

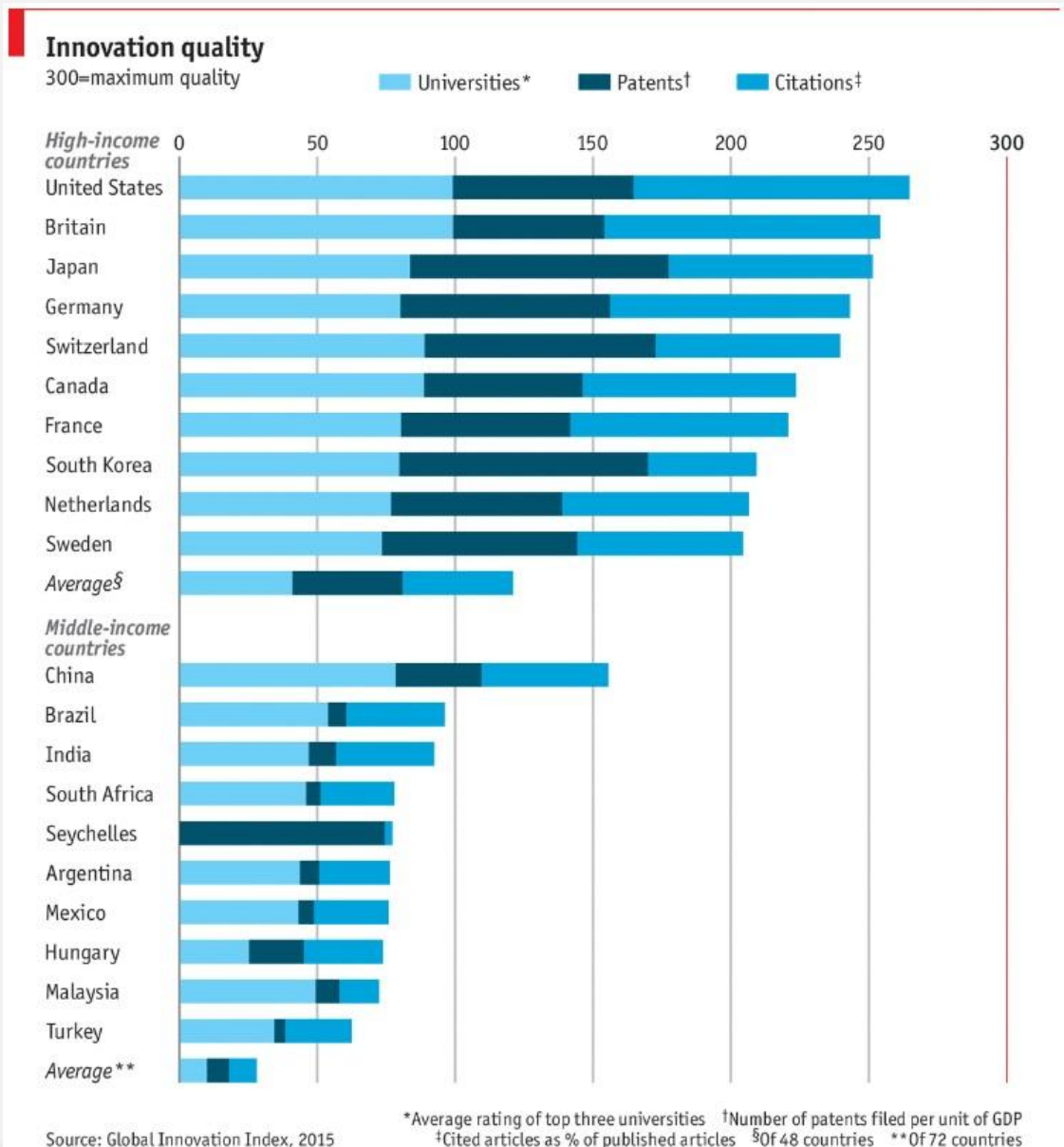
Entrepreneurship in Academe

Dr Jack M Wilson

President and Distinguished Professor Emeritus



Great Research Universities are a key to innovation quality.



