ENTWICKLUNG DES LON-CAPA-NETZWERKS

Neuerungen (Version 2.11)
und
Blick in die Zukunft

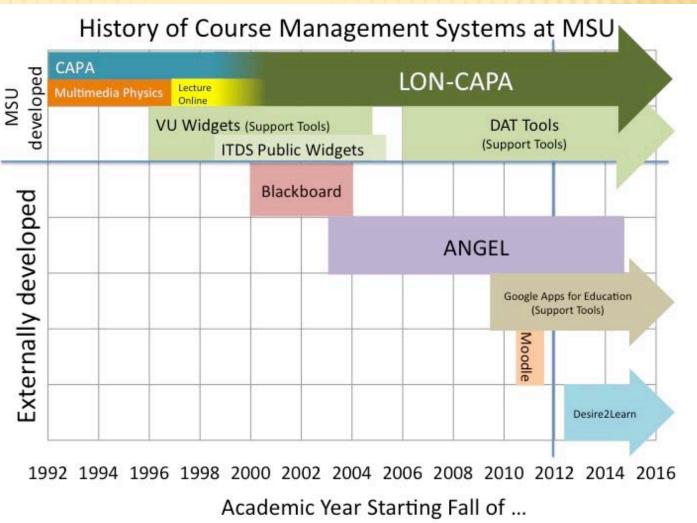
Gerd Kortemeyer

Viele Slides von

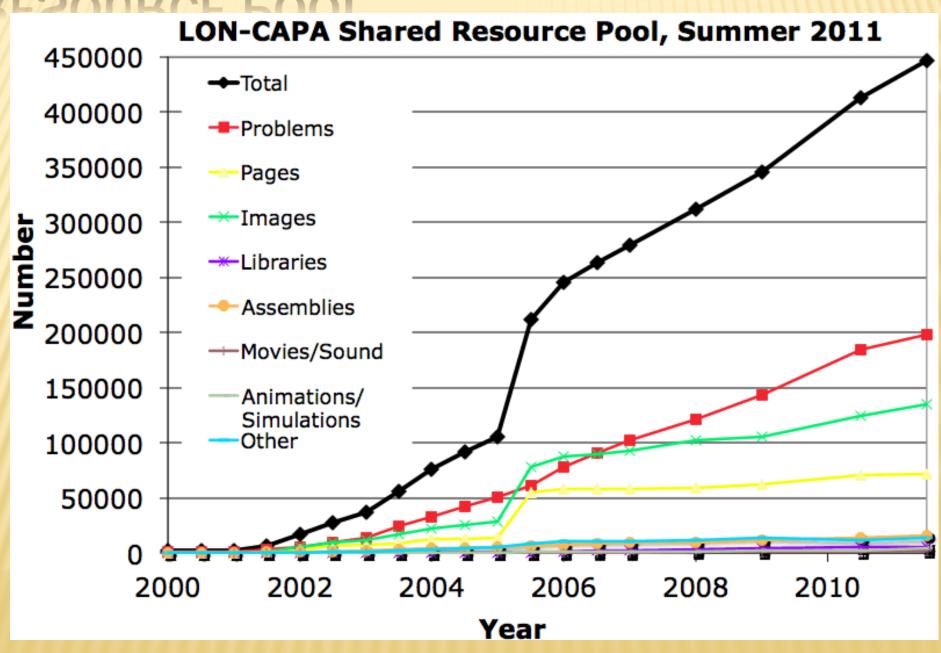
Technical Director Stuart Raeburn

20TH ANNIVERSARY

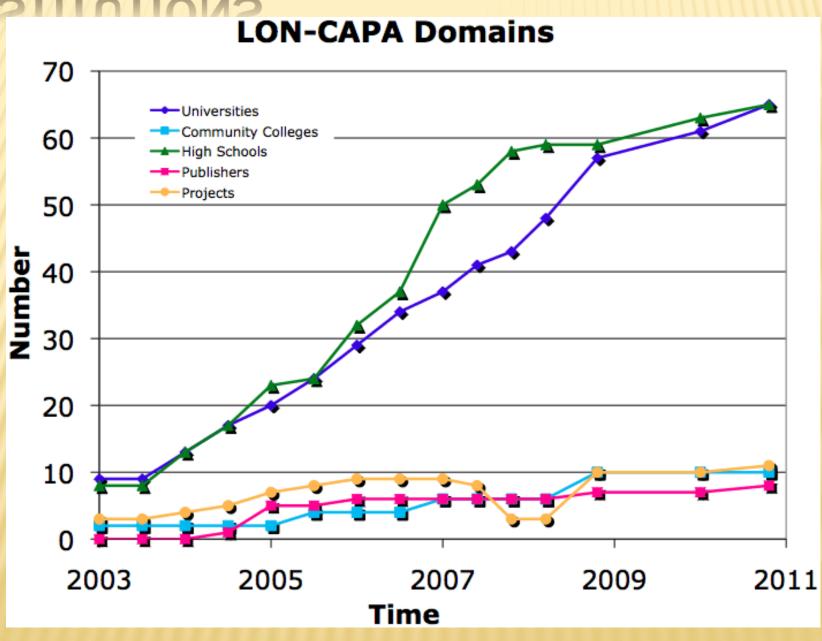
LON-CAPA's 20th anniversary on September 2nd



