



**The 5 Safest  
HyperNet Bonanza  
Stocks You Should  
Buy Now:**

TAIPANO 

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# The 5 Safest HyperNet Bonanza Stocks You Should Buy Now:

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# The 5 Safest HyperNet Bonanza Stocks You Should Buy Now:

**Stake your claim to make a fortune  
in the Next Generation Internet boom...  
and get ready for 200%, 500%, even 1000% profits!**

Dear Friend,

Remember the Internet Boom?

Over the last couple of years, you've seen hundreds of stocks create instant millionaires:

Back in 1998, you could pick up a share of eBay for less than you paid for two slices of pizza at your favorite carryout deli. Eighteen months later, at its 2000 peak, a single share would have cost US\$127... a gain of over 2,500%! (Even during the Deadbeat Market of February 2001, when it was trading at around US\$43, you'd still have been up 1,000%.)

In early 1998, AOL would have cost you 6 bucks... peaking at US\$90 in 2000... a cool 1,500% profit, with every US\$1,000 invested growing to US\$15,000...

Yahoo! went from an absolute nobody to a high of US\$205... a gain of over 2,000%. Had you invested back in 1998, when everyone was claiming the Internet boom had run its course with Netscape, you'd still be up 300-400%, even after the NASDAQ crashed.

...and then there's Broadcom, Oracle, Network Solutions, and Internet enablers Microsoft, Dell... the list goes on. Every single stock could have made you filthy rich!

But that's history. More than US\$2 trillion of market value has evaporated over the past year—and that's only counting the NASDAQ. Most Internet highfliers have come tumbling down, losing 85% or even 95% off their 2000 highs. Many of the stocks I named above have already experienced the greatest gains runup they'll ever see.

Some of last year's Net wunderkinder have crashed and burned. Gone out of business. Locked the doors to their US\$1-million-a-year office suites and put the key through the mail slot. Others are preparing to

be bought out at fire sale prices... leaving their adolescent execs sitting on worthless stock options.

Investors who made huge paper gains on dot-coms in 1999 are realizing that the only money they've made over the last 6 months was the loose change they pulled out of their dryer's lint trap.

But still...

...suppose you could have made **US\$92,200** for every **US\$5,000** invested

US\$92,200 on a single investment is a lot of money to sock away in your bank account all in one go. Right there, that's a new pair of luxury sedans parked in the garage. Or maybe it's the cost of putting a kid through college. Or more than a year of very comfortable time spent sailing or playing golf, or whatever you want to do with your retirement.

*Suppose you could have piled up those returns not in a year of investing... but in just a few weeks!*

Several investors did. Just by knowing how to read the times ahead.

We see no shame in riding a profit boom when it's nearly a sure thing. Take the IPO market when it first started to take off in the mid-1990s.

I knew then that the Internet has just as many flaws as it does benefits. It sucks up a lot of time. And doesn't do everything for productivity some people seem to think it does. But that doesn't mean there wasn't a time to make money. A lot of money. For instance, my IPO specialist, Siu-Yee Ng, helped *Taipan* readers lock down 201% profits on eBay.com... in a single day!

Subscribers who joined us at our 1998 Annual Conference in Clearwater, Florida, were able to get in on the then-obscure eBay at around US\$20... bagging 600+% gains... and are still ahead of the game as I write this, even if they held on to their positions as the

markets began heading south.

You could have joined us in buying *Sun Microsystems* just before it split in 1999, too.

On just that one pick, you would have made US\$17,900 for every US\$10,000 invested.

You also could have picked up another 194% profit—*again, in a single afternoon*—on Perot Systems. Not to mention the 1,842% profit readers made when Siu-Yee spotted a chance to get into *Red Hat* before the mania moved in. Just US\$5,000 invested would have given you US\$92,200 to sock into your bank account by the time we got out. If you'd put in US\$10,000, you would have walked away with US\$184,400. On one trade.

I don't want you to misread me here. When there's a bull to ride, you and I will ride it. When it's time to get out, we'll get out. There's always somewhere else to make money. And there's always a way to move from one kind of market to another without incurring a lot of extra risk. Again, let me show you what I mean...

Sure, it's true. Many of the Internet companies investors came to look at as cash machines will be obsolete before you sing Auld Lang Syne again.

That, however, doesn't mean you can't make money off the Web. And in a relatively safe fashion.

But it's not your college junior's Internet any more. I'm talking about the Next Generation über-Net... one that whips out a mind-boggling 10,000 terabits—that's 10,000 TRILLION bits of information—each and every second.

(Wrap your mind around this: you'll be able to download the entire DVD-quality *Star Wars* trilogy in less time than it takes to say "Princess Leia"—and have *The Phantom Menace* hit your hard drive before you computer's finished saying, "You've got mail!")

And thanks to the massacre in tech stocks since October of 2000, you now have an opportunity to pick up shares in these companies for pennies on the dollar.

Literally.

So please, take a minute out of your busy day to study this report. I promise that you'll agree with me... 6 months or a year from now... that these 10 minutes were worth your while... maybe 1,000 times over!

## How investors get rich safely in every kind of market

You see, two high-level analysts from financial firm *Donaldson, Lufkin & Jenrette* just finished a new study with a reassuring result. They took a long, hard look at historical trend cycles. Not just for the 1990s. Not just for the bull market that started in 1981. Instead, they analyzed boom and bust cycles—especially with regard to technology—going all the way back to the time of Babylon.

Guess what they found...

They found that when something historically catastrophic happens... like the wiping out of the Aztecs or the Mayans... or the devastation of a Hundred Years' War or a global epidemic like the Black Plague... a lot of fortunes may change hands.

But certain technological advances still endure. No matter who ends up with the riches. And the trick to staying on the winning side of the curve is understanding *which* advances will outlast the short-term crisis.

The key is simple. Most of the stocks that crashed last year were "buzz" stocks.

Historically, "buzz" is short-term. But lasting advances—especially with long-term technologies—aren't just about what's hot in gossip circles.

Long-term success comes only to technologies that can satisfy an already existing need in the marketplace.

Take the Industrial Revolution of the late 18th century... the electrification of the Western world in the early 1900s... or the transition of communications from the telegraph to the telephone. Take the course of modern medicine through the Great Depression... two World Wars... Korea, Vietnam, and disco dancing...

No matter what the crisis, the advances endured. And the investors that understood this made fortunes.

