Akamai Technologies, Inc. (NASDAQ: AKAM)

Initiating Coverage: HOLD   September 1, 2000

KEY CONSIDERATIONS

- Recent acquisition of CallTheShots, increases Akamai's already talented Engineering and Design team.

- Fear of stock price volatility with the release on lock-up of common stock on the dates September 13 2000 and October 29, 2000.

- Akamai's customer growth increased to 2,100 with 895 recurring customers.

- Akamai's contract with Apple computer expires September 2000. Apple constituted for 18% of Akamai revenues up to June 30, 2000.

- Akamai's ability to resign previous customers and gain new customers to increase its market share in an emerging high growth market.

Recent Price	$72.19
52WK Low	$56.63
52WK High	$345.50
P/E	--
P/Book	28.19
P/Sales	152
Market Capitalization	$7,680.23 M
Shares Outstanding	106.39 M
Float	38.3 M
Daily Volume	2.28 M
(3-month Average)	
EPS	
1999A	$ (1.65)
2000E	$ (2.30)
2001E	$ (3.08)
Current Ratio	10.83
Total Debt to Equity	0.10
LT Debt	0.10

ONE-YEAR PRICE AND VOLUME GRAPH

Akamai Technologies Inc as of 1-Sep-2000
Copyright 2000 Yahoo! Inc.   Volume (1000's)   http://finance.yahoo.com/

COMPANY PROFILE

Akamai Technologies, Inc. provides global delivery services for Internet content, streaming media and applications, and global Internet traffic management services. Akamai's services improve the speed, quality, reliability and scalability of Web sites. Akamai's services deliver customers' Internet content, streaming media and applications through a distributed worldwide server network that locates the content geographically closer to users. Headquartered in Cambridge, MA, where their Network Operations Command Center (NOCC) is located. The Akamai network is monitored 24 hours a day, 7 days a week, 365 days a year from the Akamai NOCC.   Additional information on Akamai Technologies, Inc, may be found at www.akamai.com.

This report was prepared by Loub Whai S. Mui, and David R. Rivas, Ph.D.

THE COMPANY

Akamai Technologies, Inc. was started in 1995 by a challenge from Tim Berners-Lee, the father of the web, to discover a better way to deliver Internet content. Tom Leighton, a world-renowned expert on algorithms for network applications at MIT, and Danny Lewin, former MIT graduate student, recognized that applied mathematics and algorithms could be used as a solution to web congestion. By 1998 Akamai was formed, as they had received the licenses for their technology and Internet professionals began to join the Akamai team.

Akamai provides global delivery services for Internet content, streaming media and applications, and global Internet traffic management services. Akamai's services improve the speed, quality, reliability and scalability of Web sites. Akamai markets its services to businesses with an Internet focus.   Akamai's services deliver customers' Internet content, streaming media and applications through a distributed worldwide server network that locates the content geographically closer to users. Utilizing software that is based on their proprietary mathematical formulas or algorithms, Akamai monitors Internet traffic patterns and delivers its customers' content and applications by the most efficient route available. Akamai's services are easily to implement and do not require its customers or their Web audience to alter their hardware or software.

Akamai is the foremost provider of global, high performance services for the delivery of Internet content, streaming media and applications, serving over 2,100 customers. Akamai has the broadest deployment of servers for content, streaming media, and applications delivery with more than 4,200 servers in 50 countries directly connected to 225 different telecommunications networks.

INDUSTRY OUTLOOK AND COMPETITION

As the Internet rapidly moves out of its infancy, difficulties are emerging that demand real solutions. The Internet is becoming a true global entity, but still many areas outside of the United States are trailing behind the United States due to lack of resources and infrastructure. International Data Corporation's Internet Commerce Market Model estimates, by 2004, 103 million new online users will join the US online population to bring the total US online population to 210 million. The introduction of 103 million new users to the Internet in combination with the convergence of data, voice, and video infrastructure and richer web content will likely increase Internet traffic dramatically. As the global Internet presence becomes stronger, so will the importance of Content Distribution Networks due the lack infrastructure outside the US. All highly trafficked sites will need Content Distribution Networks to increase speed, quality, and reliability of Internet materials, or risk customer loss. The Content Distribution Network services sector is still new and the market has yet to completely understand all the factors that are involved.