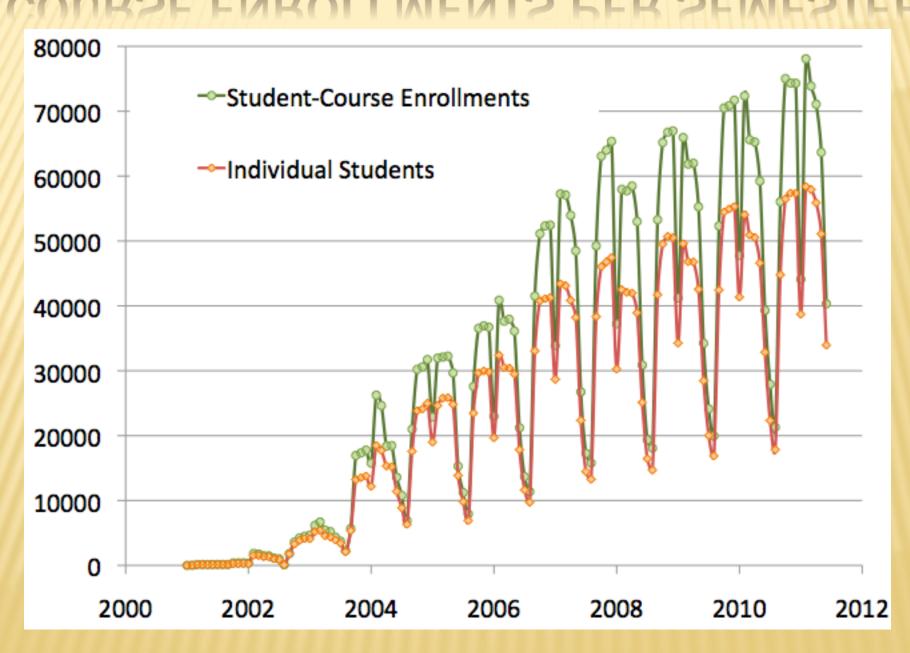
RESOURCE POOL



INSTITUTIONS



COURSE ENROLLMENTS PER SEMESTER



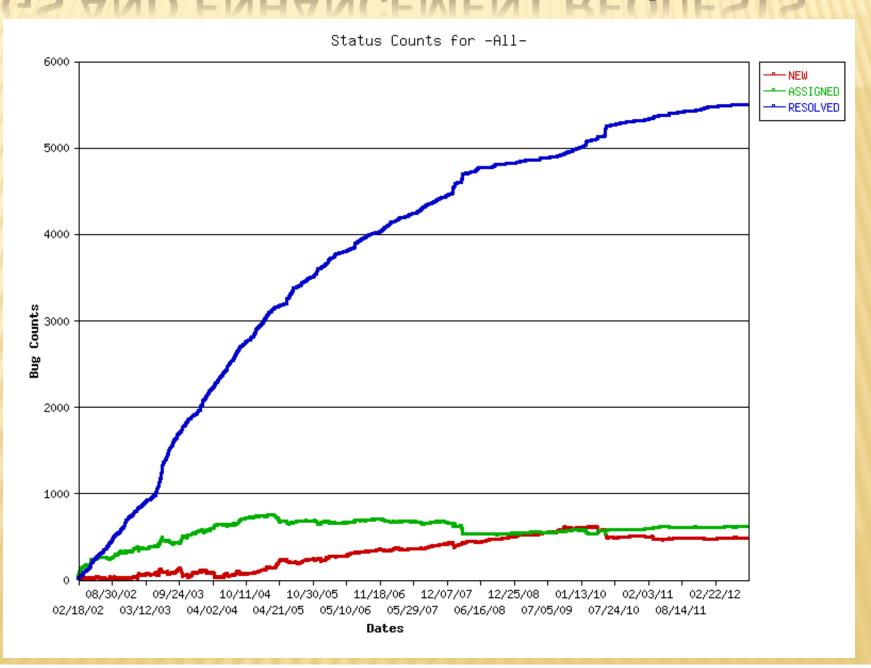
GROWTH

Somehow, LON-CAPA grows linearly in most any aspect

VERSION 2.11

- Version 2.11 being finalized
- NOTE: Some of the new problem features that are presented today are already available in 2.10.1, but "hidden" (not advertised) or not yet completely implemented

BUGS AND ENHANCEMENT REQUESTS



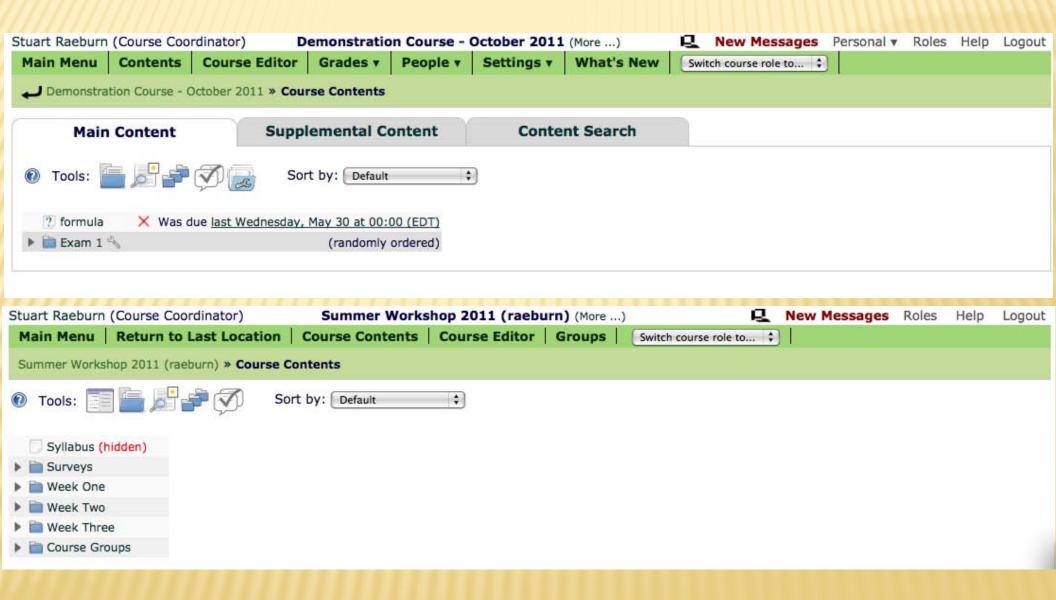
WHAT'S NEW IN 2.11

- Interface changes
- Check for new roles
- Content upload directly to course
 - Upload zip files and decompress
 - Manage dependencies
- Online exams
 - Countdown
 - Content blocking (e.g., timed exams)
- Problems
 - Lenient grading for optionresponse
 - GeoGebra vectors
 - Pre-processing
 - Custom units
- Printouts disabled (printstart and printend)
- Stored Links

WHAT'S NEW IN 2.11

- Authoring Space on multi-domain servers
- WebDAV
- Discussion Voting
- MathJax math renderer
- Bubblesheet format
 - Number of bubbles per line on bubblesheet paper
- Domain Configuration
 - Offloading sessions
 - Dedicated load balancer
- Shibboleth Single Sign On

