



Accrue Software, Inc.

Greg Walker, Accrue Software's Chief Financial Officer – and for the last week, also Interim Chief Executive Officer – surveyed the room where Accrue's executive management team would soon gather for its strategic planning offsite. "Not a bad place for a business meeting," he mused.

Starting as one of more than a dozen firms offering Web traffic analysis software, Accrue had pulled away from the pack to become one of the three successful survivors in the exploding Web analytics industry.

But in 2000, as technology and business needs evolved, new competition had come from new sources. Firms offering customer relationship management software had begun to offer Web analytics as part of their product lines. Applications service providers had begun to offer Web analytic services as an alternative to the purchase of Web analytic products. The increased blurring of industry boundaries in the Web analytics market created great uncertainty among customers and investors alike, leading several analysts to speculate about Accrue's future:

"Specifically, it needs to decide whether it will play catch-up to the likes of BroadBase and Epiphany by acquiring eCRM automation functionality...or whether to focus on analytics alone and ultimately take on analytic product vendors like...MicroStrategy...."¹

On January 16, 2001, President and CEO Rick Kreysar announced that he was stepping down from his post.² Walker and the executive team were charged with charting Accrue's new course.

The Web Traffic Analysis Industry

Deploying a Web site and not knowing anything about its visitors is like spear-fishing blindfolded. [Infoworld, January 18, 1999]³

Demand for Web traffic analysis was sparked by the development of e-commerce by both new startups and established brick-and-mortar firms. In the mid-1990s, as the popularity of the World Wide Web exploded, hundreds of thousands of firms rushed to develop a Web presence. By 2000, analysts estimated that more than 3.5 million businesses in the U.S. alone had launched Web sites.⁴

Professor Brian S. Silverman prepared this case as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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As CIOs, CEOs, and marketing executives sought to capitalize on their IT investments, questions regarding the use of Web sites become increasingly significant. Managers wanted to better understand what visitors were doing on-line – which pages they were viewing, for how long, during what hours, and why. Many businesses turned to new methods of customer behavior analysis, collectively known as Web traffic analysis, to answer these questions.

By 2000, the global Web traffic analysis market represented a \$425 million industry, and was projected to exceed \$4 billion by 2004.⁵ As business use of the Internet evolved, the boundaries between the Web traffic analysis products industry and other e-commerce-related industries, such as automated marketing, began to blur. In addition, the way that customers could obtain Web traffic analysis expanded to include subscribing for analysis services from applications service providers (ASPs) as well as purchase of customized, consultant-generated analysis products (**Exhibit 1**).

The Web Traffic Analysis “Cycle”⁶

As firms attempted to improve and extend their Web sites, they typically engaged in a “cycle” of analysis that began with the identification of Web site goals and the design and development of the site, continued through measurement of Web activity, storage and analysis of the resulting data, and eventually revision of the site’s goals and design as a consequence of the data analysis (**Exhibit 2**)

Deploying the Site: Goals, design and implementation

While the motivation for having a Web site was usually a business need such as increased profitability, the specific goals for a site could vary widely. For example, an auto dealer might have a goal of consummating sales transactions over the Web, or instead of pre-qualifying customers and encouraging them to visit the dealership. Goals could range from the easily measurable (such as increasing revenue per visitor) to the difficult-to-measure (such as encouraging people to visit stores or increasing visitors’ goodwill toward the firm).

Having established the goals of a Web site, a firm would initiate the design of the site. Site design encompassed aesthetic issues, such as visual appearance and how to divide content across different pages or frames, as well as configurational issues such as whether to deploy “cookies” onto the machines of visitors.

Upon completion of site content and infrastructure design, a firm would implement its site. This entailed creating HTML pages and configuring Web servers and networks to serve them. A wide range of hardware and software tools were available to help create and serve site content, including link checkers, content serving engines, load balancers, chat servers, and search engines.

A large number of Web site design firms had sprouted in the mid 1990s to help firms design and implement Web sites. Many of these firms also helped clients decide on the goals of their Web site. In addition, a firm’s in-house IT and publishing organizations (if it had these) were usually involved in site deployment.

Measuring activity

In the course of responding to requests from Web browsers, Web servers recorded their action in *server log files*. Log files typically recorded requests made of the server and the resulting action. For example, a log file would record the number of requests or “hits” on a particular Web page. Server log files were rudimentary text files, with one line written to record each hit. In the mid-1990s, software became available that could read in log files and generate summary statistics concerning Web site traffic. Users could launch this software application on a desktop computer, “point” it to the log file, open the file, perform analysis, and show or print the results.

However, log file data did not provide much detail. Such data could not easily identify the path across pages that a particular customer pursued. Also, if a visitor stopped downloading a page in mid-download, and then requested it again, this would appear as two hits on the page. Thus, some undesirable features of a site – such as being so slow that frustrated visitors would frequently stop and re-attempt to download a page – would in fact provide ostensibly favorable data in the log files (in terms of more hits).

