ILinc –LearnLinc Case Study

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Distinguished Professor of Higher Education, Emerging Technologies, and Innovation

Reprinted from THE WALL STREET JOURNAL

THURSDAY, AUGUST 6, 1998

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TECHNOLOGY JOURNAL / NET INTEREST

Software Seeks to Breathe Life Into Corporate Training Classes

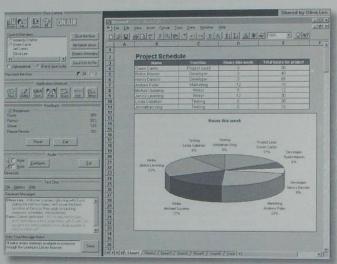
Workers Avoid Long Courses— And Long Trips

By Rebecca Quick
Staff Reporter of The Wall Street Journal
HE INTERNET promises a lot
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But maybe it can make them a little less painful.

A handful of Web companies are designing software packages that allow workers, sitting at their own desks, to learn everything from basic computer skills to accounting methods from live instructors. With just a computer and an Internet connection, these software applications allow you to dial in to a virtual classroom—along with colleagues from around the globe. The instructor can call on students, lead them through a presentation or throw out a pop quiz to make sure the class is paying attention.

For businesses, the biggest advantage is that cyberspace training cuts out the ex-



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Text: http://www.jackmwilson.net/Entrepreneurship/Cases/Case-ThelLincStory.pdf

Introduction

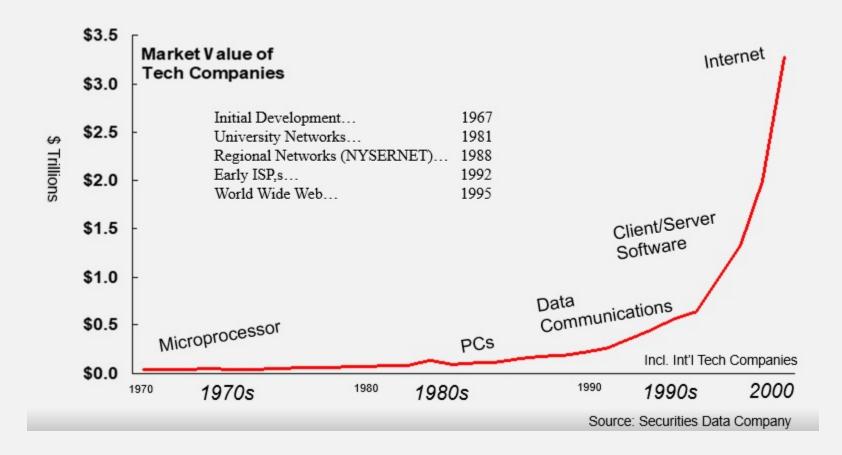
- The founding, growth and eventual acquisition of the ILINC Corporation is a typical small example of technological entrepreneurship.
- ILINC was founded in 1993 by a professor, Jack M. Wilson (the author), and two students, Degerhan Usluel and Mark Bernstein, at Rensselaer Polytechnic Institute.
- Later the name was changed to LearnLinc to match the name of its popular product and eventually
- LearnLinc entered a triple merger in early 2000 with Gilat Communications and Allen Communications to form the Mentergy Corporation (NASDAQ).
- In mid March 2000, Mentergy had a \$500 million valuation on the NASDAQ

Opportunity Recognition

- Solving a problem
 - Every problem is a brilliantly disguised opportunity –Gardner
- A major problem in the 90's: The Learning Corporation
 - Rapid changes in technology, computers, the internet, globalization, and intense economic competitiveness were forcing companies to adapt. To adapt, their employees had to learn many new things.
 - Employee training is expensive –especially for large geographically distributed firms.
 - How could they provide rapid learning opportunities to employees without breaking the bank at a time when economic competition was ferocious?

The Internet Tsunami (The 90s)

Do you think the pace of change is accelerating?