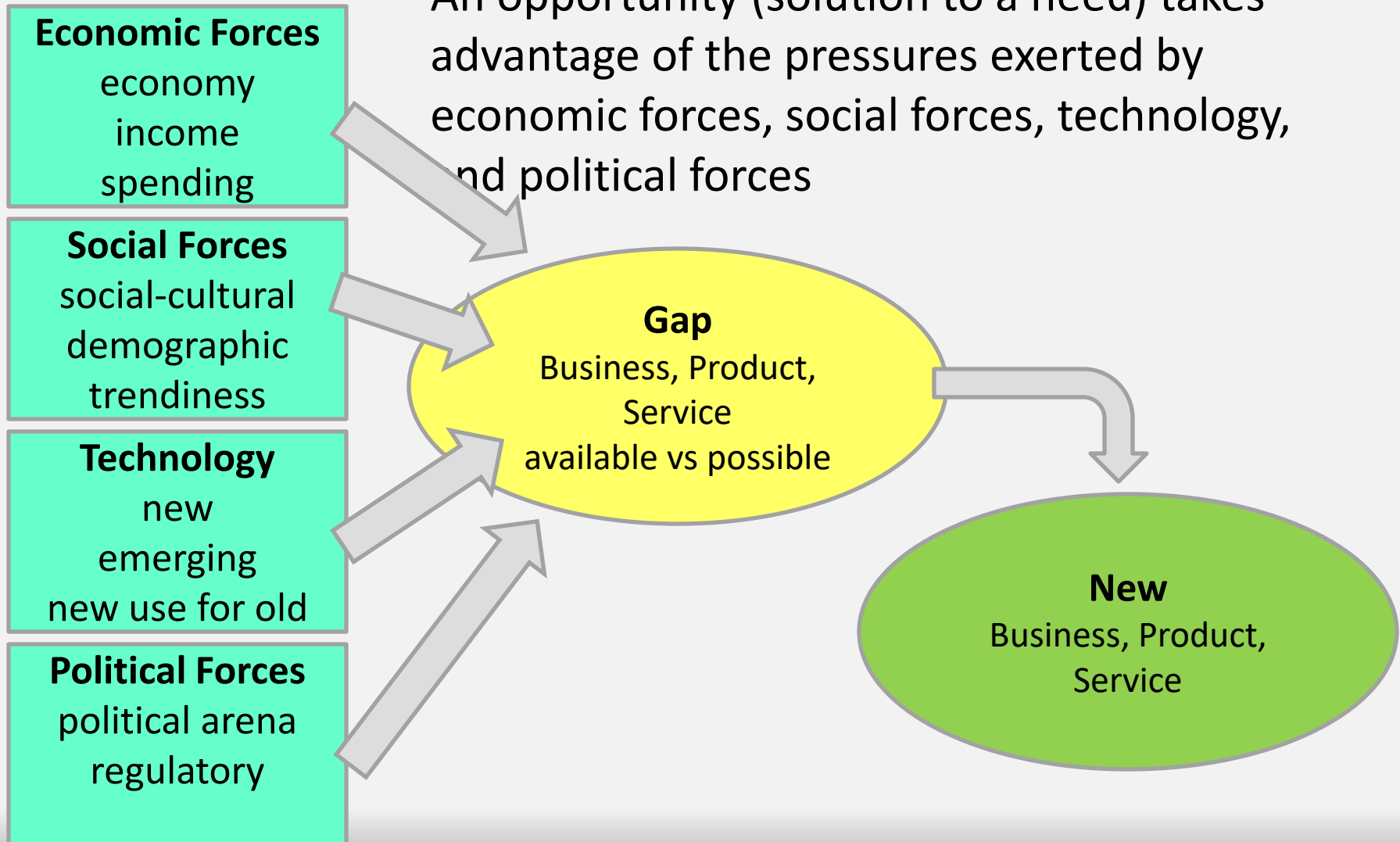
<http://www.economist.com/blogs/graphicdetail/2015/09/global-innovation-rankings?fsrc=scn%2Ffb%2Fte%2Fpe%2Fed%2Ftheinnovationgame>

Drivers of Innovation

- **Knowledge Push** – New knowledge or research suggest some new opportunities
- **Need Pull** – When an unfulfilled need is present and someone comes up with an idea to fill that need.
 - Note that these two are often related. Frequently a new technology enables a previously unfulfilled need to be fulfilled.
- **Process Innovation** – making an existing process work better
 - Total quality management, business process re-engineering, Six Sigma, Lean Management, etc.
- Discovering customers at “**The Base of the Pyramid**” as Prahalad described. We covered this in the chapter on [Globalization](#).
- **Crisis Driven** –Need pull on steroids. Zika Virus vaccine
- **Mass Customization**: Have it your way. Dell Computer, in 80s and 90s built PCs to order and shipped direct to customer. Converse allows customers to order personalized athletic shoes.
- **User Innovation** – crowd sourcing and extreme users
- **Imitation** –Often the first source of innovation in emerging economies.
- **Recombinant Innovation** –New combinations of existing things.
- Changes in **regulatory** and legal processes.
- **Design driven innovation** – Apple always focused on design even when releasing products that were not that much different than existing products.
- **Pure accidents** –discovery of penicillin, Post-it notes, Viagra, [Teflon](#)

From Trends to Opportunity -Remember

- An opportunity (solution to a need) takes advantage of the pressures exerted by economic forces, social forces, technology, and political forces



Needs Pains and Solutions

Dr. Jack M. Wilson, Distinguished Professor of Higher Education, Emerging Technologies, and Innovation



MGHPCC

-The Massachusetts Green High Performance Computing Center
Dr. Jack M. Wilson

Distinguished Professor of Higher Education, Emerging Technologies, and Innovation



The Need and the Pain:

- There was no High Performance Computing Center or Super Computing Center in the Northeast.
 - Illinois was the first
 - San Diego, Research Triangle North Carolina, Pittsburgh
- The Pain: To be great research universities you need access to high performance computing.
 - Massachusetts had five great research universities
 - Had to use outside centers for their research
 - Had to provide expensive local facilities run with a lot of expensive electricity.
 - Problems with high cost of electricity and providing suitable facilities to host computers



VISION

- World-class Green High Performance Computing Center (1st in the Northeast)
- First multi-university HPC facility of its kind in the nation
- Platform for collaboration in R&D that will strengthen Mass R&D leadership in computing applications
- Catalyst for economic & workforce development in the state, region and Holyoke (Innovation District)
- Holyoke has a municipal utility that provided electricity from hydropower.
 - Less expensive and better environmental impact (Green)
- Most significant state/industry/university partnership in state history

MGHPCC

A partnership between 5 universities



\$736.1M



\$468.7M



\$280.8M



\$61.3M



HARVARD
UNIVERSITY

\$462.3

Total Research Revenue in 2009 of \$2,009,078,000 (\$2.0B)

(Source NSF: http://www.nsf.gov/statistics/nsf11313/content.cfm?pub_id=4065&id=2)

