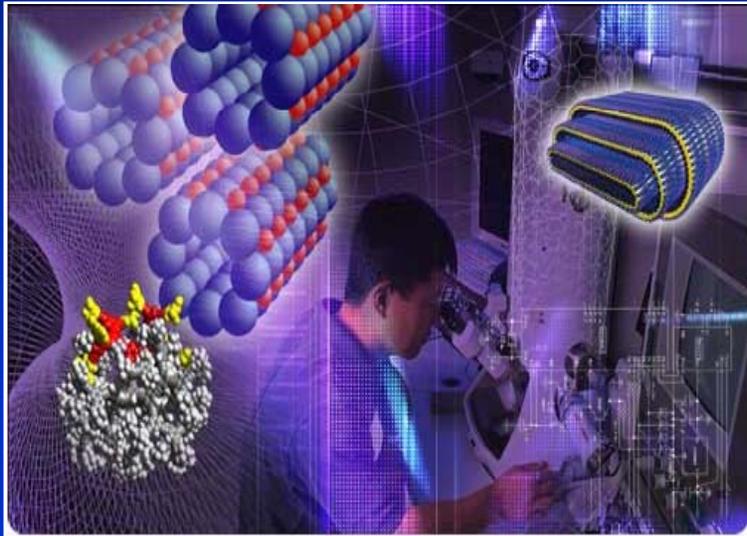


Technology Transfer & Business Incubation

Ron Kudla

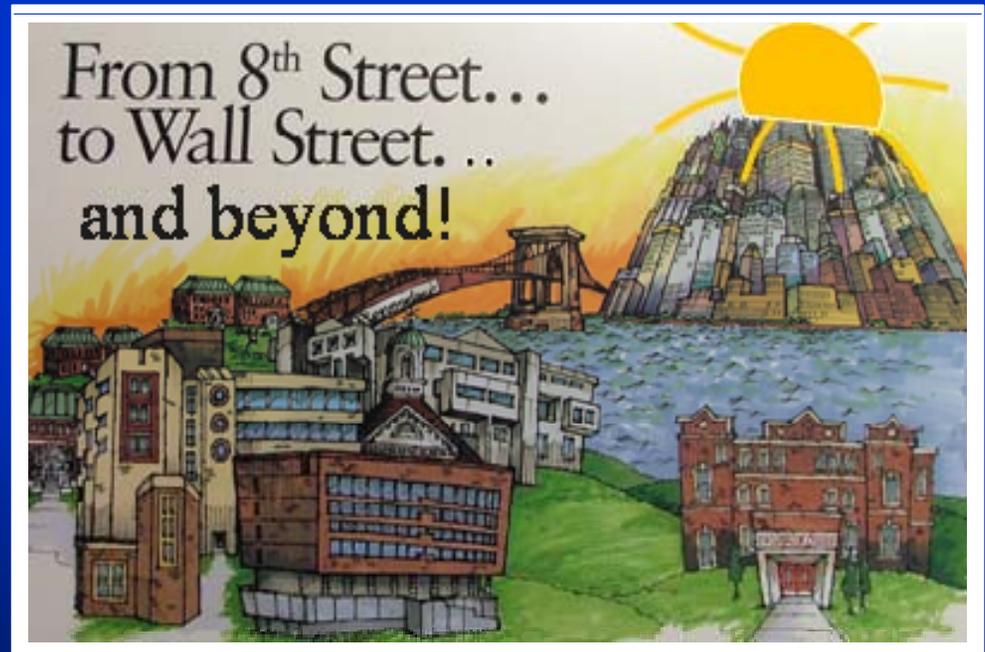
Office of IP, Technology
Transfer & New Ventures



