

Digital video applications in the classroom

April 2003

Ed Garay

UIC Instructional Technology Lab

<http://www.accc.uic.edu/itl>

Academic Computing and Communications Center
University of Illinois at Chicago

Why use digital video?

- to provide alternate means of communication
- to make educational content more accessible
- **multimedia engages today's students**
- **often, it is the best way to facilitate learning**
- to illustrate, educate and train
- to beam in guest speakers, live or on-demand
- to facilitate collaborative work

Do **not** use digital video...

- streamed or downloadable, for conventional telephone/56K modem connections
 - **consider distributing CDs or DVDs**
- to simply provide long/sequential 60-minute+ video content in digital format
 - **break it up into small digestible clips (15min max)**
 - **surround video segments with related reading, imagery and interactivity**
- for the sake of just using technology
 - **use video only when it carries pedagogical value**

Video applications at UIC

- **Digital video editing**
 - Pinnacle Studio 8
 - Microsoft MovieMaker 2
 - Apple iMovie 3, Final Cut Pro and Express
 - **Adobe Premiere and AfterEffects**
 - Microsoft Producer for PowerPoint
 - **TechSmith Camtasia Studio**
 - SeriousMagic Visual Communicator, Plus and Pro

Video applications at UIC

■ **Streaming video**

- high-capacity RealMedia (RealNetworks Helix) streaming server already in production, run by ITL
- available, free of charge, to UIC faculty and staff
- supports streaming of RealVideo, RealAudio, QuickTime, **Windows Media**, Flash, MP3, etc.
- synchronized multimedia with W3C's SMIL
- SMIL-based slide shows, Web tours and other presentations
- itITV-like interactive live Webcasts and archives

Video applications at UIC

■ **Streaming video**

- deliver educational video content and imaging
- **hybrid content – from server and/or CD-ROM**
- class materials in alternate formats
- **Encoders and production tools**
 - Helix RealProducer Basic (free), Plus
 - Helix Mobile Producer
 - Cleaner, Adobe Premiere, Pinnacle Studio
 - **Microsoft Producer, Windows Media Encoder**
 - TechSmith Camtasia Studio, Final Cut Pro
 - SeriousMagic Visual Communicator, Plus and Pro

Other useful technologies

- **RealAudio & RealVideo streaming**
 - Good for narrated PowerPoint, lecture presentations, narrated WebTours and live or on-demand Webcasts
 - RealAudio/Video of guest speakers
Example: [Provost Uofl Online talk](#)
 - Small training video clips (**CDs OK**)
 - Synchronized multimedia with SMIL
 - Review [ITL RealAudio/RealVideo seminar](#)

Video applications at UIC

- **Narrated PowerPoint presentations**

- keep presentations short (10 to 15 minutes, each)
- ideally, produce them for low (56Kbps) bandwidth
- provide PDF handouts separately, if needed

- **Authoring tools**

- Accordent PresenterOne Basic (free), Pro Standard Edition
- SofTV.net ShowAndTell, Presentation Maker
- Serious Magic Visual Communicator, Plus and Pro
- **Macromedia Breeze Presentation and Breeze Training**
 - brand new product – combines PowerPoint and Flash
- RealPresenter and RealSlideshow are discontinued

- Jon Gunderson's (Urbana) Microsoft Office Web Publishing Wizard fro PowerPoint (Word and Excel)
www.rehab.uiuc.edu/office

Using RealVideo for Instruction

Streaming video is now becoming more common in instruction, especially with increasing enrollment in online-assisted courses on campus. Its use for exclusively online classes with an audience largely connected per modem to the Internet is very limited though. Some typical applications:

- Case studies in medical and social sciences, education etc. (best use for this technology)

Example [Kinship Foster Care Project](#); [MSE: Marshmallows and Containers](#)

- Demos of patient interviews (acted or real, with patient's permission)

Example [good response](#); [bad response](#); [educate patient](#)

- Recordings of surgical procedures and other hard-to-repeat demonstrations

Example [Endodontic surgery](#) (has no sound); [Periodontal surgery](#); [EVL virtual ear](#)

- Spoken testimonies; documentaries (lends sense of immediacy)

Example [Small Schools Project](#); [Urban Developer's Program](#)

- Video animations (require lots of work)

Example [Wound healings](#)

- Videotaped conferences for remote audience unable to attend

Example [MCH conference Utah 99](#); [Healthy People 2000](#)

- Instructor's self-intro (online courses); small sized talking head

Example [Dr. Bernard Turnock\(modem\)](#); [Dr. Bernard Turnock\(network\)](#)

- Videotaped lectures (generally a very **bad** idea!)