With additional support from the commonwealth and industrial sponsors



MGHPCC



- 1/6/09 Discussion: Boston Research University Presidents' Dinner
 - At MIT President, Susan Hockfield's, home.
- 1/9/09 Friday call from Susan Hockfield, MIT to Jack Wilson, UMass
 - The Scientific Fantasy: Boston Research Universities Build MGHPCC
- 1/27/09 Meet with Gov. Deval Patrick and Sec. of Econ. Dev.
- 1/28/09: MIT & UMass Teams first meet in my office -fantasy into reality
 - City closed by snow
 - Jack Wilson, President, UMass
 - Rafael Reif, Provost, MIT
 - Claude Canizares, Vice President for Research and Associate Provost, MIT
 - James Kurose, Dean of Natural Sciences and Mathematics, UMass Amherst
 - Rick Adrion, Professor and Past Chair of Computer Science, UMass Amherst
 - Tom Chmura, Vice President for Economic Development, UMass
(Titles as of 2009)



MGHPCC

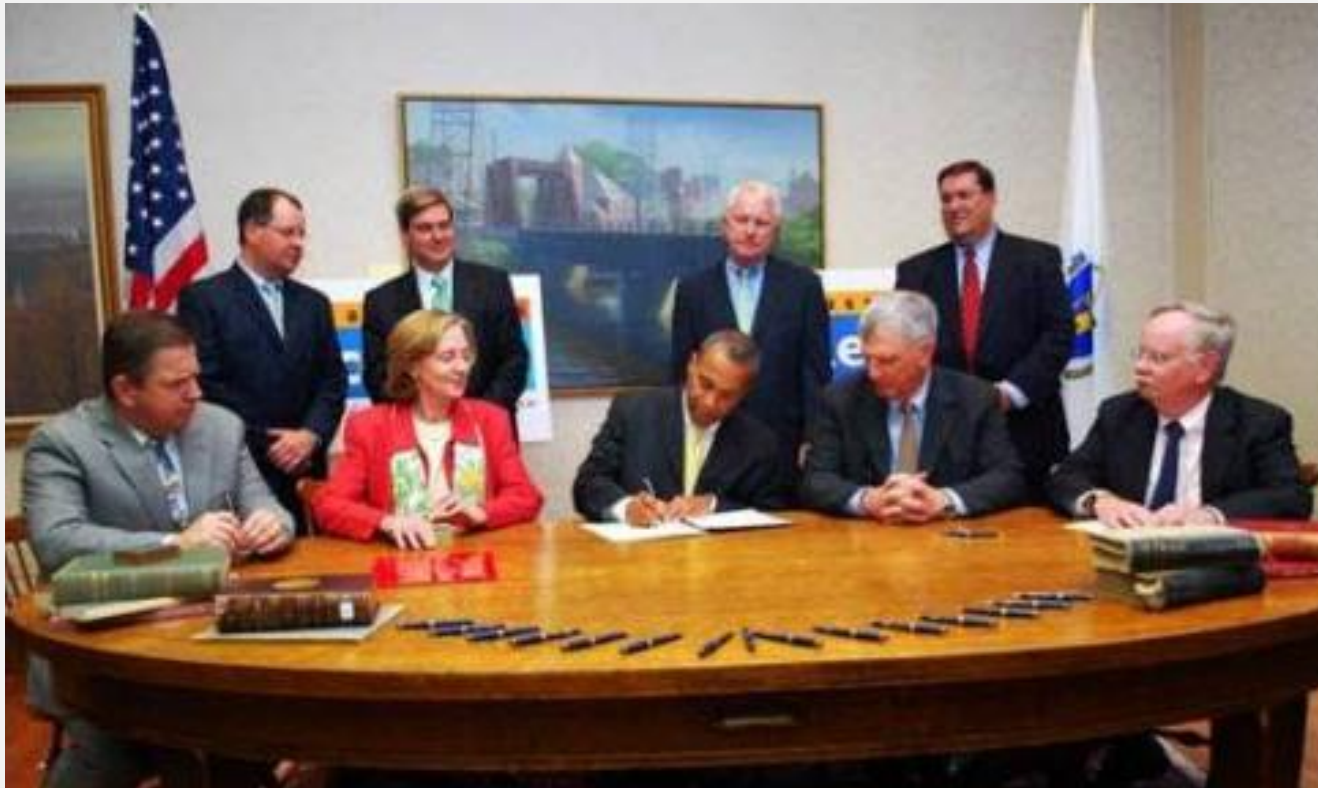


- Susan and I decided to expand the group by chatting with other Presidents.
 - She called Drew Faust, Harvard
 - I called Bob Brown, Boston University
 - Brown: You called the wrong guy! I am the only person in the world to fail twice at building a HPCC! Brown was the former Provost at MIT
- CEO Joe Tucci, EMC and CEO John Chambers, CISCO agreed to help
- Accenture provides project management guidance
- Northeastern joins the group. Now the five largest research universities in Massachusetts are collaborating
- Many other companies involved in the conversation
 - Akamai, Google, Microsoft, IBM, etc.



Working Together

Governor Deval Patrick signs the agreement for the Commonwealth of Massachusetts as Susan Hockfield, President of MIT, looks on from his right and Jack Wilson, President of UMass, and Bob Brown, President of Boston U., look on from his left. Wilson served as the first Chair of the Board of the MGHPCC.




MGHPCC




- First steps were fundraising and developing a detailed scope of the project.
 - We raised well over \$100 million.
- We were working in secrecy.
- Governor Patrick, Joe Tucci, John Chambers, I, and others do trade mission to California.
 - Governor speaks about this at every stop!
 - So much for secrecy.