Rensselaer Polytechnic
Institute

VEF 2010 Annual
Conference

January 4, 2010



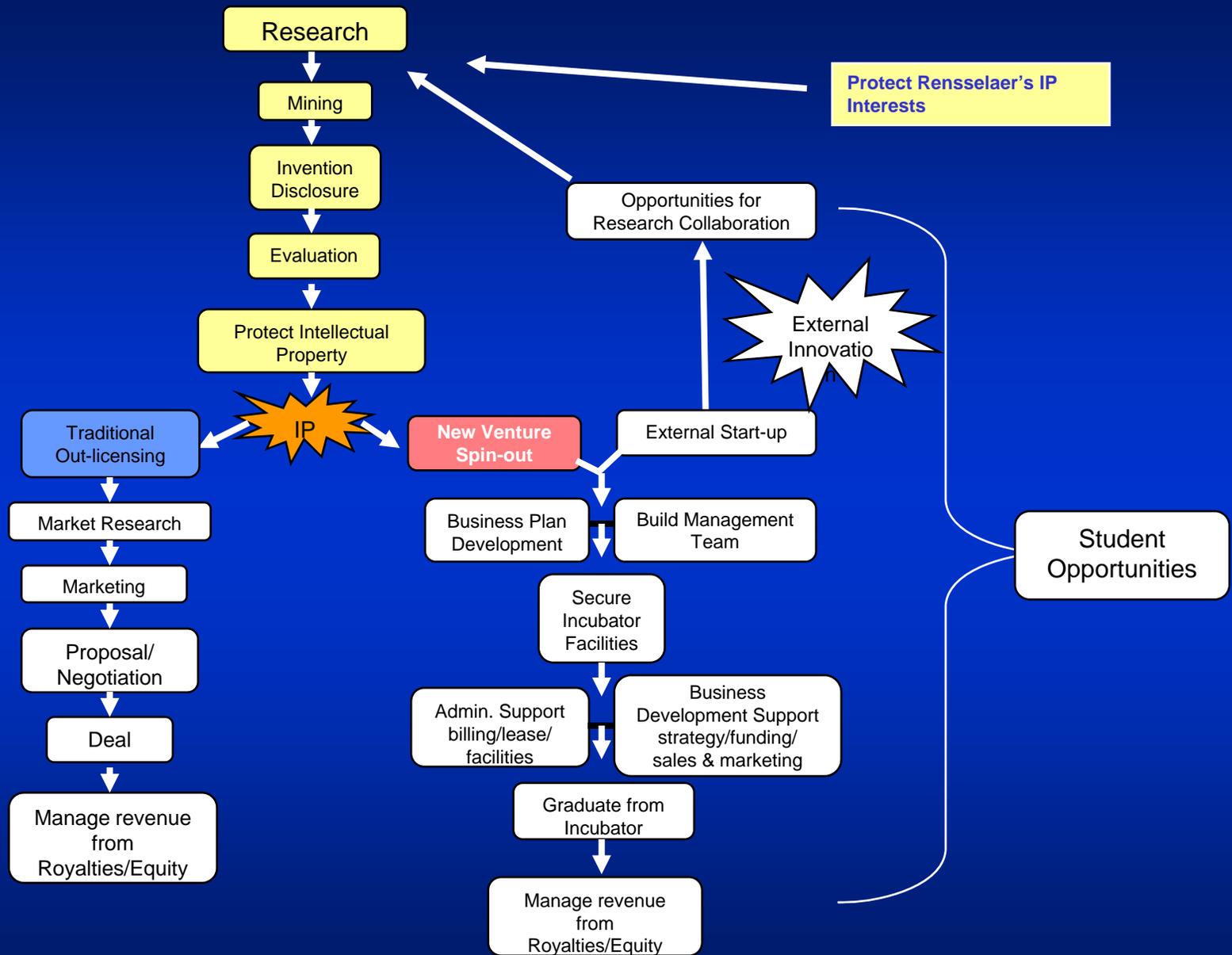
Session Overview

- Mission & Purpose
- The I.P. & Technology Transfer Process
- Advantages of combining technology transfer and a New Ventures Program
- The Rensselaer Incubator Program – History, Company Selection Process
- Some Case Studies

Our Mission & Purpose is to ...

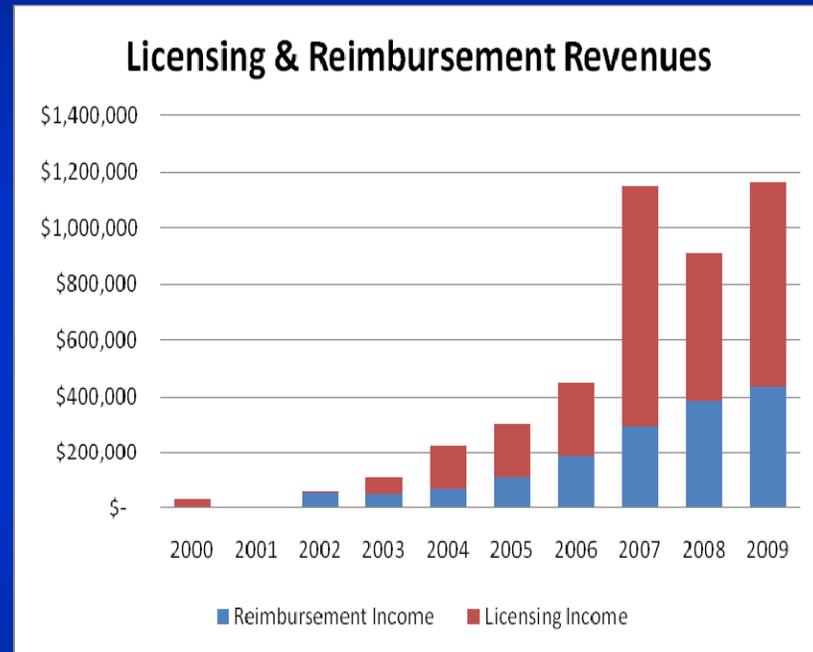
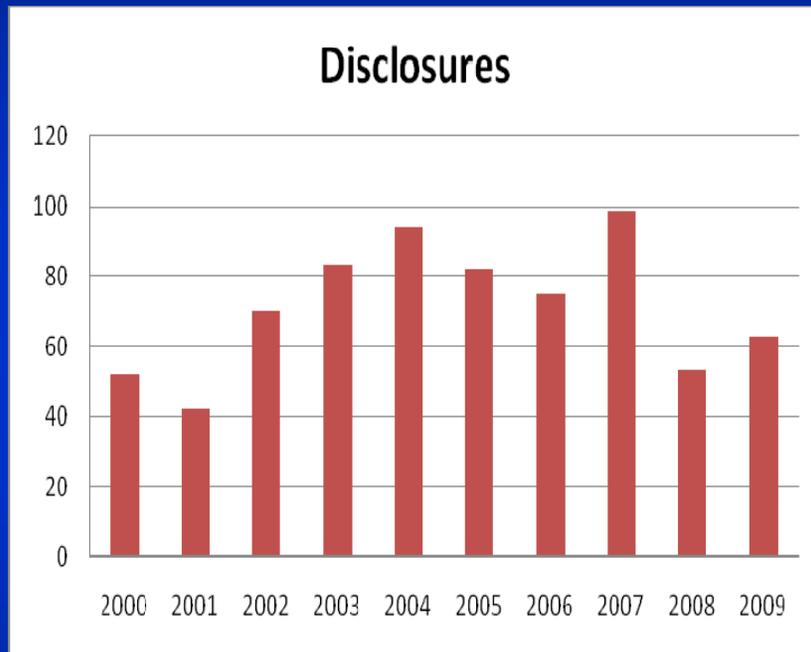
- Manage the intellectual property created at Rensselaer, and to
- Protect, market and out-license it,
 - to companies who will proactively develop it into products and services for the marketplace; and,
 - to do so in support of research and education at Rensselaer, and for the public good.
- Generate successful new ventures for their multiple contributions to Rensselaer and for economic growth, with
 - Sponsored research
 - Return on equity and royalties
 - Student involvement

