

eExecutives eLearning eBusiness

**Creating eLearning Environments
From the Convergence of
Computing, Communication, and Cognition**

Jack M. Wilson

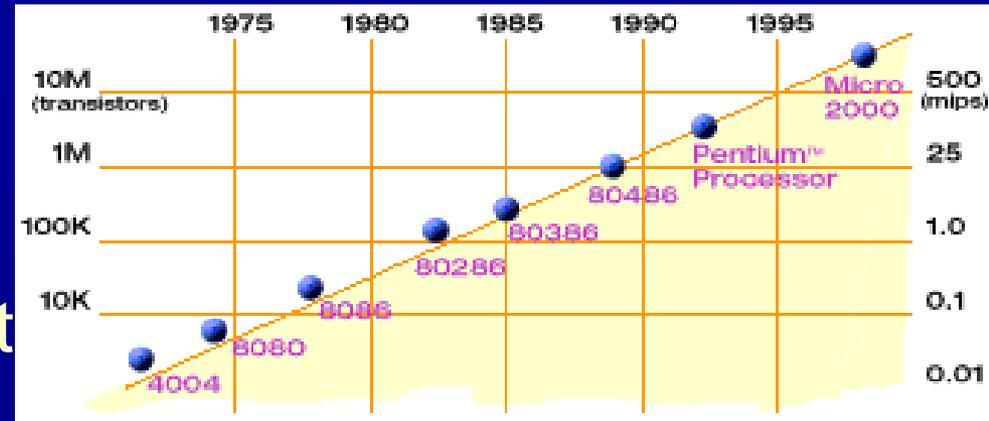
Chief Executive Officer, UMassOnline

- Service as:
 - 31 years as professor, department chair, research center director, dean (4 flavors), and provost
 - RPI: J. Erik Jonsson '22 Distinguished Professor of Physics, Engineering, Information Technology, and Management.
- **Founder, CEO, Chairman of LearnLinc**
 - Spin-off from my research
 - Now Mentergy Corporation (NASDAQ: MNTE)
 - left company in early 2000.

- Industry Consultant (IBM, AT&T, Lucent, Ford, GM...)
- Army TRADOC Advisory Committee
- Pew Center for Academic Transformation (\$8.8 M)
- One of founders of the Nat. Learning Infrastructure Init.
- Chair, NY State Task Force on Distance Learning
- Wash. DC: 8 yrs on Science Education: HS. and Univ.
- National Acad. of Science/National Research Council
 - Committees on Information Tech., Physics Decadal Overview Committee, and National Digital Library Committee
- Lots of visits, speeches, writing, reading, and visitors

- The Internet's pace of adoption eclipses all other technologies that preceded it.
 - Radio was in existence 38 years before 50 million people tuned in;
 - TV took 13 years to reach that benchmark.
 - The Internet crossed that line in 4 years, once it was opened to the general public.
- 1 internet year = 2 dog years = 14 people years

- Moore's Law:
CPU performance
doubles every 18 months



- Bandwidth law:
Bandwidth is doubling even faster!
- Metcalf's Law:
the value of a network scales as n^2 where n is the number of persons connected.

