# Intelligent Content Networking: Alteon WebSystems Profile

*An IDC White Paper*

*Analyst: Lucinda S. Borovick*

## Executive Summary

Alteon WebSystems is a leading provider of intelligent content switches. Alteon has a broad product line and a strong installed base of customers. The key strengths of Alteon's products include:

- Strong performance and scalability
- Distributed processing architecture
- Good layer 4–7 feature set
- Full range of products

Alteon's key challenge are in its ability to provide high touch sales and service to a range of global service provider clients and prospects.

## Company Overview

Alteon WebSystems, Inc. headquartered in San Jose, California was founded in May 1996. The company is considered to be one of the pioneers of content-intelligent ethernet "Web switching" having first shipped these products in February 1997. Its Web switch business is focused on developing content-intelligent switching capabilities and marketing Layer 4 through Layer 7 Web switch products. (Note: Alteon also manufactures and markets server adapters.) Alteon's stated mission is to lead the market for content-intelligent Web switching and position itself to provide Web switches that offer unprecedented intelligence, performance, and scalability for fast-growing ebusinesses, hosters, Applications Software Providers (ASPs) and Internet Service Providers (ISPs).

The following is an overview of the company's current senior management team:

- **Dominic Orr,** President & CEO
- **Selina Lo,** V.P. Product Marketing & Management
- **Jim Burke,** CFO

**IDC**

*Analyze the Future*

- **Shirish Sathaye,** V.P., Technology

- **Prahbat Mishra,** V.P. of Engineering

- **Atul Bhatnagar,** V.P. of Advanced Products

- **Tony Narducci,** V.P. of Worldwide Sales

- **Joe Booker,** V.P. of Operations

- **Steve Wood,** V.P. Asia Pacific Region

- **Rob Mustarde,** V.P. of EMEA

Alteon's three original founders, John Hayes, Wayne Hathaway and Ted Schroeder continue to be actively involved in the company's business as part of Alteon's technical engineering team. Prior to founding Alteon, the three founders worked together at Ultra Networks. Selina Lo was brought into the organization in early 1997.

Alteon is a public company traded on NASDAQ under the symbol "ATON." Alteon's initial public offering (IPO), commenced on September 24, 1999, generated approximately $76 million. On January 31, 2000, the company completed a follow-on public offering of five million shares of common stock. The company reports that funds from its IPO and additional public offering will be used for working capital and general corporate purposes.

The company reported net sales for FY00 (ending June 30, 2000) were $109 million, which represents a 314% increase over FY99 net sales of $26.3 million. The company achieved operating profitability in 4Q00. The company ended 4Q00 with sales of $51 million, which is a 545% increase over Q499 results of 7.9 million. The company currently derives approximately 65% of its revenues from domestic business with the remaining 35% coming from international sales. Going forward one of Alteon's goals is to achieve 50% of its sales equally from U.S. and non-U.S. business respectively.

The following are the company's target markets;

- Service providers, as Alteon provides the front-end to large server farms. Alteon increases the scale and performance of Web servers in the network.

- More recently, Alteon is targeting the emerging ASP companies to increase web traffic response time.

- Ecommerce and econtent sites use Alteon's products to enhance the reliability and performance of the Web server data center.

- Internet Content Delivery Networks, which provide specialized value-added traffic management, content, and security services such as Akamai, Digital Island, Check Point, and Inktomi.

IDC believes that Alteon will be challenged going forward to grow its corporate infrastructure to keep-up with the fast-pace of its Web switch sales and the demands of its growing global customer base. The company currently has approximately 450 employees worldwide and it is expected that it will double the size of its organization in the next year.

Alteon has already established a sizeable customer base for its Web switch products. The company reports a worldwide installed base of more than 1,600 customers to date. As of May 2000 the company has shipped in excess of 10,000 Web switches worldwide. These figures establish Alteon as a leader in Intelligent Content Switching.

## Strategic Direction

Alteon aims to become the top vendor in Intelligent Content Networking. Alteon primarily targets its Web switch products at Service Providers and Web Hosters who use Alteon's products to front-end large server farms. Today, approximately 75% of Alteon's Web switching business comes from these service providers and hosters. Alteon plans to focus on partnering with companies that provide specialized value-added traffic management, content, and security services such as Akamai, Check Point, and Inktomi. To further this goal, Alteon announced the acquisition of Pharsalia on July 20, 2000, a content delivery software start-up.

