

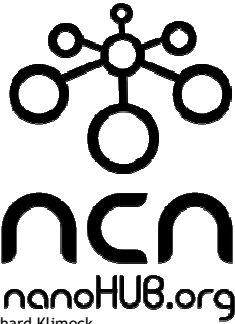
Network for Computational Nanotechnology (NCN)

Purdue, Norfolk State, Northwestern, MIT, Molecular Foundry, UC Berkeley, Univ. of Illinois, UTEP

nanoHUB.org:

Future Cyberinfrastructure

serving over 125,000 users today



Gerhard Klimeck

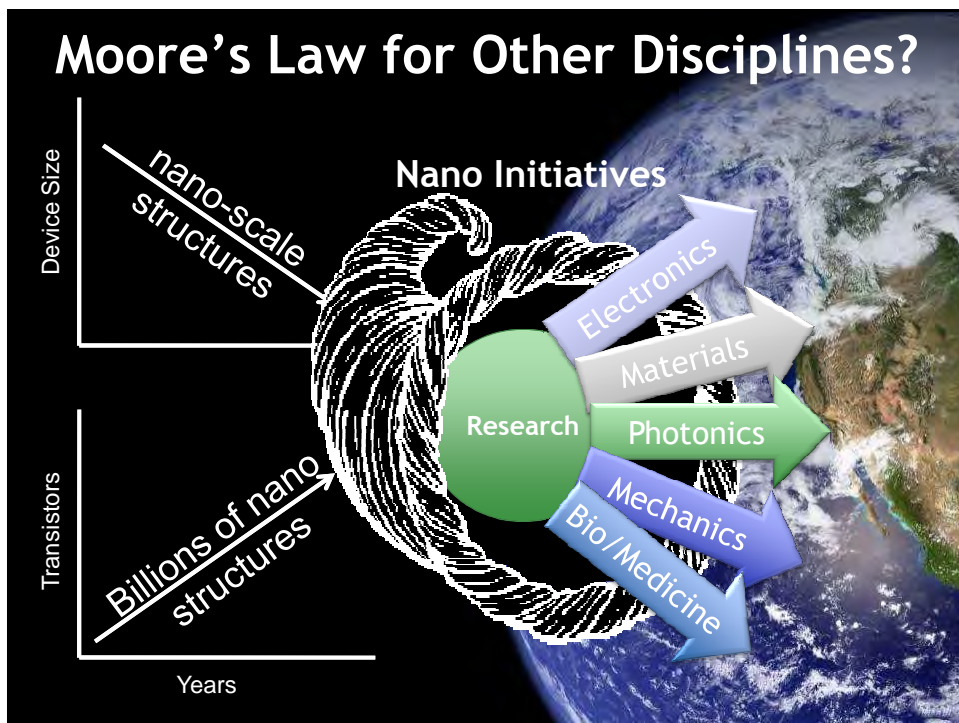
Gerhard Klimeck

Director

Network for Computational Nanotechnology (NCN)

Electrical and Computer Engineering

gekco@purdue.edu

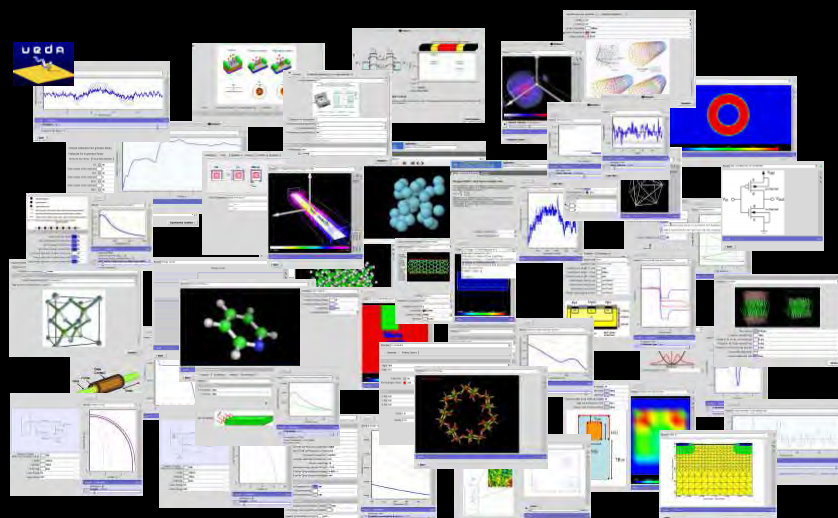


It Happens Here



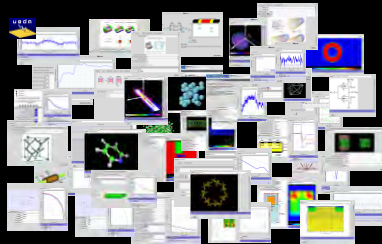
3

Over 170 tools online!

