

# Common Cartridge in Moodle



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# Welcome to the ASPECT Project

- Adopting Standards and Specifications for Educational Content: ASPECT
- A Best Practice Network funded in part by the European Commission
- Part of the eContent+ Program
- 22 Partners from 15 countries
- Academics, content providers, ministries of education
- <http://www.aspect-project.org>

- *What is Common Cartridge?*
- *Why using Common Cartridge?*
- *What is in a Common Cartridge?*
- *Who supports Common Cartridge?*
- *Importing a Cartridge into Moodle*
- *Integrating Cartridge Content in a Moodle Course*
- *Using External Cartridges from a Moodle Course*
- *News to Come*

# What is Common Cartridge?



- IMS Content Packaging Format, Release: Fall 2008
- Possible content
  - Files
  - Assessments and question banks
    - Multiple Choice – Single/Multiple Response, True/False
    - Simple Fill-in-blanks(single correct answer)
    - Essay
    - (Flexible Fill-in-blanks – evaluation with regular expressions)
  - Initializing discussion forums
  - Views for teachers and learners
  - (Import control/Resource access control)

# Why Using Common Cartridge?

- Main target group: Teachers in ***blended learning*** scenarios
- Main application: Courses in Learning Management Systems like Moodle

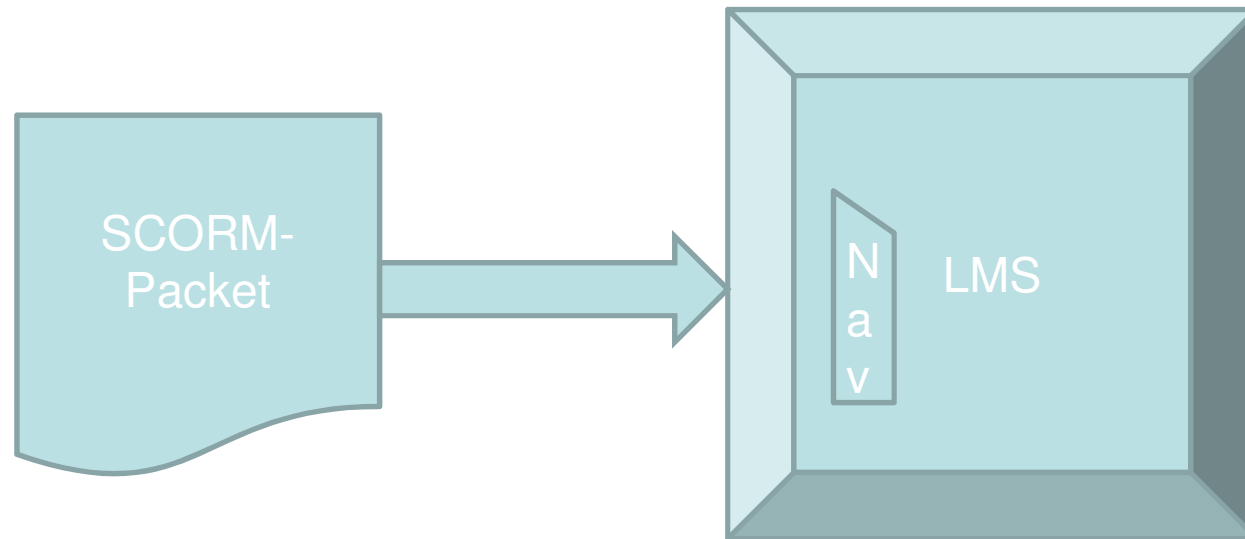
Raw material for teachers!

Selective use – Rip, Mix, Teach!