Some Service Providers and Web Hosters may also act as resellers of Alteon's Web switches. Some examples of current hosting and service provider Alteon Web switch users/resellers include: Global Center, Axient Communications, Uunet, GTE Internet, Exodus (hosting), Telstra, Cable & Wireless, Williams Communications, Globix, ICG, Planet Online, PSINet, Digex, and Concentric (one of Alteon's early customers).

As an example, ICG recently purchased Alteon Web switches for 150 locations across the U.S. in order to upgrade its data network infrastructure; the Web switches will be installed in ICG's RAS (Remote Access Server) hub sites and POPs (Points of Presence) along with the roll-out of its Traffic Servers; one major reason cited for selecting Alteon Web switches is the faster download time expected for ICG's customers, low latency, best price/performance under load, and Alteon's ability to provide additional value-added services in the future.

Alteon also targets companies (ebusiness enterprises) that have developed web sites for ecommerce purposes and now handle large volumes of traffic and may have multiple data centers. Some examples include: Reuters, Datek Online, DLJdirect, Virgin, iWon.com!,

Computer.com, FreeOnline, TicketMasterOnLine, Excite@Home and, Yahoo! Mail.

More recently Alteon is targeting the emerging ASP companies. A typical ASP may purchase 20–40 boxes (Web switches) from Alteon. Examples of current customers in this market segment include: Loud-Cloud, OnyxNetworks and, Digital Island.

Alteon is currently shipping its 700 Series Web switches (for data centers) to customers. Examples of current customers include: Concentric Network, WebTV, NTT, Fuji Xerox, Fujitsu, Digex (an ISP), Visitalk.com (an internet-based communications company)

## Alliances and Partnerships

Alteon recently (May 23, 2000) announced the start of an OEM relationship with Lucent whereby Lucent is reselling Alteon's 180e and ACEdirector 3 Web switches within Lucent's IPWorX™ Web Performance solution under the product names WebDirector 180 and Web-Director 80 Web switches, respectively. One of Lucent's first customers for the Alteon Web switch products is SINA.com, a leading Internet media company for Chinese communities worldwide. This relationship will allow Alteon to leverage Lucent's global client base. Other such strategic partnerships are expected especially given Cisco's recent acquisition of ArrowPoint.

Alteon needs a substantial direct sales team to exploit the significant opportunitiy in the service provider market. In terms of partnerships, Alteon is focused on establishing strong customer and reseller relationships with all the major hosters and ISPs. In addition to collocation and managed server load balancing opportunities for Alteon, many service providers are beginning to deploy Intelligent Content Networking equipment in order to offer managed global network load balancing services. Alteon is positioning itself to address this demand and thereby increase its sales volumes. As an example, On July 12, 2000, Alteon announced that Exodus will resell Alteon's Web switches.

## Market Forecast and Analysis

The market for Intelligent Content Load Balancing is exploding from $203 million in 1999 to reach $4 billion in 2004 (see Table 1). This market acceleration is based on the following assumptions:

- Service Providers, Web Hosters and ASPs demand intelligent content load balancing to deliver robust, reliable, high performance web server infrastructures.

- Internet Content delivery networks will require intelligent content load balancing to deliver high performance, high availability to its customers. Intelligent content load balancing provides the infrastructure to offer specialized value-added traffic management, content, and security services.

- The increasing mission critical demand on web servers dictate the need for high performance front-end network engine that acts as traffic cop to the server farms.

- The increasing transaction complexity at ecommerce sites demands intelligent content devices that analyze the traffic to increase web server response time and end user performance.

- Intelligent Content Switches and appliances provide secure, reliable, and fast server connections to support response-time- and mission-critical applications.

