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YALE ENTREPRENEURIAL SOCIETY'S  
OFFICIAL MAGAZINE

# YES & KNOW

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## Opinion &amp; Editorial

## OPINION: STUDENT RETURNS TO COLLEGE AFTER STINT AS ANALYST

I often find myself smiling, while attending courses, hanging out with classmates, and of course tapping kegs (from time-to-time) at Dickinson College. It's truly a great place. So are many of the higher education institutions scattered across the U.S. But you wouldn't have been able to convince me of this, or to remain in college for that matter, in 1999.

In late August of that year I made up my mind to leave school. I wanted to test the waters of the "new economy." Most importantly, I wanted to apply what I had learned about in the classroom. There was this amazing convergence of technology and business. I wanted to be a part of it. Internet companies were being built by young people my age and even younger. Shares of stock in companies like Yahoo, America Online, and Amazon.com were going through the roof. I had been following an analyst by the name of Henry Blodget (Yale alum) who was hired by Merrill Lynch after a prophet-like price call sent shares of Amazon.com from roughly \$200 to over \$400 in a matter of weeks.

After introducing myself and submitting some writing samples to Henry and the Internet research team, I was invited on board as an intern. It was a tremendous opportunity and one that I felt would certainly supersede anything I might learn back in Carlisle, Pennsylvania. For the most part, I still believe this to be true. At Merrill, I was able to contribute research to a number of high-profile research notes, as well as the firm's Internet/e-Commerce Quarterly Handbook.

In November, I was hired to write informative research notes for internet.com.

My official title was "analyst," although I would say my assignments were closer to that of a glorified industry columnist. In addition to working with internet.com's venture capital arm, I also had the opportunity to interview top executives such as VerticalNet's Mark Walsh and venture capitalists such as Benchmark Capital's Bill Gurley. All were aware of my age and circumstances. Only one seemed to have reservations about my decision to leave school, and that was Flatiron Partners' Jerry Colonna.

Mr. Colonna advised me to go back to school. His exact words: "go back to school, the 'new' economy will still be here when you graduate." These words weighed on me for quite some time, even after leaving internet.com to join a startup called Copyleft.net. I thought about the countless WSJ, Business 2.0, and Industry Standard articles, researching what were to become super nova start ups, sleepless nights brainstorming the "next big thing", and the fact that I had somehow put on a few pounds (ok, 15) over my high school athletic days.

This revelation that the new economy wasn't going away anytime soon, coupled with a vicious market shakeout, had me thinking about the hallowed halls of academia. If anything, the hands on experience had taught me it's not easy to build or run a strong company. To be a part of the process, for that matter, requires energy and a commitment most people aren't (or never will be) prepared to deal with. Despite all the sound bites and catch phrases, the Internet does not fundamentally change business. An important realization is the fact that it does

not, and cannot, make up for a weak business. I've discovered that the often heard admonition "If your business is not an e-business, it won't be long before it will no longer be a business" is less true than its converse "If your e-business is not a business, it won't be long before it's not a business."

Additionally, a startup requires a creative idea, which can quickly be implemented by leveraging the best resources possible. This means evaluating your opportunity through exhaustive product/service research (i.e. surveys, beta customers, etc), gaining access to computers and speedy Internet connections, hiring the best people, attracting investors, and building buzz. A large student population, dedicated T-1 connection, alumni support, and the fact that you're young and building something special on campus are all benefits the dorm room entrepreneur has going for him/her. So I'm back in Carlisle, PA taking classes, writing Raging Bull's Cyberstock Investor Report as well as a book on young entrepreneurship, drinking beer with other twenty-one year olds, and dreaming up "the next big thing." Ironically, Dickinson now offers an Innovation, Entrepreneurship, & eBusiness course catering to a lot of the technological and business interests held by students here today. Students enrolled in the course read "Leading the Revolution," "The Innovator's Dilemma," and "Customers.com." There's even a Business Concept Competition being launched to help students generate ideas for businesses and plan these ideas on paper. All these factors beg the question: Why drop out?

By Luke Fronfield  
*Luke is a Senior at Dickinson College.*

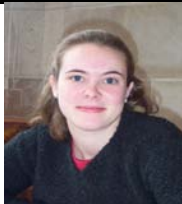
## PHOTO POLL: WHAT WILL BE THE GREATEST EFFECT OF GEORGE W'S ADMINISTRATION ON OUR ECONOMY OVER THE NEXT YEAR?

BY SHIRA TYDINGS



Jamelle Sharpe LAW '03  
"The market reaction, specifically the negative signs we have seen since Bush's impending presidency, can signal a lack of confidence in

George W's ability to manage the economy...Yet, is this tax cut only impeding a slow down to economic production? ...In order for the nation to benefit from the intangible effects of his plan, Greenspan needs to consistently give George W. his stamp of approval."



Caroline Reid LAW '02

"I suspect that Bush will have business-friendly policies, such as tax breaks, perhaps at the expense of other things that we value, such as social welfare programs."



Mike Yaeger LAW '03

"We will get a tax cut, probably larger than if we had a democratic president. We will also get some kind of minor social security reform."

## "JUNK-BOND KING" & PHILANTHROPIST, MICHAEL MILKEN, ADDRESSES YALE

So what do you do once you have revolutionized the U.S. economy and won a bout with cancer? In the case of Michael Milken, you try and solve the world's problems.

The junk bond king of the eighties, Milken has more recently shifted his focus to his long-standing interest in philanthropy. Milken is said to have been a major part in the creation of modern capital markets, helping to create the conditions of America's economic boom of the 1990s.

While known for his entrepreneurial exploits of the 1980s, Milken is now an entrepreneur of a different sort: he runs several foundations that support the advancement of knowledge, education, medicine and goodwill in general. Cap CURE, the Association for the Cure of Cancer of the Prostate, which Milken started in 1993, is now the world's largest non-governmental supporter of prostate cancer research.

