Implementation Fest
The Last Decade

Dr. Kristy Murray
<table>
<thead>
<tr>
<th>1. REPORT DATE</th>
<th>2. REPORT TYPE</th>
<th>3. DATES COVERED</th>
</tr>
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<tr>
<td>AUG 2010</td>
<td></td>
<td>00-00-2010 to 00-00-2010</td>
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<tr>
<th>4. TITLE AND SUBTITLE</th>
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<td>Implementation Fest. The Last Decade</td>
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<tr>
<th>5a. CONTRACT NUMBER</th>
<th>5b. GRANT NUMBER</th>
<th>5c. PROGRAM ELEMENT NUMBER</th>
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<th>5e. TASK NUMBER</th>
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<th>6. AUTHOR(S)</th>
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<tr>
<th>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</th>
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<tbody>
<tr>
<td>Advanced Decision Learning (ADL), 1901 N. Beauregard Street Suite 600, Alexandria, VA, 22311</td>
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<th>8. PERFORMING ORGANIZATION REPORT NUMBER</th>
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<th>9. SPONSORING/Monitoring AGENCY NAME(S) AND ADDRESS(ES)</th>
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<th>13. SUPPLEMENTARY NOTES</th>
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<tr>
<td>Implementation Fest 2010, 10-12 Aug 2010</td>
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<th>14. ABSTRACT</th>
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<th>15. SUBJECT TERMS</th>
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<th>16. SECURITY CLASSIFICATION OF:</th>
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<tbody>
<tr>
<td>a. REPORT</td>
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| 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
| Same as Report (SAR)       | 40               |                                  |

[Standard Form 298 (Rev. 8-98) Prescribed by ANSI Std Z39-18]
Provide access to the highest quality education and training, tailored to individual needs, delivered cost effectively, anywhere and anytime.
1996
Quadrennial Defense Review
(QDR) identified need
for on-demand training worldwide

1998
Office of the Under Secretary of Defense
For Personnel and Readiness
(OUSD P&R) to create the Advanced
Distributed Learning Initiative
ADL Initiative

1999
Executive Order 13111 tasked the DoD with lead for developing consensus standards for training software and associated services.
ADL Co-Laboratory established in Alexandria, VA
Joint ADL Co-Lab established in Orlando, FL

2000
SCORM Version 1.0 released
Academic Co-Lab established at University of Wisconsin
First Plug Fest
2001
SCORM Version 1.1/1.2 released
First Implementation Fest held in Orlando, FL

2002 - 2003
1st ADL Partnership Lab established in UK
Workforce ADL Co-Lab established
DoD Directive 1322.18 reissued
2004 - 2005
First International Plug Fest conducted in Zurich, Switzerland
SCORM Version 2004 released

2006 - 2007
DoD Instruction 1322.26 issued
SCORM 2004, 3rd Edition released
ADL Registry 1.0 released
2008
Defense ADL Action Team established
Defense ADL (DADL) Working Group established

2009
ADL Registry Version 1.7 released
ADL Labs & Centers Today

International Collaboration

- Canada ADL Partnership Lab
- United Kingdom ADL Partnership Lab
- Norway ADL Partnership Lab
- German Workforce ADL Partnership Lab
- Korea ADL Partnership Lab
- Australia ADL Partnership Lab
- Academic ADL Co-Lab Madison, Wisconsin
- ADL Co-Lab Hub Alexandria, Virginia
- Center for Online Workforce Development Fairfax, Virginia
- Romania ADL Partnership Lab
- Latin America and Caribbean Regions ADL Partnership Lab
- Joint ADL Co-Lab Orlando, Florida
Technology’s Effects to Instructional Systems Design – Yesterday
Technology’s Effects to Instructional Systems Design - Today
SCORM

1998
- AICC
- ARIADNE
- IEEE LTSC
- IMS
- Others

1999
- SCORM 0.7.3 Reference Model

2000
- SCORM 1.0 Content Model, Run-Time Environment

2001
- SCORM 1.1 Post Test Phase: Clean, Fix, Trim
SCORM Today

**SCORM 1.1**
- Content Aggregation Model: Metadata + Binding
- Run Time Environment: API + Data Model

**SCORM 1.2**
- Content Aggregation Model: Metadata + Binding; Adds: Content Packaging & Content Organization
- Run Time Environment: API + Data Model (updated/fixed)

**SCORM “2004”**
- Content Aggregation Model: Metadata + Binding; Content Packaging & Content Organization (updated/fixed)
- Run Time Environment: API + Data Model (updated/fixed)