Management of the Intellectual Property Process



Office of Technology Commercialization

(Key statistics 2000-2009)



•FY '09: 31 U.S. Patents filed; 12 U.S. Patents received; 10 license agreements signed

Portfolio Statistics

- 350 technologies under management
- 126 foreign applications
- 109 US applications
- 85 US patents not yet licensed
- 66 licenses require ongoing contractual obligation monitoring
- 26 Inter-Institutional Agreements
- 60 new invention disclosures received
- 10 license agreements have been concluded
- 30 contracts are in negotiation

Advantage of Combining OTC and New Ventures Program

- Reduces the barriers to commercialization of new technology.
- Aware of all research projects ongoing at RPI
- Can review all disclosures from the perspective of their best route of commercialization.

The Bayh Dole Act - Passed in 1980's

- Allowed universities to take ownership of Intellectual Property from federally funded research.
- Obligates the university to **proactively** protect and market the technology or return it to the federal funding agency.

Institutions having Technology Transfer programs

1972

30

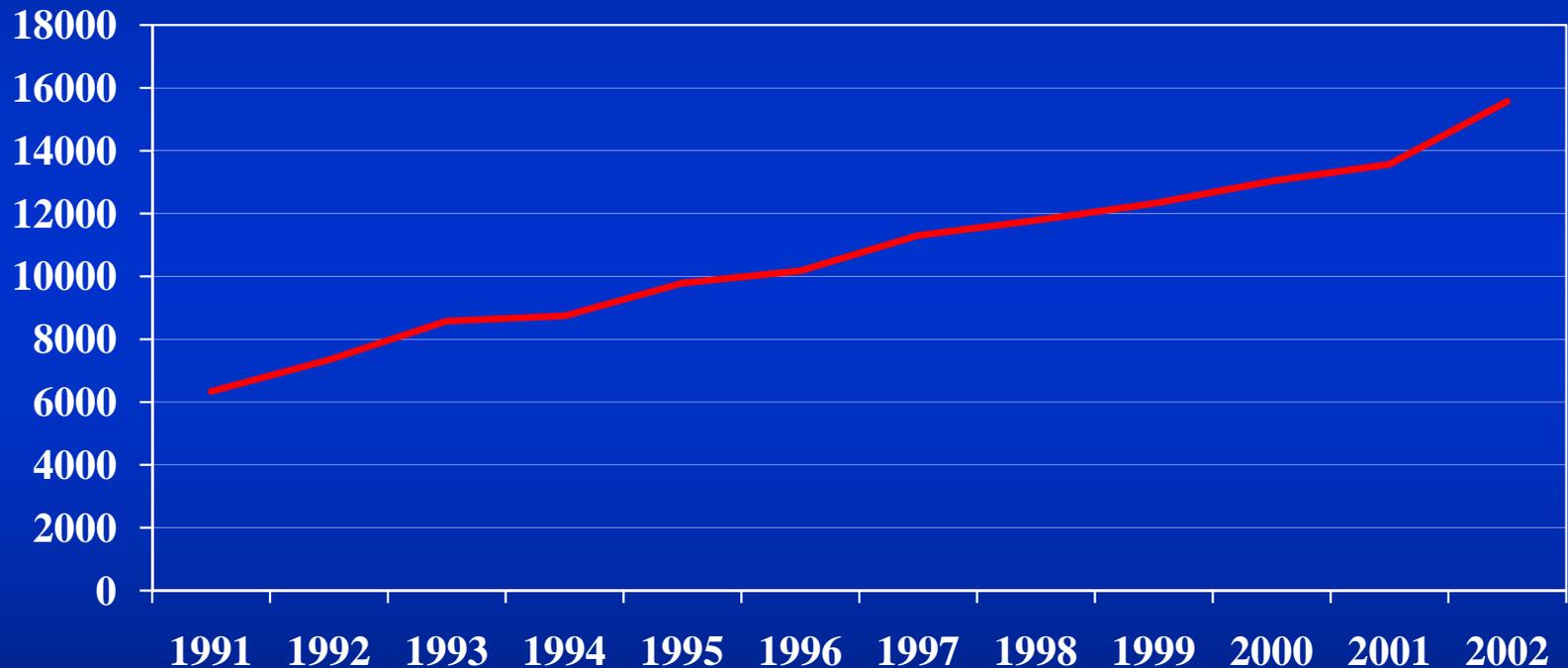
2010

>300

Invention Disclosures Received

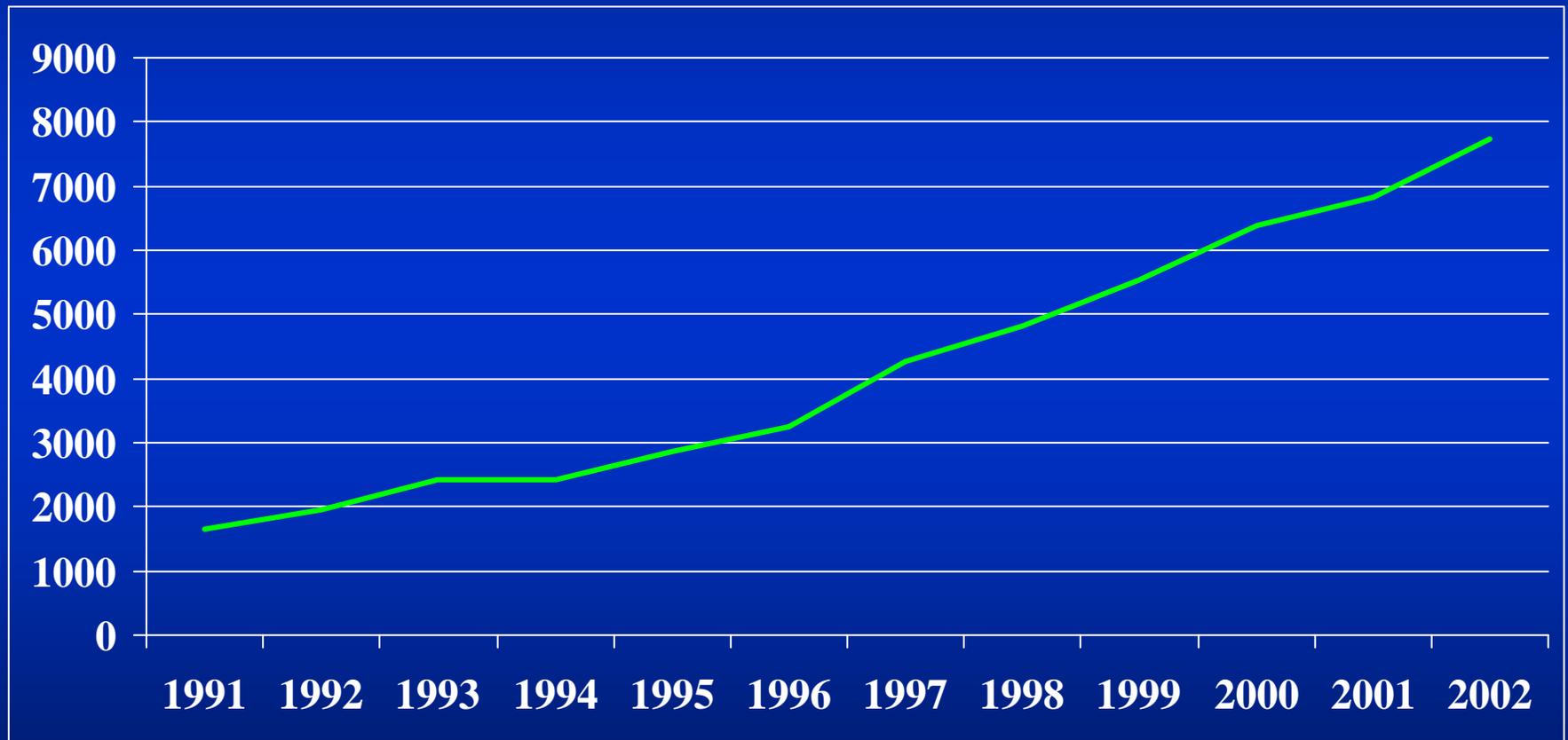
source: AUTM Survey 2003

