


How to use IMS Learning Design and SCORM 2004 together

OUNL



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About Us, the Department Otec

Educational Technology Expertise Center

1. Research (fundamental educational research)
 - 4CID model
2. Development (product oriented research)
 - Products like IMS-LD & CopperCore
 - Currently developing products for 'Learning Networks'
3. Implementation (end-user / faculty oriented)
 - Traditional multi-media productions
 - Educational Design Support for faculties

Similarities

- Standards for developing e-learning courses
- Both use content packaging
- LOM is used for metadata
- Consist of a server and a client or player part

Differences

SCORM 2004

- reference model describing content and runtime behavior
- has an API for server interaction (LMS)
- simple to implement
- single user
- plenty platforms support it

IMS-LD

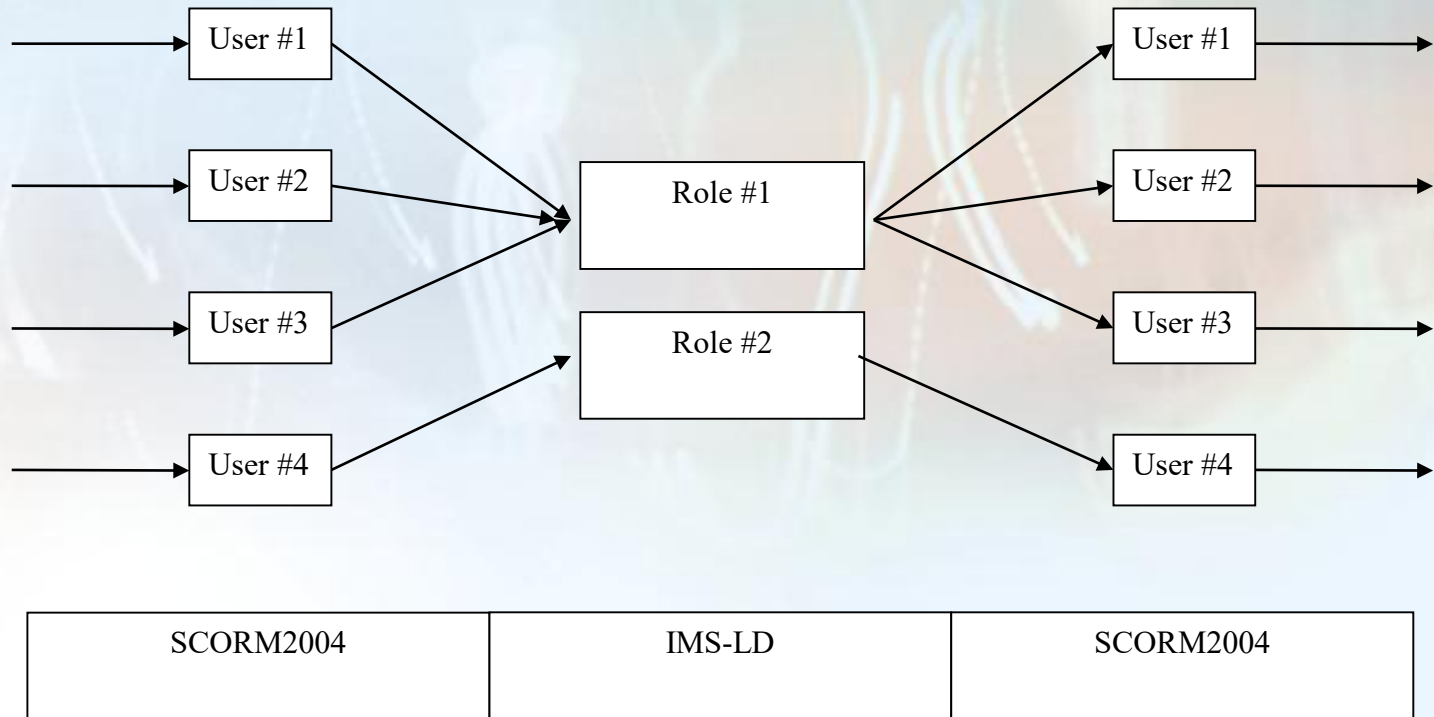
- single specification for both content and its runtime interactions between users
- no restrictions on actual content
- no standard interface with server
- more complex to implement
- growing support
- can model complex interactions
- designed to link other specifications
- Is multi-user and supports roles
- Sequencing activities is a integral part of the specification.

