



# Running with laser scissors Make 358% over the next six months without putting your eye out!

By Christian DeHaemer

Welcome to the year 2000. The future has arrived. They've cloned cows, sheep and monkeys. There are robotic dogs, vacuum cleaners and lawn mowers. There are TV screens as flat as a newspaper that you can roll up and take with you. The Japanese are walking around with Dick Tracy watches.

In a few more months we will have mapped the human genome and will begin curing genetic diseases. There is a man walking around with a corpse's hand and it works just like Frankenstein — all twitchy and bloated — but it works.

The only parts of you they can't replace are the brain and the spinal column — and ex-Superman, Christopher Reed, is working on that one.

There are hybrid cars that get 80 miles to the gallon, buses powered by fuel cells that emit water as exhaust, and high tech materials that can stop a rifle bullet and yet weigh next to nothing. A few weeks ago, a couple of smart guys in California managed to transport a proton across their lab. Don't ask me how they did it or what it means to society as a whole. I believe that teleportation would be anarchy. (Imagine thugs materializing in your living room.)

The future isn't all here. I'm still waiting on the antigravity belt and the moon colony, but barring those things, I am simply in awe of the technological progress over the last 25 years.

## Blow glass

But that won't stop me from searching out opportunities in the next new thing. *Taipan* is on a constant search for the new and the profitable.

Consider the simple mechanical means by which modern scientists manipulate cells, chromosomes, and other tiny bits of organic matter. They use high tech microscopes and

computer guidance systems.

But when they actually have to physically move microscopic things around they use pipettes, which are tiny glass tubes. This is like framing a house with a sledge hammer. You can do it, but there has to be a better way. Well, the company I'm about to tell you about has solved that problem and a few more along the way — and it's trading today for under US\$3 — with a

**I conservatively rate Cell Robotics as a strong buy up to US\$5 with a 12 month target of US\$13.75 — a 358% percent gain over current levels. Don't chase it. But if you get in, I think will have a winner.**

market cap of less than US\$20 million! But within two years their sales could reach the US\$1 billion mark. Read on.

## Bloody fingers

If you've been to the doctor in the past thirty years, you've had a blood test. Some ancient nurse with a hair coming through her mole grabs your finger and jabs it with a sharp piece of metal. Then she holds a small glass tube to the wound, which sucks up the blood. Your finger gets bruised a little bit and is sore for the rest of the day. Life goes on.

But imagine if you have to jab your own finger multiple times a day, every day for the rest of your life. Or what if your five-year-old, or your grandmother, was in the same predicament

(over, please)

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# TAIPAN

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ment. Today it's the daily regime for over 150 million diabetics worldwide. But things are changing.

**Cell Robotics (CRII: Bulletin Boards)** has invented a device the size of a cell phone that perforates the skin with a laser. It's been dubbed the Lasette — like a lancet, get it?

The Lasette costs just under US\$1000. It has adjustable power for various skin types and is reputed to be nearly painless. The Lasette also heals faster, is sterile, and causes no bruising or excess bleeding.

You simply put your finger in a small indentation located at the top of the device, adjust the power, and presto — you get a drop of blood from which diabetics are able to measure glucose to determine proper insulin dosing. I know I'd buy one.

### **Lasers are not just for breakfast anymore**

There are two types of Lasettes — the Lasette and the Professional Lasette. The latter is about the size of a videocassette and contains a battery-driven laser with a charger. This was introduced about 14 months ago and sells for just under US\$2,000 to professional environments such as hospitals.

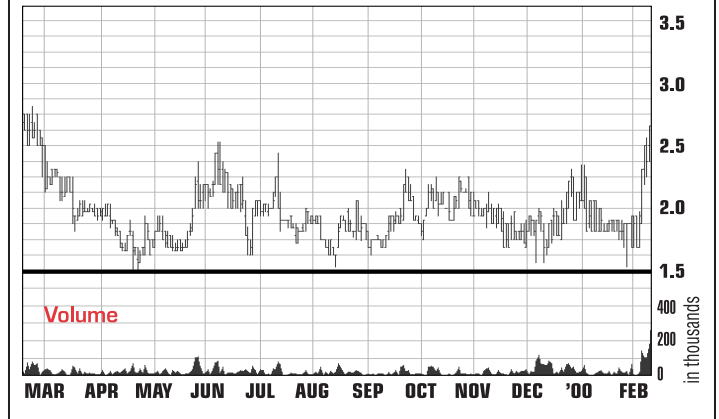
There are some 53,000 medical sites in the United States alone that perform capillary blood sampling.

The pros of the Lasette are obvious. It's quick, easy and painless. The Lasette has no sharp, bloody, AIDS-infected points that must be disposed of. Not to mention that it takes the jab method out of the hands of nurses who just had a fight with their boyfriend. And it eliminates the perfectly rational fear of needles.

But most importantly, the Lasette is the only device that has been FDA approved as an alternative for the steel lancet. The home model has also been approved by a number of insurance companies.

Insurance companies like it because it increases the likelihood of personal glucose testing and therefore reduces the risks of emergency room visits.

### **Cell Robotics (CRII:BULLETIN BOARDS)**



### **The Lasette market**

The annual market for glucose testing is estimated to be US\$3 billion worldwide and is expanding at a 12-18% clip. In the United States, the estimated number of people who test their blood sugar levels on a daily basis exceeds 4 million. The total market for diabetes care is estimated to be US\$44 billion.

Like all markets, the diabetic population is offered items through direct mail. The National Diabetic Assistance Corp. (NDA) and Cell Robots have a nonexclusive distribution agreement. The NDA will sell the home-based Lasette to its focused mailing list of 1.5 million — of which 500,000 are currently customers.

The marketing of this product has barely gotten off the ground and will ramp up over the next few months.

The Professional Lasette is currently being marketed by Chronimed, a mid-sized medical device supplier. The terms of the deal guaranteed purchase of 6,500 Professional Lasettes

### **HISTORICAL QUARTERLY RESULTS REVENUE**

(Thousands of U.S. Dollars)

	1996	1997	1998	1999
1st Qtr MAR	128	257	456	516
2nd Qtr JUN	335	278	328	601
3rd Qtr SEP	130	294	274	265
4th Qtr DEC	70	208	371	—

### **EARNINGS PER SHARE**

(U.S. Dollars per share)

	1996	1997	1998	1999
1st Qtr MAR	-0.090	-0.100	-0.060	-0.140
2nd Qtr JUN	-0.080	-0.120	-0.100	-0.059
3rd Qtr SEP	-0.100	-0.140	-0.130	-0.060
4th Qtr DEC	-0.095	-0.120	-0.100	—



over a two-year period and a US\$600,000 investment in Cell Robotics.

### **Really big market**

If one percent of the U.S.-based insulin-injecting diabetic population of 4.7 million bought a personal lasette — you are looking at revenues of US\$55 million. Or two times their current market cap. If 5 or 10 percent bought a lasette — you are looking at somewhere between US\$276 million and US\$552 million. On the world stage the potential soon exceeds one billion!

Before you start to call me math happy, consider that this isn't their only product. That's right, there's more!

### **In Vitro Workstation**

The IVF workstation is a computer-controlled microscope with a motorized stage and a video camera. It utilizes a laser to manipulate eggs, embryos and sperm. The laser also assists embryo hatching. Furthermore, it enables data to be stored on standard word-based software.

The world of in vitro fertilization is growing rapidly. The IVF workstation increases success rates as well as cutting time and cost.

There are some 1,300 test-tube baby clinics worldwide and 300 in the U.S. The average cost of an in vitro process is US\$5000. Often, a couple needs to go through the process multiple times. Needless to say, increases in productivity benefit all concerned. The IVF is currently being used in Europe and FDA testing is being done in the United States.

### **Cell Robotics Workstation**

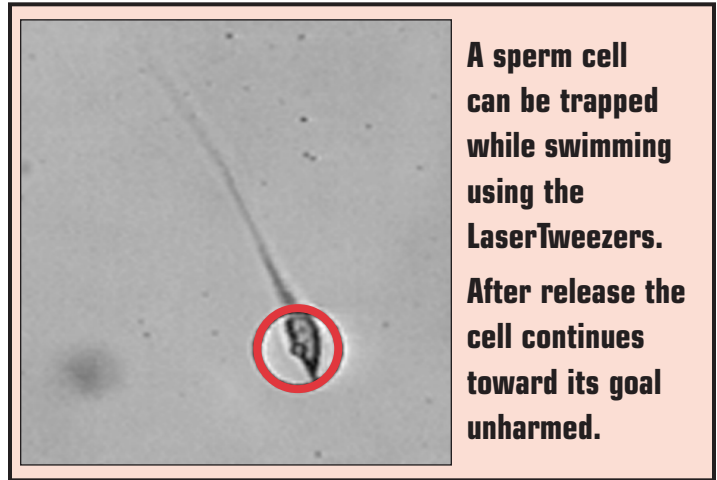
The Cell Robotics Workstation is a computer-controlled workstation similar to the IVF Workstation. It is intended for use in optical trapping, manipulation of micro-biological matter and microsurgery. Let's face it — with the human genome project nearing completion there are more and more of these labs every day.

