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CUSTOMER EXPERIENCE MANAGEMENT AND WEB ANALYTICS

From KPIs to Customer Transactions

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EXECUTIVE SUMMARY

The Internet is a seemingly infinitely measurable medium—every click can be recorded, every view can be captured, every visit can be dissected, every user’s behavior can be analyzed. But the notion of “infinite measurability” in the online channel is far more complex than most businesses realize. The assumption that a single application or data source can provide the necessary depth and breadth required to deeply understand website visitor behavior is fallacious at best and dangerous at worst.

A common misconception is that Web Analytics applications alone can provide all necessary measurement and optimization information. Unfortunately, most Web Analytics systems are limited in their ability to gather valuable qualitative data and thusly struggle to answer many critical questions about visitor behavior.

The core competency of Web Analytics applications is their ability to process and aggregate high volumes of quantitative minutiae collected from visitor click-stream data. These systems are very appropriate for answering aggregate-level questions such as “*Which campaigns performed best today?*” and “*Where do visitors drop out of the conversion process?*”

But quantitative data alone can never accurately answer more probing questions about visitor behavior—particularly the “why” questions like “*Why did so many visitors drop off at this step?*” or “*Why are conversion rates down today?*” Gathering this type of unique qualitative data is where Customer Experience Management (CEM) solutions excel. The core value of CEM systems is their ability to capture and report on every interaction a visitor has with a site, thereby affording a more complete understanding of why that customer succeeded or failed.

Consider the example of an online retailer using only Web Analytics to monitor shopper interactions. Commonly available scenario analysis tools will easily highlight a decrease in conversion rate and go so far as to identify an individual step in the checkout process that is the likely source of the problem. However, the use of a robust Customer Experience Management technology would help the retailer identify that “a form field in the third step of the checkout process is improperly handling customer inputs and sending customers into a frustrating error loop.” More importantly, using segmentation the retailer would be able to identify that “the problem had caused 300 potential customers to abandon their purchases during the same day.”

With this level of granularity, it is easy to see how these two technologies working in concert can help e-business executives answer critical business questions. More importantly, a combined quantitative and qualitative view of Internet usage is increasingly necessary to understand *true* visitor behavior.

In today’s e-business environment, *both Web Analytics and Customer Experience Management systems together* should be considered foundational to website measurement and optimization. These similar-yet-distinct systems each contribute to a site owner’s ability to recognize, react, and respond to the ongoing challenges they face. Used together, these two technologies are collectively able to resolve the “What, Where, When, and “Why” of visitor interactions on the Internet.

The most forward-thinking companies have already recognized the value of investing in solutions beyond Web Analytics in order to measure and optimize their web channel. By understanding the true strengths and weaknesses of Web Analytics products and how Customer Experience Management systems can best be leveraged, web site owners will be able to extend their web measurement and optimization processes to achieve far greater levels of success – ultimately by improving the site, serving customers better, and increasing site revenue.

INTRODUCTION

Many people believe that website measurement and analysis is defined by the ability to log, parse, and report on the click-stream behavior of site visitors—nominally referred to as “Web Analytics.” While click-stream data is undoubtedly a valuable source of information about web site interaction, the reality is that this type of data is ultimately limited in its ability to answer fundamental questions about visitor behavior. Understanding visitor behavior is as much a function of qualitatively understanding experience and intent as it is quantifying visitor clicks from page to page.

Fortunately, there are other solution sets designed to provide this more qualitative view of online visitor behavior, broadly referred to as Customer Experience Management (CEM) and Voice of Customer (VOC) technologies. The best CEM solutions capture every interaction with a customer, thereby filling the gap between purely quantitative click-stream data and the actual customer experience of a site. The best VOC solutions compliment Web Analytics and CEM solutions by augmenting interaction-based data with true qualitative response and direct feedback—essentially providing the customer a “voice” in the online channel.¹

All three applications play a critical role in the site and marketing optimization process, and smart business owners have already learned how to take advantage of each in an ongoing effort to maximize returns in the online channel. The measurement challenge facing online business is not recognizing that each of these systems exist; the challenge is understanding the true capabilities of each system and formulating a complimentary strategy to use all three to create a more accurate view of visitor and customer behavior.

The goal of this whitepaper is to clarify two of these three solutions – Web Analytics and Customer Experience Management – as their differences are important and often misunderstood. This paper will describe the core competencies of Web Analytics and Customer Experience Management and showcase scenarios where the *combination* of these technologies provides a substantial advantage to companies leveraging both in their analytical and competitive efforts.