Executing control on behalf of content owners

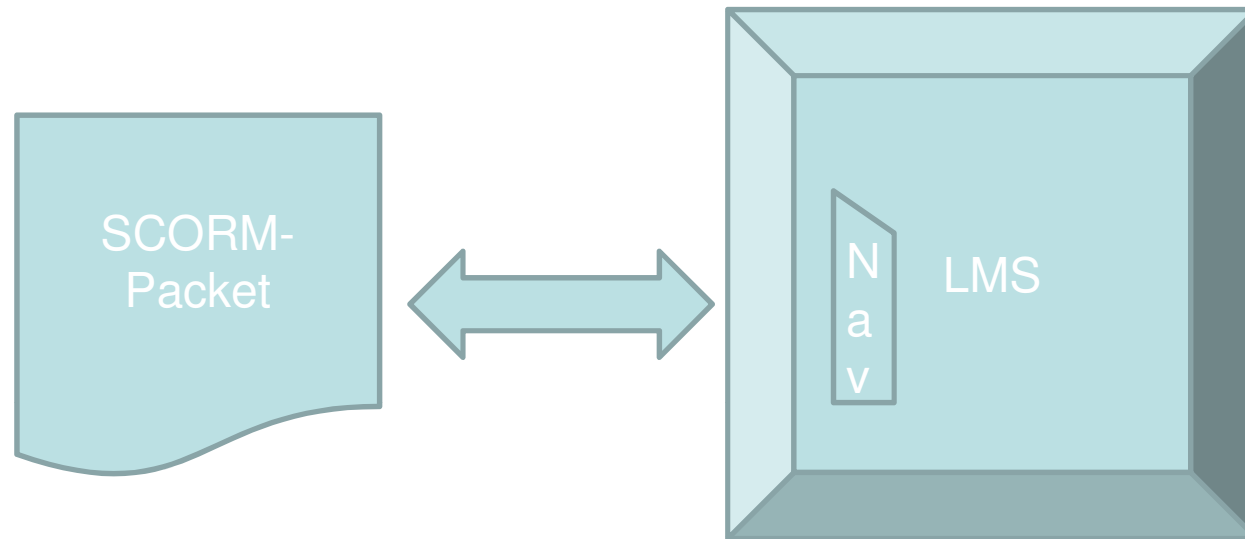
# Common Cartridge is not SCORM

## SCORM

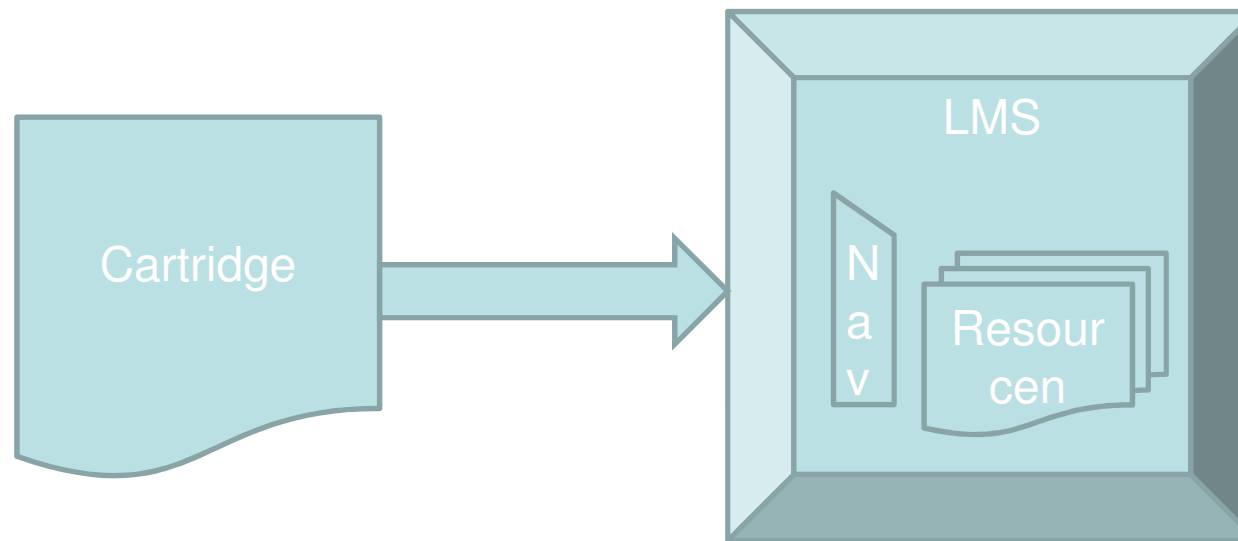


# Common Cartridge is not SCORM

SCORM

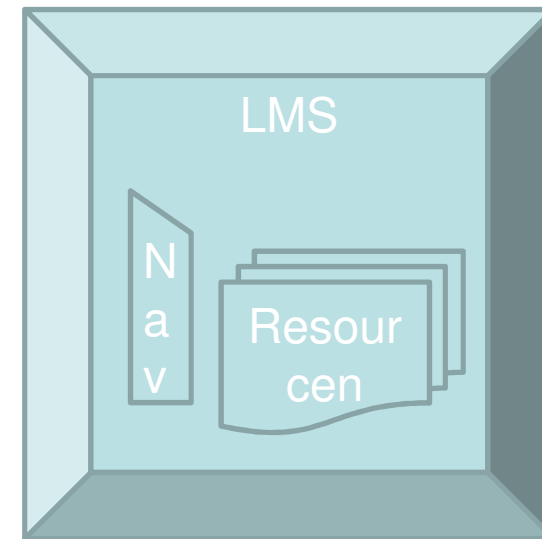


## Common Cartridge

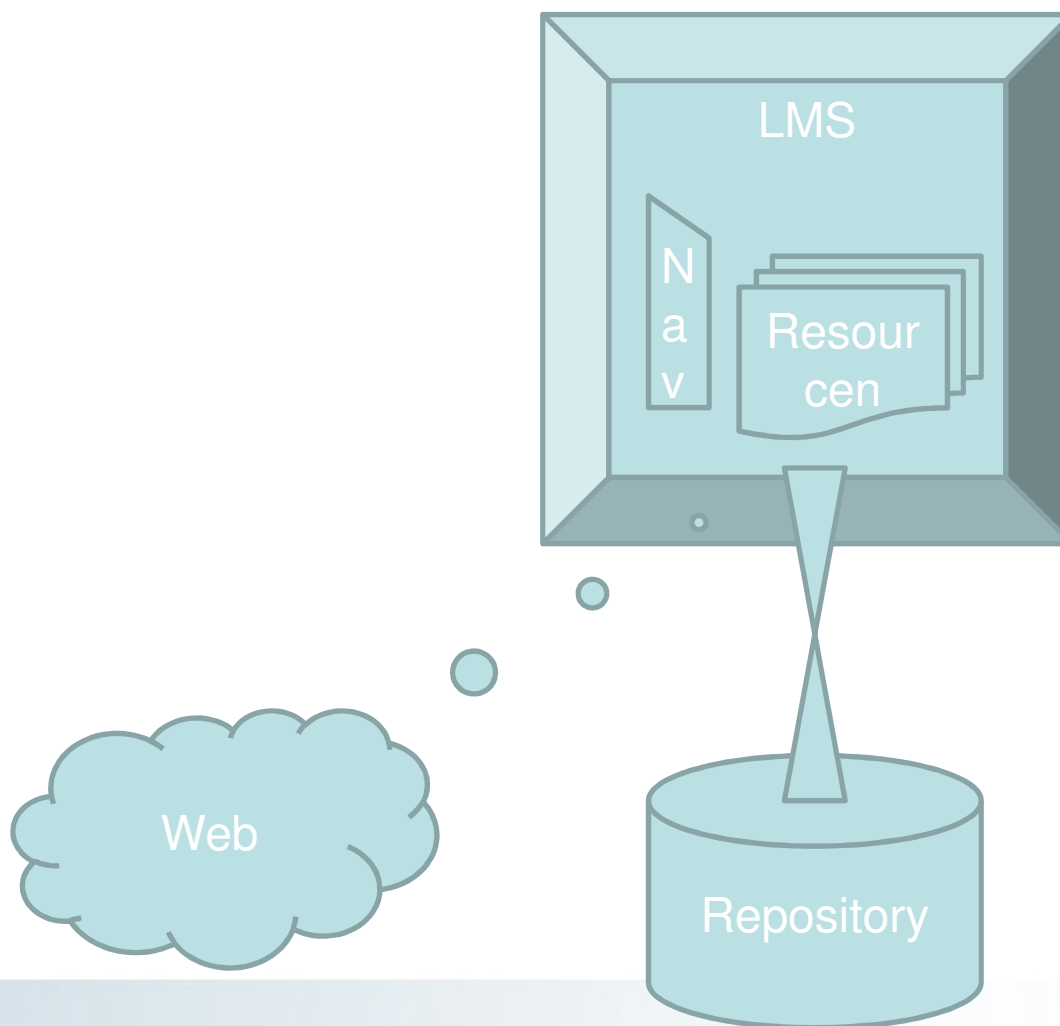




## Common Cartridge



## Common Cartridge



## Cartridge (zip-File)

Manifest (imsmanifest.xml)

Ressource-  
Files

Shared Files

Metadata

Organization

Ressources

(Authorization)

Metadata

File references

# Who supports Common Cartridge?

- Cartridges from the Open University and from Elsevier

- Software (released)

ANGEL 7.4 (SP5) - Blackboard Inc

ANGEL Learning Management Suite

Atutor - Adaptive Technology Resource Centre

SoftChalk

CAMS (Comprehensive Academic Management System) - Three Rivers Systems, Inc.