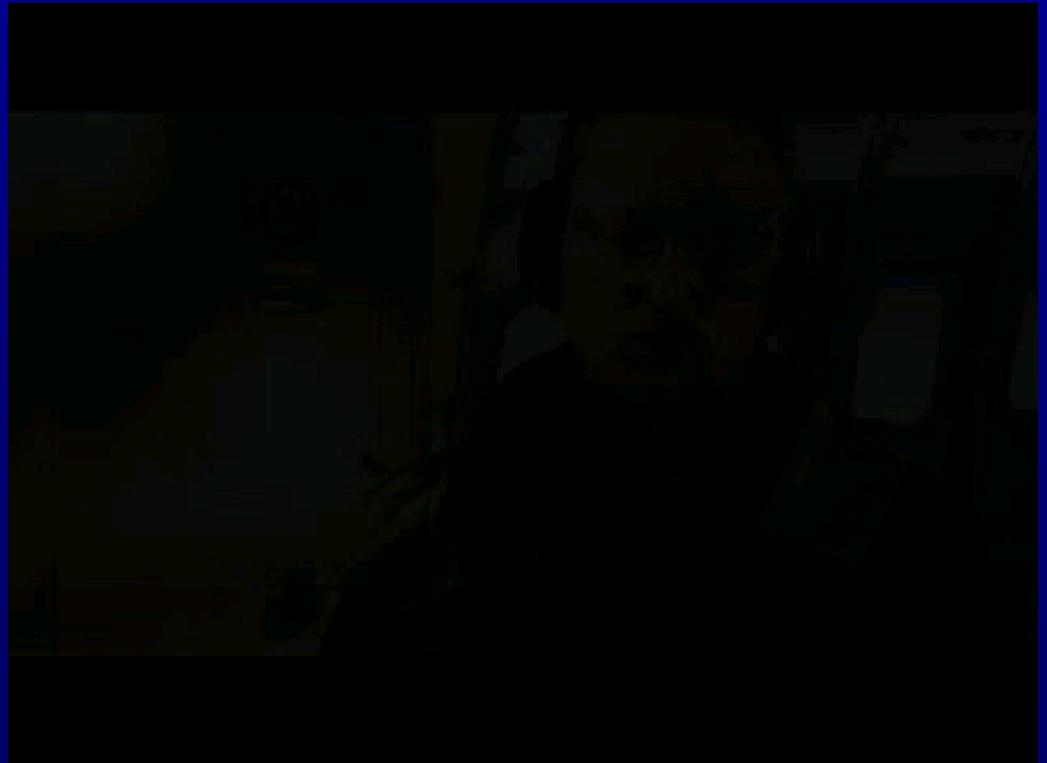
- OLD Paradigm:
Physical Capital / Resources
- NEW Paradigm:
Knowledge / Intellectual Capital
 - Frank P. Quattrone
Managing Director
Head of CSFB Technology Group
Credit Suisse/First Boston

- “Last year witnessed an unprecedented destruction of wealth in gargantuan proportions. The market value of the Nasdaq alone declined by \$1.6 *trillion* -- about eight times larger than the decline of the entire GDP during the Great Depression -- yet for the most part people shrugged.”
 - “Crash Economics;” Fortune; by Erick Schonfeld, January 05, 2001.
- Guess what Erick? They are shrugging no longer!

- People change very slowly
- Technology changes very rapidly
- Do you feel like you are herding cats?



- Ever feel like you are building a plane in flight?



- Entrepreneurs and Executives at high technology companies face a difficult challenge.
 - How can they keep up with the pace of technical change and the new economy business environment when they find themselves overwhelmed with work and with little time for traditional educational programs?
- These eExecutives are ideal candidates for high quality and high flexibility learning environments.
- We designed a series of courses for them leading to a certificate in eBusiness at the graduate level.
 - The courses could also form part of their program for an MBA degree