The workstation uses lasers instead of pipettes. These lasers have patents and are dubbed LaserTweezers, LaserScissors, CellSelector and SmartStage. They enable precise manipulation of cells. I know I've never met a coordinated micro-biologist.

The workstation is the next generation for use in micro-biological laboratories. It is used in a variety of medical, biological and genetic applications for manipulating and cutting cells and chromosomes.

### **How to sell a laser pricker**

Cell Robotics intends to focus on what it believes will be the most profitable and most widely accepted component of its business — the Lasette. The company feels that it will be of particular benefit to the 10-33 percent of diabetics who suffer from needle phobia. This would suggest that the sales would go beyond 1 percent of the



**A sperm cell can be trapped while swimming using the LaserTweezers. After release the cell continues toward its goal unharmed.**

available population.

Cell Robotics is just now starting to ramp up its advertising. In addition to the direct mail campaign mentioned above, advertisements will appear in several magazines including Diabetes Forecast, Diabetes Self-Care and Diabetes Interview.

The time to purchase this stock is now, before it makes the news.

### **The numbers baby!**

Cell Robotics is a start-up company with an eye on growth. Revenues increased 31% to US\$1.38 million in the first nine months of 1999. Total assets increased from US\$1.5 million at December 31, 1998 to US\$2.1 million at September 30, 1999. Over that nine month period US\$843,492 was burned from operating capital.

A letter of credit is in the works, but I wouldn't be surprised at a secondary offering if this stock starts to run.

There are 8.2 million share outstanding with a 6.8 million share float. This stock has not been heavily traded in the past but is starting to pick up some attention.

There are risks associated with any start-up. This one is no different. Based on the revenue projections of US\$110 million (2% of the daily multiple users) and considering that this company could make as much as US\$522 million over the next 18 months — and considering that it has a market cap of only US\$40 million (at US\$5 a share — current price is US\$3) — this company should at least trade at sales, if not 2 or 3 times sales, considering its growth rate will be more than 5000%.

I conservatively rate Cell Robotics as a strong buy up to US\$5 with a 12-month target of US\$13.75 — a 358% percent gain over current levels. Don't chase it. But if you get in, I think you will have a winner.

**Buy Cell Robotics (CRII: OTC BB) up to US\$5 today!**

*For more information contact: Cell Robotics at [cii@cellrobotics.com](mailto:cii@cellrobotics.com), tel: 505/343-1131.*

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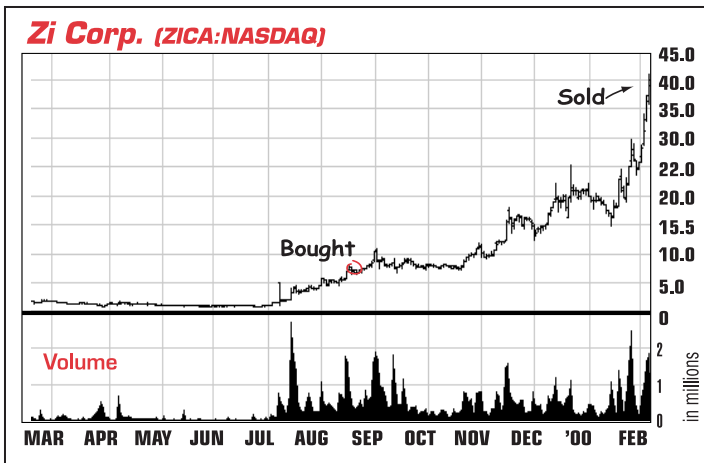


**Sell Zi Corp. (ZICA:NASDAQ) above US\$39—Lock in a 421% profit in less than six months**

It's been a great run. If you didn't get my hotline last week, it's time to take profits. A recent article in a couple of newsletters as well as a push from Lehman Brothers has brought in a wave of new buyers. I believe that this is the blow off top we've been expecting.

**Zi Corp.** now has a market cap over US\$1 billion. In March, the company will report quarterly revenues of US\$3 million. This announcement will throw a cold bucket of water on this fire.

I might be a little out of it, but a Canadian company that changed its mission three times, lost a patent fight, and whose major trading partner is communist doesn't deserve a market cap of US\$1.2 billion nor to trade at 1,187 times sales. But then again, maybe it's just me.



Zi Corp has been a great story stock from the beginning. That story is now widely disseminated. The downside from this level greatly outweighs the upside. **It's time to pat yourself on the back and seek opportunities elsewhere. Sell Zi Corp. now! Lock in profits.**

**The comeback of kitsch**

MDA went on a rampage yesterday, shooting up to US\$7.75. It picked up a couple of buy recommendations, but my feeling is that the rapid rise was mostly based on misplaced B2B Internet hype.

The company still has decent fundamentals and put in a strong Q3 — surprising analysts by 27%. One of the buy recommendations from a less than top name broker put a 12-month price target at US\$20.

I don't have a lot of trust in this company's management. However, as long as Jesus freaks and crystal worshippers continue to buy the art, I'm willing to hang on.

That said, I don't want to follow it down in the current market climate. **Put a stop in at US\$6 and we will keep a close eye on her.** I'll come back to this on the hotline.

**Media Arts Group (MDA:NYSE)**



**Talk.com remains a buy under US\$18**

Talk.com is the low-cost producer of long distance service. You can't beat 5 cents a minute, all the time, anywhere in the United States. In fact, I am a customer. If you knew how much my wife jabbered away on the phone you'd understand why.

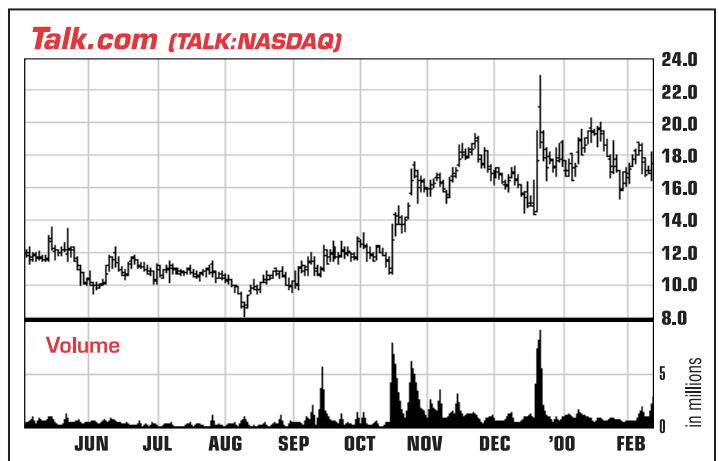
Last week, **Talk.com (TALK:NASDAQ)** reported earnings which were exactly in line with expectations. Talk.com Inc., announced 4Q EPS US\$0.25 vs. loss of US\$1.56 and annual EPS US\$0.90 vs. loss of US\$5.20. 1999 online revenue grew 78% and gross profit more than doubled.

These are great numbers for a company that trades at valuations which are half its industry. However, the announcement was not enough to blow out the short position. There are 7.8 million shorts (32 percent of the float!) priced in at US\$11.

The possibility for a short squeeze is very real.

Unless you believe that free long distance is coming you have to be a buyer in Talk.com. The free services I've seen aren't worth the aggravation of listening to advertisements. The other option would be free over the Internet. I simply don't believe that people will forego the ease of a wireless telephone, for the rigmarole of sitting at a desk with a dial-up modem.

**Talk remains a strong buy.**





# Tell that pencil-pushing bureaucrat to hit the bricks *She's been replaced by the Internet!*

by Brian Hicks

We've all been there. Standing in line at the world center of intellectual discourse, the Department of Motor Vehicles.

You arrive 7:00 in morning thinking you'll beat the crowd. Not this time, guy.

The line is out the door and around the corner.

After dodging the panhandlers in the parking lot, you have to contend with the woman in front of you and her four screaming kids. Satan's minions have come to see their sister get her learner's permits.

Add to your increasing aggravation the 80-year-old woman who won't shut up. Blah... blah... blah... as if you care about her 8 children, 25 grandkids, and her swelling ankles.

The teller, fifty miles ahead of you, is new to the system. And yes, she has an attitude... and is doing you a favor.

What makes the entire situation worse is that when you finally make it to the counter, her plastered-on smile is little comfort for the inevitable phrase, "You're in the wrong line!"

