WebTrends Intelligence Suite provides the ultimate in web analytics by offering the most complete view of web customer activity to improve the performance of an organization's e-business. To go beyond traditional web traffic reporting, WebTrends Intelligence Suite adds the sophistication and flexibility of a scalable data warehouse with the ability to integrate customer and sales information and leverage a range of highly developed analysis technologies.

The components of WebTrends Intelligence Suite provide a complete solution for efficient processing, reporting and analyzing of web-derived customer and site traffic information, enabling users to make informed and timely business decisions.

Written for chief information officers, information technology professionals and marketing executives, this white paper provides an overview of the architecture of WebTrends Intelligence Suite and its components, and examines a number of powerful applications for this solution.
Companies that do business online are hungry for meaningful data about their web site customers’ interests. The pages customers touch, the links they follow and the inspirations for their visits (such as web advertisements or links from another site) are priceless pieces of information, if they can be sorted out and properly analyzed. Industry analyst Jupiter Media Metrix estimated that companies that accurately identify loyal customers could reduce customer acquisition costs by 27 percent and increase average order sizes by up to 60 percent.

E-businesses today need tools that capture and analyze volumes of rich behavioral web data. The sheer quantity of web-derived visitor and customer information, ironically, can stand in the way of its effective use, with the result that many companies underutilize the data they collect. Moreover, to leverage their existing investment in infrastructure, companies should correlate their web responses with their other enterprise databases to gain a comprehensive view of their web visitors and customers.

WebTrends Intelligence Suite is a complete solution for these complex challenges. Its five fully integrated components are designed to transform volumes of uncorrelated raw data into useful information that supports effective, strategic decision-making.

- **WebTrends Warehouse.** The WebTrends Warehouse overcomes the substantial technical challenges to implementing a comprehensive web analytics solution by creating a powerful, central data warehouse for enterprise business use. The WebTrends Warehouse efficiently transforms, processes and stores every detail of web customer activity for advanced analysis, and has the power to provide a multi-channel view of an e-business through data integration with customer and sales data.

- **WebTrends Reporting Center (Enterprise Edition).** To satisfy fundamental reporting needs, meaningful and easy-to-understand reports are critical. WebTrends Reporting Center offers more than 350 predefined reports to get business, web and technical managers up and running quickly with minimal effort. E-business statistics are provided for web traffic and visitor activity, marketing campaign performance, web site performance and visitor shopping behavior. WebTrends Reporting Center also enables reporting on streaming media effectiveness, wireless application protocol (WAP) and Palm operating system traffic.

- **WebTrends Report Designer.** Business users frequently need to use organization-specific information to gain insight into the performance of their web sites. WebTrends Report Designer goes beyond predefined reporting by providing the ability to design custom reports, trend analyses and comparative reports for enhanced sophistication in the analysis of an organization’s customer interactions and e-business performance.

- **WebTrends OLAP Manager.** To fully explore substantial amounts of web site data, advanced analysis tools are needed to uncover customer, sales and visitor activity trends. WebTrends OLAP Manager provides the most powerful analysis capabilities within WebTrends Intelligence Suite, offering more than 40 predefined, multi-dimensional models to jump-start pattern analysis on customer abandonment, customer attrition, customer loyalty or customer conversion rates and trends. Using industry-standard business intelligence tools, powerful, in-depth custom analyses can reveal critical trends to optimize the performance of your e-business. The highly graphical format and easy navigation through the data makes the powerful analysis tools accessible to a broad audience, not just professionally trained data analysts.
• **WebTrends for Content Management Systems.** Content management systems often contain valuable information that can be difficult to interpret. WebTrends for Content Management Systems can translate proprietary data formats into meaningful reports and analysis for multiple, industry-leading content management systems, such as Vignette Content Management Server, BroadVision One-to-One Enterprise and Macromedia Spectra and other dynamic site management systems. WebTrends for Content Management Systems also enables integration with real-time profile information from BroadVision’s database.

WebTrends Intelligence Suite has been designed from the ground up to be cross-platform compatible, to integrate with leading e-business platforms and to provide flexible reporting for multiple users in your organization. WebTrends Intelligence Suite is available for Sun Solaris and Microsoft Windows 2000 or NT. It is compatible with Oracle and Microsoft SQL Server databases and has pre-built integrations with Siebel eBusiness Applications. Browser-based reporting ensures that the right people have the right information when they need it.
Building a warehouse for web site data is a daunting, complex activity that would tax the technical and knowledge resources of most organizations, making the effort prohibitively expensive and time-consuming. The WebTrends Warehouse provides an extensive packaged repository for web site data that is ready to deploy and can easily manage the volume of data produced by a typical web site. As the foundation of the WebTrends Intelligence Suite, the Warehouse efficiently transforms, processes and stores every detail of visitor activity for advanced analysis, and facilitates a multi-channel view of an e-business through integration with data from content management systems, e-commerce applications and CRM or ERP systems.