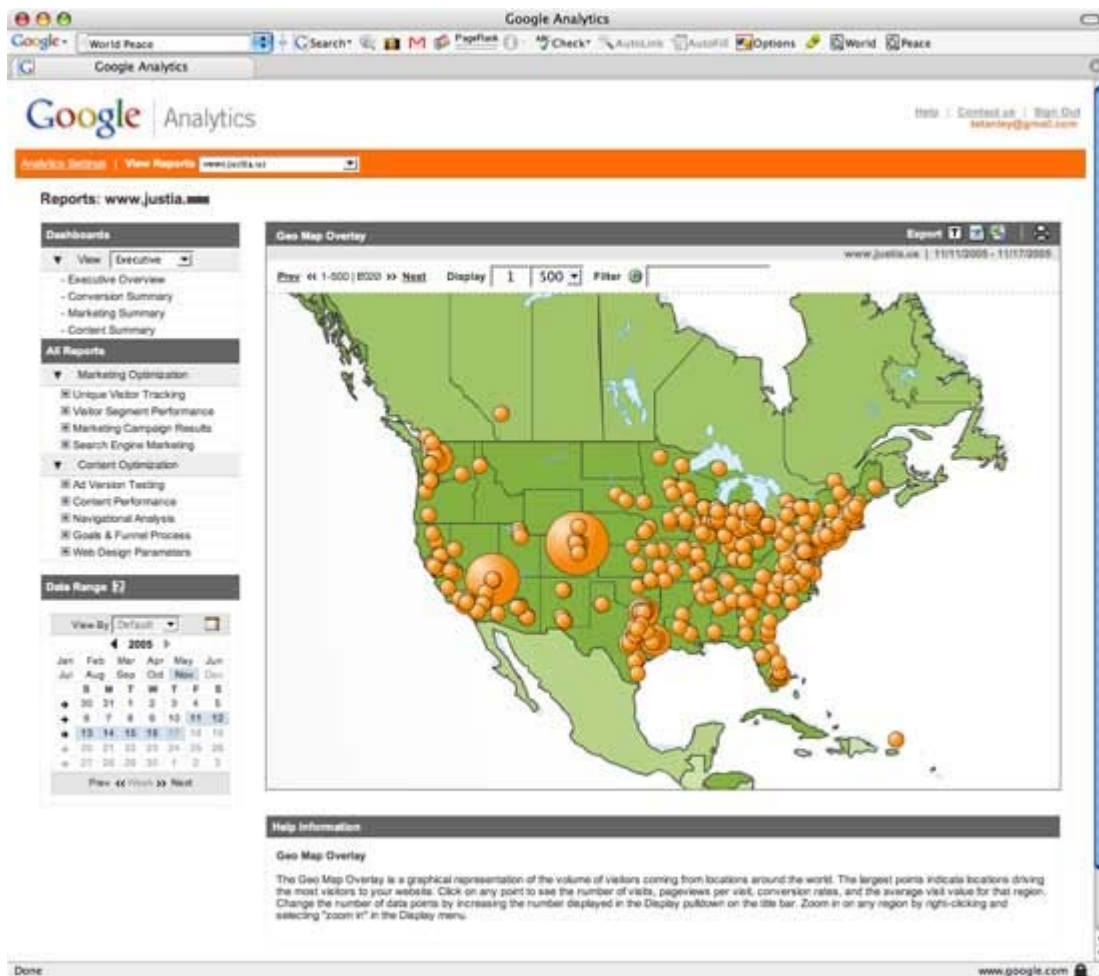
AN OVERVIEW OF WEB ANALYTICS AND CUSTOMER EXPERIENCE MANAGEMENT SOLUTIONS

WEB ANALYTICS

Given the explosive growth of the Internet, it is tremendously important for companies to understand the relationship between visitor interactions and business success. The main objective when deploying a Web Analytics application is to determine which aspects and interactions on the website are meeting specific business goals. These systems are adept at doing this because they quantify visitor actions—the number of visits to a website, the number of pages viewed, the number of downloads requested, the number of forms started and completed, the number of visits from a particular site or marketing campaign, and so on. The best systems support the segmentation of these counts based on other criteria contained in the click-stream data, for example the count of page views from a visitor

¹ For more information about the Web Site Optimization Ecosystem, Web Analytics 2.0, and the process of integrating web analytics, customer experience management, and voice of customer technologies, please visit <http://www.webanalyticsdemystified.com>

responding to a specific campaign, or the list of search terms used by visitors who had viewed a particular set of pages.



A very popular Web Analytics application, Google Analytics, showing visitor geographic distribution

While a great deal of information about visitor behavior can be *surmised* from these counts, often by creating complex views of movement between pages in the form of three-dimensional graphs and fall-out reports, traditional Web Analytics applications contain little information about *why* a visitor failed to complete a critical action or what ramifications that failure may have on the long-term relationship between the visitor and the business. Even complex multi-dimensional analyses designed to identify non-obvious correlations often fail to provide meaningful insight into underlying cause given the lack of qualitative data about the visitor experience.

Web Analytics systems support the creation and deployment of digital dashboard and key performance indicators (KPIs) that provide business-critical views of site activity. They also excel at providing data inputs to the web site optimization ecosystem, a suite of related applications designed to help business owners manage and optimize their online marketing investment. In a nutshell, Web Analytics systems are ideal to help business owners visualize the “where” and “when” of visitor behavior on their websites.

CUSTOMER EXPERIENCE MANAGEMENT

The ideal use of Customer Experience Management technology is to support deep-dive investigation of issues surfacing through other systems like Web Analytics, customer service groups, and system monitoring tools. For example, if an online bank is notified by their call center that a number of customers are having problems setting up bill pay, a CEM solution will allow the transactional assurance team to better focus their efforts in an attempt to understand what went wrong and why. CEM systems are adept at performing this type of discovery because they are specifically designed to capture every interaction between the customer and the site, often including a full replay of the page-by-page experience. By capturing every visitor interaction, these systems allow deep exploration of usability and process-flow issues, as well as highlighting application performance issues that so commonly frustrate visitors.