Integration paths

- Paths for integrating IMS-LD and SCORM2004
 1. SCORM orchestrates and uses IMS-LD as content/resources
 2. IMS-LD orchestrates and uses SCORM SCO's as content/resources

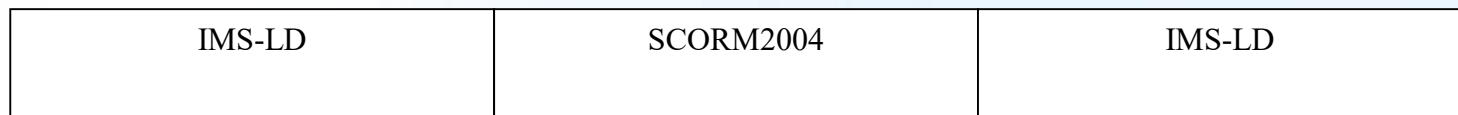
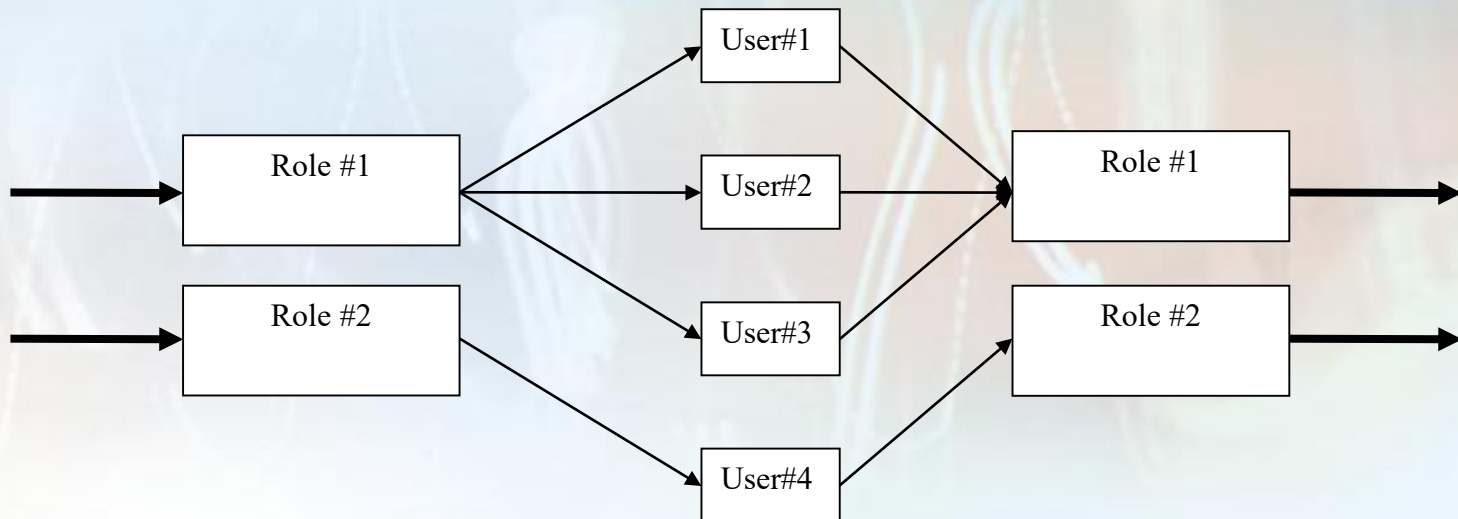
Connecting users and roles