These are the days you wish you hadn't taken your Prozac... and forgot to take the pistol out of your car.

## Welcome to Hell's Kitchen

For an hour and a half you've been standing in a line so long it's reminiscent of "Hands Across America."

But can you imagine not waiting—ever! Well, it's about to come true. And just in time for Christmas.

The National Information Consortium (NIC) provides Internet-based electronic government solutions for nine states and one local government.

## It's a godsend

EGOV is a leading provider of "eGovernment" solutions to state and local government entities. The company provides Internet-based, transaction-enabling solutions for these government bodies.

The company's goal is simple: to allow governments and citizens a better process of interacting with one another. What this means for you is standing in the line of the DMV may become a thing of the past.

At the present time, 95% of EGOV's US\$63 million run rate in revenue comes from DMV-related services. In October, Idaho was the 10th state to announce a contract with EGOV. The company expects another contract by year-end.

Revenue estimates reflect the company's momentum. Because of better than expected revenue growth in 3Q/99, the company plans to increase revenue projections for 4Q/99 and bumping up revenue estimates for 2000 and 2001.

First full quarter results as a public company showed EGOV reporting US\$15.7 million in revenue and (US\$0.03) in EPS, which beat out the revenue projection of US\$14.8 million.

This is positive momentum for EGOV as it heads into the 4Q and 2000. The company is increasing estimates from US\$54.6 million to US\$57.0 million for 1999, and from US\$90 million to US\$95 million for 2000.

That's blockbuster growth.



A catalyst for the increase in estimates could range from the announcement of the 10th state to its alliance with Oracle. As they stepped out of the box for their first "full" third quarter, total revenues for the company was an astounding US\$15.7M, a 61% increase from 3Q-98.

Simultaneous with the 3Q release, EGOV announced it entered into an alliance with Oracle to promote web-centric, transaction-based solutions for federal state and local governments.

Oracle will help EGOV in promoting its public/private partnership "e-gov" model through sales and marketing efforts in the government services segment. The hope is that Oracle will be able to give EGOV strategic leverage as the company begins to enter into larger states.

EGOV also announced that it was planning to acquire eFed, a leading provider of Web-based procurement solutions to federal and local governments.

The company decided to make this move because it felt as if eFed fit into its growth plan by adding another stream of

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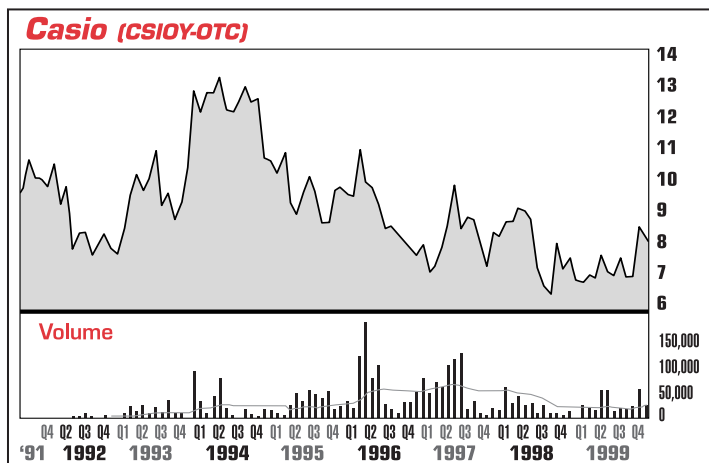
# Play the wireless Internet revolution with this forgotten Japanese electronics giant

By James Passin

“Convergence” is an ugly word. But it’s an inevitable yet potentially lucrative trend. Internet, TV, radio, telephony are converging into a seamless reality. The first great .com era was about bringing people to the Internet. I believe the next .com era will be about bringing the Internet to the people.

LCD screens will be imbedded into nearly every artifact of daily life. Wireless technologies will add Internet connectivity to appliances and clothing. Eventually, nanotechnology will enable the direct exchange of data between your body and the Internet.

One of the pillars of convergence is miniaturization. As chips and circuit boards shrink in size, the consumer applications get more compelling (remember the once fashionable bag phones of the mid 1980s?). And no one knows more about miniaturizing electronics than the Japanese.



**Casio Computer Co., Ltd. (CSIOY-OTC)** is a leading manufacturer of branded consumer electronics. Casio dominates the lower- to mid- end market for digital watches and calculators. With over US\$3.5 billion in annual sales, Casio is a global marketing powerhouse. Recently, Casio has switched its focus to value-added Internet products. I believe that Casio will dominate the exploding market for cheap wireless devices.

At current levels, Casio is trading at just 0.7x sales and 1.4x book value. If Casio succeeds in transforming itself into a major wireless/Internet player, the current market capitalization will look like a joke. As a conservative, long-term, blue chip play on the market for wireless Internet access, I recommend Casio as a Strong Buy at current levels.

## Rising sun

Japanese manufacturers tend to suffer from unacceptably

low profitability. Casio is no exception. In 1999, Casio generated a pathetic operation profit margin of 2.8%. The old line Japanese companies suffer from excessively high fixed costs. An inflexible labor market and culture of bureaucracy make it difficult for managers to squeeze out fat. Lacking in any clear shareholder value focus, managers have squandered capital on worthless investments, piling up assets and hurting return on equity (ROE).

This view is the consensus. But it no longer describes corporate reality in Japan. Unemployment recently hit a post-WWII high—an unequivocal sign that the labor market is loosening up. Managers at Internet companies have been rewarded with exploding stock prices (Yahoo Japan climbed from US\$4,000 to US\$1,000,000 per share since the 1997 IPO!). The gray-suited career middle managers are doomed to disappear...

In my opinion, the long-awaited restructuring of corporate Japan is already occurring. You can position yourself now or wait for mainstream investors to pile into the market.

## Voodoo analysis

The collapse of the dollar against the yen is over. Technically, it’s evident that the dollar has hit a major bottom. The yen broke the 100-day moving average in early January. If you follow voodoo technical analysis, you can see the clear head-and-shoulders bottom on the daily chart. In my view, the dollar could rally to 120-125 against the yen.

The reversal of the yen signals the end of the deflationary era. Japan has been trapped in a deflationary spiral since the collapse of the 1980s equity bubble. In a deflationary environment, falling prices trigger falling prices. Deflation tends to lead to a rising currency, since a decline in the general level of prices is equivalent to an increase in real purchasing power. A sustained weakening of the yen would indicate that the massive expansion in Japan’s monetary base in the late 1990s and loose fiscal policy has finally kickstarted a reflationary spiral.

The Japanese exporters have been clamoring for yen weakness. If your sales are denominated in dollars and your costs are denominated in yen, you want the yen to decline. The robust yen has strangled profit margins for even the most competitive exporters. I suspect that lobbyists and bagmen have finally persuaded the central bank to quietly intervene against the yen (I wouldn’t be surprised to see a “coincidental” yen downtrend lasting until mid-March, right before the end of the Japanese fiscal year).

Casio immediately benefits from yen weakness. 50% of



Casio's sales are exports, while almost 100% of Casio's costs are in yen. If my bearish outlook for the yen is accurate, then Casio is on the verge of a dramatic turnaround in profitability.

Casio's stock price exhibits a high inverse correlation with the yen. The major peaks and valleys line up when you eyeball a chart. Applying an historical regression analysis, there is a strong 50% statistical correlation between the yen and Casio. Based on my technical view of the yen, a significant rally in Casio is imminent.

Escalating inflationary fears will force Japanese households to switch their savings from bank deposits to equities. Since the average household has US\$200,000 in savings, this represents a tremendous source of liquidity for the stock market.

Just as the Koreans converted into daytrading fanatics (only one year after the Asian crisis), the Japanese are culturally susceptible to the e-trading bug. NASDAQ and Softbank are setting up new electronic exchanges in Japan to bypass the traditional Yakuza-tied brokerage industry. Casio's new wireless devices will become handheld platforms for daytrading. The Japanese stock market is setting up for speculative frenzy... And, of course, the money will flow into tech stocks like Casio...

### **Robust brand equity**

I remember banging on a Casio keyboard when I was 10 or 11. My parents were grateful that I quickly abandoned my music career. While a Casio is no Yamaha (and I am no Kitaro), it is dirt cheap—and fun for children.

Electronic musical instruments only represent 11% of total sales and are insignificant contributors to operating profits. In fact, this product segment declined 10% in 1998 and 25% 1999 in absolute (yen) terms. Casio is deploying its resources in higher margin, faster growing product segments.

