Workforce Development at the Frontier of DHS Science, Technology, Engineering and Mathematics

S&T Stakeholders’ Conference West
January, 2008
Quick Review of Our Objective:

• DHS S&T Directorate Goal #3
  – “In conjunction with other public and private institutions, proactively provide leadership, opportunities and resources to maintain and develop the necessary intellectual basis for a national S&T workforce and focused research disciplines that will ensure the safety of our homeland.”
Workforce Development at the Frontier of DHS relevant STEM

• This session will address a DHS sponsored initiative to apply innovative content delivery strategies to the task of developing the future workforce. The session will include an in-depth look at the field of immersive games and simulations in addition to an update on a specific DHS initiative that addresses immersive simulations for the middle school population. Attendees will be provided with an opportunity to bring this initiative back to their communities.
  – Moderator, Mr. Tom Kowalczyk, DHS Office of University Programs
  – Dr. Mike Zyda, Director of USC GamePipe Lab, USC
  – Dr. Isaac Maya, Research Director, CREATE, USC
  – Mr. Daniel Wendel, Teacher Education Program, MIT
  – Mr. Adam Jascoff, NIST, Dept. of Commerce
  – Ms. Cindy Randall, FIRST (For Inspiration and Recognition of Science and Technology)
DHS S&T Workforce Development Strategy

Elementary School | Middle School | High School | Undergraduate | Graduate School | Post Doctoral Programs

Government, Academia and Industry Employment

Time

Excite

Attract

Educate and Assist

Recruit

Retain

Continually Monitor and Assess
DHS Relevant/Unique Core Competencies

Frameworks for Higher Education in Homeland Security

- Risk Management and Analysis
- Systems Integration and Management
- Social, Cultural, Psychological, Political, Historical, and Operational Dynamics of Threat
- Legal, Political, and ethical Issues in Threat Response
- Decision-Making Tools and Process for the Management and Resolution of Complex Problems

Workplace Competencies - Productively Use

- Resources
- Interpersonal Skills
- Information
- Systems
- Technology

The Foundation

- Basic Skills
- Thinking Skills
- Personal Qualities

SCANS
STEM Workforce Development View from 60,000 Feet

• Rising Above the Gathering Storm included a model Science, Technology, Engineering and Mathematics (STEM) Workforce Development Strategy.
• The National Academy Convocation on the report (September 25, 2006) examined actions at the State/Regional/Local Level.
• Social Cognitive Career Theory says” ‘start with math self-efficacy.’