Update: In 2007- 19,827 Disclosures



New U.S. Applications filed

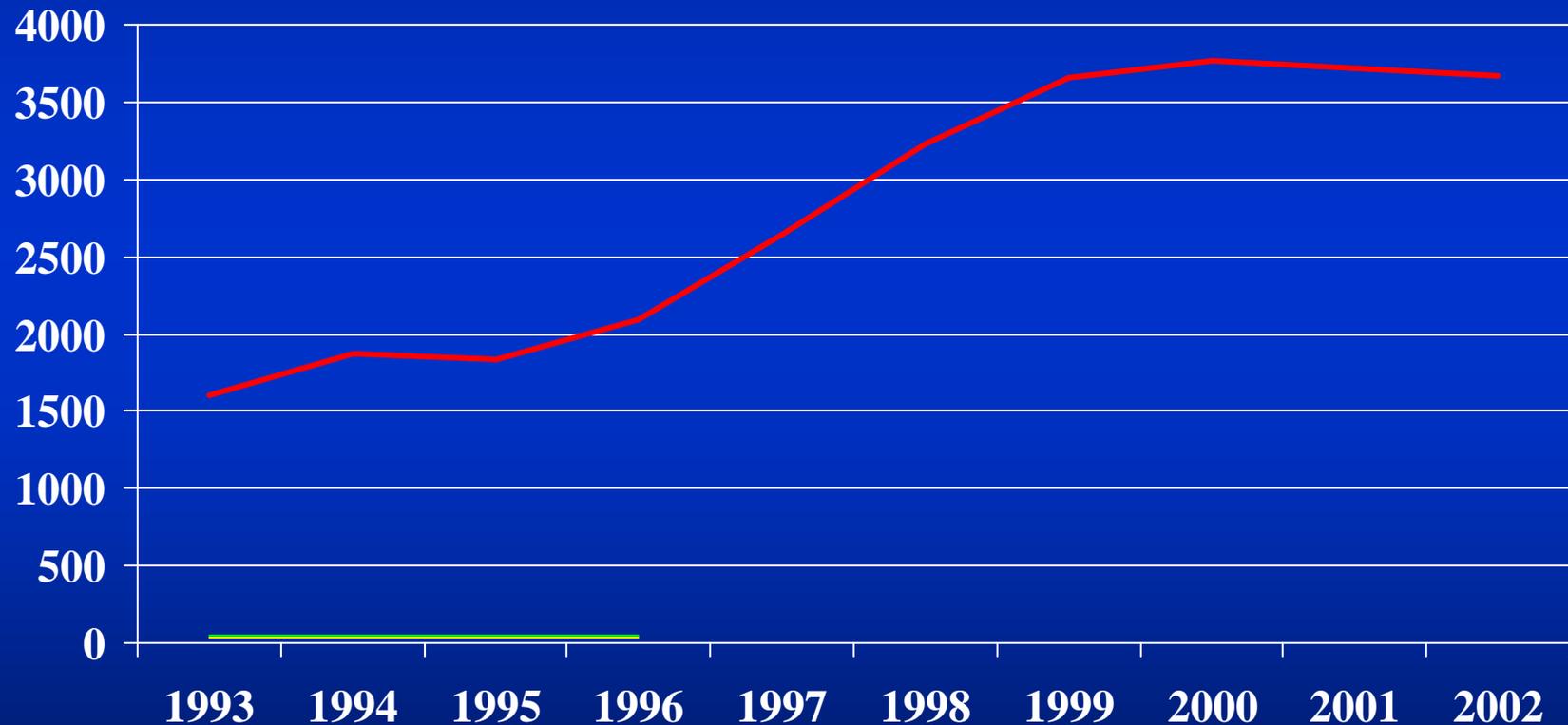
Source: AUTM survey 2003



U.S. Patents Issued

Source: AUTM Survey 2003

2007 Update: 3,622 patents issued to U.S. Research Institutions



U.S. Start-Ups Formed

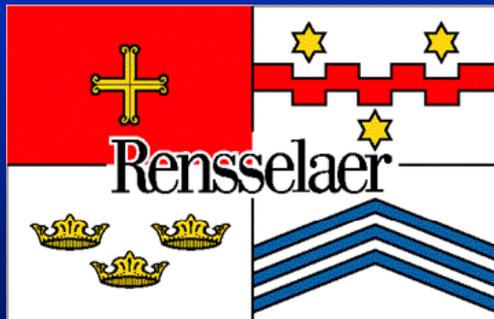
Source: AUTM Survey 2003

2007 Update: 555 companies formed

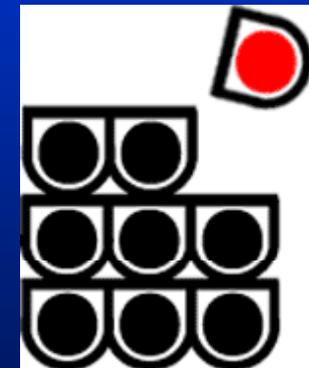


The Rensselaer Incubator Program

Building Companies, Creating Jobs and
Enriching the Campus Community



Rensselaer Polytechnic Institute
Incubator Program
Troy, NY



Rensselaer Polytechnic Institute - Incubator Program
www.rpi.edu/dept/incubator/homepage/

What is a Business Incubator?

- A business incubator is an organization of services designed to nurture young businesses.
- A wide range of services can be offered within an incubator, including:
 - management assistance
 - access to financing
 - business or technical support services
 - and shared office services such as access to equipment
 - flexible and affordable leases; and,
 - expandable space.
- Not only do incubator tenants benefit from business and technical assistance, they also benefit from:
 - official affiliation with the incubator;
 - a supportive community with an entrepreneurial atmosphere;