As an entrepreneur of knowledge, Milken began the Milken Institute, an academic think tank that addresses issues of the global economy, and he is chairman of Knowledge Universe, a company that invests in and incubates leading companies, helping them to achieve their full potential. The Milken Family Foundation, started in 1970, has funded many programs in education and health care and is currently a major focus in Milken's life.

Milken was brought to Yale jointly by YES and the Yale School of Management Education Student Interest Group, with the goal of fostering among Yale students a sense of the many forms entrepreneurship can take.

Vice President of YES Evan LePatner said before the event, "It is a great opportunity for us to have a high profile individual on campus who is a huge supporter of entrepreneurship himself and through his foundations."

YES's president David Pozen agreed. He said, "The speaker himself is very much a symbol of the modern entrepreneur."

Pozen also commented that having Milken address Yale was an enormous chance for YES and the SOM to spread entrepreneurship throughout the Yale community.

The title of Milken's talk was "The Promise of the 21<sup>st</sup> Century," and in his discussion, he pointed to areas in which the global economy will have huge opportunities for improvement in years to come. After giving some brief background on



**Junk-bond financier and philanthropist Michael Milken receives YES t-shirt from YES President David Pozen.**

his life, namely his experiences at Berkeley and Wharton and his decision to venture into the business world, Milken pointed to five particular areas that show promise for the coming century. He titled these areas: the democratization of capital, seeing the world through new eyes, where's the revolution?, the democratization of knowledge, and finally, the democratization of health care.

Beginning with the democratization of capital, Milken noted that there has been a major increase in access to capital in America, creating a plethora of successful small and mid-sized companies along with a veritable tsunami of job opportunities. "The U.S. has created 62 million new jobs since 1970," Milken stated, which he added is an incredible sum compared to the relative amounts in Europe and Asia. In the U.S., small companies comprise a large percentage of the total market cap, and access to capital, rather than competition, governs the success of the company, said Milken. Milken

also pointed out that this set-up is in opposition to many countries in Europe, where very few companies occupy and overwhelming majority of the market cap and success is governed by competition. This democratization of capital in the U.S., Milken predicts, will soon spread to the rest of the world, first in Europe and then in Asia and other areas.

Milken's second area of promise was the concept of looking at the world through new eyes. He noted that at the beginning of the twentieth century, the focus of the global economy was on natural resources. This focus, Milken said, shifted toward financial resources on the 1980s, and today, the economy is contingent on human and social resources. Milken pointed out that in the 1920s, the cost of raw materials and energy was 60% of America's corporate spending, while in the 1990's, this cost was only 2%. Meanwhile, Technology and Pharmaceutical, industries based on knowledge and human capital, are the world's fastest growing and most influential industries. The U.S. currently has far more skilled than unskilled workers, and higher level degrees are becoming increasingly important in the job market. Milken argues that an understanding of the importance of human capital, part of seeing the world through new eyes, is imperative in moving forward successfully in the global economy.

Thirdly, Milken posed the question, "Where's the revolution?" Referring to the tension one might expect to exist given the small average relative income of the working American, he went on to explain why there has been no explosion of discontent in recent years while wages have not gone up. The combination of the stock market improving while interest rates fell in the last twenty years, in conjunction with the rising frequency of multiple wage earners in households, have delayed confrontation by shifting the focus of discontent away from pay. The challenge, Milken notes, will be to continue to please the middle class in the new century.

Milken then turned to the fourth area of

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## MICHAEL MILKEN, CONTINUED

*(Continued from page 4)*

his discussion, namely the democratization of knowledge. While our society spends billions of dollars on information technologies, the possibilities for knowledge become endless. Through the use of the internet, anyone can access a world of knowledge inside the home through which the possibilities are endless. Milken warned, however, that we cannot use infotech as a replacement for education. We need to spend more money on education in order to reap the benefits of the possible collaborations of technology and education. Milken mentioned his own endeavors in this area, as the Milken Family Foundation has honored over 1,650 educators with their acclaimed National Educator Award. In a touching moment, he introduced a math teacher who had won the award and recounted the story of this teacher's mentally disabled son who has been able to express himself and achieve academic excellence through the use of educational technologies.

Finally, Milken moved onto the fifth of

his points, the democratization of health care. With the recent boom in biotech and pharmaceutical companies, Milken suggested that biology and chemistry will be-



Milken, along with SOM students and YES officers, before his speech at Yale in January 2001.

come the fruitful disciplines of the next generation. With the shift toward human capital, Milken said that there will be tremendous opportunities to make advances in these fields. As far as the rest of the economy, by eliminating disease as a death threat, Milken said that the US would save billions of dollars as a nation.

Milken alluded to the successful war on polio, noting the immense changes that a successful war on cancer would produce. He also noted that the US has spent 110 times as much money on nuclear weapons than it has on cancer research in recent years, and just a fraction of this money would go very far in medical research. Milken's own organization, Cap CURE, is a leading supporter in the field of cancer research and plans to set an example for other organizations.

Milken finished off the afternoon by fielding questions from the audience on several different issues, all of which he answered as optimistically as he spoke during the rest of his talk. From Wall Street to philanthropy, this entrepreneur has always set trends in his field, and from the look of his ambitions, he will continue to do so. In the words of a woman sitting behind me, "I have never learned so much in an hour."

-By Max Pitman

## From Audobon Arts District to the Internet: A Profile of eHammer

When asked to name a local New Haven business, what do most Yale students say? Krausners? Cutlers? Au Bon Pain? How about eHammer?

