

Beyond the Annual Report

Web Analytics for Evidence-Based User Experience Decisions



Vancouver Public Library

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- Introduce self & Jonathan
- Today's presentation
 - wrangle Google Analytics so we can understand them and use them to make decisions
 - Limited time - will only briefly touch on a lot of GA concepts
 - Hope to have a discussion with you about what we want to see in our numbers
 - Casual & conversational - Ask questions - time at end & feel free to interrupt



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Introduction

Both new to the job last year - inherited Google Analytics

Photos by Scott Meyers and Sara



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Starting point

No screenshot of what it looked like before, but this is what it felt like
From the outside, it's a black box.
When you get in, you have no idea what you're looking at -
What's in these boxes?
Does this TV even still work?
Whose chair is this and can we get rid of it?

Photo by Lukas



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Why Google Analytics?

But we knew that GA is an important source of information about what users are doing on our website, and that it was important to roll up our sleeves, dive in, figure out what we had and organize it so that we could actually make use of the good stuff in there.

Website redesign



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Why Google Analytics?

We also needed to make sure our analytics were giving us accurate information because we are currently undertaking a pretty major website redesign, and we need to make sure that we're making decisions based on good data.

Definitions:

- Hit
- Pageview
- Session
- Event



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Basic terminology: Tracking

Definitions taken from Google Analytics Help pages

- **Hit:** An interaction that results in data being sent to Analytics.
- **Pageview:** An instance of a page being loaded (or reloaded) in a browser. Pageviews is a metric defined as the total number of pages viewed.
- **Session:** The period of time a user is active on your site or app. By default, if a user is inactive for 30 minutes or more, any future activity is attributed to a new session. Sometimes referred to as a Visit.
- **Event:** A type of hit used to track user interactions with content
 - e.g. a download or closing a tab.

Property

View

Filter

Google Analytics Administration

Home Reporting Customization Admin

jonathan.kift@vpl.ca
www.vpl.ca - http://www.vpl.ca
All Web Site Data (www.vpl.ca)

Administration
Vancouver Public Library

ACCOUNT
Vancouver Public Library

PROPERTY
www.vpl.ca

VIEW
All Web Site Data (www.vp...)

Account Settings
User Management
All Filters
Change History
Trash Can

Property Settings
.js Tracking Info

PRODUCT LINKING
AdWords Linking
AdSense Linking
Ad Exchange Linking
All Products

View Settings
Goals
Content Grouping
Filters
Channel Settings
Ecommerce Settings
Calculated Metrics BETA



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Basic terminology: Administration

Property: A sub-component of an Analytics account that determines which data is organized and stored together.

Property

View

Filter

The screenshot shows the Google Analytics Administration interface for the Vancouver Public Library. The top navigation bar includes 'Home', 'Reporting', 'Customization', and 'Admin'. The user is logged in as 'jonathan.kift@vpl.ca'. The main content area is divided into three columns: ACCOUNT, PROPERTY, and VIEW. The ACCOUNT column shows 'Vancouver Public Library' selected. The PROPERTY column shows 'www.vpl.ca' selected. The VIEW column shows 'All Web Site Data (www.vp...)' selected, which is circled in red. Other options in the VIEW column include 'View Settings', 'Goals', 'Content Grouping', 'Filters', 'Channel Settings', 'Ecommerce Settings', and 'Calculated Metrics BETA'.



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Basic terminology: Administration

View: A subset of an Analytics account property that can have its own unique configuration settings.

Property
View
Filter

The screenshot shows the Google Analytics Administration interface for the Vancouver Public Library property. The top navigation bar includes 'Home', 'Reporting', 'Customization', and 'Admin'. The main content area is organized into three columns: ACCOUNT, PROPERTY, and VIEW. In the ACCOUNT column, the 'All Filters' option is circled in red. In the VIEW column, the 'Filters' option is also circled in red. Other options in the ACCOUNT column include Account Settings, User Management, Change History, and Trash Can. The PROPERTY column includes Property Settings, Tracking Info, and various linking options. The VIEW column includes View Settings, Goals, Content Grouping, Channel Settings, Ecommerce Settings, and Calculated Metrics.