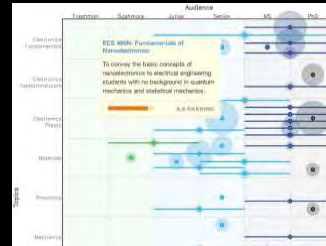


4

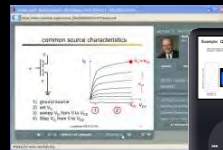
Over 2,100 Resources!



170 tools



43 courses



1,557 seminars and teaching materials

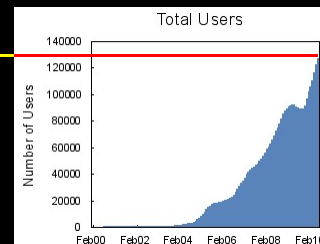


5

World-Wide Community

125,000 users worldwide

As much traffic as www.purdue.edu
 Users at all Top 50 US Engr Schools
 19% of all .edu domains
 116 classes at 76 institutions in 2009
 8,300 users ran 344,000 simulations



172 countries

Demo>>

6

A course on nanophotonics

nanoHUB.org
an ncn project

ONLINE SIMULATION AND MORE FOR NANOTECHNOLOGY

Search []
Login Register

Home My HUB Resources Members Explore About Support Help!

You are here: Members › Vladimir M. Shalaev › Usage

Vladimir M. Shalaev

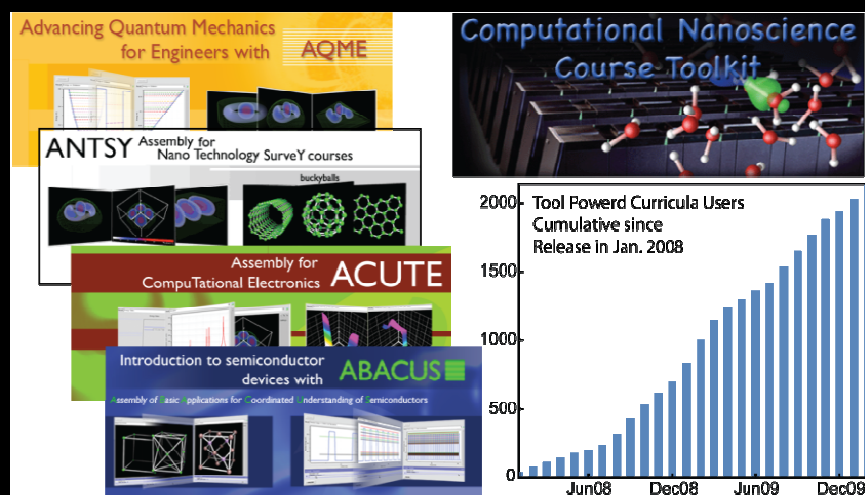
Profile Contributions Usage Favorites

Table 1: Overview

Item	Value
Contributions:	24
Total "and more" Users Served:	20,631
Rank by Contributions:	18 / 731
First Contribution:	04 Oct 2005

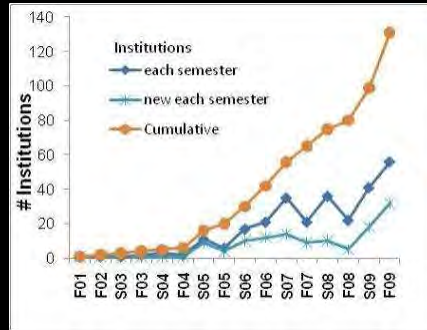
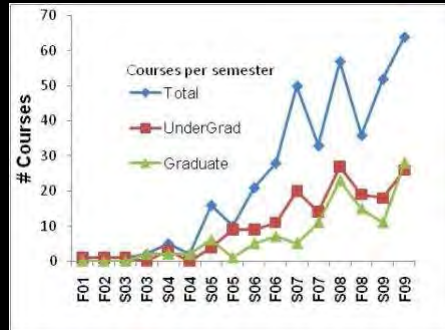
Tool Powered Curricula

