

Creating Enhanced Podcast Virtual Lectures

Using Enhanced Podcasts and PowerPoint to Deliver Online Modular Lectures

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Abstract:

This report proposes a methodology that can be used to create enhanced podcast lectures using PowerPoint and audio podcasting tools. Podcasting is a new and exciting multimedia Web delivery protocol accessible to anyone with an Internet connection. Enhanced podcasts can be created on both Windows and Macintosh platforms by anyone with a microphone and an audio input, and one does not require an iPod to view or listen to a podcast (listening and viewing is possible through the free cross-platform iTunes program.)

The process starts by digitally recording audio lectures (using a wireless Lavalier microphone and a boundary microphone connected to a MAudio MicroTrack recorder.) Relevant PowerPoint slides from the recorded lecture can be converted into static graphic files (.png or .jpg) then combined with the audio recordings to create an enhanced podcast. Posting the podcasts to the Web makes the content accessible to anyone.

I plan to slice my normal 50-minute lectures into more manageable "learning modules" of no more than ten minutes length. Students would need to listen to a lecture module on "electrons" only instead of listening to the entire lecture on "atoms", for example.

Instructions and examples of creating enhanced podcasts from my PowerPoint lectures will be provided. This methodology is applicable towards all faculty and staff interested in podcasting and creating podcast lectures.

Note that this document may be viewed on the World Wide Web: <http://gst-d2L.com/TLC>

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Thank you for considering my request. If I can answer any additional questions you might have, please contact me. Thank you for your time,

Michael Russell, Ph.D.

I. Project Goals:

Creating an "in class" lecture experience for web-based distance learning students can be problematic. To address this problem, a variety of "**virtual lecture**" tools are available (including PowerPoint HTML files, PDF outlines, etc.) which attempt to recreate the live classroom experience, but none have approached the level of instruction and interaction quality that a regular lecture provides. It would be wonderful to have a "virtual lecture" capable of transferring some of the "live lecture" ambiance into a digitally recorded medium. This would benefit not only the distance-learning students but also "traditional" students who happen to miss a class due to illness or personal emergencies.

Enhanced podcasts provide a worthy avenue for exploring the creation of virtual lectures. Podcasts are audio streams posted to the Web and listenable by anyone (Mac, Windows, etc.) who wishes to download them. **Enhanced podcasts** are audio recordings with chapter markers used to delineate long passages into shorter segments. Each chapter can have a picture associated with it (and web link) using relatively inexpensive software. If a high quality audio recording of a lecture were to be made, one could incorporate a static image of a PowerPoint slide into an enhanced podcast at the chapter marker. This would provide a cross-platform (Mac and Windows) medium for a virtual lecture that should give the student the "essence" of a traditional face-to-face lecture.

Audio quality is important, and a two-microphone system (consisting of a wireless Lavalier microphone focused on the lecturer and a "boundary" microphone to collect the sounds of the audience) will be used to record the audio in a digital format. In addition, the virtual lectures should be focused on one or two topics only (a "modular" approach), keeping the podcast file size small (faster downloads) and making information retrieval for the student easier.

The "*Creating Enhanced Podcast Virtual Lectures*" project proposes to explore the methodology needed to create virtual lectures from audio recordings of lectures and PowerPoint slides using the enhanced podcasting medium. The proposal can be divided into three goals:

- Goal #1 of the project will be to explain the differences between regular podcasts, enhanced podcasts (the focus of this proposal) and vodcasts (video podcasts). A comparison of the benefits of each methodology will be provided, and a brief review of available software (both commercial and freeware) for the creation of podcasts will be given.
- Goal #2 of the "*Creating Enhanced Podcast Virtual Lectures*" project will be to create several examples of enhanced podcast virtual lectures. Technical details of the creation process will be provided for both Windows and Macintosh platforms. An explanation of the rationale for the modular approach to enhanced podcast creation will be supplied.
- Goal #3 will be to actively encourage other faculty and staff members to create their own enhanced podcast virtual lectures. The goal will be accomplished through a variety of mediums: a **written paper** outlining the research performed and results obtained for this project (which will be released to the TLC when completed); an **oral presentation** (to be arranged with the TLC, possibly for Spring Term 2006); a **web site** with accompanying materials (<http://gst-d2L.com/TLC>); and a **commitment to assist other faculty and staff** members to create their own enhanced podcast virtual lectures.

It is not enough to simply present the material; providing a forum by which interested faculty members can ask questions and receive answers is essential to the goals of this project. The primary goal is to explore the creation of enhanced podcast virtual lectures within the context of the MHCC community. I will do everything

in my power to help others accomplish this goal.

