



Al Martinez-Fontes talks to 10-250 audience after his presentation in March.

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APRIL 2003

VOL. 21 NO. 7

10-250 Re-Cap
Miss The Last 10-250?
Let's Review!

Homeland Security:
New Opportunities for
Business

By Martha Mangelsdorf

NEXT 10-250:
The Future of Business on the Internet:
What have we learned?

Wednesday, April 9, 2003
Room 10-250 @ MIT

PANEL: Rick Daniels, President, The Boston Globe, David P. Fialkow, Managing Director, General Catalyst Partners, Ben Fischman, Executive Vice President of Strategic Development, SmartBargains, and Christopher M. Kelley, Analyst, Forrester.

MODERATOR: John Landry, President, Lead Dog Ventures

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(WALK IN REGISTRATION ONLY!)

Osama Bin Laden has said
"It is very important to hit the U.S. economy with every available means"

To emphasize the importance of homeland security, Alfonso Martinez-Fontes, Jr. read a quote by Osama Bin Laden. Osama Bin Laden has said "It is very important to hit the U.S. economy with every available means." Martinez-Fontes told the audience on March 12, 2003 at the 10-250 event of the MIT Enterprise Forum of Cambridge. Martinez-Fontes, who is special assistant to the U.S. Secretary of Homeland Security for the Private Sector, warned that terrorist-type activity could "spoil the American way of life and, in doing so, the American economy."

Martinez-Fontes, who previously served as chairman and CEO of JP Morgan Chase Bank in El Paso, Texas, briefly discussed the structure of the recently formed U.S. Department of Homeland Security. The department's mission is to prevent terrorist attacks; reduce vulnerability to such attacks; and minimize damage or assist in recovery from them. The department, he explained, has four critical areas, each one headed by an under secretary. They are science and technology; information analysis and infrastructure protection; border & transportation security; and emergency preparedness and response.

Martinez-Fontes noted that the Department of Homeland Security's Under Secretary of Science and Technology will soon be issuing what's called a broad agency announcement, in this case a list of products that the department has allocated a total of \$30 million to research. There will be an additional \$3 million available for researching ideas not on the list, Martinez-Fontes said.

"I believe that there is a business case for homeland security," Martinez-Fontes said. He explained that he believes it is in our best interest to invest in homeland security, and that businesses need to make it part of their best practices to create security that will make their companies or products preferred in the marketplace. Martinez-Fontes observed that the private sector owns 85% of the infrastructure in this country. We need, according to Martinez-Fontes, to look at homeland security as a cost of doing business -- the way homeowners' insurance is a cost of owning a home.

The AssureTec Systems, Inc., Plan

After Martinez-Fontes' keynote, Peter Antoinette, vice president of marketing for AssureTec Systems, Inc., gave a presentation about AssureTec and received feedback from expert panelists.

AssureTec Systems was founded in the summer of 2001 and has 18 employees. Antoinette said. The company's objective is to offer technology that provides real-time validation of identity documents such as passports and drivers' licenses. Antoinette explained that border inspectors are under tremendous time pressures. For example, in the U.S., there are 1 billion annual exits and entries across the country's borders.

AssureTec's product is a machine that reads and recognizes identity documents like passports and automatically confirms the security features in the documents. The company's offering, Antoinette explained, includes a software platform that has risk assessment features and can integrate data from third parties - such as passenger lists. Potential applications for the product include not just validating travel identification but also, in the financial arena, deterring identity theft. Another potential application is providing ID verification in high-risk commercial facilities like nuclear power plants.

AssureTec, which is based in Manchester, N.H., has products in the beta stage and is seeking to raise \$5 million to \$10 million in capital. Antoinette said that there are organizations that have already placed orders for the beta product, and the company expects to have its system, called the i-Identify system, in production in the middle of this year.