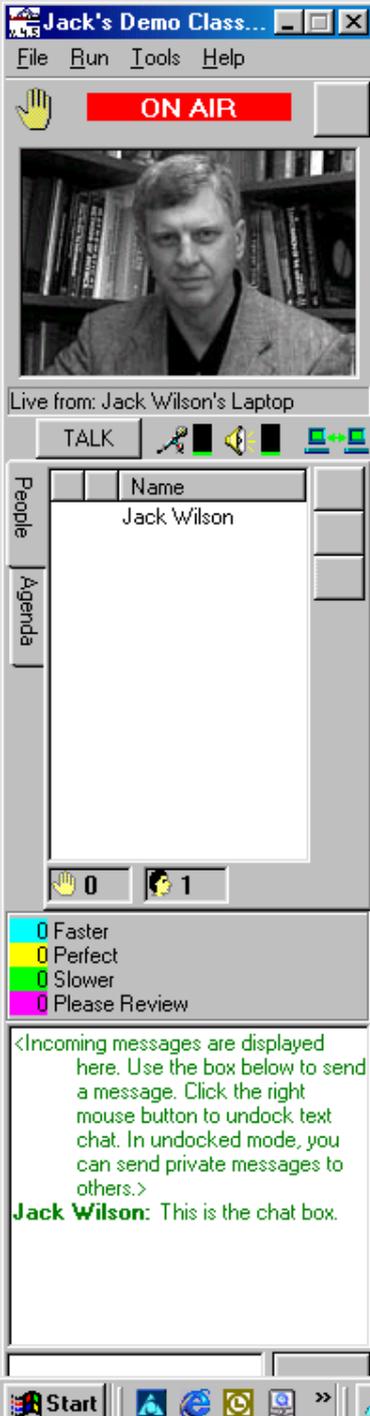
- If you are an entrepreneur, you have no time to head off to the local university for graduate courses in the latest in business strategies and technologies.
- With the world moving in Internet time, you must find a way to learn faster and better and just in time to give your company a competitive advantage.
- It is a daunting challenge for new and old graduates alike. How can they keep up with a system that changes dramatically every month?

- If you are a student studying in the MBA programs at the leading American technological universities, how can you tap into the expertise and experience of those who are right in the middle of this Internet Tsunami?
- How do you know whether the things you are learning will hold up to the test of corporate reality?

- One night per week, 75-125 executives and potential executives met on-line to learn eBusiness. (repeated at other times in subsequent semesters.)
 - Half sitting at desks with laptops with instructor
 - Half scattered throughout world in their homes and at corporate sites including: General Electric, IBM, Ford, Sun Computer, J.P. Morgan, Lockheed Martin, Sikorsky, Carrier, Pratt and Whitney, Otis Elevator, Consolidated Edison, and Computer Sciences Corporation.
- Some corporation's participants were also scattered.
 - IBM: VT, MN, TX, NC, and all over NY.
 - Ford participants included Canadian as well as US installations.

- In Introduction to eBusiness these two groups were interacting every day.
 - The students in the room were about evenly divided between those who were employed by local industries during the day and full time MBA students.
 - Leading American corporations employed all of those 55 students at a distance.

- 1-2 hour live on line
- 2- 6 hours of asynchronous work
- Online research
- Online readings
- Homework questions submitted online
- Student teams present case each week.
- Threaded discussion questions over weekly case
- Individual paper analyzing strategy for one company.



Live On-Line eBusiness

- A one semester course in eBusiness
- Offered in the blended model
 - Live session (1-2 hours per week)
 - All students use LearnLinc or Centra for
 - Application sharing and collaboration
 - Polling
 - Testing
 - Group work – case presentation
 - May also be attended physically in classroom
 - Optional: could connect through video-conferencing
 - Asynchronous- Web based activity (1.25 hours – 6 hours)

Centra Symposium - LLEP - eBusiness Presentation (Main Room)

File View Insert Actions Tools Record Help

Presenters

 **Jack Wilson**

Participants

Jack Student

0  0  0  0  2

Agenda

- The Future /
- Lewis Perelman
- Matter of Fact Approach
- Denial
- Success Story-LearnLinc
- Albany International Paper
- Success Story
- Web Safari
- eBusiness Syllabus
- Jack M. Wilson Home Page
- Text: Ebusiness: The hope, the hype, the power, the pain

eBusiness: The Hope, the Hype, the Power, the Pain (© Jack M. Wilson 1999,2000, 2001, 2002)

Dr. [J. M. Wilson](#); CEO, UMassOnline.; JackMWilson@JackMWilson.com
[Course Operation](#) | [LearnLinc Class](#) | [Prometheus](#) | [On-line Text](#)

Week Schedule

- [1 Introduction](#)
- [2 Players](#)
- [3 Technologies](#)
- [4 Entrepreneurship](#)
- [5 Strategies](#)
- [6 Finances](#)
- [7 Marketing](#)
- [8 Data Mining](#)
- [9 Law&Ethics](#)
- [10 Old Economy](#)
- [11 B2B](#)
- [12 ERP](#)
- [13 ASP](#)
- [14 Final Presentation](#)