In contrast, *network collection tools* – the first of which was invented by Accrue – essentially “watched” the network data coming and going from a Web server. Such tools collected far more information than log files, including whether or not requests were cancelled by visitors via the stop button, the amount of time a Web server took to respond to requests, the amount of time a visitor spent on each page, and the path across pages pursued by a visitor. Also, since these tools could monitor both the amount of material being sent, and how long it took for the page to be downloaded, they could estimate the speed with which data traveled to the visitor and thus estimate whether the visitor used a T1 line, a 56 Kbps (thousand bits per second) modem, or something in between.

The primary challenge facing network collection tools was dealing with encrypted traffic on secure servers. Since the tool observed traffic from “outside” the server, it was not privy to the decrypted activity and consequently could not monitor properly the Web traffic data. In contrast, server log files worked with encrypted traffic since the server decrypted the request information for logging.

Finally, there existed *server plug-in modules* that could create custom log files containing more data than standard log files, but less than network collection tools. Server plug-ins were software programs that “talked” to the server software and recorded detailed information on each request and response of that server.

Storing the data

The volume of traffic on heavily trafficked sites could reach millions of hits per day. For example, Yahoo’s portal site averaged more than 625 million hits per day during mid-2000.⁷ This could generate 500 MB of server log file data every hour. Even smaller sites, such as that of Apple Computer, averaged more than 20 million hits per day.

This level of traffic created challenges in collection and storage. The primary challenge was finding a way to store enough data for meaningful analysis while still being able to provide timely reports. The high volumes of data from heavily trafficked sites exacerbated this challenge, and necessitated tradeoffs regarding the amount of data to store. How many days, weeks, or months of data should be retained? More data supported more comparisons across time, at the expense of a huge investment in storage capacity. Further, large amounts of data often led to slow retrieval and processing. For example, some analysis tools required more than six hours to generate a report from a 100Mb data file.⁸

Analyzing/Processing the data

Raw Web traffic did not lend itself well to analysis. This was compounded for those sites that had complex, distributed environments – for example, where multiple Web servers were involved. In such environments, consecutive requests by the same visitor could be handled by different servers, thus complicating the task of following the visitor’s progression through a site. So even before analysis could be done, upfront processing of the data to construct an accurate picture of visitors’ journeys was necessary to allow for good analysis.

A Web site tracked each unique visitor as she entered the site by using a mechanism established to track visitors, such as “cookies.” A Web traffic analysis tool then stitched together all of

that visitor's visit information across all of a site's servers to construct a report on each unique visitor. This stitching capability often required a great deal of software design effort.

Quantitative analysis was the most basic type of Web traffic analysis. Quantitative analysis provided counts and trends to answer questions such as who visited the site, when and how often they visited, how long they visited each page, etc. The information could be ranked, sorted, filtered, and subjected to additional processing, to show (for example) that visitors at certain times of the day tended to stay the longest on particular pages.

Such quantitative analysis could be used to support broader business analysis. For example, a firm might run a television advertisement during a major sporting event on a given day. By comparing the number (and length, and other characteristics) of Web visits that day to the site's normal traffic, the firm could develop a measure of the advertisement's effectiveness and possibly even its economic effect.

Other tools and technologies, such as data mining and on-line analytical processing (OLAP), provided additional views of the data to support qualitative analysis. Data mining had its roots in pattern recognition algorithms developed by mathematicians for military purposes. After the end of the Cold War, mathematicians left the military to apply such algorithms to business. Data mining software was designed to use "brute force" methods to sift through data on past customer behavior to uncover patterns too subtle for a human analyst to find.

OLAP software was designed to enable human analysts to "drill down" into data easily and quickly. OLAP software used relational databases or other data manipulation techniques to define the data along an extremely large number of dimensions. An analyst could disaggregate Web site traffic data along any of these dimensions with a single click, and hence could rapidly search for patterns in the data.

As a result of this analysis, a firm might revisit its earlier decisions about its site's goals and design, thus completing the Web traffic analysis cycle.

Integrating other sources of data

As a firm began to rely more heavily on its Web site, it often felt an increased need to understand the relationship between the site itself and other business processes. This frequently entailed the integration of data from other sources into the Web traffic analysis pipeline. For example, a firm might wish to integrate information on the people that visit the site, such as user preferences and demographic information. Or a firm might want to include information about non-Web activities, such as whether or not a particular user received a direct mail brochure, or which advertising campaign a visitor was exposed to. Such information could answer questions such as: which advertising campaigns drove in the most traffic, which resulted in the most sales, and which resulted in the most sales for the lowest cost?

Different data sources often collected and stored data in mutually incompatible formats. Integration of multiple sources thus often required the development or purchase of additional software that could import and merge data from disparate formats or platforms.

Customers

Corporate Web sites varied widely in their degree of sophistication, and consequently in the level of Web traffic analysis needed. The typical purchaser of a high-end Web traffic analysis product was the CIO of an enterprise with a substantial Web presence, although a client's marketing managers often wielded influence over the decision as well. The purchase process typically involved three steps. First, a team of marketing and technical personnel from the enterprise would meet with a

sales team from each of several potential Web traffic analysis vendors. The team would then narrow its choice of vendor to two firms and request detailed proposals from them. Finally, the team would choose between the two proposals, often after additional negotiation over terms. Purchasing criteria included price, quality of information provided, ease of use, and the product's "scalability" – its ability to handle anticipated future volumes of traffic.