"make abstract concepts more concrete"



Use in the classroom

In the year 2009:
116 classes; 76 institutions; 23 countries



nanoHUB on iTunes U



Exclusive - Apple VP
OK'ed

INDIANAPOLIS MUSEUM OF SCIENCE - one of 68 orgs



nanoHUB on iTunes U



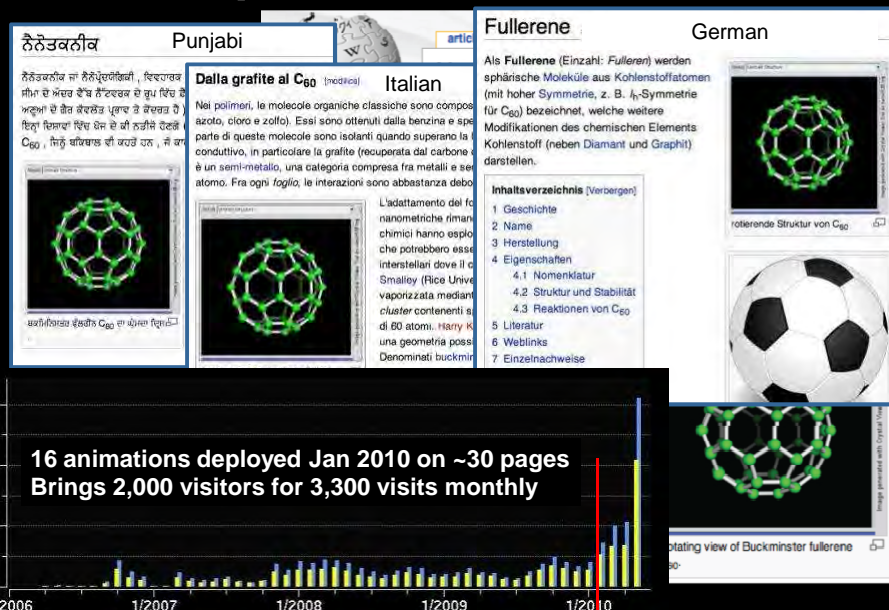