- As enterprise accounts increasingly deploy web based applications within the intranet the need for intelligent content networking will increase. IDC believes that enterprise sales will begin to accelerate in 2001.

| Table 1 Worldwide Forecast for Intelligent Content Networking: Server Load Balancing | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | CAGR 99–04 |
| Revenues (M$) | 203 | 652 | 1,300 | 2,141 | 3,093 | 4,000 | 81% |
| Growth (%) | | 221% | 99% | 65% | 44% | 29% | |
| Source: IDC, 2000 | | | | | | | |

### Key Competition

Competition in this space is coming from two major types of products: Switches and single targeted application appliances. The Switches or Web Switches hail from the traditional switch space. Vendors offering intelligent content switches include Cisco (Arrowpoint acquisition), Foundry and CyberIQ.

The vendors that have taken a traditional appliance approach include: F5 Networks, Intel, Coyote Point, Radware, and Cisco with local director and global director. Recently, F5 Networks and RadWare announced switch architectures to address customers performance requirements. The basic assumption of an appliance is that it is a single-use point product that is easy to use and simple to deploy. It allows the customer to avoid costly development, integration, and testing efforts. The products in this space make it simple for the overburdened IT manager to deploy specific functions such as SSL acceleration or

firewall load balancing. Alteon's iSD products would be considered in this category.

## Product Line

In marketing its Web switches — actually ultra-fast LAN switches — Alteon emphasizes that its products are "purpose built" Layer 2 through 7 (ethernet content-intelligent) Web switches that incorporate customer network processors, also known as WebICs, throughout each switch. This is a different approach from companies (i.e., Foundry) that have taken their existing products (such as Layer 2 and 3 switches with a centralized CPU architecture) and added software to market them as Web switches. Alteon makes a clear distinction between its Web switch products and conventional packet switching products (that handle packets per second).

Alteon's Web switch products' process and switch entire Web sessions (at line rates) while applying sophisticated traffic management service to the most optimal resources at ultra high speeds. This processing is supported by Alteon's WebIC which is a custom network processing ASIC that incorporates multiple RISC processors. These network processors perform packet processing functions and apply traffic management services in addition to traditional switching and routing. Alteon's Web switch products also offer added functionality such as traffic management services, including load balancing, HTTP header, cookie and URL parsing, bandwidth metering, filtering, etc. to every packet. (Note: A single Web page typically requires many different sessions to download a Website.) These Web switches maintain the state of every Web session and make intelligent decisions on where to direct traffic based on TCP port numbers, URLs and HTTP cookies and headers found deep in every packet. Alteon emphasizes one of the key benefits for its Web switch customers (i.e., internet service providers, hosters, and ecommerce companies) is high levels of availability resulting from intelligent health checking mechanisms.

Alteon's product line range from the entry level ACEdirector to the high end Alteon 700 Series. The ACEdirector is positioned as an entry-point Web switch. The Alteon 180 series are stackable switches which provide a midrange option. The high end Alteon 700 series is positioned in Carrier-class data center environments. The Alteon iSD is a new line of specialized and highly-integrated network computing devices that provide specific traffic management functions such as SSL acceleration and "Akamaization" — automating the process of manipulating Web content for use on Akamai's global content delivery network

All the products run Alteon's Web OS software2000 (leveraging Cisco's IOS concept). Web OS comes integrated within Alteon's ACEdirector family and Alteon 180+ Web switches,. For Alteon's standard 180 and 700 series Web switches Web OS features can be

enabled/activated with the purchase of a software key. Web OS provides high-performance Web traffic control services. The major advantages of this approach is that these functions are available on a single platform and customers need only be concerned with a single point of failure. Examples of some of the traffic management functions provided by Web OS include:

- local and global server load balancing

- bandwidth metering and management

- application redirection

- filtering

- content intelligent Layer 7 switching (such as cookie parsing and URL load balancing).

Alteon's latest release, Web OS 8.0, was announced in May. It's a software upgrade for Alteon's (stackable) Web switches that adds a bandwidth management solution that operates at gigabit speeds (the industry's first), advanced server security features, and content switching services. This software release supports Alteon's strategy of "futureproofing" its Web switches so no hardware changes are required. Alteon's customers do not need to purchase entirely new hardware to take advance of enhancements such as the industry's first gigabit-class, switch-based data center bandwidth management solution and Alteon's Virtual Matrix Architecture (VMA)-the latter enables Alteon's customers to support many more Web site visitors (a 4-fold increase in concurrent session capacity) while speeding-up processing of Web connections.