Mid-sized enterprise customers might not need all features of a high-end solution, but wanted customer service and support and a reliable back-end database to store the information. Low-end sites often simply wanted to know basic site information such as the number of visits and page views per day.

Analysts predicted that as Web sites migrated toward one-to-one marketing, performance measurement would become an increasingly complex task. At the same time, this migration would require dramatically increased investments in the technology needed to enable such personalization. A November 1998 survey of e-commerce CIOs found an average annual Internet commerce budget of \$1.6 million – with respondents anticipating an 8-fold increase within three years.⁹ As Web spending increased, many CIOs felt increased urgency to justify their Internet spending.¹⁰

In the early days of the Web traffic analysis industry, products were usually licensed for a flat sales price per unit. By 1999, most high-end systems were sold according to a "CPU-" or "server-pricing" model. Under this model, the license fee moved along a sliding scale based on the number of CPUs on the Web site. As with most enterprise software, it was common for customers to negotiate a discount off of the list price.

Competition

Although providers of low-end tools had dominated the Web traffic analysis industry in the mid-1990s, providers of more sophisticated systems had grabbed more than 25% of the market by 2000 (see **Exhibit 3**) and were expected to make strong gains in the next four years.

Roughly 15 players had entered the high-end Web traffic analysis segment by 1996. By 2000, three major competitors were left. The survivors attempted to differentiate themselves through unique product features such as Web datamining, the ability to analyze Web sites that used dynamic content (which was far more complex to monitor), data warehousing capabilities, and user-centric analysis (capturing a visitor's path over multiple servers and domains).¹¹ Most high-end solutions also contained back-end database or data warehouses for data storage.

Although few analysts expected new firms to enter the Web traffic analysis industry, many noted that the industry's boundaries were beginning to blur. In particular, customer relationship management tool providers and application service providers threatened to encroach on traditional Web analysis tool providers' territory.

The logic behind customer relationship management (CRM) was that the more a company knew about its customers, the more efficiently and effectively – and consequently the more profitably – it could serve them. CRM solution providers offered software programs and systems designed to collect as much information as possible about a firm's customers from that firm's interactions with its customers. During the late 1990s, CRM solutions had become perceived as "mission-critical" to managers at many firms.¹² With the advent of e-commerce, Internet-based interactions were added to the portfolio of CRM information. By 2000, several leading CRM manufacturers claimed to offer competitive Web analysis capabilities as part of their CRM software packages – a claim hotly disputed by incumbents in the Web analysis industry.

Application service providers (ASPs) were firms that delivered software applications over the Internet for a monthly fee. The logic behind applications service providers (ASPs) was that rather than invest a substantial sum in software to manage various back-office operations, it could be cheaper for a firm to purchase use of the software from a supplier – as one observer analogized, “why build a power plant when you can pay someone else for electricity?”¹³ By 2000, several ASPs had begun to offer Web analysis services, either as their primary service or as an ancillary offering. A recent survey had found that 10% of all Web ventures already outsourced their Web-site usage analyses, and that another 55% would consider doing so.¹⁴ However, some managers expressed concern about recording and storing sensitive Web traffic data outside of the firm. In at least one case, this apparently exacerbated consumers’ privacy concerns over Web traffic data, where toysrus.com’s reliance on an ASP had allegedly led to violations of the retailer’s Internet privacy rules.¹⁵

WebTrends Founded in 1993 by two veterans of the software industry, WebTrends was perhaps the first firm to offer Web traffic analysis tools. The firm’s Enterprise Suite and Professional Suite packages were inexpensively priced (listing at \$1,499 and \$499, respectively, in 1999) and conducted analysis of server log files.¹⁶ In addition, WebTrends offered various “cartridges” that provided additional analyses (e.g., track usage trends) and that could be added as needed.

In late 1999, WebTrends introduced software that would integrate Web traffic data with data collected on a customer’s legacy systems, by exporting the Web data to legacy system databases. The new package, CommerceTrends 2.0, could handle data generated by up to 160 million hits per day.¹⁷

Six months later, the company introduced WebTrends Live, which was essentially an in-house ASP. This service raised grumbling from existing ASPs that relied on WebTrends software. The company introduced co-branding programs and other mechanisms to allay fears that it was attempting to circumvent its existing ASP partners.¹⁸

In December 2000, WebTrends unveiled a product designed to help businesses develop and manage online marketing campaigns. Although introduction of WebTrends eMarketing Server put WebTrends “head to head with E.piphany Inc.”¹⁹ and other CRM software providers, some observers predicted that the firm’s focus on Web site visitors, in contrast to the multichannel customer focus of competitors, would give WebTrends an edge in the market.²⁰

WebTrends had held an initial public offering in February 1999.²¹ In January, 2001, the firm announced that it would be acquired by NetIQ, a network monitoring software vendor, for stock worth \$1 billion. WebTrends CEO Glen Boyd commented, “What makes this such a great fit is that we have the same types of customers, but WebTrends focuses on Web site administration and NetIQ on systems management. Neither company offers an all-encompassing framework, but two high-growth companies coming together can share distribution channels and technologies.”²² (See **Exhibit 4** for more details of WebTrends’ stock performance, financial performance, and product characteristics.)