 - direct access to entrepreneurs and the Rensselaer campus;
 - immediate networking and commercial opportunities with other tenant firms.

RPI Incubator History

- Started in 1980 as one of the first university-owned incubators in the US
- Mostly self-sustained with some support from RPI & various grants & gifts

“I don’t think we can educate all of our students without having available to them ... the laboratory of an entrepreneurial company. I think that’s an important part of the educational process, because it’s an important part of America.”

- George Low, former RPI President

Famous Quote

"Tell me and I forget.

Teach me and I remember.

Involve me and I learn."

Benjamin Franklin

Rensselaer's Classes on Entrepreneurship Result in Spinouts

- Design Manufacturing and Marketing (multiple faculty)
- Starting up a New Venture (Corbett, Young)
- Introduction to Engineering Design (B. Swersey)
- Inventor's Studio (B. Swersey)

RPI Incubator Growth



1980 – spare rooms in house



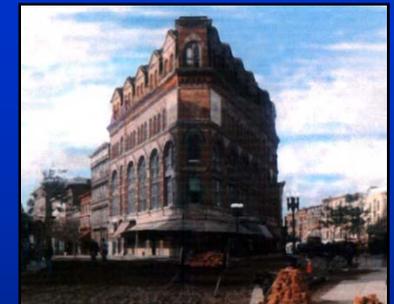
1980 – administrative building



1983 – orphanage/warehouse



1992 – industrial building



1999 Historic office building

RPI Incubator Facilities



“J” Building: 42,000 ft² office/mixed use building on main RPI campus.