Example [a test recording](#)

- Powerpoint-presentations converted to video (outdated; low quality)

Example [Women's Health Issues](#) (has no sound); [Using "Level 5"](#)

Creating RealVideo

Any camcorder can be used to create the original footage, but there are many things to keep in [at the IFL](#) to discuss your plans and needs and to get valuable production tips before wasting time from the IFL for a few days.

- [Intro](#)
- [Audio](#)
- [Video](#)
- [Presentations](#)

RealPlayer: Using the Internet to Research Women's Health Iss...

File View Favorites Help

1999 Research Forum
School of Biomedical and Health Information Sciences
www.sbhhs.uic.edu/

The Value of Health Information on the Internet***

- 65% of those with specific medical problems reported an increased ability to cope
- Overall, nearly 90% reported an increase in understanding of health and medical information specific to their needs and interests.

****April 1995 Survey of AOL's Better Health & Medical Forum

© 1999 by UIC

16.0 Kbps 00:41.6/03:50.0



ECM Videos

Streaming RealVideo and HTML provide a powerful combination for delivering effective learning materials

▶ [Play video](#)

Acknowledging the patient's emotion is key to a good doctor-patient alliance.

▶ [Play video](#)

Demonstration of bad body language during an interview.

▶ [Play video](#)

Poor response to a patient's idea of the cause of illness will disrupt your alliance.

▶ [Play video](#)

Demonstration of a doctor's positioning while interviewing a hospitalized (in bed) patient.

▶ [Play video](#)

Clarification of a patient's history keeps your history straight and strengthens your alliance.

▶ [Play video](#)

Ending the interview with an agreement to meet again (if that is going to occur) is wise.

▶ [Play video](#)

Corridor discussions of patients are NOT a good idea.

▶ [Play video](#)

Education of a patient about his/her illness is a critical part of a good interview.

▶ [Play video](#)

Empathic responses to patients strengthen the alliance - I

▶ [Play video](#)

Empathic responses to patients strengthen the alliance - II

▶ [Play video](#)

Eliciting the patient's expectations of the illness or its treatment is important.

▶ [Play video](#)

Exploring the patient's understanding of his/her illness.

▶ [Play video](#)

Facilitation is used to explore his/her story during an interview.

▶ [Play video](#)

The use of good body language during an interview is demonstrated even better with a video.

▶ [Play video](#)

Demonstration of a doctor's response to a patient's idea/cause of illness.

▶ [Play video](#)

Normalizing a patient's response can improve your alliance.

▶ [Play video](#)

Demonstration of a doctor's response to a patient's idea/cause of illness in an interview.

▶ [Play video](#)

Closing the interview with an agreement to meet again if he/she has any questions to do.

▶ [Play video](#)

Repeating the patient's response can help the patient feel understood and strengthen the alliance.

▶ [Play video](#)

Planning a treatment strategy with a patient.