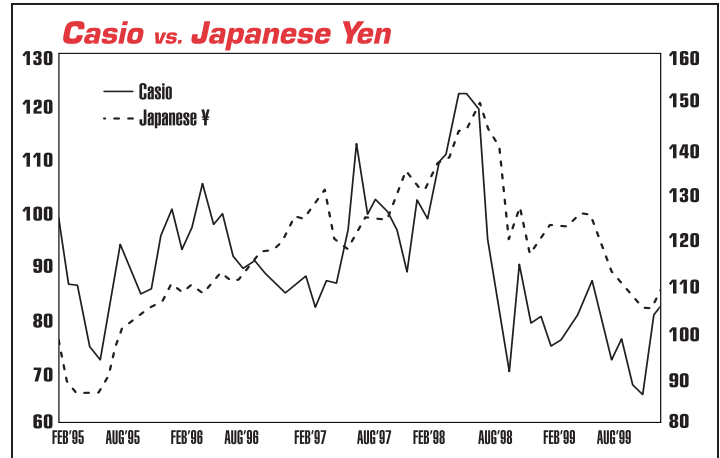
But I bring up the ubiquitous Casio keyboard as a strong testimony to the company's marketing and distribution muscle. It's hard to find a household that wasn't graced at some point with a Casio keyboard.

I've owned numerous Casio calculators over the years. While I've never owned a Casio watch, I see them everywhere. Casio has a deep understanding of the consumer electronics market and rock solid market position.

Casio crushed the high end market for digital watches with its G-Shock brand in 1998. G-Shock and Baby-G's rugged metal and plastic construction appealed to young consumers in the U.S., Japan, and Europe. While the initial trendiness of G-Shock is beginning to wane, it is still a powerful brand.

### **Real estate of the wrist**

Casio recently unveiled its new line of value-added digital watches. The Casio Wrist Audio Player can play 30



minutes worth of CD-quality music using MP3 compression. You can download music from your computer to the watch. Headphones attach to the watch. The retail price of watch will be around US\$200.

The Casio PC Unite is an amazing watch: it can exchange data with Palm Pilots using infrared signals. The retail price will be around US\$100. Casio Wrist Camera is an excellent spy gadget. You can take up to 100 digital black-and-white photos in JPEG or BMP formats with your watch. The retail price will be around US\$200.

I anticipate that sales of Casio's new watches will explode. None of them are excessively bulky or expensive. The wrist represents prime real estate for the Internet era. Everyone wears a watch. I glance at my watch five or six times per day. There is no more convenient Internet terminal than the face of a digital watch. I would expect Casio to increase the breadth of its value-added product line with a co-branded wireless watch over the next eighteen months.

### **Forget Palm**

Palm Pilots (made by COMS-NASDAQ) are a pain in the neck. I can't stare at the screen without getting a headache. Call me an idiot, but I can't get the hang of Palm's orthography. Don't get me wrong: Palm Pilots are great products. But there's definitely room for a more convenient device.

Casio's Cassiopeia handheld PC is widely regarded as superior to the Palm Pilot. But sales have fallen below expectations. The initial retail price of ¥79,800 (US\$730) priced it out of the market. Only 300,000 Cassiopeias have been sold worldwide. While international sales have dragged, Cassiopeia has achieved the #2 market position in Japan. Recently, Casio linked up with NTT DoCoMo (Japan's cellular giant) to produce a Cassiopeia for DoCoMo phones. While the market views Cassiopeia as a failure, I view it as an invaluable training ground for Casio's next generation palm-sized PCs.

*(Continued on next page)*

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### Casio's master plan

Casio has been forging some interesting alliances. While Casio could easily have jumped on the **Java (SUNW-NASDAQ)** or Linux bandwagon, Casio partnered with **Microsoft (MSFT-NASDAQ)**. Software gurus consider Windows CE to be an inferior operating system for hand-held devices. They're probably right. But Microsoft desperately wants to extend its global hegemony to wireless software architecture. As the PC loses relevance, control over the post-PC operating systems becomes critically important. Bill Gates' return to the software side of the business suggests that Microsoft isn't going to bend over willingly. Casio has made itself a preeminent component of Microsoft's grand strategy for survival.

Casio's agreement with **AOL (AOL-NYSE)** is highly significant. Casio acquires access to AOL's 20 million Internet subscribers. While I personally detest AOL's service, it has an unrivalled brand and tremendous marketing power. Like Microsoft, AOL will stop at nothing to achieve a quasi-monopoly position. Casio's systematic choice to side with market leaders, however imperfect their products, reveals the brilliance of management's master plan.

Recently, Casio announced separate agreements with both Siemens and Vodafone to develop palm-sized wireless Internet devices. Neither Siemens nor Vodafone would have partnered with Casio unless they believed in the company's miniaturization technology.

The total worldwide market for palm-sized computers is expected to grow four fold to US\$7 billion by 2003. Assuming 20% market penetration, Casio's handheld PC division will generate US\$1.4 billion in sales. Projecting a 4x price/sales multiple, this would imply a US\$5.6 billion market cap for this division alone—double the current share price. The coming flotation of 3Com's Palm Products subsidiary is likely to trigger a re-rating of Casio.

### Ball bumping IPO

Casio is taking concrete action to realize value in the company. Casio is planning to spin off Casio Micronics in an IPO. Casio Micronics is involved in semiconductor capital

equipment. This subsidiary has the world's largest market share of "ball bumping," a new method of semiconductor packaging (the old connectors are made of metal pins; the new connectors are spherical). Casio Micronics's rapid sales growth, healthy margins, and unique story warrant an independent listing. The successful flotation of Casio Micronics should give a huge short-term boost to Casio shareholders.

I am extremely bullish on Casio's liquid crystal display (LCD) division. Casio specializes in small LCDs called thin-film-transistor LCDs, or TFT-LCDs. There are only two significant competitors in the TFT-LCD market: **Sharp** and **Hosiden (HOD-GR)**. TFT-LCDs are tiny flat screens used in digital video cameras. Eventually, LCDs will be embedded everywhere (washing machines, toilet stalls, dashboards).

### Buy this giant today!

Given Casio's massive sales force, extensive distribution channels, outstanding brand name, and powerful partners, I believe that the company's Internet strategy has a high probability of success. Casio's current market cap does not reflect any significant "Internet bubble" valuation. Regardless of the success of future products, the imminent rebound in the dollar/yen exchange rate will lead to a material recovery of profitability.

I consider Casio to be a Japanese turnaround story with an Internet kicker. While Casio ADRs trade in the US under ticker CSIOY, the ADR is illiquid. The Berlin-traded Casio GDRs are a better buy (CAC-Berlin). 10 GDRs = 1 ADR (the GDR is trading around US\$9; the ADR is trading around US\$90). However, you will need to have access to foreign stocks to trade the GDR (I recommend contacting Peter Schiff, Euro Pacific Capital, tel. 949-863-9500). **Casio ADR (CSIOY) is a Strong Buy under US\$90 with a three year target of US\$300.**

James Passin is a Portfolio Manager with Firebird Management and Contributing Editor to *Taipan*. James Passin's views are strictly his own and not necessarily the views of Firebird Management or *Taipan*.

(...continued from page 5)

revenue that can be expanded across current and new states, and new markets (including federal and local government).

The company plans to purchase eFed for US\$30 million in cash and stock.

A new state may be in the works for EGOV. Although the company has not officially named a state, it has hinted at a state with approximately 1 million in population which would represent approximately a US\$3 million annual revenue opportunity for EGOV. EGOV also hinted that there might be three other state prospects in the partnership selection phase.

## MICROCAPS

In those states that have EGOV, business and citizens are able to gain a faster, more convenient and more cost-effective means to complete transactions with government.

These transactions include, but are not limited to, permit applications, license renewals and report filing to obtain government information. With such technology, the woman behind the two-inch plastic glass window that can't seem to give you a straight answer for anything and around whose throat you just want to place your ten fingers would be gone. **The stock is a buy under US\$60 a share.**



# Get on the Bandwidth Bandwagon with this small-cap play on the Optical Revolution!

*Briton L. Ryle*

For want of a nail the shoe was lost, for want of the shoe, the horse was lost. And for want of one product, US\$64 billion in market cap was lost.

It's called a Dense Wavelength Division Multiplexer (DWDM). It splits the colors in a light-wave into individual, unique wavelengths, or channels. It's the most important advance in optical networking and a godsend for cost-conscious, bandwidth-hungry companies. And Lucent can't make enough of 'em.

The telecom equipment giant warned that earnings would be missed. The stock got hammered, dropping US\$64 billion in market cap in a single trading day. But there's always an upside.

Lucent failed to anticipate the demand for their new DWDM products. Demand for DWDM products is far outstripping supply. And one company is particularly well-positioned—**APA Optics (NADSAQ:APAT)**. APA just announced two revolutionary DWDM products. And when word gets out, APA will explode to the upside.

