

Your Opinion Counts: Using Twitter to Poll Conference Attendees

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Abstract

Twitter is a ubiquitous communications tool used to send some interesting (and often not so interesting) messages to friends and followers. The sheer volume of messages provides a veritable gold mine of unstructured text for marketers to mine, and for companies to monitor to ensure any “bad press” is quickly identified and acted upon. In this paper we will show how SAS® can access tweets in a fun interactive audience polling exercise.

Introduction

Twitter is a ubiquitous communications tool; users post their thought (tweets) in short messages, up to 140 characters while others (followers) read and sometimes pass-on (re-tweet) these thoughts. Over time the use of hash-tags (a word or abbreviation beginning with the pound/hash sign #) has helped add the ability to identify topics and ultimately search for these topics in the Twitter database. In this paper we will start with an overview of Twitter and end with some SAS code that will allow you to retrieve tweets with specific hash tags. This process was used at a presentation at SAS Global Forum as part of an audience quiz,

Twitter Overview

Twitter has been changing the way that the world communicates – 140 characters at a time – since March of 2006. Why only 140 characters? Well, the story is that the founders of the company (Jack Dorsey, Evan Williams & Biz Stone) were searching for a way to send text messages on their cellphones. The carrier limit was 160 characters, but they wanted to leave room for the username: hence 140 characters (source: [Socialnomics](#))

Today, this social networking and microblogging service boasts over 500 million users – 200 million of whom are considered ‘active’ (source: [Expanded Ramblings](#)) - who send 400 million tweets each day (source: [Nielsen](#)).

Twitter has proven itself to be a versatile service. Politically, it has helped to reach out and mobilize voters – Barack Obama is actually the 4th most followed account on Twitter and the most of any politician with 34.5 million followers (source: [Wikipedia](#)). He's not as influential as the Pope, however, who boasts the highest number of retweets – a simple act of republishing a tweet to a wider audience – of any world leader (source: [National Catholic Reporter Online](#).) As the Arab Spring uprisings swept through the Middle East over the past few years, the world was able to get ‘on the ground’ reporting through Twitter and better understand the volatility of the situation even as traditional news outlets and sources were grounded and taken offline. Culturally, musicians have taken to Twitter to express their thoughts and feelings while connecting directly to their fans. Unsurprisingly, the top 5 most followed individuals are pop icons Justin Bieber (42.4M), Katy Perry (39.9M), Lady Gaga (39.2M) and Taylor Swift (31.4M) (source: [Wikipedia](#)).

Businesses have latched on to the power of Twitter as well. Twitter is a marketers’ dream in many respects. Whether promoting a product or a service, humanizing a brand or engaging with customers in near real-time, the methodology of how brands connect with individuals and position themselves in a favorable light has irrevocably changed.

Users can choose to tune in to a specific brands messaging by ‘following’ them on Twitter. This allows an entity’s tweets to appear directly in the subscribers’ ‘twitterstream’, a great opportunity to appeal to an already intrigued audience and offering an opportunity for ‘retweeting’: what amounts to magnification of a message to a much larger, perhaps unfamiliar audience. It is the ultimate tool for reaching out to the masses and the cost is essentially non-existent. Conversely, brands can reach out to ‘follow’ individuals and other brands themselves, offering unprecedented competitive advantage and amplification of marketing messaging.

Marketers have taken to Twitter because of one inescapable truth: Twitter is all about relationships, both real and potential. It's about engaging with a customer – an evangelist or a sceptic – and growing a trusting, honest and transparent rapport. This is the key to any business relationship, especially through the lens of a sales cycle. We are all customers – or potential customers – of someone, and most of us (even we marketers!) are inherently defensive around perceived sales tactics. Yet we will listen to a friend who recommends a product or service and because of our relationship, we trust that their advice is good. Twitter allows brands to create this same type of trust by building familiarity and engendering trust. By offering value along the way – through useful content, unprecedented customer support, or even by offering amusement and diversion – suspicions are put to rest and guards are relaxed.

A few brands are doing this very well. As I'm Canadian, I'd like to offer an example from my home country. One brand which has global appeal is McDonald's, and the Canadian office ran an incredibly compelling campaign just this past June. Following on the heels of the infamous '#McStories' incident in the United States (whereby twitter users hijacked the hashtag to tell less-than-glamorous tales of McDonald's food), In the summer of 2012, McDonald's Canada launched a project called 'our food. Your questions'. Working across a variety of social media platforms, McDonald's Canada solicited questions from Canadians and answered them through engaging YouTube videos. They received over 19,000 individual questions such as 'does your Egg McMuffin use real eggs?' and 'why is the food at McDonald's so cheap?', and the YouTube responses to these questions have exceeded 10 million views (source: [Globe & Mail](#)). McDonald's Canada used twitter to curate these responses and even gave their microsite a Twitter look and feel. Their supporting print ads in public transit took on the same type of Twitteresque format. At the end of the day, the company won Marketing Mags Marketer of the Year 2012 Award (source: [Marketing Mag](#)) and fostered tremendous goodwill with their supporters and detractors alike.