The Research:

- It all began with an idea, and that idea eventually became a research project.
- In the late 80's and early 90's, my scientific colleagues and I were working on the application of computing and communication technologies to science and engineering education.
 - After producing several multimedia projects, I turned my attention to the management of large quantities of educational materials on networks.
 - The early focus was on the modularization of materials and the ability to store and retrieve those modules in an object oriented fashion.
- In order to fund my research I had obtained research grants from the
 - National Science Foundation (NSF),
 - the Dept. of Ed. Fund for the Improvement of Post-Secondary Education,
 - The Research Corporation for Scientific Advancement,
 - the Annenberg/CPB Foundation,
 - The Sloan Foundation,
 - the AT&T Foundation,
 - Lucent Technologies,
 - The Defense Advanced Research Projects Agency (ARPA), and the IBM Corporation.

The Idea. The Research

- Managing learning on networks
- Consulting with IBM, AT&T, GTE, Boeing, NeXT, Microsoft, Intel, etc.
- I had served as an IBM Consulting Scholar and was a frequent speaker at conferences on multimedia on networks.
 - At one point I was invited to present my vision of the future of networked multimedia education to a group of executives that included several key executives from AT&T. That speech led to an invitation to Bell Laboratories to discuss potential cooperation and to present my vision to a broader and more technical audience.
- Apparently the speech was a great hit with the audience, because the AT&T Executives asked me to create a prototype of the vision in partial collaboration with scientists from Bell Laboratories
- Joint Venture between AT&T Bell Labs and RPI
 - WorldWorx product released
- New technology releases allow a better idea.

The Opportunity

- Propose a significantly enhanced and advanced version to AT&T
 - AT&T declines
 - But Bell Labs excited!
- Research continues in Wilson's Lab
- Design and Manufacturing Learning Environment
- Degerhan Usluel, MBA student, BSEE, former entrepreneur
- Degerhan recruits Mark Bernstein, former CA "TopGun."
- They want to start company and want Wilson to lead it.
- Distributed learning environment with multicast video, application sharing, agents to control bandwidth.
 - None of these had been done reliably and internet was not ready.

The Team: ILinc LearnLinc Founders

Degerhan Usluel, Mark Bernstein, Jack Wilson



2019- RPI- William F Glaser Entrepreneurs of the Year

ILinc Founders

2019 William F. Glaser '53

Rensselaer Entrepreneurs of the Year: Mark Bernstein 94 Degerhan Usluel 94 Jack Wilson, Ph.D.

Degerhan (Dare) Usluel, an MBA student who had no intention of working for a big business upon graduation, approached former Rensselaer faculty member Jack Wilson with the idea of starting a business in Wilson's area of expertise—the application of computing and communication technologies.

The one-to-many style of online video communication solutions was flawed and slow due to bandwidth limitations, but Wilson had an idea that would solve that. Usluel recruited classmate Mark Bernstein to round out the team that would eventually succeed in doing what several major computing companies had tried and failed at. iLinc became the first PC-based "virtual classroom" and "web conferencing" software product.

Bernstein earned a bachelor's degree in business economics from Union College and an MBA from Rensselaer. Usluel holds a bachelor's degree in electrical and electronics engineering from the Bilkent University (Ankara, Turkey) and an MBA from Rensselaer. Wilson was the J. Erik Jonsson Distinguished Professor of Physics, Engineering Science, Information Technology, and Management at Rensselaer from 1990 to 2001.

William F. Glaser '53 Rensselaer

Entrepreneur of the Year Award

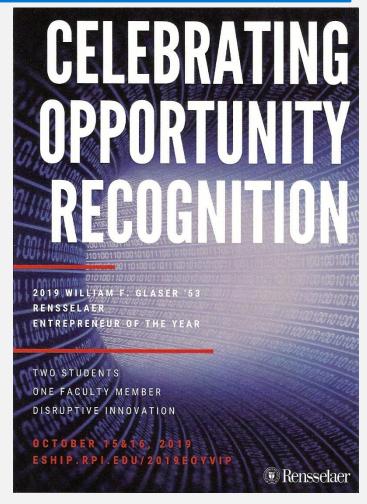
The William F. Glaser '53 Rensselaer Entrepreneur of the Year Award recognizes successful entrepreneurs whose vision, commitment, and creativity exemplify the entrepreneurial spirit that is the past, present, and future of Rensselaer.