If you've paid any attention to tech stocks over the last year, you know about optical companies, like JDS Uniphase or Sycamore networks. You've also seen their valuations skyrocket. JDS boasts a market cap of US\$58 billion on US\$673 million in sales. Sycamore's market cap is US\$23 billion on only US\$30 million in sales. Clearly, the market sees a bright future for these companies.

Sales estimates for the optical equipment sector range from US\$17 billion to over US\$40 billion by 2003. International DWDM sales should hit US\$3 billion by 2004. Another forecast sees domestic DWDM sales going from US\$2.1 billion in 2001 to nearly US\$6 billion by 2006.

## **Buy or die**

The story behind most booming optical equipment companies is growth by acquisition. Over the last few years, the pace of technological innovation has been blinding. One lapse in strategic judgement can put a company out of the running. Often, there's no time for R&D. To keep up, companies have to buy or die.

JDS Uniphase, Nortel, Cisco, and even Lucent have been on the acquisition warpath. Cisco alone spent US\$9.5 billion on optical companies in recent months, including US\$7 billion on Cerent, which had only US\$10 million in revenues. CEO John Chambers said Cisco plans to buy at least another twenty companies in 2000. Interestingly, Cisco doesn't have DWDM technology. Yet.

JDS bought Uniphase for US\$6 billion and dropped

another US\$15 billion on E-Tek Dynamics. The trend toward consolidation and insane valuations will continue. Why?

Because many believe the optical industry will bury all other network technologies in as little as two years.

## **Who's your Daddy**

It's ironic that Lucent often gets painted out of the optical landscape. After all, Lucent is the father of fiber optics. Two scientists, Arthur Schawlow and Charles Townes, at Bell Labs (now Lucent's R&D division) got a patent for their laser design. And Bell Labs now holds over 2,000 patents for optical technology.

Lucent may have lost a battle, but I don't see the company losing the war. Lucent has a huge lead in market share, having sold US\$6 billion in optical equipment and fiber in 1998. Compare that to JDS sales. And the Ortel acquisition will put them into the voice over cable market as well as adding some nifty optical technology. You can bet that recent problems will not be soon forgotten at Lucent.

But here's the kicker. I've heard there's a chance Lucent may issue a tracking stock for its optical division. That stock would unlock billions in value. It'll probably be worth US\$200. Due to current market weakness, I see the bottom of Lucent's slide in the US\$45 range. Lucent is a strong buy at these levels.

But I'm not here to talk about Lucent.

## **Less is Moore**

The computer revolution happened as fast as technological innovation would let it. Moore's Law observes that the processing power of electric circuits doubles every 18 months. While that's plenty fast for most people, you ain't seen nothin' yet. Optical processing speeds are growing four times as fast.

DWDM increases network capacity exponentially by sending several light-waves down one piece of fiber. Bandwidth can potentially be increased ten times over. And the amount of equipment needed is actually much less than for current SONET (synchronous optical network) networks.

Dense wavelength division multiplexing is a disruptive technology—it does more with less. Disruptive technologies greatly lower costs for businesses and consumers. Vastly cheaper equipment, in turn, can quickly turn an industry on its ear.

APA Optics' newest DWDM is a breakthrough among

*(...continued on page 10)*



breakthroughs. It's the kind of thing that gives the pocket protector crowd nocturnal emissions. But it should cause equal excitement in investors.

### **Networks: The Basics**

For decades, analog voice signals were changed into electrical signals so they could move over copper wires. With fiber, voice signals could be converted into light waves and sent long distances very fast. And very cheaply.

Fiber networks come in two basic types: the long-haul, or point-to-point, and the metro ring. Long-haul, point-to-point networks are just what they sound like. They're the long-distance networks, like what MCI uses. And MCI uses DWDM in about 80% of its long-distance network, as does Sprint and AT&T.

Voice and data are generated at one point and travel across the network to another point, where it's delivered to its intended recipient, the end-user. Getting to the end user requires the signal to travel over the local metro fiber ring and, often, copper wires.

Voice signals are small enough to travel over copper with no problems. But copper is no match for the massive data transfers made possible by the Internet.

For data to the home, DSL and Cable access have proved good enough. But the bread and butter for voice and data carriers comes from business customers. And the business customer presents special problems.

### **Getting enough fiber**

What's called a fiber ring is used in urban areas. The idea is to build a fiber ring or loop around a city. You want to get it as close to concentrations of businesses as possible. That way, when a company signs up for data services, it's easier to string a piece of fiber from the ring to the business.

*Taipan* leases a T-1 line, about the fastest data rate you can get. I'm not allowed to tell you how much it costs, but DWDM will slash the cost. Maybe as soon as a year from now. Here's how.

DWDM divides a light wave into several wavelengths, each of which can carry data. Commercial products now generally use eight or sixteen channels (wavelengths), though it's possible to get more. Lucent's Wavestar has 80 channels, but it's for long haul networks only.

Each channel is either 200GHz or 100GHz wide and can carry 2.5 gigabits (giga = billion) of data per second. APA is ready to roll out a product that creates channels only 50GHz wide, effectively doubling the number of wavelengths that can travel on a piece of fiber. At the moment, this is a unique product. No one else makes one.

Other companies have announced DWDMs similar to APA's. Cash flush from a recent IPO, a company called Avenex says it'll have one ready sometime in late summer or fall. *APA is ready to fill orders now.* And APA can make the devices themselves in their own factory. APA has a

huge first-to-market advantage. They are positioned to dominate a crucial area in one of today's hottest technology sectors. To the victor go the spoils.

### **A new lease on data**

It won't be long before the whole revenue model for data services changes dramatically. DWDM is paving the way for truly customized pricing plans. It will no longer be necessary for a company to lease a T-1 line. Several companies will share one piece of fiber. Within a year, companies will purchase only the bandwidth they need, and they'll be able to pay on a time-based scale.

This has even greater implications for the campus or multi-tenant office building. In the office building, it won't be necessary to run a separate line to each business. And campus networks can be built cheaper and operate more efficiently.

APA Optics is in the right sector, with leading technology. Optical equipment is efficient and promises significant costs savings to carriers and end-users alike. Demand for bandwidth is strong. There's only one question—Can APA Optics execute when orders start coming?

### **The Golden Parachute**

Two decades of being a research facility makes this an important question. Can scientists transform themselves into businessmen overnight? It doesn't matter. APA has a golden parachute—the buyout. I believe the pace of consolidation in the optical equipment sector makes APA Optics prime target number one for acquisition. The big players simply can't afford to miss an opportunity.

In fact, APA CEO Anil Jain has already said that he'd sell the company. It's practically a written invitation. APA Optics stock has put on a great show over the last few weeks. Investors hungry to get into a reasonably priced optical stock bid the stock up to around US\$55 a share.

While doing my research I was afraid it was going to get out of range. Fundamental market conditions coupled with profit-taking have caused a retracement into the US\$40 range. I would love to get this stock under US\$40, but that may be wishful thinking.

The market cap is in the US\$350 million area. If APA gets treated like other optical stocks, it will have a billion dollar cap in no time. Upside for us could approach 200%.

**I will put my buy target for APA Optics (NASDAQ:APAT) at US\$47. Please consult the *Taipan* website if conditions change dramatically. Contact information: APA Optics 2950 N.E. 84<sup>th</sup> Lane, Blaine, Minnesota 55449 Phone: (612)-784-4995.**



### **Here's to Dim G-men and cyber-terrorists**

A CIA director gets careless with some sensitive files, some punks attack Yahoo and eBay and boom, **SafLink**

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# A “fabless” brain play on Silicon Laboratories, Inc. with double-digit IPO returns!

By Siu-Yee Ng

My family, friends and I were sitting at our annual Chinese New Year’s dinner. We had some of our usual symbolic dishes for a profitable and healthy New Year. I’m not a superstitious person, but it never hurts to have a little luck on your side. And it seems that making money off the stock market requires a bit of luck. Internet-related companies are trading above their valuations and word is that many haven’t even made any profits.

Recent IPOs have doubled and even tripled in their debut. I wouldn’t buy into this stampede, because not all are going to be around in a few years. Even a start-up online cattle company is up 180% from its IPO. Online cattle auctions – what will people think of next?

This month’s IPO pick is a play on the “brains” of computers.

According to Dataquest, the overall worldwide analog and mixed-signal integrated circuits, or IC, market, surpassed US\$21.2 billion in 1998 and is expected to grow to more than US\$39.1 billion by 2003. Think about some of the things you use on a daily basis. Computers, cell phones, pagers, cable set-top boxes, fax machines, and automated teller machines all require a “brain.”

