

Website Data And Uses For Strategic Marketing – A Commercial Experience

Bruce Q. Budd, Alfaisal University, Kingdom of Saudi Arabia

ABSTRACT

This is an investigation into website analytics and the traffic source effect on goal conversions. The primary objective is to measure its web page analytics and improve its commercial marketing strategy. Crucial benchmarks of website efficacy for improved business optimization were created. Interesting results emerged. Though Google was by far the best traffic source, it did not achieve the highest comparative goal conversion rate. While Facebook had a lower conversion rate, they attracted the highest traffic flow for returning visitors. Hotfrog.com.au results showed a 100% conversion rate with all of the users who visited the website via the online directory being successfully converted into goals. Results provided productive information for future website marketing strategy.

Keywords: Google Analytics; Off-page Analytics; Online Marketing; Marketing Strategy

INTRODUCTION

The originality of this research is the use of a case study based on a purpose built website for a wedding stationery retail business in Australia. The primary objective is to measure its webpage analytics and improve its commercial marketing strategy. Raw data are collected and extracted from Google Analytics. These data are then collated into their different traffic sources as well as classified into their respective impact on the number of page views, pages per view, and whether the visitors are new, returning or unintended. Careful statistical analysis follows to provide crucial benchmarks of website efficacy for future policy-making for online marketing and improved business optimization. This in turn provides information for any subsequent fine-tuning for future website marketing strategy concerning online electronic transactions.

The prime objective for all business' websites is to promote market awareness. Using these unique time-series data metrics derived from a purposely constructed website, the impact and effectiveness of traffic on the website and web page traffic sources are investigated. As information systems improve and users become more technology savvy, the ability to publish content on the internet is no longer reserved for the few with a unique technical skill set. Current users are spoiled for choices in a crowded market of blogs, wikis, corporate website and social media. As this rapid growth of internet content items continues, users are quickly becoming exposed to information more quickly than their ability to process it. It is therefore important to be able to analyze the data metrics collected by web analytics software to ensure that visitors are navigating websites effectively and efficiently.

It is now possible to utilize web analytics tracking technology to collect, measure, analyze, and report large amounts of detailed online data of visitors' traffic and activities on websites. Such data is implemented through two main technologies - web server logfile analysis and page tagging. Reporting services are offered through various companies, including Google, Alexa Internet, Compete.com., Comscore, Hitwise, Microsoft, and Yahoo. The measurement of website traffic exposure provides a valuable source of customer-centric information of the popularity of a site. The use of a website as a marketing source medium is apparent, but the use of Google Analytics to evaluate and develop the website is less known. Websites undoubtedly enrich the image of a business and provide direct and indirect benefits to consumers and businesses alike. Benefits of online marketing have been well researched and documented - better quality customer service (Owens, 2000), increased number of customers (Daniel, 2000), increased revenue (Auger and Gallagher, 2001), ability to reach a wider market (Gallaughar, 2001),

and cost reductions (Owens, 2000, and Franco and Klien, 1999). See Shah and Bokhari (2002) for further discussions.

It is against this backdrop that a series of research questions emerge concerning website marketing strategy vis-a-vis the website usage. The following questions relate to Off-page Analytics (OPA); that is, the ability to analyze how people find the website and which sources produce the best goal conversion results. Hence, the following research questions relate to linking and capturing a greater audience:

1. Which traffic source achieves the best goal (sale or contact) conversions?
2. What keyword(s) can be identified to initiate and recognize the website?
3. What search engine should be adopted when using that identified keyword(s)?
4. What is the most effective referral traffic source for attracting return visitors and converting goals?

LITERATURE REVIEW

Web tracking, also known as web log analysis, web logging, and web log file analysis seem to be very popular in information seeking studies (Hsieh-Yee, 2001; Fourie, 2002; Jansen and Pooch, 2001; Pharo and Jarvelin, 2004). Fourie and Bothma (2007) provide an excellent background overview of web tracking and explain the criteria for researchers working on web usage. With regard to research methodologies, Steyaert (2004) uses five marketing indicators - consumer awareness, popularity, contact efficiency, conversion, and retention - to assess performance of six electronic government service programs. Her results support the use and importance of marketing framework in organizing and evaluating websites. Fang (2007) and Bhatnager (2009) use Google Analytics to evaluate and develop a library website utilizing the ordinary reports from Google Analytics without developing specific metrics. Plaza (2008) extends the research to time series data using Google Analytics to provide web metrics of her website <http://www.scholars-on-bilbao.info>, a site which disseminates Research and Development results in the field of Art-related Humanities and Social Sciences' scientific production. Her methodology analyzes the effectiveness of visits depending on their traffic source - direct visits, referring site entries, and engine visits. Her results conclude that priority for website designers should be to promote the number of direct visits, then improve the website's search engines' visibility, and lastly, employ more time in link-building.