Only a block and a half behind Timothy Dwight College, eHammer is an antique store located right in the middle of the quaint Audobon Arts District. Owner Fred Giampietro (GRD '79) moved his business to this location just two years ago. eHammer is unique because it integrates a brick-and-mortar store with an international online person-to-person website ([www.ehammer.com](http://www.ehammer.com)). This new type of business, utilizing technology to bridge the distance-gap between producers and consumers, seems destined to emerge in our modern Internet-based society.

How does New Haven's unique environment affect this type of entrepreneurial business? In general, Giampietro seemed very pleased with the local busi-

ness community. "I looked for a small, urban center that was college based," Giampietro explained. This ensures that a high percent of the population has computer skills and the fact that residents are always moving in and out provides a constant source of antique customers. However, Giampietro is concerned about the division between different downtown business communities. Most of eHammer's business comes from the courthouse and School of Management areas, with very little spillover from the strong Chapel Street business center.

What is the relation between eHammer and Yale students? For the most, "students just don't know about us," Giampietro said. Since the Internet is so important to eHammer's business, all advertising is online and it is simply too costly to put much effort into advertising in New Haven. One problem, Giampietro supposed, is that "Yale is a city within a

city," with little interaction with stores that are not located within the Broadway and Chapel Street areas. eHammer, instead of attacking this problem directly, uses the Internet to break through these city walls and find business in all types of neighborhoods.

One question remained. How did a Yale graduate with a degree in music performance get started as an antique dealer? Giampietro's answer - encouraging to some students, discouraging to others - was that he got started in antique dealing as a freshman in college. He took his personal bug for antiques, and the belief that the Internet is a way to conjoin the antique industry from highly fragmented "Mom and Pop" stores into a unified center. eHammer may not be the center of Yale life, but it shows how with a little innovation, a lot of interest, and the right effort, entrepreneurial success is possible - just a block and a half away.

## Honest Tea: Avoiding the High-Tech Chaos by Keeping it Simple

Honest Tea's Chairman and co-founder Barry Nalebuff had only one request before agreeing to conduct an interview with me: that I begin this article with the results of a taste test between Snapple and several of his young beverage company's bottled iced teas. After all, the real test of any food product is a taste test between it and a competitor. Before taking leave of his house, which is stocked full of his own product, he loaded me up to carrying capacity with a generous selection of different flavors and products. Gathering seven of my friends together, I served three different Honest Tea flavors (Moroccan Mint, Black Forest Berry, and First Nation) alongside Snapple Raspberry Iced Tea.

Sorry Nalebuff, but when the results were in, on taste alone all seven students preferred the Snapple Raspberry Iced Tea.

So I filled them in on the health benefits of Honest Tea: All Honest Tea's products have between two to four grams of sugar and between nine to 17 calories per serving in comparison to Snapple beverages which typically have 100 calories and 25 grams of sugar per serving.

"If you filled up their bottle with sugar, it would go about halfway up. They are essentially liquid candy," said Nalebuff. "That is more than twice the recommended daily amount of sugar."

Teas, especially green teas, are packed with anti-oxidants, which are known to help prevent cancer. According to Nalebuff, one bottle of an Honest Tea green tea such as Moroccan Mint has as much anti-oxidants as twenty servings of broccoli, but the same cannot be said about their competition.

"We went and did a test of many of the other green teas in the market and discovered that what was green in their tea was the bottle. Basically they use syrup, powder, and concentrate and who knows what else and by the time they are done, there aren't very many of the anti-oxidants, if any, left. One of the things we do is use real tea leaves and just put them in boiling water," said Nalebuff.

After listening to the health benefits of Honest Tea, three students chose not to change their choice of drink, two students insisted that they would rather drink Diet Snapple or water, but the remaining two said they would now choose to drink Honest Tea's fruit infusion Black Forest Berry.

These last two students belong to the market sector that Nalebuff and his co-founder and former student Seth Goldman are targeting. These two entrepreneurs are betting on the fact that there is a large, currently poorly served market



YES advisor and Founder of Honest Tea, Barry Nalebuff.

sector that is highly health conscious and desires a drink with the calories of water, but more taste.

"It is hard to believe that in a world where there is grape, cherry, lemon-lime, ginger ale, root-beer, colas, un-colas, caffeine, no caffeine, that there is anything missing, but in fact we think that there is a huge thing missing, which is the barely sweetened category," said Nalebuff.

Judging by the enormous level of positive responses that the two founders have received regarding their product since they launched it two years ago, it seems that an Honest Tea fan club has practically emerged.

One customer wrote "any accolades for your tea fall short of describing how wonderful it is" and another described that "what caught my eye was the 'Barely sweetened' on the label. I prefer my tea unsweetened and have a terrible time buying bottled tea. I was pleasantly surprised that you have been able to barely sweeten it."

### LOOKING BEYOND THE HIGH-TECH START-UPS

Having achieved superstar status among

their customers, for such a successful first few years the company does not appear to have as much name recognition in comparison to its high-tech counterparts.

In a market that has for the past several years granted instant stardom to both successful and unsuccessful information technology ventures alike, the collapse of the high tech bubble might allow prosperous brick and mortar start-ups such as Honest Tea to receive their due respect.

"In some sense, beverage companies don't get a whole lot of respect at least in our stage of the game, but later on you get a lot of respect," said Nalebuff. "There has been a decline in interest in starting companies that are non-tech oriented. In part because that is where the money still is. But you can't go to where the ball is, you have to go to where it's going."

Nalebuff points to such companies as EarthWeb, an IT career solutions company that went public at a valuation of about 150 million dollars a little over two years ago. According to Nalebuff, Honest Tea's revenue has tracked EarthWeb's almost perfectly: \$250,000 in 1998, \$1.1 million 1999, and \$2.5 million last year. Nalebuff estimated EarthWeb's cumulative losses far exceed \$30 million, whereas Honest Tea's cumulative loss to date is only \$2 million. Over the past three months Honest Tea has lost a total of only \$25,000 making its burn rate less than \$100,000 dollars a year, according to Nalebuff.