Nov 2009 start

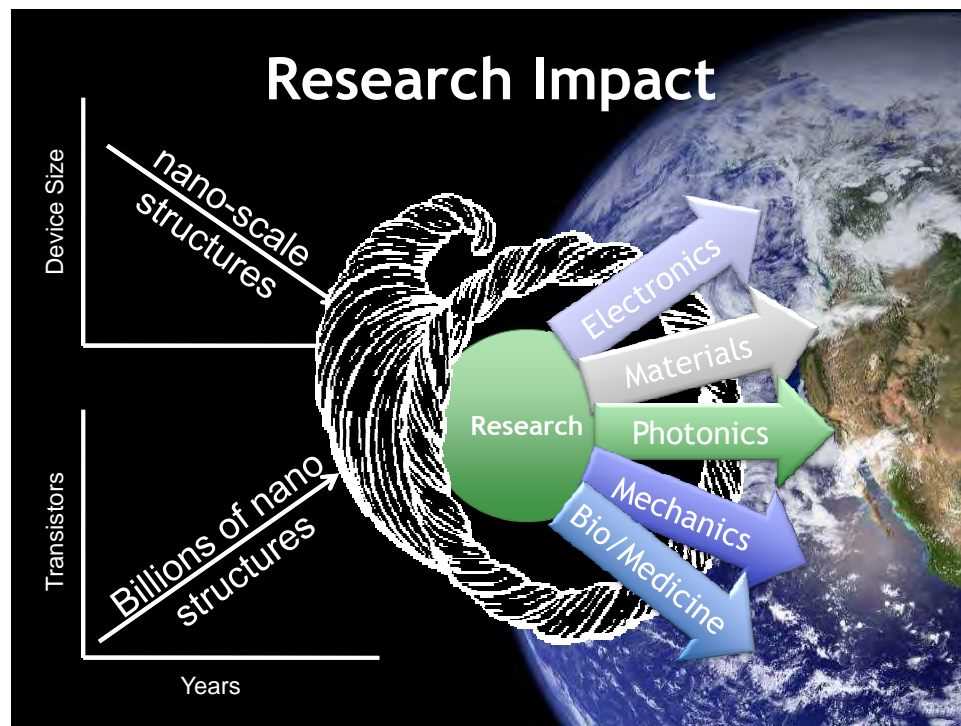
350 content items today

55,000 downloads

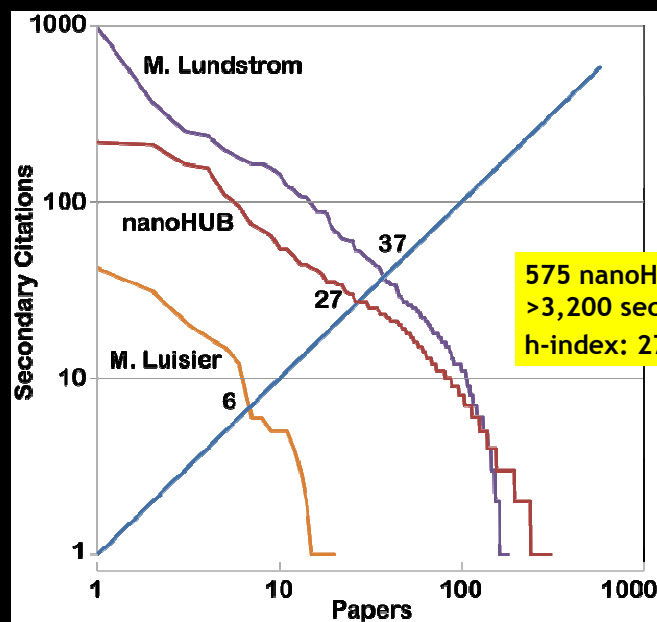
~10,000 downloads/month

Wikipedia Contributions

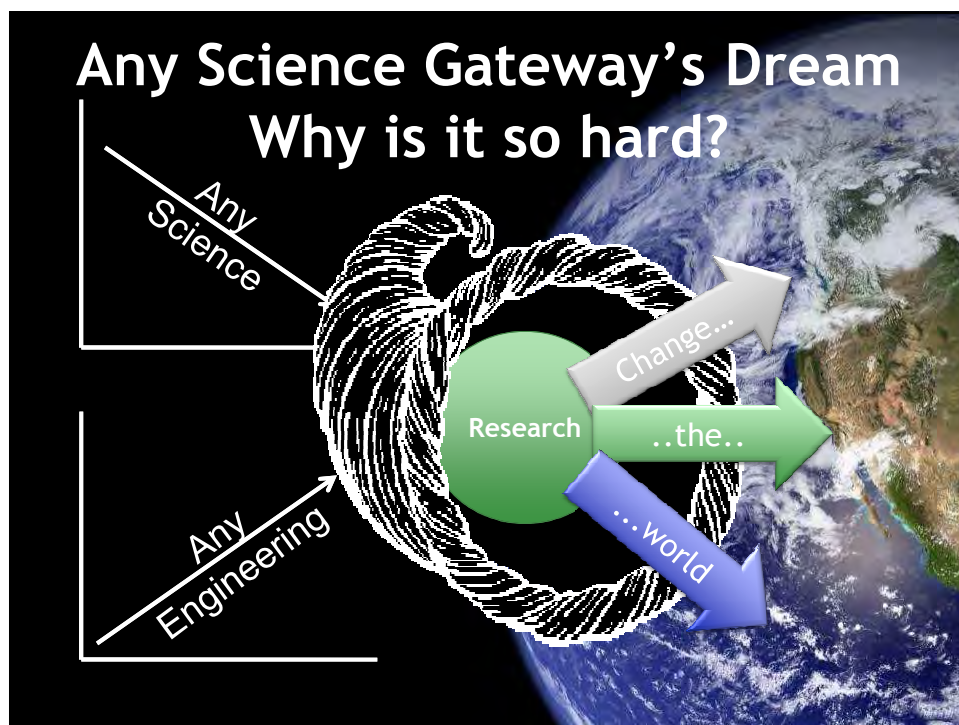
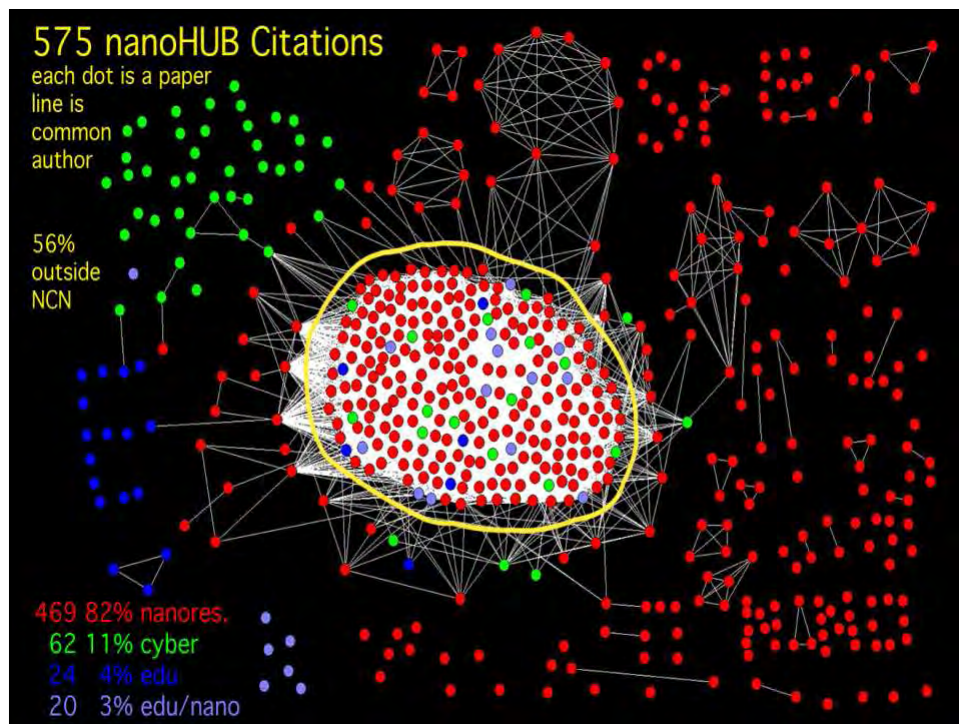