Paul J. '69 and Kathleen M. Severino

Center for Technological Entrepreneurship

The Severino Center for Technological Entrepreneurship fosters new generations of entrepreneurs through outreach programs and education and is centered in the Lally School of Management at Rensselaer.

The mission of the Center is to expose every Rensselaer student to the practices and principles of entrepreneurship while enhancing the synergy between entrepreneurship and technology.



ILinc Founders named Entrepreneurs of the Year by RPI in 2019









Entrepreneurship: ILinc Case

Exit Strategy

- Need to decide ahead of time how we wanted this to end.
 - Private Company
 - Public Company
 - IPO or acquisition
 - Life Style Company
- We all wanted to create a public company and either IPO or Sell.

Lean Launchpad

- Business Model Canvas
- Minimum Viable Product
- Customer Discovery
 - Customer Discovery->Customer Validation->Customer Creation->Execute
- A **temporary organization** designed to **search** for a repeatable and scalable business model.
 - Existing companies execute a business model, startups search for one.
 This distinction is at the heart of the Lean Startup approach.
- Iterate and Pivot

ILinc Business Model Canvas

Key Partners



Microsoft – Early OS Intel - ProShare Video and Capital AT&T – Early OEM Customer

CISCO – Router software

Key Activities



Create multi-cast video and audio conferencing to large #s Screen sharing **Training Development tools** Market to Fortune 500

Kev Resources

Early access to new hardware and software tech. Solving the video multicast problem. Deployment of networks with

sufficient bandwidth. Customers who buy and test

and fund early products.

Value Proposition



Allow customer to provide "just in time training to large numbers of employees at a very low cost. Reduce employee down time

(cost) for training. Improve quality and quantity of training.

Reduce cost of training programs by eliminating travel and ending large corporate training centers.

Customer Relationships



Close partnerships with companies that want our software and are willing to help development. Early relationships with AT&T, IBM, Intel, News Corp. Business model is sales and customization of software for Fortune 500

Channels: Direct sales to Fortune 500. First addressed the Corporate training dept. Pivot: Sell to CEO/COO/CFO Use Wilson's extensive corporate contacts to gain an audience. Presentations at large

conferences like ComDex,

Customer Segments



Our most important customers are Fortune 500 companies with large training needs, large training expenses, and a recognition that success required the deployment of new technologies.

Cost Structure: Costs are primarily personnel costs for a development team, a quality assurance team, and a sales/marketing team. Smaller expenses for leased office space, tech. acquisition (some provided by partners for free) Business is primarily value driven. Costs small in comparison to the saving of

corporate expense. Because we have very low variable expenses, the ability to achieve scale will quickly lead to profits. Building ten thousand units of software is only marginally more expensive than building ten.

Revenue Streams: Sales of software in the form of corporate licenses to Fortune 500 firms.

Software costs are small in comparison to training costs.

Want revenue now in return for software later.

Educom, etc.

A challenge in selling to trainers since this sidelined them and reduced their budget.

Qui Bono? Executives with bottom line responsibility.

Intellectual Property

 The Team considered whether to patent the software or proceed while trying to make it a trade secret.