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Basic terminology: Administration

Filter: A configuration setting that allows you to add, remove or modify your data during processing before it is displayed in your reports.

Google Analytics Home Reporting Customization Admin This Vancouver - jonathan.kift@vpl.ca <http://www.vancouver.ca> All Web Site Data

Apr 11, 2016 - May 10, 2016

	Sessions	Avg. Session Duration	Bounce Rate	Goal Conversion Rate
☆ Bibliocommons - Events				
☆ Vancouver Public Library				
☆ BiblioCommons (UA-1457930-15)				
★ Exclude Staff Usage (BibComm)	297,233	00:04:09	17.78%	0.00%
★ External Usage	129,544	00:03:52	18.13%	0.00%
☆ LibGuides (UA-1457930-18)				
☆ PWP - Vancouver Learning City (UA-1457930-21)				
☆ PWP - West End Stories (UA-1457930-20)				
☆ This Vancouver (UA-1457930-22)				
☆ www.vpl.ca (UA-1457930-1)				
★ All Web Site Data (www.vpl.ca)	292,356	00:01:49	71.86%	0.00%
★ Exclude Staff Usage	280,863	00:01:38	72.60%	19.20%

Account

Metrics

Property

View

What it looks like



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Cleanup

Required Views

View Name	Views	Time on Site	Conversion Rate	Goal Conversion Rate
All Photo Microsites	471	00:01:50	55.03%	0.00%
All Web Site Data (www.vpl.ca)	298,230	00:01:48	71.77%	0.00%
ARCHIVE - Exclude Internal VPL (bad filter)	297,167	00:01:46	71.86%	6.39%
DELETE - URL Query Parameters	298,230	00:01:48	71.77%	0.00%
Exclude IPac	280,225	00:01:31	74.05%	0.00%
Exclude Staff Usage	286,888	00:01:38	72.47%	19.51%
External DB launch	11,277	00:01:10	88.17%	0.00%
External Usage	237,669	00:01:36	70.78%	0.00%
Internal Public Usage	47,158	00:01:35	83.10%	0.00%
Internal Staff Usage	13,467	00:06:11	49.79%	0.00%
IPac Only	7,502	00:06:00	14.68%	0.00%
Public Branch Usage	25,670	00:01:44	84.33%	0.00%
Public CEN Usage	22,379	00:02:03	78.86%	0.00%
Public Terminal Usage	39,589	00:01:22	89.59%	0.00%
Public Wireless Usage	3,554	00:01:54	73.78%	0.00%
TEST - Bot filtering	-	-	-	-



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Cleanup work - Views

All Web Site Data: Your precious! Keep it safe!
Exclude Staff Usage: Your workhorse

Naming Conventions

View Name	Visits	Time on Site	Conversion Rate	Goal Conversion Rate
All Photo Microsites	471	00:01:50	55.03%	0.00%
All Web Site Data (www.vpl.ca)	298,230	00:01:48	71.77%	0.00%
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Public Terminal Usage	39,589	00:01:22	89.59%	0.00%
Public Wireless Usage	3,554	00:01:54	73.78%	0.00%
TEST - Bot filtering	-	-	-	-



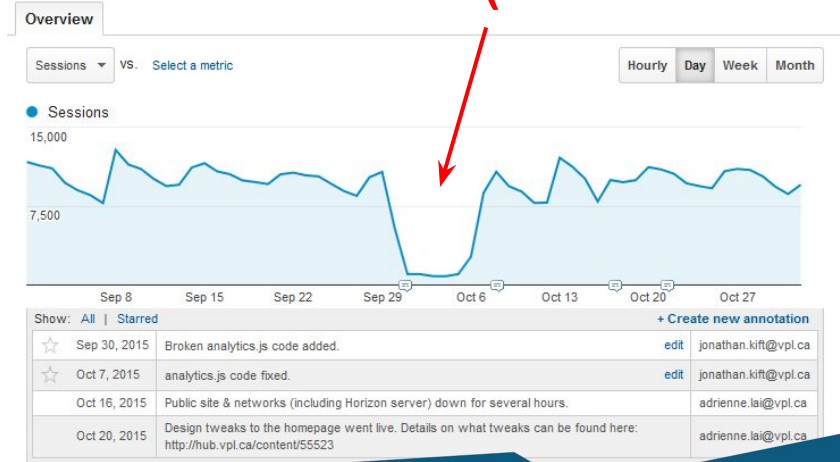
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Cleanup work - Views

TEST, DELETE, ARCHIVE

When we inherited GA, it was hard to know which views were critical for reporting, and which ones were one-off experiments.