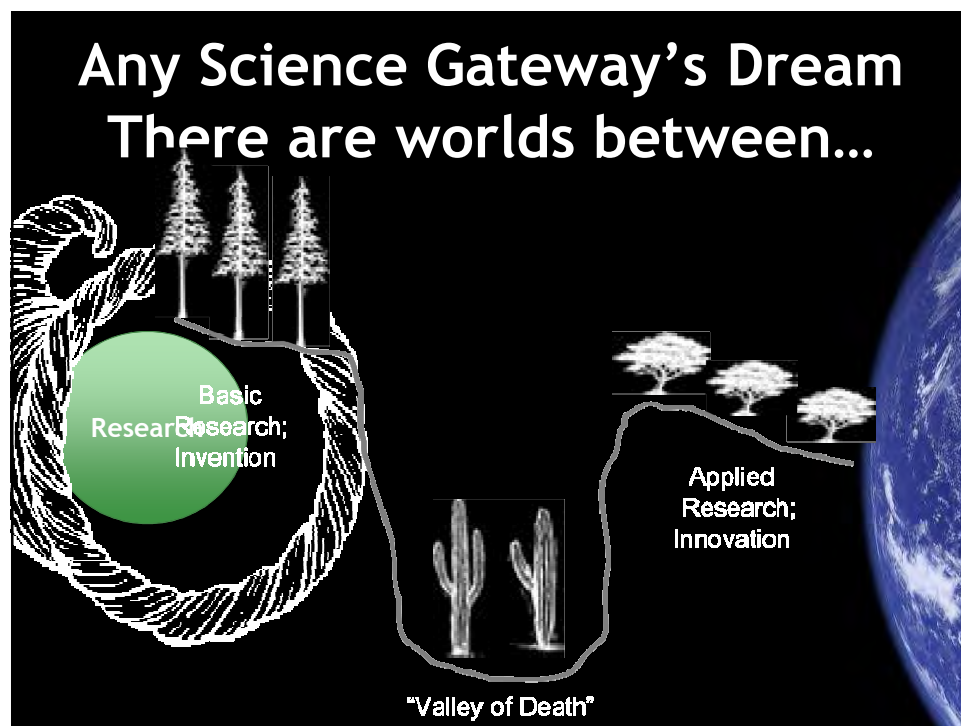


575 nanoHUB Citations Research: Publish or Perish



575 nanoHUB citations
>3,200 secondary citations
h-index: 27





5 Criteria

for Successful
Science Gateways

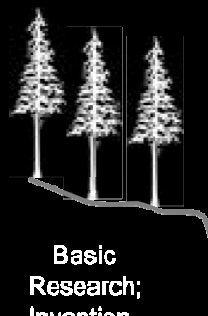
1: Outstanding Science

“Stuff the world wants”



Leveraged Research

\$5.1M



Basic
Research;
Invention

2: Commitment to Dissemination

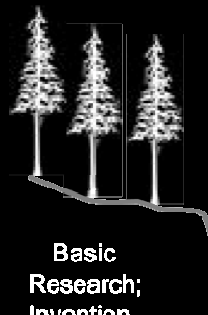
“faculty that want to give it away”