And today: It serves all five universities.


f t yu ..

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ABOUT
VISITING
RESOURCES
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ABOUT

The MGHPCC provides world-class computational infrastructure, indispensable in the increasingly sensor and data-rich environments of modern science and engineering discovery. Today, virtually no major breakthrough — be it designing a new drug, developing new materials for clean energy or addressing climate change — can take place without computation. In silico experimentation adds a powerful new dimension to knowledge discovery in all fields, alongside theory, physical experimentation and observation. With the increasingly integrated role of computation in fundamental and applied research, the MGHPCC is a critical piece of infrastructure that will continue to fuel the world-leading innovation economy of the Commonwealth of Massachusetts through cooperative research, education and outreach activities.






Completed in November 2012, the 90,000 square foot, 15 megawatt facility is located on an 8.6 acre former industrial site just a few blocks from City Hall in Holyoke, MA.




Currently, computers in the MGHPCC run millions of virtual experiments per month, supporting thousands for researchers in Massachusetts and around the world.



UNIVERSITY PARTNERS

IN PARTNERSHIP WITH

 Northeastern University  HARVARD UNIVERSITY  

Some other examples:

- Founding board member of the Massachusetts Clean Energy Center:
 - the Mass CEC Climate tech Studio that is working with faculty members and researchers from around the state to explore the spin out of IP related to sustainability
 - Was one of the funders for the MGHPCC
 - I was a founding board member.
-
- Helping found the Massachusetts Life Sciences Center:
 - A \$1 Billion effort with Governor Patrick and Nobel Prize winner Craig Mello from UMass
 - Highlighting this initiative could demonstrate the impact on life sciences research and the subsequent commercialization of innovations.

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

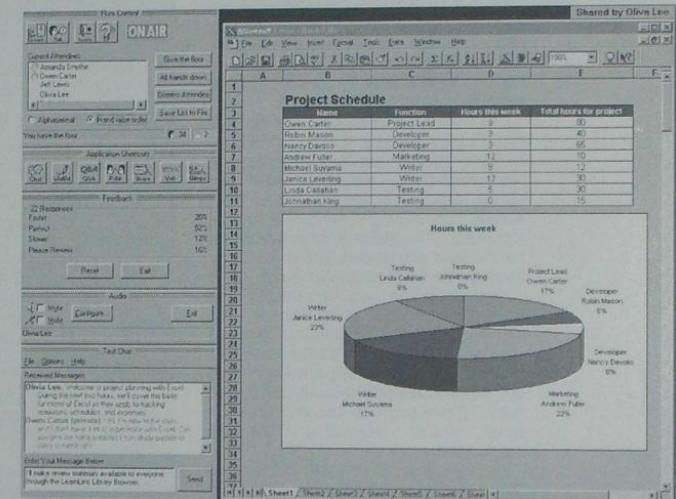
By REBECCA QUICK

THE INTERNET promises a lot of miracles, but here's one thing even it can't do: make corporate training classes actually enjoyable.

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.

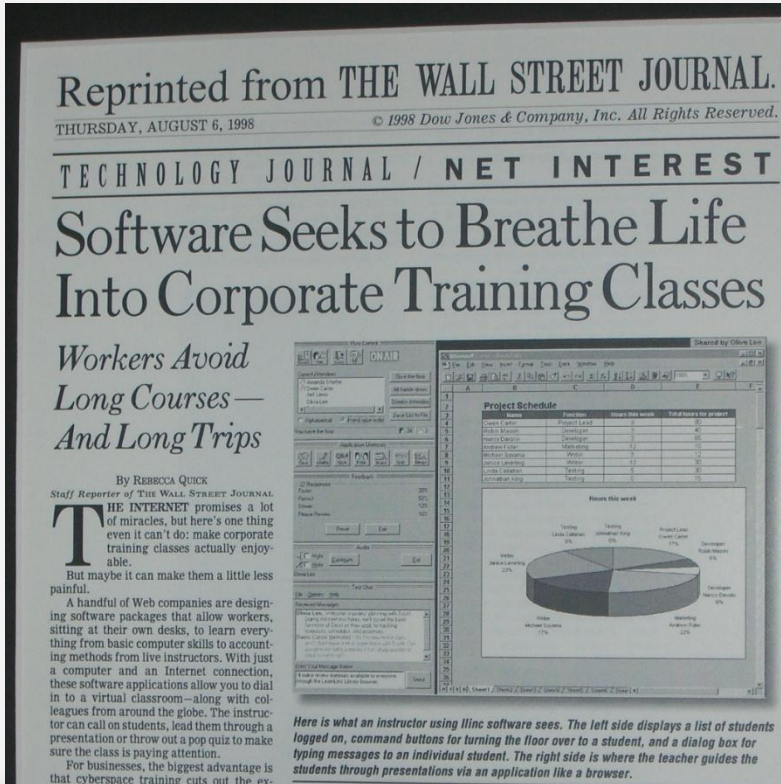
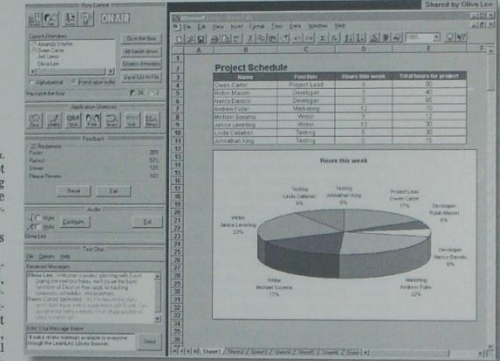
For businesses, the biggest advantage is that cyberspace training cuts out the ex-



Here is what an instructor using Ilinc software sees. The left side displays a list of students logged on, command buttons for turning the floor over to a student, and a dialog box for typing messages to an individual student. The right side is where the teacher guides the students through presentations via an application like a browser.