The Warehouse imports and transforms the gigabytes of web site activity data into meaningful information, with a minimum capacity to process and store over 50 gigabytes of web data per day. More than simply tracking visit activity, the Warehouse offers multiple ways of identifying a web site visitor in order to consistently identify “who” is actually visiting the site. The identification of an individual’s web site activity is tracked using cookies, session identification data or authenticated user identification data. The numerous benefits of identifying an individual are more than simply understanding web traffic statistics. For example, by knowing who is visiting a particular web site, marketers can provide personalized content or offers, salespeople can make personalized up-sell or cross-sell offers, and service representatives can proactively respond to visitors expressed issues or preferences.

In addition to gaining a view of an individual web site visitor’s behavior, the Warehouse supports a variety of user-definable business rules to classify the raw web log data and to identify particular actions or events (such as single pages, content groups, qualification levels, favored paths or marketing campaigns). The result is that a user can make sense of the wide variety of activities that can take place on a typical web site. These user-defined data transformation definitions are stored in administrative tables and can be updated, added to or changed at any time, either through the interface or directly at the command line.

**Unmatched performance**

The WebTrends Warehouse optimizes the performance of enterprise databases when loading and querying the complex behavioral data from web sites. It extracts all basic statistics, such as start and end times, referrers, search phrases or browser types, as part of the initial log file processing to avoid slowed query and reporting times. As a result, typical processing times for importing and analyzing log files are about 1.5 – 4GB of log file data per hour, depending on the complexity of the data. This imported and pre-analyzed data results in optimal warehouse performance. Finally, all the data is organized into individual visits that are attached to a visitor, with their visit attributes, and stored in the Warehouse.

The diagram below illustrates the conversion of log data to Warehouse information. The initial step is to parse all the character-based log data into a structured entry that is suitable for further processing. From here, various translations and filters can be applied to each entry to provide a meaningful record of what the visitor experienced rather than a cryptic string of numbers and characters.
Enabling complete analysis of your web site

**Warehouse**  
WebTrends Warehouse transforms, processes and stores summary and detail web customer activity for analysis and reporting.
- Web site data is parsed, sessionized and stored into a web site data structure designed for fast and accurate analysis as well as data integration with other systems.
- Information from content management, CRM, ERP and transaction systems can be integrated with web site data to create a more complete view of web customer activity.

**Analyze**  
Reporting and Analysis solutions take different views of the information to answer questions about web site performance, usability, marketing campaigns and e-commerce performance.
- Reporting Center provides fast comprehensive web analytics reports in a browser interface.
- Custom reports are generated with Report Designer to respond to business-specific web metrics.
- OLAP Manager creates data cubes from the WebTrends Warehouse to provide multi-dimensional analysis, leveraging Hyperion Essbase or Microsoft Analysis Services.
- Data Mining combs through the massive amount of web data to uncover hidden correlations between the data and predict behavior and affinities.

**Act**  
Business managers can now take action on the information to improve the performance of their web site.
- Impact site performance by identifying page load errors, remove confusing paths, and fix broken links.
- Increase marketing effectiveness by targeting campaigns to specific, qualified customer segments.
- Build sales by identifying cross- and up-sell opportunities.
- Use web site data to personalize web interactions and sales/service calls.
Facilitating integration

The WebTrends Warehouse offers a starting point for organizations that want to create a single point of information on their customers. With its rich visitor behavioral data, the WebTrends Warehouse serves as the ideal source of web customer information for integration with additional demographic data, historical marketing data (from non-web campaigns), service history or transactional history. This wealth of web customer information has the ability to provide enterprise business users with a single, unified profile of their audience from which to develop segments or identify candidates for targeted marketing or personalization of services. This integration may take place within the WebTrends Warehouse or in an organization’s existing enterprise data warehouse. Because not all of a company’s customers or contacts may visit their web site, integration would be required to fully analyze the customer base and accurately view the complete picture of activity, preferences, purchases and service issues. Due to its inherently flexible, extensible schema, the Warehouse is capable of being populated with data on individuals from any number of external customer data sources. Custom tables have been designed expressly for contact data and data attributes.

An additional integration option is available with WebTrends for Siebel eBusiness Applications, an add-on module that delivers insight and unprecedented understanding of customer interactions and preferences directly within the Siebel applications. The seamless integration pinpoints which content, products and services individual customers are interested in, leading to increased sales and customer satisfaction, condensed sales cycles and improved marketing campaigns and web customer self-service performance.