Common Cartridge Desktop - Ucompass.com, Inc.

Education portal service - Edunet – KERIS

Enrich E-Learning Framework - Ucompass.com

GeNIE 1.0 – DUNET

GoCourse Learning System - Agilix Labs, Inc.

Icodeon Common Cartridge Platform– Icodeon

Jenzabar's e-Racer Learning Management System (Jenzabar LMS) – Jenzabar

Learning Environment 9.0 - Desire2Learn

SCORM2CC – Microsoft/Icodeon

- Moodle
- Blackboard
- Microsoft Semblio
- Mir (Microsoft/Learngauge)
- Common Cartridge Builder (Learning Components)

- Example and content from University of Ljubljana
- Learning Objective: Basic knowledge about pressure, temperature, etc.
- Lesson plan:
  - Introduction by teacher using CC content
  - Test with selected CC quiz items
  - Homework: Discussion in CC forum
  - Discussion of open questions face-to-face
  - Learners collaborate on a problem (CC weblink)

- Importing a cartridge into Moodle
- Integrating cartridge content in a Moodle course

## Demo Course

aspect ▶ WebinarOctober

### People



 [Participants](#)

### Activities



 [Forums](#)  
 [Quizzes](#)  
 [Resources](#)


### Search Forums



Go

[Advanced search](#) ?

## Weekly outline

Thermodynamics 

 [News forum](#) → ⌂ 🔊 X 👁 👤

 [Teachers Notes for Lesson 1](#) ↔ ⌂ 🔊 X 👁

 [Some Examples from Everyday Life](#) ↔ ⌂ 🔊 X 👁

 [Global Warming Movie](#) ↔ ⌂ 🔊 X 👁

 [Temperature - Test Your Knowledge](#) ↔ ⌂ 🔊 X 👁 👤

 [Example of multimedia document \(Wikipedia\)](#) ↔ ⌂ 🔊 X 👁

 [Collaborative Work: Thermodynamics \(multimedia document\).](#) ↔ ⌂ 🔊 X 👁

 [Support for Collaborative Work: Forum - A gallery of multimedia examples from thermodynamics](#) ↔ ⌂



Add a resource...



## Demo Course

You are

[aspect](#) ► [WebinarOctober](#) ► [Quizzes](#) ► [Temperature - Test Your Knowledge](#) ► [Editing Quiz](#)

[Info](#) [Results](#) [Preview](#) [Edit](#)

[Quiz](#) [Questions](#) [Categories](#) [Import](#) [Export](#)

### Questions in this quiz

| Order | # | Question name                              | Type | Grade | Action  |
|-------|---|--|------|-------|---------|
| ↓     | 1 | Select one of the following options: [...] | ☰    | 1     | 🔍 ⚙️ >> |
| ↑ ↓   | 2 | Choose one of the following options: [...] | ☰    | 1     | 🔍 ⚙️ >> |
| ↑ ↓   | 3 | Choose one of the following options: [...] | ☰    | 1     | 🔍 ⚙️ >> |
| ↑     | 4 | Select all correct answers: [...]          | ☰    | 1     | 🔍 ⚙️ >> |

Total: 4

Maximum grade: 10 ?

[Save changes](#)

☐ Show page breaks

☐ Show the reordering tool ?

[Go](#)

### Question bank

**Category** [Quiz Bank 'Entropy - Test Your Knowledge' \(2\)](#)

☒ Display questions from sub-categories too

☐ Also show old questions

☐ Show question text in the question list

Questions in quiz 'Entropy - Test Your Knowledge'.