Akamai has already demonstrated that is the leader in its sector with its huge growth figures of 355% revenue and 111% customer base sequential growth. The Content Distribution Networks services sector relies heavily on the amount of servers and their locations because Internet content is routed along the most efficient path. Much of Akamai's competition has linked their resources, under the lead of Inktomi, to build a network of servers recognized as "Content Bridge" in direct competition of Akamai's network. Thereby reducing costs by sharing their servers. Akamai continues to maintain an estimated 70% of the Content Distribution revenues.   Due to the cost-efficient nature of alliances and partnerships Akamai competes in an increasingly aggressive market. However, the "Content Bridge" network still has no unified language or billing system and lags behind Akamai's services. Akamai's main competitors are other Content Distribution Network service providers such as Inktomi (NASDAQ: INKT), CacheFlow (NASDAQ: CFLO), Digital Island (NASDAQ: ISLD), iBEAM Broadcasting (NASDAQ: IBEM), and other companies offering Content Distribution services.

Table 1	**Primary Competition** 9/01/2000			
Company	Services/Products	Product Basis	Customer Base	Clients
Akamai	FreeFlow Content Delivery Services, Streaming Services, EdgeScape Services, First Point Global Traffic Management	Utilizes largest global network and proprietary algorithms in content delivery. No hardware purchase required for customers.	2,100	Apple Computer, YAHOO! , CNN Interactive
Inktomi	Traffic Server E-Class, Traffic Server C-Class, Content Delivery Suite, Traffic Server Media-IXT	Cache based system. Users must purchase hardware and integrate software solutions. Part of "Content Bridge" network.	200	AOL, YAHOO! , Real Networks
CacheFlow	CacheFlow Servers, Content Delivery Management based on CacheFlow Servers	Cache based system. Users must purchase hardware and integrate software solutions.	---	Sony, Delta Airlines, Sprint Communications
IBeam Broadcasting	IBeam Network Services aimed primarily at streaming media services	Utilizes satellite technology in combination with ground level network. Specializes in constant streaming content.	225	MSNBC.com, Ariba, Launch.com
Digital Island	Hosting Services, Network Services, Content Delivery Services, Application Services	Offers full service hosting. Content Delivery services based on use of proprietary algorithms. Part of "Content Bridge" network. No hardware purchase required for customers.	382	CNBC.com, Mastercard, E*Trade

SERVICES

Akamai offers its customers a full series of Content Delivery services aimed at bringing higher performance, reliability, and scalability in order that they retain Internet users and maximize online profits. At the heart of Akamai's Content Distribution services lies Akamai's global network of over 4,200 servers in 50 countries directly connected to 225 different telecommunications networks. Akamai guarantees their Free Flow content 100% of the time, and if there is a lapse in service the customer is given one day's credit. Also, Akamai guarantees that it can deliver content faster then the customers can deliver it themselves. These two guarantees bolster their commitment to Content Management and act as one of the critical elements of their appeal to customers.

Akamai's services do not require any hardware installations and thereby decrease equipment, labor, space costs to their consumers. Their measurement system only charges customers for the amount of content delivered.

Forrester Research estimates that 58% of first time users do not return to Web sites if they are not able to access it the first time. In addition research has shown that Web surfers will wait and average of 6 to 8 seconds for pages to load before leaving. Akamai's service portfolio is all designed as a complete package to ensuring Web site reliability and minimal customer loss from Internet Traffic.

1. FreeFlow Content Delivery

Akamai's FreeFlow services give Web businesses a reliable, cost-conscious, non-obstructive way to deliver their web content. Akamai's services do not require hardware or software installations. Instead all Internet Traffic Management is directed by Akamai's global server network to the quickest route based on geography