Extending warehousing throughout your e-business

The WebTrends Warehouse collects the data from web server logs, integrates data from transactional or e-commerce systems and creates a record that details the history of the web or offline transaction. The WebTrends Warehouse is also capable of managing and processing files across geographies and domains. If an organization’s web presence services multiple geographies or if parts of the business have sites hosted by local hosting companies, ISPs or affiliates/partners, accumulating log file data may be difficult. The WebTrends Data Collection Server eliminates the need to collect those files by using client-side data collection technology. With client-side data collection, each page view executes a script to capture activity data and generates a standardized data source for storage in the WebTrends Warehouse, making it available for advanced analysis and reporting with WebTrends Intelligence Suite. This extends your organization’s ability to generate accurate, complete analysis of web customer activity.

Another example relates to application servers. An application server might use the file name of the requested page from the browser to encode information. That information may have context only when associated with the database in the application server. These are examples of scenarios that require time-dependent interpretation of events or translation of log entries to create useful, structured Warehouse information that can be analyzed and turned into action.
WebTrends Warehouse summary
The WebTrends Warehouse manages web site content definitions, path analysis and campaign definitions with an easy-to-understand, browser-based user interface. All configuration files are text-based and documented. A rich command line feature permits administrators to activate key functions from custom scripts. Its design minimizes the need for additional training or specialized resources. The schema is fully documented to facilitate its integration with other applications, data sources and analytic tools, or to provide source data for other corporate warehouses.

The Warehouse is designed to use industry-standard database management systems, including Microsoft SQL Server 7.0 and Oracle 8i. The Warehouse is optimized to minimize load times with both databases through the use of their native load capabilities.

For more information about the Warehouse, see the white paper Warehousing Visitor Information in WebTrends Intelligence Suite (February 2002).
WebTrends Reporting Center (Enterprise Edition)

WebTrends Reporting Center (Enterprise Edition) creates comprehensive summary reports on web site traffic and performance and delivers this information directly into the hands of managers throughout the organization. WebTrends Reporting Center reports answer questions like:

- What is the most popular content on the web site?
- From what sites do visitors come to the site?
- Which online ads drive the greatest return on investment?

Unlike other solutions in the market that report solely off a database, WebTrends Intelligence Suite leverages the Reporting Center to deliver reports almost immediately because the analysis can be conducted in a web site analysis engine before it enters a traditional database. Thus, web traffic summary reports are available in real-time for managers who need up-to-date information to support ongoing business decision-making.

To get business, web and technical users up and running quickly with minimal effort, WebTrends Reporting Center offers a thorough library of over 350 predefined, meaningful and easy-to-understand tables and graphs. E-business statistics are provided for web traffic and visitor activity, marketing campaign performance, web site performance and visitor shopping behavior. WebTrends Reporting Center also enables reporting on streaming media effectiveness and wireless application protocol and Palm traffic.

Direct reporting process

WebTrends Reporting Center retrieves and processes web data independently through a powerful web site analysis engine. Using a simple browser interface, a business manager can create “profiles” that identify:

- Location of the raw web server log files.
- Filters (what types of information to include and exclude from the raw data).
- Report time spans (enable daily, weekly, monthly reports, and so on).
- Report templates (style, colors).
- Technical information (cookie format for identifying users, DNS lookup mode, etc.).
- Administrative information (archive frequency, legacy data removal, etc.).
- User access (defining who has control over a profile).

The Reporting Center conforms to each profile and analyzes raw log data to create summary data files containing the specified historical information. These summary files contain the results of the traffic analysis computations done during the raw log processing. Because this data is "lossy" (i.e., the individual events that make up the server log file are not stored), the summary data files are very small and are much faster to access than the original log data. A summary file is created for each day, week, month, quarter and year spanned by the raw data. To generate the reports, Reporting Center accesses the summary information and creates a report framework for each of its profiles. The framework consists of a report calendar and a table of contents. A business user is able to simply click on a particular day, week, month, quarter or year to view a comprehensive summary of web activity during that time span. Additional flexibility provided in this on-demand interface allows the user to choose which tables and graphs to view interactively to get complete results and full web traffic analysis almost immediately.
Providing enterprise-wide access to reporting

Reporting Center’s reports are available enterprise-wide via an entirely browser-based solution. Thus, multiple business users in an organization, from marketing and sales to IT professionals, can have access to customized reports anytime, anywhere. The simple user interface means that non-technical users can configure their own reports—significantly reducing IT involvement.