Alteon has adopted an "pay-as-you-go" (or "cafeteria") packaging strategy to differentiate itself from its competitors (especially those in the load-balancing product arena, e.g., F-5 Networks, Foundry Networks, ArrowPoint, and Cisco). In this vein, Alteon markets its Web switches as fully-functioned products whereby the customer receives a robust product, but is required to pay additional fees in order to turn-on additional functionality (a.k.a. value-added features such as bandwidth management or global server load balancing). The advantage is that the customer can "turn on" and pay for feature/functionality when needed and does not have to experience lag time in the delivery of additional Web switch functionality. All the functionality is contained in a single, high-performance traffic management platform.

### Product Line Strengths

The following are the strengths of Alteon's product line in Intelligent content networking product line:

- IDC believes that Alteon's Web switch product line is well positioned to capture market share in the new ebusiness data center. Alteon's highly scaleable switch fabric can meet customers' Web

site performance requirements as well as scale to meet peak Web traffic. The switch is currently meeting customer needs in key customer segments such service providers and econtent sites.

- The new iSD platform provides Alteon with a platform to deliver targeted content networking requirements to customers. It also provides a quick time to market approach. The integration with WebOS offers value add that separates the solution from other appliances on the market.

- Alteon's modular pricing strategy provides customers with flexibility in only paying for the features that they need. In speaking with lead users, IDC found that this is an important differentiation. Many installations do not require all the functionality available on one switch today but anticipate that rapidly changing demands on Web server infrastructures will dictate the need to add functionality seamlessly.

- Alteon offers a full range of products from high to low end to meet diverse customer requirements.

- Early customers purchased Alteon WebSwitches for its fully distributed architectures to drive Web site performance.

- Cisco's recent acquisition of ArrowPoint has brought increased attention to the Web switching market and the need for content-intelligent switching capabilities. In this context, it is likely that Alteon will be approached for strategic partnerships and will be considered as a potential acquisition by companies such as Nortel, Alcatel, Lucent and others. IDC believes that Cisco's competitors will seek to partner with Alteon given Alteon's extensive Layer 7 switching capabilities, as well as an architecture and platform by which such services can be provided.

### Product Line Weaknesses

- IDC believes that Alteon will be challenged going forward to grow its corporate infrastructure to keep-up with the fast-pace of its Web switch sales and the demands of its growing global customer base.

- Alteon is competing head to head with Cisco the leader in data networking. Cisco is aggressively acquiring companies to position themselves as a leader in Intelligent content delivery. Recent acquisitions include Arrowpoint, SitePath and Netiverse.

- Alteon will face competitive threats from other large providers as well as other more targeted players such as F5 Networks, Riverstone, Foundry, Intel and Extreme.

## Sales Force and Messages

Alteon currently uses direct and indirect channels to sell its Web switch products. In the U.S. its sales are conducted mostly on a direct basis with some sales are made by resellers (i.e., selected ISP and Web hosting customers). Lucent is Alteon's only OEM customer. Outside of the United States Alteon uses more of an indirect sales model.

Alteon is distinguishing itself in the Web switch marketplace in defining its Web switch products as "purpose built," as well as scaleable and easily upgradeable (since boxes are shipped fully functioned and new features can be activated quickly via a software key so customers only pay for the features needed). It continues to emphasize the performance of its Web switch products.

Alteon's Web switch architecture is designed to "get users to the closest and fastest servers." Its Web switches can reside as front-ends to servers and caches in service providers access points of presence or as a full featured, content-intelligent traffic management platform in front of servers, caches, firewalls and other devices in the Web data center. The company also emphasizes that added features such as scalable load-balancing (to servers, caches and firewalls) and bandwidth management can be added easily as modular feature sets to its Web switches (refer to pricing information). Its firewall load-balancing (supports load balancing traffic to multiple firewalls) is being deployed in customers' Web data centers so user traffic can be processed in parallel among firewalls which allows for better response times and higher availability. Active/active redundancy is also a key feature for users enabling traffic to be diverted automatically to another active Alteon switch in a situation of a failed link, port or switch.