Tealeaf's replay capability allows analysts to see what the page looked like in the browser of a specific customer, what functionality that customer chose to employ, and what, if any, problems that customer encountered on the site

While even the smallest web site will generate exhaustive quantities of measurable CEM data, the best applications incorporate sophisticated indexing and search capabilities, allowing analysts to quickly uncover answers about their website without the need to anticipate problems in advance. Just like in Web Analytics, these segmentation capabilities are the difference between “analysis paralysis” and effectively being able to use the available data to drive site optimization efforts.

Tealeaf's indexed visitor session data supports robust search and segmentation functionality

CEM applications do a very good job at providing actual visitor experience information to help determine why customers are succeeding or failing online. They excel at providing real-time alerting and monitoring, not only for site functionality issues but also for business-related issues such as a declining conversion rate, an increasing bounce rate, or a sudden change in average order value. In a nutshell, Customer Experience Management applications are ideal for helping business owners understand the “what” and “why” behind visitor behavior on their websites.

THE IDEAL USE OF WEB ANALYTICS AND CUSTOMER EXPERIENCE MANAGEMENT

When properly implemented, both Web Analytics and Customer Experience Management systems sample data from the same audience. However, analysis processes will extend beyond quantitative click-stream data to more qualitative, customer experience data. The combination of these data—either through data integration projects or simply via the process of conducting good analysis—supports far more actionable insights than either system individually.

Consider an example where Web Analytics reports that session conversion rates on a retail site have suddenly declined. With click-stream data, site owners and analysts will almost certainly be able to accurately identify the source of the problem granular to the level of the page or pages where abandonment has increased. More complex Web Analytics implementations may even highlight that the error rate on the page is increasing, but abandonment and error rate data fails to indicate the reasons behind the emerging behavior.

Using a Customer Experience Management system, analysts will likely be able to determine the specific reason for increased abandonment. CEM systems allow analysts to replay sessions focusing specifically on users who abandoned at the page identified by Web Analytics, pinpointing the true source of the problem (for example, a site error, a usability problem, or an inventory issue), and allowing a more accurate assessment of the business impact of the problem. Armed with this information, analysts are then able to recommend an efficient resolution to the problem.

In this case, the CEM system provides far greater visibility into the real source of the problem. Customer Experience Management is highly diagnostic in this case and allows analysts to determine whether the abandonment was audience or application related *and* by observing actual user sessions, look for behaviors, trends, and commonalities. By allowing the observation of actual user sessions, CEM solutions allow analysts far greater visibility into the sources of visitor problems, again critical to answer important questions of “what” and “why”.

Put another way, using only Web Analytics to monitor its site, the retail site would only be able to identify that conversion rates are down 15 percent and the problem stems from a sudden increase in abandonment in the third step of the checkout process. However, if the company was also leveraging a CEM system, it would be able to identify that a form field in the third step of the checkout process is improperly handling customer inputs and sending customers into a frustrating error loop, and that this problem caused 300 customers to abandon their purchases. Clearly both insights are critical for any online retailer, but the latter will clearly speed the resolution of the problem by clarifying both the functional breakdown and the business impact.

THE IMPORTANCE OF PROCESS IN WEB SITE MEASUREMENT AND OPTIMIZATION: RECOMMENDATIONS FROM WEB ANALYTICS DEMYSTIFIED

When working to understand visitor behavior using the systems described in this document, the need for process is critical. Given the complexity associated with integrating Web Analytics and Customer Experience Management systems, effectively leveraging the combined data often requires careful analysis supported by robust processes for data integration and validation. And given the depth of analysis required to fully benefit from measurement technologies used in tandem, it is critical that organizations have clear processes to take advantage of the output.

To effectively leverage both systems analysts must understand what data is available in each system. There is a tendency for companies to struggle to reconcile similar data from disparate systems, a struggle that more often than not becomes a political battle. To avoid this problem altogether a company must establish business processes that guide the use of these technologies.

In an effort to help establish and guide these business processes, the following section outlines five process recommendations from Web Analytics Demystified, and includes concrete examples that will better explain why both Customer Experience Management and Web Analytics technologies are necessary to understand customer behavior.

PROCESS #1: CREATE A ROBUST VIEW OF VISITOR INTERACTIONS

One common complaint about Web Analytics systems is the lack of visibility that they provide into real visitor interactions; pure Web Analytics tools all too frequently fall short when attempting to describe *exactly what went wrong* during a visit. This lack of visibility into the exact cause of a problem often times leads to an organization’s inability to make a decision on how to rectify the situation because there is simply *not enough* of the right kind of data to properly guide the decision making process. Analysts are left scratching their heads saying “It could be this, or it might be that, or maybe it’s something else entirely.”

The need for deep-dive analysis is perhaps the number one reason that Customer Experience Management is required as part of the a website’s optimization toolset—at some point during click-

stream analysis a company is inevitably left asking the important question, “Why did so many people abandon this process?”