The company foresees exponential growth of its market; Antoinette estimated the current accessible market size as somewhat less than \$1 billion but expects it to grow to reach \$10 billion in 2006. AssureTec's strategy is to sell through dominant channel partners, he said. Antoinette acknowledged that an 18-employee start-up won't be credible by itself in this marketplace and needs relationships with large companies that serve this market, companies like Unisys or EDS. He explained that AssureTec has already started relationships with such companies. AssureTec's revenue strategy is to price its hardware in a competitive manner and sell it with bundled software. Additional revenues, Antoinette said, will come from follow-on sales and software upgrades.

Here's some of the feedback the expert panelists gave to the AssureTec presentation.

John Skinner, Adams, Harkness & Hill

Skinner observed that the government market is now viewed as a growth area and, in the public capital markets, it is one of the few areas where institutional investors want to put money. Although the government is a slow payer, government agencies do typically pay, he added. However, Skinner noted that the government market is a hard one to penetrate, and it's hard for start-ups to break into. That's why it's important to get a close relationship with a strong, Tier 1 prime contractor to the government, Skinner explained. "It's the land of the giants," he said.

Steven Davis, CXO Management

Davis pointed out that, although the AssureTec plan discusses several markets, the company will probably have to focus on one. He agreed that Tier 1 partners are key; the key to winning government bids, he said, is getting "spec-ed" into the bid process - something a start-up isn't going to be able to do on its own. However, he wondered why AssureTec wants to focus on the government market, given the business plan's mention of a \$1 trillion identity theft problem in the financial industry. "You should go back, look at that" market, he urged. He noted that the government has a long sales cycle, is a slow payer, and that government will pay the major contractor, who will then pay its smaller partners - a scenario that has a major impact on a small company's cash flow. Davis also said that AssureTec's analysis of the competition in its business plan was light.

Suresh Shammugham, Boston Millennia Partners

There are three primary roles, Shammugham explained, to look at when evaluating an investment opportunity: management team, market, and product or service. On the first two counts, Shammugham termed it "refreshing" to see that the company has a well-developed team, one he observed that one won't be hard-pressed to find a more "timely" or "relevant" market than AssureTec's. But he said he'd like to see more comparison between AssureTec's solution and what's being done now. What is the price performance benefit of your solution versus the existing competition? Demonstrate your competitive advantages, Shammugham advised.

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Ten Hazards of Start-up Companies

Trish Fleming
Executive Director
MIT Enterprise Forum of Cambridge

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A version of this article appeared in the March 3-9 edition of Mass High Tech.

All new ventures, are inherently high-risk. Every founding team member should be familiar with the broad categories of hazards that threaten a fledgling company. Successfully guiding the company around these obstacles is critical to success.

1. Team-building beyond "family." Most startups begin as a "family" venture, founded by friends, colleagues, and relatives. In the early days gets everyone through the long hours and initial bumpy ride. Every team must plan for the time that the skills needed to run the company will change, and that everyone, especially the founders, might be replaced. Just because it is good for you doesn't mean it is good for the company.

2. Confusing a sale with a market. Getting that first customer is great, but it doesn't mean you'll get another one. We often see companies that know the market's size, but nothing about how it works. For example, one company invested serious cash in a new product after they sold the prototype to one customer. However, they had no knowledge of the needs of other potential customers, the sales cycle, or distribution networks. They never sold another unit.

3. Believing that technology, like love, conquers all. Successful products make the leap from the early adopters to the mass market because they solve a need, not because they're cool. If the technology is too far ahead of the market and addresses too small a niche, the product will go nowhere. Particularly in a down market, make sure your products truly a "must-have".

4. Insularity. Don't rely on the "If you build it, they will come" philosophy. There is no substitute for a good network that finds you customers, team members, investors, and champions. Every successful entrepreneur tells stories of how meeting someone led to their first customer, or first investor, because rarely do you find the one person you need in the first step. You must get out of the lab or office and meet as many different types of people you can.

5. Underestimation. Entrepreneurs generally underestimate everything, from the amount of time and money it takes to develop a product, to the ease of the first few sales and the barriers to entry. If you haven't planned for contingencies, you lose your ability to react quickly when your business plan goes awry.