Annotations



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Cleanup work - Views

Made a change?

Messed something up?

Aside: you're going to have issues! Occasionally things will get messed up. Accurate data is worth the effort.

Discovered why the data looks weird?

Label it!

Parameter exclusions

<input type="checkbox"/>	71. /search?searchOpt=catalogue&t=author	🔗
<input type="checkbox"/>	72. /user/account	🔗
<input type="checkbox"/>	73. /search?commit=Search&display_quantity=25&page=1&searchOpt=catalogue&t=title&utf8=√&from_login=true	🔗
<input type="checkbox"/>	74. /search?utf8=√&t=smart&page=1	🔗
<input type="checkbox"/>	75. /search?commit=Search&display_quantity=25&page=4&searchOpt=catalogue&t=keyword&utf8=√	🔗
<input type="checkbox"/>	76. /user_profile/me	🔗
<input type="checkbox"/>	77. /search?utf8=√&t=subject&searchOpt=catalogue	🔗
<input type="checkbox"/>	78. /?page=	🔗
<input type="checkbox"/>	79. /search?custom_edit=false&custom_query=-subject:(("electronic+books")+language:"eng"+audience:"adult"+contentclass:"FICTION"+formatcode:(BK+)&newly_acquired=PAST_7_DAYS&sort[direction]=descending&sort[field]=NEWLY_ACQUIRED&sort[type]=BIB_FIELDS&suppress=true&title=All+Fiction+(past+7+days)&suppress=true	🔗
<input type="checkbox"/>	80. /search?custom_edit=false&custom_query=genre:(("feature films")) language:"eng" formatcode:(DVD)&sort[direction]=descending&sort[field]=NEWLY_ACQUIRED&sort[type]=BIB_FIELDS&suppress=true&title=DVD-Movies&newly_acquired=PAST_90_DAYS&title=DVD-Movies&title=DVD-Movies&suppress=true	🔗

VS.

71. /messages	🔗
72. /search?title=DVD-TV Shows&title=DVD-TV+Shows	🔗
73. /item/show/3208465038_vancouver_inspiration_pass	🔗
74. /search?q=Chinese+books	🔗
75. /search?title=Blu-ray Disc&title=Blu-ray+Discs	🔗
76. /search/index.mobile?formats=DVD&q=all&title=Recent+Arrivals	🔗
77. /search?formats=BK	🔗
78. /search?title=Blu-ray+Discs	🔗
79. /search?q=star+wars	🔗
80. /search?title=eBooks-Non-Fiction	🔗



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Cleanup work - Views

The “All Pages” report can be very handy, but it often looks like a mess!
That’s because of all the unnecessary URL query parameters
Buried in the View Settings is a little box entitled “Exclude URL Query Parameters”.

(Behavior -> Site Content -> All Pages)

Filters:

Staff vs. Non-Staff

Inside the building vs. Outside

Weird bots



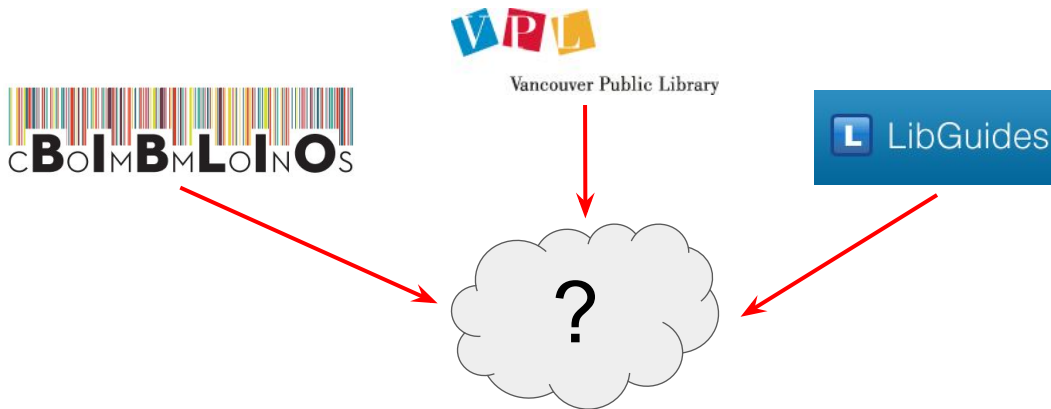
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Cleanup work - Filters