net.Genesis Founded in June 1994 by two MIT engineering students, net.Genesis pioneered the mid-range segment of Web traffic analysis. The firm’s flagship product, net.Analysis, was the first commercial software package to track Web use and display the result in graphical form. In early 1999, the company introduced version 4.0 of net.Analysis. Analysts noted that net.Genesis had shifted its marketing focus, pushing the product as a way of “understanding a Web site’s customers” rather than simply monitoring traffic.²³ Toward that end, the company had signed several partnerships to enable it to integrate information from other sources, including customer profile data from Engage Technologies, commerce data from IBM’s Net.Commerce, and personalization information from Net Perceptions Inc.²⁴ All of net.Genesis’s products relied on server log file data. By 2000, net.Genesis offered a range of software consulting services around its Net.Analysis products.

In February 2000, after raising more than \$40 million in venture funding over the previous 5 years, net.Genesis held an initial public offering.

MicroStrategy In 1989, Michael J. Saylor, a recent MIT graduate, founded MicroStrategy as a consulting company that built customized “decision support” applications – applications that used sophisticated software to analyze large amounts of data – for Fortune 500 companies. Whereas the use of such tools was typically highly centralized within a client firm, by 1996 MicroStrategy took advantage of the Web to create software to diffuse decision support throughout a client’s organization.²⁵

MicroStrategy developed expertise in OLAP technologies in the course of creating its products. In 1997, the firm entered an agreement with Accrue Software whereby Accrue licensed MicroStrategy’s OLAP toolkit to embed OLAP capability in its Web analytics software. As part of the agreement, programmers from both companies worked together to adapt MicroStrategy’s technology to the needs of Web analysis. MicroStrategy subsequently licensed its OLAP technology to other Web traffic analysis firms including net.Genesis.

By 2000, MicroStrategy began to extend its products’ reach into the realm of CRM applications. The firm’s eCRM 7 software, released in October 2000, “tread on turf that has been claimed by the likes of E.piphany and vendors that have actually used the MicroStrategy analytics engine as the basis for their own CRM software applications.”²⁶

MicroStrategy held an initial public offering in June 1998. By March 2000, the firm planned a secondary offering expected to generate an additional \$1 billion. However, that month the firm announced that it would restate revenues and earnings for 1999 and 1998, revising these figures significantly downward. MicroStrategy’s stock price fell nearly 63% on the day of the announcement, as the SEC announced an investigation, law firms announced class action lawsuits against the firm, and the firm canceled its secondary offering.²⁷ By December, 2000, MicroStrategy settled the SEC complaint without admitting wrongdoing or incurring fines, although Saylor and two other officers agreed to pay \$10 million to shareholders.²⁸ The company also settled most lawsuits by that time.

E.piphany Founded in November 1996 to produce general purpose data management software. E.piphany evolved into a customer relationship management software provider by mid-1997. In May, 1998, Roger Siboni left his position as deputy chairman and COO of KPMG Peat Marwick LLP to join E.piphany as CEO. Siboni had managed KPMG’s systems consulting practice, and proposed to replicate such systems generation in the Internet arena. In January 1999, the company launched its first version of the E.piphany E.4 suite of e-marketing products, including software to manage e-mail and Web marketing campaigns. By November of that year, E.piphany advertised that this suite included software to analyze customer behavior. When selling the suite to a client, E.piphany would sell ancillary consulting services that could include writing client-specific software to pull together the client’s various data sources, including Web site traffic data, into a single analyzable database.

E.piphany held an initial public offering in September 1999 and a secondary public offering four months later. During the first half of 2000, the company acquired several firms including Rightpoint Software (personalization software) for \$400 million in stock and Octane Software (customer interaction software) for stock worth \$3.2 billion.²⁹ In July, E.piphany introduced its next generation of CRM software, E.5, which integrated products from its acquired companies. E.5 listed for \$250,000 or more.³⁰ This price covered both the software and some systems consulting service to adapt it to a client’s specific needs and legacy systems.

Other CRM-based entrants into Web site traffic analysis included Broadbase Technology, which had made several acquisitions following its IPO in September, 1999, and which touted its software as containing an “e-business analytic application platform to integrate data from all customer touch points and delivering powerful yet easy-to-use reporting and analysis to business users throughout the organization.”³¹

WebSideStory Founded in September 1996, WebSideStory was an ASP focused solely on providing Web traffic analysis services under the name “HitBox.” Like most Web analysis ASPs, WebSideStory relied on “invisible gif” to track clients’ Web traffic. A client would place on each key Web page a gif that contained no visible image, but that “called” on WebSideStory’s servers. This enabled the ASP to record clients’ Web traffic information – e.g., “this page was displayed at this time by a user with this IP address.” The client could then analyze the data via the Internet at any time. By mid-1999, WebSideStory had more than 130 servers performing this function for its customers.³²

WebSideStory charged as little as \$19.95 per month for its basic HitBox service, although clients could pay as much as \$695 per month for the full-featured Enterprise version. The firm announced plans to hold an IPO in September 2000, but canceled the offering as the stock market fell sharply during that month.

