



# ADL State of the Union

*Where We Are and Where We Are Going*

**Paul Jesukiewicz**

*Director*

ADL Initiative

08/18/2009

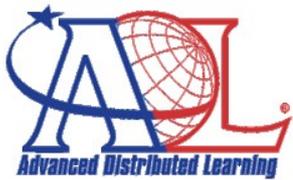


# Report Documentation Page

Form Approved  
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE <b>18 AUG 2009</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2009 to 00-00-2009</b>	
4. TITLE AND SUBTITLE <b>ADL State of the Union. Where We Are and Where We Are Going</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Advanced Decision Learning (ADL),1901 N. Beaugard Street Suite 600,Alexandria,VA,22311</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES <b>ImplementationFest2009, 18-20 Aug 2009</b>					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>56</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

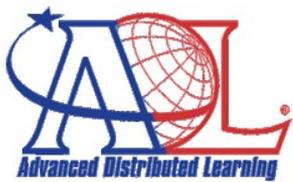


# Overview

---

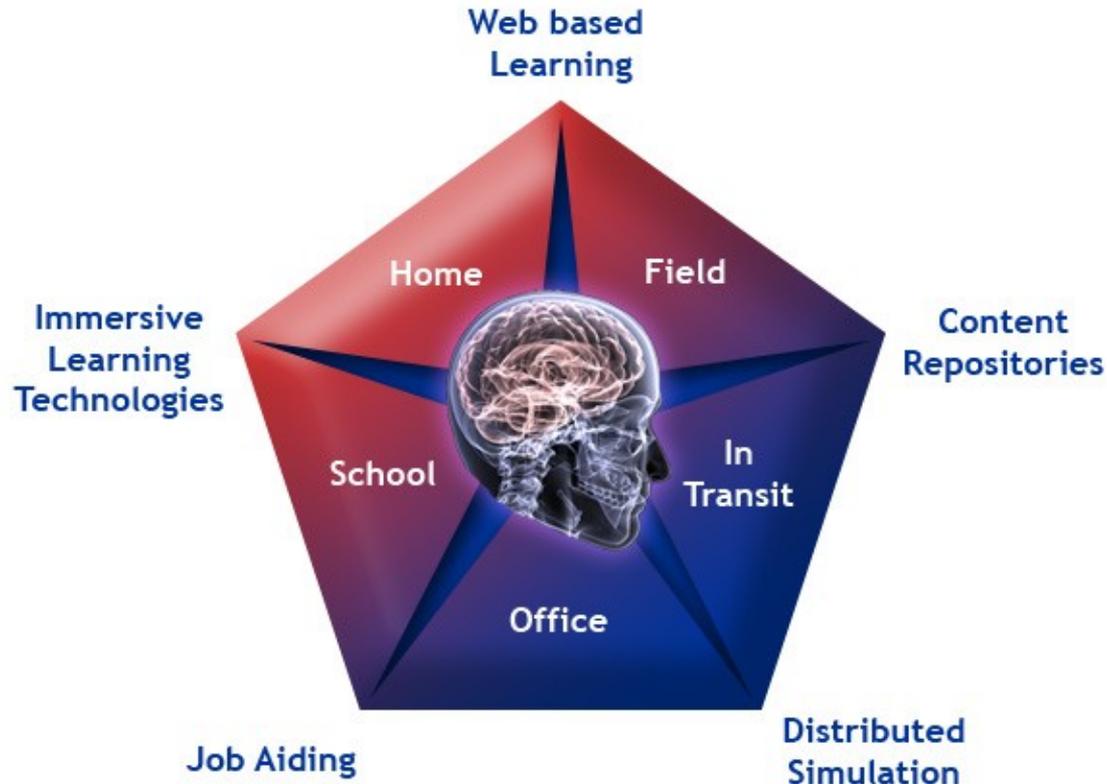
- Vision
- New Direction
- Structure
- Co-Labs and Partnership Labs
- Partnerships
- Technical Direction
- Research and Evaluation
- Other Activities
- Job Performance Technology Center
- Resources





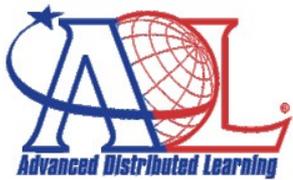
# ADL Vision

Provide access to the highest quality education and training, tailored to individual needs, delivered cost effectively, anywhere and anytime.