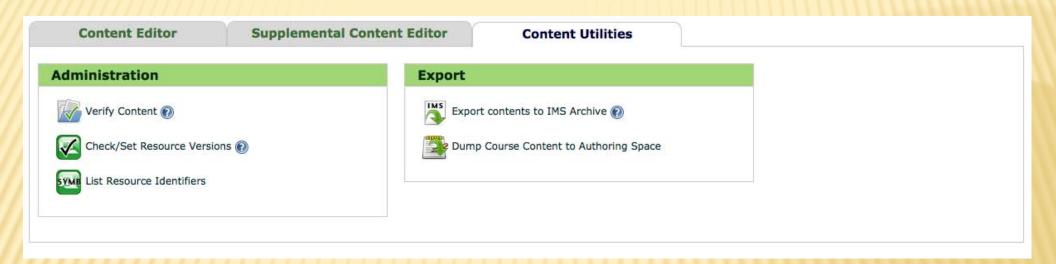
Interface: Contents 2.11 v 2.10



Interface: Content Editor 2.11 v 2.10

in Menu	Contents	Course Edito	Gra	des ▼ F	People v Se	ttings v	What's Nev	V Switch co	urse role to	•)				
Demonstrat	tion Course - O	ctober 2011 » Co	urse Co	ntents						-14		Editing C	Course Cont	ents
Conte	ent Editor	Sup	pleme	ntal Con	tent Editor		Content U	tilities						
ain Cours	e Content													
To Overvie	ew Undo D	elete Histor	Nev	w Folder (Import D	ocuments	Published	Resources	Grading R	esources	Collaborat	ion Sp	ecial Docum	ent
Move		Actions	Do	ocument		Settings								
♦ (1)	Remove Cu	t Rename Copy	?	formula	☐ Hidden ☐ URL hidden									
(2)	Remove Cu	t Rename		Exam 1	Hidden URL hidden		omly Pick om Order							
t Raeburn	(Course Coor	dinator)	,,,	Sum	mer Worksho	p 2011 (ra	aeburn) (Mo	e)		Q	New Mes	sages R	toles Help	N S
n Menu	Return to I	dinator) ast Location urn) » Course I					CONTRACTOR OF THE PARTY OF THE	e) witch course role	: to 🗘	500/3000	New Mes		(20)	
n Menu mer Works	Return to I	ast Location urn) » Course I	ditor	se Conter		Editor G	CONTRACTOR OF THE PARTY OF THE		to 🗘	500/3000			(20)	
n Menu mer Works	Return to I	urn) » Course E	ditor	se Conter	nts Course	Editor G	CONTRACTOR OF THE PARTY OF THE		to ‡)	500/3000			(20)	
mer Works	Return to I	urn) » Course E	ditor	se Conter	ourse Docui	Editor G	CONTRACTOR OF THE PARTY OF THE		to ‡)	500/3000			(20)	
mer Works Main Cou in Course D Move	Return to I shop 2011 (raet urse Docum Documents » V	ents S	ditor	mental C	ourse Docui	editor G	iroups s	witch course role	to ‡)	500/3000			(20)	
Main Course D Move (2) \$ F	Return to I shop 2011 (raet urse Documents » V	ents S /eek Two	uppler supplied	mental C	course Docui	nents	Groups S	witch course role		Editin			(20)	
Main Course D	Return to I shop 2011 (raet urse Docum Documents » V Actions Remove Cut Renai	ents S /eek Two	supplied applied appli	mental C	course Docui	nents	URL hidder	Settings		Editin	g the Table o		(20)	

Interface: Content Editor 2.11 v 2.10





Interface – Check for new roles



Stuart Raeburn	(Author)		/msu/	
Main Menu	Construction Space	Browse		
Menu » User R	oles			
Checking for ne	w roles No role chang	es		

Upload archive files (zip, tar etc.)



Uploaded educogdemo000start.zip

This file is a Camtasia archive file.

LON-CAPA can process the files automatically, or you can decide how each should be handled. Process automatically?

Yes

No

Title for folder containing movie:	Tutorial01
Title for page containing embedded movie:	

Extract contents

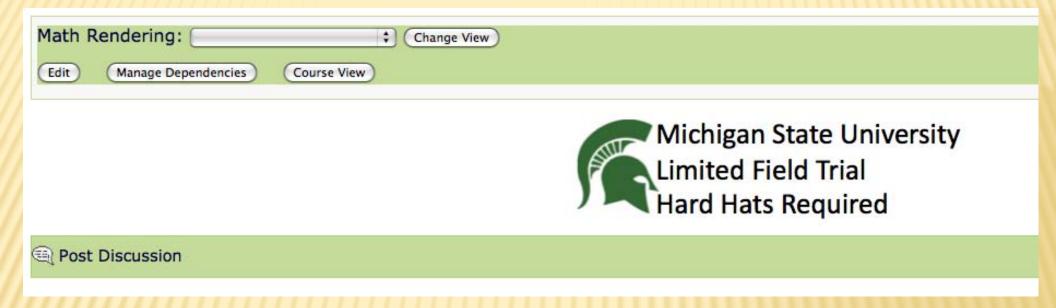
Return to Editor

- Folder: Tutorial01 added to course
- · File: LON-CAPA Intro added to course
- /media included as a dependency
- /media/player.swf included as a dependency
- /media/educogdemo000start.mp4 included as a dependency
- · /media/expressInstall.swf included as a dependency
- /media/swfobject.js included as a dependency
- /media/FirstFrame.png included as a dependency

Archive file removed.

