

# Adaptive Learning Systems Workshop

## Developers Panel

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SRI eLearning Network Nov.15, 1999

## Wayne Hodgins



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**IEEE**

Networking the World™

Fostering Technological Innovation

Chair, Learning Object Metadata (LOM)

**IEEE Learning Technology Standards Committee**

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*“The global hardware & software force shaping  
excellence in Education, Training & Learning”*

- ◆ Worldwide Industry Association of:
  - Hardware & Software companies
  - Directors & Managers of Education,  
Training & Learning functions

## Presentation Overview:

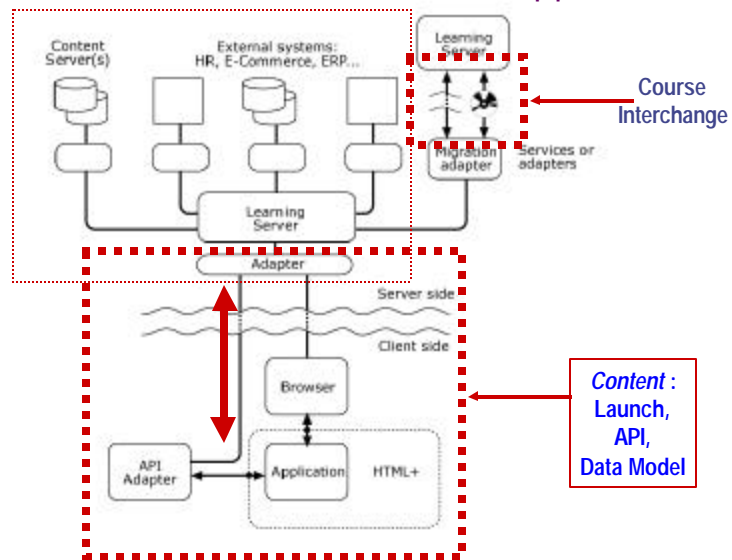
- Market overview
- Individual Perspectives
- Panel Discussion
- Q&A

- ◆ \*\* All links & references available at  
[www.learnativity.com](http://www.learnativity.com)

## Market Overview:

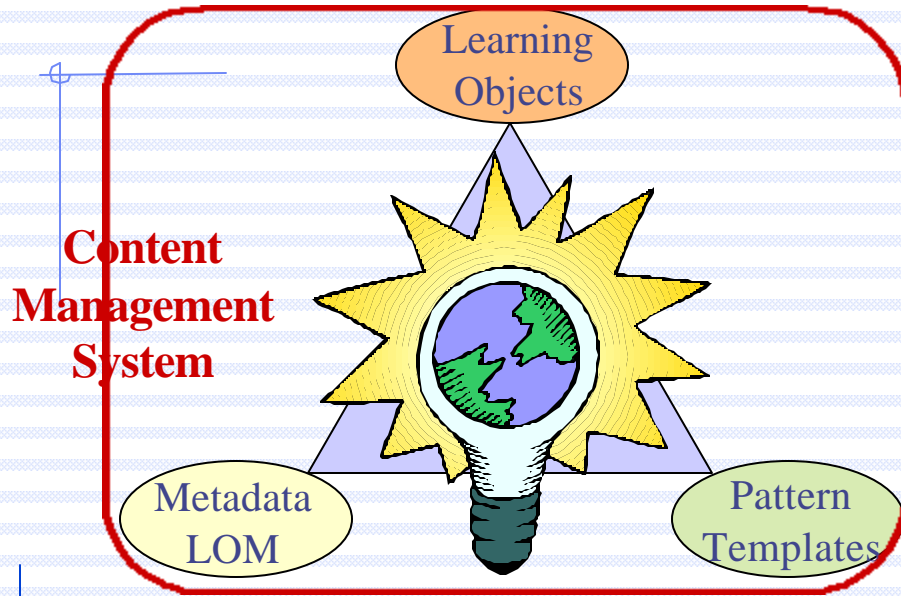
- ◆ The "supply side" story
- ◆ This is all VERY new and undefined
- ◆ PC Week article