MacFarlane (2007) investigates the value of web information for the practitioner. This paper argues that the use of diagnostic measures is essential in web search, as precision measures on their own do not allow a searcher to understand why search results differ between search engines. Mansourian (2008) explores web-based research into two categories – technical-orientated and user-orientated. He defines the users as an influential element in the success of web-based services and explains the link between users' characteristics and search results. He further introduces a new conceptual measure called "web search efficacy" to evaluate the performance of searches mainly based on users' perceptions. The analysis of the dataset led to the identification of five categories of influential factors - searcher's performance, search tool's performance, search strategy, search topic, and search situation.

Plaza (2009) further uses Google Analytics data to monitor web traffic of a particular website. Using a time series analysis, she investigates the web traffic source effectiveness with the data. She identifies that website direct visits are the most effective visits which stay longer on site, followed by search engine visits, and then link entry visits. Return visits are the main engine for creating session length. Watson, Berton, Pitt and Zinkhan (2000) developed a marketing website frame work that identifies five stages:

1. Awareness efficiency, identified by the proxy direct traffic; i.e., people who are aware of the website and directly type the address into the browse
2. Attraction/popularity efficiency identified by a person who is aware that a certain brand has a website but never visited (search traffic and referral traffic are the proxies)
3. Contact efficiency, which is measured by the number of page views (pages per visit are the proxies). These proxies identify the conversion of a "hit" to a "visit".
4. Closure efficiency identifies average time on site
5. Retention efficiency is identified by returning visitors

Overall efficiency identifies the maximum total of all efficiencies. This particular frame work attempts to answer the following questions: How do visitors discover the site? What are their initial intentions to visit the site? What determines their duration on line? What makes them purchase? What makes them return?

DATA

Figure 1 shows the time series data of 440 observations for the period 5 November, 2010, to 17 January, 2012. The site was visited by 26,961 people and 213,090 pages were viewed, with an average time per site of 3 minutes and 27 seconds. Of those visitors, 74.29% were unique. The 28.20% bounce rate represents percentage of single page visits or visits in which the person left the site from the entrance or landing page immediately. The lower the bounce rate, the higher the return visits.

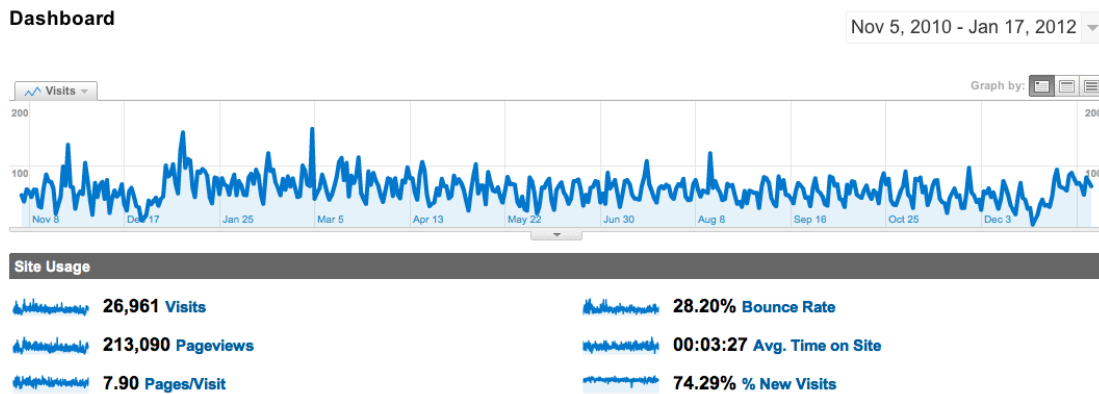


Figure 1: Traffic Sources Overview (Daily)

Figure 2 shows the Google Analytics traffic sources between 5 November, 2010, and 17 January, 2012. The site received a total of 26,961 visits of which 65.20% originated from search traffic. These individuals used search engines to find relevant sites. An additional 15.63% originated from referral traffic - those using affiliated websites that host a reciprocal link to the website (i.e., Facebook). The remaining 19.17% originated from direct traffic source - individuals who are aware of the company brand and their website address; they navigate directly to the website without using a search engine or referral link.