6. Lacking focus and flexibility. Some entrepreneurs believe their product is adaptable to so many markets that they run through cash developing a product that doesn't have enough features for any market. Conversely, there are entrepreneurs who are too rigid. . And are unable to see opportunities when they arise. Make sure your product development strategy is manageable, but never stop scanning the horizon for new markets or applications that can be incorporated into your plans.

7. Falling for financing fallacies. The tech boom gave rise to the mistaken belief that venture capital is the only way to build a company. Venture capital is appropriate only for certain types of companies, not the vast majority. Know which financing vehicles and investors are appropriate for your firm, and remember that successful companies utilize many different sources of capital.

8. Inappropriate exit strategies. The tech boom also gave us the belief that all technology companies should be fast-growth and headed for an initial public offering, or a sale. So-called "lifestyle" companies (privately held, up to \$10M in revenue, run by the founders), were considered second-class, even though most technology firms in Massachusetts fit this description.. If you want a big exit, make sure the company can achieve a large market capitalization, pay for professional management and has a broad market range. You'll burn through too much cash and burn out too many people if you try to make a growth company out of a lifestyle one.

9. Pricing pitfalls. Entrepreneurs always struggle with pricing dilemmas. Charge too much, you'll have no customers; charge too little, you'll have customers but no gross margin. Your pricing strategy depends upon your sales and marketing strategies. You must know how your customers behave in the market segment you've chosen.

10. Running out of cash. I know of a 20-year-old technology company that has made numerous errors, some quite serious, in every one of the above categories, but has never violated the basic tenet that "cash is king." They are careful, not profligate or stingy, with their cash, and will spend it if they believe the reward is worth the risk. As a result, they have a loyal, hard-working team that brings forward new ideas, engages in healthy debates over features and improvements, and is invested in the company's success.

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Technology @ MIT

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From The MIT News Office

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HAWAII'S FRESH WATER

During a recent expedition to Hawaii, 20 MIT researchers collected data from land, sea and air in work that could have an impact on the state's management of fresh water. Their goal is to calculate the amount and distribution of groundwater flowing into coastal waters. While Hawaii has models to gauge rough averages of groundwater flow, no one has ever determined the exact source and quantities of the groundwater coming into the ocean. If it works, the MIT technique could do so. [MORE](#)

MEXICO CITY'S AIR

An international team led by an MIT research scientist and her husband, an MIT Nobel laureate, is working to help Mexican policy-makers find ways to reduce Mexico City's severe and persistent air pollution. The researchers, who have been working on the project for more than three years, are currently using a novel mobile laboratory in Mexico City to collect field data. The goal of the program is to perform "integrated assessments" of different emissions-reduction strategies, considering not only scientific and technological factors but also the broader social, economic and political dimensions of the problem. [MORE](#)

BOOST TO BOSTON

Greater Boston's eight research universities -- magnets for talent and billions of dollars in investment -- will play a key role in the region's economic recovery by continuing to expand knowledge and technology that creates new industries and jobs, according to a study released in mid March. "Engines of Economic Growth" is a detailed report on the economic and social impact in 2000 and 2002 of Boston College, Boston University, Brandeis University, Harvard University, Massachusetts Institute of Technology, Northeastern University, Tufts University and University of Massachusetts Boston. [MORE](#)

TERRORISM: UNDERPREPARED

Political scientists with expertise in military strategy, international security and the causes and consequences of war analyzed U.S. operations in Iraq and weighed their potential aftermath in an MIT Center for International Studies (CIS) forum in late March. One speaker warned that the U.S. currently faces security challenges which it is not meeting, particularly in preparing for the possible use of chemical or biological weapons here. [MORE](#)

INSIGHTS ON CLONING

Only 1 percent to 2 percent of animals cloned from adult cells survive to birth; many die mysteriously very early in development, around the time of implantation. A new study authored in part by MIT researchers suggests that a set of genes important in early development fails to reactivate in adult, or somatic, cell-derived clones, a finding that could help scientists skirt a major roadblock in cloning. [MORE](#)