Return to Editor

Managing dependencies



Managing dependencies

Status of dependencies in DemoWebPage (testdrivedemo.html) Uploaded dependencies (in use)

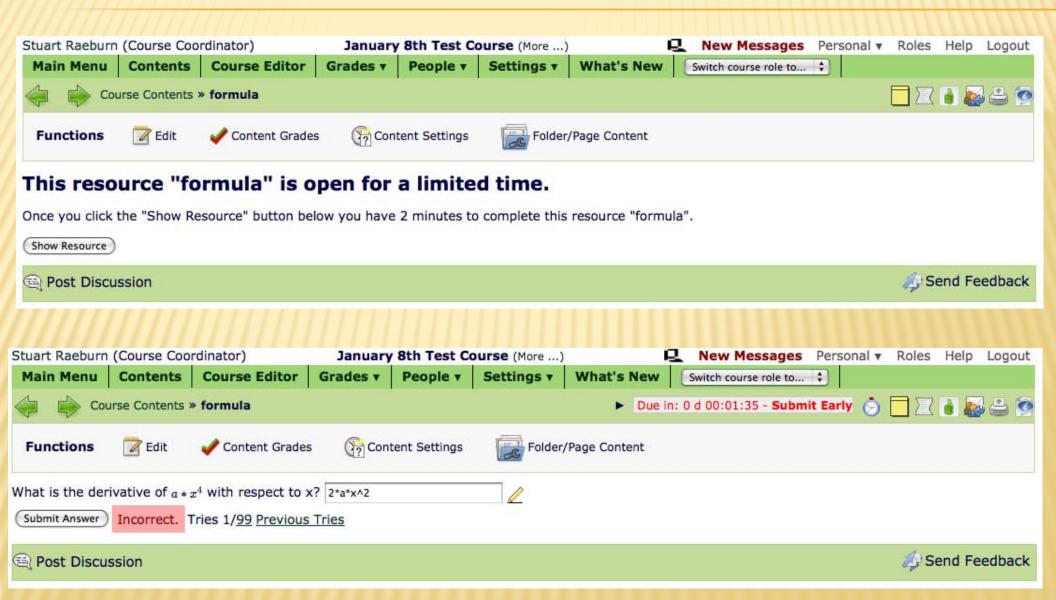
Upload a new file to replace the one currently in use.

File	Size (KB)	Modified	Upload replacement?
images/msutestdrive.gif	8.9	Fri Jun 1 03:33:20 pm 2012 (EDT)	□Yes

Save changes

Close window

COUNTDOWN TIMER



BLOCKING DURING EXAMS



Blocking communication and/or content access during exams

For the duration of an exam, or a timed quiz, students in this course can be prevented from:

- . displaying LON-CAPA messages sent by other students in the course
- . displaying or posting to LON-CAPA discussion boards or live chat in the course
- accessing content in LON-CAPA portfolios or blogs
- · generating printouts of course content
- · accessing course content in specified folders or resources

Blocks can potentially interrupt legitimate communication between students who are also both enrolled in a different LON-CAPA course. Portfolio blocking can impact a student's ability to complete assignments in courses besides your own. Please use this feature wisely.

There are no blocking events currently saved.

Add new blocking event

Save

			Туре				Event e.g., Exam 1	Bloc	ked?
ed Start/End e dates	01	riggered	by Activating	Time	r.	1		The state of the s	☐ Chat Room ☐ Portfolio
June ‡	1	2012	12 noon ‡	40	m 12	s EDT <u>Select Date</u>		Groups	Blogs
June ‡	1	2012	2 pm 💠	40	m 12	s EDT Select Date		■ Printouts	□ Content
	dates	June \$ 1	June \$ 1 2012	June \$ 1 2012 12 noon \$	June	June \$ 1 2012 12 noon \$ 40 m 12	June \$ 1 2012 12 noon \$ 40 m 12 S EDT Select Date	June \$ 1 2012 12 noon \$ 40 m 12 S EDT Select Date	Use dates Discussion Groups

BLOCKING DURING EXAMS

Blocks can potentially interrupt legitimate communication between students who are also both enrolled in a different LON-CAPA course. Portfolio blocking can impact a student's ability to complete assignments in courses besides your own. Please use this feature wisely.

There are no blocking events currently saved.

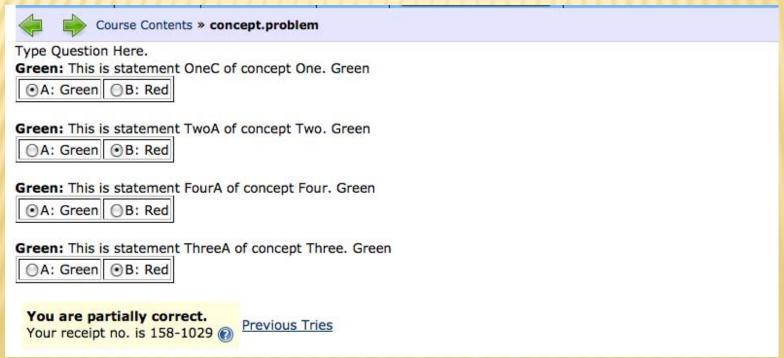
Add new blocking event

Туре	Event e.g., Exam 1	Bloc	ked?
Defined Start/End Triggered by Activating Timer		Messaging	☐ Chat Room
Choose trigger		Discussion	□ Portfolio
○ Timer for resource: formula (in: Main Course Documents)		Groups	■ Blogs
		□ Printouts	□ Content

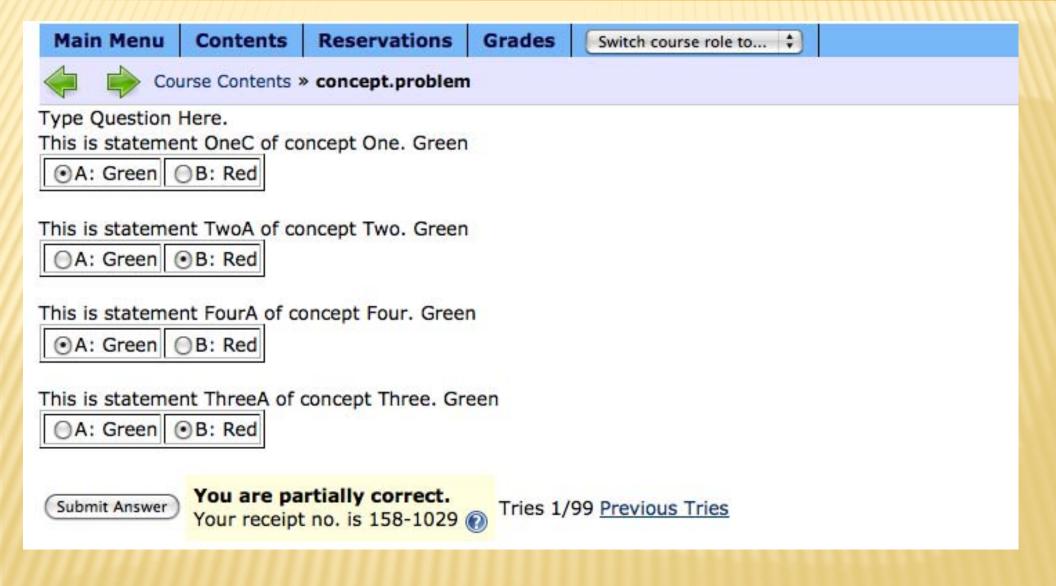
Save

LENIENT GRADING (OPTIONRESPONSE)