46 faculty



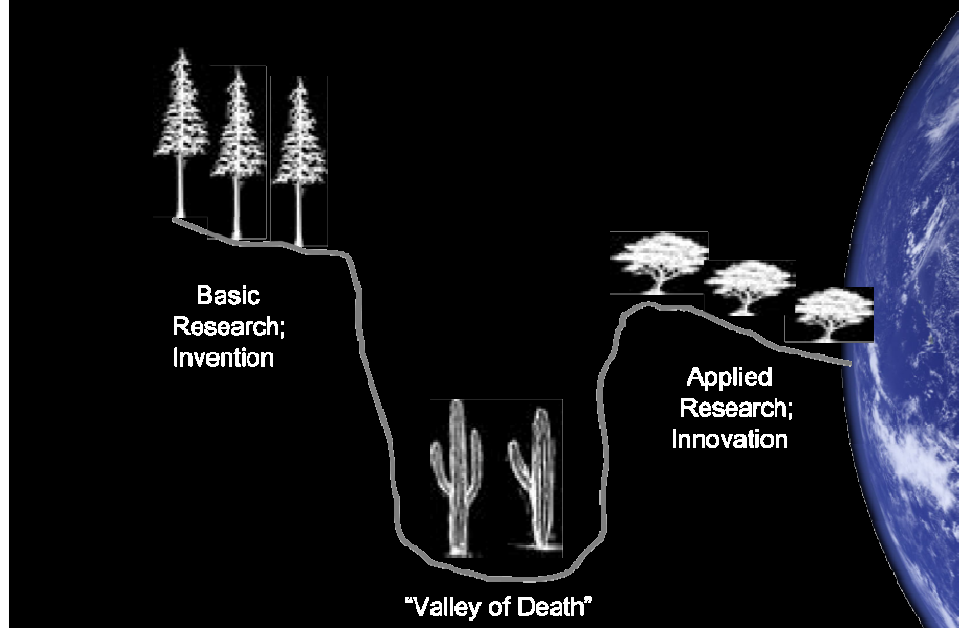
+ 6 site leads

106 grad students

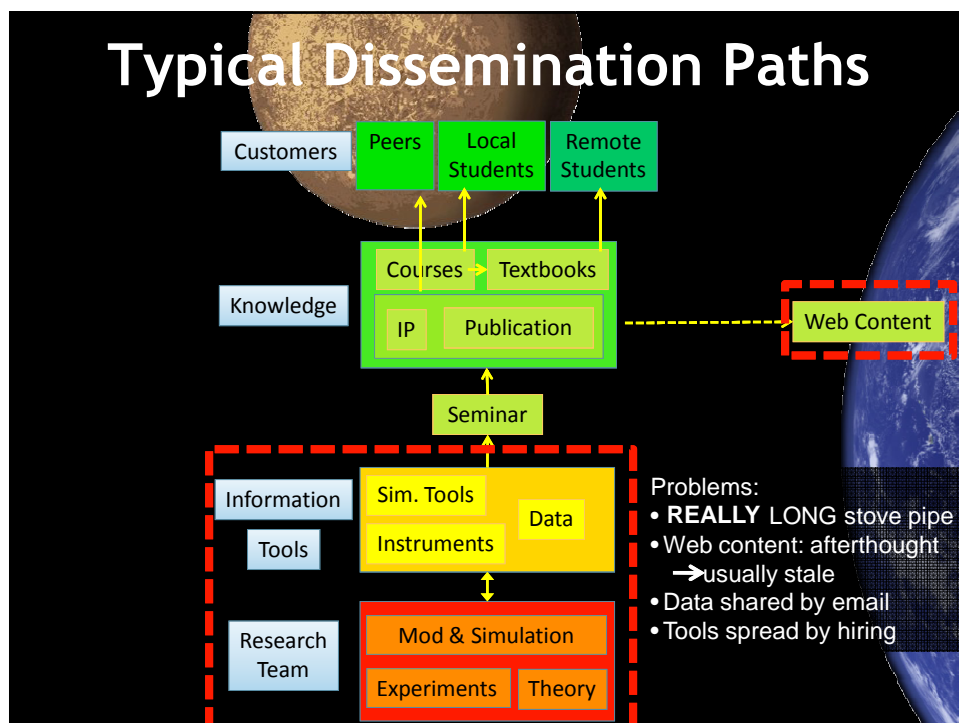