[Help!](#)

Week 3 The Technologies of eBusiness

Text: [Chapter 3](#) The Technologies of eBusiness

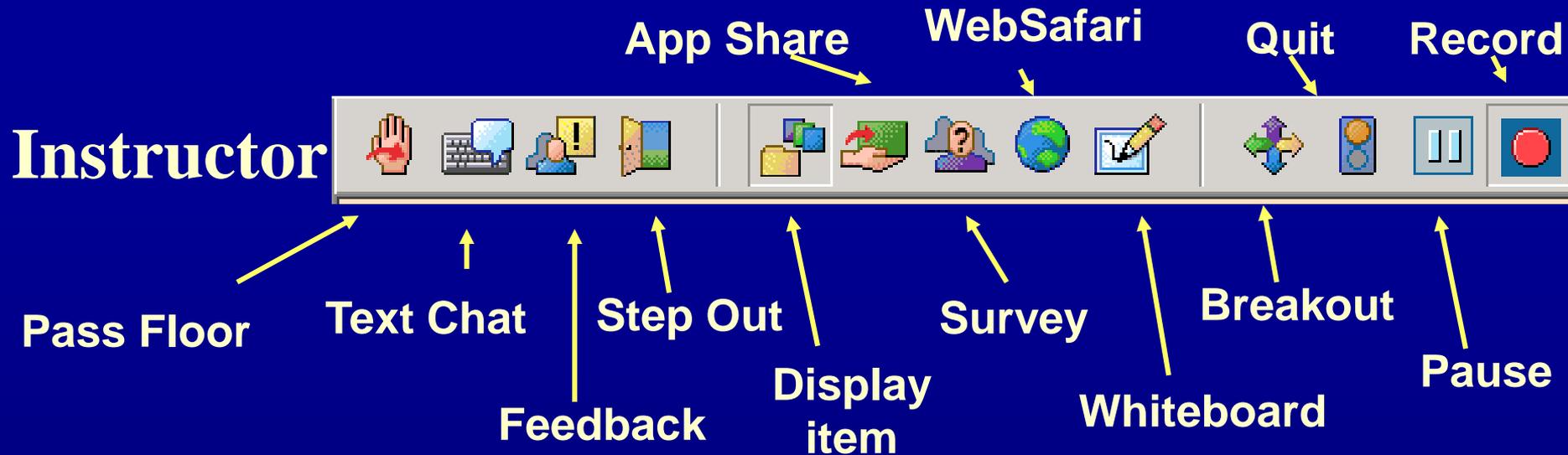
Case: Microsoft

Assigned Reading:

- [Chapter 3](#) The Technologies of eBusiness
- [XML Drives Development](#)," Information Week p 76; July 17, 2000.
[<http://www.informationweek.com/795/ssxml.htm>]
- "[Will JAVA Break Windows?](#)" Forbes ASAP August 25, 1997
- "[Java and XML: Great Together](#)," Information Week p 93; July 17, 2000.
- "[Java Emerges As Server-Side Standard](#); Java 2 Enterprise Edition has turned the language into a total app-development environment," by Alan Radding, Information Week , May 22, 2000.
- "[Making Microsoft Matter](#)," Forbes; June 12, 2000.
- Brent Schlender, "[Damn the Torpedoes! Full Speed Ahead](#)," Fortune p 99; July 10, 2000.
- "[Gates: Trust Microsoft to Improve the Web](#)," Business 2.0; Sept. 12, 2000. - Microsoft's CEO sits down with Business 2.0 to discuss what a truly unified Web will mean, and why you should trust him to get you there.
- "[Dissecting .NET](#): Sure, it's a Microsoft initiative, but .NET is based on technology that might just be neutral, open, and important," Business 2.0; Sept. 12, 2000.