Text: <http://www.jackmwilson.net/Entrepreneurship/Cases/Case-TheLincStory.pdf>

ILinc

- The second example of the ILinc LearnLinc company shows how a faculty member's research can grow into a groundbreaking company on NASDAQ and featured in the Wall Street Journal (8/6/1998).
 - Research ideas
 - Opportunity recognition of need
 - Team formation
 - Financing the venture
 - Minimum viable product
 - Customer Discovery
 - Business Model Canvas
 - Supportive University Infrastructure
- 
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THURSDAY, AUGUST 6, 1998 © 1998 Dow Jones & Company, Inc. All Rights Reserved.
- TECHNOLOGY JOURNAL / NET INTEREST
- ## Software Seeks to Breathe Life Into Corporate Training Classes
- ### Workers Avoid Long Courses — And Long Trips
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- 
- | Project | Project Level | Total hours for project |
|------------|---------------|-------------------------|
| Learn Linc | Project Level | 40 |
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Introduction

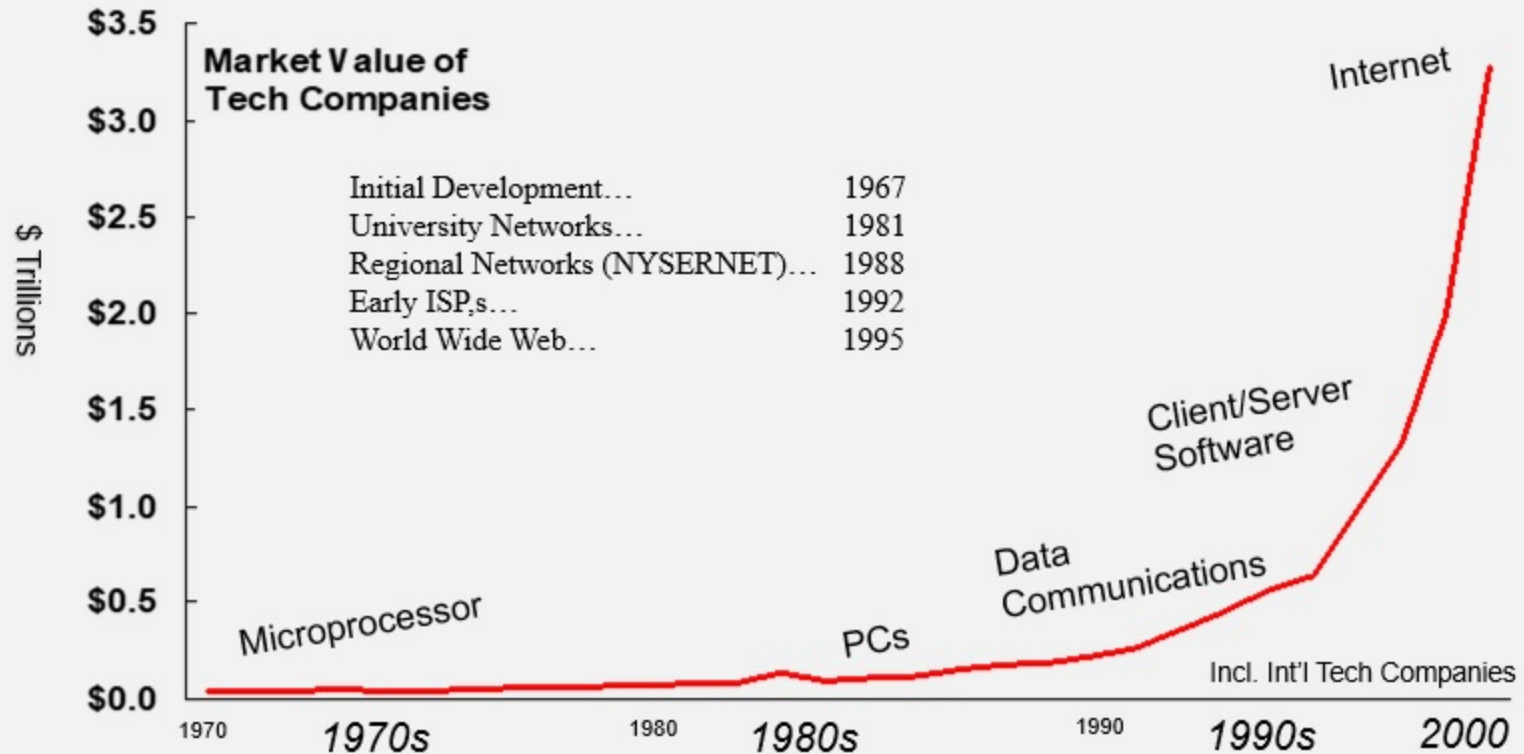
- The founding, growth and eventual acquisition of the ILINC Corporation is a typical small example of technological entrepreneurship.
- ILINC was founded in 1993 by a professor, Jack M. Wilson (the author), and two students, Degerhan Usluel and Mark Bernstein, at Rensselaer Polytechnic Institute.
- 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?