1. SCORM to IMS-LD and back



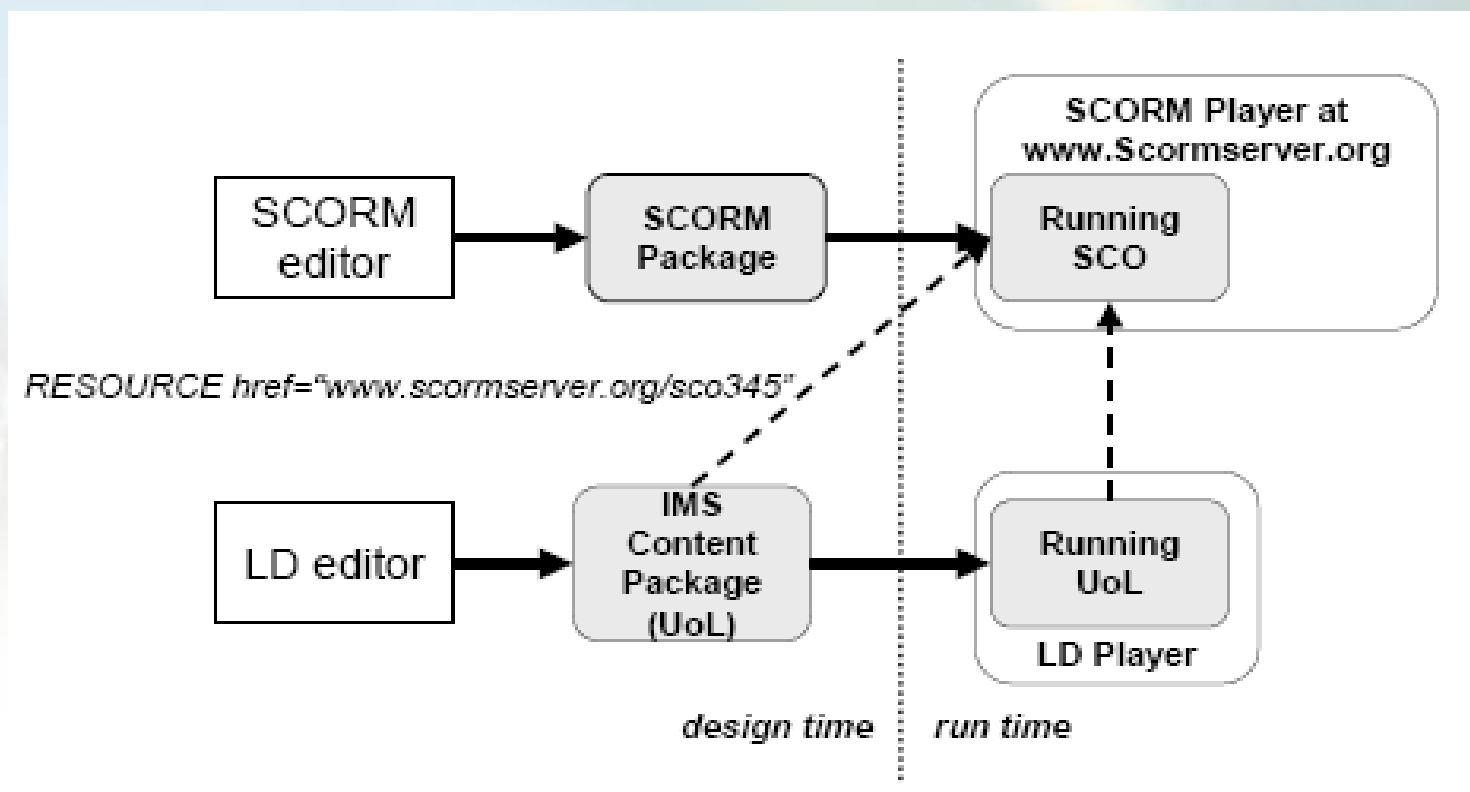
Connecting users and roles

2. IMD-LD to SCORM and back



Using a SCO from inside IMS-LD #1

Hardcode url's to SCORM player as web resources:



Drawbacks #1

- Two distinct servers -> single logon problems
- No communication between the IMS-LD and the SCO
- Url of SCO has to be known before IMS-LD can be published

Using SCO from inside IMS-LD #2

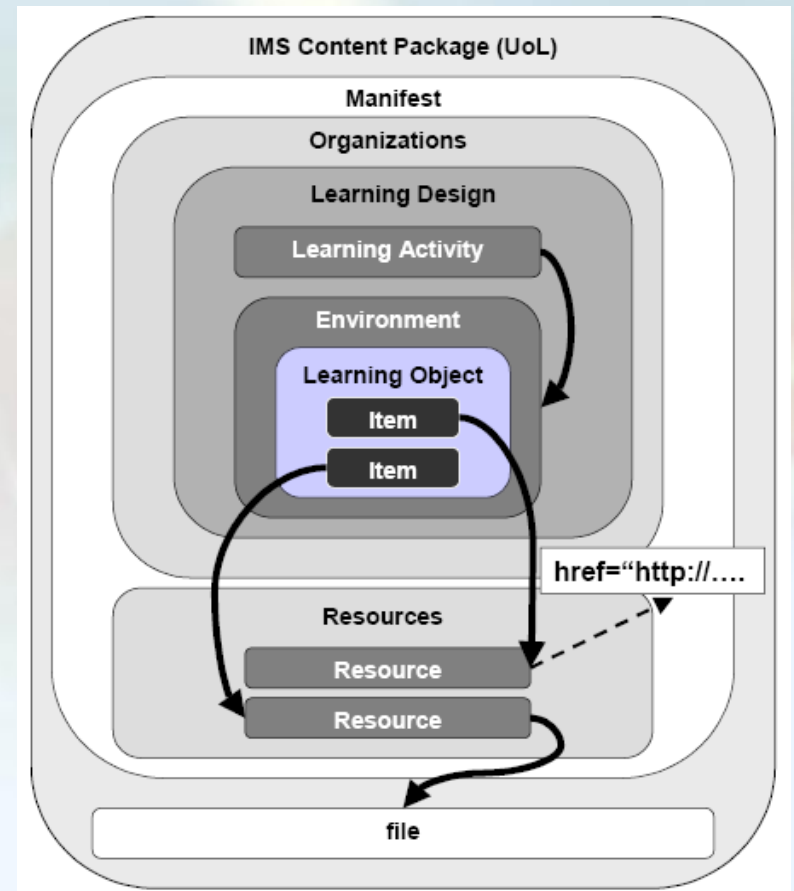
Use single content package for both IMS-LD and SCO's to solve url problems.