Recording

Network 



Student



Test: 2/29/2000 Employee Orientation Test

This test uses the Orientation Test Template

Testing Options

Limit test to 60 minutes

Random question order

Number of times student can take test: 2

Students can access this test...

Starting

Month Day Year Time
2 29 2000 16:24

But not after

Month Day Year Time
3 1 2000 16:24

Grade Posting Options

- Don't show results
- Show final grade only
- Show grades by question
- Show grades and answers

Show results after:

Month Day Year Time
2 29 2000 16:24

Review grades before posting

Publish

Cancel

Test: Office 2000 Overview

Karen Ling

Question	Correct Answer(s)	Student's Answer(s)	Points Available	Points Awarded
Microsoft Office 2000 includes which of the following standard software applications?	1. Word 2000 2. Excel 2000 4. FrontPage 2000	1. Word 2000 2. Excel 2000 4. FrontPage 2000	20	20
The "desktop" is a metaphor used to represent an important part of your computer's graphical user interface (GUI).	True	True	20	20
The Microsoft Office 2000 software application that you can use for word processing is called	Microsoft Word Word	Word	20	20
. Microsoft Excel, another Office 2000 software application, is used to create	spreadsheets forms graphs	graphs		
. To create your corporate intranet site, you could use	Microsoft FrontPage FrontPage	FrontPage		



-  Folder List
-  Virtual Campus
-  Help

Test: Office 2000 Overview

Click a student name to review individual test results.

Student	Date/Time Completed	Duration of Test (minutes)	Total Points	Awaiting Grade	
Arman Stattic	3/2/00 9:13:37 AM	1	80	No	Delete Result
Bernice Campollini	3/2/00 9:37:12 AM	5	60	No	Delete Result
Brian Mann	3/2/00 9:22:39 AM	8	100	No	Delete Result
Jude Sages	3/2/00 9:41:10 AM	1	80	No	Delete Result
Karen Ling	3/2/00 9:38:47 AM	0	100	No	Delete Result
Pamela Fraser	3/2/00 9:29:51 AM	2	73	No	Delete Result
Rumi Platek	3/2/00 9:42:58 AM	0	100	No	Delete Result

Done

View Statistics

- Few high school students studying math & physics
- Lack of qualified teachers
- Rural and inner cities are particularly bad
- Solution:
 - LearnLinc used to teach physics over the network
 - Funded by:
 - AT&T
 - Lucent
 - Bell Atlantic
 - IBM

- Introductory Calculus Physics
- Delivered via ILINC **LearnLinc**
- Cobleskill High School in rural upstate NY
- Collaborative between the physics teacher at Cobleskill and graduate students at R



LearnLine Client

File Run Tools Help

Nichole



Live from: San Francisco, CA

Mute

People

Name

- Isaiah Beres
- Owen Carter
- Tom Elliot
- Wally Emerson
- Ben Frank
- Geoff Gamache
- Alicia Hoffman

Agenda

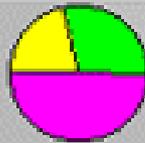
2 25

0 Not much progress

5 Still working

7 Almost finished

13 Completed



Note: Yes. Could you please review the chapter on formating graphs in Excel?

Raise your hand when you see the AppShare window.

