BRIDGELINE SOFTWARE

Interactive Business Technology Solutions

WHITEPAPER

What is “Integrated Analytics”?

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Introduction

A relatively recent innovation in web best practices is “integrated analytics” – fully integrating your analytics package with your content management system (CMS) and other web applications.

Why would you want this? By integrating analytics with the CMS, content can be updated dynamically to optimize performance levels based on accurate reporting of actual user behavior and actions tracked by the analytics package.

Seamless integration between analytics reports and the CMS enables performance-enhancing changes to be made to web pages in real time. Because the content revisions are made based on actual user behavior they can significantly improve website performance and ROI.

Integrated analytics: buyer beware

You would think integrating your analytics software with content management, e-mail marketing, e-commerce, and other web applications would be a simple and straightforward task. But there is significant miscommunication in the marketplace about what constitutes true integrated analytics.

So, how do you shop for and implement a fully integrated analytics package into your website? Today there are three basic choices available when selecting analytics tools for measuring web metrics: stand-alone analytics tools; connected tools; and integrated analytics:

Stand-alone analytics. Stand-alone tools are analytics packages that are not integrated with the CMS. Examples include SPSS Web Analytics, SAS Web Analytics, and Web Trends Analytics.

With stand-alone analytics tools, you run the application on demand. Data is fed electronically from your website into the tool. The tool processes the data, calculates the key metrics, and generates reports showing how well or poorly your site is doing.

You can read the metrics reports on the screen or offline. After reading and studying the analytics reports, you and your team can discuss ideas for improving key performance indicators (KPIs).

You then can implement these changes in web copy and design using your CMS, measure the performance of the revised pages with the analytics tool, and learn whether your changes actually improved KPIs.

There are a number of drawbacks to using an analytics package that is not integrated with your other web applications, especially your content manager.

To begin with, the analytics package and the content manager can’t communicate with each other. That means the page-level detail information about the site, which is maintained by the CMS, can’t be used by the analytics package.

In addition, metrics reports produced by stand-alone analytics packages do not contain detailed information about the page author, publishing specifics, duplicate page use, and hierarchical layout.

Integrating analytics and content management can solve both of these problems. Here at Bridgeline Software, for example, we frequently put up landing pages that visitors can use to register for various webinars or access downloadable documents. We use our iAPPS analytics package to track the conversion rate.

If the landing page is not performing well, iAPPS analytics is integrated with the iAPPS CMS, allowing us to notify the page author that changes are needed. The page author can make his or her improvements in real time.

The analytics chart can be time-stamped with the time and date the changes to the page were implemented, allowing us to compare the conversion rate before and after that date.

That way, we can see on the report whether the improvements to the landing page in fact boosted the conversion rate. Internet marketers have found that changing headlines, copy, images, and the position of the form on a landing page can increase conversion rate 10% to 50% or more.

When web applications are not integrated, each requires separate user login databases with different technology for administration roles, responsibilities, and authorizations. Management user interfaces are different, which in turn increases training requirements and slows adoption of the software.

Stand-alone analytics packages don’t give analysts a quick or easy way to change or remove content based on site analysis. If a bad page is identified within a stand-alone analytics tool, it can be difficult to track down the page author to request changes.

Connected analytics. You can connect a stand-alone analytics package to your CMS and other applications by having a programmer write “hooks”; examples include Google Analytics and Omniture.

Hooks (aka page tags) are short segments of code that pass information about the page and visitor to the analytics package. They can loosely integrate certain analytics packages to your content management system and other website applications (e.g., shopping cart, e-mail distribution, CRM).

Transmitting data to a non-integrated analytics tool via JavaScript introduces risk. If the code on the page does not execute due to a conflict with other JavaScript code, the page data will not be transmitted. Often times, these conflicts do not even manifest themselves in a browser error making it difficult to track down problematic implementations and faulty data collection.

Even with custom programming and hooks, the ability of the analytics package to communicate with the CMS and other web applications remains limited, since they were not designed to work together as a single, integrated system. In addition, any upgrade made to the CMS may cause the link to the analytics package to be severed, requiring page tags to be modified once again.

Analytics integrated in a CMS poses no such concerns as it captures the data on the server level. This also eliminates problems surrounding latency of JavaScript requests and the interference introduced when data needs to be collected on form submission or “on click.”

Integrated analytics. A relatively new idea in website design is to build sites with analytics tools integrated directly into the site. This approach, called “integrated analytics,” offers a number of advantages including greater ease of use, enhanced usability, and an augmented ability to drive persuasive, relevant content to the appropriate users.

Not all integrated analytics tools are created equal, however. Some metrics tools advertised as “integrated solutions” are in fact only marginally integrated into the website and its applications while others are integrated on a much deeper level.

This deeper integration enhances communication between the analytics tool and the applications it monitors, so that knowledge gained through metrics measurement can be applied to improve site performance in real time.

In addition, when you use a stand-alone analytics tool, your data resides on the tool. If you do not own the tool and abandon the tool, you also abandon your data (porting it to a new analytics package is nearly impossible).

On the other hand, when you use a suite of integrated web applications, all of the applications share data produced by the analytics package. By purchasing a perpetual license to the application suite, you can ensure your data remains with you.

Achieving deep integration

Businesses increasingly recognize the convenience and other advantages of integrated software for web applications. According to a 2007 report from Forrester Research, 83 percent of marketers embrace the idea of a comprehensive web marketing suite, with 45 percent of respondents citing “improved online customer experience” as their #1 priority.

Analytics tools can be integrated with other web applications at three levels: the user interface level; the data and functionality level; and the content delivery level.