Reporting Center focuses on predefined reports that are easy-to-use and ready to go out-of-the-box so that it will be running in a minimal amount of time. It allows business users to quickly gain valuable insight on web site activity, while limiting reliance on scarce IT resources. Minimizing IT involvement in the creation of such a wide range of reports means IT can focus on other enterprise tasks. The Reporting Center requires minimal IT administration and offers a browser-based administrative user interface for maintenance anywhere, anytime. Additionally, Reporting Center is a cross-platform solution supporting Sun Solaris, Red Hat Linux and Microsoft Windows 2000/NT. Thus, organizations with a variety of technologies are not likely to need to purchase new hardware to support their Reporting Center implementation.

For more information about WebTrends Reporting Center, see the white paper, WebTrends Intelligence Suite Reporting and Analytics  (March 2002).
WebTrends Report Designer

WebTrends Report Designer is a critical reporting element in WebTrends Intelligence Suite, going beyond predefined reports and providing the ability to design custom comparative reports and trend analyses for improved customer interactions and e-business performance.

Using the custom reporting capabilities of WebTrends Report Designer, business users can leverage organization-specific information to gain insight into the performance of their website and to optimize its presentation. For example, if a service manager were trying to understand how to improve the information on their self-service site, Report Designer would facilitate a thorough exploration of related cause-and-effect data:

- Top Paths by Content Group over Time (quarter, week, month, etc.) (How are visitors coming to the knowledge base?)
- Browse-to-Call Ratio over Time (Are website visitors calling into the call center after reading the information on the website?)
- Knowledge Base Article by Frequency (Which articles are helping and how many times are people referencing them?)

Leveraging industry standard report design technology

WebTrends Report Designer leverages the features of Crystal Reports, the convenient and flexible industry standard in custom reporting, so there are no proprietary report design languages to learn or support. The friendly interface includes comprehensive formatting and design controls for all aspects of report design. Using Report Designer, business users are able to create entirely custom reports based on the data in the WebTrends Warehouse database. Other data sources can be integrated to create reports that provide answers not met by reports from a single system or database, enabling business users to analyze e-business performance using multiple dimensions.

Measuring website customer activity

Benchmarking and comparative reports for custom time spans are an ideal way to analyze performance for any time period in order to determine if key objectives are met. For example, using a side-by-side comparative report showing quarter-over-quarter leads from particular referrers or measuring the frequency of browsers-to-buyers over months facilitates an at-a-glance understanding of marketing campaign performance, e-commerce initiatives or lead conversions.

Ensuring timely information distribution

WebTrends Report Designer helps ensure that needed reports and analyses are always available to the right people in an enterprise. Report distribution can be based on key e-business measures, by functional groups or by users. Its strong set of automation features allows reports to be created at any specified time to minimize processor congestion or meet other requirements.

WebTrends Report Designer includes a report organization mechanism familiar to users of Reporting Center. The report viewer tree (table of contents) provides easy and clear report organization. With Report Designer, you can also organize reports to give each department a folder of common reports and each individual a folder of personal reports.

To get up and running quickly, Report Designer includes more than 40 report templates based on data from the WebTrends Warehouse that provide a starting point from which to develop custom reports.
WebTrends OLAP Manager

The ascendance of the Web as a major avenue of commerce and interaction with site visitors and customers creates a wealth of ongoing data for businesses. WebTrends empowers business users to make smarter decisions by providing real-time web customer analysis on an on-going basis and more sophisticated analysis when necessary.

WebTrends Reporting Center provides timely and detailed reports about web site performance and operation. Its reports are based strictly on the captured log information from the web servers. WebTrends Report Designer adds the capability to customize reports, create comparative analyses and benchmark web activity over time for enhanced web customer intelligence.

For more advanced analysis, WebTrends Intelligence Suite offers powerful multi-dimensional analysis of the integrated information in the WebTrends Warehouse. Using online analytical processing (OLAP), business users leverage a highly interactive point-and-click tool to explore information that can solve problems, uncover hidden relationships and support intelligent decision-making.

OLAP provides a powerful multi-dimensional view of collected data that allows you to view large amounts of summarized information efficiently. If, for example, product managers have placed multiple promotional offers on the web site, they might want to know something about the performance of those promotions and get answers to questions such as:

- How many visitors viewed the promotions’ product pages or content groups?
- Where did visitors come from (referrer, advertisements or searches)?
- How many were returning visitors?
- How many times did they return?
- What paths on the site did they follow to reach the product?
- How many web visits typically occur before the visitor makes a purchase?

Exploring this information across several dimensions helps these marketers understand exactly what attracts visitors to specific product pages.