Sure, Wall Street gave up on Pets.com. We may yet give up on Amazon.com.

But can you imagine us giving up on breakthroughs with the Human Genome? Can you imagine a surgeon suddenly opting *not* to use a laser instead of a scalpel?

Can you see yuppies giving up on cell phones or email? If companies can slash costs using the Internet in revolutionary new ways, can you see them passing

up the chance? As George Bush Jr.'s dad used to say...

"Not gonna happen!"

Now that we've found the map of the Human Genome, nobody will lose it in a kitchen drawer or a glove compartment. Now that half the world is blanketed with fiber-optic cable... computer chips... satellite cellular service... and almost instant communication...

Nobody wants to take a step backward. Progress marches ahead.

Every 18 months, computer speed still doubles (Moore's law, not mine)...

Every day, I come to my office and log on to find 50 or more emails...

At Johns Hopkins Hospital nearby, they test new cancer treatments every day...

And even as you read this, more and more "old economy" companies are still going online. Not to destroy their old businesses. But to reinvent them.

My point is, if you understand how history works... and how some trends get ever more profitable even as others are wiped out... you can still get rich. And you don't have to watch the broad indexes to do it. In fact, the tighter your focus, the better your profits. For instance...

## **Magic words that bring you riches**

Ironically, it will be a 1999 buzzword that will create the next generation of 1,000%, 2,000%, even 4,000% profits over the next 5 years.

Broadband was one of the hottest sectors of 1999. And it was one of the coldest of 2000. But regardless of what the current whipped-dog market thinks of the sector, from a technological perspective, bandwidth is revolutionizing the world.

And mark my words: market valuations will reflect this again. And those investors who had the discipline and stamina to jump on an opportunity when it arose will reap the rewards of their foresight... a thousandfold!

But before I tell you in detail where and how to find super safe moneymakers time after time...

I'm sorry. I've been rude. I haven't introduced myself.

My name is J. Christoph Amberger.

Since 1988, I've been a part of a small but stunning group of individuals. I put this group together, in fact. From modest beginnings in the back room of a business meeting in a swank Hong Kong hotel...

To a throng of networked analysts who virtually cover the globe, reporting back with leads on the hottest trends and freshly uncovered secrets in the world's markets.

We call our most active insiders "*Taipans*"... after the capitalist profit lords who made a massive bundle of riches for themselves and Great Britain in the early days of the Hong Kong trade.

You'd like the inner circle I keep close by in our *Taipan* headquarters.

They're not your usual ego-sodden investment gurus. (Though I have to admit, a couple of my colleagues get a little smug once in awhile.)

They're just a group of guys who have helped a lot of investors—people just like you—make a lot of money on some very solid trends. Not just on the Internet, or biotechnology. But on *every* profitable trend my team can uncover. From real estate and REITs... to income investments, energy stocks, and telecommunications technology... and a lot more.

Like the profit lords who inspired *Taipan's* founders, we take pride in leading investors anywhere and everywhere they can make money without taking on too much risk. Just take the revolutionary changes we're about to encounter in the SuperNet.

## **How the Real Opportunity in Hypernet Stocks will Unfold**

There's one common thread that seemed to give world conquerors, master tradesman, and fortune-makers a greater chance of success. What is it?

*Connectivity.*

In good times and bad... and especially in moments of market confusion... victory almost always goes to the man or business or country who can get the fastest read on what's happening now... and what's going to happen next.

Whether you're talking about the tea trade from

China to London... or the telecom trade from Tokyo to New York... it's always been true.

The better you can communicate with your partners, the sharper your edge.

It's no wonder investors crowded into wireless stocks in the late '90s and on into 2000. And when the market overloaded, some investors got burned.

But the fact remains, the world is still trending toward *more* connectivity, not less. In the days ahead, to do business in this world you'll have to be plugged in and networked. It's that simple.

Even as investors still try to sort out this fact, the communications market continues to explode. Here's a telling detail. Guess what one of the hottest real estate markets is in Manhattan?

It's roof space! That's right. Wireless companies are crowding the tops of skyscrapers to set up their communications dishes. You can pay as much for a square foot of rooftop as you would for the same chunk of office or apartment space inside. Even now, after the market shakeout.

Because, more and more, Americans are making the switch to wireless. In Europe, some people don't even *get* home phones anymore. They just use cellular service for everything.

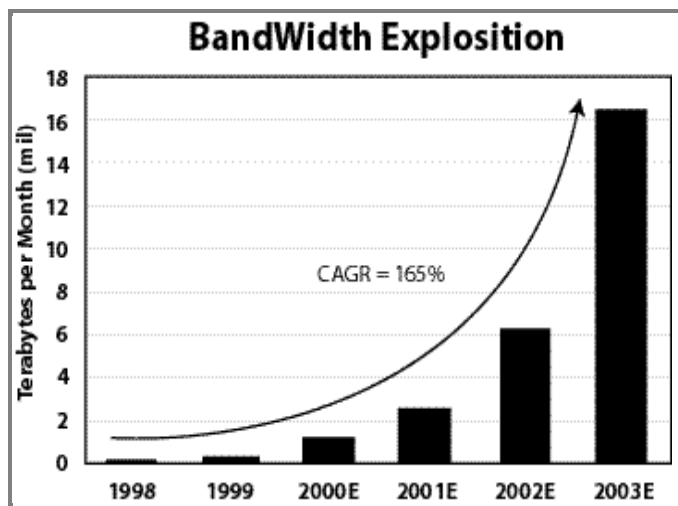
How are you and I *still* going to make money on the wireless connectivity trend? By rolling over a pile of profits in a part of the market that's still virtually unrecognized...

Whether it's cable, DSL, fiber, or fixed wireless, the market for broadband is huge. Consumers want it. Companies need it. Why? One word:

Speed!

The research firm IDC estimates that half of America's 90 million homes will have broadband Internet access in the next three years—up from only 11% now. Cahner's In-stat predicts that, by 2004, this market will generate over US\$13 billion in subscriber revenues alone.

But like French fires, Coke, and Britney Spears, broadband is a global phenomenon. IDC says global DSL subscribers alone will grow from 4.5 million in 2000 to over 66 million by 2004.



### Bandwidth bargains?

You'd think that after the yearlong bear market in technology, you'd be able to pick up some market leaders on the cheap. But, for two reasons, investing in the leaders isn't necessarily the way to profit from the spread of broadband.