## Interface Points (Standards Opportunities)



ADL SCORM

# Big 3 Strategies + System



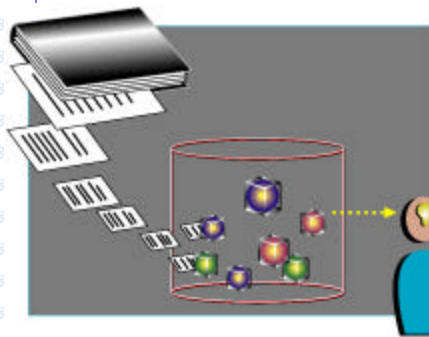
NIST ALS Conference

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# Learning Objects (Granular Content)



- ◆ Small
- ◆ Reusable
- ◆ Stand alone pieces of information
- ◆ Durable:
  - Reusable in multiple contexts
- ◆ Dynamic "just right" content
- ◆ Single Learning Objective

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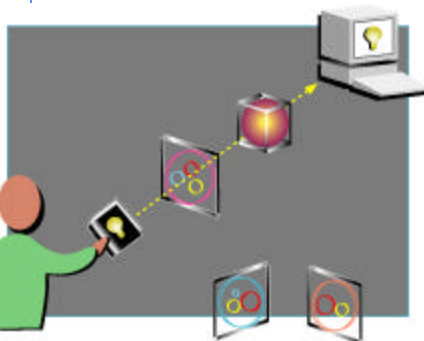
ORACLE 8

## Metadata (Attributes)



- ◆ Defines a variety of characteristics about each granule of content
- ◆ Facilitates searching, management, and linking of granules of content
- ◆ Enables the author to search and retrieve content as needed
- ◆ Allows for the selection by multiple pattern templates

## #3: Pattern Templates



- ◆ PS4ID
- ◆ Based on Pattern recognition
- ◆ Automated "best practice"
- ◆ Ultimate flexibility

# Management Systems

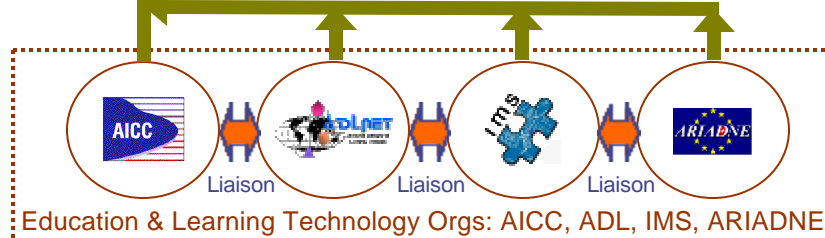
- ◆ TMS, LMS, ERP, IS.....
- ◆ To phase or not to phase.....