**Create new question** [Choose...](#) ?

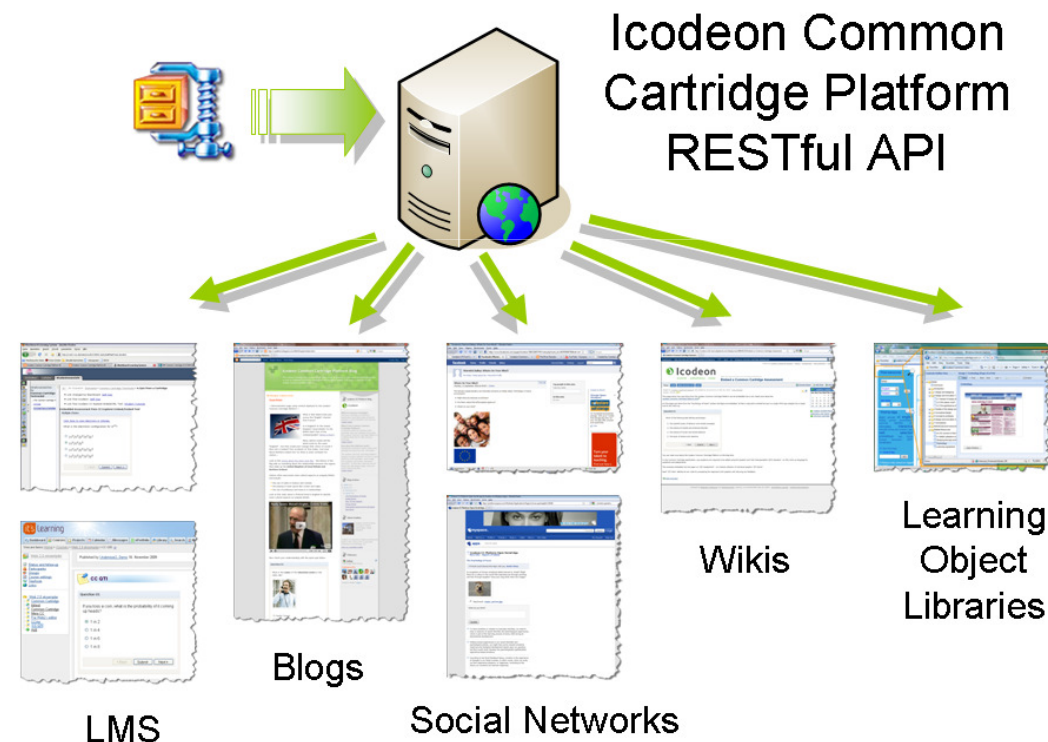
[Sort by type, name](#)

| Action  | Question name   |
|---|---|
| << 🔍 ⚙️ ⬆️ ⬆️ ×   | <input type="checkbox"/> The entropy of a system: [...]                       |
| << 🔍 ⚙️ ⬆️ ⬆️ ×   | <input type="checkbox"/> A system in equilibrium has the maximum _____. [...] |
| <a href="#">Select all</a> / <a href="#">Deselect all</a> |   |
| <b>With selected:</b> _____                               |   |

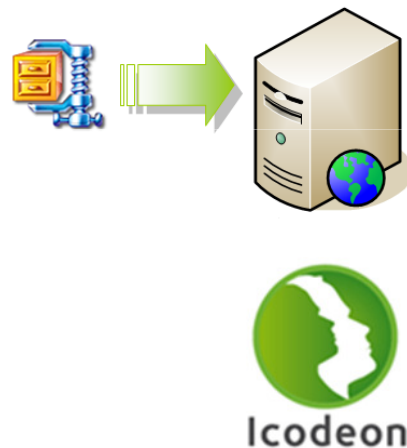
## Native Moodle Support for Common Cartridge

- Experimental in current release
- Fit for real life usage
- Not yet CC conformance certified
- All content types are supported
- No matching questions
- Cartridges with protection are not imported
- Need to correct scoring for multiple correct answers