The company's value proposition is based on the premise that it is easier and more cost-effective for a customer (those who offer a Website or a Web service) to buy Alteon Web switching architecture that can improve the performance of their Web computing traffic instead of opting to assemble separate pieces (i.e., load balancers, bandwidth managers, etc.) and placing them in front of a server.

## NORTH AMERICA

**Corporate Headquarters**
5 Speen Street
Framingham, MA 01701
508-872-8200

**IDC Canada**
36 Toronto Street, Suite 950
Toronto, Ontario
Canada M5C2C5
416-369-0033

**IDC Irvine**
18831 Von Karmen Ave, Ste 200
Irvine, CA 92612
949-250-1960

**IDC Mtn. View**
2131 Landings Drive
Mountain View, CA 94043
650-691-0500

**IDC New Jersey**
120 Wood Ave South, Suite 509
Iselin, NJ 08830
732-632-9222

**IDC New York**
2 Park Avenue
Suite 1505
New York, NY 10016
212-726-0900

**IDC Texas**
100 Congress Ave, Suite 2000
Austin, TX 78701
512-469-6333

**IDC Washington**
8304 Professional Hill Drive
Fairfax, VA 22031
703-280-5161

## ASIA/PACIFIC

**IDC Asia/Pacific (Hong Kong)**
12/Floor, St. John's Building
33 Garden Road
Central, Hong Kong
852-2530-3831

**IDC Asia/Pacific (Singapore)**
71 Bencoolen Street, #02-01
Singapore 189643
65-226-0330

**IDC Australia**
Level 4, 76 Berry Street
North Sydney
NSW 2060, Australia
61-2-9922-5300

**IDC China**
Rm.610-612 Time Square
No. 88 Xi Chang'an Avenue
Xicheng District
Beijing 100031
China PRC
86-10-6833-1179

**IDC India Ltd.**
Cyber House
35 (4 Bays)
Echelon Institutional
Sector 32 Gurgaon 122002
Haryara, India
91-124-381673

**IDC Japan**
10F The Itoyama Tower
3-7-18, Mita Minato-ku
Tokyo 108-0073, Japan
81-3-5440-3400

**IDC Korea Ltd**
Suite 704, Korea Trade Center
159-1, Samsung-Dong, Kangnam-Ku
Seoul, Korea 135-729
82-2-55-14380

**IDC Malaysia**
Suite 23.1 23rd Floor Menara Genesis
33 Jalan Sultan Ismail
50250 Kuala Lumpur, Malaysia
60-3-244-3715

**IDC New Zealand**
Level 7, 246 Queen Street
Auckland, New Zealand
64-9-309-8252

**IDC Philippines**
7F, SEDCCO 1Bldg
Rada Street Corner
Legaspi Street
Legaspi Village
Makati City, Philippines
632-750-9477

**IDC Taiwan Ltd.**
10F, 31
Jen-Ai Rd, Sec 4,
Taipei 106, Taiwan, R.O.C.
886-2-2731-7288

**IDC Thailand**
27 Soi Charoen Nakorn 14
Charoen Nakorn Road, Klongtonsai
Klongsan Bangkok 10600, Thailand
66-2-439-4591-2