# ADL Activities





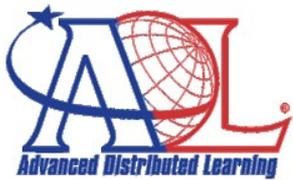
# New Direction

---

## ■ Priorities

- New Strategic Plan (Sep 09)
- R&D (BAA)
- Technical
  - Harmonize with global community
  - Extend and Innovate
- Evaluation
  - DoD ROI (efficiency and effectiveness) data gathering and reporting
- New Partnerships
- Restructuring
  - New PM structure
  - Realignment of Co-Labs & Partnership Labs





# New Direction – R&D

---

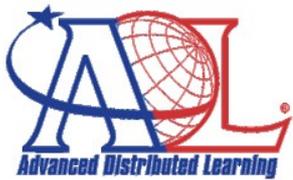
## **Broad Agency Announcement (BAA)**

**W91CRB-08-R-0073**

### **Amendment 2, Topic 7**

- Partner with RDECOM-STTC to sponsor research and development
- Leverage projects and initiatives for dual use in both organizations





# New Direction – Standards & Specs

---

- Retain stewardship of SCORM
- Re-engage with standards and specifications bodies including
  - AICC
  - IEEE
  - IMS
  - LETSI
  - Others
- Support organizations that profile ADL work
  - Schools Interoperability Framework Association (SIFA)
  - Medbiquitous

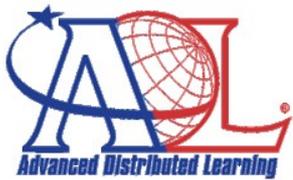


# New Direction – Harmonization

---

- Independent development of point-solutions has caused fragmentation of e-learning technologies
- Contributing Factors
  - Community specific needs
  - Legacy content and systems
  - Advances in technologies (Web 2.0, mobile, etc...)
- ADL will
  - Engage stakeholders to initiate a needs analysis and scoping effort
  - Lead a harmonization effort and facilitate broad community engagement