Accrue Software

Accrue Software was founded as a spin-off from Organic Online, a leading Web site development company. Bob Page, a chief scientist at Sun Microsystems, was involved in network management, network security, and other kinds of network applications. These tasks often relied on “packet sniffing” technology, which had been developed in the 1970s. By “observing” the transmission and circulation of commands and data over networks, packet sniffers could perform diagnostic checks on network operations.

In mid-1995, Page received a call from a former colleague, Cliff Skolnick, who had left Sun to start Organic Online in late 1994. It seemed that many potential and actual customers were interested in measuring a return on their Web site investment to justify continued expenditures. Skolnick thought that packet sniffing technology could provide a means to measure crucial aspects of Web site performance, and hoped that Sun would agree to produce such a measurement tool.

In the course of their discussion, Skolnick asked Page if he was interested in leaving Sun to start a company to commercialize this tool. Organic Online would license the requisite intellectual property to the venture. Page agreed, and Accrue (initially called Plumb) was born with Page as Chief Technology Officer:

“We rented an old garage in Mountain View. It was like an old airplane hangar, and dirt cheap. No air conditioning, no heat. I practically lived there 24 hours a day. Within a few months we built a core team of 3 or 4 engineers. We were incredibly unstructured – we would get together before noon, I would slap up huge 8’ x 10’ sheets of white board from Home Depot, and we’d argue. Then lunch, and then code from about 1 p.m. until 4 a.m. And then do it all again the next day.”

Accrue launched its first product in December 1996. Accrue Insight 1.0 consisted of a packet sniffer, a relational database, and a visualization tool. Although packet sniffing technology was used by many firms to monitor activity on servers, Accrue was the first Web traffic analysis company to convert the resulting information into a high-performance relational database. This conversion reduced dramatically the space and time required for data storage and analysis. Accrue’s packet sniffer processed each day’s log, storing the data in a relational database, thus conserving space and processing time. Vito Salvaggio, Vice President - Marketing, provided an analogy:

“Imagine standing on an highway overpass and logging traffic that passes by underneath. In addition to simply counting cars, you can identify their color, speed, which lane they take, and so on. A packet sniffer tracks similar characteristics of server requests. Most of this information is not available in a log file.”

After an internal debate, the firm had decided to aim for the high-end segment of the enterprise Web site market. “One venture capitalist put it this way,” recalled Page. “‘You’re defined by the first product you release. Make sure that you first release the product you want to be known for, and then add the low end if you want to.’” At a time when Web and several shareware products sold for less than \$500/copy, Accrue licensed Insight 1.0 for approximately \$35,000.

After some early sales, Accrue went through a dry period during the second half of 1997 and early 1998. Salvaggio recalled, “We were having a tough time getting customers to pay \$30,000 or \$40,000 for our product, because they just didn’t see it as ‘strategic’ or critical to their business.”

In mid-1998, software veteran Richard Kreysar was brought in to lead the company.. In 1996, then-42-year-old Kreysar had retired from his Vice President position at Computer Associates in order to indulge his interest in teaching high school mathematics and coaching basketball and soccer. Intrigued by the challenges facing Accrue, Kreysar returned to the software business.

In short order, Kreysar restructured Accrue’s management team and set the company’s sights on an initial public offering by November 1999, stating “We’ve got to be the first high-end eBusiness Analysis firm to go public.” To achieve this, the firm established a goal of smooth sales growth at 30-40% per quarter through mid-1999.

By 1998, Accrue employed nearly twenty people in R&D, including ten programming engineers, five quality assurance (QA) engineers, one project manager, and one technical publications writer. But the team was stretched thinly.

“We had done our original internal design documentation on the fly, and it came back to haunt us. Folks from tech support would come by engineering and ask, ‘I’ve got this weird problem....’ This became a huge time sink for our engineers.”

In late 1998, Page approached Kreysar about delaying an upcoming major release in favor of a “maintenance” release that would stabilize the software and rely on a new documentation process. Kreysar agreed, subject to the condition that the next major release still come out by spring 1999. Page recalled, “The sense within the company was that the major release had to come out in spring 1999 to keep our momentum going, and it had to be so solid that we could go public on it. It would be the only chance we would have.”

Accrue Insight 3.0 was released in April 1999, five months after the maintenance release. Within the company, it was believed that Insight 3.0’s improved features – including better reporting, higher performance, and email distribution of reports – increased Accrue’s lead over its competitors from 18 months to 24 months.

As Accrue prepared to launch its initial public offering, Greg Walker joined as CFO. Walker had nearly 20 years of experience in financial operations of high-growth companies, most recently as CFO at Duet Technologies, where he had raised tens of millions of dollars in financing. Before that, Walker had managed financial operations and business planning for Synopsys, Inc., as it grew from a \$20 million venture-backed firm to a \$400 million NASDAQ listed company.

Accrue filed to float an initial public offering in May 1999, and sold 3.9 million shares (out of 23.5 million outstanding) at \$10 apiece in July 1999. The firm bought Marketwave, a competitor focused on the low end to mid-range of the Web traffic analysis market, for stock worth \$70 million in September of that year. Whereas Accrue’s tools were UNIX-based, Marketwave’s Hit List ran on NT. Both products collected data via packet sniffing.