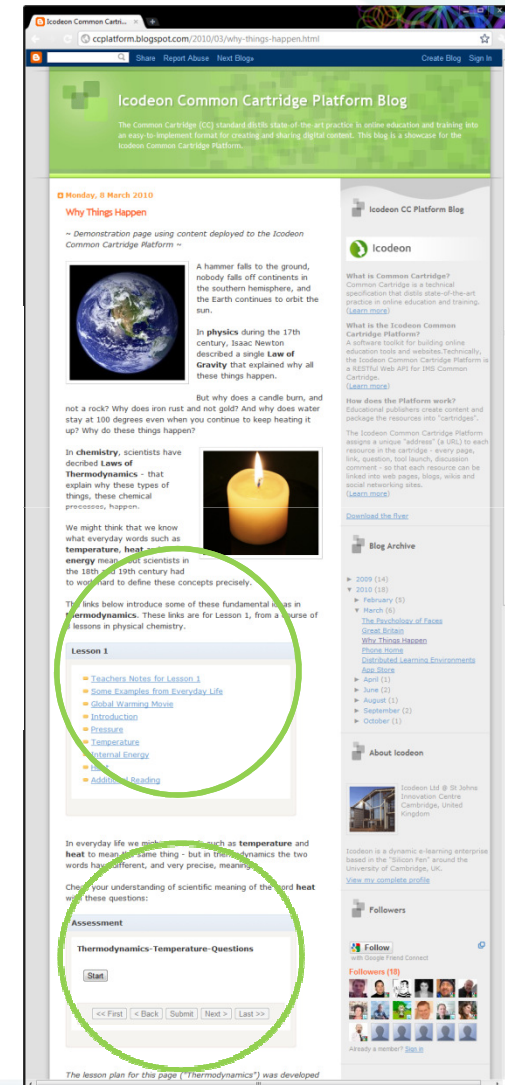
- Re-mixing Common Cartridge Content Using the Icodeon Platform



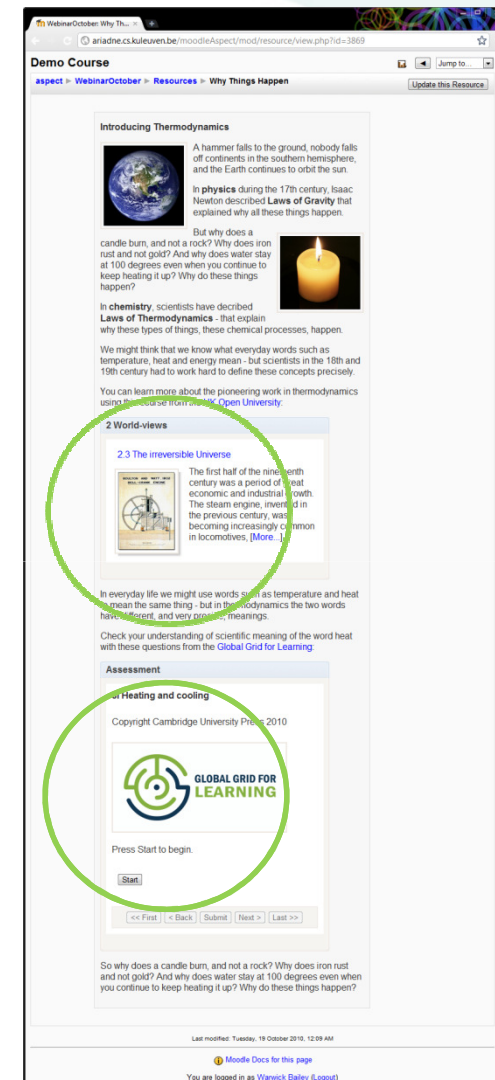
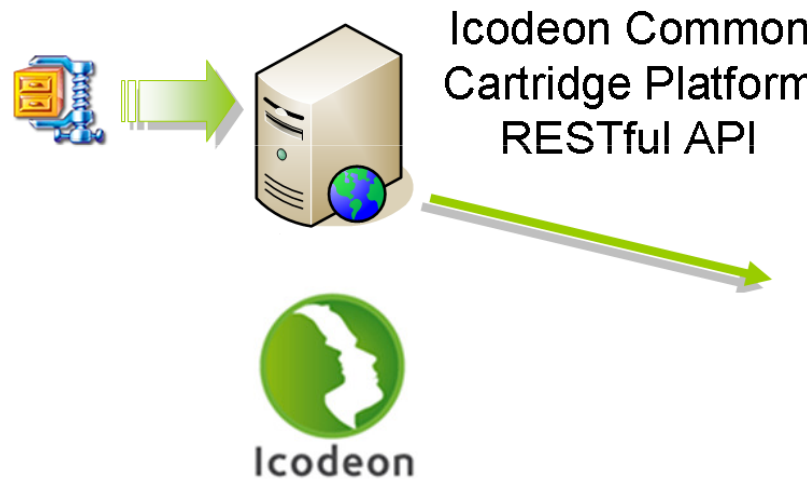
# Re-mixing Common Cartridge *Content* Into a Blog Entry