ECM Videos

- ▶ [Play video](#)
Acknowledging the patient's emotion is key to a good doctor-patient alliance.
- ▶ [Play video](#)
Demonstration of bad body language during an interview.
- ▶ [Play video](#)
Poor response to a patient's idea of the cause of illness will disrupt your alliance.
- ▶ [Play video](#)
Demonstration of a doctor's positioning while interviewing a hospitalized (in bed) patient.
- ▶ [Play video](#)
Clarification of a patient's history keeps your history straight and strengthens your alliance.
- ▶ [Play video](#)
Ending the interview with an agreement to meet again (if that is going to occur) is wise.
- ▶ [Play video](#)
Corridor discussions of patients are NOT a good idea.
- ▶ [Play video](#)
Education of a patient about his/her illness is a critical part of a good interview.
- ▶ [Play video](#)
Empathic responses to patients strengthen the alliance - I
- ▶ [Play video](#)
Empathic responses to patients strengthen the alliance - II
- ▶ [Play video](#)
Eliciting the patient's expectations of the illn or its treatment is important.
- ▶ [Play video](#)
Exploring the patient's understanding of his/her illness.
- ▶ [Play video](#)
Facilitation is used to help the patient contin his/her story during history taking.
- ▶ [Play video](#)
The use of good body language during the interview is demonstrated here (it would be even better without the intervening desk!)
- ▶ [Play video](#)
Demonstration of a good way to handle a patient's idea/concerns about his/her illness
- ▶ [Play video](#)
Normalizing a patient's behavior can at time improve your alliance.
- ▶ [Play video](#)
Demonstration of the proper setup for an interview in an office.
- ▶ [Play video](#)
Closing the interview by asking the patient if he/she has any questions is a good thing to do.
- ▶ [Play video](#)
Repeating the patient's words can help the patient feel understood, facilitating your alliance.
- ▶ [Play video](#)
Planning a treatment strategy with a patient.



In this application, medical students can review a number of streaming video clips showing proper and improper ways of handling psychiatric patients — very effective and engaging teaching and learning application of streaming technology



Using RealVideo for Instruction

Streaming video is now becoming more common in instruction, especially with increasing enrollment in online-assisted courses on campus. Its use for exclusively online classes with an audience largely connected per modem to the Internet is very limited though. Some typical applications:

- Case studies in medical and social sciences, education etc. (best use for this technology)

Example [Kinship Foster Care Project](#); [MSE: Marshmallows and Containers](#)

- Demos of patient interviews (acted or real, with patient's permission)

Example [good response](#); [bad response](#); [educate patient](#)

- Recordings of surgical procedures and other hard-to-repeat demonstrations

Example [Endodontic surgery](#) (has no sound); [Periodontal surgery](#); [EVL virtual ear](#)

- Spoken testimonies; documentaries (lends sense of immediacy)

Example [Small Schools Project](#); [Urban Developer's Program](#)

- Video animations (require lots of work)

Example [Wound healing](#)

- Videotaped conferences for remote audience unable to attend

Example [MCH conference Utah 99](#); [Healthy People 2000](#)

- Instructor's self-intro (online courses); small sized talking head

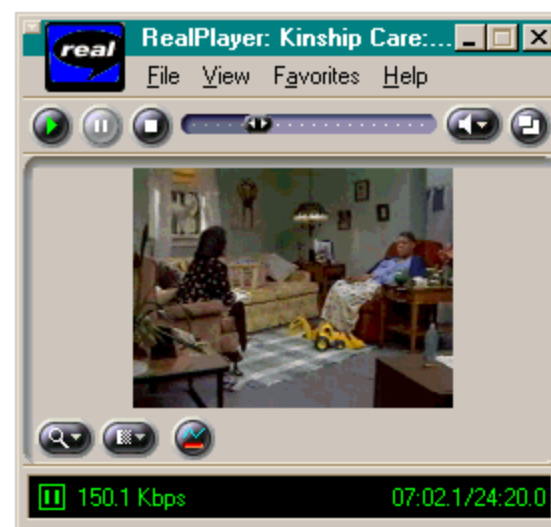
Example [Dr. Bernard Turnock\(modem\)](#); [Dr. Bernard Turnock\(network\)](#)

- Videotaped lectures (generally a very **bad** ideal)

Example [a test recording](#)

- Powerpoint-presentations converted to video (outdated; low quality)

Example [Women's Health Issues](#) (has no sound); [Using "Level 5"](#)



Another example of using RealVideo effectively to facilitate learning

[Intro](#)

[Audio](#)

[Video](#)

[Presentations](#)

[SMIL](#)

[Technical
Details](#)

[Links](#)

[Seminar
Presentation
\(browsable
version \)](#)

[UIC RealMedia
support site](#)

[ITL](#)

Creating RealVideo

Any camcorder can be used to create the original footage, but there are many things to keep in mind when videotaping. We recommend an [appointment at the ITL](#) to discuss your plans and needs and to get valuable production tips before wasting time and nerves. A videocamera can also be borrowed from the ITL for a few days.