First of all, valuations are still troubling. Companies like Ciena, JDS Uniphase, and AOL/Time Warner are priced to perfection. And there's more competition than ever.

Others, like AT&T or Worldcom, are shackled by lagging divisions. Worldcom, for instance, has an Internet business (uunet) that's growing by 4 to 8 times a year. But exposure to the dying long-distance business is capping overall growth at around 10%.

Second, broadband is fast becoming a commodity. Bandwidth pricing will follow long distance pricing. Optical components will get cheaper and more plentiful as this new industry—where many products are still made by hand—gets automated.

And it's inevitable that the biggest companies will be the first to be affected by cyclical downturns. Because their revenues aren't growing as fast on a percentage basis. In other words, a company growing at 20% a year will be hurt worse by a 10% slowdown than a company growing revenues by 50 or 100%.

One of the difficulties with investing in broadband is the number of different strategies available. Should you invest in cable or DSL? Are network operators, content companies, or hardware companies the better place to put your money? Is the market growing faster in the U.S., Europe, or Asia?

The hard truth is, there is no better, faster or bigger. Every aspect of broadband offers spectacular investment opportunities.

That's why I sent out my team to get me the inside scoop on the best companies available. They put together a white paper of very diverse companies that are in the business of addressing some aspect of the broadband market... and are set to make a bundle for their investors over the next 2 to 5 years.

One of them is a voice and data carrier. Then there's an optical components maker, and a CLEC that's wiring and servicing new subdivisions. We'll tell you about the "optical incubator" and the company that's leading the charge to break the Internet bottleneck, and mounting a major threat to the established hosting companies at the same time.

The following white paper was compiled by *Taipan* editors Brit Ryle, Chris DeHaemer, and Siu-Yee Ng.

### **HyperNet Opportunity #1: Laying cable for fun and profit: Get hardwired for an easy 203% gain!**

It's been a couple of years now since the electronic elite began promising the nirvana of broadband in the house. Bill Gates wired his house like a chicken coop, with talking toasters, streaming audio, and pop-up video conferencing in every room. He labeled it the future and declared that it was only a matter of time until you, too, could have such things.

We heard stories about video games on demand, never having to return a movie, and refrigerators that could order more milk. And the Internet as it was meant to be, with new pages loading as if you were flipping through a phone book. Just faster, more colorful, with more pictures... and you wouldn't get ink on your fingers!

I don't know about you, but in my house, we still buy milk from the corner store, we don't talk to our toaster unless we've had a really, really, *really* bad day, and we all continue to suffer through the World Wide Wait.

I'd walk a last mile for a broadband network.

Extreme data functions such as wired refrigerators are a reality—no matter if they sound like something straight out of a B movie. The problem lies in getting them to the consumer. We're held hostage by two industries that epitomize the word dinosaur: cable

and telephone.

But who do you call? There's no "fully wired home" section in my phone book. Clearly, this is a market void waiting to be filled. And that's why I was so happy to discover the following company. Please, read on.

Who you gonna call?

Recently, a merger between two companies took place. Companies merge all the time. But this merger was special. The new entity is a truly unique broadband company.

It's attacking every aspect of the high-speed Internet access market. From wiring the home with optical cable, to providing key hardware, to the delivery of broadband services. And let's not forget the most important part—billing.

The company is **Eagle Wireless International (EAG:AMEX)**. But the story really begins with **ClearWorks.net**. ClearWorks incorporated a little over three years ago as a company that wired businesses for voice, data, and video. It has since captured a major opportunity in the new home market.

ClearWorks contracts with housing developers to wire new homes and subdivisions with fiber optic cable. Then, ClearWorks delivers "bundled digital services," including voice, to the homes. There was only one thing missing—hardware.

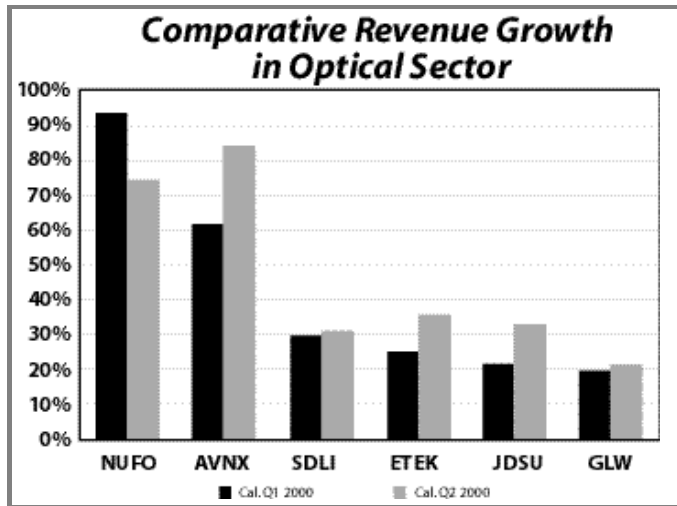
Enter Eagle Wireless. Eagle's been a small-time wireless equipment supplier for a number of years. But the development of some novel set-top boxes made it the perfect merger partner for ClearWorks.net.

Now, the new company not only wires homes and businesses and delivers broadband services, it also provides the hardware to turn your TV set into a fully functional computer, home theater, stereo and gaming console.

### **But that's not all...**

Eagle adds DSL and wireless access technology to the optical solution. Now, this merger is billed as a merger of equals, but that's a little misleading.

ClearWorks.net generates more revenues and has more long-term deals. ClearWorks also has the more attractive business model—once homes are wired, ClearWorks can count on recurring subscriber fees. And with a backlog of 60,000 homes, those subscriber



revenues could be huge.

It's estimated that 1.7 million homes were built in the U.S. last year. Somewhere around 30% of homebuilders are wiring new dwellings for broadband access. And the fastest growing new home market continues to be in the Southwest, where ClearWorks is located.

As you can see from the chart, ClearWorks' market will triple over the next 3 to 4 years. Among the drivers for this growth is the number of people who choose to work from home. According to the Gartner Group, a third of the U.S. workforce will be working from home at least one day a week by 2003.

ClearWorks currently works with several regional and national builders, including Centec, Pulte, Royce, Kaufman and Broad, Ryland, D.R. Horton, Village Builders, David Power, Legend, Hammond, and Trendmaker.

### Put fiber in your portfolio

ClearWorks will build you a home-based LAN, bringing multiple telephone jacks, cable hookups, and standard outlets to each room.