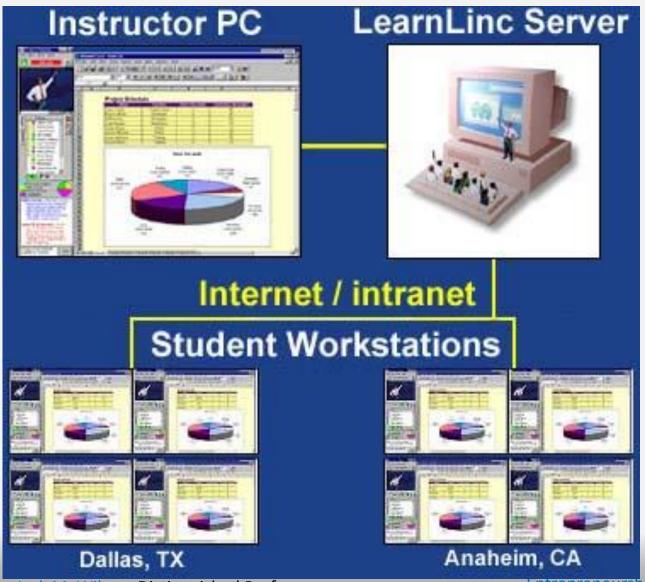
- Advantage of patenting
 - Protect our intellectual property from being copied.
 - Dissuade competitors.
- Disadvantages:
 - Could get to market faster,
 - patenting (and defending) is a long and expensive process.
 - Potential dispute with AT&T who had funded earlier project.

Creating a Prototype –The minimum viable product

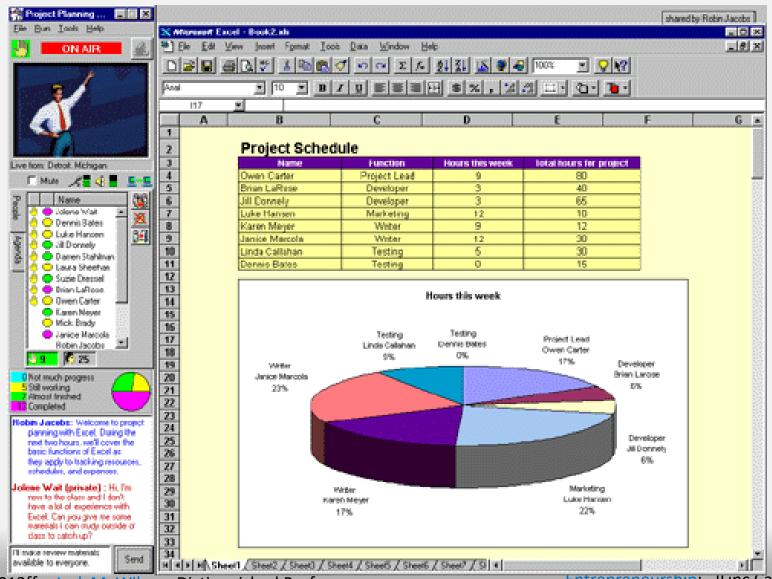
- Need a prototype to raise money.
- Need a prototype to acquire early customers.
 - In order to create the prototype, we had to solve the problem of excess bandwidth on the network due to so many interacting individuals on computers. The primary problem was the video and graphics.
 - The problem was solved by creating agents to shut off video that was not being used and by making reliable IP multi-casting work.
- Need a polished pitch



LearnLinc



LearnLinc Instructor

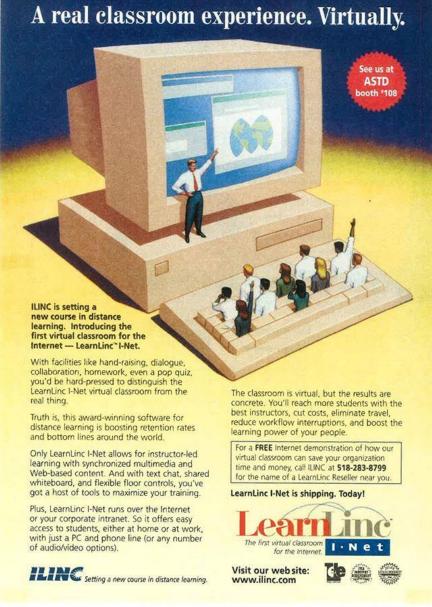


Funding the Enterprise

- Met with many successful entrepreneurs
 - Bugle Boy, Wellfleet, Interlan, Bay Networks, Nortel, MapInfo, etc.
- Went against advice
- Decided to sell vaporware. (Our form of customer discovery!)
- Success magazine called it the "Wimpy method"
 - Wimpy: "I'll gladly pay you Tuesday for a hamburger today!"
 - ILinc: "I'll gladly give you software next year for \$300,000 today."
- Against all odds (and reason): It worked!
- First Customers: IBM, AT&T, GTE, Sprint, Office Depot, and News Corp.
- We also had received funding from the Air Force SBIR program.