Figure 2: Types of Traffic Source

The awareness efficiency of the website is identified by the variable direct traffic. It refers to the effectiveness at making the target audience aware of the website. Direct traffic represents visitors who are aware of the website and directly type the address into their browser address bar. The variables - search traffic and referral traffic - indicate popularity efficiency. Search traffic is that which has been organically generated from search engines; organically meaning not paid advertising. A website which ranks well on a search engine is said to have strong Search Engine Optimisation (SEO) and, as such, will rank well for common search terms related to the website. Figure 2 illustrates a very strong proportion of search traffic over the observed period compared to direct and referral traffic. Referral traffic is related to the Search Engine Marketing (SEM) ideology of linking a website to as many websites as possible. While this has been negatively implemented through link farms, it is meant to encourage reciprocal links to associations, other websites, forums, directories and social networks of similar topics, in much the same way that academic papers include citations to good research on a similar topic. Referral traffic is what allows the internet to work as an information source (the way that it does) and is traffic from a website that contains a URL on it. This may be placed by the webmaster or it may be someone suggesting the website in a forum.

ANALYSIS

The analysis of the website follows four explicit research questions, with the first being, “Which traffic source achieves the best goal (sale or contact) conversions? Any conversion rate over 10% is generally considered noteworthy. Table 1 shows a league table of the top ten traffic sources that achieved an average goal conversion rate of 14.91% over the sample period. Despite Google attracting the highest number of Goals Completed (2,654), its conversion rate is comparatively low (15.98%), whereas AOL has a conversion rate of 28.72% but with only 27 goals (sale or contact) completed. Yellowpages.com.au has a conversion rate of 20.81% but with only 67 goals (sale or contact) completed. Clearly, Google attracts the greatest number of visitors and cannot be ignored, but the importance of AOL and Yellowpages.com.au’s potential goal conversion should be considered in its future marketing strategy.

The website traffic is dominated by Search Engine sources. Direct Traffic source has the second highest number of goals completed (14.61% of total conversions) with a 10.81% conversion rate. This suggests that potential customers may identify the brand name and type the website address directly into the browser avoiding referred traffic sources. This is efficient, since referral traffic represents marketing efforts that have already been allocated. It is further noticed in Table 1 that EasyWeddings.com.au, Facebook and Hotfrog.com.au are also important contributors to overall goal conversions (sales). Running search marketing keyword conversion rates are great metrics to point to, particularly when the percentage conversion is higher than 10% or more. The problem is that these rates are usually low volume niche search terms; therefore, these metrics must be viewed cautiously.

Table 1: League Table 10 Best Performing Traffic Sources

Name of Traffic Source	Type of Traffic Source	Number of Goals Completed	% of Goals Completed	Total Traffic by Source	Conversion Rate %
Google	Search	2654	69.39	16607	15.98
Direct	Direct	559	14.61	5169	10.81
Bing	Search	101	2.64	674	14.99
EasyWeddings.com.au	Referral	93	2.43	588	15.82
Google (AUST)	Search	71	1.86	657	10.81
Yellowpages.com.au	Referral	67	1.75	322	20.81
Facebook.com	Referral	29	0.76	634	4.57
AOL (America online)	Search	27	0.58	94	28.72
Yahoo	Search	22	0.58	158	13.92
Hotfrog.com.au	Referral	18	0.47	142	12.68
Average		364.10	1.54	2004.50	14.91

Table 2: Goal Conversions For Each Top Performing Keyword(s)

Keyword(s)	Search Sources				Total Conversions for Top 4 Engines	Total Visits using Keyword	Keyword Goal Conversion Rate
	Google	Bing	Yahoo	AOL			
Wedding Invitations Perth	242.9	3.9	1.8	1	249	1,559	15.99%
Wedding Invitations	122.2	1.0	0	0	123	772	15.97%
Invitations Perth	117.1	2.2	0.6	0.1	120	730	16.45%
Invitations	69.0	1.6	0.6	0	71	449	15.92%
Perth Wedding Invitations	52.4	0.7	0	0.1	53	334	15.95%

The next research question is, “What keyword(s) can be identified to initiate and recognize the website?” Table 2 shows the top five most productive keywords in gaining goal conversions from the search engine sources. The best conversion rate is for the keyword “Invitations Perth”. “Wedding Invitations Perth” captures the most conversions of all the keywords (242.0 conversions). However, marginally it does not have the highest conversion rate. “Invitations Perth” has a conversion rate of 16.45%, which makes it 0.46% higher than “Wedding Invitations Perth”. Therefore, future marketing strategies should also focus on this keyword to improve its overall traffic flow and ultimately increase goal conversions.