## Related Standards/Specification Development Orgs: Education & Learning Technology

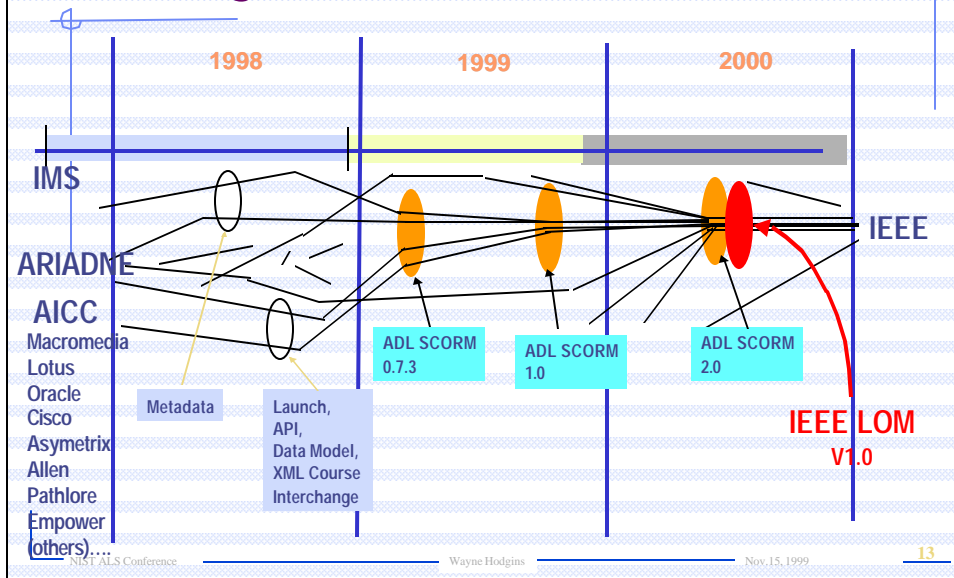
IEEE, ANSI, ISO: Accredited Standards



Specs submitted by Consortia/Fora



# Convergence Catalyst Approach for Learning Standards



## Panelists:

- ◆ Tyde Richards 
  - ◆ Manager, Open Standards Development,
  - ◆ Distributed Learning Group, **Lotus**
- ◆ Umberto Milletti, 
  - ◆ General Manager, Product Development and Operations, **DigitalThink Corporation**
- ◆ Harvi Singh, 
  - ◆ President, **Empower Corp.**
- ◆ Steve Griffin, 
  - ◆ VP, CTO, **Eduprise.com**, and Technical Director, Instructional Management System (**IMS**)
- ◆ Harvey Ollis: 
  - ◆ America's Labor Exchange (**ALX**)

## Topics:

- ◆ Roles & Definitions
- ◆ Trends & Directions
  - ◆ Market, Company, Economy
- ◆ Content
- ◆ Barriers
- ◆ Opportunities
- ◆ Standards
- ◆ Recommendations

# Thank You!!

- ◆ Responses?
- ◆ Questions?

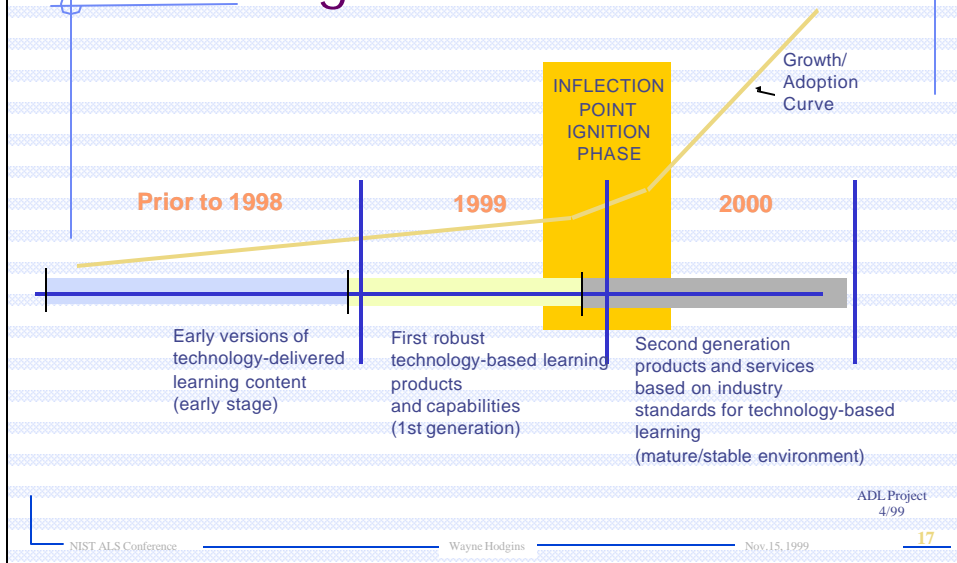
Presentation & other links  
& resources available at:

**[www.learnativity.com](http://www.learnativity.com)**

**[wayne@learnativity.com](mailto:wayne@learnativity.com)**



# Evolution of Learning Technologies



## Why Standards?

- ◆ Create a Learning Economy
  - Change the number of the "Zero Billion Dollar economy"
- ◆ To finally give us the "... bilities"