Two months later Accrue acquired NeoVista, a producer of data mining software. NeoVista’s data mining algorithms were designed to detect patterns in large data volumes. The firm announced

plans to use NeoVista's data mining technology to support deeper analysis of Web traffic data. In August 2000, Accrue acquired Pilot Software, another data mining firm with strength in OLAP technology, for stock valued at \$19 million. Shortly thereafter, Accrue acquired the assets associated with the "Infocharger" data processing technology from Tantau Systems, a company with expertise in processing enormous amounts of data.

By mid-2000, Accrue introduced Accrue Insight 5.0, the latest version of its E-business analysis software (**Exhibit 5**). The release included new modules for analyzing online advertising and marketing campaign results, and the behavior and purchases of online shoppers. Another new module, which utilized data-mining technology, analyzed sales and profits generated through business partners. The base Insight 5.0 system was priced at roughly \$25,000 for a single CPU, and roughly \$10,000 for each additional CPU. Modules were priced at \$3,000 per CPU.

Accrue also launched the next version of HitList. HitList 4.6 lacked some of the OLAP and data mining capabilities of Insight, and listed at \$15,000 for a single CPU and roughly \$4,000 per additional CPU. In October, Accrue began to offer HitList on a subscription basis, starting as low as \$750/month per CPU.

The End of the "Dot.com" Boom

Skeptics had long asserted that the "Internet bubble" would burst. A highly-publicized March 2000 study in *Barron's*, which indicated that several well-known dot.com businesses were in financial trouble, suggested that the bubble might burst in mid-2000.³³ As optimism wavered, the stock prices of Internet businesses fell sharply, and venture funding for dot.coms became scarcer.

As funding and growth expectations were scaled back, dot.com firms themselves invested less aggressively. This in turn slowed down revenue growth in ancillary businesses such as advertising,³⁴ ASPs,³⁵ and web traffic analysis.³⁶ Relatedly, investment in new information technology by "brick-and-mortar" firms that wished to build or expand their Web presence slowed as well.

In October, Accrue reported record revenues and profits (**Exhibit 6**). Nevertheless, these did not meet analyst's expectations. The uncertain stock market and analysts' concerns about heightened competition from new directions continued to affect adversely Accrue's stock market performance:

"Although Accrue's shortfall was not as deep as others, we believe that the company will need to navigate through a potentially difficult transition period as the company adjusts to...rapidly evolving market conditions."³⁷

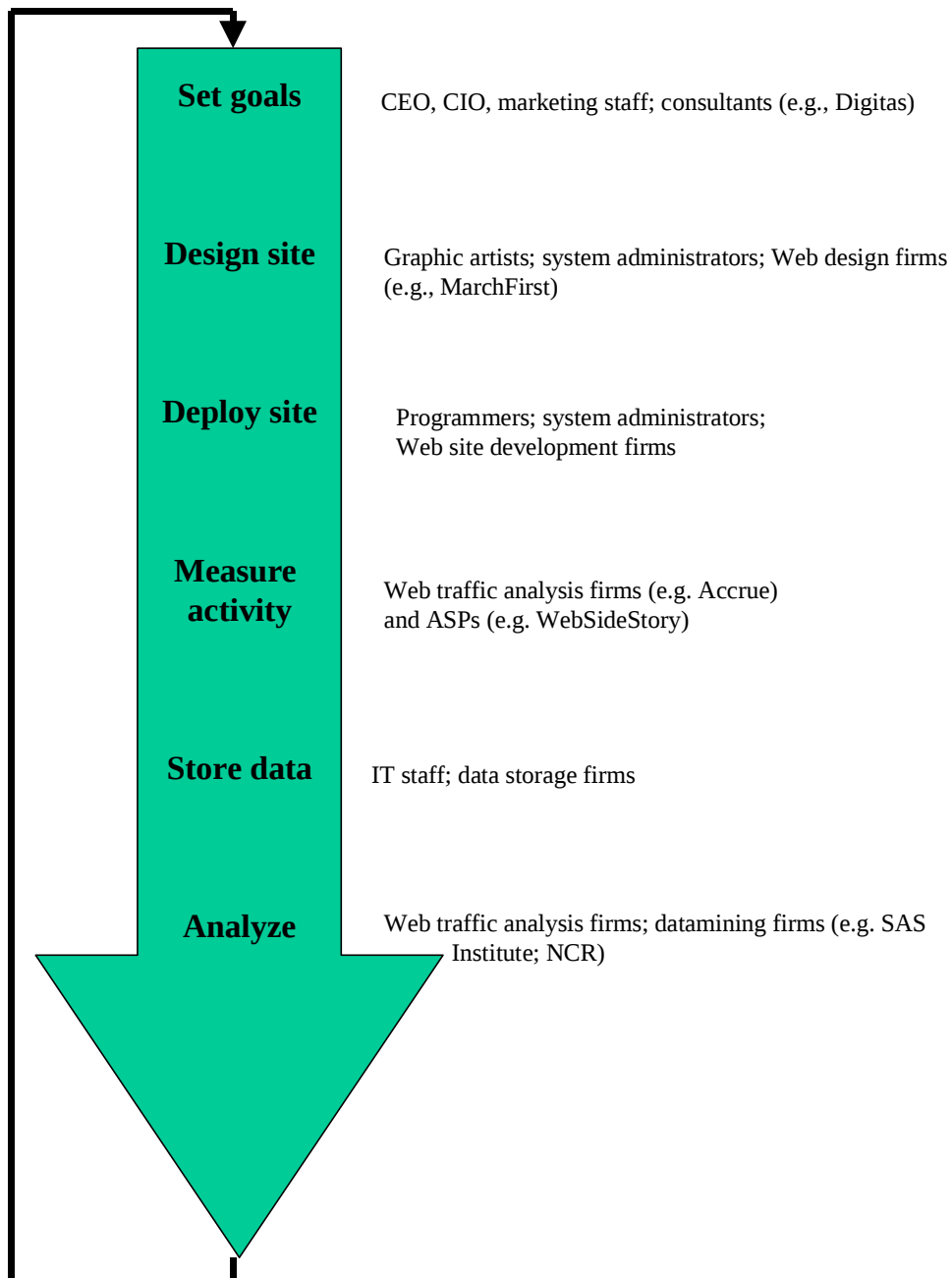
In mid-January, Accrue announced that its sales and earnings for the last quarter of calendar year 2000 would not meet expectations.