"Unlike these dotcoms, we can be profitable. We are essentially profitable now. Our revenue model works great. There is no reason not to be profitable. The margins are 40 percent," said Nalebuff. "It's not as if people can look at the dotcoms and say 'Well, they have a better growth potential.' I think that we can be at a couple of hundred million in sales, just like they can."

### BUSTING INTO THE BEVERAGE INDUSTRY

Top beverage industry analysts such as John D. Sicher publisher of Beverage Digest and Emanuel Goldman, a top analyst at ING Barings, seem to agree that successfully entering into the beverage industry is a

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## HONEST TEA, CONTINUED

(Continued from page 6)

tough challenge akin to winning the lottery or climbing Mt. Everest. The big players such as PepsiCo and Coca-Cola even have a hard time introducing new drinks. Remember New Coke? I did not think so. The current \$13 billion tea industry is already filled with established brand names as well such as Lipton, Nestea, Snapple, Arizona, Sobe, and Tazo Teas.

"We are trying to create a new category of beverage. Which is harder because you have to create it, but easier in the sense that you are not getting beat up by the big players or have to go head to head against them," insists Nalebuff.

In two years, the small company of 12 employees has reached the impressive figure of \$3.5 million in sales, but even Nalebuff admits that the company can't reach \$1 billion dollars in sales on its own. According to Nalebuff, the typical beverage company that succeeds brings itself up to \$100 million or \$200 million in sales and then turns itself over to an international player.

"There are lots of people who I can

imagine being great partners, including Danon, Stonyfields, Crystal Geysler, Hanes Natural Foods, many Japanese breweries, along with Coke, Pepsi, and Cadbury Schweppes," said Nalebuff. "I don't look on anyone as being the evil empire. Provided what we make is this type of a beverage, it's socially responsible, and it's good for you, I am happy to have more people drink it. If they can help get more people to drink it, that works for me."

### WILL WORK FOR TEA

Despite the sense of detachment that his realistic viewpoint about the need for an exit strategy signals, Nalebuff is unrelentingly committed to and proud of this business.

"Some people collect butterflies, other people read mystery novels, for me thinking about Honest Tea is actually relaxing," said Nalebuff.

Nalebuff has high aspirations for Honest Tea, and believes that the tea market could be the next version of today's current espresso obsession.

"Starbucks went and turned people

from drinking a twenty-five cent cup of Joe into a two dollar half-caf, half-decaf, semi-tall skinny latte, no foam," said Nalebuff. "People's knowledge of teas is black or green just like with wine it was red or white or with coffee it was regular or decaf. Now people have become much more sophisticated. They have some notions of oolongs, or Japanese and Indian teas. We have a large evolution to go through just as the coffee and wine industries did."

Despite some analysts' hesitations as to whether Honest Tea will be able to survive the challenges that competing in the notoriously brutal beverage industry will present, some certainly hope that Honest Tea is here to stay, as one customer recently wrote in an email "keep brewing this tasty stuff. Who would think some Ivy Leaguers could conjure up such a RAD product?"

-By Sarah J. Crews

## Q&A with Barry Nalebuff, Founder of Honest Tea and YES Adviser

### Q: How has practical business experience changed your academic teachings?

A: It does remind you of just how much stupidity you do have to deal with in the world. The old 99 percent perspiration and 1 percent inspiration. You better really really want to make something happen because the amount of effort something takes. It is huge even when you have an idea that works and people like. Just fighting the status quo is never easy. We have distributors who don't take our product because they claim they don't make enough money per case. They say they need to make five dollars a case. So I say, 'What's the problem here?' The answer is that our cases are twelve bottles a case and Snapple's are twenty-four. So

they make three dollars for 12 of our bottles or six dollars a 'case,' which is a whole lot better than Snapple's five, but because our cases are 12 and there's are twenty four, they think that they make three rather than five. Of course, that is a ridiculous way of looking at the world. In the sense that if we tape two of our cases together, they would say 'Oh, sure. That's fine.' What we are really selling is bottles, not cases -- so let's think of it that way. So it turns out that if we really were to tape them together, they would take it.

### Q: What advice would you give to future entrepreneurs?

A: DON'T DO IT. It's the same advice that I give to people who are thinking of apply-

ing for a Rhode's Scholarship. Do you really want to spend three years of your life in a country with miserable weather and worse food and whose education system isn't as good as Yale's? If you are going to do this, it's a little bit like Richard Dreyfus in *Close Encounters of the Third Kind*. You are going to do it because you just drawn to it, because you have no choice but to do it. You have an idea that just must be expressed and that I couldn't possibly talk you out of. And if I could talk you out of it, you shouldn't have been doing it in the first place. So that is my advice: Don't do it. If you are a real entrepreneur, you are going to ignore everyone's advice anyway.

-Conducted by Sarah J. Crews

## Focus on Yale Professor: Mark Reed's Inventions Could Make Computer Chips Obsolete

As entrepreneurs enter a highly competitive and perhaps declining economy, their best route to success might be to revolutionize the field in which they seek to enter.

While clearly this maxim is easier said than done, that is exactly what Professor Mark Reed is close to accomplishing. Reed is the Harold Hodgkinson Professor of Electrical Engineering and of Applied Science, and the Chairman of the Department of Electrical Engineering at Yale.

In his own terms, Reed, researches quantum electron device physics; tunneling and transport phenomena in semiconductor heterojunction and nanostructured systems; reduced dimensionality effects in nanostructures; resonant tunneling transistors, circuits and novel heterojunction devices; investigations into the physics and technology of quantum-confined electronic devices; investigation of resonant tunneling physics in a variety of heterojunction systems and materials, including OD quantum dots and resonant tunneling transistors; and molecular electronics.