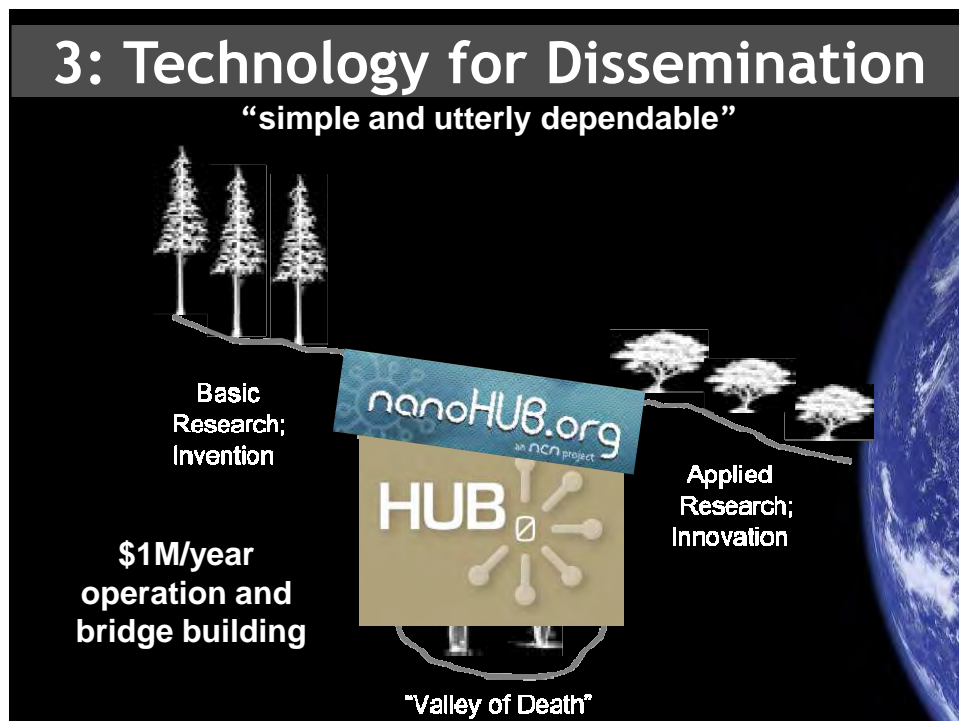
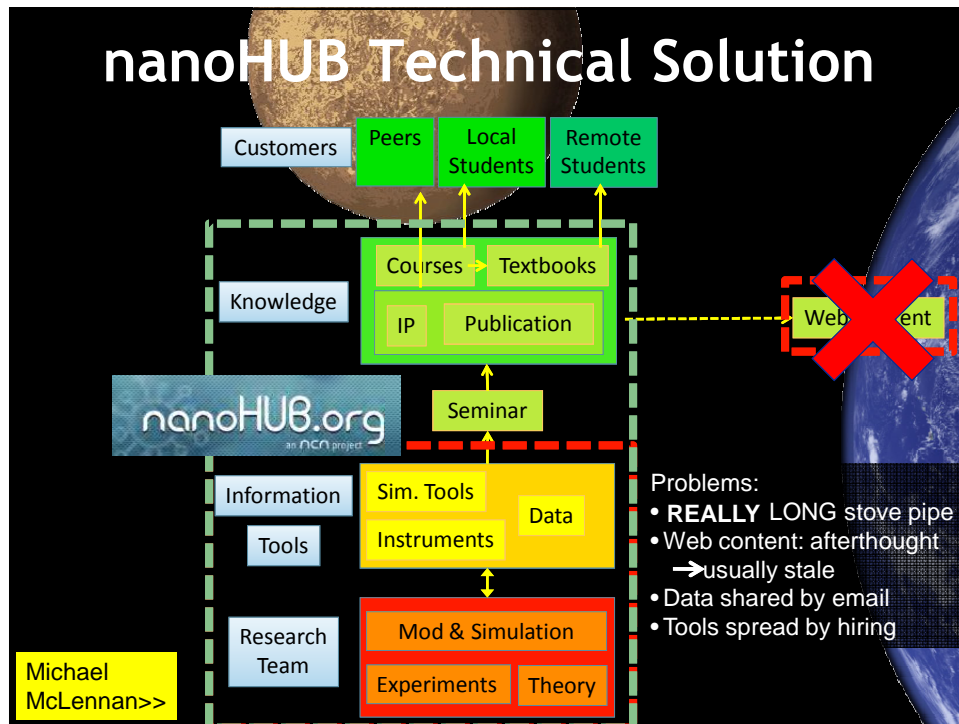
Basic
Research;
Invention