and traffic levels. The FreeFlow system works because the end-user computer only needs to communicate with the original server once. After this, the original server will send the end-user the URL of the closest Akamai server, which already holds the materials for the end-user and serves it. Akamai's proprietary algorithms always determines how many of its servers need copies of the material based on number of requests to prevent any single server ever being overloaded with requests.
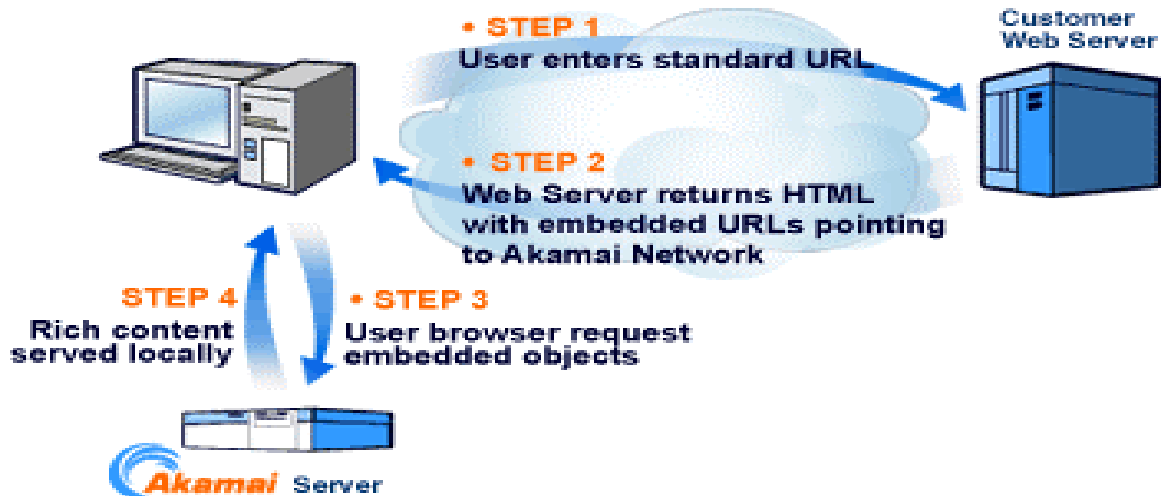
Akamai's FreeFlow system also come with the Akamai Traffic Analyzer and Akamai Reporter which give managers the ability to track and quantify their Web site traffic, both in real time and historically.

The Akamai FreeFlow system allows Web businesses to cut network costs by reducing monthly fees, and equipment and labor costs. Customers only pay for delivered content.

2. Streaming Services

Akamai's FreeFlow Streaming services enhance quality, performance and reduce costs for the customers. FreeFlow Streaming services are also based on Akamai's global delivery network and work on a similar foundation as the FreeFlow Content Distribution services. Akamai offers two types streaming applications to its customers; one is available directly to its business customers, and the other is offered through Akamai certified partners.

- Akamai's premiere streaming media application relies on Akamai's Netpodium system. This service allows up to 2,000 geographically dispersed people to participate in the same online session. The user interface allows streaming video, audio, slide presentations, moderated messages, instant polling, and Web tour capability. Following the event, the customer receives a detailed report containing all data on all participants, including name, email address, messages sent, and individual polled responses. The session can be archived on the Akamai network to be made available on demand at a later date also.
- Akamai Conference Casting service is the cost effective method, which utilizes streaming audio and video. This service permits up to 1,000 people to participate in real time. Following the Conference Cast, Akamai issues a report, which includes names, email addresses, and Conference Casting responses. Some partners in Akamai Conference Casting include AT&T, WorldCom, and Global Crossing.

Akamai's Internet Broadcasting service delivers a full-service solution to creating a Web event. Akamai has a dedicated, experienced production crew that has creative and technical experience in television and Web casting. Akamai's Internet Broadcasting service also includes encoding in all major formats, and will uplink the material immediately after recording if necessary.

3. Edge Services

Akamai's Edgescape service allows customers to customize web content to tailor to their viewer's individual preferences based on geographical location. Edgescape maps viewers IP address to their geographical location and allows customization. Edgescape uses proprietary API and Edgescape Engine software that taps into its knowledge base to provide the customer with the country of origin, the state or providence form that country, name of the user's origin network, and they viewers connection type.