Icodeon Common Cartridge Platform  
RESTful API

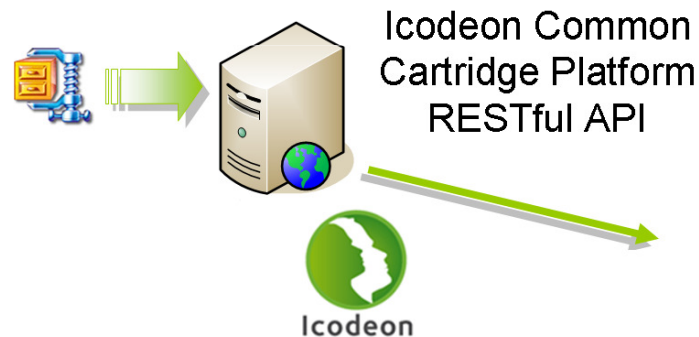


## Re-mixing Common Cartridge **Content** Into a A Moodle Course

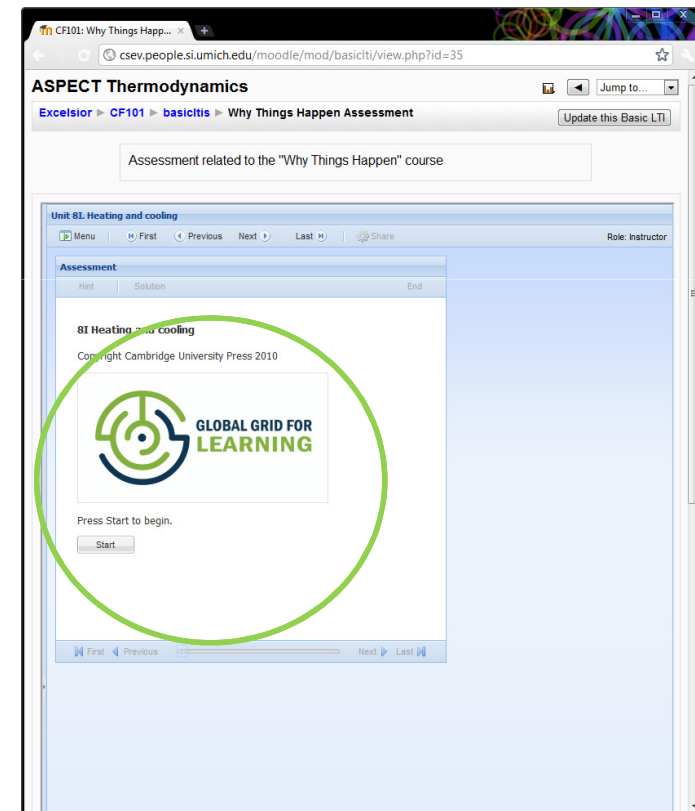


- Version 1.1
  - New role *Mentor*
  - Lesson plan items
  - Basic LTI
- Future versions
  - Support for QTI 2

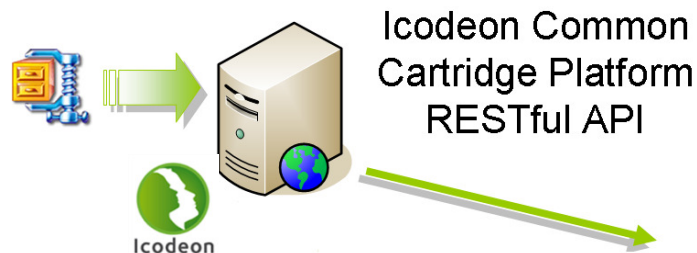
## Launching a Common Cartridge **Assessment Tool** into a Moodle Course



... using IMS Basic Learning  
Tools Interoperability



## Returning Common Cartridge *Assessment Results* to a Moodle Grade Book



Icodeon Common  
Cartridge Platform  
RESTful API

... using IMS Simple  
Outcomes

**Fillings 101 : View: User report** Jump to...

[SoftChalk](#) ▶ [FI101](#) ▶ [Grades](#) ▶ [View](#) ▶ [User report](#)