Digital communications devices typically require mixed-signal circuits that provide analog-to-digital functionality to access the communications networks to which they are connected. Traditional designs for communications devices have used mixed-signal circuits built with numerous discrete analog and digital components. These can be inefficient and inadequate for use in markets where size, price and performance are increasingly important product differentiators.

To improve their competitive position, communications device manufacturers need advanced mixed-signal IC solutions that reduce the number of discrete components and required board space to create smaller products with improved price/performance characteristics. These manufacturers also require programmable ICs that can be reconfigured for international communications standards without altering the design of a product.

Take a look at cell phones these days. Remember the whole story with Iridium last year, when they defaulted on paying their loans? Have you looked at their cell phones lately? Iridium’s satellite connection can only be used on huge old phones that weigh a ton. Who’s going to carry one of those ancient phones when one can carry a smaller cell phone with more and clearer functions?

This is what communications devices face in a market that must adapt to evolving industry standards and new technologies. Mixed-signal ICs are electronic components that are

capable of processing both digital signals and real-world analog signals, such as sound and radio waves.

Because analog-intensive, mixed-signal IC design expertise is difficult to find, these manufacturers increasingly are turning to third parties to provide advanced mixed-signal IC solutions. Designing the analog component of a mixed-signal IC involves complexity and difficulty, because the performance of an analog IC depends on the creative analog expertise of engineers to maximize speed, power, amplitude and resolution within the constraints of standard manufacturing processes.

In this tight job market, good help is already hard to find. But finding engineers with the required level of expertise and skill to develop the analog design is practically impossible. Many third-party IC providers lack sufficient analog expertise to develop mixed-signal IC solutions. So manufacturers of communications devices are often faced with inadequate mixed-signal solutions and are challenged to find third-party providers that can supply them with mixed-signal ICs with greater functionality, smaller size and lower power requirements all at a reduced cost and time-to-market.

## **Brain storming**

**Silicon Laboratories, Inc. (SLAB-NASDAQ)** designs and develops proprietary, analog-intensive, mixed-signal integrated circuits, or ICs, for the growing communications industry. Silicon expanded its effort from not only initially developing IC solutions for the personal computer modem market but are now applying its mixed-signal and communications expertise to the development of innovative IC solutions for other communications markets with high growth potential, such as cellular telephones and network access applications. Silicon’s customers include Intel, Lucent, Motorola, PC-Tel, SmartLink and 3Com.

Within the semiconductor industry, Silicon is known as a “fabless” company, meaning that it does not fabricate the semiconductors that it designs and develops, but instead relies on third parties to manufacture its products. Silicon designs and creates analog-intensive, mixed-signal IC solutions that communications device manufacturers use. Silicon combines this analog and mixed-signal expertise with standard CMOS manufacturing process technology to develop innovative mixed-signal IC solutions.

## **Smaller is better**

Silicon is organized into two principal divisions, the Wireline Products Division and the Wireless Products Division. Its Wireline Products Division commenced

(...continued on page 12)



research and development for its first IC solution, the direct access arrangement, or DAA, in October 1996. Many of Silicon's wireline products are designed for use in analog modems, which enable the transmission of digital data signals over wireline telephone networks and are used in a majority of Internet connections.

Three fundamental components of the modem provide software algorithms, a direct access arrangement, or DAA, and an analog/digital converter. Complex software algorithms reduces noise interference and echoes in the telephone network. Since the telephone lines fundamentally transmit analog signals, and computers use digital transmissions, modems require analog-to-digital and digital-to-analog converters, or coders/decoders, that are referred to as codecs.

A modem transmits analog signals from a codec to the telephone line through a DAA. Silicon offers a variety of modem products that include the DAA and codec functions, which are software programmable to meet international regulatory specifications. The company introduced its DAA solution in the first quarter of fiscal 1998, and first received acceptance of this solution in March 1998. The first commercial shipment the DAA solution was made in April 1998.

In September 1998, Silicon introduced an international version of its first DAA product. Based on the success of its DAA solution, Silicon became profitable in the fourth quarter of fiscal 1998 and has been profitable in each succeeding quarter through the quarter ended January 1, 2000.

In fiscal 1999, Silicon's Wireline Products Division introduced two additional IC solutions, the voice codec and ISModem solutions

The subscriber line interface circuit, OR SLIC, provides the analog telephone interface on the source end of the telephone line. The primary functions of a SLIC are to ring and provide power and signaling (such as caller ID, dial tone and busy tone) to the telephone. Traditionally, SLICs have been produced with an expensive high voltage IC accompanied by a CMOS codec IC and requiring as many as five voltage sources.

In January 2000, Silicon's Wireline Products Division introduced its ProSLIC product. Silicon's ProSLIC has been designed as one integrated CMOS chip, eliminating the need for a high voltage IC and requiring only two voltage source. The result is a smaller, more reliable and less expensive solution.

### **Wireless penetration**

A variety of cellular communications standards are employed around the world. The most popular standard used today is the Global System for Mobile Communications, or GSM, standard, which was first deployed in Europe and is now available in several countries throughout the world.

Manufacturers continue to introduce new cellular phone

models that offer smaller form factors and longer battery life at lower costs. These market dynamics drive a need for new highly integrated electronics that reduce component count and consume less power. And Silicon's Wireless Products Division introduced its RF synthesizer solution designed to serve this need.

### **Still growing**

Silicon markets its products to original equipment manufacturers and other solutions providers for applications in both the wireline and wireless communications markets.

Most sales are done through a direct sales force. Three sales offices are maintained in North America, and European direct sales are conducted through its United Kingdom subsidiary. Independent sales representatives and distributors are also used to generate sales.

The percentage of Silicon's sales to customers located outside of the United States was 7% in fiscal 1999 and insignificant in fiscal 1998. All of Silicon's sales to date have been denominated in U.S. dollars. But expect a greater international penetration as Silicon's products gain acceptance.

It worries me a bit to see that a small number of customers accounted for a large portion of Silicon's sales. During fiscal 1999, three customers accounted for 84% of Silicon's sales. I expect to see more customers with the introduction of Silicon's new products.

But if any of these major clients decrease its order it can adversely affect Silicon's profits. PC-Tel recently announced that, while Silicon Laboratories is currently the sole supplier of the direct access arrangement, or DAA, IC solution used in PC-Tel's products, PC-Tel is in the process of qualifying a second source for its DAA IC requirements. If this in fact happens, Silicon may be forced to lower its prices and sales volume could decrease.

Despite these worries, the numbers look good. Sales increased US\$41.3 million, or 736.4%, to US\$46.9 million in fiscal 1999 from US\$5.6 million in fiscal 1998. Gross profit increased US\$27.9 million, or 861.7%, to US\$31.1 million in fiscal 1999 from US\$3.2 million in fiscal 1998. Gross margins improved to 66.4% in fiscal 1999 from 57.7% in fiscal 1998.

### **Going to court**

Another factor that worries me a bit is the lawsuit filed on January 12, 2000, against Analog Devices and 3Com claiming that Analog Devices has infringed, and is continuing to infringe, on the U.S. patent to Silicon's DAA technology. The lawsuit also claims that Analog Devices and 3Com have misappropriated Silicon's confidential information, know-how and trade secrets.

3Com is one of Silicon's key customers, and 3Com may decide to cease its purchase of Silicon's DAA solution. But I like what Silicon has to offer and I expect the company to be a major competitor in the semiconductor industry.



## Teamwork

I like seeing that the management team has been working together prior to Silicon Laboratories. The CEO and Chairman of the Board co-founded the company in August 1996. From March 1985 until founding Silicon Laboratories, he held various positions at Crystal Semiconductor/Cirrus Logic, a designer and manufacturer of integrated circuits, including vice president of engineering, as well as product planning manager of strategic marketing and design engineer.

Another co-founder has served as Silicon's vice president of engineering and as a director since its inception. From October 1989 until founding Silicon Laboratories, he held various positions at Crystal Semiconductor/Cirrus Logic, including vice president of engineering (computer products), design manager and design engineer.

The third co-founder has served as the company's Vice president of technology and as a director since its inception. From November 1991 until founding Silicon Laboratories, he held various positions at Crystal Semiconductor/Cirrus Logic, including senior design engineer.

The Vice President and CFO has served since December 1996. From February 1985 to September 1996, he held various positions at Crystal Semiconductor/Cirrus Logic including vice president of finance and division controller.

Directors include a general partner of various funds associated with Austin Ventures and a general partner of

InterWest Partners, a venture capital firm. We'll keep an eye for any new additions. Morgan Stanley Dean Witter, Lehman Brothers and Salomon Smith Barney are the underwriters. Silicon is expected to raise US\$80 million in its IPO but no price or date has been set yet.

