


**Low Cost & Practical
Methodology for Internet
Classroom Presentations**

By Ken Ekegren



A Profile of our Current Students

- **Working on Associate Degrees**
- **Average age is 29**
- **Majority are part-time students**
 - With full time jobs
- **And most of the full time students**
 - have part-time jobs
- **Time is at a premium**

So what's the problem?

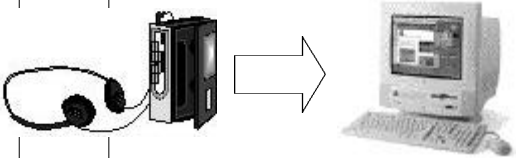
- **Students miss an occasional class:**
 - Work related business trips
 - Shift changes or unexpected overtime
 - Family schedule conflicts
- **Students miss first week of class:**
 - Late registration
 - “Just found out about the class”

How can we help these students?

- **Record lectures during class**
- **Make those lectures accessible over the Internet**
 - Allows students to “attend” class even if they missed it.
 - Hear the introduction to the course and syllabus overview

What's the solution?

- **The Audio Lecture System**
 - A low cost way to place recorded lectures onto the Internet



The Audio Lecture System

- **Based on the following parameters:**
 - Make simple use of current technology
 - Minimize any additional work for instructors
 - Teachers need not have computer expertise
 - Easy accessibility for students
- **Result: Web-based delivery of recorded lectures using PowerPoint & RealAudio**

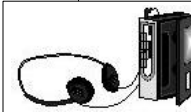
Software Needed

- PowerPoint slideshow - (Office 97)
- G2 RealProducer from RealNetworks
- Internet Explorer (preferred) or Netscape
- Simple editor (Netscape Composer)
- Students need RealAudio Player (free)



Hardware Needed

- P166 Pentium or higher
- Portable "walkman" tape recorder
– (New digital recorders now available)
- Audiocassette tape deck
or "boom box"



Expertise Needed

- Instructors: operate a "walkman"
- Students: click a mouse
- Web Content Person:
 - PowerPoint knowledge
 - RealAudio encoding experience
 - A little audio equipment experience
 - Web page editing know-how

What's the Procedure?

- Record lecture: up to 1 hour segments
- Send tapes to web course coordinator
- Open G2 RealProducer
- Download lecture into computer
 - "Capture Audio," Output to RealAudio File
 - Click "Start" and Play tape
 - Click Tools, "Create Web Page" (using Wizard)

Final Procedures

- Create Lecture Table of Contents
 - Edit T.O.C. template
- Add current lecture date & title
- Copy to web server
 - Edited Table of Contents
 - Slide web page
 - RealAudio files

North Central State College Audio Lectures

MEC 245 Machine Design - Winter, 2001

Please use headphones in all 160 hour computer labs. Headphones can be obtained at the side of the student.

Multimedia presentations on this page require RealPlayer to view.

Note: These lectures work best with Microsoft Internet Explorer.

The lectures below may take 60 to 90 seconds to download when using a 28 Kbps modem.

Lesson Number	Date of Lecture	Subject	Length of Lecture
1	3/28/01	Chapters 1 & 2	38 minutes
1A	3/28/01	Chapter 3	54 minutes
1B	3/28/01	Chapter 3	38 minutes
5A	11/09/01	Chapter 5 Problems	33 minutes



New digital recorder

- Removable memory chip
- Downloads are faster and easier
 - Model D1000
 - Model D2000



Using the digital recorder

- Instructor records lecture onto a memory chip (over 2 hours avail.)
- Download chip into the computer
- Open G2 RealProducer
 - Input File, Output to RealAudio File
 - Click “Start” and compress wave file
 - Click Tools, “Create Web Page” (using Wizard)
- Reduces production to 15 minutes

Results

- Since 1998:
 - 40 courses
 - 12 different instructors
 - Over 500 audio lectures
 - All Internet accessible
 - Some archived on CD for independent study
 - Entire year of Anatomy on CD
 - Complete course lecture series available

Types of slideshow deliveries

- Mini-lectures embedded in each slide
- Full lecture with:
 - a single PowerPoint slide
 - a second browser opened with:
 - manual slides
 - outline notes, solved equations or graphics
 - automatically changing slides

Benefits

- Asynchronous delivery for all students
- Low cost: less than \$1000 in hardware
- Minimal additional effort for instructors
- Consistent, easy access for students
- Flexibility to handle additional content
- Low impact on server, steady growth
- Simple use of PowerPoint & RealAudio

New Advances

- **Tape vs digital recording**
 - Download times from 1 hr to 5 minutes
- **Time encoding of audio with slides**
- **Multiple slide & audio combinations**
 - Any digitized media can be added
- **Video lectures with slides**
 - Note: More advanced = more time

RealPresenter G2 for PowerPoint

- **Complete package within PowerPoint**
- **Audio and/or Video capture**
- **Slides change with the lecture**
- **Pentium III required**
- **Main disadvantage:**
 - Cannot use pre-recorded material
- **Main advantage:**
 - Entire lecture is accessible by using the Index of Slides

The Audio Lecture System

- **Practical and Low Cost Method**
- **Easy way to augment courses quickly**
- **Many asynchronous uses:**
 - Over the Internet
 - Privately placed on local intranet
 - Deliver over CD or Zip disk
- **Capabilities can grow with technology**
- **Low impact on instructor's time**

The Audio Lecture System

- **Contact Ken Ekegren**
- **e-mail: kekegren@ncstate.tec.oh.us**
- **North Central State College**
- **Mansfield, Ohio**
- **www.ncstate.tec.oh.us/webpub/kekegren**

