

Instructional Technology Project

Developing Video Tutorials

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Committee

Dr. Blanche O'Bannon

Dr. Ed Counts

Dr. Jay Pfaffman

Personal Background

- ◆ BS Mechanical Engineering
- ◆ Industry (12 yrs)
 - ◆ Engineering Software
 - ◆ Computer Systems Support
 - ◆ Computer Aided Design
 - ◆ Training
- ◆ Consulting (3 yrs)
 - ◆ Technology implementation
 - ◆ Web applications
 - ◆ Developed video motion analysis system
- ◆ UT Engineering Fundamentals Division (6 yrs)
 - ◆ Teaching: Engineering Graphics, Programming, Physics, Engineering Design
 - ◆ Support: Course Management, Web site development, Web tools development

Personal Interests

- Teaching and learning
- Applications of technology for teaching
- Engineering design
- Engineering education
- Computer graphics and video
- Software development

MS - ITES Courses

Sp 2004	ITES 521	Computer Applications in Education	Pfaffman
Su 2004	ITES 576	Advanced Interactive Multimedia for Instruction	Counts
Fa 2004	ITES 570	Instructional Systems Design	O'Bannon
Sp 2005	IE 455	Human-Computer Interaction	Kong
Sp 2005	CREV 580	Techniques for Research in Curriculum and Instruction	Skolits
Sp 2005	CREV 588	Instructional Theory and Design	Connelly
Su 2005	ITES 575	Internet: Implications for Teaching and Learning	Waugh
Su 2005	TPTE 517	Theory and Practice in Teacher Education	Harris
Fa 2005	CSE 526	Philosophy of Education	Thayer-Bacon
Fa 2005	STAT 531	Survey of Statistical Methods	Husch
Fa 2005	ITES 566	Administering Instructional Media Programs	Pfaffman

Problem Definition

- ◆ People need to be able to make information available via the Web.
 - ◆ Difficult
 - ◆ Variety of environments
 - ◆ Variety of methods
 - ◆ Variety of backgrounds
- ◆ Need to teach basic skills
 - ◆ No cookbook - teach them to fish
 - ◆ Least common denominator

Audience

- ♦ IT 486
 - ♦ Primarily graduating teachers education students
 - ♦ Wide variety of backgrounds & computer skills
 - ♦ Basic knowledge required for possible use on the job
- ♦ EF 151 Students
 - ♦ Primarily college freshman
 - ♦ Wide variety of backgrounds & computer skills
- ♦ Little / no class time available
- ♦ General use?

Objectives

- ◆ Teach the least common denominator
 - ◆ Basic HTML editing
 - ◆ Basic FTP file transfers
- ◆ Self paced tutorials
 - ◆ Web / Video based
- ◆ Produce usable tutorials
- ◆ Demonstrate / document the use of instructional technology

FTP Client

- ◆ Criteria
 - ◆ Cost
 - ◆ Cross-platform
 - ◆ Visual
 - ◆ Ease-of-use
 - ◆ Customization
 - ◆ Support, stability, availability
- ◆ There is no ideal system
- ◆ There are many suitable options
- ◆ Options
 - ◆ SSH / SFTP
 - ◆ Java Based
 - ◆ Windows freeware / shareware
 - ◆ Firefox Extension : fireFTP
 - ◆ HTML editor built-in (Dreamweaver, NVU)

Contributing to Open Source

- ♦ Wanted to contribute to an open source project
- ♦ Looking for specific features in an FTP client
- ♦ Add desired features to fireFTP extension
 - ♦ “follow” - navigation on remote or local side automatically synchronized
 - ♦ “compare” - easier file difference visualization using existing tools
- ♦ Actively participated in beta testing
- ♦ Firefox Development Environment
 - ♦ XUL – XML User-interface Language
 - ♦ Javascript
 - ♦ HTML
 - ♦ Application packaging and distribution

HTML Editor

- ◆ Criteria
 - ◆ Cost
 - ◆ Cross-platform
 - ◆ Visual
 - ◆ Ease-of-use
 - ◆ Customization
 - ◆ Support, stability, availability
- ◆ There is no ideal system
- ◆ Options
 - ◆ NVU
 - ◆ Frontpage
 - ◆ Dreamweaver
 - ◆ OpenOffice

Alternatives to Consider

- ◆ Content Management Systems
- ◆ Course Management Systems
- ◆ Portfolio Systems
- ◆ Blogs
- ◆ Wikis

Teaching Philosophy(s)

- Ultimate goal is understanding
- Identify objectives
- Don't lead by hand
- Extensible to different environments
- Address different learning styles

Web-based Video Tutorials

- ◆ Advantages

- ◆ Communicate a large amount of information
- ◆ Most natural method of presenting material
- ◆ Easy to create
- ◆ Efficient use of time
- ◆ Always available
- ◆ Combine with other information

- ◆ Disadvantages

- ◆ Different
- ◆ Require maintenance (like all training materials)
- ◆ Learning curve

Making a Video

◆ Process

- ◆ Prepare – plan, script, files, applications, practice.
- ◆ Record – Camtasia Recorder – records all screen activity and audio. Saves as large AVI file.
- ◆ Process – Camtasia Producer – edit, crop, merge, add annotation, output to flash, avi, wmv, rm, etc

◆ Guidelines

- ◆ Use a good quality head set
- ◆ Planning and practice are the most important steps.
- ◆ Test audio recording before each session
- ◆ Pen Tablet PC is very useful for writing/drawing
- ◆ Keep videos short
- ◆ Usually easier to re-record rather than edit.

Results

- Evaluated FTP client and HTML editor software
- Created 8 videos (each 5-10 minutes) demonstrating all steps required to create and update a simple web site.
- Created a simple framework for displaying instructions, videos, and getting feedback
- Created 2 videos demonstrating video creation process.

Toolbox

- ◆ Camtasia
- ◆ NVU
- ◆ Wink
- ◆ Firefox
- ◆ fireFTP
- ◆ Dreamweaver
- ◆ Open Office
- ◆ Paint Shop Pro
- ◆ PHP

Future Considerations

- ◆ Implement – who, how, where?
- ◆ Refine – additions, revisions, corrections?
- ◆ Evaluate – are they effective
- ◆ Feedback – solicit and analyze
- ◆ Alternatives – what other methods are available