One multifunctional outlet provides the juice and data feed for all of your electronic needs, including telephone, television, stereo, VCR, DVD, modem/Internet, computer, fax machine, cable access, home theater, satellite dish, security system, and home automation.

It's all plug and play. You simply insert what you need, from anywhere in your home.

But that's not all, you also get digital television channels with custom-designed video feeds and HDTV

based on the nature of the community. Plus, multiple channels of digital music and pay-per-view movies and video games are part of the service package.

### The deals: streaming profits

Traditionally, internet service providers (ISPs) and cable companies have been valued at US\$5,000 to US\$8,000 per customer. However, because Eagle is a cable/digital TV/home security/Internet broadband/home networking/hardware company, you can make the argument that they should be valued at a minimum of US\$10,000 per subscriber.

Eagle has a string of deals under its belt totaling more than US\$370 million in revenue and US\$185 million in gross profit over the life of these deals.

Granted, the picture is not as rosy as it appears at first glance. The deals are structured so that the bulk of the revenues are generated after 2003. However, the company can borrow against this revenue stream to obtain the required capital for expansion. To graphically illustrate the business model, here's a look at one of the big deals.

### Accelerating profits

Before the merger, ClearWorks.net signed a US\$120 million deal for the 3,700 single-family homes in the Teravista planned community near Austin. Teravista also has 3 multifamily sites, a 196 acre commercial campus and 25 acres of retail property.

The projected revenues for the life of the project are US\$120 million. Gross profit is projected to be US\$63 million. Construction began in June 2000 and should be completed within five years.

ClearWorks.net will provide structured wiring for the homes as they are built, with initial revenues of US\$1,500 per home.

In the first quarter of 2001, the company expects to receive US\$137,000 in additional revenues from its Bundled Digital Services to the Teravista community. This is expected to increase to US\$273,000 during the second quarter of 2001 and to US\$1.4 million for the full year 2001, reaching US\$2.5 million in 2002. Starting in 2005, ClearWorks.net expects revenues from this project to be approximately US\$5.5 million per year—until 2026.

Other deals were structured much the same way,

like the US\$50 million deal in the Lakes of Eldridge planned community in Houston, with 1,400 single family homes.

Also, there's a secured US\$200 million revenue project to deliver their Bundled Digital Services to over 4,000 single-family homes and 2,000 multi-family units in the Avery Ranch community of Austin, Texas.

## What value this?

Given a US\$10,000 per subscriber multiple, the last two months of deals would give you 11,100 subscribers and a market cap of US\$111 million. Today, Eagle trades at a market cap under US\$100 million. That's because this company isn't about where it is today, but where it will be three to five years from now.

ClearWorks.net is on a path of rapid expansion. They recently became a CLEC (competitive local exchange carrier), which allows interconnection to the public switched telephone network (PSTN) in thirteen states.

This lays the groundwork for expansion into new territories. Furthermore, Eagle has just opened offices in Phoenix. It now has offices in San Antonio, Austin, and Las Vegas. With the expansion into Phoenix, the company now covers five of the top ten fastest growing residential markets in the nation.

It is reasonable to assume that in a year, given the market demand and the current growth rate, the company will have 50,000 subscribers. This would give you a market cap of US\$500 million, or 44% above its current value.

This is the only U.S.-based company we know of that's focused on this market, and they have zero analyst coverage.

**Buy Eagle Wireless International (EAG:AMEX) below US\$2, with a one-year price target of US\$7.**

Contact: 2450 Fondren, Suite 200 Houston, TX 77063, Phone: (713) 334-2595, Fax: (713) 334-6565.

## HyperNet Opportunity #2: Focus on Broadband

Fiber optic cable is lucky—it's getting laid.

Millions of miles a year. So much optical cable is getting laid that Corning, the glassmaker turned optical cable and component manufacturer, is sold out for the next year and a half. Need cable now?

Fuggedabowdit.

Corning spent a billion dollars in 2000 to increase its manufacturing capacity for both cable and components. And it plans to spend another billion in 2001. Maybe Corning knows its business better than the analysts who say the sky's falling on the optical industry.

What's even more amazing, Corning was actually downgraded because demand is way ahead of supply. What the market fails to realize is that fiber optics and telecom equipment is a cyclical industry. The surge in optical sales at the end of 1999 was the result of Y2K liquidity and end-of-year purchases.

## 20/20 hindsight

Unfortunately, many optical suppliers failed to see this as a cyclical event and inflated their inventories. Now, the combination of bloated inventory and a weak U.S. economy has put manufacturing and buying on hold.

But that hold is temporary. The demand for bandwidth isn't going away. Internet traffic doubles every three months. Which means that every kilobyte of bandwidth must be squeezed out of networks. And that means optical technologies are a necessity.

Recognizing demand is one thing. Finding the best way to profit is quite another. Optical technology isn't easy to understand. And neither is the marketplace.

Should you go for the component suppliers like JDS Uniphase, or the system suppliers like Ciena or Nortel?

At *Taipan*, we prefer the component suppliers. Component suppliers are the "picks and shovels" optical play. And our favorite optical component company is **New Focus, Inc. (NUFO:NASDAQ)**.

New Focus, along with JDS Uniphase, is one of the few pure-play optical component companies with actives, passives and electronics expertise under one roof. New Focus has ten years' experience in the optical space. It began making tools for the test market, but started developing products for the telecom market in 1998.

It now makes a wide range of optical components (DWDM, lasers, transceivers, and EDFA's), which it sells to other component suppliers like JDS Uniphase, Corning and Agilent. New Focus also sells to systems suppliers like Alcatel, Ciena and Corning, who, in turn, sell complete systems to voice and data carriers, like

Qwest, Worldcom or Global Crossing. In all, New Focus has over 50 customers.

## Build it and they will come

It was thirty years ago that the optical network began commercial operation. Because so many more signals can be sent down fiber optic cable than copper wire, long-distance transmission became much cheaper for the telephone company.

Long-distance fiber networks were in place long before the Internet came along. But the Internet couldn't have grown without them. Networks have become "datacentric"—carriers make more money from data than voice.

But fiber gets more expensive, for both carrier and customer, as you get closer to the end user. If your business leases a T1 line, you know how expensive it can be.

Fiber optics is called a "disruptive" technology because it can do more for less. And optical transmission costs will continue to decline for a few reasons. The most important ones are: dense wave division multiplexing, or DWDM, lasers, and the erbium-doped fiber amplifier, or EDFA.