From a bottom line perspective, the organization may also want to understand the conversion of web site browsers to customers. Statistics state that less than five percent of all visitors to a web site ever make a purchase. Deeper analytical questions include:

- What motivates a customer to buy?
- Which segment of customers is most profitable?
- Of the advertisements that attract customers to the site, which ones attracted the purchasers?

Repeat customers and registered web site visitors provide additional insight into buying patterns because they have chosen to provide additional information through the registration and sales process. Demographic information, coupled with actual transaction data and data from other enterprise touch points (store visits, service calls and so on), extends the understanding of a customer’s interactions with the enterprise. Uniting this information with the Warehouse data and building multi-dimensional OLAP models greatly extends a business user’s ability to gain a more holistic view of the customer and get answers to key business questions.
Introducing OLAP

Online analytical processing presents data in a format that is easy to understand and explore. The traditional way to receive information is through reports generated from accessing, aggregating and displaying data from a database in a predetermined format, such as a graph or a table. For many users, this is adequate. The analysis, however, may reveal an anomaly or interesting statistic worth pursuing in more detail.

Drilling down through the data used to create the original report can be difficult and may require the assistance of a database administrator (DBA) or programmer. In contrast, multi-dimensional modeling and display tools provide a user-friendly way to look at and explore the data directly without relying on the DBA or programmer.

Multi-dimensional modeling simply means that data is aggregated along familiar dimensions, such as time, region, products and sales. For every unit of time, product and region, a "measure," such as the actual sales figures, is introduced. The information can be viewed at different levels of aggregation, such as years, quarters, states in a region and so on.

To make data available in this format, it must be extracted from various data sources, organized with calculated measures and stored on an OLAP server. Once the information is stored on an OLAP server, it is ready for access and viewing.

An OLAP viewer, working in conjunction with the OLAP server, displays the data in a variety of formats, including graphs and spreadsheets. The information the viewer presents is interactive, allowing users to look at a particular dimension, such as time, in more detail. To look at the sales performance for a product promotion during August, for example, the OLAP viewer allows managers to drill down to the month, individual week or day and display the sales for the product at each level of detail.

With the ability to interactively and iteratively explore information, drill down, “slice and dice” or pivot data to produce different views and levels of detail, this kind of data exploration can yield additional understanding of customers’ behavior, effectiveness of ad campaigns and much more.

To fully explore the substantial amount of data from a web site, users require advanced analysis tools to uncover customer, sales and visitor activity trends. WebTrends OLAP Manager provides the most powerful analysis capabilities within WebTrends Intelligence Suite, offering predefined, multi-dimensional models to jump-start pattern analysis on customer abandonment, customer attrition, customer loyalty or customer conversion. Using industry-standard business intelligence tools, you can create custom analyses to reveal unknown trends to optimize the performance of your e-business.

Get going quickly with predefined multi-dimensional models

WebTrends OLAP Manager offers multi-dimensional e-business performance measures and analysis. The easy-to-use interface allows users to point-and-click and drill-down to additional levels of detail so that information can be viewed from a variety of perspectives, using different charts and graphs.

OLAP analysis may sound difficult, but OLAP Manager makes getting started simple for business managers and IT organizations. WebTrends OLAP Manager offers more than 40 predefined multi-dimensional models to address specific e-business needs. For example, to measure customer frequency and loyalty, models are predefined to include visitor segmentation, lifetime visits, average lifetime visit frequency and visitor lifetime duration. Additionally, these models can be customized and extended to meet any organization’s specific requirements.
Examples of pre-defined cubes in OLAP Manager are shown in the following table:

<table>
<thead>
<tr>
<th>Cube Name</th>
<th>Cube Description</th>
<th>Cube Dimensions &amp; Descriptions</th>
<th>Cube Measures &amp; Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authenticated User Analysis</td>
<td>This model analyzes the frequency, loyalty and value of each authenticated user.</td>
<td>• Time Of First Visit: Time of first visit by visitor&lt;br&gt;• Time Of Last Visit: Time of most recent visit by visitor&lt;br&gt;• Visitor Attribute: Authorized user associated with visitor&lt;br&gt;• Visitor Relationship Duration: Length of relationship (time) with visitor (last visit - first visit)&lt;br&gt;• Lifetime Visit Frequency: Segment based upon frequency of visits for a visitor&lt;br&gt;• Lifetime Visits: Segment based upon the number of visits for a visitor</td>
<td>• Visits: Number of visits or number of lifetime visits by visitor&lt;br&gt;• Authenticated Users: Authenticated Users</td>
</tr>
<tr>
<td>Visitors by Content Group and Referrer</td>
<td>This model analyzes unique visitors over time, and can be organized by referrer and content group to track traffic flow, content interest and usability.</td>
<td>• Referrer Segment: Visits based upon search engine, link, and bookmark&lt;br&gt;• Entry Page: First page visitor saw upon arrival&lt;br&gt;• Content Groups: Content groups as specified by WebTrends Warehouse advanced features&lt;br&gt;• Time: Time of hit or visit in a hierarchy</td>
<td>• Visits: Number of visits or number of lifetime visits by visitor&lt;br&gt;• Visitors: Number of visitors</td>
</tr>
<tr>
<td>Monetary Visit Value</td>
<td>This model analyzes actual sales versus potential monetary value.</td>
<td>• Shopping Cart: Shopping carts as specified by WebTrends Warehouse&lt;br&gt;• Time: Time of hit or visit in a hierarchy&lt;br&gt;• Product: Product&lt;br&gt;• Product Qualification Level: Product Qualification Level</td>
<td>• Product Views: Number of views of products in the product dimension by visit&lt;br&gt;• Product View Value: Sum of values of product views of products in the product dimension by visit&lt;br&gt;• Average View Value (formula): Average value of product views by visit&lt;br&gt;• Sales Amount: Sales Amount</td>
</tr>
</tbody>
</table>

These standard cubes encapsulate tremendous insight regarding the activity of customers on a web site. Exploring these cubes provides overall information on site traffic, revealing the visitors to specific product pages, names of referring sites or periods of highest traffic. For those who have registered at the site and given specific demographic information, OLAP analysis results can be used to segment registered web site customers. When coupled with information from sources external to the WebTrends Warehouse, multi-dimensional analysis becomes even more revealing due to the depth of analyzable information.

**Segmenting web site customers**

With WebTrends OLAP Manager, you have the ability to measure the response to every marketing campaign, identifying which visitors purchased and which visitors are good targets for repeat marketing campaigns. With this information, you can calculate the return on each campaign, trend over time which campaign was most effective and calculate the cost per lead, cost per prospect and cost per customer.

OLAP Manager features the ability to segment visitor or audience data and create custom attributes in the WebTrends Warehouse. Drill through to the unique visitor detail to mark specific customers, customer segments or data elements with custom attributes. The ability to quickly and easily identify and score or mark certain customer segments enables businesses to respond to market trends, sales opportunities, service issues or site performance issues quickly and effectively.
Customizing models for deeper insight

For deeper insight, WebTrends OLAP Manager provides the ability to easily create custom analytical models, measures, dimensions and dimension levels to incorporate unique metrics from an industry or e-business requirement. Users can:

- Easily edit predefined styles, such as background color and patterns, to achieve a specific look and feel.
- Independently create personal views and analyses, decreasing training requirements and increasing the frequency of analytics usage.
- Create, run and manage reports from the browser anytime, anywhere.

Customizing a cube multiplies its effectiveness as a tool for analyzing the performance of specific program attributes. Custom dimensions are easy to add to an existing model during the profile definition step. The following is an example of a customized cube:

CUSTOMIZED REFERRER (PRODUCT)

Dimensions:

- Referrer (Search Engine/engine name; Bookmark; or Links/Top Domain/Site)
- Entry page
- Absolute time
- Product
- Gender
- Age
- Region
- Income

Measures:

- Visitors
- First time visitors
- Returning visitors
- Visits
- Average duration

Adding demographic data (i.e. gender, age, income) to the Customized Referrer cube provides more ways of segmenting and examining the registered visitors and customers. This information can help a business manager understand where visitors are coming from and, more importantly, where each segment comes from.

Additional dimensions may be pulled in from the WebTrends Warehouse or from other relational databases. Adding a dimension from another database simply requires a common key between the two databases, typically a visitor or customer identification number. The WebTrends Warehouse can establish common identification keys for disparate databases, which greatly simplifies the integration of data from multiple sources.

Collaboration on e-business performance issues is critical due to the intense pace of business activities performed on the Web. Performance must be measured and analyzed and actions taken quickly to improve or leverage marketing campaigns, e-commerce initiatives, sales or service processes or site performance. OLAP Manager lets users e-mail important views of data to colleagues, share briefing books or create personal views of useful reports.
Leveraging leading OLAP technologies for optimal flexibility

To provide flexibility for your organization, WebTrends Intelligence Suite offers OLAP Manager for both Microsoft Analysis Services and Hyperion Essbase. WebTrends OLAP Manager integrates with ProClarity 4.0, a leading third-party reporting viewer for Microsoft Analysis Services. ProClarity supports advanced analytic features and functionality that both power users and analysts demand, including drill-through support, decomposition trees and perspective diagrams with dimension slicing and analysis. Microsoft Analysis Services for SQL 2000 is required when running the WebTrends OLAP Manager 3.0 for Microsoft Analysis Services.