BIRTH OF SOMETHING BIG

MIT scientists and others arriving on the scene of a gamma-ray burst witnessed the death of a gigantic star and the birth of something monstrous in its place, possibly a brand-new, spinning black hole. The observation, featured in a recent issue of Nature, is the most detailed of any gamma-ray burst to date and provides confirmation of the "collapsar model," in which the core of a supermassive star is thought to collapse into a black hole. [MORE](#)

For more information on Research Digest items, contact: Elizabeth Thomson, MIT News Office
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Editor's Article

The Rental Trap

By James L. Woodward, Editor
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[Past Editor's Articles](#)

It is very tempting to develop a business model that has the customer paying for the product or service over time rather than all up front. It is certainly easy to sell to the customer - "try it, you'll like it" is a very real incentive - and the revenue stream can build up into an annuity that is larger than all if sold on a one time basis. We see one or two of these at the Startup Clinic every year - most recently last month. Unfortunately, such a model is difficult, maybe impossible, to pull off, and requires expert accounting and financial advice.

The two best examples of success with the rental model are IBM and AT&T. Until antitrust caught up with them thirty years ago, both refused to sell their products. You had to pay monthly for their telephone instrument and your punch card equipment (computers came much later). Over the years, the monthly revenue was far in excess of what a telephone or computer might have sold for, and both did very well, dominating their industries.

From the perspective of IBM and AT&T, this had the additional advantage that it was very hard for competitors to break into the market. The established players had the advantage of huge cash flow and profitability from their rental bases, but new entrants had to finance the building of the base without the advantage of profitability.

The problem lies in the fact that the operating needs of a business are completely independent of the revenue model - Sales and Marketing, Research and Development, and Administrative expenses will be much the same whether you sell your product or rent it. They all have to be paid in cash and expensed on the Income Statement. If the product is hardware, the rental company will capitalize the costs of manufacturing the product and depreciate it over three to five years, but the actual cost must be paid in cash.

So, simply put, you have all the cash costs of running a business of a certain size, but only a fraction of the revenue (one third to one half, typically). On the income statement you have all the operating expenses of the business, the depreciation on the hardware, and, again, only a fraction of the revenue.

There's not space here to show the financials, but if you take a typical business - revenue 100, cost of goods sold of 40, S&M of 25, R&D 15, G&A 10, you have a profit of 10. This is hard to do in the first year or two, as expenses are typically larger in young companies, but assume it's possible. The same company on a rental basis will have revenue of 20, depreciation of 8, and the same operating expenses, for a loss of 38. If it grows at only 20% per year, it will still be losing money in the fifth year - faster growth leads to larger losses for longer periods.

The usual answer that rental model startups give when questioned about cash is that they have a bank who will finance it. This is easier said than done. Banks don't lend money to companies that are consistently losing money - telling them how much you'll make starting in the seventh or eighth year when you build up the rental base won't help.

Ah, they say, "we won't lose money - we have a contract and therefore can take the whole discounted present value of the contract into revenue when signed". This is also easier said than done. It eliminates the sales pitch "try it you'll like it" -- the customer has to make a firm commitment to the whole term of the contract up front, even if your company folds and there's no one available to service the product.

The moral is, if you decide to try "try it, you'll like it" and take your revenue on a monthly basis, get good advice and counsel - it's harder than you think.

Upcoming Events

[Calendar Details](#)

WEDNESDAY, April 9th - 10-250 Case Presentation

The Future of Business on the Internet: What have we learned?

PANEL:

Rick Daniels, President, The Boston Globe

David P. Fialkow, Managing Director, General Catalyst Partners

Ben Fischman, Executive Vice President of Strategic Development, SmartBargains

Christopher M. Kelley, Analyst, Forrester

MODERATOR:

John Landry, President, Lead Dog Ventures

WALK IN REGISTRATION BEGINS AT 5:30
NO PRE REGISTRATION

TUESDAY, April 15th - Concept Clinic - NEW FORMAT!