Rice Building: 25,000 ft² office building in downtown Troy. Owned by nonprofit (RPI, Troy Savings Bank, Troy Architectural Program).



Incubator for the Incubator



Selection Criteria

- Company must be technologically based
- Have potential synergy with RPI community
- An acceptable written business plan
- Possess financial resources sufficient to sustain their business during start-up
- Capable, motivated entrepreneurs

What is Offered at the Incubator?

- Flexible & affordable leases
- Expandable space
- Management assistance
- Access to financing
- Business or technical support services
- Shared office service such as access to equipment
- High speed internet connection

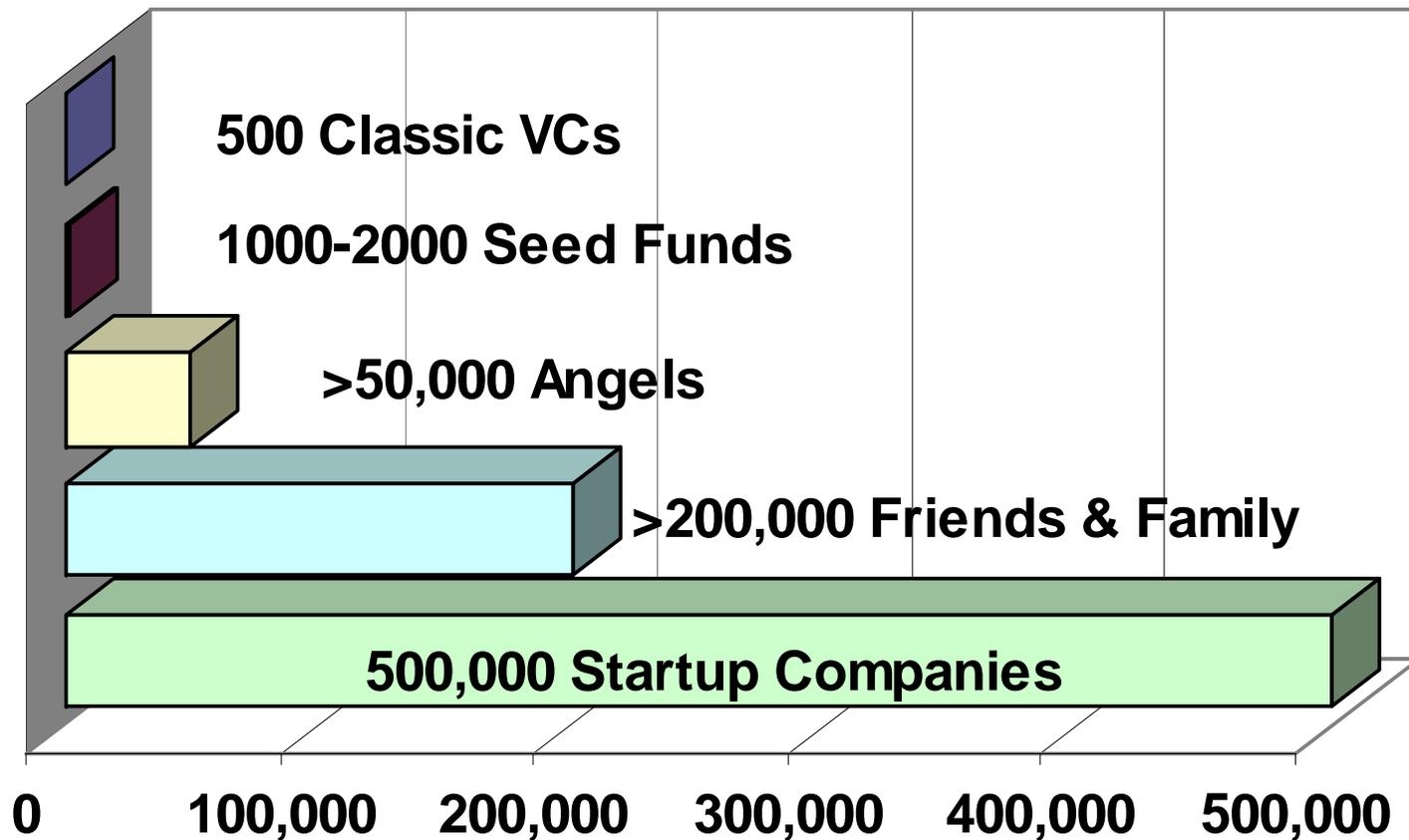
RPI Incubator Support

- Counseling, mentoring, advisory programs.
- Consulting desk.
- Student projects, internships, part-time work.
- Shared equipment and facilities, including RPI's.
- University alumni links.
- Venture B-Plan series.
- VARPI Workshops.
- RPIdeaLab.