Logically, the next research question is, “What search engine source should be adopted when using identified keyword(s) from Table 2?” Table 3 shows the comparative individual search engine goal conversion rates. The Search Engine Source “AOL” has the best conversion rate (28.72%). Based on this result, a further marketing strategy could be implemented. Strategically, a Pay-Per-Click (PPC) campaign could be developed using the keyword “Invitations Perth” (see Table 2). This keyword also had the highest conversion rate (16.45%).

Table 3: Individual Search Engine Goal Conversion Rates

	Google	Bing	Yahoo	AOL
Total Organic Search Traffic	16607	674	158	94
Total Goal Conversions	2654	101	22	27
Goal Conversion Rate (%)	15.98	14.99	13.92	28.72

Combining the two highest performing variables (best performing search engine and keywords), this policy should promote a high conversion of goals. As Google already has a high volume of traffic flow through organic (non-paid) traffic, it would not make sense to implement a PPC campaign. The amount of conversions from this search source is more than satisfactory, thus the marketing efforts should be focused elsewhere to further increase the overall success in goal conversions.

Depending on the size of the marketing budget, it could be of strategic benefit to use the already heavy traffic flow (16,607 non-paid visitors) of Google and its positive results ranking to push lower performing keywords or encourage growth in struggling products. For example, a PPC campaign could be run for the keyword “Perth Wedding Invitations” or a variation of keywords currently not being ranked on Google search results. The application of this marketing strategy will help in the selection of keywords for SEO and PPC campaigns to optimize the wording of sponsored links and help refine keywords to improve conversion rates. This is vital in the overall success and strategic marketing direction of the company.

The final research question is, “What is the most effective referral traffic source for attracting return visitors and converting goals?” Referral traffic represents already allocated marketing efforts. In other words, the company has already set up a Facebook page to link through to their products and advertise updates. They have signed up to Hotfrog.com.au’s only directory and they have allocated an advertising budget for inclusion in

Easyweddings.com.au reciprocal link exchange. For these reasons, it is of marketing interest to see the continuous traffic that these sites are attracting. As a general rule of thumb in e-Commerce marketing strategy, new customers will not purchase on their first visit. The conversion rate of returning users, not the overall traffic from each source, has been calculated. Therefore, this shows the ability for the affiliated websites to not only draw in new traffic, but also to bring back returning visitors and convert them into goal completions.

Table 4 shows the top performing referral websites. It shows that all of the hits that visited the website via the referral site Hotfrog.com.au were successful goal conversions. Yellowpages.com.au and Easyweddings.com.au were also significantly high with comparable rates of 79.8% and 55%, respectively. While Facebook had a lower conversion rate, they attracted the highest traffic flow for return visitors. This shows that marketing efforts with Facebook are effective in developing a connection with their customers, but not as affective at converting goals.

Table 4: Top Performing Referral Websites

Referral Sites	Total Visits	Pages/Visit	Returning Visitor	New Visitor	Goal Conversions	Conversion Rate (%) of Returning Users
Facebook	634	8.25	520	114	29	5.58
Easyweddings.com.au	588	8.94	169	419	93	55.0
Yellowpages.com.au	322	8.93	84	238	67	79.8
theweddingnetwork.com.au	222	8.42	62	160	0	0
perthbride.com.au	178	9.43	46	132	0	0
hotfrog.com.au	142	9.32	18	124	18	100
weddingwa.com	129	10.22	29	92	0	0

DISCUSSION AND CONCLUDING OBSERVATIONS

The research questions answered in this paper focused on the optimization of the website to accomplish better goal conversions. The four questions were: 1) Which traffic source achieves the best goal (sale or contact) conversions?, 2) What keyword(s) can be identified to initiate and recognize the website?, 3) What search engine source should be adopted when using that identified keyword(s)?, and 4) What is the most effective referral traffic source for attracting return visitors and converting goals?”

AOL has the best traffic source due to its high conversion rate (28.72%). Google has the highest volume of conversions and organic (non-paid) traffic volume over the sample period. The highest performing keyword(s) to initiate and recognize the website was “Invitations Perth” with a conversion rate of 16.45%. When running search marketing campaigns, keyword conversion rates of over 10% are a significant metric to identify niche search terms. The overall aim is always to increase the total goal conversions. Hence, online marketing for this company should be directed toward these keywords, as well as to encourage further growth in other keywords by promoting them on highly ranked search engines such as Google.

