NTER: AN INFRASTRUCTURE FOR NEXT-GENERATION LEARNING

Open-source learning technology that improves capabilities and greatly reduces costs
What is NTER?

• An open-source platform for online learning
  – Learning Management System(s) (LMS)
  – Built-in authoring capability
  – Content repositories and formats to encourage re-use

• The building blocks for an ecosystem of online learning
  – A flexible architecture to support multiple systems (instances)
  – Cooperating systems can share content
  – Users can sign on, search, and access content across systems—all from their home system
What’s Special about NTER?

- Open source software and open standards
  - Low cost—no seat license
  - No vendor lock

- 3D interactive simulations in browser with performance-based assessment
  - No download required
  - Need only access to the web for rich virtual environment-based training and education

- Architecture and key features to support standalone and multiple cooperating systems
  - Single sign-on
  - Search (including deep content search) across systems
  - Access content across systems
  - The foundations for an ecosystem of online learning
What Else is Special about NTER?

• Accessibility and multi-lingual support built in from the start
  – Accessibility roadmap developed for 508 compliance and Access for All
  – ccPlayer and other capabilities already included in current release
  – Multi-lingual capability also included
• Support for multiple LMSs
  – Within/across systems
  – Adaptable to different systems
• Rich content authoring tools for the average author
  – 3D content creation tools (Kuda)
  – Text, video, audio, and PowerPoint import
  – Content reuse and legacy content
• System can be internally hosted or cloud-based
Where Did We Come From?
Where Are We Now? Where Are We Going?

• Sponsored by DOE as National Weatherization Training Program (NWTP)
  – Initial contract to SRI started in Dec 2009
  – NWTP is currently in use with ~1000 active users at http://trainingportal.ee.doe.gov
• NTER expands on NWTP to achieve DOE vision of a next generation platform and ecosystem
  – Current NTER operational system: http://www.nterlearning.org
  – NTER Hub, an automated install procedure for the Amazon cloud: https://hub.nterlearning.org
  – Open-source NTER project: http://code.google.com/p/nter/

• Kuda 3D authoring/animation tool created as part of the NTER program
  – Open-source Kuda project: http://code.google.com/p/kuda/
• Planned efforts:
  – eCommerce in progress
  – Support for mobile applications—field training and reference
  – Development of a standards community to maintain the platform and code base long term
  – Additional interfaces and features
NTER Configuration Options

Single Instance

Portal to multiple course repositories and LMSs

Users

Central Organization

Courses (LMS) ILIAS

Affiliated Organization 1

Courses (LMS) moodle

Affiliated Organization 2

Confederation of NTER Systems
(Users seamlessly take courses from cooperating systems)

Registry

Users

Courses

Organization

Users

www.sri.com

© 2012 SRI International

www.nterlearning.org
• Build 3D simulations without programming
• Runs in browser; no heavy downloads
Trade this...

...for THIS:

Meaningful, performance-based assessment

Leaky, recessed light fixtures can cause:
- Electrical problems
- Ice dams
- Furnace malfunction
- All of the above
- Poor light quality

Submit Answers
By reviewing this lesson, participants will:

- Know the proper location of thermal and air barriers
- Recognize the driving forces of air leakage
- Understand the connection between air leakage, energy waste, and moisture problems
- Understand how air ducts affect pressure balance within the home
- Understand the principle behind the blower door as a tool for measuring air leakage
Who is using NTER?

Government

• Office of Energy Efficiency and Renewable Energy (EERE) programs use the platform for training in these programs:
  – Weatherization
  – Solar Program
  – Clean Cities University
  – Building Technologies Program
  – Advanced Manufacturing Program (formerly the Industrial Technologies Program)
• Lawrence Berkeley National Lab
• Department of Energy Health Safety and Security
• Department of Labor’s Virtual Career Network
• Department of Energy’s Office of Human Capital (NTER under evaluation)
• Numerous additional organizations considering use of NTER
Who is using NTER?

Industry and trade associations and other organizations

• Illinois Green Economy Network (IGEN)
• National Institute of Building Sciences (NIBS)
• The National Association of Manufacturer’s (NAM) Manufacturing Institute
• The Frost and Mechanics Union
• National Energy Education Development (NEED)
• Applied Science Foundation/Homeland Security (Morrelly Center)
• The Center for Energy Workforce Development (CEWD)
• Duke University Medical School
NTER Accomplishments

White House Announcements

• Announced at the White House by Deputy Secretary Daniel B. Poneman April 27, 2011
• Included in Presidential Announcement on Advanced Manufacturing Initiative June 24, 2011
• Announced by VP Biden and Sec’y Solis as included in the Round Two TAA Grants February 24, 2012
• Included in Presidential Announcement to make Broadband Construction Faster and Cheaper June 14, 2012

Other NTER Recognition

• Included in the DOE Strategic Plan May 2011
• Endorsed by Manufacturing Institute to train 500,000 manufacturing workers by 2016 June 24, 2011

NTER Awards

• The Leadership Award for Service to the Citizen presented to Michelle Fox by The Association for Federal Information Resources Management (AFFIRM) June 9, 2011
• The Innovation Gold Medal in Division I was awarded to Michelle Fox at the Chief Learning Officer Symposium, Fall 2011 October 14, 2011
• Institute Honor Award presented to Michelle Fox by the National Institute of Building Sciences (NIBS) for “an exceptional contribution to the nation and the building community” December 7, 2011
• Secretarial Achievement Award presented to Michelle Fox and Alex Cohen by Secretary Chu for improving professional development of federal workforce through NTER, which could save an estimated $8 million annually March 23, 2012
For More Information

John Shockley
Senior Program Manager
SRI International
650-859-4165
john.shockley@sri.com