## Splitting up

The first optical networks were pretty simple—a laser created single bursts of light, called photons, that carried voice signals over long distances—like between cities. DWDM technology increases bandwidth exponentially by increasing the number of light waves that can travel over one piece of fiber at the same time.

Now, in practice, DWDM lowers transmission costs because carriers can pack more data into a single optical cable. For instance, instead of running separate T1 lines to each business in an office building, one line can be shared by several businesses.

DWDM also allows carriers to offer creative service packages, such as "bandwidth on demand." According to RHK, the market for DWDM optical components is expected to grow at a compound annual growth rate of 51% for the next 4 years, making DWDM a US\$3.3 billion dollar market in 2003.

Peter Chen, a senior analyst with networking researcher RHK Inc., predicts that sales of optical equipment for high-performance applications will grow

by nearly 50% a year to reach US\$24 billion by 2004, up from US\$5 billion in 2000. Clearly, the component market is booming. And New Focus is very well positioned to exploit this market.

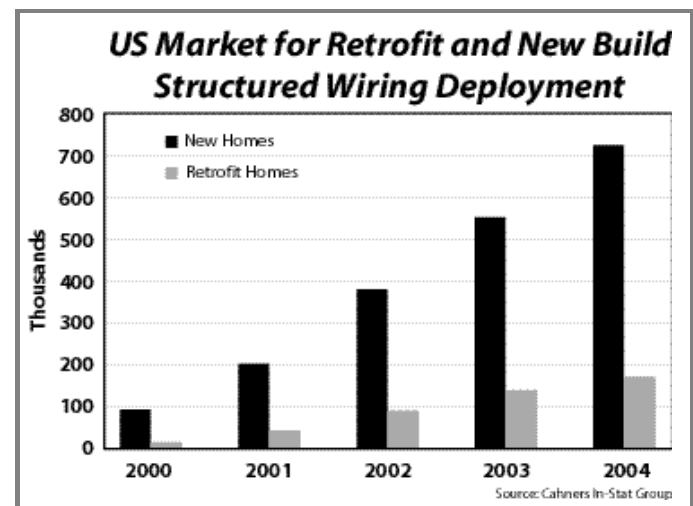
## Lighting it up with tunable lasers

DWDM systems are not without limitations. Until recently, each channel needed its own laser. But an innovation known as a tunable laser changed that. Now, one laser can tune itself to different frequencies and thus provide a light wave for each DWDM channel.

Some tunable lasers can change frequency so fast, the speed is measured in nanoseconds.

As it happens, New Focus is a strong leader in the tunable laser market. New Focus recently announced the availability of the most powerful tunable laser on the market, to commence commercial shipping by late 2001. And, according to the company, it's the first that's suitable for long haul networks. RHK estimates the terrestrial pump laser market (as opposed to the undersea laser market) will grow from US\$243 million in 1999 to US\$1.2 billion in 2003.

New Focus (pro forma)				
Q4('00)	Q3 ('00)	Q2	Q1	Q4 ('99)
<b>Revenues (\$ millions)</b>				
33.9	22.2	14.5	9.8	6.8
<b>Gain/(Loss) (\$ millions)</b>				
2.6	(1.3)	(6.6)	(6.9)	NA
<b>Earnings per share</b>				
04	(0.02)	(0.13)	(0.14)	NA



It used to be that light could only travel around 70 kilometers before it weakened too much to be of any use. The light wave or signal had to be regenerated often. Each regeneration point meant higher costs for the carrier, and more potential failure points along a network.

Then came the erbium doped fiber amplifier, or EDFA. EDFAs consist of specially treated fiber combined with a small pump laser; they help a signal retain its strength without regeneration. EDFAs are cheaper than regeneration equipment. They also eliminate an important failure point.

Fiber amplifiers extend the reach of optical networks to thousands of kilometers without a need for regeneration. And yes, New Focus makes these, too.

## The numbers

Since New Focus began selling to the telecom industry a little over a year ago, revenues have absolutely exploded. The company IPO'd in May of 2000, and turned its first quarterly profit before that fiscal year was over. Not bad. Here are the rest of 2000's numbers broken down by quarter.

The following chart shows how fast New Focus is building its business compared to its major competitors.

New Focus is one of the few optical component companies to raise revenue and earnings forecasts for 2001. While industry stalwarts like Corning and JDS Uniphase were busy lowering expectations, New Focus was raising them.

Based on company numbers, analysts have raised forecasts for revenues in fiscal 2001 by 60% to US\$240 million. Gross margins should expand to 45% and earnings per share could hit US\$0.23 cents.

New Focus has nearly US\$500 million in cash, and trades at less than 3x book value and less than 7x 2001 sales.

**We believe New Focus (NUFO:NASDAQ) is one of the best pure plays on the passive and active optical component market. We rate it a strong buy under US\$15.**

For more information, contact New Focus, Inc., 2630 Walsh Ave., Santa Clara, CA 95051-0905, phone: 408-980-8088, fax: 408-980-8883, web: [www.newfocus.com](http://www.newfocus.com).

## HyperNet Opportunity #3: The Broadband Incubator

Some computer geek once remarked that the information age was like Darwinism on steroids. And for once, a computer geek makes good sense.

Darwinism on steroids means mutations. Lots of them. Business models unthinkable ten years ago now generate billions in revenue. The dot-coms completed the entire life cycle of an industry in less than two years. The two biggest companies on earth haven't even hit middle age.

And even they have to be completely paranoid that better, faster, cheaper technology will slam like a meteor into their lush jungle.

Businesses have never been in a more cutthroat environment. Especially technology companies. The do-it-all business model is a dinosaur. Smaller, more agile and focused companies can execute better. Just look at Lucent.

Companies must adapt or become extinct. Here's a company that's taken an interesting approach to the "adapt or die" threat.

**MRV Communications (MRVC:NASDAQ)** has a myriad of technologies—optical components, terabit routers, wireless last mile access, and network management. But instead of growing as a huge "do-it-all" tech company, MRV plans to turn its divisions loose in a series of IPOs. And MRV could be creating a windfall for its shareholders.

## The optical incubator

MRV is an incubator, much like Internet Capital Group or CMGI—with one big difference. After MRV IPO's one of its babies, it plans on distributing shares to stockholders. And as you'll see, this could be a windfall for investors, though I hesitate to say we'll get rich quick.