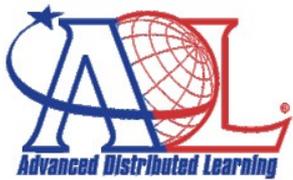




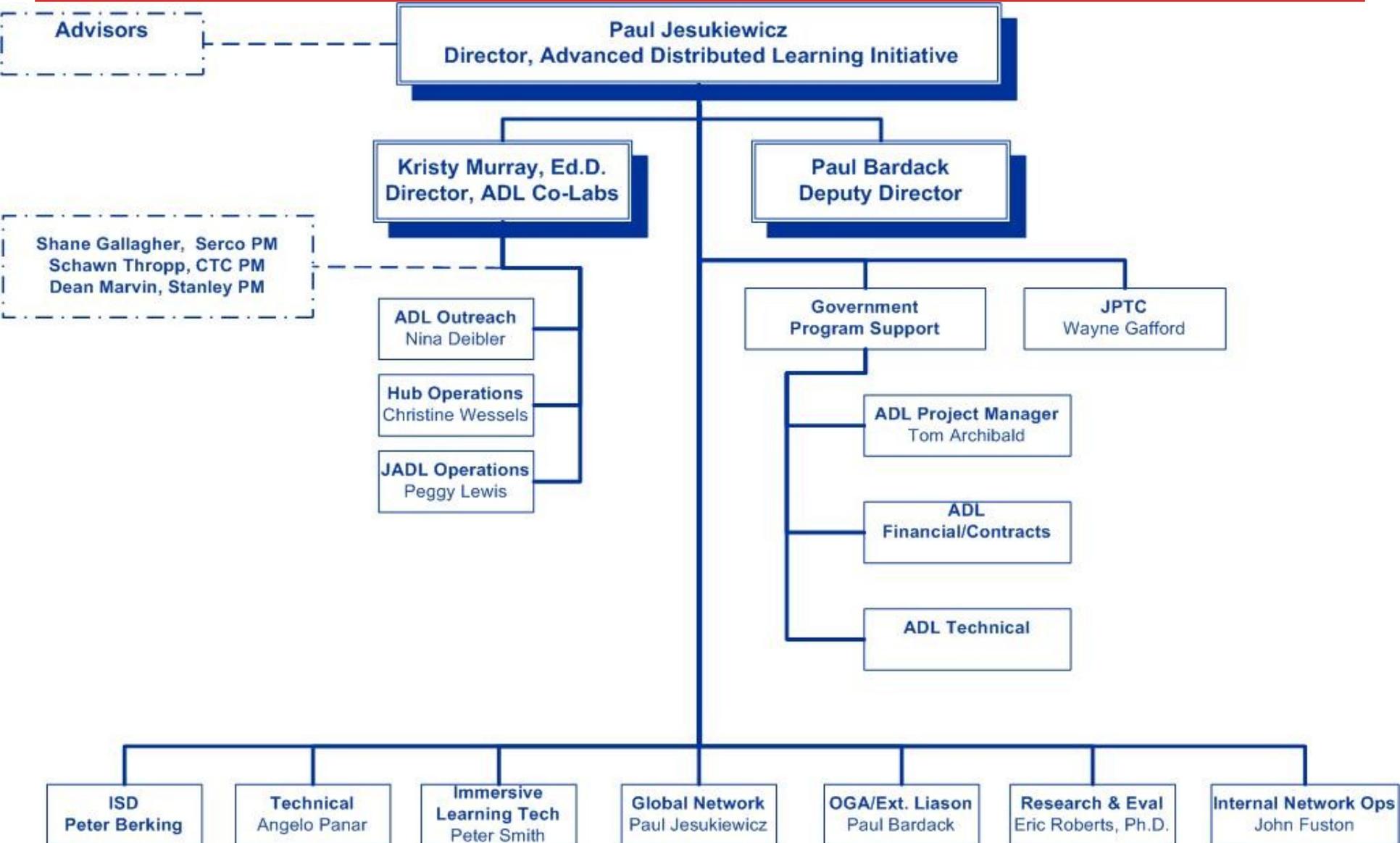
# New Direction – Generalized API

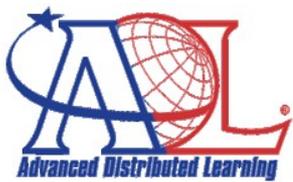
---

- The current SCORM model has constrained interoperable innovation
  - LMS-centric delivery and tracking of SCOs
  - A JavaScript enabled host
  - No flexibility for community specific extensions
- ADL will initiate efforts to generalize SCORM API
  - Standards based
  - Broadly support a diverse set of content, delivery, and tracking technologies
  - Phased approach – ultimately leading to a general model



# ADL Internal Structure





# Current ADL Laboratories

Canada  
ADL Partnership Lab

United Kingdom  
ADL Partnership Lab

Norway  
ADL Partnership Lab

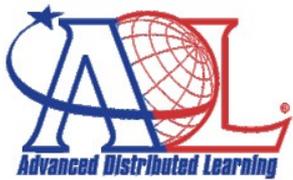
German Workforce  
ADL Partnership Lab  
Pending