In layman's terms, Reed's work could very well make computer chips virtually

obsolete. His replacement, the molecular transistor, is thousands of times smaller and 100 times faster than their silicon predecessors. When placed into supercomputers, the result would be unprecedented intelligence.

Not only would the transistors allow molecular microchips to compute faster, using less power, but they would be ridiculously cheap to produce.

While a technical explanation of a molecular transistor would be well beyond the scope of this article, the sheer possibilities Reed's research entails should interest the reader, regardless of the foreign language that engineering appears as to most.

Reed hails from Syracuse and studied physics at Syracuse University, earning both a BS and a PhD. Working on quantum devices and the limits of scaling electronics since the mid-80s, he came to Yale in 1990 as both a professor and researcher. Reed currently teaches ENAS111a: Science Fiction & Science Fact, in addition to upper level specialized courses.

"Teaching is an important, fun and integral part of being a professor," Reed said.

Over 110 of Reed's papers have been professionally published and he is the author of three books.

In addition to his academic work, Professor Reed is an entrepreneur. He co-founded Molecular Electronics Corp., a job that often takes him on the road. According to Reed, the most challenging part of working in a cutting-edge field is fundraising. In order to stay ahead of the pack in an aggressive sector of the economy, he must constantly network and attend conferences.

But there is nothing Reed would rather be doing than his present work. His advice to students seeking to start their own companies is to listen to their hearts, rather than any formulaic or calculated decisions.

"The key to success is doing it because you love it," Reed said. If you don't, you need to look elsewhere."

Fortunately, as the information age enters an exciting, yet uncertain, era, Professor Mark Reed has found a direction for his passion. As a result, the way we view the world may never be the same.

-By Tom Sullivan

## Yale Entrepreneurial Summit: YES Meets New York City

The Yale Entrepreneurial Society will meet the New York Business Community on February 8 at the Yale Club. This event, called the Yale Entrepreneurial Summit, will provide an opportunity for alumni and students with an interest in entrepreneurship to network and discuss their ideas and experiences. Furthermore, the event will be an excellent opportunity for YES to recruit interested alumni in order to springboard the establishment of an independent New York chapter of YES run entirely by alumni.

The first hour of the event will consist of a panel discussion to be moderated by Sean Glass, founder of YES and founder

and CEO of HigherOne. The rest of the event will be an open networking event with food and drinks. Several times through the course of the evening, YES President David Pozen, will discuss YES and its goals.

Following this speech, a panel entitled "Building a Business: After the Bubble has Burst" will occur. The purpose of the panel is to discuss the new challenges that entrepreneurs face in the new economy. The panel members will include:

\*Robert Pozen, Vice-Chairman of Fidelity  
\*Dhev Bhatia, Founder/CEO of HotSocket  
\*Henry Blodgett, Internet analyst at Merrill Lynch

\*Frederick Franks, Vice-Chairman of Lehman Brothers

\*Graham Anderson, Managing Partner at EuclidSR Partners

This event will be from 6:30 to 10:30.

Interested in getting involved in [YES and Know?](#)

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# Harvard Grad Describes Company's Journey in the New Economy

When Michael Fertik began Harvard College in 1996, he never imagined that by the time he graduated, he would own a successful software company. In fact, until junior year at Harvard, Fertik never had heard the phrases "business plan" or "executive summary." Despite all of this, in April of 1999 Fertik, with a team of two other students, officially became an entrepreneur. And a successful one at that. His software company, TruExchange, which began in Fertik's Harvard dormroom, currently occupies a 9000 sq. foot office, employees thirty workers, and has booked six figure revenues during a four month stretch over this past summer.

Fertik, along with Harvard pal Raefer Gabriel '00 and high school friend Noah Lehman-Haupt, initially got interested in entrepreneurship after a series of conversations he had with them in which they realized that they could create a better way of auctioning items online than previously existed. The three students recognized that the current auction sites were inefficient and inaccurate. Therefore, they decided to create a dot-com company, Bestmarket.com, which would enable people to buy/sell goods in a "high speed, efficient way," according to Fertik.

Despite successes with this company (successful incubator, IdeaLab, offered to buy Bestmarket), Fertik along with his partners came across an even better idea for a company during the winter of 2000:

a company that would create software to improve B2B marketplaces. Spending all of their holiday season working on proposals and writing a business plan, the three students both created and successfully marketed their new company, TruExchange (www.truexchange.com), which creates transaction software designed for two-way, bid/ask, continuously-clearing open market systems, by the end of the Spring.

*"HARVARD DOES NOT REALLY HELP YOU BECOME AN ENTREPRENEUR... I AM VERY GLAD THAT THE COURSES THEY OFFER ARE NOT 'HOW TO DESIGN A PRODUCT,' OR 'HOW TO START A COMPANY'..." MICHAEL FERTIK, PRESIDENT OF TRUExchange*

In fact, by March 2000, TruExchange received twelve offers for funding from incubators and venture capital funds, such as Kodiak Venture Partners.

Many might assume, given the quick success of TruExchange, that Fertik had learned much about entrepreneurship and how to manage a business during his years at Harvard. Surprisingly, however, Fertik says he had never took any economics classes at Harvard or participated in any of entrepreneur clubs.

"Harvard does not really help you become an entrepreneur. Nor do I think Harvard or Yale should. Both focus on liberal arts education, and I am very glad that the courses they offer are not 'how to design a product,' or 'how to start a company,'" said Fertik.

In fact, while Fertik attended Harvard, creating a "dormroom start-up" was prohibited. Similar to Yale's current policy, Harvard's policy then prohibited students from using the college's resources to further their own entrepreneurial endeavors.