As Accrue continued to wrestle with its future direction, Greg Walker was tapped to replace outgoing CEO Rick Kreysar on an interim basis. In this capacity, he was charged with redefining Accrue's strategy. Now, one week later, he turned to his partners in the effort to re-invent their firm. "Okay, gentlemen," Greg said to his team, "what does Accrue need to do?"

Exhibit 1 Web Traffic Analysis Market Forecast, 2000-2004 (\$ million)

	2000	2001	2002	2003	2004
Software Product revenues	\$278	\$600	\$1,200	\$1,900	\$2,550
ASP service revenues	50	100	250	475	700
Consultant service revenues	97	230	300	525	750
Total	\$425	\$930	\$1,750	\$2,900	\$4,000

Source: Aberdeen Group, December 2000; casewriter estimates.

Exhibit 2 Web Traffic Analysis Cycle

Source: Accrue Software, Inc.; casewriter assessment

Exhibit 3 Web Traffic Analysis Revenue Share by Vendor, 2000

Software products	2000	ASPs	2000
Web Trends	19.4	WebSideStory	34.7
Accrue	14.4	WebTrends Live	11.5
Net.Genesis	8.3	IBM Global Services	10.9
E.piphany	5.4	Coremetrics	9.3
MicroStrategy	4.0	Personify	9.3
Other	49.5	Other	24.3
Total	100%	Total	100%

Source: Aberdeen Group, December 2000; casewriter estimates

Exhibit 4 Providers of Web Analytics Software and Related Products ^a

	Accrue	Net.Genesis	WebTrends	MicroStrategy	E.piphany	Broadbase
Stock price information						
IPO Price (Date)	\$10.00 (7/99)	\$18.00 (2/00)	\$13.00 (7/99)	\$XXX (6/98)	\$XXX (9/99)	\$XXX (9/99)
High Price (Date)	\$75.00 (11/99)	\$59.00 (2/00)	\$86.63 (3/00)	\$333.00 (3/00)	\$216.58 (3/00)	\$86.00 (3/00)
Low Price (Date)	\$0.97 (12/00)	\$1.13 (12/00)	\$11.00 (2/99)	\$7.34 (4/99)	\$25.33 (9/99)	\$5.00 (12/00)
Price on 12/31/00	\$2.50	\$3.25	\$28.94	\$9.50	\$53.94	\$6.25
Financial data, quarter ending 9/30/00 (\$ million)						
Sales	\$10.0	\$6.7	\$17.0	\$64.9	\$ 39.1	\$14.3
COGS	1.9	2.9	1.9	26.3	17.6	5.9
SG&A	5.2	7.1	9.7	53.5	26.1	10.8
Other	22.8	3.2	2.9	31.6	278.7	38.6
Operating income	-19.9	-6.6	2.5	-46.6	-283.4	-41.1
Net income	-19.5	-5.5	2.4	-168.2	-277.3	-37.4
Selected product data						
Current flagship product	Insight 5.0 ^b	Net.Analysis 4.0	Commerce 3.0 ^c	eCRM 7	E.5	e-Marketplace
List Price ^f	\$25K for 1 st server; \$12K per additional server	\$3K for 1 server and 2 clients; \$495 per additional client	\$25K for 1 st server; \$5K per additional server	\$7.5K per metered Web server ^d	\$250K minimum price (includes consulting services)	\$200K minimum (includes consulting services)
Installed base (all products)	500-700 clients	200 clients	40,000 clients ^e	900 clients	300 clients	400 clients

^a WebSideStory is privately held, hence no stock price or financial information is available.

^b Accrue Hitlist 4.6 list price = \$15K for 1st server; \$4K per additional server.

^c WebTrends Live ASP service Priced at \$37.50 per month for 25,000 page views; \$1,500 per month for 2 million page views.