4. Global Traffic Management Services

Akamai's FirstPoint service increases Web reliability and reduces connection time required to load Web pages. FirstPoint acts as another Web performance booster for Akamai's customers, and is designed to work seamlessly with the rest of the Akamai portfolio of products. FirstPoint works by the employment of multiple probes throughout the Akamai network. The probes enable Akamai to continuously monitor the Internet environment, maintain an update mapping system of the most efficient routes, and direct its users in that direction.
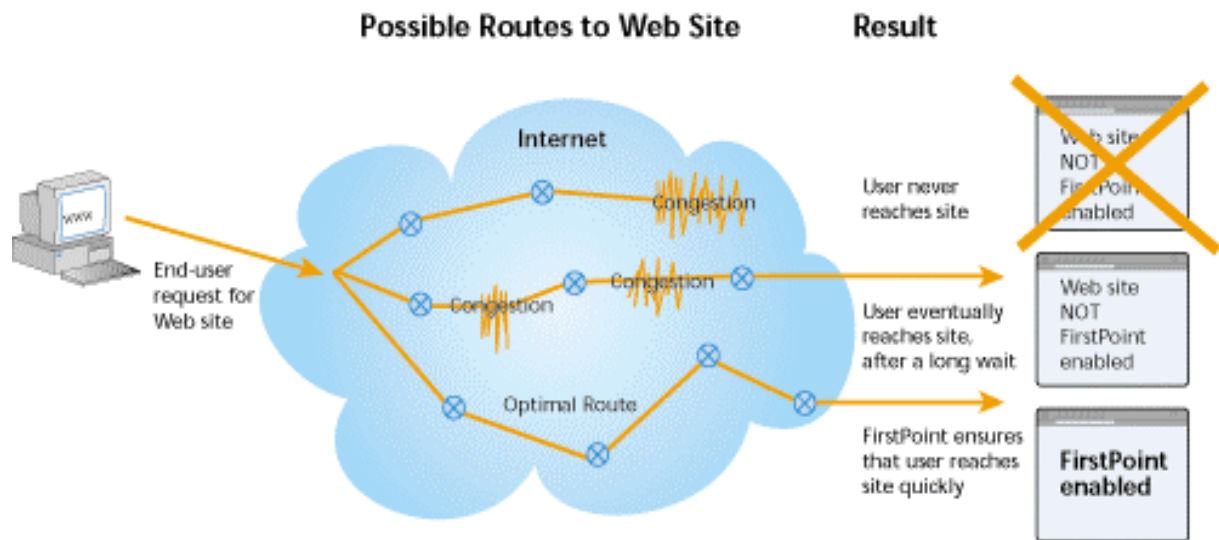
FirstPoint differs from competitor solutions because it uses trend analysis of real-time data, including packet data and latency to continuously update its map. FirstPoint is able to detect and quickly react to Internet outages and failures to keep Internet material on the best route possible, on average increasing connection speed by 30-35% between end-users and Web sites.

Clients also receive the Java-based Traffic Analyzer, which is a real-time online reporting tool. It measures total DNS hits/sec, DNS/sec per data center, and geographic origin of DNS hits to give the customer the ability to track their own servers and equipment.

5. Akamai Network Operation Command Center (NOCC)

Akamai's NOCC located in Cambridge, Massachusetts monitors all servers within the Akamai network of global servers, and allows Akamai to take a proactive stance against network failures and problems. The NOCC is operations 24 hours a day, 7 days week, and 365 days a year demonstrating Akamai's devotion to quality Content Distribution.

STRATEGIES FOR GROWTH

- **Strategic Alliances**

Akamai participates in an extensive strategic alliance program allying with many companies throughout many levels of the Internet and technology. Their alliances are categorized into four groups according to their sector. Akamai utilizes this network of alliances as a secondary channel for selling and promoting its products. Akamai even trains alliances on Akamai services.

To date all of Akamai's revenues have been derived from sales of its services through direct channels. We estimate that Akamai will see increased revenues from sales through indirect channels created from alliances in the following future periods.

Akamai Technology Partner Program. The pace that technology moves at does not permit a single company to be entirely knowledgeable in any given sector. We believe joint agreements to be cost-efficient approach to develop new technology. The Akamai Technology Partner Program allows hardware and software application vendors to integrate Akamai's Internet content, streaming media and applications delivery solutions into their own products. Akamai broadens their reach through this alliance program and enables Akamai to know which direction the hardware and software sector may be moving in the future. In July Akamai and IBM entered a partnership to improve Web performance. IBM and Akamai will leverage each other's technology to provide top service. Some partners in this program include Alteon Web Systems, Storage Networks, and Vignette.