Romania  
ADL Partnership Lab

Korea  
ADL Partnership Lab

Latin American and Caribbean Regions  
ADL Partnership Lab

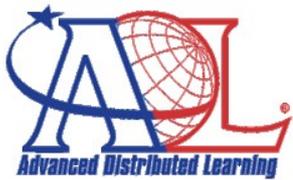
Australia  
ADL Partnership Lab



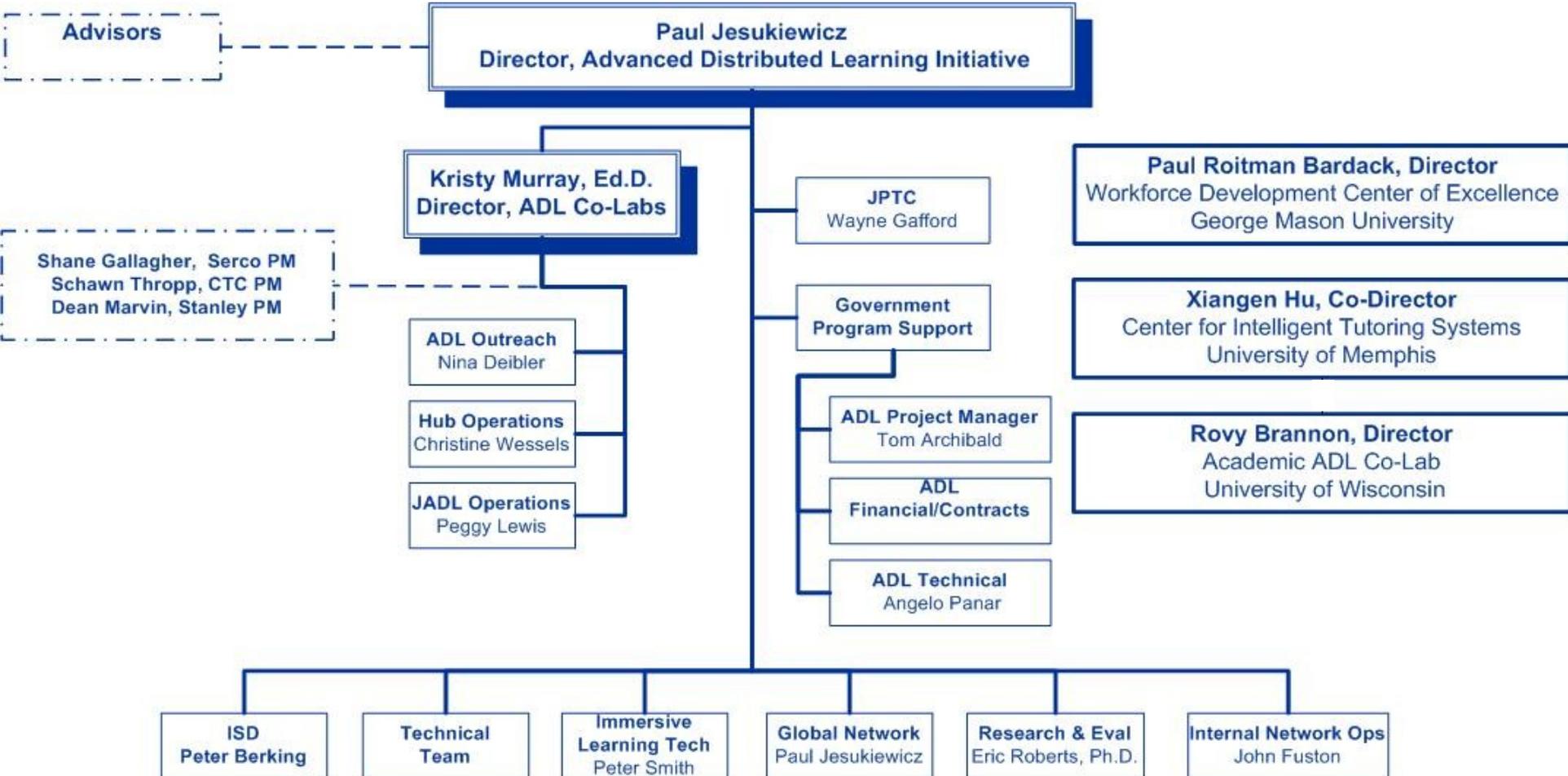
# Restructuring

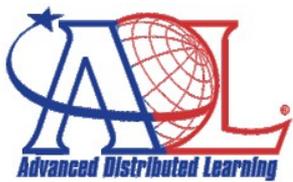
---

- ADL Hub Co-Lab and Joint ADL Co-Lab are now managed and integrated as one entity
- Migrating Workforce Development from Memphis to GMU
- Changing Workforce Co-Lab In Memphis to Center for Intelligent Tutoring Systems (ITS) Research and Development
- Partnership Labs currently being evaluated
  - Current UK Lab may realign with UK MOD



# Proposed ADL Internal Structure





# Proposed ADL Labs & Centers

Canada  
ADL Partnership Lab

United Kingdom  
ADL Partnership Lab

Norway  
ADL Partnership Lab

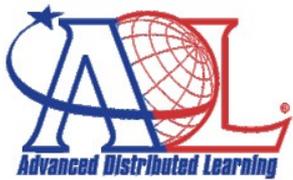
German Workforce  
ADL Partnership Lab  
Pending

Romania  
ADL Partnership Lab

Korea  
ADL Partnership Lab

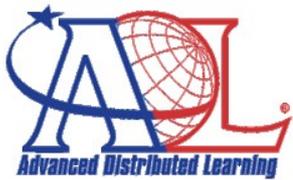
Latin America and Caribbean Regions  
ADL Partnership Lab

Australia  
ADL Partnership Lab



# Expanding Existing Partnerships

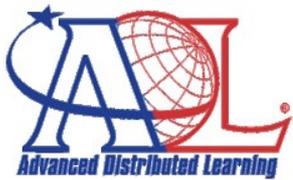
- Defense Acquisition University (DAU)
  - Will be co-locating the DAU Teaching and Learning Lab at Joint ADL Co-Lab
  - Research on game and virtual worlds applications to support training
- Office of Science & Technology Policy (OSTP) – Executive Office of the President
  - Ed Tech Working Group
    - DoD designated as leader in learning technology research
    - Interest in CORDRA/ADL-R as framework for entire government
    - Interest in DARPA's Educational Dominance program
    - DoD (ADL and DARPA) advising and participating in ongoing working group meetings



# Expanding Existing Partnerships

---

- **U.S. JFCOM**
  - Key user of ADL technologies (SCORM, ADL-R, ITS, Gaming)
  - Coded JKO LCMS to provide updates to ADL-R (dependent upon ADL-R deployment to NIPRNET)
  - Development of web-based courseware production capability (ROCCE) integrated with the JKO LMS
  - Currently in use by the COCOMs
  - Supporting M-FASR initiative
- **Office of Naval Research (ONR)**
  - The Multimodal Enabled Advanced Distributed Learning (ME ADL) Project
  - Advanced Distance Learning S&T workshop
  - Leveraging S&T resources