3: Technology for Dissemination

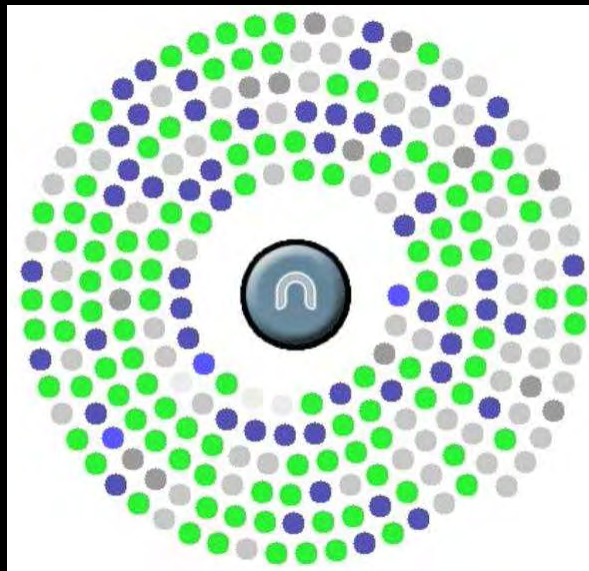



Typical Dissemination Paths






A Year in the life of nanoHUB









Hub Technology Group
Rosen Center for Advanced Computing



Hubs 'R Us




HUBzero Consortium








- Feb 2007: 1 hub
- Feb 2008: 5 hubs
- Feb 2009: 8 hubs
- Feb 2010: 21 hubs

Each hub has its own funding stream

Outside institutions:
EPA, NYSTAR, Rice



Hub Technology Group
 Rosen Center for Advanced Computing

HUBbub 2010 Workshop

April 13-14, 2010
Indianapolis, IN

102 Participants
33 Institutions

Invited Speakers:

- Rajinder Khosla
- Mark Lundstrom
- Jennifer Schopf
- John Smith

Hands-On Tutorials
Panel of Hub Owners
















4: Tech Transfer Processes

“dedicated technical site leads”

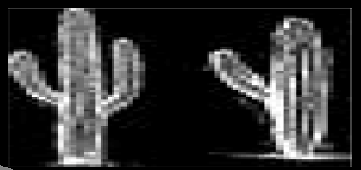



site leads






Content Creation and Support
\$2.2M







“Valley of Death”

5: Open Assessment / Incentives

“gather, understand, disseminate stats”

Basic Research; Invention

Applied Research; Innovation

Access, Use, Impact

Valley of Death

ncn nanoHUB.org Vision in 2002: What will NCN's legacy be?

- Key contributions to nanoscience and nanotechnology
- Pervasively used software
- Innovations in education
- Students and faculty who become leaders in nanotechnology
- Major, international resource, nanoHUB.org
- Cyberinfrastructure: technology and practices

Gerhard Klimeck