that data with report filters. With a report filter, I could look at just organic traffic from iOS devices or direct traffic; I can't compare their performance in a timeline like you see below. (Read more about how I did it here: bit.ly/ios-mess.)

Other good examples:

- Analyze traffic landing on blog pages vs traffic landing on commercial pages.
- Combine social referrals and campaigns for each social network — e.g., create a Facebook segment that stitches together traffic from facebook.com and m.facebook.com with campaign traffic you've tagged (more on that in the Campaign Tagging section).

- Compare visitors who made at least one goal conversion vs those who generated revenue vs those who didn't convert at all.
- Compare branded vs non-branded PPC keywords.

3. When you want to quickly apply qualifiers to a variety of reports. Report filters are tied to a particular report. Segments can be applied to all reports.
4. When you want to segment by visitor behavior. Examples might be visitors who have spent at least $100 on your site, visitors who have visited your site at least x times, date of a visitor's first visit, etc.

Gallery

Take advantage of Google Analytics' impressive gallery of segments, custom reports, and dashboards!

Report Filters

What They Do

Report filters allow you to filter a particular report using whatever dimensions and metrics are present in the report. As mentioned in the Sampling section, report filters don't cause sampling like advanced segments do.

What It Is Not

Report filters are not the same thing as view (profile) filters. View filters are applied to the entire view and are often misused. View profiles are outside the scope of this course.

Regex Heaven

If you're not familiar with regex (short for regular expressions), I wrote a post that is newbie friendly (bit.ly/regex-for-newbies). Report filters are sensitive to regex. You apply them clicking the advanced link to the right of the filter field, selecting the dimension or metric you want to filter by, choosing Matching RegExp from the drop-down menu, then entering your regular expression.

Multi-Channel Funnels

What Are They

Multi-channel funnels are the best thing to happen to Google Analytics in a long time. The reason is they show much truer values for how much a channel (or medium or source or whatever) is generating than what you get from Google Analytics' standard reports. The reason is Google Analytics' standard reporting awards conversions using last-click interactions. Multi-channel funnels look at last-click, first-click, and all other assists to a conversion.

A Few Notes

- First-click interactions are a subset (or type) of assists.
- The lookback window is set by default to 30 days. I always dial it up to the full 90 days allowed. (The API doesn't allow you to change this as of the publishing date of this workbook.) When I asked Justin Cutroni (Google Analytics evangelist) about this, he said they're considering adding it. (Translation: "Oh crap! We forgot to add that to the API? Let me submit a work order to the engineers.")
- In standard reports, if a visitor visits the site via a campaign and then returns as a direct visit, the campaign inherits credit for the conversion. Not so with multi-channel funnels. Direct is awarded credit for the conversion. Because of this revenue numbers between regular reports and multi-channel funnel reports oftentimes won't match. As you might imagine, for most sites, direct is credited with more conversions in the Multi-Channel Funnels model.

How Channels Are Defined

This is how Google has defined each of the default channels:

Channel	Description
Display	Interactions with a medium of "display", or "cpm". Also includes AdWords interactions with ad distribution network set to "content" but excluding ad format of "text".
Paid Search	Visits from the AdWords Search Network or other search engines, with a medium of "cpc" or "ppc" .
Other Advertising	Visits that are tagged with a medium of "cpc", "ppc", "cpm", "cpv", "cpa", "cpp", "content-text", "affiliate" (excluding Paid Search).
Organic Search	Visits from unpaid search on any search engine (i.e. medium="organic").
Social Network	Visits from any of approximately 400 social networks (that are not tagged as ads).
Referral	Visits from websites that are not social networks.
Email	Visits that are tagged with a medium of "email".
Direct	Visits in which the visitor typed the name of your website URL into the browser or who came to your site via a bookmark (i.e., source="(direct)" and medium="(not set)" or "(none)").

Source: bit.ly/channel-definitions

To see these in Google Analytics take these steps:

1. In the Assisted Conversions or Top Conversion Paths report (under Conversions > Multi-Channel Funnels), click Channel Groupings and then select Copy MCF Channel Grouping template. (You're not going to actually save the copy.)