MRV did over US\$300 million in sales for fiscal 2000, which means it sells for just over 1x sales. That's shockingly low for any company in the optical sector. JDS Uniphase sells for close to 5x sales. Comparisons with JDSU don't end there. MRV's first IPO, **Luminent (LUMN:NASDAQ)**, is the second company (after JDSU and NUFO) that sells and manufactures both passive and active components for optical systems. (For clarity's sake, an active component is one that changes a signal in some way. Amplifiers and lasers are active.)

You'll see MRV called an optical incubator in the press, but it's much more than just optics. MRV runs the gamut of networking products, from wireless last mile coverage to terabit routers and network management products.

## The IPOs

Luminent is the result of several acquisitions. Its products include thin film and fiber Bragg grating filters for DWDM (dense wave division multiplexing), WDM couplers, attenuators, add-drop multiplexers, detectors, transmitters, laser diodes, and transceivers for single-mode fiber optic transmission.

In a nutshell, Luminent creates the beam of light and the components to move the beam around the network. Customers include Cisco, Marconi, and General Instrument. Extreme Networks, Foundry Networks, and Cabletron act as distributors.

Luminent is profitable, a rarity among optic IPOs, earning US\$4 million on US\$65 million in revenues last year. Revenues hit US\$43 million in the six months following December 1999. The US\$207 million IPO will probably involve 12 million shares offered in the US\$17 range.

MRV will then hold 80% of Luminent stock, which it plans to distribute to MRV stockholders within 6 to 12 months of the IPO. MRV currently has 57 million shares outstanding, and holds 144 million shares of Luminent. That means the distribution ratio should be a little less than two Luminent shares for every share of MRV. Not bad.

## Number two

Next up is the Optical Access IPO. The papers have been filed, but as of this writing, the issue hasn't been priced yet.

If you ask me, this one's gonna be the blockbuster. Optical Access has a very compelling last-mile solution. For clarification, "last mile" refers to the area between a telephone company central switching office and the home. DSL is one solution for bringing megs of data to the home, as is fiber-to-the-curb. But both solutions have one thing in common: cost.

Any company can offer DSL service, but they have to lease space from the phone company. And running fiber links to every home is still prohibitively expensive. Optical Access provides a solution that lets

service providers bypass the phone company without the expense of bringing fiber to every home. It's called wireless optical.

The idea is to run fiber from the nearest network ring to a central point and then wirelessly transmit data to the end user. Of course, we've heard this idea before. AT&T has been testing wireless data for over a year with very poor results. MRV and Optical Access have overcome many of the problems that have plagued AT&T and others.

For starters, Optical Access can cover two miles with data rates as high as 155 mbps. But what makes this solution feasible is the mesh architecture it employs. Mesh architecture allows the data stream to saturate an area, eliminating any line-of-sight and weather problems. Point-to-point and point-to-multipoint wireless broadband both need line of sight. Both systems also suffer serious signal degradation in heavy rain and especially fog (as anyone with satellite TV knows).

MRV had one IPO last year and should have another two this year. And MRV shareholders can get a piece of all of them.

## Then there were three

The third IPO should be the iTouch division, which provides network management solutions. Network management sounds boring, but it's leading the charge to smart networks that can prioritize content, allocate bandwidth and charge customers accordingly.

iTouch also provides remote network monitoring equipment and a strong line of optical components, called Fiber Driver. The product line includes converters, repeaters, switches and CWDM (coarse wave division multiplexing) technology that can accommodate gigabit speeds (billion bits per second) over distances up to 110 kilometers.

Financial data for both iTouch and Optical Access are still considered part of MRV. When MRV files an S-1 for each company's IPO, we'll get a better idea of what these divisions are worth. Right now, with Luminent looking at a US\$2.5 billion market cap, I think it's safe to say that the parts are worth more than the whole. A lot more. And all you have to do to participate in this massive unlocking of shareholder value is own MRV stock.

## Après le déluge

Now, I can see you asking, "What happens to

MRV stock after it has spun off all of its value?" Could this be another 3Com/Palm Pilot deal, where the parent company gets crushed almost as bad as the spin-off? In a word, no.

First of all, Palm is a one-trick pony. Anybody who expected that stock to maintain a US\$40 billion market cap on US\$1 billion in sales got what they deserved. In my opinion, with over a billion shares, the stock is still overvalued.

Optical Access, Luminent, and iTouch are all more well-rounded companies, haven't seen massive stock dilution, have a better target market and better profit margins. But most importantly, MRV isn't spinning off all of its value. Fact is, MRV has funded several other startups and still holds large equity stakes in all of them. Charlotte's Web, Zaffire, and Zuma Networks will help support the MRV stock price after all the IPOs.

Let me give you a brief rundown of the partner companies, because there's some really interesting stuff going on here, too.

## **Charlotte's Web**

MRV owns 53% of Charlotte's Web, a maker of terabit routers. One router can handle 200 gigs a second, but the routers can be clustered to handle up to 5 terabits of data per second. This is a strong selling point, because carriers can add to their capacity on an "as needed" basis. And Charlotte's routers, named Aranea, are fully compatible with Cisco equipment, which means carriers can do partial upgrades.

The Aranea router is only about three feet high. Compare that with Avici's router, which is 7 feet tall and weighs 875 pounds. To hit 5 terabits, you need 14 of the behemoths. I think Charlotte's Web has the more practical solution. Maybe that's why Juniper took an equity stake in Charlotte's Web in the last round of financing. MRV's 53% piece could be worth a fortune if Charlotte's Web IPO's.

## **Zaffire and Zuma**

Juniper has also done interoperability tests with Zaffire, which is 20% owned by MRV. Tests went well enough for Juniper to take a stake in this company as well. Zaffire has created an optical networking system for the metro area, the final frontier for optical networks. Morgan Stanley and Bank of America Securities,

among many others, have also invested in Zaffire.

Williams Communications (WCG:NYSE), another investor, is currently testing Zaffire's lead product, the Z3000. The Z3000 will expand the capacity of metro networks using less power and a smaller footprint than any other product on the market. It's also backwards compatible with SNET architecture, as well as being designed for future network topography.

Zaffire has created a proprietary technology that allows a metro fiber ring topography to act like it was mesh topography. In other words, any node on the network can communicate with any other node directly. For more discussion on network topography, I highly recommend the website [www.lightreading.com](http://www.lightreading.com).