Customer Experience Management technologies are designed to support very deep analysis of visitor behavior on the site, going so far as to be able to replay entire visitor experiences, errors and all. Full-experience replay for an individual, combined with powerful search functionality that allows analysts to determine exactly how many visitors experienced the same type of problem, allows analysts to very quickly diagnose failed interactions and answer questions like:

- On a page with a form, did the failure have something to do with the information the visitor was entering into the form fields? If so, what data did they enter?
- For a behaviorally targeted offer or some other dynamically generated content, was the problem isolated to a single or small number of offers or contents? If so, which offers or contents caused the problem?
- On a page using a “Web 2.0” object such as a Rich Internet Application (RIA) generated in AJAX, Flash, or Flex, was there a common usage pattern that precipitated the failure? If so, what was that pattern?

Nordic Bank is an AJAX application that is being tracked using Tealeaf to record and replay each individual event on a single, HTML page

The third point above raises an interesting issue regarding Customer Experience Management applications—the best applications available today provide robust alternatives for measuring Web 2.0 technologies like AJAX, RSS and XML than comparative Web Analytics applications. Because CEM systems are integrated into the web deployment architecture, their ability to view both intra-page activities (as in the case of RIAs) and non-human user agents (as in the case of RSS feeds and XML) provides a rich alternative to JavaScript page tags and log files. This level of granularity deployed against emerging Internet technologies is important to creating a robust understanding of visitor interaction on a site.

RECOMMENDATION FROM WEB ANALYTICS DEMYSTIFIED: Leverage appropriate Customer Experience Management technology to support the deep exploration of visitor behavior,

especially when diagnosing the cause of visitor abandonment through critical site processes. Even without replaying the sessions, CEM systems can provide a wealth of data regarding the site experience that significantly enhances an analyst's ability to understand potential indicators and reasons for failures.

CASE STUDY: HOW ESURANCE CREATES A ROBUST VIEW OF VISITOR INTERACTION

Esurance, a prominent online insurance provider, used Tealeaf to diagnose and discover a major cause of failure for their customers. Web Analytics systems identified a high level of abandonment at a critical step in the insurance quoting process, but were unable to resolve the problem any further due to the amount of information requested on the page in question. Using Tealeaf CX to study a group of customers who had abandoned the process at this step, Esurance observed visitors struggling to input their vehicle identification number in the format expected by the site.

The cause of the issue was that many state registration forms show the VIN with spaces between certain digits, and the Esurance site expected a VIN without spaces—a classic “why” question that was impossible to identify using traditional Web Analytics. A quick fix to the form field resolved the problem, and the company saw an immediate increase in successful quote completions as reflected in their Web Analytics system and, more importantly, in the number of new customers Esurance signed up month over month.

Marj Hutchings, Director of Internet Operations at Esurance said, *“We were frustrated with the high rate of bail-outs on this particular page in our purchase process, but we were unable to determine why people left our website. When Tealeaf showed us exactly what our visitors were struggling with, we immediately corrected the problem and dramatically improved our application completion rate.”*

PROCESS #2: TRACK CRITICAL KEY PERFORMANCE INDICATORS

Key Performance Indicators (KPIs) and digital dashboards are in vogue these days, primarily designed to satisfy the needs of senior management. KPIs are used to simplify the Web Analytics reporting process and provide a business-focused view of visitor behavior and online marketing efforts. Some of the most commonly used key performance indicators include:

- Average page views per visit
- Order and buyer conversion rates
- Average cost per keyword click

Web Analytics systems are very good at generating traffic and count-based indicators. While the reporting infrastructure provided with most good Web Analytics systems is very appropriate for the delivery of KPI reports, traffic-based indicators only describe part of the visitor experience. Customer Experience Management systems are able to provide critical key performance indicators such as:

- Site-wide application error rates
- Percent of abandonments that include user experience problems
- Revenue impact of site experience problems

Additionally, Customer Experience Management systems provide granular tactical KPIs for critical visitor and site segments. These KPIs are particularly important to those managers responsible for visitor flow through a website and include metrics like:

- Form completion rates on critical pages
- Average response times on key pages (landing pages, home page, etc.)
- Checkout path error rates by segment:
 - Browser version
 - Campaign
 - Visitor geography
- Percent of sessions with known usability obstacles

KPI Summary								
KPI	Goal	Focus - 02/12/2007			Compare - 02/11/2007			Change
		Status	Grade	Rating	Status	Grade	Rating	
Process / Usability	95.00%	 	D	84.55%	 	C	89.71%	↓ -5.16%
Performance	98.00%	 	A	98.20%	 	A	98.09%	↑ 0.11%
Application Quality	99.00%	 	A	99.15%	 	B	91.38%	↑ 7.77%
Abandoned with Issues	5.00%	 	C	8.32%	 	B	6.54%	↑ 1.78%

Key Performance Indicators as reported by Tealeaf, covering response times, application errors, unexpected issues, and overall site usability

RECOMMENDATION FROM WEB ANALYTICS DEMYSTIFIED: While an issue and error-free experience is typically assumed, this level of service delivery is rarely achieved. Experience-centric KPIs should be considered and included in top-level and mid-tier KPI reports and digital dashboards. CEM-based indicators provide critical context to all other traffic-centric indicators, allowing senior management to quickly determine whether a sudden decline in tracked metrics is due to a failure of technology or the result of a design decision.