II. TLC Goals:

The "*Creating Enhanced Podcast Virtual Lectures*" project discussed above fits well into the Teaching and Learning Cooperative's two primary directives:

Directive #1, "*Developing and sustaining effective teaching and learning with the emphasis on student learning*", is followed absolutely in each of the project goals listed above. The first goal, providing an overview of podcasting, is necessary to enlighten faculty members about this new technology (podcasting) and how it might enhance student learning (through video, audio, etc.) in their classes. The second goal, creating the enhanced podcast virtual lecture, will allow instructors to actually create the virtual lectures which will address a greater quantity of student learning styles by offering students an additional accessible learning tool. In addition, "traditional" face-to-face students will benefit from the virtual lecture by using them when they are absent from lectures or as a lecture augmentation device. The primary goal of this project is to enhance student learning and teaching effectiveness; the medium by which this will occur is through a novel application of enhanced podcasts for creating online virtual lectures.

Directive #2, "*Ensuring broad applicability throughout the MHCC teaching and learning community*", will be followed closely as well. All of my protocols and instructions are available free of charge to any learning community that wishes them, be they from Mt. Hood Community College or elsewhere. I will be sharing my results with my colleagues through a written paper, a web site (<http://gst-d2L.com/TLC>) and a presentation on the MHCC campus during late spring 2006. I am always available for comments and questions, and I am committed to instructor success as much as I am committed to maximizing the power of student learning.

III. Innovation:

The ART 279 collective (Chris Maier, Jack Schommer, and JD Kiggins) have created a podcast series for their students, but they are not "virtual lectures." ART 279's podcasts provide a "weekly review" for their students, and although they are very interesting, the podcasts are not "virtual lectures" by any means. This TLC Innovation Grant wishes to extend the possibilities of the enhanced podcast by creating reusable virtual lectures using recorded lectures and images from PowerPoint lectures, a feat not attempted anywhere else in the world to the best of my knowledge.

The basic tools necessary for creating enhanced podcast virtual lectures are available to the MHCC community. Most recent computers have a sound input port that can act as a digital recorder for podcasts. QuickTime is important for recording and compressing audio files, and it is a free cross-platform program. PowerPoint (if needed) is a standard component of Microsoft Office that is available through Computer Services. The tools necessary for creating enhanced podcasts can be found online (ChapterToolMe, etc.) All that is needed is a vanguard to lead the way, mastering the technical obstacles and sharing the results with everyone interested in developing enhanced podcast virtual lectures, and I would be honored to be MHCC's vanguard!

IV. Evaluation:

I hope to create several examples of enhanced podcast virtual lectures created from my own PowerPoint lectures in my Chemistry 222 General Chemistry II Winter 2006 class. These modular lectures will focus on one or two topics exclusively and shall be no more than ten minutes in length. I will also provide detailed instructions on how to create these presentations using PowerPoint and various audio enhancement tools (SoundTrack, Audacity, etc.), and these instructions will be applicable to both Windows and Macintosh formats. This methodology will also be useful to people wishing to learn about podcasting in general.

Testing the enhanced podcast virtual lectures on an audience is mandatory. I have a small contingent of students who have volunteered to "test drive" the virtual lectures for me, telling me what they like, do not like, and possible improvements, especially when compared to the original PowerPoint lectures.

V. Post-project Responsibilities:

A presentation will be arranged at the end of Spring Term 2006 for interested faculty and staff regarding the creation of enhanced podcast lectures. A formal paper outlining the specific details of this project shall be created and distributed to interested parties. A web site for my proposal (<http://gst-d2L.com/TLC>) will contain these documents as well as any other pertinent information. In addition, I can always be reached for personal consultation either through electronic mail (russellm@mhcc.edu) or telephone (503.491.7348), and multiple presentations can be arranged to meet the interests and expectations of the MHCC community - I am happy to share the knowledge gained!

VI. Progress and Timeline:

All of the plans outlined in the Project Goals section will be complete by June of 2006. The results of the project will be available for colleagues at this time. This project should be completely finished - including the paper, presentation, and all research - by June of 2006. All of the timelines are dependant on the TLC's wishes - I am *very* flexible.

VII. Use of Funds:

Personnel:	\$800
Materials:	\$0
Total:	\$800

Learning the hardware and software protocols required to create enhanced podcast virtual lectures will take considerable time, especially when applied to the Windows platform. Although I have some experience with PowerPoint and audio techniques, I am completely unfamiliar with the process of creating enhanced podcasts, and my experience with two-microphone recording sessions (used during a lecture recording) is nonexistent.

I believe that the ability to make enhanced podcast virtual lectures would benefit the entire MHCC community. It would provide an additional learning opportunity for our students and keep MHCC technologically competitive with other colleges. All I need are the resources to get started!

VIII. Personal Comment:

I appreciate your time in considering my request. If I can answer any questions that this paper does not address, please feel free to contact me using the information given below. Thank you for your time,

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