What's the difference between a "kind of cool" technology and a successful company? Join us at the concept clinic and meet technologists who are, right now, developing some pretty cool technology. After their presentation, we will break into small groups and help the technologists brainstorm their prospects for business applications -- which markets might want this technology, who, if anyone, has a problem that this technology might solve and what else will they need to get this off the ground. **PRE REGISTRATION IS REQUIRED - REGISTER HERE!**

WEDNESDAY, May 7th - Start Up Clinic

PRE REGISTRATION IS REQUIRED - REGISTER HERE!

Tuesday, May 13th - Connect! For Entrepreneurs Only!

(Please Note: This is part of a SERIES of events -- visit the website for details!) Join us at an innovative program linking early entrepreneurs and board members, developed by The Commonwealth Institute, The Partnership, National Association of Corporate Directors, The Boston Club and the MIT Enterprise Forum of Cambridge.

It isn't always easy for early entrepreneurs to select advisors and board members. Getting the right people on your team is critical to the success of your company. At this session, learn from experienced entrepreneurs and board members about what works and what doesn't.

Thursday, May 15th - Connect! For Potential Board Members Only!

(Please Note: This is part of a SERIES of events -- visit the website for details!) Serving on a start-up or early stage company board is a unique challenge. This session offers a realistic picture of the particular satisfactions and stresses of serving on the boards of early companies from the perspective of experienced board members and entrepreneurs.

Wednesday, May 21st - 10-250 Case Presentation

TELECOMMUNICATIONS: Keys to Recovery
Join us as the Keynote and Panel discuss the timing, character, and opportunity for the next surge of growth in this important industry in Massachusetts!

KEYNOTE

Patricia Russo, President & CEO, Lucent.

PANEL

Sieve Levy, Managing Director and Global Group Head, Lehman Brothers,

Pierre Villeneuve, Ph.D., Founder and Chief Executive Officer, Clarendon Photonics, **Ron Sege**, Founder & CEO, Ellacoya Networks and **Edgar Masri**, Partner, Matrix Partners

MODERATOR

Peter Howe, Business Reporter, the Boston Globe.

Sponsored By: Morse, Barnes-Brown & Pendleton, P.C.

Co-Hosted By: Mass Telecommunications Council

WALK IN REGISTRATION BEGINS AT 5:30
NO PRE REGISTRATION

Tuesday, May 27th - Connect! Session Connecting Entrepreneurs & Board Members

(Please Note: This is part of a SERIES of events -- visit the website for details!) Attendees for the May 27th session must have attended either the session on the 13th or the 15th, or previously served on an early company board.

THURSDAY, June 5th - SATELLITE BROADCAST

What Private Equity Investors are Looking For
FEATURING: Alec Dingle, MIT Venture Mentor Service, **Heidi Greiner**, iRobot Corporation, **Noubar Afeyan**, Flagship Ventures, and **Allan Wallack**, Spring Tide Networks. **MODERATOR: Paul Ferri**, Matrix Partners

WEDNESDAY, June 4th - Start Up Clinic

PRE REGISTRATION IS REQUIRED - REGISTER HERE!

WEDNESDAY, June 11th - 10-250 Case Presentation

Lessons Learned from the Forum

Details Coming Soon! Mark your calendar for this event -- it's one of our most popular!

Other Events of Interest

Tuesday, April 15th - Life Science and High Tech Company Partnerships- The Challenges, Successes and Opportunities

Lydia Villa-Komaroff, COO and VP of Research at the Whitehead Institute for Biomedical Research, will keynote the event. The program also includes a panel discussion focused on strategic partnerships and technology acquisition- the criteria, challenges, and recipes for success. [DETAILS AND REGISTRATION.](#)

Wednesday, May 7th & Thursday, May 8th - 2003 SPRING IEEE Conference on Technologies for Homeland Security Requirements, Technologies, Operations and Funding

Third in a series, the IEEE Conferences on Technologies for Homeland Security, organized by the Boston Section of IEEE, will provide a forum on requirements, technologies, operations and funding for technology development and opportunities in the marketplace. A focus of this two-day conference is security to protect aviation and other key elements of our transportation system. [DATES AND REGISTRATION INFORMATION](#)