"We were technically breaking a rule," said Fertik. "However, we were not making or selling anything out of our rooms at Harvard, or using their resources. I think Harvard has wisely revised their policies so as to allow from some entrepreneurial work to go on in a dorm room."

Despite all of the obstacles that Fertik and his teamed faced in creating TruExchange, he has learned that "if you have a passion for something, then you will make it and be successful."

-By Wesley M. Mittman

## Y Capital Connection Links YES Entrepreneurs and Alumni

The Yale Entrepreneurial Society is taking yet another leap for the entire YES network.

The Y Capital Connection team is creating a web page to link YES members with promising business ideas to YES alumni interested in becoming involved with young businesses. YES members will be able to post business plans on this exclusive YES web page. Registered YES alumni then search these plans based on certain investment criteria.

The Y Capital Team will review Executive Summaries and only after this screening process a host of potential investors will

be allowed to review the plan. If an investor's interest is piqued by a particular business plan, the Y Capital page will facilitate communication between entrepreneur and investor. Gus Fuldner, a member of the Y Capital Connection team said, "Investors will have access to a unique, quality deal-flow from the greater Yale community."

The Y Capital project will be formally announced at YES New York: Yale Venture Summit on February 8.

Y Capital Connection is unique in that its value is perhaps greatest to YES alumni. While some businesses provide similar

services as Y Capital Connection, Y Capital is unique in that it is a nonprofit arm of YES. Sean Glass emphasized, "It exists solely to benefit and support the YES population."

Y Capital Connection has carefully preserved the privacy of both angels and investors, according to Glass. Investors will be able to search business plans anonymously, and at no time will financial information be released.

-By Jon Goldberg

# Career Opportunities On The Leading Edge

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## Opinion: Real World Process Engineering

At my company, Higher One, we are currently developing the first version of our service. It is amazing how even the simplest sounding service can evolve into pages and pages of specific actions and use cases. Every time we review a set of screen shots or walk through a process, we spot a way to make our service more functional or easier to use. Once we launch our beta program and actually observe how our customers understand and use the processes and interfaces that we have created, we will be able to further refine our service and create even greater value for our customers.

When being a pure-play Internet company was of primary importance in attaining venture capital, it was often overlooked that although it is possible to use the Internet to streamline many processes, most processes have a real world component or could be affected by something that happens via paper or the telephone.

The Internet is not a closed system.

For example, Datek Online (CEO Ed Nicoll – YES member and Y50k judge) has ads in magazines and newspapers that include a paper sign up form. A customer can fill in the form and send it in to sign up. There is a certain point when the customer's information has to make it into the information systems that are used by Datek's web site. Additionally there has to be a mechanism whereby a user who has not set up their account online can do so easily without have to give Datek the same information they gave in the paper form. This sounds simple, but is not as easy as it appears.

The Internet has been a tremendous enabler of customer self-service. Companies have saved tremendous amounts of money by encouraging their customers to find the answer to their questions through a FAQ section or help index rather than calling customer service. Failed process development can do the opposite. Instead of making it easy for the customer to help herself, the process can actually cause an increase in the level of

customer service necessary.

For example, Mark Volcheck, the – of Higher One, and I were recently traveling and used an airline that had implemented a "self check in" system. The system gave you several options to identify yourself. None of these were something that the average consumer who had purchased an e-ticket would know. The reason is that the machine can't look at your photo ID and determine that "yes, it really is you." Mark finally figured out the credit card he had used to make the booking, asked a person behind the ticket counter for our flight number (yes there were ticket agents assisting passengers at each "self check-in" station), and got into the system. It then asked him if we wanted to change our seats. He said yes. He put in the wrong seat by mistake and when he tried to go back, the system locked him out. A ticket agent called for our bags and asked for our boarding pass. We told her that the machine had never spat it out. We proceeded to then go through the normal check in procedure to get our boarding passes and seat assignments.

The "self check-in" didn't work at all, and even if it had, a ticket agent was still needed to see photo ID, and to ask standard security questions. I can't understand why an airline would invest in such a system. Maybe in the future it will evolve so that it can truly replace the need for ticket agents at the check in counter. There is a long way to go.

Before a company plows ahead with the digitization of a process or procedure it should test the assumption that it is the right time to change the procedure. If it determines that it will provide cost savings, customer self-service, and usability increases the company must make sure it has thoroughly thought through the digital and analog processes involved. Then the company will truly benefit from taking advantage of the digital, networked world that we are creating.

-By Sean Glass, founder of HigherOne

## How to become a YES & Know Sponsor

YES & Know, the official magazine of the Yale Entrepreneurial Society, is published three times a semester and circulates to over 1000 Yale students, faculty, alumni, and business leaders.

Becoming a sponsor of the magazine is a great opportunity to reach an audience of the Yale community that one might not otherwise have access to. Placements are offered in full-page and half-page sizes.

For more information, please contact Wesley Mittman, wesley.mittman@yale.edu or 203-436-0476.

## YESDex: Tracking Yalies' Companies Against S&P, NASDAQ

Since YES' inception last year, entrepreneurship has taken off on Yale's campus and in the New Haven area. Undergraduates, graduates, faculty, and alumni have all participated in kindling the entrepreneurial spirit and sparking interest in entrepreneurship on campus.