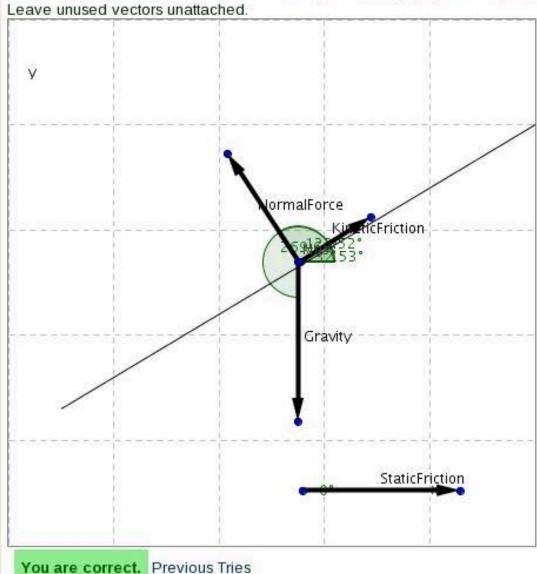


LENIENT GRADING (OPTIONRESPONSE)



GEOGEBRA VECTORS

A mass is sliding down the indicated incline with a constant velocity. Construct the free body diagram, making sure the forces are approximately proportionally correct.



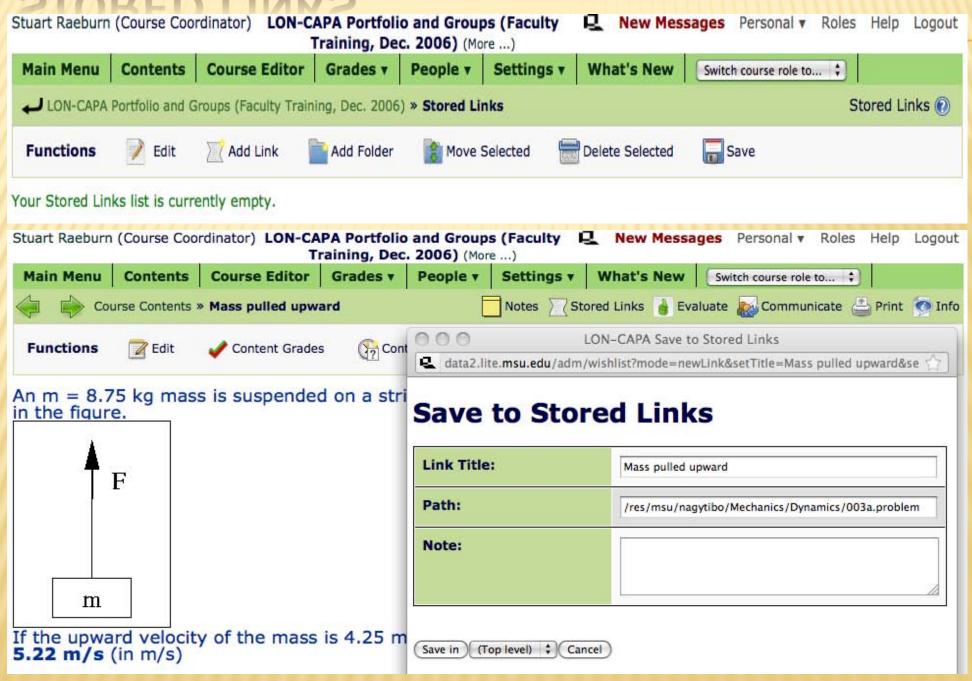
PREPROCESSING

- Process answer before submission
 - + numerical, formula, stringresponse, mathresponse
 - + specify pre-processing subroutine
- Allow numerical response to calculate input line ("3*4+5.5")

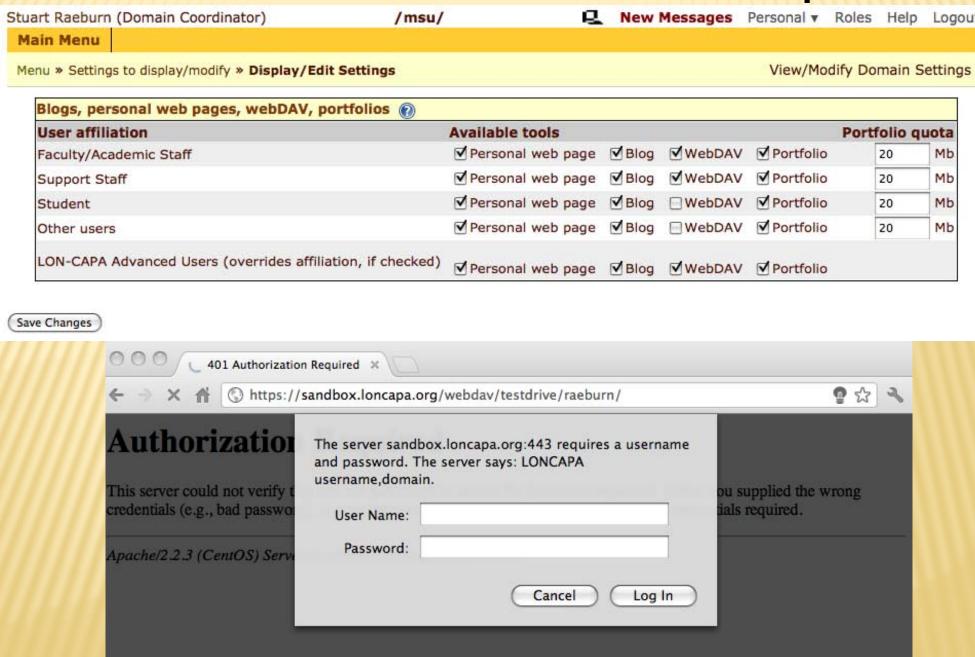
CUSTOM UNITS

- Allow authors to define new units for numericalresponse
 - + Define new unit in terms of old units <startouttext />You go to the market and buy \$pecks peck of apples and \$bushels bushel of potatoes. How much produce did you buy? Note that these are dry goods.<endouttext />
 - + <numericalresponse answer="\$total" unit="L" format="3s"> <responseparam type="tolerance" default="5%" name="tol" description="Numerical Tolerance" />
 - + <responseparam name="customunits" type="string_any" description="Custom-defined Units" default="peck=2*gallon,bushel=8*gallon,gallon=4.4*L" /> <textline readonly="no" /></numericalresponse>