2. Click the pencil icon for the channel you want to check out.

Create or edit channel grouping

Channel Grouping Settings

Channel grouping name

Copy of MCF Channel Grouping

CHANNEL DEFINITIONS

+   Define a new channel

1. ⠿ Display	User defined	✎ ×
2. ⠿ Paid Search	User defined	✎ ×
3. ⠿ Other Advertising	User defined	✎ ×
4. ⠿ Organic Search	User defined	✎ ×
5. ⠿ Social Network	User defined	✎ ×
6. ⠿ Referral	User defined	✎ ×
7. ⠿ Email	User defined	✎ ×

Save   Cancel

3. Voilà.

Social Network

Define rules

Social Source Referral ▾	exactly matches ▾	Yes	− OR AND
OR			
Medium ▾	matches regex ▾	^(social|social-network|social-media|s	− OR AND

Display Color:

a a a a a a a a a a a a a
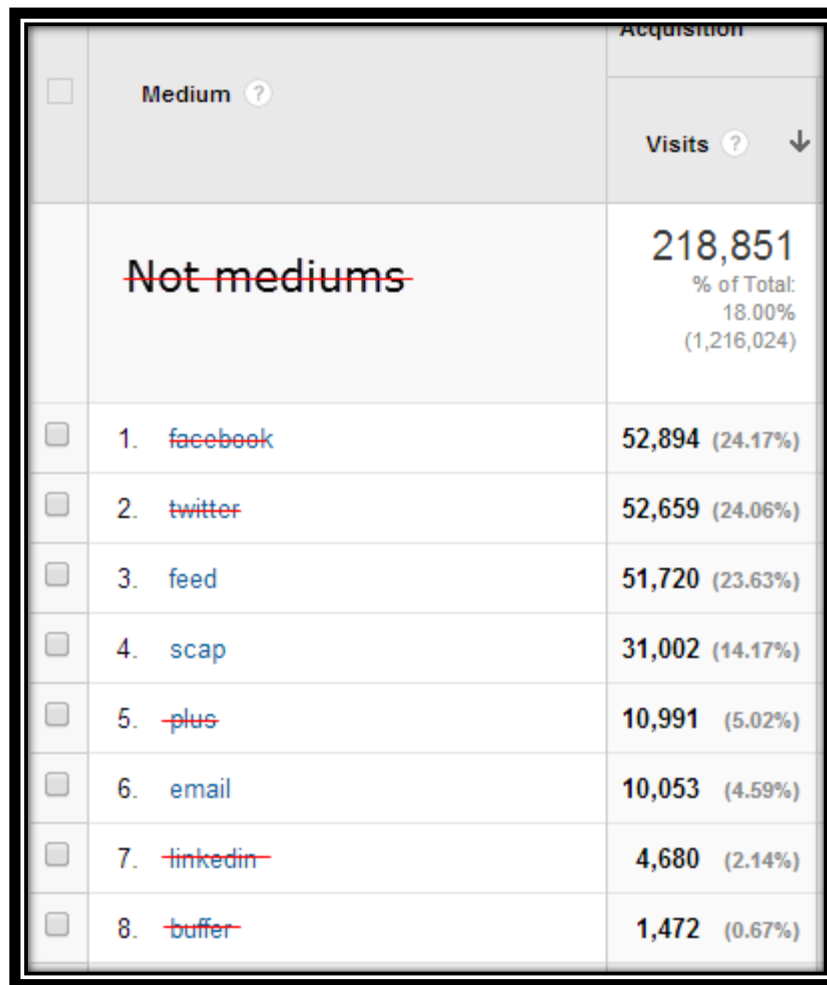a a a a a a a a a a a a a

Preview:

Social Network

Done   Cancel

How to Customize Default Channel Groupings

You will need to do this if you've been tagging social traffic as anything other than one of the acceptable tags you see in the above screenshot. I recommend using utm_medium=social for simplicity's sake.

Warning: There are social management tools like SocialFlow that mistag links. (Buffer used to be another offender.) So if you look at the mediums reporting in your Campaigns report (Acquisition > Campaigns > Primary Dimension: Medium) and see various sources, like the screenshot below, you will need to clean up your channel groupings (and fix your tagging strategy):

	Medium ?		Acquisition Visits ? ↓
☐	**Not mediums**		**218,851** % of Total: 18.00% (1,216,024)
☐	1. facebook		52,894 (24.17%)
☐	2. twitter		52,659 (24.06%)
☐	3. feed		51,720 (23.63%)
☐	4. scap		31,002 (14.17%)
☐	5. plus		10,991 (5.02%)
☐	6. email		10,053 (4.59%)
☐	7. linkedin		4,680 (2.14%)
☐	8. buffer		1,472 (0.67%)

More on why these aren't mediums in the next section.