Choose an action ... ▾

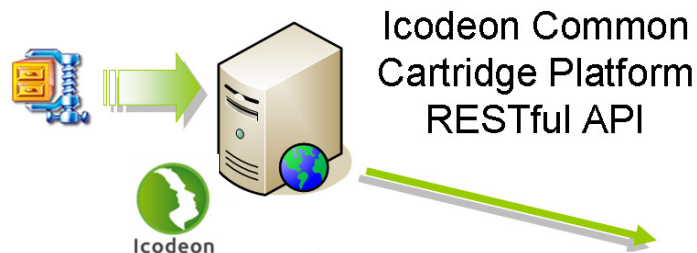
**User report - Charles Severance**

| Grade/Item                  | Grade        | Range              | Percentage     | Feedback |
|-----------------------------|--------------|--------------------|----------------|----------|
| Fillings 101                |              |                    |                |          |
| <a href="#">Terminology</a> | 80.00        | 0.00-100.00        | 80.00 %        |          |
| <a href="#">Icodeon</a>     | 22.00        | 0.00-100.00        | 22.00 %        |          |
| <a href="#">Testing 123</a> | -            | 0.00-100.00        | -              |          |
| <b>Course total</b>         | <b>51.00</b> | <b>0.00-100.00</b> | <b>51.00 %</b> |          |

You are logged in as [Charles Severance](#) (Logout)



## Returning Common Cartridge **Assessment Results** to a Moodle Grade Book



... using IMS Simple Outcomes

**Fillings 101 : View: User report** Jump to...

[SoftChalk](#) ▶ [FI101](#) ▶ Grades ▶ View ▶ User report

Choose an action ... ▾

**User report - Charles Severance**

| Grade/Item                  | Grade        | Range              | Percentage     | Feedback |
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| <b>Course total</b>         | <b>51.00</b> | <b>0.00-100.00</b> | <b>51.00 %</b> |          |

You are logged in as [Charles Severance](#) (Logout)

- Secure tool launch and return of results

The screenshot shows a Moodle course page titled "ASPECT Thermodynamics". The breadcrumb trail is "Excelsior > CF101 > basiclti > Why Things Happen Assessment". Below this, it says "Assessment related to the 'Why Things Happen' course". The main content area is titled "Unit SE: Heating and cooling" and shows "Question 2 of 20". The question text is: "The table shows the temperature ranges of four different thermometers. Choose the thermometer A B C or D that can be used to measure the temperature of both melting ice and boiling water." Below the text is a table with two columns: "Thermometer" and "Temperature range (°C)".

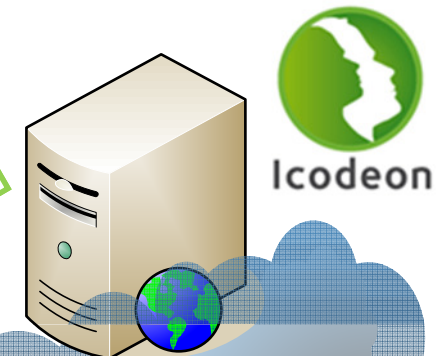
| Thermometer | Temperature range (°C) |
|-------------|------------------------|
| A           | -10 to 50              |
| B           | -10 to 110             |
| C           | 10 to 100              |
| D           | 10 to 110              |

Below the table are four radio buttons labeled A, B, C, and D. Option B is selected. At the bottom of the question area is a "Submit" button. The Moodle navigation bar at the very bottom shows "First", "Previous", "Next", and "Last" buttons.

**Moodle**

**Basic LTI**

**Simple Outcomes**



**Icodeon**

**Icodeon Platform**

- Common Cartridge Alliance
  - <http://www.imsglobal.org/cc/alliance.html>
- Introduction and Tools
  - Aspect-Website → Demonstrator → Common Cartridge area
  - <http://www.aspect-project.org/node/71>
- Sample Cartridges
  - <http://www.imsglobal.org/developers/alliance/examples.cfm>
- I. Dahn: Common Cartridge is not SCORM
  - <http://www.aspect-project.org/sites/default/files/Common%20Cartridge%20is%20not%20SCORM.pdf>

# Thank You for Your Attention!

- Ingo Dahn [dahn@uni-koblenz.de](mailto:dahn@uni-koblenz.de)
- Warwick Bailey [warwick@icodeon.com](mailto:warwick@icodeon.com)
- Aspect project: <http://www.aspect-project.org>
- Please, see **forum** on the ASPECT web site for further discussion

Icodeon Common Cartridge Platform  
<http://ccplatform.blogspot.com/>