# New Partnerships

---

- **George Mason University (GMU)**
  - Proposed new Workforce Development Center of Excellence (Sep 09)
  - Will promote the use of ADL technologies across America's workforce
- **Naval Postgraduate School (NPS)**
  - Collaboration with MOVES Institute
  - Focus on R&D, prototyping, evaluation
    - Immersive technologies, simulation, gaming, virtual worlds
    - Mobile
    - S1000D
    - ROI studies





# Technical Direction

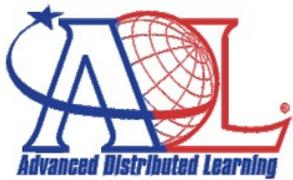
*SCORM and the ADL Registry*



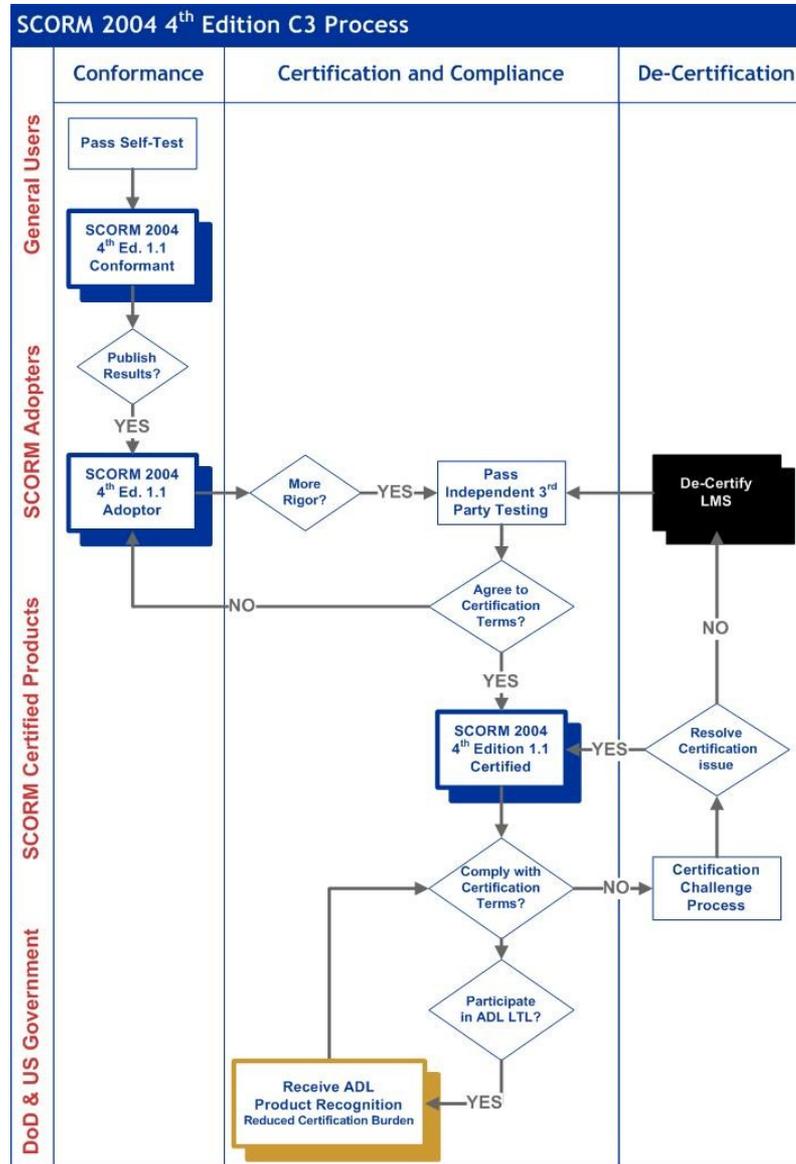
# SCORM 2004 4<sup>th</sup> Edition

- Released Version 1.1 on August 14, 2009
  - Incorporates 2 ½ years of community feedback
  - Increases interoperability
  - Provides new features
- Supporting products updated and released
  - SCORM Testing Requirements
  - Test Suite
  - Sample Run-Time Environment (SRTE)
  - ADL RELOAD Editor