Source: Securities Data Company

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

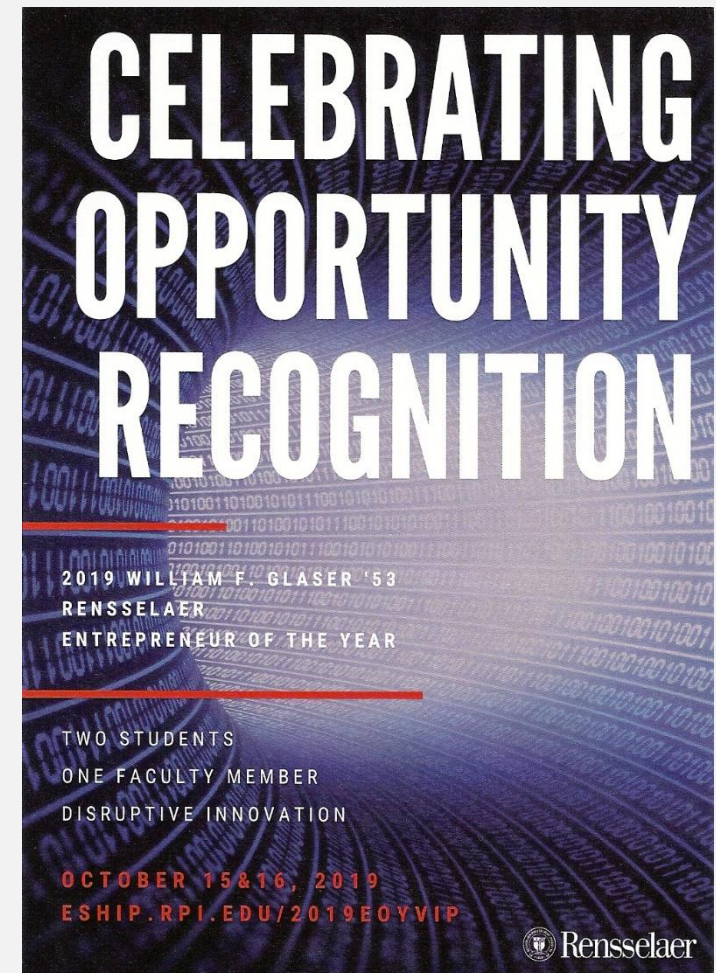
The William F. Glaser '53 Rensselaer Entrepreneur of the Year Award recognizes successful entrepreneurs whose vision, commitment, and creativity exemplify the entrepreneurial spirit that is the past, present, and future of Rensselaer.

Paul J. '69 and Kathleen M. Severino

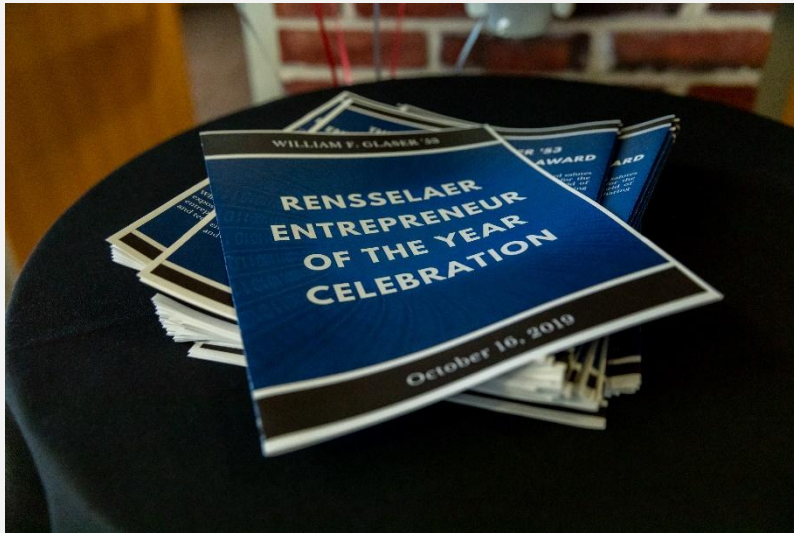
Center for Technological Entrepreneurship

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









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 	Key Activities 	Value Proposition 	Customer Relationships 	Customer Segments 
<p>Microsoft – Early OS Intel – ProShare Video and Capital AT&T – Early OEM Customer CISCO – Router software</p>	<p>Create multi-cast video and audio conferencing to large #s Screen sharing Training Development tools Market to Fortune 500</p>	<p>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.</p>	<p>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</p>	<p>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.</p>
<p>Key Resources </p> <p>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.</p>		<p>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, Educom, etc.</p>		
<p>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.</p>			<p>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. A challenge in selling to trainers since this sidelined them and reduced their budget. Qui Bono? Executives with bottom line responsibility.</p>	