STORED LINKS



WebDAV access to Author Spaces



WEBDAV ACCESS TO AUTHOR SPACES

Index of /webdav/testdrive/raeburn

Name	Last modified	Size	Description
Parent Directory		-	
OU/	03-Nov-2011 11:41	7.2	51
<u>RC1/</u>	25-Aug-2010 11:43	-	
<u>RC2/</u>	06-Jun-2011 11:49		
<u>bug1320/</u>	02-Nov-2011 19:34	-	e.
bug5925/	31-Oct-2011 12:12	7.	83
conceptgrouptemplate.problem	15-Sep-2011 22:11	1.7K	
conf2009/	05-Aug-2010 13:32	87	
flash/	29-Jun-2009 15:32		S
formularesponse.problem	20-Nov-2011 17:27	336	
formularesponse.problem.bak	20-Nov-2011 17:26	320	
formularesponse.problem.log	20-Nov-2011 17:30	933	
formularesponse.problem.meta	20-Nov-2011 17:30	1.2K	
formularesponse.problem.save	20-Nov-2011 17:27	328	

WEBDAY ACCESS TO AUTHOR SPACES



WEBDAV ACCESS TO AUTHOR SPACES

100			id Id	neburn			
4					Q		
DEVICES		2445	Name	▲ Date Modified	Size	Kind	
Macintosh HD	>		bug1320	Nov 2, 2011, 7:34 PM		Folder	
iDisk	>		bug5925	Oct 31, 2011, 12:12 PM		Folder	
E IDISK			conceptgrouptemplate.problem	Sep 15, 2011, 10:11 PM	2 KB	TextWment	
SHARED	>		conf2009	Aug 5, 2010, 1:32 PM	12	Folder	
■ sandbox.l ▲	>	-	flash	Jun 29, 2009, 3:32 PM		Folder	
bbmonurh-tw			formularesponse.problem	Nov 20, 2011, 5:27 PM	1 KB	TextWment	
E bonionani tii			formularesponse.problem.bak	Nov 20, 2011, 5:26 PM	1 KB	Bluefiument	
PLACES			formularesponse.problem.log	Nov 20, 2011, 5:30 PM	1 KB	Log File	
Desktop			formularesponse.problem.meta	Nov 20, 2011, 5:30 PM	2 KB	TextWment	
raeburn			formularesponse.problem.save	Nov 20, 2011, 5:27 PM	1 KB	Unixble File	
Applications			functionplot.problem	Sep 24, 2011, 2:05 PM	3 KB	TextWment	
Documents			handback.problem	Sep 20, 2011, 1:40 PM	2 KB	TextWment	
Documents		-	handback.problem.bak	Sep 20, 2011, 1:40 PM	2 KB	Bluefiument	
SEARCH FOR		1	handback.problem.log	Sep 20, 2011, 1:40 PM	5 KB	Log File	
O Taday	ii.		handback.problem.meta	Sep 20, 2011, 1:40 PM	5 KB	TextWment	

DISCUSSION VOTING

Threaded View Chronological View Other Views ... Export Undelete all deleted entries

My general preferences on what is marked as NEW Mark NEW posts no longer new

NEW Example Stuart Raeburn (raeburn:testdrive) Hide Delete Reply Submissions (Fri Jun 1 12:59:12 pm 2012 (EDT))

The answer to each of these items is available within the text.



_ (1 likes)

My settings for this discussion: 1. Display - All posts 2. Not new - Once marked not NEW Change

Threaded View Chronological View Other Views ... Export Undelete all deleted entries

My general preferences on what is marked as NEW Mark NEW posts no longer new

MATHJAX - MATH RENDERER

Stuart Raeburn	(Course Coo	rdinator)		Jan	uary 8th Test	Course (More)
Main Menu	Main Menu Contents Course Editor			People ▼	Settings v	What's New	Switch course role to 💠
January 8ti	n Test Course	Set User Preference	es » Math dis	play settings			
Change h	ow mat	h is display	ed				
Preferred methods	od to display	math: [jsMath		•			
Examples							

$$E_{ ext{tot}} = \sum_{i=1}^N rac{m_i c^2}{\sqrt{1-rac{v_i^2}{c^2}}} = \sum_{i=1}^N \gamma_i m_i c^2$$

MathJax provides rendered equations whose source code can be extracted in TeX and MathML formats by right clicking the equation.

DOMAIN COORDINATION

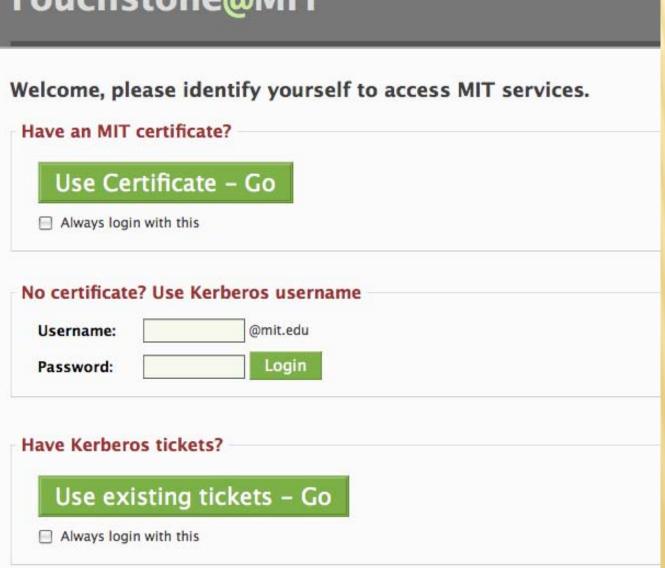
User session hosting/offloading 🔞				
Domain server	*******		Servers to offload sessions to whe	n busy
msu1 when busy, offloads to:	primary default	None specified None specified	Add new primary: Select \$ Add new default: Select \$	
testdrive4 when busy, offloads to:	primary default	None specified None specified	Session offloading controlled by domain: testdrive	
Hosting of users from other domain	S			Rules
Nothing to set here, as the cluster to wi	hich this doma	ain belongs only o	ontains one institution.	
Hosting domain's own users elsewh	ere			Rules
Nothing to set here, as the cluster to wi	hich this doma	ain belongs only o	ontains one institution.	