**Though we've barely scratched the surface of this complex company, we feel that MRV under US\$25 (before any IPO shares are distributed) is a heck of a bargain.**

Please call Diana Hayden, investor relations rep for MRV, for more information. Her number is 818-773-0900, ext. 362. You can also spend several highly informative hours perusing the websites for MRV and its partner companies at [www.mrv.com](http://www.mrv.com).

## **HyperNet Opportunity #4: Exponential Growth at Distress Level Prices**

High energy prices and a reversal of the wealth effect are all you need for an economic downturn. U.S. GDP growth came in virtually flat for the first half of 2001. And the world will follow. For 2001, the economists over at Morgan Stanley Dean Witter are calling for a 40% contraction in global GDP growth, to 2.3%.

We believe the slowdown is a cyclical event, rather than fundamental. The trend for energy prices and interest rates is down. Global capacity utilization is down due to bloated inventories, which should be sufficiently thinned by the second half of 2001. That sets the stage for a promising 2H 2001 and an excellent 2002. I think the time is right to go global bargain hunting.

The key to investing in the midst of a global slowdown is picking dynamic countries that will rebound strongly. And South Korea is one of the best examples.

## **Not an emerging economy**

South Korea has posted double-digit growth each

year since its currency crisis. It's made solid progress on economic reforms. And it's one of the most technologically savvy countries in the world.

We believe the inherent risks of a global economic slowdown are largely priced into South Korean equities, because South Korea does a huge export business. We can mitigate the risk of export-sensitive tech stocks (like chips) by finding companies that are focused on domestic demand. That means telecom stocks, and we've found a beauty.

## Go where the growth is

South Korea's **Hanaro Telecom (HANA:NASDAQ)** is trading at a 50% discount to book value, 1.5x cash and about 2x sales. These are distressed valuations, and we estimate the company has a 220% upside potential over the next 12 months. You'll understand when you see how fast this company is growing.

Hanaro is a competitive local exchange carrier (CLEC) that offers bundled services (local and long-distance voice, high-speed and dial-up Internet access, data hosting, call center) to the residential and small- and medium-sized business markets, with special emphasis on multi-tenant dwellings, of which there are thousands in Seoul alone.

## Asia online

Five of the ten largest Internet user markets are Asian. South Korea is the fourth largest, with 16 million users out of a population of 46 million. It's also the fastest growing Internet market in the world. By the end of 2000, South Korea was estimated to have nearly 3 million broadband subscribers, compared to 6 million in the U.S. and only 1.6 million in Europe.

By 2004, Internet penetration is expected to hit 43%, or 21 million subscribers. That implies a broadband subscriber base of around 6 million.

Hanaro is building the only significant last-mile access network other than the incumbent, Korea Telecom. Its fiber network reached an estimated 2.6 million households at 3,844 apartment buildings and 1,341 office buildings by the end of 2000. Hanaro owns 44% (it leases the rest) of a cable TV network that hits another 4.5 million homes.

And where neither fiber nor cable is laid, Hanaro deploys wireless LMDS (local multi-point distribution systems) for data. LMDS should be operational in 10

cities by year's end.

Network building is initially very expensive, but, over time, ownership will allow Hanaro to lower operating costs and increase margins.

## Fish in a barrel

85% of South Koreans live in cities, with 20% of the population crammed into Seoul alone. That means Hanaro can address a high concentration of potential customers for its network investment. In other words, signing up customers is akin to shooting fish in a barrel, as evidenced by the stunning growth numbers.

Hanaro is the only South Korean CLEC without a universal service order, which allows it to concentrate on areas with high population density. Hanaro's building to cover 80% of the population in 79 cities.

## Who's got the hookup?

Hanaro grew like mad in 2000, signing up broadband customers at a rate of 100,000 a month for the entire second half of the year. That's 80% quarter-over-quarter growth, making it the second largest broadband supplier in South Korea by subscriber numbers, and the largest by revenue.

Incredibly, it met its year-end 2000 subscriber estimates of 700,000 in July, and revised its yearly estimate to 1,100,000. The company expects subscriber numbers to nearly double in 2001. You've got to go back to 1997 and 1998 to find growth like that in the U.S.

Total revenues grew 62% sequentially, from US\$20 million in 1999 to approximately US\$300 million in 2000. Operating costs grew only 5% from 3Q to 4Q 2000. EBITDA loss dropped to around US\$25 million in 2000, and the company expects to post a positive EBITDA number in the next two quarters. Hanaro should be raking in US\$1 billion in revenues by 2002.

## The last mile

In its brief history (Hanaro began commercial operations in April of 1999), it's already conquered between 25 and 30% of the broadband market. This is due to strong demand, competitive pricing, and flexible last-mile deployment.

Hanaro offers DSL, fiber connections to home or office, cable access or wireless (LMDS) broadband access. Deployment decisions are based on a mix of economics and quality of service.

Average revenue per subscriber (ARPU) was US\$25.34 for 2Q 00, slightly below its two main competitors, Korea Telecom and Korea Thrunet. Gross margins hit 49% in Q3 and should top 55% in Q4.

## The wild card

Hanaro has a wild card up its sleeve—3G wireless. South Korea will award three 3G wireless spectrum licenses in the near future. Korea Telecom and SK Telecom won the competition for the W-CDMA license.

But the South Korean government is demanding that one of the future licensees adopt CDMA2000 as its network standard. We can't prove anything, but we suspect Qualcomm had something to do with this.

The theory is that Qualcomm is losing its grip on 3G wireless networks and it's desperate to get commitments to its 3G technology. And since South Korea was the site of the first commercial CDMA network launch, it kind of makes sense that everyone's still a little chummy.

Hanaro has expressed interest in getting the CDMA2000 license as part of a consortium. Qualcomm's on board. Now, all that's needed is a commitment from a major international carrier. Verizon (VZ:NYSE) has already declined.

The market has mixed reactions to Hanaro's 3G aspirations. On the one hand, it would be moving into the high-growth mobile telephony business. On the other, it would be taking on more debt. Either way, the uncertainty has put a cap on Hanaro's stock at US\$3. Resolution of the 3G license situation is the next potential catalyst for Hanaro's stock.

## Bridge over troubled water

We believe most of the risk for Hanaro is macro-economic. But the significant startup costs for telecoms shouldn't be ignored. Just look at some CLECs in the States. Hanaro's done a good job managing costs so far. EBITDA losses have been steadily declining for the last year, and were trimmed significantly in Q3 and Q4.