Using RealVideo for Instruction

Streaming video is now becoming more common in instruction, especially with increasing enrollment in online-assisted courses on campus. Its use for exclusively online classes with an audience largely connected per modem to the Internet is very limited though. Some typical applications:

- Case studies in medical and social sciences, education etc. (best use for this technology)

Example [Kinship Foster Care Project](#); [IMSE: Marshmallows and Containers](#)

- Demos of patient interviews (acted or real, with patient's permission)

Example [good response](#); [bad response](#); [educate patient](#)

- Recordings of surgical procedures and other hard-to-repeat demonstrations

Example [Endodontic surgery](#) (has no sound); [Periodontal surgery](#); [EVL virtual e](#)

- Spoken testimonies; documentaries (lends sense of immediacy)

Example [Small Schools Project](#); [Urban Developer's Program](#)

- Video animations (require lots of work)

Example [Wound healing](#)

- Videotaped conferences for remote audience unable to attend

Example [MCH conference Utah 99](#); [Healthy People 2000](#)

- Instructor's self-intro (online courses); small sized talking head

Example [Dr. Bernard Turnock\(modem\)](#); [Dr. Bernard Turnock\(network\)](#)

- Videotaped lectures (generally a very **bad** idea!)

Example [a test recording](#)

- Powerpoint-presentations converted to video (outdated; low quality)

Example [Women's Health Issues](#) (has no sound); [Using "Level 5"](#)

Creating RealVideo

Any camcorder can be used to create the original footage, but there are many things to keep in mind when videotaping. We recommend an [appointment at the ITL](#) to discuss your plans and needs and to get valuable production tips before wasting time and nerves. A videocamera can also be borrowed from the ITL for a few days.



[Intro](#)

[Audio](#)

[Video](#)

[Presentations](#)

[SMIL](#)

[Technical Details](#)

[Links](#)

[Seminar Presentation \(browsable version\)](#)

[UIC RealMedia support site](#)

[ITL](#)

UIC video application examples

Ma Mere L'oye (Mother Goose) RealAudio

- Gene Collerd, Performing Arts, Fall 1997
- <http://realvideo.uic.edu/ramgen/classes/mus/mus117/RAVMereL'Oye.2.ra>

Women 2000: Beijing Plus Five - RealVideo

- Sen. Hilary Rodham Clinton, January 2000
- <http://www.accc.uic.edu/itl/statedept>

UIC video application examples

Management 495: Competitive Business Strategy

- Darold Barnum, Managerial Studies, Spr 2001
- <http://www.uic.edu/classes/mba/mba590/execinclassroom/lectureindex.htm>

Essentials of Clinical Medicine: Patient Interview Demos

Dr. Debra Klamen, Psychiatry, June 1999

- <http://www.uic.edu/classes/psychiatry/klamen>

UIC video application examples

itlTV

UIC Instructional Technology Lab, since Spring 2000

- <http://www.accc.uic.edu/itl/itltv.html>

Surgical Procedures on CD-ROM

Dr. Luca Cicalessi, Surgery, February 2001

- [file:///C:/Documents and Settings/Administrator/Desktop/Conf2003/videoapps/recipient3.mov](file:///C:/Documents%20and%20Settings/Administrator/Desktop/Conf2003/videoapps/recipient3.mov)
- [file:///C:/Documents and Settings/Administrator/Desktop/Conf2003/videoapps/procedures.mov](file:///C:/Documents%20and%20Settings/Administrator/Desktop/Conf2003/videoapps/procedures.mov)

Videoconferencing over the Internet

Ed Garay, UIC Instructional Technology Lab, Spring 2001

- <http://www.accc.uic.edu/itl/pubs/ipvc>

Video applications at UIC

■ **DVD authoring**

- authoring tools make production quick and easy
- good for high-quality movies, or a large number of high-end video clips (no computer required)
- **strive to produce interactive DVDs**
- “General” vs. “Authoring” type DVDs

- Pinnacle Studio 8, Microsoft MovieMaker 2
- Sonic DVDit! Professional Edition
- Apple iDVD 3 and DVD Studio Pro 1.5