Attracting Financing

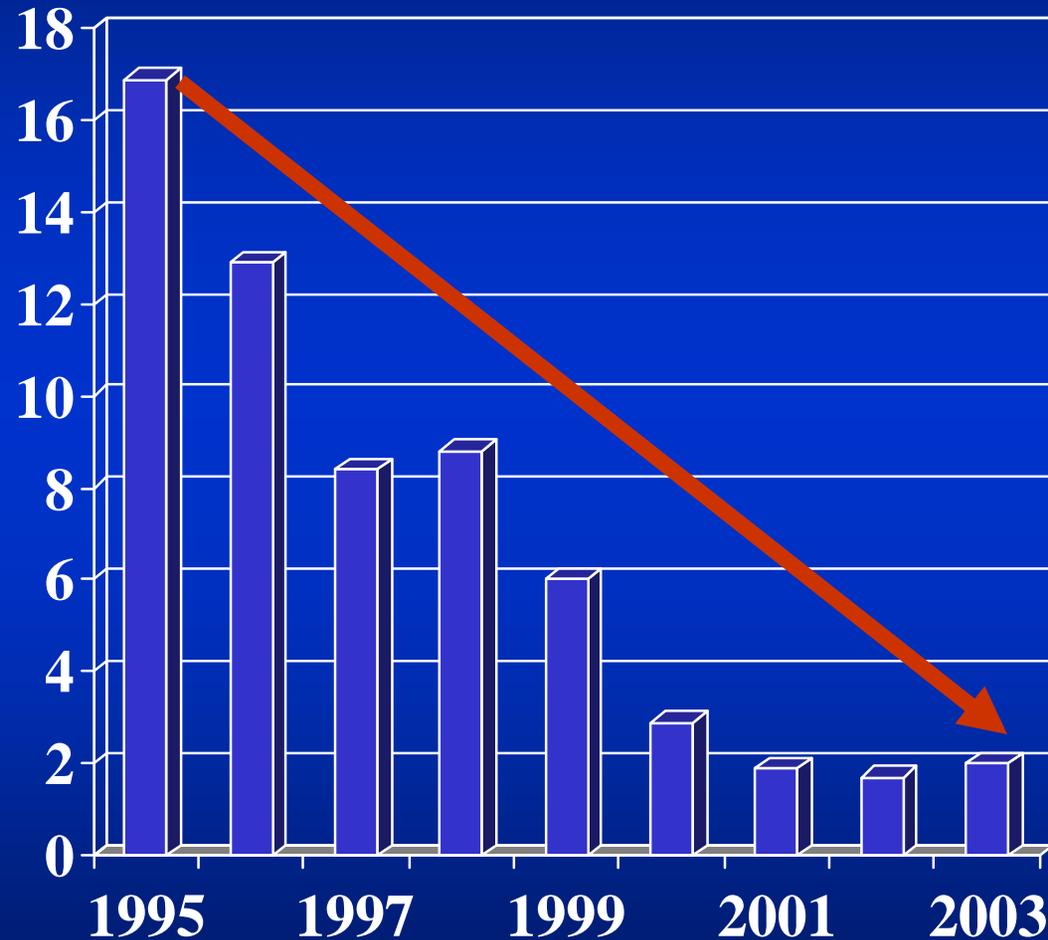
- Build a business plan that sells
- Finance/Accounting/Marketing Consulting desks
- Venture B-Plan series
- One-on-One meetings with local VCs
- Guest VC
- Rensselaer Entrepreneurship Network (REN) in NYC and Boston
- New Venture Exhibit for Alumni

New Company Formation Source of Funds – Typical Year



VCs Are Funding Fewer Start-ups

% of All
VC Funds
Invested in
Start-ups



Rensselaer Polytechnic Institute - Incubator Program

Source: NASVF and PWC-MoneyTree www.rpi.edu/dept/incubator/homepage/

Angel Organizations Can Fill Capital Gap

Stage	Pre-Seed	Seed/Start-Up		Early	Later
Source	Founders, Friends and Family	Individual Angels	Funding Gap between \$500,000 and \$2,000,000/\$5,000,000	Venture Funds, Banks	
Investment	\$25,000 to \$100,000	\$100,000 to \$500,000		\$2,000,000/\$5,000,000 and up	

RPI Incubator Results

- 16 tenant companies; 23 virtual members
- 185 tenant companies graduated since 1980.
 - Founders: 1/3 faculty, 1/3 RPI graduates, 1/3 community.
- Over 2000 jobs, \$500M revenues by companies since 1980.
- 80% of graduates still in business 5 yrs after graduating.
- 90% remain in region.
- Hundreds of Rensselaer grads employed locally.
- Hundreds of students educated in the incubator “living laboratory.”

Graduates (Partial List)

- Crystal IS, Aluminum Nitride substrate wafers for semi-conductor industry
- Starfire Systems, SiC ceramic forming polymers
- Map Info, \$100 million public co. – Location intelligence
- Albany Molecular Research, Recently named *Inc. 500* fastest growing company
- Authenticate Inc., Electronic Postage Stamp, Authentication Software licensed to Microsoft
- E-Transmedia, offshore, out-sourced IT services
- Float-Tech, Self-Inflatable Life Vest
- GlobalSpec.com, Receives \$20 million investment from leading VC firm
- Vicarious Visions, Recently acquired by Activision
- Ecovative, environmentally friendly insulation material. Graduated in June of 2009.

Crystal-IS Inc.