## Why Standards?

- ◆ ..... bilities:
  - ◆ Interoperability
  - ◆ Accessibility
  - ◆ Durability
  - ◆ Reusability
  - ◆ Discoverability
  - ◆ Extensibility
  - ◆ Affordability
  - ◆ Manageability

## Standards Focus

- ◆ **IEEE LTSC is focusing on web-based learning system standards**

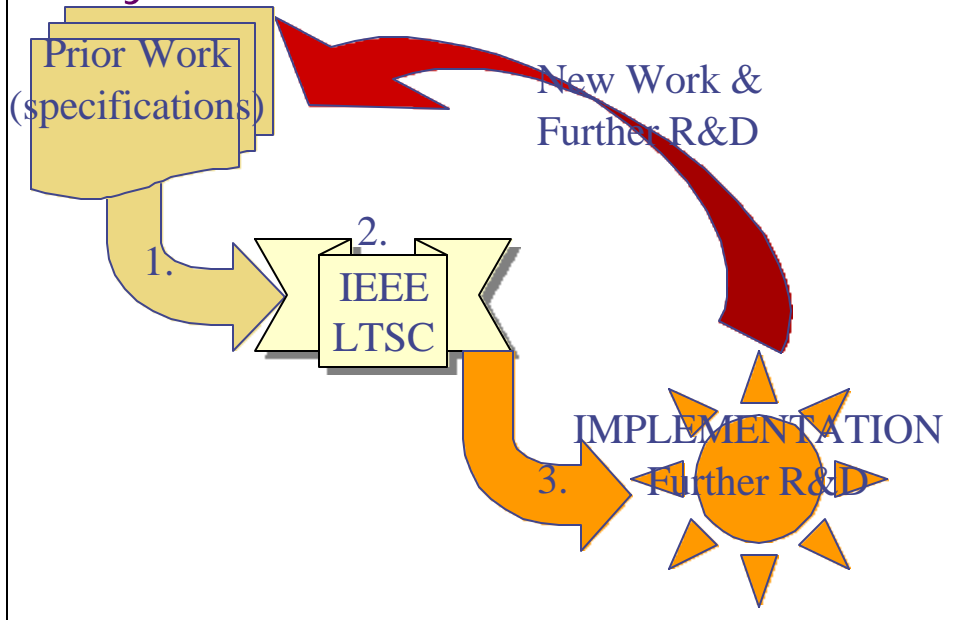
Learning System Standards  
content  
metadata  
LMS data model  
....

Internet Technologies  
HTML  
HTTP  
XML  
JAVA/JavaScript  
...

- ◆ **But not In**
- ◆ **standards**
- ◆ **(others are doing that)**

See [www.learnativity.com](http://www.learnativity.com)  
For more information

## "Cycle of Life" of Standards:



IEEE

Learning Technology  
Standards Committee

IEEE LTSC P1484

<http://ltsc.ieee.org>

## IEEE LTSC (P1484) Working/Study Groups

- ◆ General activities
  - 1484.1 Architecture and Reference Model
  - 1484.3 Glossary
- ◆ Learner-related activities
  - 1484.2 Learner Model
  - 1484.4 Task Model
  - 1484.13 Student Identifiers
  - 1484.5 User Interfaces
  - 1484.19 Quality System for Life-Long Learning
  - 1484.20 Competency Definitions
- ◆ Content-related activities
  - 1484.10 CBT Data Interchange
  - 1484.6 Course Sequencing
  - 1484.17 Content Packaging
- ◆ Data and metadata
  - 1484.12 Learning Objects Metadata
  - 1484.9 Localization
  - 1484.14 Semantics and Exchange Bindings
  - 1484.15 Data Interchange Protocols
  - 1484.16 HTTP Bindings
- ◆ Mgmt. systems & applications
  - 1484.11 Computer Managed Instruction
  - 1484.18 Platform and Media Profiles
  - 1484.7 Tool/Agent Comm.
  - 1484.8 Enterprise Interfaces