CASE STUDY: HOW ART.COM TRACKS CRITICAL KEY PERFORMANCE INDICATORS

Art.com monitors a variety of click-stream-based key performance indicators such as bounce rate, conversion rate, and revenue per site visitor. However, by additionally monitoring error rates across their site and through key site processes using Tealeaf, Art.com can immediately determine whether an unexpected decline in conversion rate or revenue per visitor is likely caused by conditions such as an application error or a usability issue.

One example of how this reporting helps Art.com answer specific “why” questions comes from a recent decline in a critical site KPI. In the middle of ongoing customer acquisition efforts, the company’s conversion rate suddenly dropped. Normally, this decline would trigger the need for time-consuming analysis efforts to examine marketing campaigns, product mix, and site functionality. Thanks to Tealeaf, management was immediately alerted to a marked increase in site-wide errors. Problem sessions were isolated and reviewed using Tealeaf CX, and the root cause was quickly diagnosed and corrected. The Tealeaf system informed Art.com both *why* the decline was occurring and what they needed to do about it. In certain cases, Art.com was able to proactively reach out and re-engage customers who experienced errors and who did not complete transactions. In other cases, site copy and error notifications were revised to provide a more friendly navigation path for visitors who ran into the discovered error conditions. In both situations, insights gained from Tealeaf enabled Art.com to recover a substantial number of otherwise “lost” customers – and resolving one issue alone recovered over \$25,000 in lost revenue per day.

According to Michael Marston, VP of E-Commerce and Product Management at Art.com, *“Without Tealeaf as part of our ecosystem, Art.com would be tremendously less efficient in our ability to track and diagnose experience-related issues on the site.”*

PROCESS #3: ACTIVELY MONITOR CRITICAL VISITOR ACTIVITIES

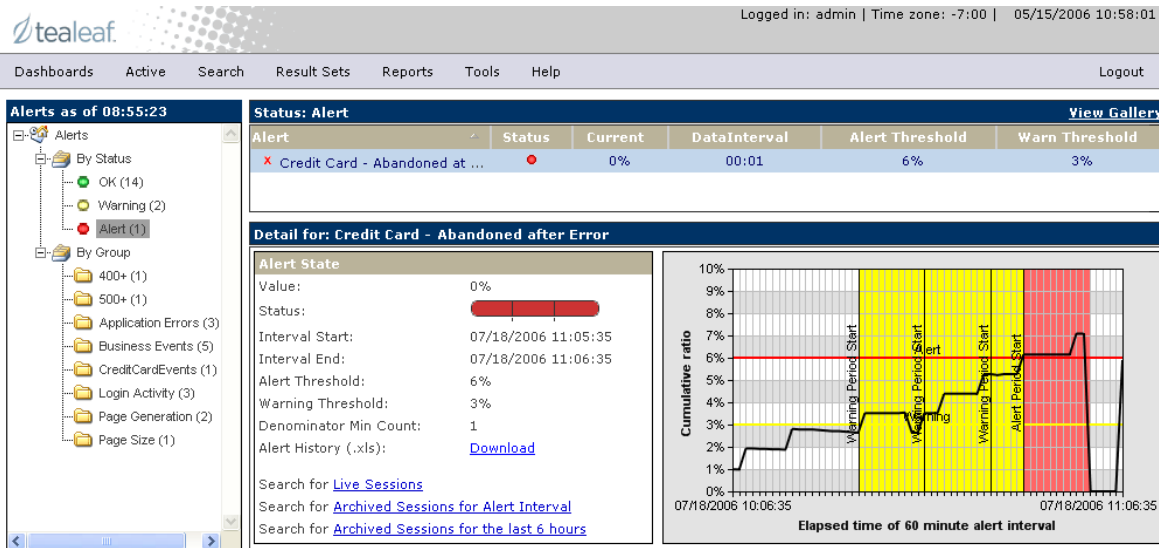
One of the benefits of the online channel is that it is always on. Unfortunately, this benefit can also be a curse since problems sometimes happen in the middle of the night, leaving embarrassing issues for all to see until they are detected and resolved. To address issues of system availability and site performance, a variety of technologies ancillary to website measurement exist—largely synthetic measurement applications designed to simply ping web pages and report on their status.

Sometimes business problems don’t manifest as easily as slow-loading pages or full-blown application errors. Sometimes critical site paths appear fine when measured using simple criteria like load time and availability but paint an entirely different picture when real customer experiences are observed. Consider the following situations:

- All pages in a checkout path load normally, but an unexpected change to the application prevents visitors in certain countries from progressing past a critical step. Instead they are forced into an infinite loop when attempting to complete a transaction.
- Search results pages load properly, but a change to the relevancy algorithm causes totally irrelevant results to be generated
- All pages in a critical process load and render normally in Internet Explorer but fails to render properly in non-IE browsers, making the pages unreadable in Firefox and Safari browsers

- The lack of product availability is displayed normally, but the application is not redirecting the user to alternate choices as designed

Business owners owe it to their visitors and customers to actively monitor and quickly diagnose and correct problems when they occur. While both Web Analytics and CEM technologies support some level of alerting and monitoring functionality, Customer Experience Management systems are extraordinarily well suited to provide real-time feedback against these complex scenarios.