With all this excitement surrounding YES and the companies that have sprung from its annual Y50K business plan competition, we here at *YES & Knowthought* we should check in on some of the entrepreneurial endeavors of past Yalies. In subsequent issues of this newsletter, we will be tracking top Yalie-led and Yalie-founded public companies by constructing an index called YESdex and comparing its performance to that of benchmark indices such as the S&P 500 and the NASDAQ. We will also include feature articles profiling specific companies in the YESdex and their Yalie members. YESdex is a fairly simple, straightforward index that is calculated

using a weighted average based on market capitalization. More precisely, YESdex is tabulated in this manner:

$$\frac{\text{SUM (MARKET CAPITALIZATION} \times \text{PRICE) OVER } N \text{ COMPANIES}}{\text{TOTAL MARKET CAPITALIZATION OF THESE } N \text{ COMPANIES}}$$

At this writing, there will be six companies in YESdex. Three were founded by Yalies: FedEx ([FDX](#)) the famous global express delivery company founded by Fred Smith YC '66; RealNetworks ([RNWK](#)) a pioneer in the online streaming media industry founded by Rob Glaser; and Handspring ([HAND](#)), the handheld computing company co-founded by Donna Dubinsky YC '77. Rounding out the index are three companies with Yalies serving as chief

executives: DoubleClick ([DCLK](#)) an online targeted advertising firm that has Kevin Ryan as its CEO; Lucent Technologies ([LU](#)), the telecommunications innovations company formerly known as AT&T's Bell Labs, has Henry Schacht YC '56 steering at the helm; and finally Liberty Media Group ([LMGa](#)), a veritable giant in the media world led by John Malone '63 its CEO.

Below is a table of the components of YESdex. The initial index value of 21.80 is based on the closing prices of the six companies on January 31, 2001. Over the next few months we will gauge the percentage performance of this index against the S&P 500 and the NASDAQ. And if what they say about a Yale education is true, YESdex should outperform!

-By Alexander Nazem

Symbol	Name	Last Trade	Market Cap	Earn/Shr	P/E	
<a href="#">FDX</a>	FEDEX CORP	31-Jan	<b>45.38</b>	12,957,000,000.00	2.47	18.37
<a href="#">RNWK</a>	REALNETWORKS	31-Jan	<b>10.1875</b>	1,606,000,000.00	-0.72	N/A
<a href="#">HAND</a>	HANDSPRING INC	31-Jan	<b>45.9531</b>	5,828,000,000.00	-1.4	N/A
<a href="#">DCLK</a>	DOUBLECLICK INC	31-Jan	<b>15.375</b>	1,899,000,000.00	-1.29	N/A
<a href="#">LU</a>	LUCENT TECH	31-Jan	<b>18.6</b>	63,034,000,000.00	-0.29	N/A
<a href="#">LMGa</a>	AT&T LIBERTY A	31-Jan	<b>16.9</b>	43,592,000,000.00	-0.8	N/A

<b>Index</b>
21.80

<b>Total Market Cap</b>
128,916,000,000.00

### Enter the Y50K!

Executive Summaries Deadline: February 13, 2001.  
For More Information, Contact Julian.Revie@yale.edu.

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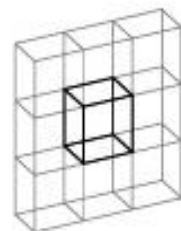
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## YALE COMPANY FOCUS: TOTALITY TAKING IT TO THE NEXT LEVEL

Founded by Yale graduate Michael Carrier '89, Totality, an application and infrastructure management service provider, hopes to join the ranks of Yale-founded, public companies Beauty Jungle and HandSpring, by IPOing within the next year. In order to reach this goal, Totality has added more experienced individuals to their management team, secured \$100 million dollars in second round financing, and has been pushing toward profitability.

Recently named one of LocalBusiness.com's top 50 companies to watch in the Bay Area during the fourth quarter 2000 list, Totality prevents e-commerce sites from failing. The company provides the infrastructure to enable other businesses to run their own software codes. After aiding in the initial deployment of a site, Totality then monitors the site, guaranteeing security and 24 x 7 up time for a monthly fee.

"We lay out the infrastructure for people, they roll out their e-commerce application on top of that infrastructure, and we monitor, manage it, and maintain it," Carrier said. "The goal is to make sure that the systems are always up and that they are always fast, responsive, and secure."

Carrier recognized the need for this service after founding his first company Fort Point Partners, which develops the code for e-commerce sites such as J.Crew and Nike. "The motivation for the creation of this company came out of building lots of e-commerce sites for big companies at Fort Point and watching them flail after we had turned over the site," said Carrier.

Totality targets Global 2000 companies. Their customers include K-Mart's online division Bluelight.com, and Smith and Hawken's online garden furniture shopping site Garden.com. "We want to grow as fast as possible, but we want to grow in a

measured way. You have to be able to find the people you need and ramp the sales in the way that you need to. We sell and we fulfill here," said Carrier. "Demand is not the problem we need to solve. We have more demand than we can supply."

Totality has found itself constantly being compared to its competitor Loudcloud, founded by Marc Andreessen. The two companies are in the same industry and do share similar business models. They were founded in the same year, have raised

roughly the same amount of financing, and share many of the same strategic partners including Oracle, Sun, BEA, and Exodus. *Red-herring* described Loudcloud, which recently filed for its IPO, as having the

most media buzz of any private company on their Top 100 companies to watch list for 2000. Carrier believes that having Andreessen as its competitor elevates consumers' consciousness of the importance of the industry. Carrier, however, insists that there are differences between the two companies.

"We don't worry about their PR buzz because we believe that the proof is in the pudding. It is a long war made out of many battles. If you look at our team, it's a little different from Andreessen's company. Our team comes from backgrounds of operating multi-million dollar systems in mission critical environments, and we think that we brought a certain maturity and experience level that you don't find at Loud-

cloud. Over time I really think that is going to be the test of who wins the race," said Carrier.

While both companies claim to target Global 2000 enterprises, Loudcloud appears to focus more on dotcom start-ups, whereas Totality seems to focus on larger, more complex systems.

"There is sort of a one-size fits all box at Loudcloud. If you don't fit in that box, that solution is not going to be for you. That is fine for a small business because they can fit themselves into that box, but it doesn't really work for the larger companies," said Carrier.