Video applications at UIC

- **Internet-based H.323/IP videoconferencing**
 - point-to-point and multi-point videoconferences
 - H.323 multi-point (MCU) videoconferencing servers already in production, run by the ITL
 - **H.323 Polycom ViewStation videoconferencing systems available in conference rooms and for portable (check-out) use**
 - Polycom ViaVideo H.323 (USB) desktop video conferencing system for personal use
 - ubiquitous high-speed campus backbone connected to external high-speed networks, like Abilene (Internet 2), StarLight and StarTap already in place

Video applications at UIC

- **H.323/IP videoconferencing applications**
 - beaming in outside guest speakers
 - save on (reduce) traveling expenses
 - **point-to-point or multi-point (3 or more) video conferences for class or regular meetings**
 - Example 1 : Great Cities “Contested Cities” class meetings between UIC, Jerusalem, Belfast and Berlin – UIC Professors Perry and Hagedorn
 - **Example 2: a few weekly Nursing classes between UIC, Urbana, Rockford, Peoria and Quad Cities**
 - Example 3: Dr. Folberg’s Pathology of the Eye classes to Cornell, UofC, West Virginia, Missouri, etc. students
- **could record these for later on-demand streaming**

Video applications at UIC

- **Videoconferencing over the network**
 - Free one-to-one videoconferencing with (H.323) [Microsoft NetMeeting](#)
 - Powerful **Applications Sharing** feature for tutoring and guided demonstrations
 - Recommended systems: Polycom ViewStation and/or Polycom ViaVideo
 - **Multi-point** (3 or more) videoconferences possible via new ACCC MCU Services *

Video applications at UIC

- **Web conferencing systems**

- a real-time communication and collaboration environment with the following characteristics
 - could function as a virtual classroom to complement traditional on-campus or UofI Online classes
 - easy-to-use, seamless integration
 - Web-based, real-time and on-demand archiving
 - keyboard chat, instant and private messaging
 - application sharing for Web tours, PowerPoint presentations, and being able to run/show any desktop application

Video applications at UIC

- **Web conferencing systems**
 - a real-time... with the following characteristics
 - application sharing control granting
 - **voice-over-ip capabilities**
 - shared white boards
 - **real-time polling (surveys)**
 - being able to push content to students
 - **authenticated access, taking student attendance**
 - virtual student hand raising
 - support for ad hoc break-out rooms

Introducing ACCC e-Rooms

ACCC e-Rooms = Centra Symposium

- like HorizonLive, WebDemo, and FirstVirtual, or ASP hosted solutions like WebEx and PlaceWare (M\$)
- **ACCC e-Rooms servers running at UIC**
- to go in production in May/June 2003
- live UIC demo scheduled for Tuesday 4/29 10am in 408 CCC, east campus
- think of it!TV on steroids
- interested? -- email Ed Garay at itl@uic.edu

Centra Symposium - Main Room (Session Leader)

File View Tools Actions Video Markup Help

Host... Host being viewed: Greg Smith

Microsoft Excel - annual growth

File Edit View Insert Format Tools Data Window Help

B12 Cols... Ctrl+I

Row

Column

Sheet

AutoFormat...

Conditional Formatting...

Style...

Annual Growth

	A	B	C	D	E	F	G	H	I	J	K
1											
2	Annual Gr										
3											
4											
5											002
6	Boston										\$900
7	New York										\$723
8	Paris										\$920
9	Los Angeles										\$621
10	Madrid										\$620
11	London										\$819
12	Tokyo										\$1,472
13	Vancouver										\$245
14	Beijing										\$789
15	Ottawa										\$400
16	Munich										\$437
17	Totals:										\$9,073
18											\$9,405
19											
20											
21											
22											
23											
24											
25											

New Growth Markets for 2002

- Boston
- New York
- Paris
- Los Angeles
- Madrid
- London

Presenters: Susan P.

Participants: John L., Susan D., 1. Tim N., 2. Eric D., 3. Robert B., 4. Alex J., 5. Greg S.

Agenda - Symposium Room

- Introduction
- Background
- eLearning
- Solutions
- Customer Base

In Session OK









ACCC e-Rooms (aka Centra Symposium) is a state-of-the-art interactive and easy-to-use Web conferencing system that can augment the educational hypermedia of traditional face-to-face on-campus classes, as well as Internet-based distance learning programs.



