Content Delivery Network

Project Overview

Proposal project lead / contact person (Name, title, institution, e-mail, phone)

Role	Name	Title	Organization	Email	Phone
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Second	Dr. Jeff Delaney	Assoc. VC of Operations, ITS	University System of Georgia	Jeff.delaney@usg.edu	706-583-2155
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Project category - Category 1 - Proof of Concept or Start-up

Overview of project (150 words or less)
The Content Delivery Network project will allow faculty to create course content in a learning object fashion. The project will include a series of Web applications to support faculty and instructional designers who create learning objects and catalog them for maximum reusability via a Content Delivery Network. Instructors, faculty and other course designers/developers can design courses by leveraging learning objects designed by multiple contributors. Learning objects can be documents, graphic files, multimedia, and other executable files that can be played from a student's PC.
The CDN project will comprise of modules for Learning Object Generation, Learning Object Administration and finally Learning Object dissemination to students.

Impact on completion (150 words or less)
The model for creation of the learning (object) content is localized and left to the discretion of individual faculty members. Each faculty member spends approximately 5-10 hours per week on activities related to content (content generation, cataloging, providing maintenance and dissemination). For a school with 200 faculty members, that's an average of 1000-2000 hours/week in total.

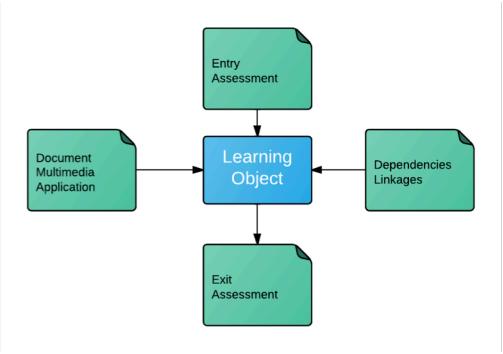
The Content Delivery Network allows faculty members to create reusable course content and share it with other faculty members using a Web portal. Completion of this project can improve efficiencies with the creation of learning content and delivery of content to students. The goal of this project is to move the content generation and content maintenance responsibilities from every faculty member to just a few members. We expect that after this project, the average time spent by an individual faculty member on content related activities will be reduced to 3-5 hours/week.

Potential lessons to be learned (150 words or less)

We expect to learn the following lessons from this project: (i) best ways to catalog content, (ii) best ways to build learning objects, and (iii) best ways to administer the learning objects to make them reusable across mulitple courses. This process can be a daunting task to take up for all the courses in the catalog – so SPSU will take up an incremental/phased approach. Investigators will select a few departments that are willing to leverage this design for course content and design and implement standards and best practices using a template based approach.

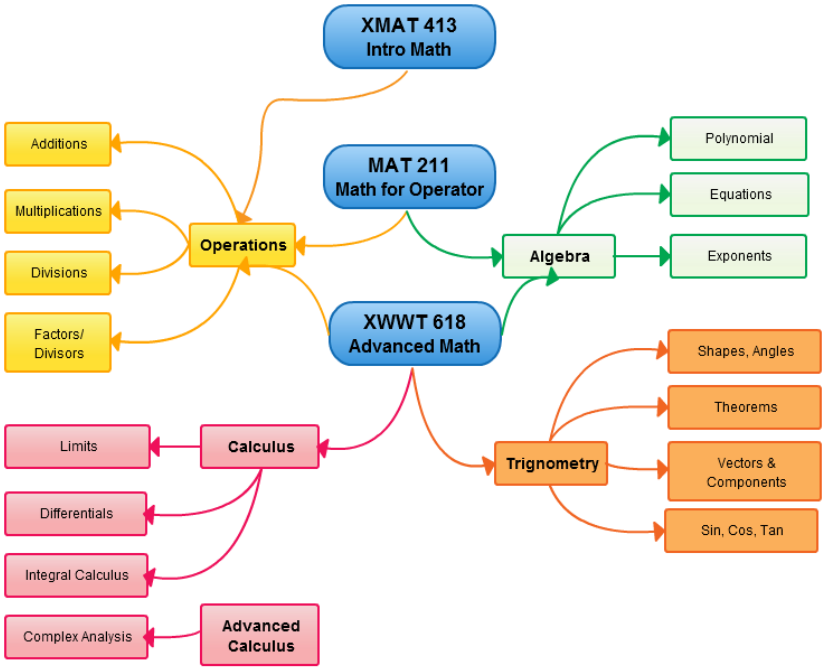
Area of need and defined potential impact on completion

Educational Institutions in GA and throughout US are currently looking for better ways to cope with decreasing enrollment, dropping graduation rates and dwindling funds from state and federal budgets. One of the most important areas of focus for the leadership of Higher Education is to identify the potential ways by which they can reduce costs and increase efficiencies at the educational institutions. Most surveys have shown that Institutions spend majority of their budget on faculty and infrastructure to support learning. The faculty costs continue to rise because of the brick and mortar model of Higher Education – even though the course catalog, curriculum and other base foundation is formalized and standardized; the course content and delivery is left to individual faculty members. The instructors spend a significant amount of their time on finding references, building course content, maintaining course content and administering the content. Most educational institutions believe that the learning environment for students can be significantly improved if the faculty can share the content amongst themselves. Some institutions have also started the process of flipped classrooms where the instructor advises the students to get acclimatized with the course content ahead of the class and discuss the course when they come to class.