IP range filters are tricky to create, as they require knowledge of regular expressions. If you don't know what a regular expression is, you *probably* don't want to know! There are tools online to help you build them, though. When in doubt, ask your closest nerd!

Timms' ghost! Discovered that all of the traffic was coming from a particular Network Domain. Filtered that out and we're good!

Referrals: Getting accurate session counts



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Cleanup work - Filters

Libraries use lots of 3rd-party vendors, e.g. BiblioCommons and LibGuides.
How do we treat someone jumping between these sites as a single session?

- Old way: subtracting referrals from session counts for 3rd-party sites (i.e. only count direct visits)
- Option 1: Referral Exclusion List
- Option 2: Getting your hands dirty with some more advanced JavaScript coding



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Using analytics

After an initial first pass-through at cleanup, we were able to start making better use of the GA, which means that we actually look at them more frequently than once a quarter when we get asked for board report numbers.

How the cleanup helped

- Removed fear
- Gave us license to experiment
- Felt ready to invite collaboration



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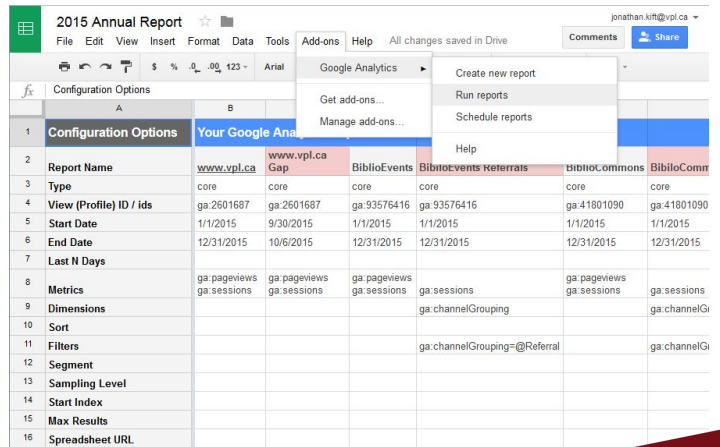
Share and use

Even the first pass-through yielded a lot of benefits.

- Remove fear - of deleting things, also of making meaning
- Allowed us to experiment - after we lost that week of analytics (that you saw in the annotations) and no one yelled at us, we felt more comfortable trying things
- We were able to be more of a resource for other staff - we felt more confident in inviting questions and feeling like we weren't giving made-up answers

Sharing info:

Google Sheets Add-on



The screenshot shows a Google Sheet titled "2015 Annual Report" with the Google Analytics add-on menu open. The menu options include "Create new report", "Run reports", "Schedule reports", "Get add-ons...", "Manage add-ons...", and "Help". The spreadsheet data is as follows:

Report Name	www.vpl.ca	www.vpl.ca Gap	BiblioEvents	BiblioEvents	Referrals	BiblioCommons	BiblioComm
Type	core	core	core	core	core	core	core
View (Profile) ID / ids	ga:2501687	ga:2601687	ga:93576416	ga:93576416		ga:41801090	ga:41801090
Start Date	1/1/2015	9/30/2015	1/1/2015	1/1/2015		1/1/2015	1/1/2015
End Date	12/31/2015	10/6/2015	12/31/2015	12/31/2015		12/31/2015	12/31/2015
Last N Days							
Metrics	ga:pageviews	ga:pageviews	ga:pageviews			ga:pageviews	
	ga:sessions	ga:sessions	ga:sessions	ga:sessions		ga:sessions	ga:sessions
Dimensions				ga:channelGrouping			ga:channelG
Sort							
Filters				ga:channelGrouping=@Referral			ga:channelG
Segment							
Sampling Level							
Start Index							
Max Results							
Spreadsheet URL							



