

Blue Team

# New York E<sup>3</sup> for Computing:

**E**cosystem for

**E**fficiency and

**E**ase of use

# This Morning

- Its not bits and bytes, not just Big Iron, not just Big bandwidth
- Last mile of the network
- Last mile of computing
  
- It's the people
- Communities of practice

# Difficulties

- Barriers to use cyberfacilities
  - access
  - data rights, control, authentication
  - multiple operative policies

# Difficulties

- Issues for generating collaborations
  - IP
  - data ownership
  - software use
  - trust environment

# Tools

- 3 platforms (massively parallel, cluster, distributed) must remain hidden from endusers
- Different platform for different apps. Again disciplinary users need not know

# Tools

- Explore other business models for cyberinfrastructure (big state center; mixed central/distributed model)
- Virtual Resource model

# Tools

- Cell on a Chip model for resource access

# Different Tools for Different Users

- Heroic apps
  - big iron/broad bandwidth
- Next Gen apps
  - how to reach these app scientists

# How to collaborate

- Recognize the returns and incentives
  - state funds to get collaborations (individuals and teams) started
  - get government to use peer review for awards
  - NYSTAR/NYSerNet fellowships to work with cyber centers
  - Recognition for research performed
- University tenure and promotion guidelines
  - senior faculty mentoring junior colleagues for interdisciplinary research
- Academic infrastructures could make this easier – tools, access
- Sustainability – long lead time to get collaborations going

# How to collaborate

- Scientists recognize how to 'carve up' science problems
- Foundations make awards that have multiple co-PIs

# Grand Challenge Problems

- Not a science problem
- **THE** grand challenge is the sustained, cross-disciplinary collaboration that enable cyberdiscovery

# Low Hanging Fruit

- Inventory of resources
  - Map
    - big iron
    - network
    - how to access these resources
      - **RPI/BNL working on policies for use**
  - Knowledge base that describes cyber ecosystem in the state

# Low Hanging Fruit

- NYSTAR-NYSerNet convene panels to review national reports (Cyberinfrastructure, DOE, etc) within the context of NY resources, economy