The results identify that AOL, with a conversion rate of 28.72%, would ideally be adopted when using the identified keywords(s). The strategic logic behind this is to combine the two highest performing variables (best performing search engine and keywords) which, in turn, will result in a high conversion of goals. Google’s already high traffic flow will then best be used to boost the lowering performing keywords. Finally, the most effective referral traffic source for attracting return visitors and converting goals was identified. While Facebook has a lower conversion rate, they attracted the highest traffic flow for returning visitors. Hotfrog.com.au results show a 100% conversion rate with all of the users who visited the website via the online directory being successfully converted into goals. Yellowpages.com.au and Easyweddings.com.au were also significantly high with comparable rates of 79.8% and 55%, respectively.

While this is only a preliminary study into website analytics and the traffic source effect on goal conversions, future research can now expand to referral traffic individually and its effect on goal conversions and search result rankings. Through the process of researching this case study, it was identified that paradoxically, Facebook created a large amount of referral to the website, but its conversion rate was comparatively low. Future research needs to focus on the demographics of the Facebook page community, the browsing trends of the fans, and the overall reach of Facebook.

AUTHOR INFORMATION

Dr. Bruce Q. Budd is an Associate Professor in Finance at Alfaisal University in Riyadh, Saudi Arabia. His research interests are efficiency performances of GCC banks using DEA, financial performances of capital markets, and more recently, strategic marketing performances of commercial websites. E-mail: bbudd@alfaisal.edu

REFERENCES

1. Bhatnager, A., (2009). "Web Analytics for Business Intelligence." Online. 333(6): 32-35.
2. Daniel, E. (2000, November 3-4). Who Dares Wins? On-Line Banking Services and Innovation Types. Paper presented at the 9th Annual Business Information Technology Conference, Manchester, UK.
3. Fang, W., (2007). "Using Google Analytics for Improving Library Website Content and Design: A Case Study. Library Philosophy and Practice, LPP Special Issue on libraries and Google.
4. Fourie, I., (2002)., "A review of web information-seeking/searching studies (2000-2002): Implications for research in the South African context", in Bothma, T. and Kaniki, A.(Eds) Progress in Library and Information Science in Southern Africa: Proceedings of the Second Biennial DISSAnet Conference, PROLISSA Conference, 24-25 October, Pretoria, Infuse, Pretoria, available at: <http://www.dissanet.com>., pp. 49-75.
5. Fourie, I. and Bothma, T., (2007). "Information seeking: an overview of web tracking and the criteria for tracking software". *Aslib Proceedings: New Information Perspectives*. Vol. 59. No.3, Emerald group Pub. Ltd.
6. Gallagher, M. A., P; BarNir, A.; (2001). Revenue streams and digital content providers: an empirical investigation. *Journal of Information and Management*, 38(7), 473-485.
7. Hsieh-Yee, I. (2001), "Research on web search behaviour", *Library and Information Science Research*, Vol. 23, pp. 167-85.
8. Jansen, B.J. and Pooch, U. (2001), "A review of web searching studies and a framework for future research", *Journal of the American Society for Information Science and Technology*, Vol. 52, No. 3, pp. 235-46.
9. MacFarlane, A., (2007). "Evaluation of web search for the information practitioner". *Aslib Proceedings: New Information Perspectives*. Vol. 59. No.4/5, Emerald group Pub. Ltd.
10. Mansourian, Y., (2008). "Web search efficacy: definition and implementation". *Aslib Proceedings: New Information Perspectives*. Vol. 60. No.4, Emerald group Pub. Ltd.
11. Owens, I., Robertson. D. (2000). Aligning e-Commerce with Business Strategy: The Case of the Bank of Scotland. Paper presented at the 5th UKAIS Conference, University of Wales Institute, Cardiff, UK.
12. Plaza, B., (2009). "Monitoring web traffic source effectiveness with Google Analytics. An experiment with time series". *Aslib Proceedings: New Information Perspectives*. Vol. 61. No.5, Emerald group Pub. Ltd.
13. Pharo, N. and Jarvelin, K. (2004), "The SST method: a tool for analysing web information search processes", *Information Processing and Management*, Vol. 40, pp. 633-54.
14. Shah, M. H. B., Rahat.H. (2002). A Decision Making Framework for Internet Banking Based on Critical Success Factors Approach. Paper presented at the Business Information Systems. Retrieved from <http://bis.kie.ae.poznan.pl/biblio/>
15. Steyaert, J.C., (2004). "Measuring the performance of electronic government services". *Information and Management* 41, 369-375, Elsevier.
16. Watson, R., Berton, P., Pitt, L. and Zinkhan, G. (2000), "*Electronic Commerce – The Strategic Perspective*". Harcourt College Publishers.

NOTES