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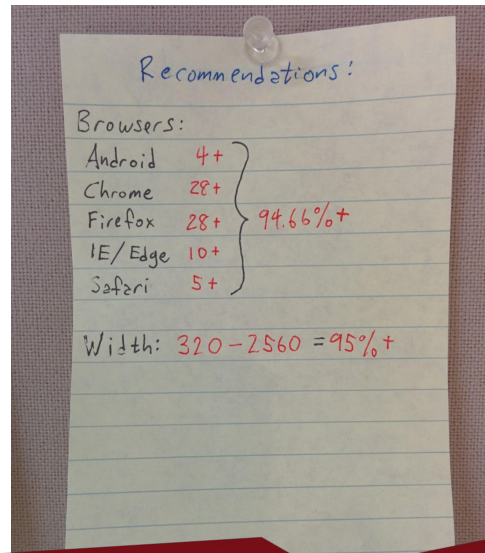
Share and use

Allows you to combine results from multiple properties and views to create more advanced reports

If you're handy with spreadsheets, you can do pretty much whatever you want!

Sharing info:

Analytics as reference librarianship



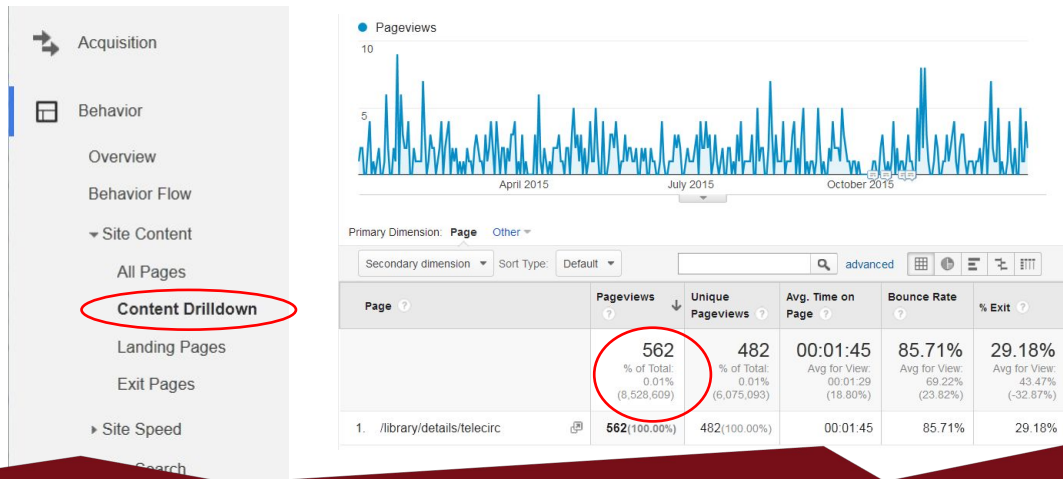
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Share and use

quarterly reports vs. answering questions on the fly when decision points come up

- readers' advisory: how are people getting to the page?
- subject guide use: which are most popular?
- Browser & resolution support for redesign

Should we keep this page?



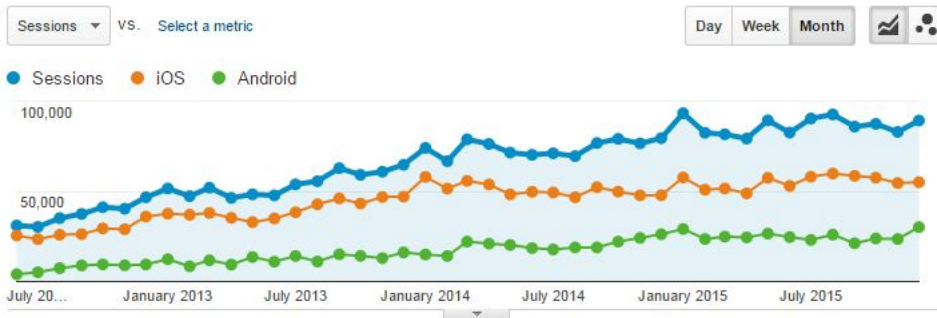
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Share and use