Alliance Partners. We believe that Akamai's distribution network reach to be higher then their competitors reach Akamai complements their direct sale staff of 250 by many indirect sales channels through leading Internet service companies. Akamai has partnered with a consortium of leading Web developers, system integrators and digital media companies in order to increase visibility and reseller network. Within this program Akamai has two tiers; the Alliance Partners and the Preferred Alliance Partners that have extensive experience with Akamai solutions. The recent alliance with Intertainer allows Akamai to the Content Distribution Network service provider for Intertainers database of over 50,000 hours of programming from top media companies. This program includes also Zooropa, Xuma, TreeFrog Productions, and many others.

Akamai Streaming Provider Partners. We see increased streaming and video convergence on the Internet as connection speeds increase and streaming quality becomes better. Akamai recognizes the growth in this portion of the Internet and has been aggressively increasing their streaming abilities through strategic alliances and developing its own portfolio of streaming services. Akamai hosted over 2,500 streaming events this quarter alone and was the host of high profile events such the Victoria's Secret Cannes 2000 Fashion Show Webcast, which received over 15 million requests at peak times.

Akamai Accelerated Network Partners. Currently Akamai has more then 4,250 servers in 50 countries and 225 networks. Akamai is constantly increasing its network. Akamai leverages its large network to increase performance. By entering into agreements with ISP's Akamai is able to increase its network footprint by trading off with ISPs Akamai service for rack space for Akamai servers. This translates into more network coverage for Akamai at lower costs increasing their already growing gross

profit margin.   Included in Akamai's network partners are AOL, [Excite@Home](), RoadRunner, AT&T, Cidera, Cyberstar, and many others.

- **Acquisitions**.

  We believe acquisitions to be a cost efficient approach to increasing growth if the target is researched thoroughly, specifically supplements a firms core business, and if managers recognize the importance of high synergy between the companies. Acquisitions have contributed to Akamai's growth by rapidly expanding the employee base, client base, industry expertise, and technical skills. The recent acquisition of CallTheShots should increase Akamai's technological expertise by adding the highly touted (one of Red Herring's ``top 20 most promising emerging technology companies'') engineering team to Akamai's already formidable Engineering and Development team of over 200 which includes 50 PhDs.

- **Global Expansion.**

  We believe that Akamai is poised to become one of the leaders domestically as well as globally as the Internet population outside of the United States begins to develop. To date none of Akamai's significant revenues have been produced through sales outside the United States, but we believe Akamai will realize revenues from sales of services outside the United States as they are well positioned with their global server deployment and increasing exposure to global markets. Akamai's network spans 50 countries and Akamai has European subsidiaries located in Munich, Germany; Paris, France; and London, UK.

- **Network Coverage.**

  We believe Akamai's network of servers to be one of the most extensive in the Content Distribution Network services business. Akamai's network currently encompasses 4,250 Akamai servers in 50 countries and 225 networks. Currently Akamai's strategy now includes a program of trading off Akamai services for rack space in medium to small ISP's networks. This will increase profit margins because they will be able to increase their network coverage without increasing fees. In addition the recent network agreements with Cidera and Cyberstar, which both specialize in Internet satellite services will enhance Akamai's network. In addition, Akamai's agreements with Cidera and Cyberstar Akamai will get access to chosen satellite ISP's on the ground that will more then double Akamai's satellite deployment.

- **Engineering and Development.**

  We believe that Akamai's high investiture into their engineering and development area has translated into on of the most talented technology R&D teams with a nucleus of 50 PhD employees and 366 overall employees. Akamai's birth was as a result of technology not as a result of want of business. We believe that Akamai's technological beginning provides a sound basis for more future technological innovations and will allow Akamai to bring them to market faster.

- **Marketing.**

  We believe that Akamai has successfully marketed the company through a combination of their marketing, sales, and customer support staff. They have successfully impressed their name onto the technological world, and have the ability to follow Intel's example and make their name common to the non-tech crowd. Akamai will launch 2 television commercials through the Winter/Spring of 2000. The success of these commercials could lead to increased demand for their services in the form of the end-users and lead to higher realization of their services.