- Chemical mechanical polishing of aluminum nitride substrate wafers for the semi-conductor industry
- 2002 – RPI licensed it's 50% ownership right to Crystal-IS
- Crystal-IS entered RPI Incubator facility
- Raised funding of ~\$7.0 million
- Graduating from RPI Incubator in 2005, moved to Green Island

Float-Tech

Personal Floatation
Jacket

2003 Business Plan
Comp Winner

\$150 K investment



Etransmedia

Off-shore outsourced
IT services

2001 Business Plan
Comp Winner

\$500K investment

\$3 Million in Sales



BusinessWeek Small Biz **UNDER THIRTY**

A Remote Type

If you want to make money in the global village, it helps to know the neighborhood. Vikram Agrawal knows it well. Raised in family of entrepreneurs in Bangalore, India, Agrawal came to Rensselaer Polytechnic Institute in Troy, N. Y., in 1999. A year later, he won a business-plan competition that helped him raise \$475,000 in venture capital to start Etransmedia Technologies Inc., a transcription service for U. S. doctors and businesses.

It's a simple idea. Clients use digital devices to record audio files, which are sent electronically to typists in Bangalore. About 24 hours later they get back a transcript. In three months, the company has racked up \$1 million in sales. Says Agrawal: "We edge the American companies out by price. And we edge offshore competition out by quality." Next, Agrawal plans to start a call center in India to do billing for U. S. hospitals. Talk about a hometown advantage.

—NAWEEN A. MANGI

AT A GLANCE

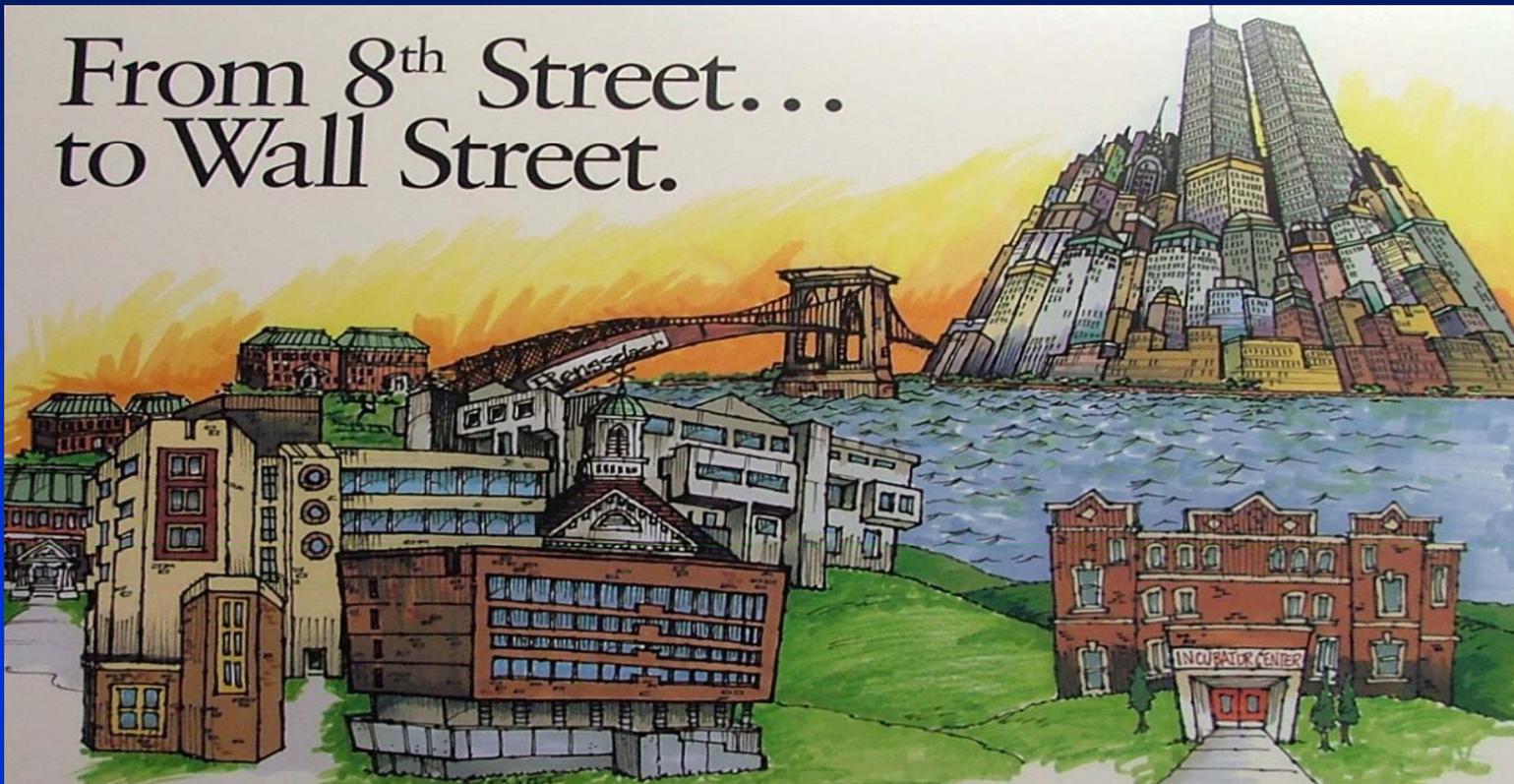
WHO: Vikram Agrawal, 26
COMPANY: Etransmedia Technologies Inc.
WHERE: Troy, N. Y.
REVENUES: \$1 million
EMPLOYEES: 4

THE BUSINESS: Transcription of audio files into text

QUOTE: "I'm not doing anything innovative. But we've married service with the best of technology."

Rensselaer Polytechnic Institute - Incubator Program
www.rpi.edu/dept/incubator/homepage/

From 8th Street... to Wall Street.



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