^d This represents an optional component that can be bundled with MicroStrategy's CRM software package.

^e Virtually all of these purchased WebTrends' low-end log analysis software, which listed for less than \$500.

^f Initial purchase price only. Some firms also charged annual license fees or maintenance fees.

Source: OneSource Global Business Browser.

Exhibit 5 Accrue products and sample metrics

	Target customers	Key features	Launch date
Main products			
Insight	High-volume, high-complexity Web sites up to 60M hits/ day	Web data collection; warehousing and reporting application	12/97
Hit List	Medium-volume, medium-complexity sites up to 5M hits/ day	Web data collection; warehousing and reporting application	11/99
NeoVista Decision	Highly sophisticated traditional retailers or Web sites	Advanced datamining toolkit for sophisticated custom merchandising	1/00
NeoVista Suite	Highly sophisticated traditional retailers or Web sites	Advanced datamining application for profiling and assortment planning built on top of Decision Series	1/00
Add-on products			
Vista	High-volume, high-complexity Web sites up to 60M hits/ day	Add-on segmentation application that sits on top of Insight	9/99
Content bridges	High-volume, complex Web site built on Vignette and Art Technology Group platforms	Applications that allow Insight to “read” dynamic content generated by Vignette and Art Technology Group platforms	9/99; 6/00
Ad/commerce bridges	High-volume, complex Web site built on Doubleclick, DART, IBM platforms	Applications that will link advertising and commerce platforms	6/00

Examples of metrics gathered by Accrue Insight		
Understanding visitors	Evaluating content effectiveness	Monitoring site performance
• Number of unique visitors • New vs. repeat visitors • Duration of visits • Location visitor came from (referring URLs) • Site navigation paths • Time of visits • Type of connection used by visitor (T1 line, 56K modem, etc.)	• Number of hits • Number of page views • Time spent per page • Number of clicks on browser’s “stop” button	• Server response time to requests • Network response time • Download time • Number of clicks on a browser’s stop buttons

Source: Syed, R.A. “Accrue Software, Inc.” research report, S.G. Cowen Securities Corporation, September 1999; casewriter estimates.

Exhibit 6 Accrue Software, Inc. Financial Statements

	2000	1999	1998	1997
Net revenue				
Software license	\$14.7	\$3.6	\$1.9	NA
<u>Maintenance and service</u>	<u>4.2</u>	<u>1.0</u>	<u>0.2</u>	<u>NA</u>
Total revenue	18.9	4.7	2.1	0.2
Less: Cost of revenue				
Software license	0.6	0.3	0.2	NA
<u>Maintenance and service</u>	<u>2.2</u>	<u>0.2</u>	<u>0.1</u>	<u>NA</u>
Total cost of revenue	2.8	0.5	0.2	0.0
Gross profit	16.1	4.2	1.8	0.2
Less: Operating expenses				
Sales, general & administration				
Sales and marketing	12.1	5.4	2.7	NA
General and administration	2.4	1.9	1.0	NA
<u>Stock-based compensation</u>	<u>4.3</u>	<u>1.3</u>	<u>0.0</u>	<u>NA</u>
Total Sales, general & administration	18.9	8.7	3.7	1.3
Research & development	4.4	3.2	2.4	0.9
Amortization	10.9	0.0	0.0	0.0
<u>Unusual expenses</u> ^a	<u>4.2</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
Total operating expenses	38.4	11.9	6.1	2.2
Income from operations	-22.3	-7.7	-4.3	-2.0
Plus: Other income or expenses				
Other income	1.2	0.1	0.1	0.1
<u>Interest expense</u>	<u>-0.1</u>	<u>-0.0</u>	<u>-0.0</u>	<u>0.0</u>
Total other income or expense	1.2	1.0	0.1	0.1
Pre-Tax Income	-21.1	-7.6	-4.2	-1.9
Less: Income Taxes	0.0	0.0	0.0	0.0
Net Income	-\$21.1	-\$7.6	-\$4.2	-\$1.9
Current assets	\$39.1	\$5.1	\$1.0	NA
Property and equipment, net	2.3	0.9	0.5	NA
Goodwill and intangibles, net	119.5	0.0	0.0	NA
<u>Other assets</u>	<u>0.1</u>	<u>0.2</u>	<u>0.0</u>	<u>NA</u>
Total assets	160.9	6.1	1.5	NA
Current liabilities	8.9	2.5	1.1	NA
<u>Long term debt</u>	<u>0.0</u>	<u>0.2</u>	<u>0.3</u>	<u>NA</u>
Total liabilities	8.9	2.7	1.4	NA
Common and convertible preferred stock	0.0	15.5	5.9	NA
Additional paid-in capital	191.3	6.8	0.1	NA
Notes receivable from stockholders	-0.2	-0.2	0.0	NA
Unearned compensation	-4.2	-4.9	0.0	NA
<u>Retained earnings</u>	<u>-34.9</u>	<u>-13.8</u>	<u>-5.8</u>	<u>NA</u>
Total stockholders' equity	152.0	3.4	0.1	NA

Source: Accrue Software, Inc. 10-K reports and S-1 filing.

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