Drawbacks #2

- Two servers -> single logon problems
- No communication between the IMS-LD and the SCO.
- Some preprocessing is needed to split and publish the CP into separate content packages for the two runtime systems.

Where to put a SCO inside IMS-LD

- IMS-LD has an Item model that permits linking to file resources packed into the content package
- That file may be another content package
- The file may be another CP containing a SCO.

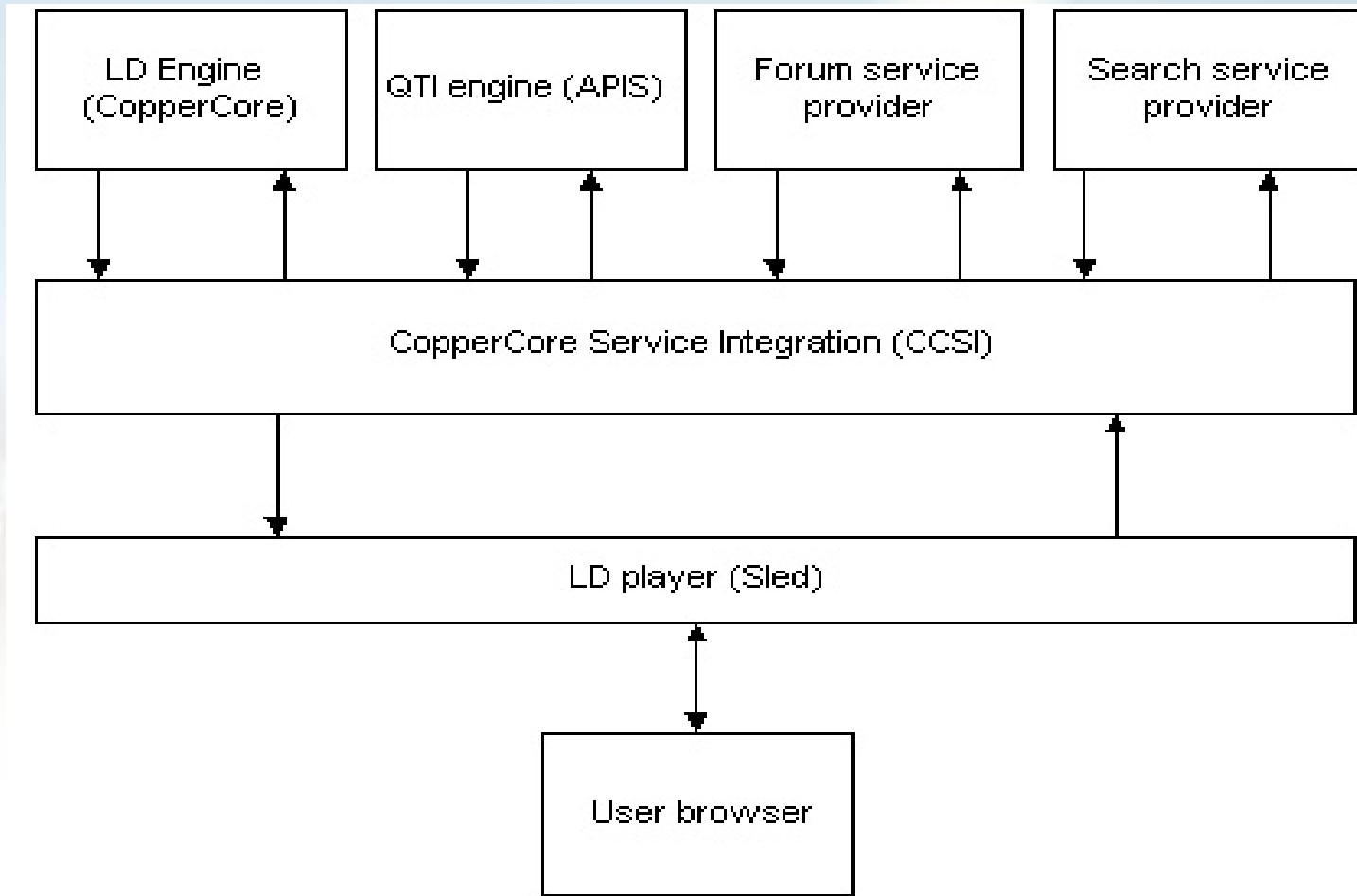


How to solve the lack of interaction problem?