DOMAIN COORDINATION

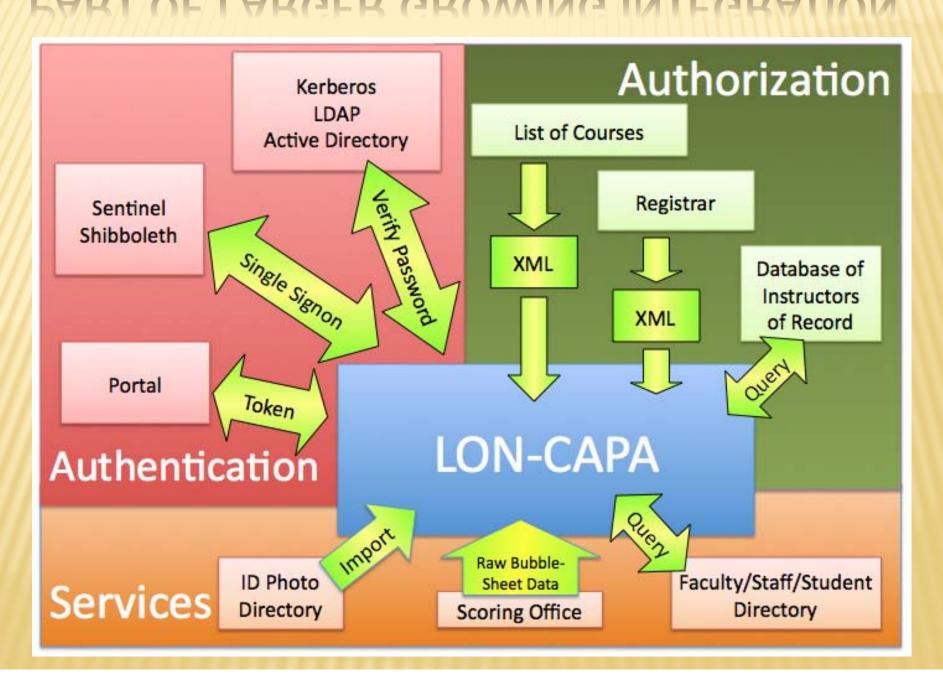
Server	Default destinations	User affliation	Overrides
testdrive4 💠	Offloads to: primary ✓ msu1	Faculty/Academic Staff	 Offloads to default destinations Offloads to user's home server Offloads to specific server: No offload
	default ☐ msu1	Support Staff	 Offloads to default destinations Offloads to user's home server Offloads to specific server: No offload
		Student	 Offloads to default destinations Offloads to user's home server Offloads to specific server: No offload
		Other users from msu	 Offloads to default destinations Offloads to user's home server Offloads to specific server: No offload
		Advanced users from msu	 Offloads to default destinations Offloads to user's home server Offloads to specific server: No offload
		Users from msu with author role	 Offloads to default destinations Offloads to user's home server Offloads to specific server: No offload

SHIBBOLETH SSO

Touchstone@MIT



... PART OF LARGER GROWING INTEGRATION



... UND BLICK AUF DIE ZUKUNFT

What's down the road?



+ CourseWeaver Project



RECOMMENDER

Like in online stores



Based on usage information: context, access statistics

RECOMMENDER

Search

accounting (640) advertising (2.000) astronomy (6.000) biochemistry (2.200) biology (50.000) botany (89.000) chemistry (36.000) computerscience (1.200) design (450) ecology (1.700) engineering (2.200) finance (1.600) geology (2.400) geometry (550) history (260) languages (13) mathematics (12.000) medicine (5.100) nursing (8) nutrition (590) philosophy (10) physics (110.000) psychology (530) statistics (3.100) zoology (220)

Checkout

Your cart (8 item(s))

Filter Lists Problems \$

			Recommendations
Ne	ext .		
Ac	Id msu-prob16.problem	physics:mechanics:linearkinematics	/ msu / physicslib / msuphysicslib / 05_1D_Motion / msu-prob16.problem
Ac	ld msu-prob54.problem	physics:mechanics:linearkinematics	/ msu / physicslib / msuphysicslib / 05_1D_Motion / msu-prob54.problem
Ac	Id msu-prob55.problem	physics:mechanics:linearkinematics	/ msu / physicslib / msuphysicslib / 05_1D_Motion / msu-prob55.problem
Ac	ld msu-prob38.problem	physics:mechanics:linearkinematics	/ msu / physicslib / msuphysicslib / 08_2D_Motion_and_Motion_in_a_Circle / msu-prob38.problem
Ac	Id msu-prob40.problem	physics:mechanics:linearkinematics	/ msu / physicslib / msuphysicslib / 05_1D_Motion / msu-prob40.problem
Ac	Id msu-prob38.problem	physics:mechanics:linearkinematics	/ msu / physicslib / msuphysicslib / 05_1D_Motion / msu-prob38.problem
Ac	Id msu-prob53.problem	physics:mechanics:linearkinematics	/ msu / physicslib / msuphysicslib / 05_1D_Motion / msu-prob53.problem
Ac	Id msu-prob01.problem	physics:introduction:mathematics	/ msu / physicslib / msuphysicslib / 07_Vector_Calculus / msu-prob01.problem
Ac	Id msu-prob10.problem	physics:mechanics	/ msu / physicslib / msuphysicslib / 06_Vectors_Scalars / msu-prob10.problem
Ac	Id msu-prob09.problem	<u>physics</u>	/ msu / physicslib / msuphysicslib / 01_Math_1 / msu-prob09.problem
Ac	ld msu-prob33.problem	physics:mechanics:linearkinematics	/ msu / physicslib / msuphysicslib / 05_1D_Motion / msu-prob33.problem
Ac	<mark>ld</mark> <u>SpeedTimeHist.problen</u>	physics:mechanics:linearkinematics	/ msu / kashy / physicsLib02 / 05_1D_Motion / SpeedTimeHist.problem
Ac	Id msu-prob16.problem	physics:mechanics	/ msu / physicslib / msuphysicslib / 03 Units Scaling / msu-prob16.problem
Ac	Id msu-prob46.problem	physics:mechanics:linearkinematics	/ msu / physicslib / msuphysicslib / 05_1D_Motion / msu-prob46.problem
Ac	id msu-prob11.problem	physics:mechanics:linearmomentum	/ msu / physicslib / msuphysicslib / 16_Momentum / msu-prob11.problem
Ac	Id msu-prob03.problem	physics:mechanics:lineardynamics	/ msu / physicslib / msuphysicslib / 09_Force_and_Motion / msu-prob03.problem
Ac	ld msu-prob43.problem	physics:mechanics:linearkinematics	/ msu / physicslib / msuphysicslib / 08_2D_Motion_and_Motion_in_a_Circle / msu-prob43.problem
Ac	AccelerationHist.proble	n physics:mechanics:linearkinematics	/ msu / kashy / physicsLib02 / 05_1D_Motion / AccelerationHist.problem
Ac	ld msu-prob44.problem	physics:mechanics	/ msu / physicslib / msuphysicslib / 08_2D_Motion_and_Motion_in_a_Circle / msu-prob44.problem
Ac	Id msu-prob08.problem	<u>physics</u>	/ msu / physicslib / msuphysicslib / 07_Vector_Calculus / msu-prob08.problem
Ne	ext		