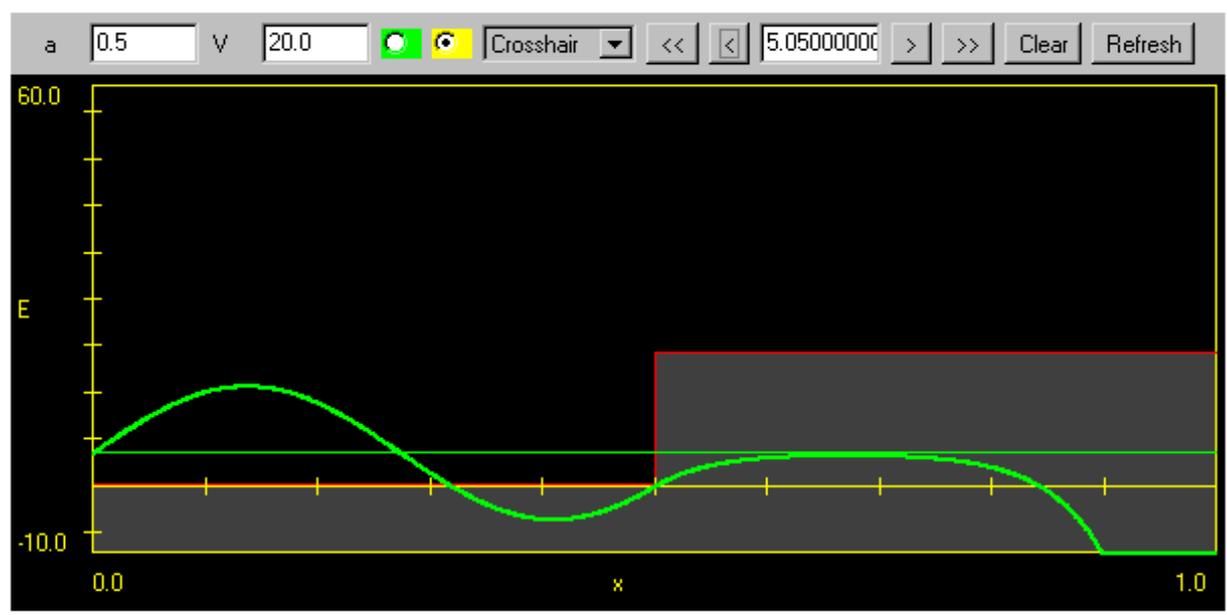
SquareWell - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address <D:\JavaPrograms\cde\SquareWell.html> Go Links

This illustrates the solution of a quantum well with an infinite wall at $x=0$ and a finite potential of 20 V at $x=0.5$ nm. - Jack Wilson



Author: Jack Wilson

Using the buttons to each side of the Energy window, you can adjust the energy of the particle in the well to see if the energy leads to a bound state. In a bound state the wavefunction will satisfy the boundry condition at infinity (on the right). It must go to zero to do that. You should find several bound states of the particle for the energy selected here.

Notice that you can select various annotation possibilities, including "Crosshair," "Derivative," "Integral," and "Chalk." You can use each one in combinations with the mouse and mouse button.

- Remember Moore's Law, the Bandwidth Law, Metcalf's Law.
- Present asynchronous courses are primitive and rudimentary precursors to real distributed learning.
- Don't wait, get started now.
- “Don't look back, somethin' might be gaining on you.” –Satchell Paige

1. **Restructure around the learner.** Neither over-emphasize nor under-emphasize technology.
2. **Build upon research results**, which inform design; don't try to reinvent the wheel.
3. **Remember that technology has an intrinsic educational value beyond helping students learn better.**
4. **Do systematic redesign and not incremental add-ons.**
Do not automate the lecture. There is always a tendency to just add on a few computer experiences to everything else. By definition this costs more, is more work for faculty, and adds to the students' burden. An innovative approach changes rather than adding poorly integrated exercises.
5. **Benchmark your plans** and build upon examples of systematic redesign. Find the best examples and build upon them.

6. **Count on Moore's law** ("What is hard today is easy tomorrow"). Eg., CPU power and bandwidth relentlessly double.
7. **Cost is an important aspect of quality**. There is no lasting quality if there has been no attention to cost. There are more than enough examples of expensive high quality solutions. We need more examples of inexpensive high quality solutions!
8. **Avoid pilots that linger**. Design for a large scale and pilot projects only as a prelude to scaling up. It is easy to design innovative educational experiences that work for small groups. It is harder to address the needs of the 1000 students taking calculus I at the large research or comprehensive university.
9. Develop a **balance between synchronous and asynchronous** distributed learning.
10. **There is no longer any way to do good scholarship without technology, and there is no longer any way to teach good scholarship without technology.**

Dr. Jack M. Wilson

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<http://www.JackMWilson.com>



The End