KEY RISK FACTORS

- The company has a limited operating history and is in the early stages of development.
- The company's future revenues are completely dependent on the success of their Internet Content and Streaming Media Delivery services.
- Any failure of the company's network could lead to significant costs and disruptions which could reduce the companies revenue and harm the business, financial results, and reputation.
- Because Internet Content Delivery services are complex and deployed in complex environments, they may have errors or defects that could seriously harm the company's business.
- Any failure of the company's telecommunications and network providers to provide required transmission capacity to us could result in interruptions in our services.
- The markets in which the company operates are highly competitive and the company may be unable to compete successfully against new entrants and established companies with greater resources.
- A substantial amount of the company's common stock will be eligible for public sale after existing lock-up periods expire, which could cause the stock price to fall.
- The company faces risks associated with international operations that could harm the business.
- The company depends on key personnel to manage the business effectively in a rapidly changing market and if the company is unable to retain key employees, the company's ability to compete could be harmed.
- The company has limited sales, marketing, and growth experience and the business will suffer if the company does not manage it properly.
- The company's business will suffer if it does not respond to rapidly technological changes.
- Some of the company's customers are emerging Internet-based start-ups that may not be able to pay for services on a timely basis.
- The company must have the ability to scale its network with demand increase.
- The unpredictability of the company's quarterly revenues may adversely affect the price of the company's common stock.
- There are a number of unknown risks associated with Year 2000 problems that they company may or have to experience.
- The company could incur substantial costs depending on intellectual property from infringement or a claim of infringement.

FINANCIALS

Revenue. Akamai derive its revenues from the sale of their services under contracts that typically range 12-24 months. Akamai recognizes revenue primarily on fees based on the amount of Internet content delivered through their services. The Internet Research Group estimates the market for Content Distribution Network services to reach 6 billion based on their annual growth rate of 173%.

Gross Profit. We believe the gross margin will grow in part due to the lowered cost of bandwidth that Akamai relies upon, however, there will be a window to this growth due to Akamai's plans to heavily invest in the deployment of more servers in the near future. Therefore we estimate the gross margin to reach 26.8% and 43.8% in 2000 and 2001 respectively.

Engineering and Development. Akamai's services are highly related to their technology and the Content Distribution Network services market is experiencing more and more competition due to the high gross margins available. In addition, Akamai's engineering and development team is highly talented and recognized; we believe that Akamai will be willing to pay higher Engineering and development costs to maintain this level ability in their designers. We believe that Akamai will invest large amounts of its revenues into Engineering and development in order to stay competitive.

Sales, General, and Administrative. Due to the high growth and expansion of Akamai, we believe that Akamai will continue to funnel large amounts of capital into their SG&A departments. In addition we believe Akamai to be a dedicated to high quality customer service and therefore will need to generally invest more capital into their employee base to sustain their desired level of customer service.

Cash. Akamai was able to raise 217.6 million from their initial public offering. We believe Akamai has sufficient funds to finance projects through FY 2000.

VALUATION

Internet Sector. As shown below, Akamai usually follows the Internet Index trends. Currently, it is still substantially below its year high and break-even point. We believe that with time, Akamai will begin to follow the Internet Index more closely and even outperform it once the Content Distribution market grows out of its infancy stage.

Table _ 9/01/2000

Stock	Price	Market Cap.	Customer Base	Price To Sales	Gross Margin*
AKAM	72.19	7.68 B	2,100	152.29	23.98%
ISLD	26.56	2.06 B	382	37.17	-103.6%
IBEM	11.50	1.246 B	225	70.58	---
CFLO	109.50	4.271 B	---	57.33	68.49%
INKT	130.75	14.909 B	200	87.33	85.41%
Average	---	6.0332 B	726.75	80.94	18.57

*Based on most recent 10-Q

Margins. Akamai has one of the lower gross margins in their sector, however, this is partly because they are a young company and are investing greater amounts of capital to deploy their servers worldwide. Akamai has indicated that if they stopped deploying servers this quarter, their gross margins would be 65-70% and stay around that level. We expect gross margins to grow higher as the company matures and does not require as much capital for the deployment of servers.