An example of an alert monitor in Tealeaf, showing the number of visitors that have abandoned a business process after running into site issues

RECOMMENDATION FROM WEB ANALYTICS DEMYSTIFIED: Actively monitor critical visitor and customer activities using Customer Experience Management tools designed to provide real-time feedback on critical events, rates, and measures. In addition to standard alerts monitoring application performance, consider monitoring and alerting against changes in site and business key performance indicators such as conversion rate, bounce rate, and abandonment rates at discreet points in multi-step processes.

CASE STUDY: HOW BLUEFLY ACTIVELY MONITORS VISITOR ACTIVITIES

As a leading online retailer, Bluefly is open all-day, every day. It is essential that the company has a firm handle on what their customer are experiencing during any given buying or browsing session. To that end, Bluefly was particularly interested to monitor all critical processes on their website, including their checkout process.

Through the use of Tealeaf, it didn't take long for Bluefly managers to notice a pattern—many of the customers who had recently abandoned their shopping carts were those who had opted to pay with BillMeLater. By replaying customer sessions using Tealeaf, the company was able to rapidly identify the cause of the problem: a large number of users hadn't been able to complete their transactions because they had failed to check a box indicating their agreement with the terms and conditions. Bluefly typically uses a red exclamation point to alert customers to required input fields, and although that red mark was showing up next to the terms and conditions box, it was appearing in a tiny font, which customers were apparently missing. The vast majority of customers who hadn't checked the box, and therefore could not complete their transactions, simply gave up on the transaction. For Bluefly, the ability to immediately see what users were experiencing on the website, along with the ability to capture and correct the errors as they happened, proved invaluable.

“We don't want to lose one customer to a technical problem. If they have a bad experience—if something goes wrong—they aren't going to give you another chance,” says Bluefly vice-president of technology Matt Raines. According to Raines, Tealeaf gave them the ability to detect and resolve these issues before they became widespread.

PROCESS #4: CREATE A FEEDBACK LOOP WITH ONLINE CUSTOMERS

On business-to-business (B2B) sites and in situations involving high-value customers or transactions, the need to be able to diagnose failed or unsatisfying visitor interactions transcends “nice to have” and becomes mandatory. Especially when the company is working to target and keep a specific segment of customers, a well thought-out feedback loop built on a solid business process can be the difference between keeping and losing customers when something unexpected happens online. But again, the critical insight is rarely that something unexpected happened, it is “why” something unexpected happened.

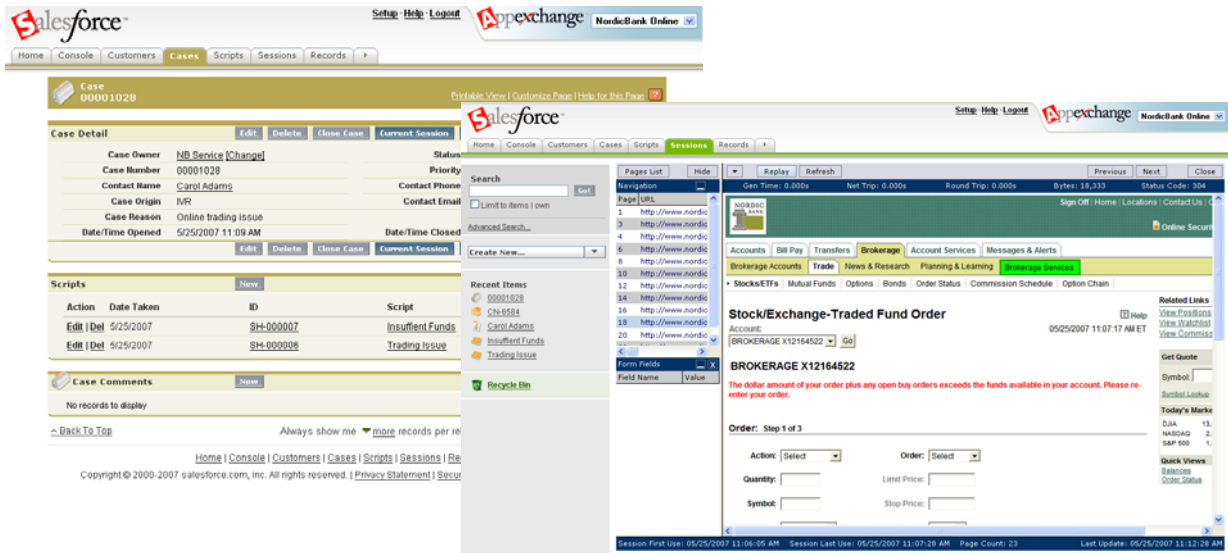
Fully understanding the exact nature of any failed visitor interaction can have a profound impact on the customer's willingness to continue to conduct business with a website. The use of Web Analytics and Customer Experience Management systems in concert allow analysts to efficiently identify, diagnose and work to correct the problem—both by conducting triage with the individuals affected and also by accurately reporting the nature of the problem to internal teams assigned to maintain the failed application or process.

Given appropriately robust Customer Experience Management technology, individual visitor interactions can be flagged for examination and follow-up. This information can be reported as:

- A KPI report (“percent of failed purchase sessions from high value customers”)
- Part of a digital dashboard (in a report explicitly naming known high-value customers who have had a transactional issue)

- From within the organization’s customer relationship management (CRM) consoles that allow front-line resources to directly review immediately recent customer interactions in order to diagnose and correct problems

Additionally, based on inputs from Web Analytics solutions, managers responsible for the overall customer experience can use CEM technology to regularly review customer interactions with the website. Guided by declines in click-stream KPIs reported by Web Analytics, managers can spend an hour a week following the same best practice widely used in offline call centers and “listen” to customer interactions, looking for common problems and opportunities to improve the overall online experience.