With deep integration, your analytics software is interconnected with your other web applications at all three levels. Such an integrated product suite is both user-friendly and provides visitors with the great content they want and demand.

Level I: User Interface. In an integrated suite of web applications, all modules – analytics, content management, e-commerce, online marketing, – use the same graphical user interface (GUI). Screen layouts, drop-down menus, and icons share a common appearance in all applications.

As a result, the learning curve is shortened for the user -- reducing training costs, lowering IT’s support burden, and enabling rapid and widespread adoption of the system throughout the enterprise. A common GUI also makes the analytics package easier to use, enabling more rapid reaction in response to discovery on the analytics report of subpar web page performance.

Level II: Data Integration. With data level integration, all applications and modules share a common data set. Sharing of information between applications enhances decision-making and simplifies site maintenance and updating.

One metric measured by most analytics packages is identifying a website’s most frequently exited page, indicating that the page lacks user interest and relevant content.

When the analytics package measuring page exits is integrated with the content management system used to create those pages, you can get detailed information about when the page was originally authored, the last time it was updated, and who created it – making it easy to track down the author.

The page author can make changes for you to review in-line. The date of when the revised page goes live on the site is time-stamped in the analytics package, enabling you to compare page views before and after the revisions to see whether the edits are effective.

Level III: Content Delivery Integration. At the deepest level, communication automatically takes place between analytics and other applications such as the content management system. Dynamic visitor segments and user profiling drive persuasive, personalized content to the right users at the right time. Result: enhanced user experience resulting in higher conversion rates and revenues.

At Level I and Level II, the person reading and interpreting the analytics report has to instruct the people creating the pages on the CMS to make changes. So any “communication” between the analytics package and CMS is manual and requires human operators.

With true integrated analytics, the analytics package can automatically assign user profiles to visitors based on their website usage and activity. On a financial services site, for instance, visitors reading articles on ways to enjoy retirement might be placed in a group called “retired,” while those reading content on saving enough money for retirement are placed in another user profile called “pre-retirement investors.”

Once the analytics software assigns user profiles to visitors, the CMS can extract the profile assignment in real-time and drive persuasive content to those users as they are logged onto the site. For instance, a “pre-retirement

investor” might be served a page on 529 programs, while the “retired investor” is served content on estate planning.

Now let’s say users click on a “Contact Us” or “For More Information” page. The younger investors, those planning for retirement, might be served an online response form that can request a quote or more information. The older investors, those already retired, might be sent to an audience-appropriate response page that features the toll-free phone number more prominently.

Transforming analytics into actionable ideas

By customizing web content delivery based on user profiles, an integrated analytics/CMS software suite can ensure that each visitor gets the most relevant and engaging content. The result: greater site stickiness, longer page views, and ultimately, improved website performance and ROI.

The bottom line: when analytics and the CMS are integrated on Level III, the analytics system can talk with the CMS. The analytics software can tell the CMS about user behavior, and the CMS can then alter content delivery accordingly.

The optimal set-up for efficient websites is to integrate content management, analytics, and other site functions (e.g., e-mail marketing, campaign management, etc.) to the user, data, and systems levels.

To achieve true deep integration of analytics with CMS and other web applications at all three levels – user experience, data, and system – all web software should be built from the ground up on a common platform or framework.

When analytics and the CMS are tightly integrated, the modules can easily communicate and share data in real time. The CMS can then take appropriate actions, based on metrics measured and reported by the analytics package, to deliver more relevant and valuable content to users, where and when they need it.

By providing site visitors with more persuasive content, integrated analytics greatly enhances the user experience. The result is greater user satisfaction, improved website utility, and increased conversion rates and revenues.

About the Author

Brett Zucker is Bridgeline Software's Executive Vice President and Chief Technical Officer.

From 2004 to 2006, Mr. Zucker was Bridgeline Software’s Executive Vice President and General Manager of the New York business unit. From 2002 to 2004 Mr. Zucker was the Vice President of Delivery for Bridgeline Software’s New York business unit. Prior to joining Bridgeline Software, Mr. Zucker was the Director of Development and Delivery for Lead Dog Digital, Inc., a custom Web application development company Bridgeline acquired in 2002. Prior to joining Lead Dog Digital in September 2000, Mr. Zucker served in management positions with AppNet and Agency.com.

Mr. Zucker holds a BS degree in Electrical Engineering from Cornell University and a Masters in Business Administration from Harvard Business School.

About Bridgeline Software

Bridgeline Software is a developer of web application management software and award-winning interactive business technology solutions that help organizations optimize business processes. The iAPPS Product Suite is an innovative SaaS solution that unifies Content Management, Analytics, eCommerce, and eMarketing capabilities – enabling business users to swiftly enhance and optimize the value of their web properties.

Combined with award-winning interactive technology services by Microsoft Gold Certified development teams, Bridgeline Software helps customers to cost-effectively maximize the value of their rapidly changing web applications. Bridgeline Software's teams of developers specialize in web application development, usability engineering, SharePoint development, rich media development, and search engine optimization.

Bridgeline Software is headquartered near Boston with additional locations in Atlanta, Chicago, Cleveland, Denver, New York, Washington, D.C., and Bangalore, India. Bridgeline Software currently has over 600 customers ranging from middle market organizations to divisions within Fortune 1,000 companies that include: Healthcore, The Bank of New York Mellon, Marriott International, Berkshire Life, PODS, Honeywell, Budget Rental Car, Washington Redskins, AARP, National Financial Partners, The Packard Foundation, DTCC, Cadaret, Grant & Co., National Insurance Crime Bureau, the American Academy of Pediatrics, and the Georgia Lottery.

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