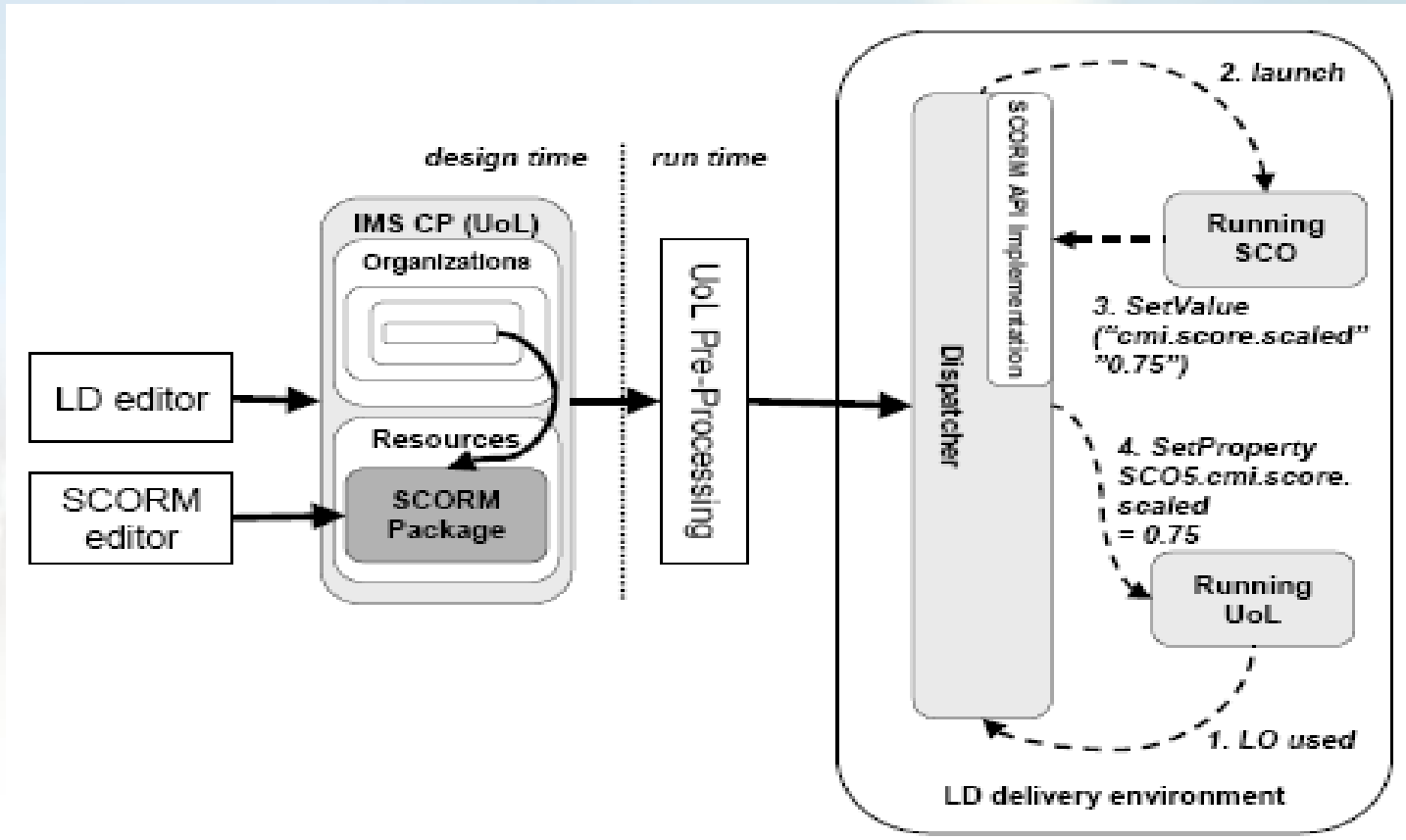
Incorporate the server part of SCORM2004 into a IMS-LD system, for both launching SCO's and SCO data storage.

- Use the packaging mechanism of option #2
- Store SCO runtime data in the IMS-LD database so the UOL can read/write them too.
- Make arrangements on the mutual property names and their meaning.
- This could all be implement through the CopperCore CCSI (CopperCore Service Integration) dispatcher.

CCSI



Linking with interaction



Questions?