RECOMMENDER

- Prototype on one server in the network:
- http://vita2.ostfalia.de/
- Login using your normal credentials (replace "Domain" by your domain)
- Go to Course Editor
- Click on Import

- Next generation of LON-CAPA
- CourseWeaver
- http://www.courseweaver.org/
- Officially launched at LON-CAPA Conference at UIUC, June 2012

Course•Weav•er /kōrs-wē'vər/ n. 1. A system for combining modular educational content from various sources into a unit of curriculum. 2 a. A repository for open, shared, and licensed educational content. b. A system for publishing and managing such content. 3 a. A system for integrated formative and summative assessment. b. A system for assessing educational content. 4. A system to manage a course. 5. The right thing to do.

court /kôrt / n 1 The residence of a sovereign or dignitary, 2. A manor or large building surrounded by

Home

Concept

Content

Users

Course Management

System

About

Search

Welcome to CourseWeaver!

Next Generation Free Open-Source Learning Content and Course Management

We are ready to build the next generation learning content management: a sustainable economy for online educational content, which will

weave (wev), v., wove or (esp. for r. weath-er-worm weaved; wo-ven or wove; weav-ing; n. -v.t. 1. to interlace (threads, yarns, strips, fibrous material, etc.) so as to form a fabric or material. 2. to form by such interlacing: to weave a basket; to weave cloth. 3. (of a spider or lava) to spin (a web or cocoon). 4. to form by combining various elements or details into a connected whole: to weave a tale. 5. to introduce as an element into a connected whole (usu. fol. by in or into): to weave a folk song into a musical comedy. 6. to combine (two or more things) so as to form a whole. 7. to make or move obs winding or zigzagging, esp. v.i. 8. to form or winding or zigzagging. —v.i. 8. to elements.

winding or cowded room. —visite elements.

a crowded room. —visite elements.

for interlacing for interlacing side. COURSEWEAVER

Next Generation Learning Content Management

WHAT WE ARE ABOUT

analytics architecture
assessment authors
blended cloud collaboration

content course

course management

crowd-sourcing data mining deployment discussions enterprise

experience expertise

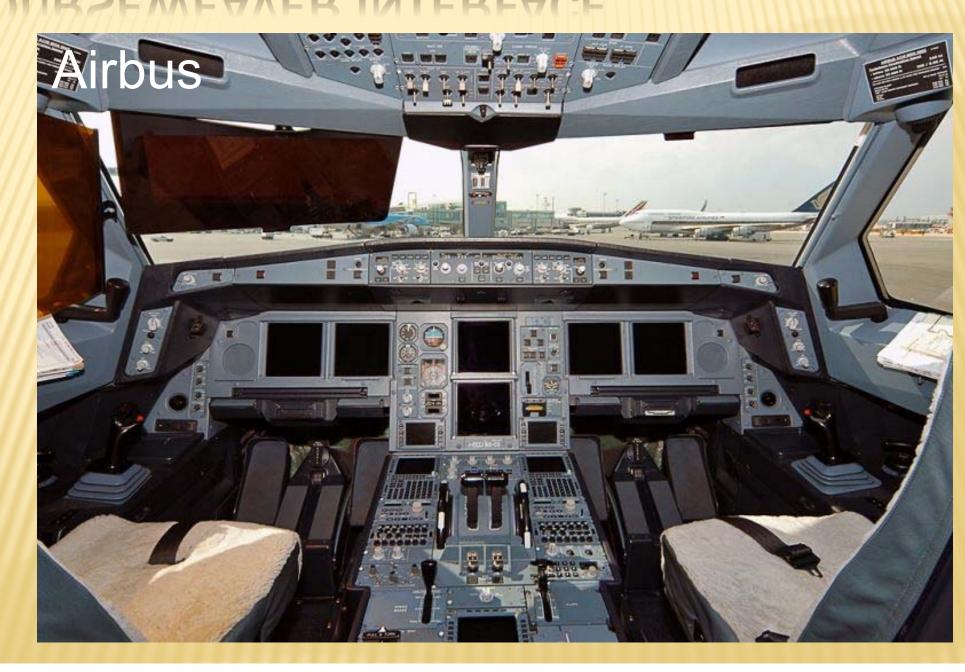
formative free granularity
higher education innovation
instructors integration learners
learning machine room
management massively

- Updated infrastructure
 - + Dynamic cloud
- Better rights management
- Better information flow for dynamic metadata
- Cleanup, cleanup, ...
- Commercial content?
- Interface changes

LON-CAPA INTERFACE



COURSEWEAVER INTERFACE



- **×** Estimates:
 - + Four years
 - + Four million dollars



THANKS!

- * Gerd Kortemeyer kortemey@msu.edu
- Stuart Raeburn raeburn@msu.edu