For more information after the quiet period contact **Silicon Laboratories**, 4635 Boston LN., Austin, TX 78735; phone: 512-416-8500 or 877-444-3032; fax: 512-416-9669; website: <http://www.silabs.com>.

## IPO FOLLOW-UP:

■ **webMethods, Inc. (WEBM-NASDAQ)** debuted on Feb. 11, 2000 pricing above the expected range at \$35.00. The stock opened on the first day at \$195. That's a 457% IPO profit!

■ **Interwoven (IWOV-NASDAQ)** continues its climb form its IPO. ebookers.com chose Interwoven's TeamSite and Linux version of OpenDeploy for web content management. We're up 855%!

■ **Akamai Technologies (AKAM-NASDAQ)** completed its acquisition of Network24 Communications, a privately held provider of Internet broadcasting application services. Hold for more profits. We're already up 777%!

(...continued from page 10)

## FUTURE FILE

(NASDAQ:ESAF) tacks on another 50%, for a total 200% gain since January. Gotta love it. There's always opportunity in seemingly bad news. Finding it is *Taipan's* mission, our quest.

I'm really looking forward to SafLink's next earnings report. I think there'll be some positive surprises.

### Is No News really good?

I'm starting to get a little antsy with **Ashton Technology Group (NASDAQ:ASTN)**. We're up around 50% to date and the stock is holding up well. But there should be news. Ashton is supposed to be deploying its electronic commerce network this spring. I expected to see some press releases about it by now.

Earnings were released on Valentine's Day. Ashton showed a US\$.02 cents a share profit, compared to a US\$.22 cents loss in the same quarter a year ago. The gain comes from sale of warrants for subsidiary Gomez Advisors. Ashton is no longer the majority owner of Gomez. There was no important mention of the eVWAP system. I don't believe the stock will stay in the US\$10 range without any news. *To lock in gains, I recommend*

*applying a mental stop at US\$9.50.*

### Nothing wrong with taking profits

**Geoworks (NASDAQ:GWRX)** has returned 400% for *Taipan* subscribers since the beginning of December. Recent news indicates that WAP Forum members are prepared to honor Geoworks' intellectual property rights claims. The stock didn't move much in response, which makes me think we're at the upper end of the medium-term range.

I'm inclined to take profits at these levels. The real work is ahead for Geoworks and the stock has exceeded all of my expectations. **I'm setting a price target of US\$45 a share. When this target gets hit, we'll put those profits to work somewhere else.**

I will be attending a huge wireless conference in New Orleans from Feb 27th through March 1st. Of course, I'll be looking for some explosive wireless investments. Please stay in contact through the web site and the hot line for anything I may uncover.



# Take shelter in the next wave of Linux plays

By J.K. Riffin

We can disagree about business models, but the growth of the Internet is undeniable. Content, carriage and commerce have ridden the wave that has given **America Online (AOL:NYSE)** stunning clout, **PSINet (PSIX:NASDAQ)** room to breathe and nine lives for **Amazon.com (AMZN:NASDAQ)**.

Still, the Internet-fueled market for software has not been so dramatic for a variety of reasons. E-commerce, advertising and content management requirements are highly customized. Software development cycles are typically much longer than Web deployment cycles. And most significantly, **Microsoft (MSFT:NASDAQ)** has had a lock on desktop computer operating systems and applications (as a result, its stock has more than quadrupled in value over the past three years).

But then came Linux and the open source movement. And as the operating system has been rapidly growing in popularity with programmers, the corporate world has remained hooked on Microsoft software. Yet now, as companies struggle through their “e-business” strategies, Linux has quickly become an attractive, scalable and *free* option compared to the Wintel standard.

The real impact of Linux as a viable open source alternative is rapidly becoming apparent. In February — two weeks ahead of Microsoft’s release of its long-awaited Windows 2000 operating system upgrade for the enterprise market — a consortium of corporate IT blue chips (including Intel, IBM, and Hewlett-Packard) announced they were backing the latest release of Linux that will run on Intel’s new 64-bit Itanium processor. This is perhaps the latest and greatest step up in momentum for Linux as a serious choice in the fast-growing high-end server space now dominated by Microsoft and **Sun Microsystems (SUNW:NASDAQ)**.

## *Giving it away*

In the early 1970s, the legendary Bell Labs created the first versions of the Unix server operating system. Linux is not Unix, but it looks like Unix and has many of the same features and benefits (it’s fast, portable, scalable and almost infinitely adaptable to users’ needs).

To best support and service the software, these versions of Unix were copyrighted and licensed by their publishers, thereby limiting outside developers’ ability to continue to refine and enhance the software. In the mid-1980s Richard Stallman began developing an open source version of Unix called GNU (which stood for GNU is Not Unix) and published the “GNU Manifesto” and “GNU General Public License,” which laid the ground rules for open source software being free and available.

An open source operating system is not so much a product as much as it is a public resource. And in the late

1980s and early 1990s, these open source alternatives were not as reliable and did not offer the same level of support as their copyrighted, licensed (“closed”) alternatives.

But then along came Finnish computer science student Linus Torvalds. In the early 1990s, he sought to bridge the gap between the vast opportunities of open source software and the usability requirements of the rest of the world. Torvalds’ efforts were blessed by the explosion in Internet use, as hundred of thousand of developers from around the world contributed to the freely available Linux. These developers included companies such as **Red Hat (RHAT:NASDAQ)** and Caldera, which began to create and support distributions of Linux bundled with business applications and a graphical interface.

## *Turning a philosophy into profits*

By April, 1999, Linux ran on 31% of the Internet’s Web servers, more than any other operating system. In the second half of last year, three Linux service providing companies went public and exposed the market to the potential of Linux. All three went through the roof. Red Hat provides Linux software, service and support. Andover.net is a Web portal dedicated to Linux content. **VA Linux (LINUX:NASDAQ)** provides computer hardware ready to run Linux. And just this past month, VA Linux Systems bought Andover.Net for approximately US\$800 million.

The Linux space today resembles the early ISP business models of 1995—with more upside. Early ISPs were delivering access to the public network, which itself was very nearly free by virtue of early peering agreements between backbone providers. Customers pay for service and support.

Because of the overhead required to build out, manage and maintain a network capable of supporting rapid growth, most ISPs have merged with telephone companies. The most notable exceptions are PSINet, which is still losing money; **Earthlink (ELNKD:NASDAQ)**, which is in the midst of a race to acquire customers through other ISPs to survive; and AOL, which has successfully incorporated content and commerce revenue into its business model.

The Linux opportunity is almost entirely in services and support, if not also content and commerce to a lesser degree. The operating system is available for free, but if you want it to work for your company, you need the value adds of custom development and long-term support (both of which you still pay for in the world of copyright, licensed software).

## *This year’s beauty contest*

Sequels to blockbusters do well on Wall Street, and the Linux moonshots of 1999 were just the opening credits. Following are two of the hotter upcoming Linux IPOs, and another to avoid.



**Caldera Systems** (symbol to be CALD on the NASDAQ) filed its S-1 on Jan. 10. The company recently raised US\$30 million in private equity financing from Sun Microsystems, Citrix, and Novell, among others. Besides being one of the more experienced providers of Linux solutions, Caldera offers a wide range of mature 32-bit software applications for corporate Internet, intranet, network and desktop needs.

Beyond its software products, the upside with Caldera is in its training centers (a high-margin offering) and its network of more than 750 value added resellers—the first in the Linux market space.

**Linuxcare** (symbol to be LXCR on the NASDAQ) filed its IPO registration statement on Jan. 19. The company provides technical support for Linux users and offers international reach and deep expertise. Linuxcare is trying to become the one-stop shopping destination for all Linux-related technical support services, such as telephone-based customer service, systems consultation and customized installations.

The upside for Linuxcare is its ability to plug into established vendors to handle Linux support on an outsourced basis. The company already has relationships with Dell Computer, Hewlett-Packard, IBM Global Services, Motorola, NEC Software, Oracle, Sun Microsystems and TurboLinux. The kicker is the company's veritable Who's Who list of investors, which includes the king-maker venture capital firm Kleiner Perkins Caufield & Byers, not to mention funding from Dell, Sun Microsystems, Oracle, and Motorola. Yes, this one's a keeper.

Remember the **iVillage (IVIL:NASDAQ)** IPO about this time last year? The female-oriented Web site popped a virile IPO, but went limp in the aftermarket. The same red flags are waving around Linuxone (symbol to be LINX on the Nasdaq), which submitted its S-1 last September. The company has been in business for less than a year and has no revenue. All it really has are some nifty products (a hard drive pre-loaded with Linux and a program that handles Macintosh media on a Linux system) and the right name at the right time. Given the Internet investing world, this might be enough to pass muster with the SEC.