# New Certification Process Workflow





Check-out the break-out session:  
**SCORM 2004 4<sup>TH</sup> EDITION**



## ■ New Features

### ■ Multiple typed locations

- Allows contributors to provide one or more ways of experiencing the object

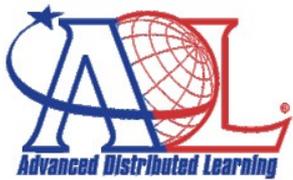
### ■ Search receipts

- Allows searchers to prove that a search was executed

### ■ Registry transaction file (REG-T) schema changes

- Minimal changes were made to support the new features





# ADL Registry Contract Award

---

- New Contract Award (Aug 6<sup>th</sup>)
- Two-phased Effort
  1. Technology and Adoption Assessment – Current Policy, Architecture, & Usage (ICF lead)
  2. Finding a new .mil home, operationally testing candidates such as JFCOM, DISA, DMDC, Services, etc. against ADL-R requirements (BAH Lead)



Check-out the break-out session:  
**THE NEW ADL REGISTRY**



# Technical Direction

***M-FASR***



# M-FASR Participants

- Purpose
  - To develop an infrastructure to allow multiple nations to search, discover, view, and share technical and instructional content
- Current Participants



- Metadata from participating registries federates to the Registry of Registries (RoR)
- The RoR serves as an metadata aggregator, enabling effective single-point search
- In contrast, distributed search would require the query to be submitted to multiple registries
  - Incurring potential network latency and availability
  - Requiring results to be filtered and post-processed
  - Losing relevant results due to semantic differences in metadata



Check-out the break-out session:

# ADL PARTNERSHIP LABS



# Technical Direction

*Immersive Learning Technologies*



- Game-based Training (Serious Games)
- Virtual Worlds
- Mobile Devices
- Web 2.0



# Potential of Immersive Training

---

- Current beliefs
  - Better than conventional CBT
  - Faster than classroom
  - Cheaper than simulation
- Issues
  - Currently not enough research
  - No standards/metrics for doing research
  - No agreed upon definitions

- Virtual World Standards Working Group Meetings
  - A working group comprised of experts in virtual worlds explore coming standards and the potential role of ADL
- Immersive Learning Pod-Cast Series
  - A coming series of pod casts where members of the ILT Team sit down with leaders in the ILT space



# Current ILT Virtual World Initiatives

- Virtual World Test Bed
  - The test bed will be comprised of over a dozen functioning virtual worlds allowing us to test and compare affordances
- Team Orlando SecondLife Island
  - Part of Linden Labs MiLands Initiative, the ADL will be developing demonstrations and tests of ADL technologies



# Current ILT Game Initiatives

- Games Test Bed
  - The test bed contains many of the games and supporting technologies used by the DoD today
- Mini-Game Development
  - A group of small games being developed with DAU covering many topics in their current curriculum

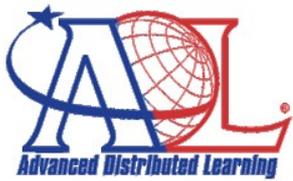




# **Research and Evaluation**



- Programmatic Impact
  - ADL's Evaluation Team has been re-named and is being re-oriented toward assessments of how ADL technologies positively affect member organizations.
- Time-to-Train = ?
  - For example a “time-to-train” study, using Navy statistics, found that ADL technology-based instruction reduced seat time by as much as 47% -- while holding achievement constant.
  - We now choose to try to push the analysis to identify what mission tasks the Navy was able to achieve with that saved time.



# On-going Projects

---

- Defense Ammunition Center (DAC)
- Navy ILE
- Battle Command Knowledge System (BCKS)
- Defense Acquisition University (DAU)



Check-out the break-out session:

# **RESEARCH ON SOCIAL NETWORKS IN LMS**



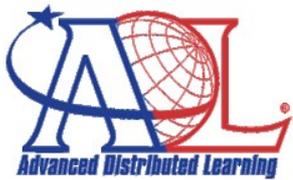
Check-out the break-out session:  
**IMPLEMENTING A TRAINING INTERVENTION  
TO INCREASE LEARNING AND  
REDUCE ATTRITION**





## **Other ADL Activities**

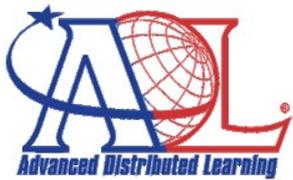




# NATO Training Group (NTG)

- NATO Training Group – Working Group on Individual Training & Educational Developments (NTG-IT&ED)
- Chairman – Joe Camacho (JFCOM)
- U.S. Delegate – Paul Jesukiewicz (OSD P&R)
- ADL Subgroup – LtCdr Geir Isaksen, (ADL SG CM)
  - Shared research, shared content
  - Joint projects (MFASR)
  - Bilateral agreements
  - Partnership for Peace (PfP) consortium shared use of open source LMS (ILIAS) and authoring tools

