

OVERVIEW

NYS Center for Advanced Technology (CAT)

at

Columbia University

Medical Informatics Update

December 10, 2008

Approach

The secret of a good sermon is to have a good beginning and a good ending; and to have the two as close together as possible.

- George Burns

Centers for Advanced Technology (CAT)

- ❑ One of several NYSTAR* economic development programs
- ❑ CAT program supports 15 major current research specialties at 13 NYS institutions
- ❑ Focus on biotechnology, information technologies, nanotechnology, materials, clean technologies

* NYS Office of Science, Technology and Academic Research (Innovation)

CAT's Role

- ❑ Develop new technologies and improve existing ones.
- ❑ Supports university-industry collaboration in
 - research
 - education
 - technology transfer

with a strong focus on helping New York businesses gain a technological edge on their competition.

NYSTAR Mission

Objective:

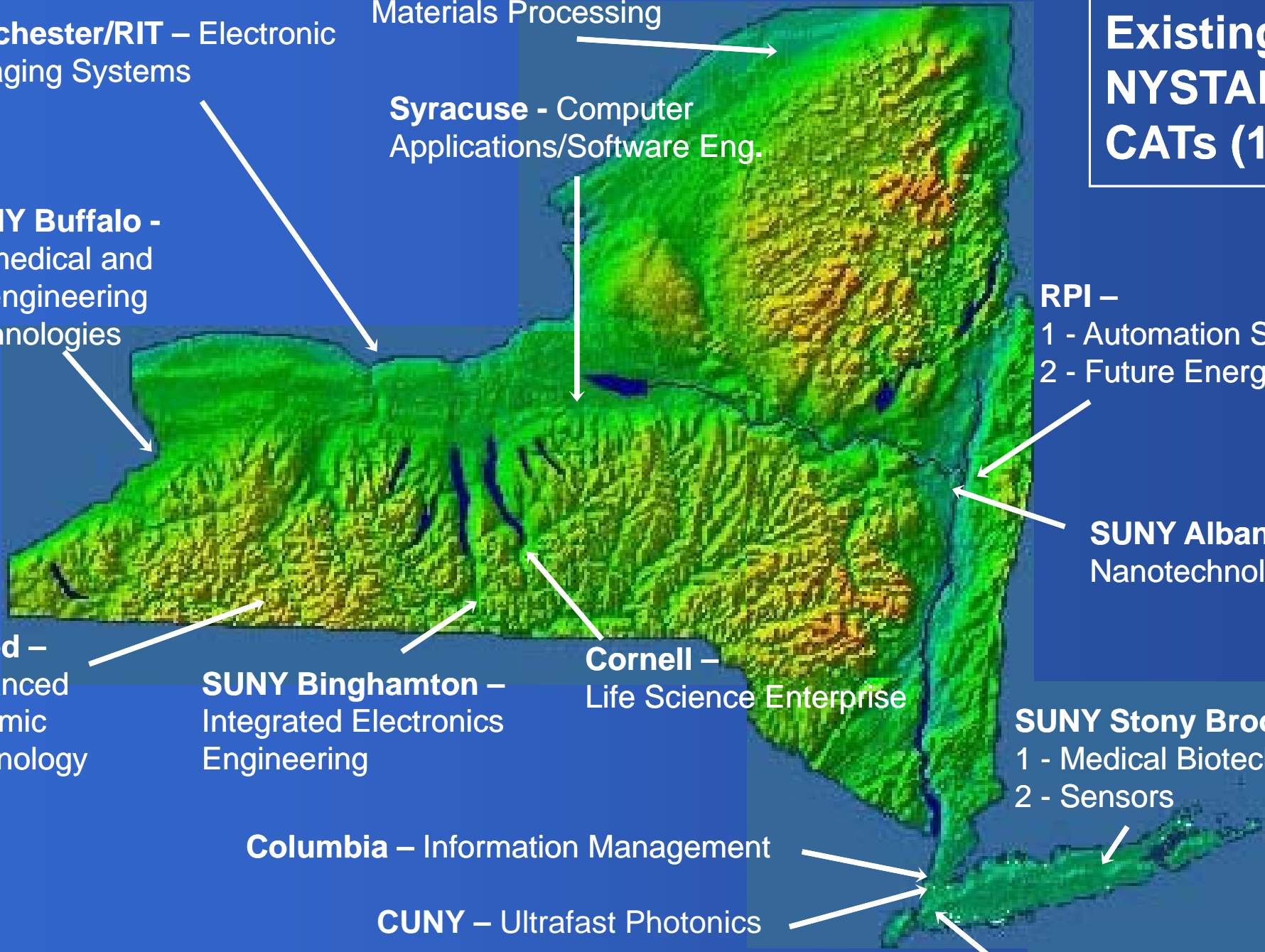
Make New York a national leader in high-technology academic research and economic development