To redefine how a channel grouping is defined, you'll need to take these steps:

1. Click Admin > Choose the Property and View.
2. Click the Actions button next to Default Channel Grouping and choose Edit.

3. Click AND/OR to add new rules.

Create Your Own

You can create your own channel groupings (in the Assisted Conversions and Top Conversion Paths reports), but you can only access the default channel grouping via the API (at the time of publication). So if you want to use the API, you'll need to modify the default channel grouping as described above.

Notes: Multi-Channel Funnels

Campaign Tagging

If you're running marketing campaigns, campaign tagging is absolutely critical. What campaign tagging allows you to do is set the source, medium, and campaign name for a marketing campaign. Although term an content are primarily for tagging your paid campaigns, you can use them for regular marketing campaigns to get more data. For example, I sometimes use content to capture banner sizes or the position of a link in an email (body, image, footer, etc.)

Campaign Parameters

Medium

What It Is

Think of medium as a bucket. You want these buckets to be pretty big. In Google Analytics you can view the mediums your site is getting traffic from by going to Acquisition > All Traffic and choosing Medium as your primary dimension. If you see more than 10 line items, you may be tagging mediums incorrectly.

How It's Collected

When Google Analytics drops a cookie in a visitor's browser, it will collect medium data automatically, as long as the user has cookies enabled. The standard mediums are:

- organic
- (none)
- referral
- cpc (if you're using AdWords and have enabled auto tagging)

If you don't tag links and no one else tags links that point to your site, these are the mediums you'll see. (And you'll only see cpc if you're running AdWords.)

However, Google gives you the ability to overwrite the cookie with what you want the medium (or source) to be. But with great power comes great responsibility, grasshoppah. I've seen site owners completely trash their analytics profile by misusing campaign tagging. You can read a cautionary tale here: bit.ly/trash-your-data.

Good Mediums to Use

If you're putting links to your site on social media channels, email, banner ads, etc. it's critical that you tag these links. Here are some good mediums to use:

- social
- email
- feed

- banner
- cpc (or ppc)
- display
- affiliate
- ebook
- tv
- print
- billboard
- partner
- radio
- qr code
- widget

Tagging for Offsite Campaigns

But what if your link isn't on a website? What if it's on a billboard, for example? That's where vanity URLs come into play. Let's say you're running a sale on funky shoes. (Imagine that!) You could create a vanity URL (let's say yousocray.com) and 301 redirect it to a landing page on your site that's tagged:

www.annielytics.com/?utm_medium=billboard&utm_source=main+st&utm_campaign=socray

As always, test this before launching your campaign to make sure nothing gets mangled in the redirect.

Don't Be a Statistic

The most common mistake I see with social tagging is tagging the network — e.g., Twitter and Facebook — as the medium. *They are not mediums; they are sources.* Getting this wrong will wreak havoc in your social reports AND the glorious Channels report (under Acquisition), as mentioned in the Multi-Channel Funnels section. Your precious social visits will show up as referrals.

Default Channel Grouping	Acquisition
	Visits ? ↓
	71,077 % of Total: 100.00% (71,077)
1. Organic Search	41,521
2. Referral	12,512
3. Direct	9,161
4. Social	6,677
5. (Other)	760
6. Email	444

Pro Tip: Google launched the Channels report July 25, 2013. If you run this report for a date range that predates this date, your data will show up as (not set). If you adjust your date range and you still see (not set), click on (not set) to drill down to see the sources driving this traffic and modify your Default Channel Groupings. (Learn how in the How to Customize Default Channels section of this workbook (under Google Analytics Interface > Multi-channel Funnels).

Source

Source is simply the site the link lives on. So if you put a link out on Twitter, the source should be twitter.com; if it's on Facebook, facebook.com; if it's a banner on a partner site, it should be the domain of the site it's on.

Look at how sources show up in your referral reports (Acquisition > All Referrals). Your tagged sources should match those.