Here are some examples of questions & then where we'd go to look

- Should we keep this page? Are people using it?
- We'd set the date range for the past year (or over numerous years if that makes more sense)
- Content drilldown report on the left sidebar
- Gives you concrete numbers for stakeholders - 562 pageviews per year
- Leads to more questions:
 - Is 562 views per year worth the effort to maintain this page?
 - Are people not interested in this content, or can they just not find it?

What are the trends?



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Share and use

What are the trends? In which platforms, browsers, browser versions, screen sizes do we need to support our users?

What caused that spike?



The Zone at 91-3
August 17, 2015 · 🌐 Like Page

So Cool!!! The Vancouver Public Library has opened 'Inspiration Lab' studio space and equipment to help you create and experiment with traditional and digital media. Recording studios, green screens....and it's all FREE!!

Would love to see this in #YYJ

Details here: http://www.vpl.ca/programs/details/inspiration_lab_booking

... See More



👍 500 💬 43 Comments 🔄 172 Shares



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Share and use

We can also learn things by working backwards - looking at the analytics and seeing weird things and investigating where they came from

- In this example, we noticed a spike in our Inspiration Lab room booking pages with the majority of the traffic coming from Facebook & we then discovered that a Victoria radio station had posted about it (and got 172 shares)

So what this data gives us is some ideas for content marketing strategy - Inspiration Lab spike from the Facebook post in August was actually larger than the traffic we got when we first opened



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Beyond basics

There are limitations to the basic Google Analytics setup, so we'll briefly discuss a couple of ways we've tried to extend our data-gathering reach

Where, as well
as what

The screenshot shows the Vancouver Public Library website. At the top, the logo and navigation links are visible. A red circle highlights the 'Contact Us' link in the top navigation bar. Another red circle highlights the 'Contact Us' link in a sidebar menu. A red arrow points to a 'Contact Us' link in the footer. The main content area includes sections for 'Did You Know?', 'Upcoming Events', and 'Library News'.

Also a
link in
the footer!

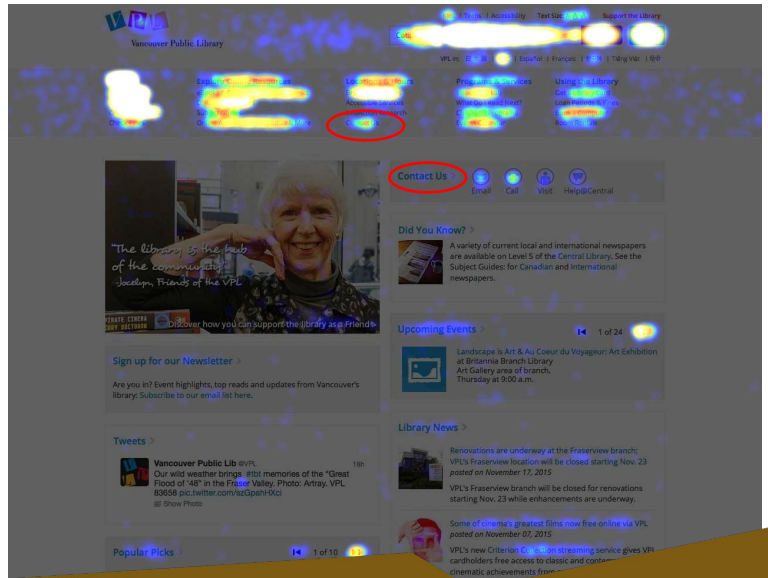


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Extending Google Analytics

GA tells you which pages people are going to, but it's not great at telling you where they're clicking to get there. So, for example, on our home page, there are a couple of links that take you to the Contact Us page. GA will tell you how often people go to that page, but it doesn't tell you which link people use.