WebTrends OLAP Manager also fully integrates with Hyperion Analyzer, the reporting viewer for the industry-leading OLAP server, Hyperion Essbase. Hyperion supports advanced analytic features and functionality including traffic-lighting, a cube navigator for easy view creation and a tabbed-desktop design for easy organization and navigation.

OLAP Manager summary

WebTrends OLAP Manager, the most sophisticated analytical tool in WebTrends Intelligence Suite, extends reporting and analysis by transforming complex, multi-source data into meaningful information through powerful multi-dimensional analysis. Using OLAP Manager, business users will uncover web site performance and web customer activity information by examining the rich, interactive analysis that OLAP Manager delivers right to your desktop or laptop.
WebTrends for Content Management Systems

Content management systems often contain valuable information that is difficult to interpret and is stored in proprietary log file formats or contained in separate databases. WebTrends for Content Management Systems provides the ability to translate proprietary data formats into meaningful reports and analysis for multiple, industry-leading content management systems such as Vignette Content Management Server, BroadVision One-to-One Enterprise, Macromedia Spectra and other dynamic site management systems. WebTrends for Content Management Systems also enables integration with real-time profile information from BroadVision’s database.

The benefits of using WebTrends for Content Management Systems include:

- **URL Translation:** Makes complex URLs understandable from within web customer activity reports. WebTrends for Content Management Systems focuses on tracking content and significant data rather than confusing and often meaningless page addresses.

- **Database Lookups:** Enables inclusion of relevant data rather than meaningless alphanumeric strings into web customer activity reports. For example, instead of knowing that “product #98765” had 100 visits, you would know that your new “red beach sandals” product had 100 visits.

- **Storage of translated URLs in WebTrends Warehouse:** All database lookups and translated URLs can be included directly into the Warehouse database. These dynamic elements and content can then be used as dimensions in OLAP analysis, custom reports or data mining.

Maximizing your content management system

Content management systems can be a vital part of web site design and management, but they also pose several challenges to an organization interested in gaining insight into their web site performance and return.

- **Page names are cryptic** in basic reports when using a content management system (CMS), making the data difficult to interpret. For example, an unmodified page name from a CMS appears as:

  /columns/index.htm?catID=100023&template=1120&type=5409001

  Using WebTrends for Content Management Systems to translate this by looking up the specific values in the database, this page will appear as:

  /NWTimes/Entertainment/Music.html

- **Highly parameterized page names** can make tracking a statistic as simple as Top Pages problematic when using a CMS with a highly dynamic site because the page name may not be specific enough. Parameters contain the detailed content reference, yet tracking the pages using all their parameters may be too unique. For example, a page name without parameter shows as:

  /NWTimes/Entertainment/index.htm

  However, the parameters on the page may include session IDs, page content, browser types, visitor IDs and more, which would make tracking the full URL too unique (potentially almost every hit would be entirely unique). For example:

  …index.htm?sessionID=100023-192168071&template=1120&…

Using WebTrends for Content Management Systems, the page name could be altered to include the content in the parameters:
Cryptic page names confuse reporting because of the depth of parameters used by the CMS. WebTrends for Content Management System enables actual page names, content or other database information stored in your content management database to be inserted into the WebTrends Warehouse for reporting and analysis. When a page looks like the following example, it makes it difficult for anyone to easily know which page it is or which campaign is referenced; thus, the usefulness of the report is diminished. For example:

/columns/index.htm?catID=100023&template=1120&type=5409001

When WebTrends for Content Management systems is installed, the WebTrends Warehouse as well as any reports could include the actual template name and page title from the database into reports. This report would refer to:

“Business and Technology | ‘By the Ticker’”

Additionally, dynamic content IDs or references complicate the simple task of configuring commerce-related reports like Shopping Carts, Product Definitions and Online Marketing Campaigns. WebTrends for Content Management Systems translates those IDs and references, simplifying setup and maintenance of your web analytics solution.

Dynamic parameters require database lookups to be translated into user-friendly language. Typical dynamic parameters appear as:

“product #98765” had 100 visits.

With the database lookups enabled by WebTrends for Content Management Systems, the information is dramatically more relevant, satisfying business users and eliminating the technical nuisance of performing the lookup. This also means that WebTrends “Parameter Analysis,” which is often used for reporting on products, registration data or any other dynamic content passed between the client and server, will contain the easy-to-understand information. For example:

“red beach sandals” product had 100 visits.