Goals:

Spur economic development using academic research/resources

- Leverage federal research dollars
- Encourage inter-institutional collaboration
- Provide academic, business, and research communities access to these resources

**Existing
NYSTAR
CATs (15)**



Rochester/RIT – Electronic Imaging Systems

Clarkson – Advanced Materials Processing

Syracuse - Computer Applications/Software Eng.

SUNY Buffalo - Biomedical and Bioengineering Technologies

RPI –
1 - Automation Systems
2 - Future Energy Systems

SUNY Albany – Nanotechnology

Alfred – Advanced Ceramic Technology

SUNY Binghamton – Integrated Electronics Engineering

Cornell – Life Science Enterprise

SUNY Stony Brook –
1 - Medical Biotechnology
2 - Sensors

Columbia – Information Management

CUNY – Ultrafast Photonics

Polytechnic - Telecommunications

NYSTAR Programs

- ❑ Centers for Advanced Technology (CAT)
- ❑ Technology Transfer Incentive Pgm. (TTIP)
- ❑ CAT Development
- ❑ Faculty Development
- ❑ Science and Technology Law Center
- ❑ James T. Watson Investigator
- ❑ College Applied Research and Technology
- ❑ Small Business Technology Investment Fund

<http://www.nystar.state.ny.us/>

Our Name

The Columbia CAT is the

*Center for
Advanced Information Management*

CAIM Technologies

- ❑ Biomedical Informatics
- ❑ Computational Biology/Bioinformatics
- ❑ Computer Science
- ❑ Medical Imaging (Biomedical Engineering and Radiology)
- ❑ Others

Education/Workforce Training

- ❑ *Intensive Course in Biomedical Informatics*
May 2005, 2006, (future?)
- ❑ *Advances in Medical Imaging: Techniques, Applications, and Target Organs. The Four Dimensional Future*
April 2007
- ❑ *Informatics Update (with Pfizer)*
July 2007, December 2008

Benefits to Companies

- Access to Columbia researchers
- Link to Columbia infrastructure (tech xfer, B-School, clinical trials office, etc.)
- Special IC rates for CAT projects
- Plug into other organizations, services, CATs, etc.
- Grant/proposal assistance
- Service with a smile

What We Do

- ❑ Identify, promote, and support industry co-sponsored research projects
- ❑ Assist with technology licensing (with STV)
- ❑ Educational/workforce training programs
- ❑ Informatics consulting service
- ❑ Corporate Affiliates Program
- ❑ Outreach (e.g. Technology Forum, seminars)
- ❑ Other activities, as needed

How Well We Do

Matching funds* (from industry): \$2.6M

Economic impact (to industry): \$33.8M

(Metrics from 2007-08 Annual Report)

* Required minimum match on \$1M NYSTAR award is \$1.125M

Economic Impact, 2007-08

□ New jobs created: 2.5	\$.25M
□ Cost savings –	
For profits:	\$20.5M
Non-Profits (NYPH):	\$11.7M
□ Funds received:	<u>\$1.3M</u>
Total	\$33.8M

Who We Worked With

Projects (CAT co-funded, 2007-08) –

- Philips Research NA*
Medical Imaging: Clinical Validation of Cardiac Strain Measures with Real-time 4D Ultrasound
- Aetna Dental
Aetna IntelliHealth e-Health Development and Evaluation
- ConEd
Machine Learning Algorithms and Applications to the Electric Power Grid
- Verizon
Preventing Theft-of-Service in Large-Scale Voice-over-IP Deployments

* Affiliates member

Who We Are

- ❑ George Hripcsak, Director
- ❑ Soumitra Sengupta, Co-Director
- ❑ Henning Schulzrinne, Co-Director
- ❑ Vincent Tomaselli, Deputy Director
- ❑ Paul Goldfarb, New Business and Marketing Manager
- ❑ Albert Lai, Assistant Clinical Director
- ❑ Laura Tejeda, Administrative Assistant

More information...

- ❑ web site: www.cat.columbia.edu
- ❑ call: (212) 305-2944
- ❑ visit *The Penthouse* (PH15-1501)