The Content Delivery Network project aims at the providing an infrastructure to support faculty, instructors and instructional designers to generate learning content in a reusable learning object fashion.

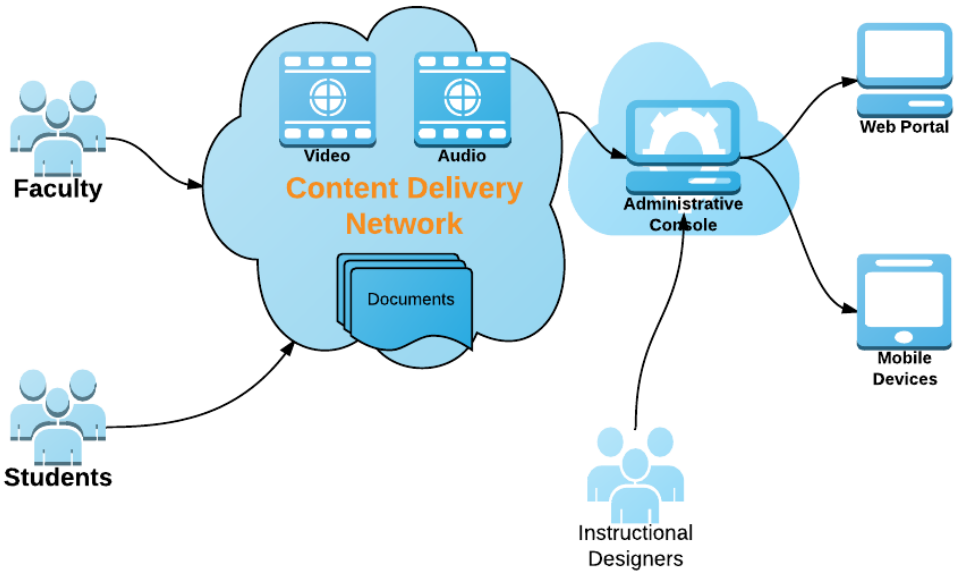
Illustration demonstrating the Reusable Learning Object Model



The CDN product suite will comprise of the following application modules –

1. **Faculty/Learning Object Designer Module** – This module allows the faculty member to generate the Learning Objects and submit it for review.
2. **Instructional Designer/Administrator Module** – This module allows the Instructional designers to edit the learning object, meta data, key words and catalog it as per institution's standards and conventions
3. **Course Designer Module** – This module helps the instructors to generate the courseware and build the classes based on their personal preferences and recommendations. The instructors can add assessments, and drag multiple learning objects from the CDN or use the resources available on the Internet.
4. **Student/Course Consumer Module** – students can use view the learning objects, take pre-assessments and get familiarized with related course topics and references

High Level Vision of the Content Delivery Network



Potential for lessons learned and models for other institutions

Other institutions can adopt the CDN design and approach to implement reusability between Learning content and course material. Once this is implemented, University System of Georgia can implement a consortia model at the level of the System Office to promote sharing of content and courseware between participating institutions.

This level of collaboration can have multiple benefits. Some of them are included below

1. Institutions will have the ability to generate their learning content to support adaptive learning, flipped classrooms and other educational transformation initiatives. These initiatives have been proven to support better progression and graduation rates for students.
2. CDN will provide the institutions capability to share the content internally for reusable learning content. The reusable learning content model has potential to reduce cost of content generation. It also frees up instructors time to spend more time on student interaction and learning management instead of content management and administration.
3. Educational institutions will be able to share their learning content and with other schools in the System
4. CDNs will provide potential for institutions to exchange their content and possibly sell it to other institutions (similar to coursers and udacity model)

Project Plan

Project Phase	Activities	Milestones	Timeline
Phase 1	Faculty Content Generation Module	Web App for Content Generation	April 1st, 2013 to June 1st, 2013
Phase 2	Instructional Designer Module	Web App for Content Review and Edits	May 1st, 2013 to July 1st, 2013
Phase 3	Student Module	Web App for students to view Learning Module	August 1st 2013 to December 1st, 2013
Phase 4	Adaptive Learning Module	Adaptive Learning and Flipped Classroom Modules	August 1st 2013 to December 1st, 2013
Phase 5	Mobile Learning	All modules will be accessible from Mobile Devices	December 1st 2013 to February 1st 2014
Phase 6	Learning Exchange and Consortia	Ability for institutions to exchange content to other institutions	February 1st 2014 to April 1st 2014