- ADL developed course for NATO Working Group - Training and Education for Peace Support Operations (TEPSO)
  - *Public Information Operations (PIO) Course*
  - ~1 hour seat time
- Used
  - New SCORM Editor in ILIAS to author
  - SCORM 2004 sequencing to deliver different content for three user groups
- Awaiting final SME review and approval



# Virtual Cultural Awareness Trainer

---

- Investigate instructional strategies using Virtual Worlds to augment/enhance the existing VCAT POI
  - Synchronous/Asynchronous learning opportunities
  - Guided Practice / Pre-deployment
- Integrate Assessment middleware into a Virtual World
  - Collect user performance information from multiple individuals simultaneously and determine proficiency for each user based on their role
  - Collect Assessment data from multiple, disparate systems (Nexus and SGST)
- Identify requirements for delivering this capability via JKO

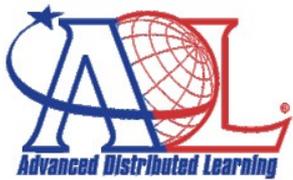


Check-out the break-out session:  
**RESEARCH ON CURRENT CAPABILITIES,  
ISSUES, AND TRENDS IN LMSs AND  
AUTHORING TOOLS**



**Job Performance  
Technology Center (JPTC)**

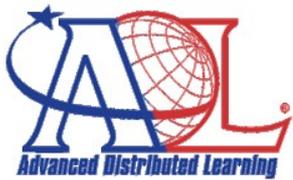




# JPTC Vision

---

- Support job performance through standards-based information technology
- Link learning content, in support of job performance, to authoritative sources
- Allow requirements *and* performance gaps to drive learning objectives
- Ensure learning content is accurate and available for job performance



# Problems JPTC is Solving

---

- Absence of
  - Life cycle-based content management practices for ADL learning content
  - Timely change notifications for ADL learning content
  - Links in ADL learning content to authoritative sources

A green bridge-like graphic with a central arch. Below the arch, the text 'THE BRIDGE PROJECT' is centered. To the left and right of the arch, the words 'S1000D' and 'SCORM' are written in a light, italicized font.

*S1000D* THE BRIDGE PROJECT *SCORM*

- Identifying learning/training performance objectives at the product design stage
- Integrating SCORM learning content tools into common source databases
- Designing technical learning content for better reuse in technical publications
- Developing “change notification” services to ensure training is notified when products are redesigned

# Next Questions for JPTC

---

- How are learning content development, performance support, and retraining improved by the use of
  - Competency models?
  - Mobile devices?
  - Open source software?
  - Registries?

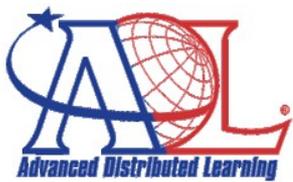


# ADL Resources



- Vendor-neutral Evaluation Environment
  - Hosted at ADL Co-Lab Hub in Alexandria, VA – Virtually at JADL
  - Expert support to help resolve interoperability concerns
  - Unbiased facilitation for dispute resolution
- Will host a variety of LMS, LCMS, and authoring tools
  - Support test and evaluation of content across platforms  
Showcase exemplar content and tools
  - Enable rapid troubleshooting to quickly identify problem areas

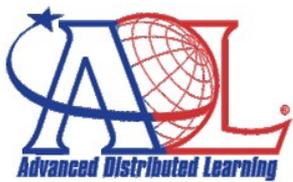




# Games & Virtual World Lab

---

- Research environment hosted at the Joint ADL Co-Lab in Orlando, FL
  - Evaluate interoperability of immersive technologies with learning systems
  - Perform research to determine the instructional potential of immersive technology
  - Capture pertinent metrics related to assessment and tracking of student performance in immersive environments

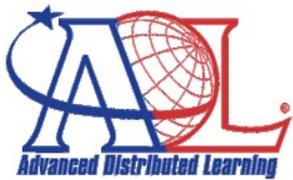


# Learning Opportunities

---

- Webinars: 1-hour sessions each week
  - Current topics
    - SCORM 2004 4th Edition Overview
    - Creating Reusable Content with SCORM 2004
    - Sequencing SCORM 2004 Content (2-part series)
    - Contributing to the ADL Registry Version 1.7
    - Federated Registry Architectures
    - Choosing Authoring Tools
    - Visual Design Principles for Reusable Learning Content
  - Custom sessions may be available
  - For details, visit [www.ADLNet.gov](http://www.ADLNet.gov)