Intellectual Property

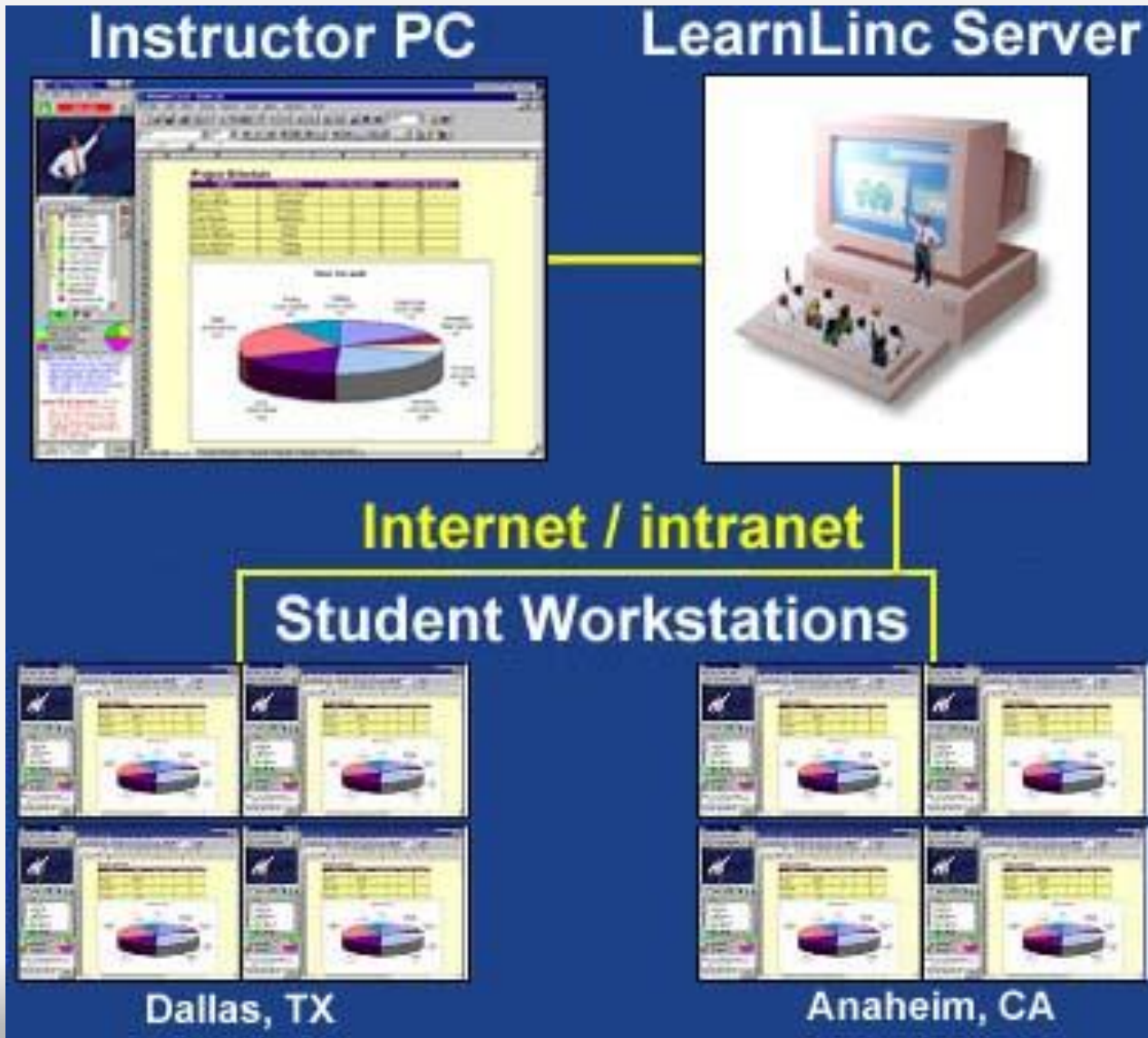
- The Team considered whether to patent the software or proceed while trying to make it a trade secret.
- Advantage of patenting
 - Protect our intellectual property from being copied.
 - Dissuade competitors.
- Disadvantages:
 - Could get to market faster,
 - patenting (and defending) is a long and 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

Project Planning ...

File Edit Tools Help

ON AIR

Live from: Detroit, Michigan

☐ Mute
 ☐ Video
 ☐ Audio

Participants

Name
Jolene Wall
Dennis Bates
Luke Hansen
Jill Donnelly
Darren Stahlman
Laura Sheehan
Suzie Dessel
Brian LaRosa
Owen Carter
Karen Meyer
Mick Brady
Janice Marcola
Robin Jacobs

9

25

0 Not much progress

5 Still working

10 Almost finished

15 Completed

Robin Jacobs: Welcome to project planning with Excel. During the next two hours, we'll cover the basic functions of Excel as they apply to tracking resources, schedules, and expenses.

Jolene Wall (private): Hi I'm new to the class and I don't have a lot of experience with Excel. Can you give me some materials I can study outside of class to catch up?

I'll make review materials available to everyone.

Send

Microsoft Excel - Book2.xls

File Edit View Insert Format Tools Data Window Help

100%

117

	A	B	C	D	E	F	G
1							
2		Project Schedule					
3							
4		Name	Function	Hours this week	Total hours for project		
5		Owen Carter	Project Lead	9	80		
6		Brian LaRosa	Developer	3	40		
7		Jill Donnelly	Developer	3	66		
8		Luke Hansen	Marketing	12	10		
9		Karen Meyer	Writer	9	12		
10		Janice Marcola	Writer	12	30		
11		Linda Callahan	Testing	5	30		
12		Dennis Bates	Testing	0	15		
13							
14		Hours this week					
15							
16							
17							
18							
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31							
32							
33							
34							

Role	Person	Hours	Percentage
Project Lead	Owen Carter	9	17%
Developer	Brian LaRosa	3	6%
Developer	Jill Donnelly	3	6%
Marketing	Luke Hansen	12	22%
Writer	Karen Meyer	9	17%
Writer	Janice Marcola	12	23%
Testing	Linda Callahan	5	9%
Testing	Dennis Bates	0	0%