Tealeaf’s customer experience replay embedded within a CRM application used by customer service agents. By showing exactly what a customer saw or did, this capability enables front-line reps to effectively and efficiently serve the online customer.

RECOMMENDATION FROM WEB ANALYTICS DEMYSTIFIED: Actively monitor a sample of individual visitor and customer interactions, focusing on high-risk and high-value customers, especially in business-to-business environments or in any situation where the health of the business depends on creating a strong, positive, ongoing connection with known customers. Depth of data gathered can range from click-stream data provided by Web Analytics systems but is ideally full-experience replay, allowing customer-facing resources to understand *exactly* the nature of a failure and work quickly to correct the problem or escalate as appropriate.

CASE STUDY: HOW AIRLINES REPORTING CORPORATION CREATES A POSITIVE FEEDBACK LOOP

Processing over \$77 billion in transactions annually for airlines, travel agencies, corporate travel departments, railroads, and other travel suppliers, Airlines Reporting Corporation (ARC) is the financial backbone of travel distribution. Understanding how these organizations use their online products and services is vital to ARC for maintaining and fostering positive relations. When users need assistance, ARC delivers the most efficient service possible by providing their customer service teams with immediate access to all user interactions using Tealeaf cxReveal. This full user-experience replay, which has become part of ARC's customer service process, enables reps to address customer issues immediately—resulting in a 50% improvement in the team's first call resolution rate.

The above dialog, based on customer experience, has also extended to internal communications between ARC's service, development, and product teams. When resolving issues or discussing product enhancements, ARC relies on user interactions to identify opportunities for improvement, drive requirements, and set priorities. In fact, Tealeaf, and the capabilities that it delivers, has become a corporate standard for the delivery of all online products and services at ARC.

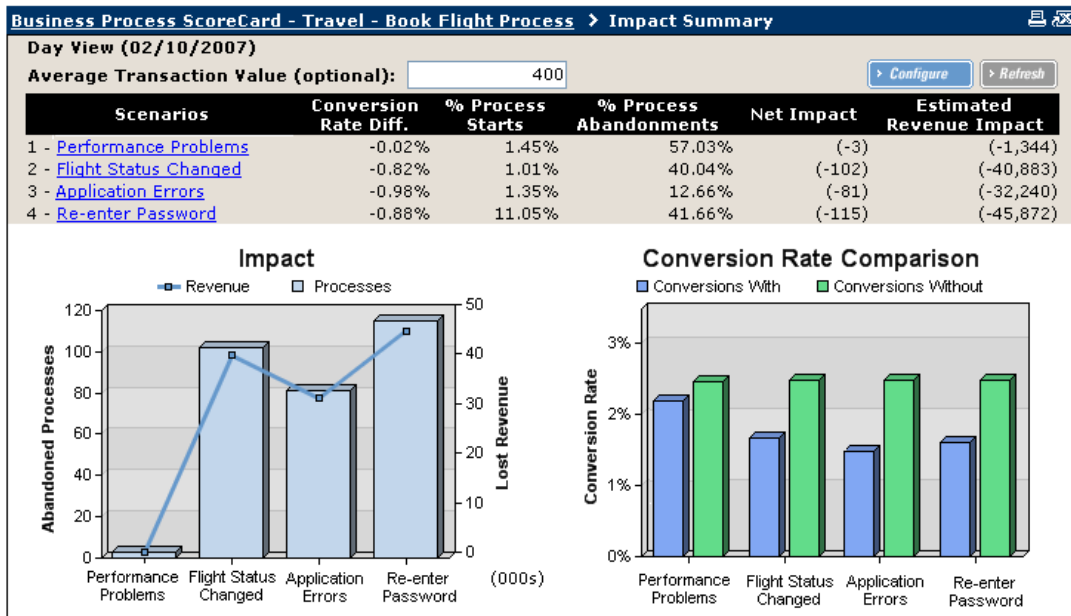
PROCESS #5: PERFORM “UNCONTROLLED” EXPERIMENTS

A great deal has been written about controlled experimentation and multivariate testing as a fundamental component of Web Analytics and website measurement. Controlled experimentation and testing is critical to every business's success using website measurement and analysis technologies. However, it is equally important to conduct *ad hoc* analysis against existing data looking for opportunities for improvement that can be tested.

In sufficiently powerful systems, this *ad hoc* exploration is usually done by segmenting visitors into comparable groups based on some aspect of their session or experience. This session-level segmentation essentially becomes a type of “uncontrolled experimentation”—allowing for the comparison of different groups against a set of defined key performance indicators. “Uncontrolled experimentation” allows for the exploration of leading questions like:

- Are visitors more likely to purchase after viewing the shipping policy?
- What is the impact on customer satisfaction when a visitor cannot complete a critical site process?
- Does site performance have any material impact on a shopper's likelihood to purchase?
- Do application errors occur more frequently on some browsers or operating systems?