Building the Product

- Degerhan actually conquered the reliable multicasting challenge and made the product work!
- Bernstein sold lots of vaporware.
- Every customer, except for one, was very satisfied.



FOR MORE INFO, CIRCLE # 166

Winning Many Awards

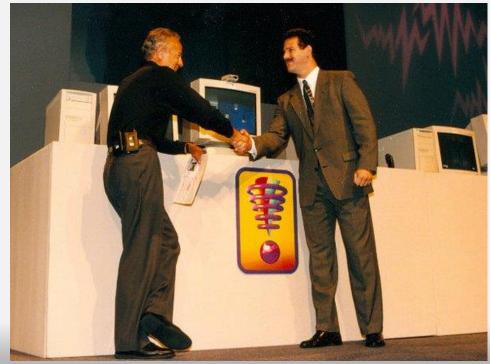


Venture Capital

- Once company was up and running, we were short of working capital and tired of co-signing bridge loans!
- First Round of Venture Capital:
 - Exponential Investors and New York state development fund.
- Board asks Wilson to leave RPI permanently to continue as CEO of ILinc.
- Instead Wilson hires a new CEO who would bring advanced start-up experience.
- Second and Third Rounds of Venture Capital:
 - GeoCapital Investors, Intel, and original investors.
- Total outside investment was less than 50% of the company.
 - Very rare, but left the company short of cash compared to new arrivals.
 - We were using the old model. They used the TechBoom model.

Intel Invests millions

- I made a presentation to Andy Grove, CEO of Intel, at their headquarters. They told me that I would only have ten minutes to present and answer questions and then he had to run to another appointment. He ended up sitting down and spending a fascinated hour with me exploring the software.
- They then made their investment.
- Here is Andy Grove with Mark Bernstein when he presented the ILinc software at a major conference before thousands.



Early ILinc Team

Top:

- -Jack Wilson Founder 1st CEO, Chair
- –Mark Bernstein, Founder, VP of Marketing and Business Dev.
- -John Waiveris, Web Design

Bottom:

Mike Marvin, 3rd CEO

- -Degerhan Usluel, Founder, VP of Technology, & 4th CEO
- James; Tolga Lazare, AdamStewart, Software Engineers



Fortune on ILinc:

- "Interactive Learning International Corp. (ILINC), a two-yearold company in Troy, New York, has shown what's possible in today's world of limited telecommunications bandwidth. ILINC's interactive training programs can be transmitted to users' PCs over local- and wide-area networks, as well as highspeed communications links such as ISDN (integrated services digital networks). A live instructor can appear in a window on the screen and address students in dozens of locations. He can launch video and audio clips for all the "class" to see and hear. And at discussion time, a student can click on a "raise hand" icon to get the floor. "
 - REPORTER ASSOCIATE Alicia Hills Moore
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Wall Street Journal on ILinc -1998

- "It's great -- by using it, we've cut our travel expenses substantially," says Gary Schweikhart, a spokesman for Office Depot, an office-supply company in Delray Beach, Fla. Office Depot first took its corporate training sessions on-line in May 1996. It was one of the first customers of Interactive Learning International Inc., or ILINC, a Troy, N.Y., maker of distance-learning software. Since then, about 1,500 Office Depot employees have completed on-line training, on everything from how to write a business letter to how to use the company's proprietary order-taking system.
- "We were in a situation where we were doing a lot of training of trainers" in order to have enough qualified instructors to teach employees at 629 stores and 68 sales offices across the country, says Doug Kendig, the company's manager of training technology. "We had to deputize a lot of people [to train employees], and you don't always get the best results that way."
- But now Office Depot uses the ILINC software for about 20% of its training, with classes in Florida, California and Texas using just six instructors. "I think it's fantastic," says Jeannette Perez, who works in Office Depot's commercial creditcard department. "It just holds my attention more, because you're interacting with the computer."
 - Wall Street Journal –Thursday August 6, 1998