More likely, the company will get bought before an IPO. If Linuxone does make it to the party, stay away. Too many investors have been burned on Internet IPOs to fall for an issue simply having the word "Linux" in its name.

### **Don't forget the first-movers**

Though RedHat and VA Linux have fallen way back from their stratospheric IPO levels, both are solid companies. Should the market cap of Red Hat fall beneath the US\$5 billion range, or that of VA Linux dip beneath US\$1 billion, jump on either one. Either company would be a peach of an acquisition for one of the blue chip IT services big boys.

**eOn Communications (EONC:NASDAQ)** recently went public to relatively little fanfare. The company develops Linux servers and is focused on delivering integrated

voice, e-mail and Internet communications solutions for customer contact centers (i.e., everything from 911 calls to customer service centers to telemarketing facilities).

Though the company has not posted explosive quarter-to-quarter growth, it is profitable. Against a backdrop of growing Linux excitement, this stock is cheap at under US\$25.

There also are bargains available among companies that are not purely dedicated to Linux. The world beyond Microsoft is littered with bastard step-children software companies.

Like **Applix (APLX:NASDAQ)**, developers of a range of business applications, including customer relationship management and business intelligence tools. Although the company has historically worked in both the Windows and Unix environments, they are moving rapidly toward Linux. It gets better, too. Not only is the company profitable, but it's already serving more than 3,000 customers worldwide, nearly three-fourths of the Fortune 50 and more than half of the Fortune 500.

At less than US\$20 a share and a US\$175 million market cap, with a solid Linux game plan intact, Applix is waiting to be discovered.

Finally, there's **Corel (CORL:NASDAQ)**, developer of the famous drawing software and then purchaser of WordPerfect. After a trainwreck 1998 (with stock dipping south of US\$5) and rebuilding 1999, Corel made waves in December with several announcements to port its applications to Linux. Then last month the company announced it would acquire Linux developer **Inprise/Borland (INPR:NASDAQ)** and the market yawned. At issue is Corel CEO Mike Cowpland's ability to execute, or, rather, his track record of over-promising and under-delivering.

Depending on how you look at it, Corel is a US\$1 billion company that is either a victim of the Microsoft juggernaut or its own mistakes. Credit Cowpland for jumping on Linux early and having the balls to pull on the Inprise deal in short order. The pieces are all there for Corel to move on to a US\$10 billion valuation enjoyed by Red Hat, if Corel can become the flavor-of-the-month. And boards have a way of jettisoning CEOs who repeatedly fail to deliver. At a current price under US\$20, it's time for Corel to take off.

### **Conclusion**

In his 1985 "GNU Manifesto" (<http://www.gnu.org/gnu/manifesto.html>) Stallman wrote, "Once GNU is written, everyone will be able to obtain good system software free, just like air. This means much more than just saving everyone the price of a Unix license. It means that much wasteful duplication of system programming effort will be avoided. This effort can go instead into advancing the state of the art."

At the time it had little impact. Few people had access to the Internet and most network administrators favored the safety of a license. Now, between the arrival of Linux, the Internet and more capital than ever before, the state of the art Stallman envisioned is about to hit warp speed.



# WHAT TO BUY AT WHAT PRICE

**What to Buy at What Price aims at giving you a general idea of how Taipan's stock picks are standing in relation to our initially recommended buying range.**

Company	Exchange/Symbol	Status	Action
Fox Entertainment	NYSE:FOX	open	Hold
Barnes and Noble	NASDAQ:BNBN	open	Hold
Korn/Ferry International	NYSE:KFY	closed	
TheStreet.com	NASDAQ:TSCM	closed	
Razorfish	NASDAQ:RAZF	closed	
GoTo.com	NASDAQ:GOTO	closed	
Tibco Software	NASDAQ:TIBX	closed	
"Red Hat, Inc "	NASDAQ:RHAT	open	Hold
Interwoven	NASDAQ:IWOV	open	Hold
Akami Technologies	NASDAQ:AKAM	open	Hold
FreeMarkets	NASDAQ:FMKT	open	Hold
ADFlex Solutions	NASDAQ:AFLX	open	
AVI Biopharma	NASDAQ:AVII	open	Hold
Aviron	NASDAQ:AVIR	open	Buy under US\$20
Closure Medical	NASDAQ:CLSR	open	Hold
Micros Systems	NASDAQ:MCRS	open	Hold
Modtech	NASDAQ:MODT	open	Buy at current prices
Nastech Pharmaceutical	NASDAQ:NSTK	closed	
Printtrak	NASDAQ:AFIS	open	Hold
MedImmune	NASDAQ:MEDI	open	Hold
Pharmaceutical Product Development	NASDAQ:PPDI	open	Buy at current prices
Orbital Sciences	NYSE:ORB	open	Buy at current prices
Visix	NASDAQ:VISX	open	Buy at current prices
Millennium Pharmaceuticals	NASDAQ:MLNM	open	Hold
CheckFree Holdings	NASDAQ:CKFR	open	Hold
Univision	NYSE:UVN	open	Hold
Optimal Robotics	NASDAQ:OPMR	open	Hold
Ballistic Recovery System	OTC BB: BRSI	open	Buy at current prices
Sensormatic Electronics	NYSE:SRM	open	Hold
Analytical Surveys	NASDAQ:ANTL	closed	
Vision Twenty-One	NASDAQ:EYES	closed	
Human Pheromones	NASDAQ:EROX	open	Hold
York Rearch	NASDAQ:YORK	closed	
PLD Telecom	NASDAQ:PLDI	closed	
SunMicroSystems	NASDAQ:SUNW	open	Hold
Marilton Technology	AMEX:MTY	n/a	Never hit our entry price
Media Arts	NYSE:MDA	open	Hold
Oracle	NASDAQ:ORCL	open	Hold
SM&A Corp.	NASDAQ:WINS	open	Hold
Zi Corp	NASDAQ:ZICA	sell	Sell
Telekom Indonesia	NYSE:TLK	closed	
Safeguard Scientific	NASDAQ:SFE	open	Hold
Internet Capital Group	NASDAQ:ICGE	open	Hold
Aramex	NASDAQ:ARMX	open	Hold
Restaurant Brands	—	—	open
Fischer & Paykel	—	—	open
Unicharm	—	—	open
Elron	NASDAQ:ELRNF	open	
Elscint	NYSE:ELT	closed	
Elbit Medical Imaging	NASDAQ:EMITF	closed	
Orbotech	NASDAQ:ORBK	closed	
Aladdin	NASDAQ:ALDN	closed	
Elbit Ltd.	NASDAQ:ELBTF	open	
Orckit	NASDAQ:ORCT	open	
Elbit Systems	NASDAQ:ESLTF	closed	
Commodity Trust Warrants	CMT	open	
Commodity Trust Warrants	GMTW	closed	
Hurricane Hydrocarbons	HHLFQ	open	
Hurricane Warrants	HUHY	open	
Ashanti Goldfields	ASL	open	
Surgutneftegaz ADR	SGTZY	open	
Suez Cement	SZCD	open	
Sasol	SASOY	open	
Monsenergo ADR	AOMOY	open	
TyumenAviaTrans	TVAVY	open	
Ventspils Nafta	VNFT	open	
Lukoil Preferred	LUKPY	open	
Xoma	XOMA	open	
Shaman	SHMN	closed	
Avant Immunotherapeutics	AVAN	open	
Williams Control	WMCO	open	
Exponent	EXPO	open	
Genus	GGNS	open	
Computer Learning Centers	CLCX	open	
Morgan Stanley India Fund	IIF	closed	
MS Russia Fund	RNE	closed	
Herzfeld Caribbean Fund	CUBA	open	
Conqur	NASDAQ:CNQR	Open	Hold
VerticalNet	NASDAQ:VERT	Open	Hold
Advanced Aerodynamics Structures	NASDAQ:AASI	Open	Hold
American Quantum	AMEX:AFV	Open	Hold
VentureCatalyst	NASDAQ:VCAT	Open	Hold
Geoworks	NASDAQ:GWRX	open	Sell over US\$45
SafLink	NASDAQ:ESAF	open	Buy on weakness
Ashton Technology Group	NASDAQ:ASTN	open	Hold—Set trailing stops at US\$9.50
Fastcomm Communications	OTC BB:FSCX	open	Buy on weakness
Pliant Systems	OTC BB:PLNS	open	Hold
Illinois Superconductor	OTC BB:ISCO	open	Buy on weakness

• Positions may be modified in the free Weekly Taipan Hotline: 410-528-8228 and at <http://www.taipanonline.com/htmlcode/members/hotline/hotline.html> •