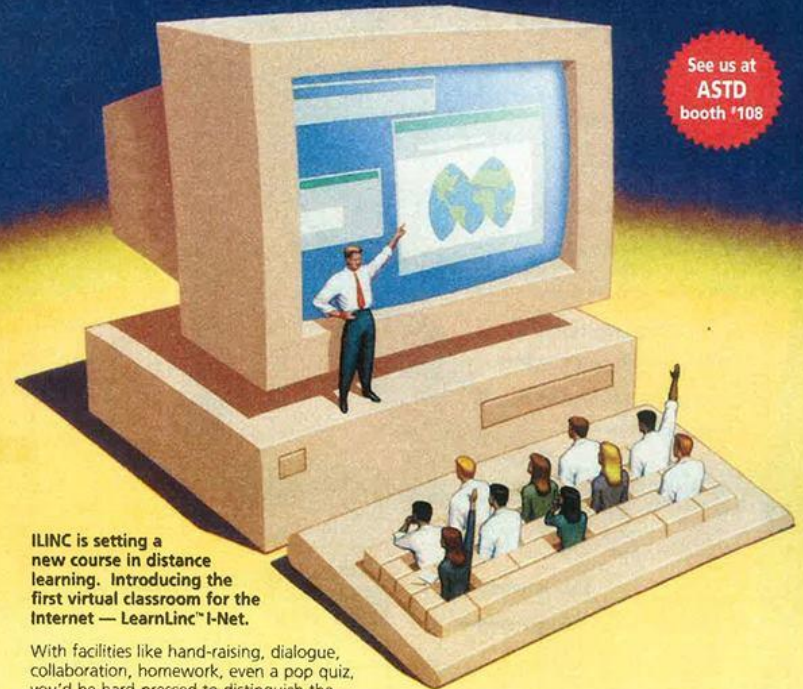
Funding the Enterprise

- 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.

A real classroom experience. Virtually.



See us at
ASTD
booth #108

ILINC is setting a new course in distance learning. Introducing the first virtual classroom for the Internet — LearnLinc™ I-Net.

With facilities like hand-raising, dialogue, collaboration, homework, even a pop quiz, you'd be hard-pressed to distinguish the LearnLinc I-Net virtual classroom from the real thing.

Truth is, this award-winning software for distance learning is boosting retention rates and bottom lines around the world.

Only LearnLinc I-Net allows for instructor-led learning with synchronized multimedia and Web-based content. And with text chat, shared whiteboard, and flexible floor controls, you've got a host of tools to maximize your training.

Plus, LearnLinc I-Net runs over the Internet or your corporate intranet. So it offers easy access to students, either at home or at work, with just a PC and phone line (or any number of audio/video options).

The classroom is virtual, but the results are concrete. You'll reach more students with the best instructors, cut costs, eliminate travel, reduce workflow interruptions, and boost the learning power of your people.

For a **FREE** Internet demonstration of how our virtual classroom can save your organization time and money, call ILINC at **518-283-8799** for the name of a LearnLinc Reseller near you.

LearnLinc I-Net is shipping. Today!

LearnLinc
The first virtual classroom
for the Internet. **I-Net**

ILINC Setting a new course in distance learning.

Visit our web site:
www.ilinc.com



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, Adam Stewart, Software Engineers



Fortune on ILinc:

- “Interactive Learning International Corp. (ILINC), a two-year-old 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 high-speed 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
 - *Copyright © 1996, Time Inc., all rights reserved.*

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 credit-card department. "It just holds my attention more, because you're interacting with the computer."
 - Wall Street Journal –Thursday August 6, 1998

TECHNOLOGY JOURNAL / NET INTEREST

Software Seeks to Breathe Life Into Corporate Training Classes

Workers Avoid Long Courses—And Long Trips

By REBECCA QUICK

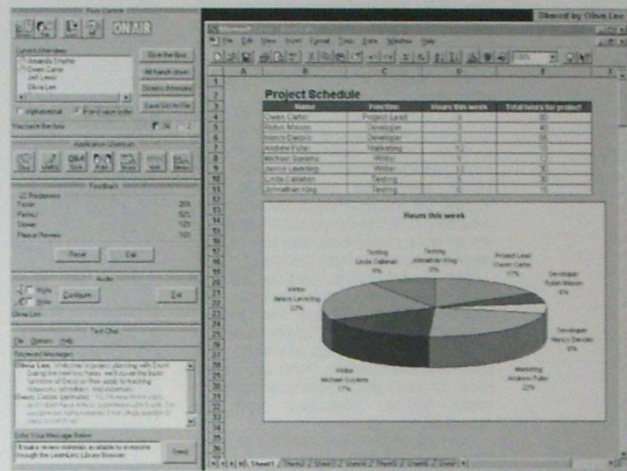
THE INTERNET promises a lot of miracles, but here's one thing even it can't do: make corporate training classes actually enjoyable.

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 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



Here is what an instructor using Iline software sees. The left side displays a list of students logged on, command buttons for turning the floor over to a student, and a dialog box for typing messages to an individual student. The right side is where the teacher guides the students through presentations via an application like a browser.

students: Studies show that retention levels drop (and doodling, no doubt, rises) significantly after two hours.

Of course, some things can't readily be learned over the Internet. Teaching presentation skills, for example, is largely about eye 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 quarter for the past year. And earlier this year, International Business Machines Corp. acquired Data-

Beam Corp., a Lexington, Ky., firm that sells distance-learning software.

Here's how the software packages work: Students go to a special Web site, on either the Internet or a corporate intranet, and sign 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 word processor.

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

(over please)

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/corporate-strategyoffice/acquisitions/broadsoft.html>
 - <https://newsroom.cisco.com/pres-releasecontent?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>

Summary

- The first example of the Mass Green High Performance Computing Center illustrated how universities need to learn to be entrepreneurial.
- The second example of ILinc shows how a faculty members research can grow into a groundbreaking company.
 - Research ideas
 - Opportunity recognition of need
 - Team formation
 - Financing the venture
 - Minimum viable product
 - Customer Discovery
 - Business Model Canvas
 - Supportive University Infrastructure