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By REBECCA QUICK

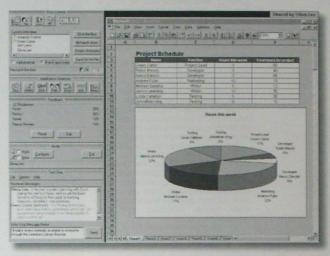
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For businesses, the biggest advantage is that cyberspace training cuts out the expense of getting the instructor and students in the same place. It also means that training classes can be pared into shorter sessions and spread out over a number of days or weeks-meaning you don't lose an employee for entire days at a time. Even better, instructors can train employees in multiple locations at one time, allowing for rapid deployments of, say, new software being rolled out to a corporate empire.

The no-travel-required aspect may also be the biggest benefit for the folks who actually have to endure corporate training classes. That means more time at home and less on the road-no more trips to headquarters to learn how to make a spreadsheet. Shorter training sessions are also a plus for



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drop (and doodling, no doubt, rises) significantly after two hours.

contact, voice projection and body language, skills that don't translate well in the digital realm. And some critics argue that on-line training will never replace the good old-fashioned way of learning.

Still, demand is clearly growing. One interactive-software supplier, Centra Software Inc. of Lexington, Mass., says its revenue has doubled each guarter for the past year. And earlier this year, International Business Machines Corp. acquired Data-

students: Studies show that retention levels Beam Corp., a Lexington, Ky., firm that sells distance-learning software.

Here's how the software packages work: Of course, some things can't readily be Students go to a special Web site, on either learned over the Internet. Teaching presenthe Internet or a corporate intranet, and sign tation skills, for example, is largely about eye in. Once on-line, their screens split in two: On the left side are a set of controls for communicating with the instructor and other students, while the right side shows an application such as a browser, whiteboard or

Anything the instructor does on the right side of the screen automatically appears on the right side of the students' screens. So, if the instructor, say, moves to a Web site, the entire class is automatically dragged along. Speakers and microphones on the computers

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Going Public

- Rapid Growth meant much more capital needed.
- Arrival of several "fast-followers" meant that we had competitors nipping at our heels.
- Potential IPO was about \$100 million.
- Acquisition was only about \$50 million but could create some beneficial alliances.
- Investment Banker hired.

Mentergy formed

- With help of Investment Banker and VC advisors:
- A triple reverse merger.
- Sold control of LearnLinc to GILAT Communication of Israel and at the same time used LearnLinc to acquire Allen Communications, John Bryce Training, and GILAT itself.
- Closed deal on February 29, 2000 for \$52 million.
- Combination called Mentergy
 - Value was \$500 million in March
 - New York, Salt Lake City, Europe, and Israel.
 - Created headquarters in Atlanta
 - As tech bust came they entered bankruptcy in 2002.
 - They eventually emerged as an independent company based in Phoenix, Arizona
 - Text: http://www.jackmwilson.net/ILincLearnLincStory-text.htm

The rest of the story ILinc > CISCO

Web collaboration technology provider will enhance BroadSoft's cloud-based unified communications capabilities