This list of potential experiments is nearly endless and the ability to explore questions like these is the foundation of a good site measurement and analysis program. The ability to answer most of these questions absolutely depends on a robust system that supports visitor segmentation. While popular Web Analytics systems provide increasingly robust segmentation capabilities, a great deal of valuable information is contained in the document proper—dynamic content, error messages, and other application metadata that can be used to create *ad hoc* segments for examination. To access this information, sites need a CEM solution capable of recording, searching, and segmenting against the entire visitor transaction.



Example of how Tealeaf enables “uncontrolled experimentation” based on information gathered from the customer’s individual experience including application errors and other performance problems, “flight status has changed” notices, and the need for the user to re-enter their password.

RECOMMENDATION FROM WEB ANALYTICS DEMYSTIFIED: Develop a robust process for “uncontrolled experimentation” based on multi-dimensional visitor and session segmentation capabilities, and formulate a strategy that allows analysts sufficient time to look for opportunities within the data. Bolster this analysis with the additional content and metadata inputs available through CEM systems capable of recording and mining whole visitor interactions.

CASE STUDY: HOW A MAJOR ONLINE TRAVEL HUB AGGRESSIVELY CONDUCTS “UNCONTROLLED” EXPERIMENTS

Managers at a major online travel provider spent a great deal of time trying to determine why certain customers failed to complete transactions. The working hypothesis was that specific performance and pricing related conditions were having a substantial negative impact on conversion rates; unfortunately the travel hub had no data in their Web Analytics system that allowed them to test these hypotheses. Given the complex nature of pricing in the airline industry and the great variation in demand observed on a daily and weekly basis driven by extrinsic factors, it was unlikely that the company’s Web Analytics solution would be able to support the complex multi-dimensional analysis required to determine why these transactions failed.

Using Tealeaf CX, analysts conducted “uncontrolled experiments” examining the behavior of visitors using segments defined in real-time by pricing and performance conditions. The company investigated the impact of slow search results and forced “re-pricing” on the visitors likelihood to complete a transaction. In doing so, analysts saw a surprisingly high correlation between these complex conditions and visitor abandonment—abandonment rates were often twice as high among affected users as non-affected users. By making several relevant user experience and business logic changes to the site, this impact was dramatically minimized, recovering several million dollars of previously foregone revenue.

CONCLUSIONS

This document describes two distinct solutions designed to support fundamental site optimization processes, as well as the fundamental need for *both* quantitative and qualitative data. While the majority of business websites already have a pure Web Analytics system deployed and are actively gathering quantitative click-stream data, the same cannot be said for Customer Experience Management solutions. The ability of these complimentary systems to provide more granular and definitive answers to a suite of common business questions—questions outlined throughout this document—makes a compelling case for the focused inclusion of CEM technology as part of the site optimization toolset.

Forward-thinking companies like Esurance, Bluefly, Art.com, and ARC have already taken this guidance to heart and are actively using Web Analytics and Customer Experience Management systems in concert to answer critically important questions of “what” and “why” on their sites. As documented, the benefit of integrating these systems effectively and efficiently can be significant, both in terms of incremental financial growth and increasing customer loyalty and satisfaction.

Given the continual shift of advertising dollars, resources, and most importantly, customers into the online channel, the belief is that executives who aggressively pursue a more holistic view of their customers will have a substantial advantage over those who continue to base their analysis only on a simplified view of visitor behavior on the Internet.

ABOUT THE AUTHOR

Eric T. Peterson, CEO and Principal Consultant at Web Analytics Demystified, has worked in web analytics since the late 1990's in a variety of roles including practitioner, consultant, and analyst for several market-leading companies. He is the author of three best-selling books on the subject, *Web Analytics Demystified*, *Website Measurement Hacks*, and *The Big Book of Key Performance Indicators*, as well as one of the most popular web analytics bloggers at www.webanalyticsdemystified.com. Mr. Peterson has committed much of his life to the betterment of the web analytics community, so much so that Jim Sterne, President and co-founder of the Web Analytics Association says "Eric's leadership in the industry is unparalleled, his devotion to the community is legendary and his years of experience translate immediately into strategic and tactical competitive advantage for everybody who works with him."

ABOUT WEB ANALYTICS DEMYSTIFIED

Web Analytics Demystified, founded in 2007 by internationally known author and former JupiterResearch analyst Eric T. Peterson, provides objective strategic guidance to companies striving to realize the full potential of their investment in web analytics. By bridging the gap between measurement technology and business strategy, Web Analytics Demystified has provided guidance to hundreds of companies around the world, including many of the best known retailers, financial services institutions, and media properties on the Internet.

For more information on Eric T. Peterson and Web Analytics Demystified, please visit www.webanalyticsdemystified.com, email eric.peterson@webanalyticsdemystified.com, or call (503) 282-2601.

ABOUT TEALEAF

This whitepaper is sponsored by Tealeaf, the leading provider of online customer experience management solutions. Tealeaf's CX family of solutions provides unprecedented enterprise-wide visibility into every user's unique online interactions. This "360-degree view" of the online customer experience enables a clear and consistent understanding of the customer for Ebusiness, IT, customer service and legal and compliance executives and their organizations across a wide range of vertical industries including retail, banking, travel, insurance, telecommunications, pharmaceutical and transportation. Founded in 1999, Tealeaf is headquartered in San Francisco, California, and is privately-held. For more information, visit www.tealeaf.com.