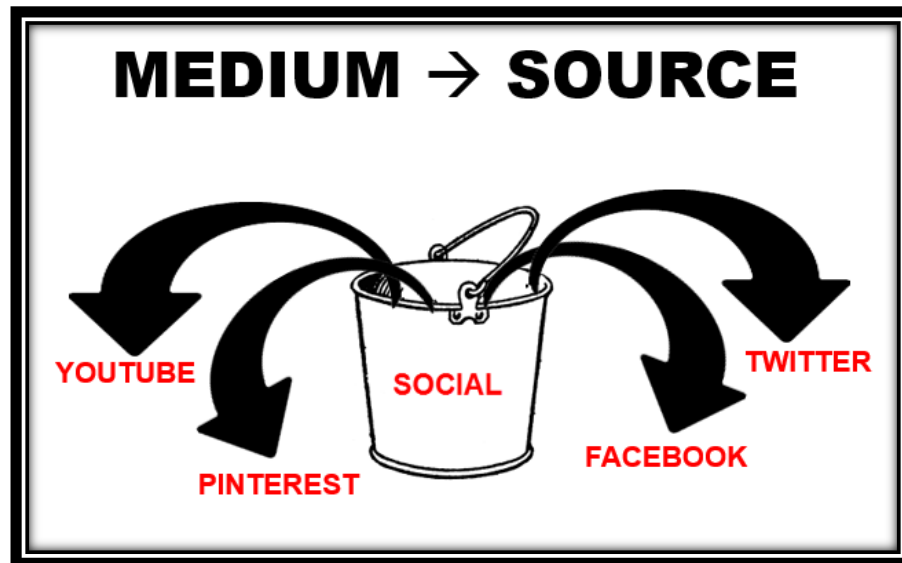| Source ?	Acquisition
	Visits ? ↓
	39,277 % of Total: 32.83% (119,620)
1. searchenginejournal.com	9,547
2. t.co	6,935
3. searchengineland.com	3,607
4. moz.com	3,314
5. facebook.com	1,481
6. unbounce.com	1,243
7. inbound.org	1,172
8. plus.url.google.com	1,137
9. m.facebook.com	974
10. marketingland.com	711

Warning about Google+

If you want links you share on Google+ to show up properly, either use plus.url.google.com (Google's default) or plus.google.com as the source. Either of these will cause visits from tagged URLs to show up in other important reports, such as the Network Referrals report (Social > Network Referrals) and the Visitors Flow report (Social > Visitors Flow).

Email Tagging Conundrum

Email is a little different. Because these links don't reside on a site per se, use your discretion. I've most commonly seen marketers tag them as internal or the name of the email service they use (such as marketo). I wouldn't use your site (e.g., annielytics.com) as the source though because it will look like you have self-referrals (which you can check for by looking for your own domain in the All Referrals report).

When links are tagged strategically, your ability to segment will be a thing of legends. Sources should fit neatly into medium "buckets" and look something like this:

Campaign

The campaign name is simply whatever you name your campaign. Examples might be *bogo+sale*, *2014-02+newsletter*, and *new+member+email*.

A few things to keep in mind:

- Don't make them too specific. If you send out a daily email, don't make the campaign name specific to each day. It makes roll-up reporting more challenging.
- Ideally, you should use campaign names that span different mediums. For example, if you run a BOGO sale using the campaign name bogo+sale and promote it on Twitter, Facebook, Pinterest, email, CPC, and a banner for your affiliates, they should all use the same campaign name. This way you can compare how your promotion did across marketing channels (mediums) and across sites (sources).

Tagging Strategies

There are a few tips I'll pass on from the trenches:

- Be consistent. Keep a record of the tags you use and use the naming conventions consistently.
- Use a tool to tag. You can use Google's URL builder (bitly.com/url-builder) to create them one by one. Or you can use this Google Spreadsheet I created to auto tag your links: bit.ly/utm-tagging. I include a tab with tips and comments throughout the doc. Look for the orange dots in the upper-right corners of cells.

- Use lowercase. Google Analytics is case sensitive, so visits to utm_campaign=BOGO+sale will show up as a separate line item from utm_campaign=bogo+sale, wreaking havoc in your reports.
- Separate words with + signs. These will translate into spaces in your Google Analytics reports.

Campaign Reports

You will find campaign traffic under Acquisition > Campaigns. The default primary dimension is Campaign, but feel free to choose Source and Medium and even use secondary dimensions. Slice and dice this data until the cows come home.

Notes: Campaign Tagging