Another fantastic campaign run with the goal of raising awareness was the #surrenderyoursay effort of the Tourette Syndrome Foundation of Canada. The premise was simple. Individuals who used the hashtag and joined the campaign handed over their Twitter account to the foundation for 24 hours. This lack of control over what was said publicly, when, and in what circumstances was meant to mimic the same sense of powerlessness and lack of control which affects those individuals who have Tourette's. IN fact, each of the tweets was based on something a real person with Tourette's has said (source: [CBC](#)) and also linked to a site to generate awareness. The campaign saw close to 9,000 people join and their tweets reached almost 4 million people (source: [Tourette Syndrome Foundation of Canada](#)). This represents a massive increase in awareness and engagement with the Foundation which will undoubtedly lead to greater fundraising and sponsorship opportunities.

So what's next for Twitter? Well, marketing is ever evolving and the latest trends are shifting towards retention as opposed to new client acquisition and content production, especially video (source: [CMO](#)). As a service which allows for all of these activities to take centre stage through hyperlinks, hashtags and an established, engaged membership, Twitter will continue to play a prominent role in marketing strategies moving forward.

Search Twitter

Twitter published an Application Programming Interface (API) that allows programs to connect to and query the Twitter database; programs which implement this API can then send queries to Twitter and receive the results for further processing. This means a program could regularly send requests to Twitter for all tweets containing the hashtag #sesug13 (the generally agreed upon hashtag for the SESUG 2013 conference) and display these tweets in a ticker tape type display on a large monitor so people could see what is being said about the conference; the mobile phone app used at SESUG would use this type of approach. In addition, if these tweets are stored in a SAS table, we could then apply analytics to these data. What follows will first show how to set the communication pipeline to Twitter, then how to send/retrieve specific queries. Finally we will show how this was used earlier in the year to retrieve answers to simple quizzes during a SAS Global Forum presentation.

Connection to Twitter

Note: The programs used here are based on downloads made available by Hemedinger and Slaughter 2011. See the reference below for a more complete description and a link to the downloads; the source code is not provided in this paper.

Data can be retrieved from Twitter by sending a command through a URL to Twitter; for example:
<http://search.twitter.com/search.atom?lang=en&q=%23SESUG13&page=1>

will query Twitter for all tweets referencing SESUG13. This URL query will return one page (page=1) of the most recent tweets, where each page contains 15 tweets. To retrieve more tweets, simply repeat the call and increment page=x. In SAS, this type of repeated activity is easily implemented in a macro loop as the following snippet shows:

```
%do pgNo=1 %to &pages;
  %let feed="http://search.twitter.com/search.atom?lang=en&q=%23SESUG13&page=&pgNo";
%end;
```

Once we consider the SAS macro language, we can also easily replace the search string SESUG13 with a macro (here &query) as well:

```
%let feed="http://search.twitter.com/search.atom?lang=en&q=%23&query.&page=&pgNo"
```

Since we now have a well formed URL, the **FILENAME URL** method can be used to send the query:

```
%do pgNo=1 %to &pages;
  %let feed="http://search.twitter.com/search.atom?lang=en&q=%23&query.&page=&pgNo"
  FILENAME twit URL &feed
%end;
```

The data returned by this query are formatted in XML. XML mapper was used to create an XML map and ultimately an XML library.

```
libname tf XML xmlfileref=twit xmlmap=twsearch;
```

Here the XML map is called twsearch and the XML file reference is the fileref just created.

Finally, we can read the data into a SAS dataset.

```
data work.feed;
  set work.feed tf.entry;
run;
```

Here we are adding the contents of each new page of tweets (returned in tf.entry) and adding them to the current contents of work.feed.

Once all of this code is wrapped in a macro function (in this case getTweets), it is easy to change the search string and retrieve the tweets. For the SAS Global Forum presentation, each quiz was given a specific hashtag and attendees were asked to tweet their answer using the specified hashtag. A simple PROC FREQ was performed on the data and the results were displayed.

In order to use this method effectively there are a number of issues that need to be addressed:

1. a simple but unique set of hashtags to use. If the hashtag is too general your query will bring back extraneous results. If the hashtag is too complex or too long, users can make mistakes typing it so you will lose some results
2. a set of simple responses to the quiz; multiple choice type questions that required the attendee to enter a single number.
3. For more robust analysis, more rigorous data cleaning. Even when asked to respond with a number from 1 to 5, we received many interesting responses.

Conclusion

Twitter can be an effective way to communicate. The wealth of information in tweets has certainly caught the attention of large companies in tracking brand loyalty as well as trends. Although this is not a rigorous polling mechanism, it is a simple way to engage your attendees during a presentation.

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