Hanaro's CAPEX peaked in 2000 at around US\$1.4 billion, and it should finish the year with over US\$300 million in cash. Hanaro should be adequately funded for the first half of 2001. The company prefers to raise money with bonds, but may use equity if the bond markets aren't receptive. Hanaro's debt/equity ratio is only around 64%, so there's room for a secondary offering—though that may not be the best solution

considering the stock's current price.

Hanaro currently has vendor financing agreements with Cisco, Hewlett-Packard, and Lucent (no surprise there), but that source may be less reliable in the near future. Macroeconomic conditions in South Korea could also affect Hanaro's ability to raise funds from foreign lenders.

Subscriber growth, improving margins, cost management, and the likelihood of turning EBITDA positive in the near future should help offset further price decline.

## The final word

Hanaro is a strong company with dynamic management, a focused business plan and huge market potential. Its current valuation is mainly the result of local and macroeconomic risks, but a negative perception of CLECs is also a factor.

**We consider Hanaro Telecom a strong buy under US\$3, with a one-year price target of US\$10.** Our price target is based on 3x estimated 2001 revenues and 1.5x estimated 2001 book value.

## HyperNet Opportunity #5: Rethinking Network Architecture

We're taught that the shortest distance between two points is a straight line. Apparently, the airline industry missed school that day.

How else do you explain a flight from Baltimore to Jacksonville, Florida, that transfers in Cincinnati? Last time we checked, Cincinnati was 550 miles in the wrong direction.

Little wonder that most airline companies lose money. Profits are always related to efficiency, and airlines have to be among the most inefficient businesses in the world. And it's because they operate on an outdated concept of a network.

Airlines operate from hubs. Most flights return to the hub before flying to a new city. There's no such thing as a straight line if your flight doesn't originate at a hub. It's time someone introduced this business to basic geometry.

## The network mindset

What's ironic about the hub-oriented network mindset is how prevalent it is. Any distribution

network you can think of operates on the same basic model—cargo is transported from various points to a centralized locale, where it is categorized and sent to its final destination. The same is true for telephone services, the Post Office, even Amway.

But conventional network architecture is changing. And lo and behold, it's the Internet that's leading the charge. Decentralized distribution networks are changing the shape and performance of the Internet. And there's one company we can thank for this, **Akamai Technologies (AKAM:NASDAQ)**.

## **Mommy, where do networks come from?**

The idea behind Akamai came from a bunch of smart people at MIT. Tim Berners-Lee, the inventor of the World Wide Web and an MIT professor, issued a challenge to his colleagues 1995—invent a fundamentally new and better way to deliver Internet content to users.

F. Thomson Leighton, an MIT professor of applied mathematics, answered the challenge with an intelligent alternative to hub-oriented network architecture.

Dr. Leighton wanted to bring the Internet closer to the user. He also believed he could speed delivery by giving computers the intelligence to direct content along the fastest route, avoiding bottlenecks. The result is a network of distributed servers, working as a system to deliver content without depending on a centralized controlling core—otherwise known as Akamai Technologies.

## **Better, faster, stronger**

Akamai is a content delivery company that serves users over its 8000-server global network. It's called a decentralized distribution network. The Akamai network is at the "edge," closer to the user. Download times are anywhere from two to ten times faster.

And on the Internet, speed is vital to a website's success.

In a study completed in June 1999, Jupiter Communications found that if download times didn't meet users' expectations, 37% went elsewhere. 24% of users made the switch permanent. Zona Research estimates online retailers lose US\$4 billion a year from customers who are chased away by long download speeds. On the Web, "slow" means anything that takes longer than 8 seconds.

Akamai's content delivery solution not only helps online retailers keep customers, it also cuts down on investments in expensive servers, routers and other Internet gizmos. The Motley Fool, for example, uses Akamai to deliver as much as 90% of its content, greatly reducing the need to continually upgrade its own network.

In all, Akamai has over 2800 customers, including Microsoft, Yahoo!, Apple, CNN, Reuters, and CBS. Akamai is currently working on ways to optimize streaming media. If successful, Akamai will hold one of the major keys for unlocking the potential of the Internet.

## **Getting Akamaized**

Here's how it works: customers tag bandwidth-intensive portions of their websites for delivery. Akamai stores the tagged items on its server network. When a user downloads a web page, the "Akamaized" items get sent over Akamai's network. Even though these items require more bandwidth, they usually arrive at the user's computer before the rest of the content.

Akamai charges for bandwidth used, which makes for very interesting pricing models. Customers pay only for what they need.

Customers	Rev (\$mil)	Seq.	Growth
ISLD	125	8.9	30%
AKAMx	2,100	18.1	151%

This makes Akamai the ideal solution for delivering streaming media. Customers don't have to upgrade their servers and add bandwidth for one-time events like sports contests, breaking news or corporate conference calls.

For example, in October 2000, Akamai hosted Microsoft's developers' conference in a pay-per-view web broadcast that totaled 40 hours. The availability of the Webcast increased attendance by over 40%. And Microsoft had to do next to nothing.

## **Want growth? You got it!**

Akamai's the first mover in this new space and it's way out in front of its closest competitor, Digital Island. The following table uses data from the quarter that ended June 30, 2000. As you can see, Akamai's business is bigger and growing faster than its nearest competition.

Akamai is a startup, even though it sports a pretty good-sized market cap. The company IPO'd in October of 1999 and only started generating significant income in 2000. But the sequential revenue growth is astounding.

In the first quarter of 2000, which ended March 31, revenues were US\$7 million. Third quarter 2000 revenues were US\$27 million, and 4Q00 revenues were US\$37 million. Total 2000 revenues were US\$89 million, and analyst firm Epoch Partners has 2001 revenues pegged at US\$250 million.

Epoch goes on to say that Akamai has only cap-

ured 10% of its potential market, so the possibility of an upside surprise in 2001 revenues is very high. Akamai has around US\$300 million in the bank and carries a book value of US\$22 a share.

**We rate Akamai Technologies (AKAM:NASDAQ) a strong buy under US\$12 a share.**

For more information on Akamai Technologies, contact Akamai Technology, 201 Broadway, Cambridge, MA 02139, phone: 617-250-3000, fax: 617-250-3001, toll free: 877-425-2624, Web: [www.akamai.com/home.shtml](http://www.akamai.com/home.shtml).