However, Carrier points out that LoudCloud and Totality are not the only two companies battling for control over this industry; he explains that the traditional outsourcers, such as IBM and EDS, are the other sect of major competitors. "It's not just us [Totality] versus them[LoudCloud]. It's Totality versus IBM and EDS, and those are really the bigger players that we focus on. They are big companies with lots of resources that have already penetrated into a lot of accounts," said Carrier.

Start-ups often need a second-generation executive on board before they can go public. Davidson, Totality's new CEO, filled that need in July when he assumed Carrier's former role. Since then, Carrier has become the CTO. Davidson has twenty-three years of experience in the IT industry and was most recently president of a strategic business unit at EDS.

"In well run companies this is the normal trajectory because there are people who are entrepreneurial and create companies, and there are people who run big companies. And they have two different skill sets," said Carrier. Davidson said that he is looking forward to doubling Totality's staff and expanding into Europe and Asia within the next year.

*Totality recently changed its name from MimEcom.*

- By Sarah J. Crews



Michael Carrier '89, founder of Totality.

## Office of Cooperative Research Links Academia to Business

In the academic world, Yale University is distinguished by its unparalleled resources and faculty. In the economic world, Yale is equally famous for its research facilities and faculty. Add to that the potential for billion dollar developments and inventions, and one can begin to realize the enormous power Yale yields in the financial world.

However, the transition from the academic to the economic world can be a tumultuous one. Enter the Office of Cooperative Research (OCR). Founded in 1982, the OCR acts to extend and expand Yale's interaction with the private sector. This involves oversight for patenting and licensing activity, university inventions and contractual relationships between faculty and industry. By working with Yale researchers, the OCR staff identifies inventions that may ultimately become commercial products and services useful to the public, and establishes industrial partnerships to license Yale inventions. In addition to promoting existing inventions, the OCR also functions to cultivate venture capital funding for new ideas and assist their progression into the New Haven and worldwide economy.

But it wasn't always this way. Past University policy dictated that Yale refrain from directly linking researchers with investors. In the mid-90's, however, Yale President Richard Levin announced a reversal in course, and directed the OCR to begin actively promoting Yale research to industry. "The change is a recognition of the change in the nature of academia in the economic world," said Jon Soderstrom, managing director of the OCR. "

When recruiting faculty in the life-sciences, the biggest question they

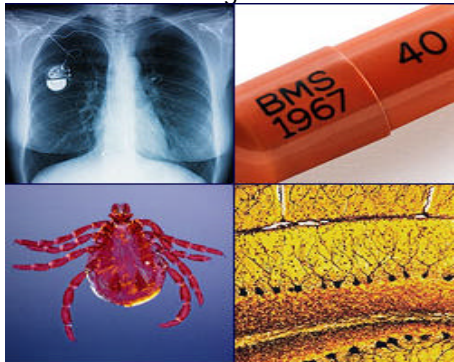
have is 'what's going to happen to inventions that come out of my labs.'"

Soderstrom believes that an established biotech industry is essential for drawing the elite professors and researchers to New Haven.

"People like to see the transition of work to the real world," Soderstrom said. "People like to see a thriving biotech market. It's very exciting."

In addition to the faculty members themselves, such an industry also allows for spouses of recruited faculty to find work.

Since the University and the city of New Haven initiated cooperative efforts to establish a biotech market, New Haven has rapidly risen to where it is now a major player on this scene. Projects such as Science Park and the George Street Technol-



Yale's Office of Cooperative Research has been working hard to establish a biotech industry in New Haven.

ogy Center have drawn an estimated \$1.1 billion to New Haven, with much more on the way. There is little doubt that the presence of Yale is paramount in attracting investors.

The OCR, not content with its remarkable successes, is continuing to bring entrepreneurs, investors and advisors together. Recently, the OCR sponsored a "Boot Camp" for over 175 scientists, entrepreneurs, existing company management, advisors

and investors, to not only educate on financial and venture strategies, but to introduce the groups to one another and establish partnerships to add to New Haven's burgeoning market. Among those in attendance was Achillion Pharmaceuticals, which along with Molecular Staging, will be the cornerstone of the George Street Technology Center and a major acquisition for New Haven.

In addition to maintaining present procedures, in the future the OCR will look to promote Yale investors and start-up companies to the international market. Soderstrom views the information technology industry as a major opportunity for growth in New Haven.

"The nexus between information technology and biotechnology is something we see as very important and starting to grow."

The OCR also recognizes the rapidly blurring line between students and industry and is constantly monitoring student entrepreneurial activity on campus.

"We're very interested in student venture and in business plan competitions," Soderstrom said.

Although more has been accomplished by the OCR than anyone ever dreamed in elevating New Haven to the upper echelon of biotech markets, now is not the time to grow complacent. The economic world is changing faster than one can comprehend. By having the OCR in their corner, Yale students and faculty have a critical advantage in this startup-eat-startup world.

# CALENDAR OF EVENTS

UPDATED INFORMATION ON THESE EVENTS CAN BE FOUND AT:

**WWW.YES.YALE.EDU**

EVENTS	TIME & LOCATION
Dr. William Haseltine, CEO, Human Genome Sciences	*Monday, February 12 *LC 102, 7 p.m.
<b>Executive Summaries deadline.</b> 3-5 page summaries are mandatory; top 2/3 of summaries make semi-finals of Y50K Entrepreneurship Competition.	*Wed, February 13 *WLH 116, 8 p.m.
Full Business Plans due	* Wed, March 28 * Location TBA, 8 p.m.
Final Judging Round	*Saturday, April 14 *Luce Hall, 9 a.m.
Y50K: Awards Gala Announcement of the Y50K finalists. Gala speech.	*Sat, April 14, 2001, * Location TBA, 4 p.m.

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