**IDC Vietnam**
37 Ton Duc Thang Street
Unit 1606
District-1 Hochiminh City Vietnam
84-8-910-1235

## EUROPE, MIDDLE EAST, AND AFRICA

**IDC Austria**
c/o Loisel, Spiel, Zach Consulting
Mayerhofgasse 6
A-1040 Vienna, Austria
43-1-50-50-900

**IDC Benelux (Belgium)**
29 Avenue Louis Gribaumont
B-1150, Brussels, Belgium
32-2-779-46-04

**IDC Benelux (The Netherlands)**
A. Fokkerweg 1
1059 CM Amsterdam
The Netherlands
31-20-669-2721

**IDC Central Europe (ECE)**
Male Namesti 13
Praha 1 110 00, Czech Republic
420-2-2142-3140

**IDC Central Europe (Germany)**
Westerbachstr. 23A
61476 Kronberg/Ts., Germany
49-6173-7098-0

**IDC Central Europe (Switzerland)**
WTC, Leutschenbachstrasse 95
CH-8050 Zürich, Switzerland
41-1-308-3619

**IDC Egypt**
39 Iraq Street
Mohandesseen, Cairo, Egypt
20-2-336-7355

**IDC France**
Immeuble La Fayette

2, Place des Vosges, Cedex 65
92051 Paris la Defense 5, France
33-14-904-8000

**IDC Hungary**
Bajcsy-Zsilinszky út. 57
Building 3, Rooms 103-104
H-1065 Budapest, Hungary
36-1-153-0555/ext. 165, 166

**IDC Israel**
4 Gershon Street
Tel Aviv 67017, Israel
91-124-381-673

**IDC Italy**
Viale Monza, 14
20127 Milano, Italy
390-2-284-571

**IDC Nigeria**
House 2, 'C' Close
403 Road, 4th Avenue
New Extension, Festac Town
Lagos, Nigeria
234-1-883585

**IDC Nordic (Denmark)**
Jagtvej 169B
DK-2100 Copenhagen, Denmark
45-39-162222

**IDC Nordic (Finland)**
Jarrumiehenkatu 2
FIN-00520
Helsinki, Finland
358-9-8770-466
972-3-561-1660

**IDC Nordic (Sweden)**
Box 1096 Kistagången 21
S-164 25 Kista, Sweden
46-8-751-0415

**IDC Poland/ProMarket**
Wrobla 43
02-736 Warsaw, Poland
48-22-644-4105

**IDC Portugal**
c/o Ponto de Convergencia S.A.
Rua Leopoldo de Almeida 4A
1750 Lisbon, Portugal
351-1-758-3126

**IDC Russia**
c/o PX Post, RDS 186
Ulitsa Zorge 10
Moscow 125525
Russian Federation
7-501-929-9959

**IDC South Africa**
c/o BMI-TechKnowledge
3rd Floor, 356 Rivonia Blvd.
PO Box 4603, Rivonia, 2128
South Africa
27-11-803-6412

**IDC Turkey**
Tevfik Erdonmez Sok. 2/1 Gul Apt.
Kat 9D; 46 Esentepe
Istanbul, Turkey
90-212-275-0995

**IDC U.K.**
6 Dukes Gate, Acton Lane
Chiswick, London W44AE
United Kingdom
44-181-987-7100

**IDC U.K.**
2 Bath Road
Chiswick, London W4 1LN

United Kingdom
44-181-987-7100

## LATIN AMERICA

**IDC Miami**
Latin America Headquarters
5301 Blue Lagoon Drive, Suite 490
Miami, FL 33126
305-267-2616

**IDC Argentina**
Trends Consulting
Rivadavia 413, 4th Floor, Suite 6
C1002AAC, Buenos Aires, Argentina
54-11-4343-8899

**IDC Brasil**
Alameda Ribeirão Preto, 130 cj 41
01331-000 São Paulo
SP Brazil
55-11-253-7869

**International Data Corp. Chile**
Luis Thayer Ojeda 166 Piso 12
Providencia, Santiago 9, Chile
56-2-231-0111

**IDC Colombia**
Carrera 40 # 103-78
Bogota, Colombia
571-533-2326

**IDC Mexico**
Select - IDC
Av. Nuevo Leon No. 54 Desp. 501
Col. Hipodromo, Condesa
C.P. 06100 Mexico, D.F.
52-5-256-1426

**IDC Venezuela**
Trends Consultores
Av. Francisco de Miranda
Centro Perú, Torre A, Piso 9
Of. 91, Chacao 1060
Caracas, Venezuela
58-2-261-0352

IDC delivers accurate, relevant, and high-impact data and insight on information technology to help organizations make sound business and technology decisions. IDC forecasts worldwide IT markets and adoption and technology trends, and analyzes IT products and vendors, using a combination of rigorous primary research and in-depth competitive analysis. IDC is committed to providing global research with local content through more than 500 analysts in more than 40 countries worldwide. IDC's customers comprise the world's leading IT suppliers, IT organizations, and the financial community. Additional information on IDC can be found on its Web site at http://www.idc.com.

IDC is a division of IDG, the world's leading IT media, research, and exposition company.

00-C2694