WebTrends Content Groups become difficult to implement, manage or report on with the dynamic content offered by a CMS. Dynamic content limits the ability to define fixed WebTrends “Content Groups” due to the very fact that it is dynamic and cannot be predefined into a WebTrends profile. For example, a content group would have to be explicitly defined for each and every page name using each cryptic template number:

“0,1087,315,1.html 0,1637,315,1.html 0,1195,315,1.html …”

URLs translated by WebTrends for Content Management Systems can be defined as a Content Group such as:

“*Entertainment***”

Database integration with the WebTrends Warehouse is made possible through WebTrends for Content Management Systems. For example, if there are special attributes stored within your content management or dynamic site database, the WebTrends Warehouse open database schema facilitates the integration of this data. Additionally, translated page names and paths can be stored directly into the WebTrends Warehouse. This enables reporting and custom queries on your web customer activity without further translation. Similarly, parameter information would be automatically available for custom database queries.
**Summary**

WebTrends for Content Management Systems improves reports by translating encoded information in each web page’s URL into the plain text name (and corresponding parameters) of the page or file. Leveraging the additional data in advanced content management systems to gather, analyze and mine in-depth web customer data provides the complete picture of web activity to support quality business decisions. WebTrends for Content Management Systems is available for the following content management technologies: Vignette Content Management Server, BroadVision One-to-One Enterprise and Macromedia Spectra; and, via the WebTrends Data Conduit for Dynamic Sites, other content management solutions like ATG and Open Market, or dynamic content servers such as Cold Fusion, ASP, JSP and PHP.

**Conclusion**

The focus of this paper is to provide an overview of WebTrends Intelligence Suite components. Intelligence Suite provides the ultimate in web analytics to transform raw web log data into reportable and meaningful information. The five core components of WebTrends Intelligence Suite together provide extensive capabilities for collation, reporting and analysis of web customer information.

The WebTrends Warehouse provides the foundation of WebTrends Intelligence Suite by systematizing the daily import and transformation of log files, and offers predefined reporting based on analysis directly from the web server log files, custom report design and multi-dimensional analysis for deeper web customer insights. WebTrends Reporting Center gives marketers and product managers the fast, day-in, day-out visitor information they need to keep pace with activity on their web sites. WebTrends Report Designer provides businesses with a flexible report design tool for creating reports tailored to their very specific needs. Using WebTrends OLAP Manager, business users have the power to drill-down and slice-and-dice data to digest the abundant input from the Web and other enterprise information sources to support informed, timely business decisions. WebTrends for Content Management Systems enables multiple technologies and resolves the disparate data types between dynamic sites, content management systems and log files.

WebTrends from NetIQ is the world’s leading provider of enterprise solutions for e-business intelligence. WebTrends is the pioneer in web traffic analysis with over five years of experience and 55,000+ customers, including half of the Fortune 500. WebTrends develops premier Internet and intranet enterprise management products offering complete solutions for managers, Webmasters, IT and IS professionals and web site developers to improve the performance, quality and integrity of their web sites.
## Key Terminology

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Clickstream</td>
<td>The succession of mouse clicks each visitor makes when visiting a web site.</td>
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<tr>
<td>CRM</td>
<td>Customer relationship management. An information industry term for methodologies, software and usually Internet capabilities that help an enterprise manage customer relationships in an organized way.</td>
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<tr>
<td>Data mining</td>
<td>Sorting through data to identify patterns and establish relationships.</td>
</tr>
<tr>
<td>Data warehouse</td>
<td>A central repository for all or significant parts of the data that an enterprise's various business systems collect.</td>
</tr>
<tr>
<td>ERP</td>
<td>Enterprise resource planning. An industry term for the broad set of activities supported by multi-module application software that helps a manufacturer or other business manage the important parts of its business, including planning products, parts purchasing, maintaining inventories, interacting with suppliers, providing customer service, and tracking orders.</td>
</tr>
<tr>
<td>Hit</td>
<td>A single file request in the access log of a web server.</td>
</tr>
<tr>
<td>IP</td>
<td>Internet protocol.</td>
</tr>
<tr>
<td>OLAP</td>
<td>Online analytical processing. A technology that enables a user to easily and selectively extract and view data from different points-of-view.</td>
</tr>
<tr>
<td>Schema</td>
<td>The organization or structure for a database.</td>
</tr>
<tr>
<td>URL</td>
<td>Uniform resource locator. The address of a file (resource) accessible on the Internet.</td>
</tr>
</tbody>
</table>

## For More Information

See these white papers:

- *WebTrends Intelligence Suite Reporting and Analytics* (March 2002).
- *Warehousing Visitor Information in WebTrends Intelligence Suite* (February 2002).

See the following URLs:

- [http://www.netiq.com/](http://www.netiq.com/)

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