- GAITHERSBURG, MD, September 7, 2011 BroadSoft, Inc. (NASDAQ: BSFT), the leading global provider of software that enables mobile, fixed-line and cable service providers to deliver real-time communications over their IP networks, today announced it has signed a definitive merger agreement to acquire all outstanding shares of Phoenix, Arizona-based iLinc Communications, Inc. in an all-cash transaction. The closing of the acquisition is subject to the satisfaction of various customary closing conditions.
- **iLinc™** is a leading provider of web conferencing services for global businesses, governments and educational institutions. The firm's Software-as-a-Service (SaaS)-based web collaboration tools enable organizations to efficiently and cost-effectively engage, learn and collaborate.
- The acquisition of iLinc and its web collaboration SaaS offering will strengthen BroadSoft's BroadCloud™ services capabilities that include high-definition (HD) video conferencing, consumer fixed-line SMS and network assessment and monitoring capabilities.
- "Adoption of additional Unified Communications services, such as web collaboration, demonstrates
 the desire by enterprises for a broad range of communication applications," said Michael Tessler,
 chief executive officer, BroadSoft. "We believe that by incorporating iLinc into our Unified
 Communications services offering we will help our service provider customers meet the
 communication needs of businesses of all sizes."
- "For more than a decade we have been offering an intuitive web conferencing solution to
 enterprises that service a variety of industries to meet their unique needs," said James M. Powers,
 Jr., chairman, president & chief executive officer, iLinc Communications, Inc. "With BroadSoft's
 market leadership position and strong international presence, we believe we are joining the right
 team to best serve our existing customers and drive significant adoption of our product."
 - https://www.broadsoft.com/news/broadsoft-signs-definitive-agreement-to-acquire-ilinc/

Cisco acquires BroadSoft and ILinc

- In 2019, Cisco purchased BroadSoft and ILinc and made it a division of Cisco. They suggested that:
 - "BroadSoft accelerates Cisco's cloud strategy and collaboration portfolio by adding the industry's leading cloud calling and contact center solutions to Cisco's leading calling, meetings, messaging, customer care, hardware endpoints and services portfolio.
 - https://www.cisco.com/c/en/us/about/corporatestrategyoffice/acquisitions/broadsoft.html
 - https://newsroom.cisco.com/presreleasecontent?type=webcontent&articleId=1908621
- And that is the "rest of the story."
- Read the Full Story at: •
 http://www.jackmwilson.net/Entrepreneurship/Principles/3-BeyondEntrepreneurship-ILinc-example.pdf

Research Commercialization: Questions for the student

- How did ILinc use research funding to develop potential technologies for commercialization?
- 2. What were some of the key technologies that ILinc had to develop to give themselves a competitive advantage?
- 3. What are the key differences in the funding given by the National Science Foundation and the SBIR program?
- 4. What advantages does a large business have in investing in new technology start-ups?

Opportunity Recognition -Questions for the Student:

- 1. A new venture is expected to be attractive, timely, durable, and anchored in a product or service that creates or adds value for the buyer. How did ILINC fit with this description?
- 2. What was the "opportunity gap" that ILINC addressed.
- 3. Was ILINC a disruptive innovation? What did it disrupt?
- 4. How did ILINC fit with trends in economic forces, social forces, technological advances, and political and regulatory changes?
- 5. How did the personal characteristics of the entrepreneurs help and hurt?

Positioning and Type of Innovation –Questions

- Where would you place LearnLinc on the spectrum of types of innovations?
 - Product or process; radical or incremental; architectural or component, competence enhancing or destroying?
- How would you place LearnLinc on the S curve of technology?
 - What does this imply for its adoption?
- LearnLinc offered a low cost universal way to bring learning to learners in a corporate training environment.
 - Were they operating in segment zero? If so, what was the market they were disrupting?
- If you were advising ILINC as to how to manage its LearnLinc product just prior to its acquisition, what would you identify as major challenges they would need to face quickly?

Intellectual Property –Questions for the Students

- Why is it that the founders decided not to patent the product?
- What were the obstacles to patenting the software?
- What other forms of intellectual property protection might have been available to the founders, and what do you see as the advantages and disadvantages of each?
- What was the consequence of not doing the patent?
- If you were one of the founders, would you have pursued a patent?
- Do you see any other strategies that they might have used?

Growth, IPO, or Being Acquired- Questions

- 1. What were the apparent advantages to doing an IPO?
- 2. What were the advantages to being acquired instead.
- 3. What drove the founders to consider these two alternatives instead of continuing organic growth?
- 4. If you were the founder, what strategy would you have selected and why?