Where, as well
as what



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Extending Google Analytics

A clickmap tool like Crazy Egg will give you that information, which is immensely helpful when making design decisions. In this case, we discovered that while the contact us link in the nav got the most clicks, the contact box got more clicks in total when you added up the sub-links, and that the link in the footer actually got a healthy number of clicks, indicating that there's an argument to be made for this redundancy.

Why, as well as what

*One small change, one big leap forward: a *big*, bright, obvious "Login" button. I'm always hunting for it, and would love to have you make it easy to see.*

Teens Accessibility Text Size: A A A

Search

endar: ●

Español Français 한국어 Tiếng Việt हिंदी

Using the Library

Get a Library Card
Loan Periods & Fines
Book a Computer

Text Size: A A A Support the Library

les and more Search Login

pañol | Français | 한국어 | Tiếng Việt | हिंदी

Using the Library

Get a Library Card
Loan Periods & Fines
Book a Computer



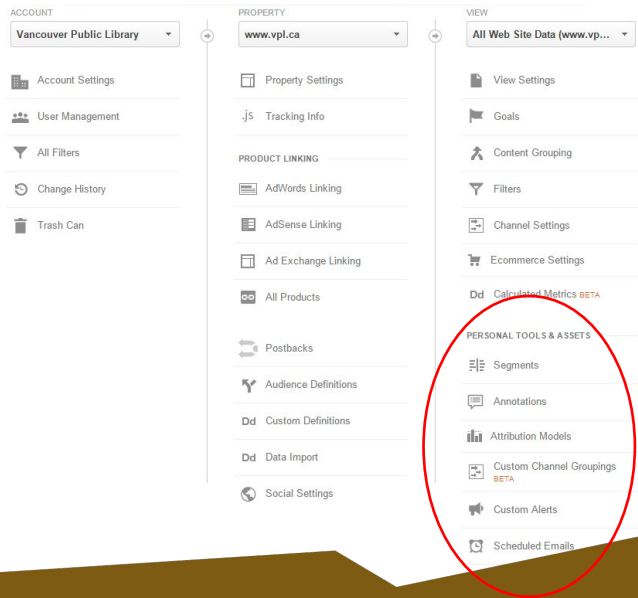
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Extending Google Analytics

Again, the GA tells you what people are doing, but it's not telling you what people can't do, what they wish they could do, and why. So for our redesign, we conducted interviews with users to uncover their frustrations and motivations with using our site. If there's something I want to emphasize with this, is that big data isn't the be-all end-all when it comes to making decisions about your users. Numbers alone don't tell the story, it's critically important to go out and talk to library users.

Advanced Analytics:

- Events
- Goals
- Dashboards
- Automation



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Extending Google Analytics

- Events
- Goals
- Dashboards
- Automated reports & scheduled emails



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Discussion

Discussion

- What are the metrics that tell us if a library website is successful?



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Extending Google Analytics

Which pages on your site are key destinations? Databases? Subject Guides? Programs?

- Do users actually use our intended pathways to get there?
- How long does it take?
- Counting clicks is not always useful on its own.

Clicking “Submit” on a form is a well-defined event

Increased time spent in “browse friendly” portions of the site, i.e. the Wikipedia Effect

How often are “Related Content” links clicked?

Discussion

- Where do we want users to linger & where do they need quick answers?



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Extending Google Analytics

One measure that analytics people will pay a lot of attention to is bounce rate, which is basically a one-page session - a user lands on a page and leaves without going anywhere else. This is bad in e-commerce, it means that the user isn't browsing products or adding things to their shopping cart.

But what does a high bounce rate mean on an FAQ page, or an hours & location page?

Another measure is dwell time. Does long time on page mean that users are interestedly reading, or does it mean that they can't find what they're looking for?

Questions?



@801



@daftkifty

Online Resources

- Library Technology Review, Number 4 / June 2013
<http://journals.ala.org/ltr/issue/view/125>
- Massachusetts Library System Guide
<http://guides.masslibsystem.org/webanalytics>
- Google Analytics Academy
<http://analyticsacademy.withgoogle.com>
- Google Analytics Spreadsheet Add-on
<http://developers.google.com/analytics/solutions/google-analytics-spreadsheet-add-on>