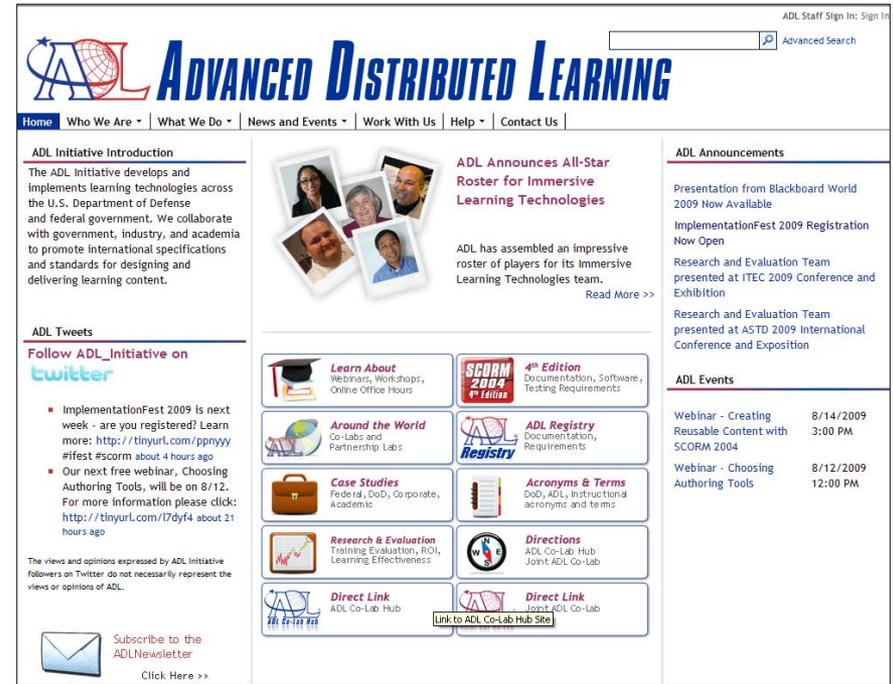


# Learning Opportunities

- Online Office Hours
  - Every Thursday from 1:00 - 3:00 PM Eastern
  - Instructional Systems Designer (ISD) and technical expert support
  - For details, visit [www.ADLNet.gov](http://www.ADLNet.gov)



- Bookmark ADLNet.gov
  - Topic sections with new feature stories each month
  - More resources for designers and developers
- *ADL Initiative Insights* Newsletter (monthly)
  - Subscribe at [www.ADLNet.gov](http://www.ADLNet.gov)



ADL Staff Sign In: Sign In

Advanced Search

Home | Who We Are | What We Do | News and Events | Work With Us | Help | Contact Us

**ADL Initiative Introduction**  
The ADL Initiative develops and implements learning technologies across the U.S. Department of Defense and federal government. We collaborate with government, industry, and academia to promote international specifications and standards for designing and delivering learning content.

**ADL Announces All-Star Roster for Immersive Learning Technologies**  
ADL has assembled an impressive roster of players for its Immersive Learning Technologies team. [Read More >>](#)

**ADL Announcements**  
Presentation from Blackboard World 2009 Now Available  
ImplementationFest 2009 Registration Now Open  
Research and Evaluation Team presented at ITEC 2009 Conference and Exhibition  
Research and Evaluation Team presented at ASTD 2009 International Conference and Exposition

**ADL Events**

Webinar - Creating Reusable Content with SCORM 2004	8/14/2009 3:00 PM
Webinar - Choosing Authoring Tools	8/12/2009 12:00 PM

**ADL Registry**  
Documentation, Software, Testing Requirements

**ADL Registry**  
Documentation, Requirements

**Acronyms & Terms**  
Only ADL Instructional acronyms and terms

**Directions**  
ADL Co-Lab Hub  
Joint ADL Co-Lab

**Direct Link**  
ADL Co-Lab Hub  
[Link to ADL Co-Lab Hub Site](#)

**Direct Link**  
Joint ADL Co-Lab  
[Link to ADL Co-Lab Hub Site](#)

**ADL Tweets**  
Follow ADL Initiative on **twitter**

- ImplementationFest 2009 is next week - are you registered? Learn more: <http://tinyurl.com/ppnyyy>
- #ifest #scorm about 4 hours ago
- Our next free webinar, Choosing Authoring Tools, will be on 8/12. For more information please click: <http://tinyurl.com/U7dyf4> about 21 hours ago

The views and opinions expressed by ADL Initiative followers on Twitter do not necessarily represent the views or opinions of ADL.

Subscribe to the ADL Newsletter  
[Click Here >>](#)

- Follow ADL on  @ADL\_Initiative



# Questions or Comments?

**Paul Jesukiewicz**

*Director, ADL Initiative*

paul.jesukiewicz@adlnet.gov

+1.703.575.2000