CAM 1.3

RTE 1.3

S&N 1.3

SCORM Certified Products 305
SCORM Adopters 334
SCORM Harmonization

Today

Stable SCORM 2004
• ADL maintain and support
• Facilitate implementation
• Promote adoption
• Listen to users

Evolutionary

New Learning Technologies
• Simulations, games, and virtual world
• Mobile systems
• Performance support, S1000D tech manuals
• Intelligent tutoring systems
• Collaborative learning
• Auxiliary online resources

Tomorrow

New Enterprise Architectures
• Post-Google knowledge management
• Service-oriented software architecture
• Content management and repositories
• Future LMS architectures
“It doesn’t do much good to have interoperable and reusable digital objects if people can’t find and use them”
CORDRA Today

Innovators
Early Adopters
Early Majority
Late Majority
Laggards
CORDRA Future

User Community
- Usability
- Social

Global Perspective
- Protocols
- Federation

Learning Registry
- DSpace
- ILIAS
- mo orphan
- Islandora
- Fedora Commons
- 3D Repository
SCORM / S1000D Harmonization Today

Technical Data
- IETM
- Technical Publication

Training Materials
- Multiple Format Types
  - HTML
  - PDF
  - JPG
  - PPT
  - Word
- WBT
- Classroom
SCORM / S1000D Harmonization Future

Common Source Database (CSDB)

- CGM
- SGML
- XML
- PDF
- PPT
- JPG
- Word
- HTML

Technical Data
- IETM

Training Materials
- Classroom
- WBT
Immersive Learning

Games – 08/09 revenues of $41 billion

Virtual Worlds - 1.5 million Second Life users in the last 60 days

Social Networking - more than 400 million Facebook users

Mobile - Phones are outselling PC’s 3:1 with Smart Phone users spend ~80-90 min./day using apps
Games Yesterday

USMC Tactical Combat Casualty Care (TC3)

Darwars Ambush (ECS)

Gator 6 (Will Interactive)
Games Today

Enhanced Learning Environment using Creative Technology – Bilateral Negotiations Trainer (Elect BiLat)

Red Owl Sniper Bot

VBS2
Games Future

Back to the Future

Microsoft Kinect
Virtual Worlds Yesterday

TRON
Virtual Worlds Future
Mobile Yesterday
Mobile Today

V Communicator

Apps for Army Program
Mobile Future
Social Media Yesterday

Web 1.0
"the mostly read-only Web"
250,000 sites
45 million global users
1996

Web 2.0
"the wildly read-write Web"
80,000,000 sites
1 billion+ global users
2006
“For leaders, ... it's really important to be connected to that and understand it… I think communicating that way and moving information around that way -- whether it's administrative information or information in warfare -- is absolutely critical.” **Navy Adm. Mike Mullen, Chairman of the Joint Chiefs of Staff**
Since the beginning the focus of the R&D program has been to fund research to further the ADL Initiative.

Approximately $1.5M per year was awarded starting in 2000.

In a nutshell, the general “focus” over the first seven years:

- **2000-2003** – Incentivize SCORM development and courseware best practices
- **2003-2005** – Investigated: repository/registry mechanisms, sequencing development, and serious games
- **2005-2007** – Integrated Prototype Architecture and continued research in simulations/games integration
Early Research

Deployable Virtual Training Environment (DVTE)

Civil Support Team Trainer (CSTT)

Cultural Familiarization and Language Training

Tactical Command Casualty Care (TC3)
Research Today

Eduworks and College of Continuing Education USMC
Research Today

Corporation for National Research Initiatives

3D Repositories  SCORM Repositories  Image Repositories

ADL Registry

Polygon Count
Textures Etc.

Harvest

Simple Metadata
Research Future

Mobile content delivery platforms

Adaptive Stance Study with Ministry of Defense Advisors (MODA)

SCORM Communications Framework Modernization

Anonymous Data Brokering

E-learning Reuse Integration, Automation, and Support System

Assessment in Complex Simulations
Impact

ADL: The Last Decade

Increased Access = Increased Throughput

Time

Throughput

CD  DL  Trad
ADL Initiative

Impact

- USMC
  - Enrollments: 1,215,349
  - Completions: 698,965
- Army
  - Enrollments: 1,143,644
  - Completions: 543,570
- Navy
  - Enrollments: 6,228,331
  - Completions: 5,441,794
- Air Force
  - Enrollments: 7,678,210
  - Completions: 7,181,833
Adaptability to support Training

Evolve Standards

Identify Research Areas needed to achieve potential

Expand International Collaboration

Evolve Registry/Repository

Improved Content Discovery
ImplementationFest 2010
10-12 August
Rosen Centre, Orlando, FL

Dr. Kristy S. Murray
Director, ADL Initiative

www.adlnet.gov