Price to Sales. We believe that Akamai's P/S ratio value deserves to be higher than those of its competitors, and is therefore fairly valued, because of the higher expectations for the company in future periods. Akamai currently has the highest customer base after 111% sequential customer growth since 1998. In addition, we believe Akamai is poised to handle higher Internet traffic better then its competitor's due to one of the largest global server networks, with larger global span than its competitors. In addition, Akamai has a first-mover advantage.   Juniper Communications estimates that Akamai holds 70% of the Content Delivery Network services even with the build up of competition.

Investment Opinion

Akamai has demonstrated it is the clear leader in the Content Distribution services sector with its impressive revenue growth and customer growth of 111% sequential growth.   Akamai has poised itself, with the early mover advantage and continues to build on this lead by offering new services to compliment its core competency and increasing its network of Edge servers in preparation for higher Internet traffic. Akamai's addition of streaming services demonstrates their ability to utilize their FreeFlow Content Distribution

system as a platform for more Internet content delivery services. With this early mover position, we believe Akamai will continue to capture large market share of a high growth sector of the Internet.

Akamai continues to build upon its already extensive network of Edge server networks, and increase its gross margins by trading off its services for network rack space with small to medium ISP's. Akamai has shown an outstanding customer retention rate, as most customers resigned with Akamai at the end of their contracts.   We believe that Akamai's ability to leverage its proprietary algorithms, expansive network of Edge servers, and exceptional intellectual capital will continue to add to its leading market position. However, we currently rate the stock a HOLD because of the expected volatility in the Internet sector and fears that the amount of shares being released from lock-up on September 13 2000 and October 29 2000 could drop the stock price significantly.

Akamai Technologies, Inc.

Income Statement	1998A	1999A	2000E	2001E
(in 000s except per share data)				
Revenue	N/A	3,986.0	81,300.0	182,300.0
Cost of services	31.0	9,002.0	59,511.6	102,452.6
Gross Profit (loss)	(31.0)	(5,016.0)	21,788.4	79,847.4
Operating Expense				
Engineering and development	229.0	11,749.0	55,690.5	108,103.9
Sales, general and administrative	435.0	29,668.0	166,990.2	262,876.6
Equity related compensation	205.0	10,005.0	15,934.8	22,969.8
Operating loss	(869.0)	(51,422.0)	(298,127.1)	(496,402.9)
Total operating expenses	900.0	60,424.0	298,127.1	496,402.9
Operating loss	(900.0)	(56,438.0)	(216,827.1)	(314,102.9)
Interest income (expense), net	10.0	2,269.0	7,300.0	2,500.0
Loss before extraordinary loss from early exting	(890.0)	(54,169.0)	(209,527.1)	(311,602.9)
Extraordinary loss from early extinguishment of	N/A	3,390.0	2,800.0	-
Net Loss	(890.0)	(57,559.0)	(212,327.1)	(311,602.9)
Dividends and accretion to preferred stock red	N/A	2,241.0	-	-
Net loss attributable to common stockholders	(890.0)	(59,800.0)	(212,327.1)	(311,602.9)
Basic and diluted net loss per share*	(0.06)	(1.98)	(2.49)	(3.32)
Basic and diluted net loss per share**	(0.05)	(1.65)	(2.30)	(3.08)
Shares outstanding	15,015	30,177	85,204	93,806

Margin Analysis (%age of revenue)

Gross Margin	N/A	-125.8%	26.8%	43.8%
Engineering and development	N/A	294.8%	68.50%	59%
Sales, general, and administrative	N/A	744.3%	205.40%	144.20%
Equity related compensation	N/A	251.0%	19.60%	12.60%
Operating Margin	N/A	-1290.1%	-366.7%	-272.3%
Net Margin	N/A	-1444.0%	-261.2%	-170.9%

Growth

Total Revenue	N/A	10000.0%	1939.6%	124.2%
Gross Profit	N/A	-16080.6%	334.4%	266.5%
Operating Expense	N/A	5030.6%	374.0%	94.1%
Operating Loss	N/A	6017.4%	679.8%	266.5%
Net Income	N/A	6367.3%	268.9%	46.8%