Instructional Technology Lab








UIC Academic Computing and Communications Center




-  [about the ITL](#)
-  [hours and location](#)
-  [making reservations](#)
-  [seminar materials](#)
-
-  [Blackboard CourseInfo](#)
-  [FirstClass](#)
-  [WebBoard](#)
-  [RealAudio](#)

The mission of the ITL is **to help UIC faculty** make use of computer technology and Web-based solutions to enhance teaching and learning. The ITL also serves as a test bed for new technology applications in computing and education. [12Mar2002]

ACCC highlights

-  [Getting help from ACCC](#)
-  [New faculty orientation](#)
-  [Network Services Kit](#)
-  [Get Web space on Tigger](#)
-  [PC lab reservation](#)

UIC in session!

-  [Phonebook lookup](#)
-  [UIC Timetable](#)
-  [Class rosters](#)
-  [Class Web pages](#)
-  [Academic calendar](#)

GET SHOCKWAVE FLASH

Get Acrobat Reader
Adobe


AOL Instant Messenger
Click Here!


ITL/News

- **ITL Conference 2002**
Monday-Sunday
Spring Break
March 18-24
East Campus


Centra e...

File View Tools
Actions Help




Presenters
 **Josh**

Participants



✓ 0 ✗ 0 🖱 0 👤 1

Agenda - Test of the system

 **Agenda**

Internet

Web-based assessment

■ **CourseBuilder for Dreamweaver**

- An intuitive visual tool for creating **highly-interactive and media-rich** Web-based self-assessment modules
- An extension to Dreamweaver (formerly, DW Attain) that uses knowledge objects and wizards to make authoring **easy**
- Supports immediate grading and feedback
- Good for practice (non-graded) exercises
- See [WebQuizzes](#) seminar materials



Dreamweaver Attain :: Examples

Drag each name onto the image that represents the Evangelist from the Book of Kells.



John

Luke

Matthew



Saint Mark - The Lion - Netscape



The Symbol of Saint Mark
The Lion

Close

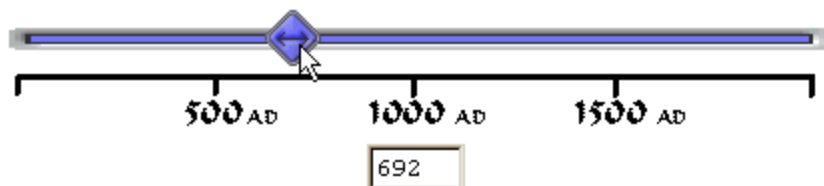
Macromedia CourseBuilder for Dreamweaver is a good easy-to-use tool for authoring interactive learning modules.

This example shows how a student could learn (through critical inquiry) by experimentation, i.e by dragging and dropping the correct names on the appropriate images



Dreamweaver Attain :: Examples

Move the sliding scale to the approximate year in which the Book of Kells was created.



www.uic.edu - [JavaScript Application]



Although Christianity was already spreading throughout Europe at this time, this is still too early for Christianity to have reached Ireland.

OK

This Dreamweaver CourseBuilder example allows the students to move a slide to indicate their selection. The moment they let go the slide, they get immediate feedback, specified by the instructor

Web-based assessment

■ Other options

- Solutions using home-grown JavaScript and/or [Dynamic HTML](#)
- Some assessment possible with [UIC FormMail](#)
- For ultimate interactivity and media-rich assessments, consider **Macromedia Flash and Macromedia Authorware**
- Custom applications developed in [Lotus Notes](#)
- ITL to evaluate/run high-acclaimed Perception's QuestionMark in 2H2003. Contact ITL if you'd like to try it.

UIC BRAINSTEM

brainstem - Netscape

UIC BRAINSTEM quit

Conwell Anderson, PhD
Robert J McAuley, PhD

UIC Brainstem

Thirty pictures are labeled in a series of 60 images.

To begin, click a number next to an image name under the List of Sections, on the left pane. Click on the down or the up arrow, on the left pane, to see the rest of the sections.

When you select an image section number, an unlabelled image and top navigation bar appears on the right side. Click on show all, show previous, or show next to display the image labels, or, for interactive quizzes, click on take quiz. Press the home icon to return to this page, or click on quit or X to exit.

The Mac version of UIC Brainstem was ported to HTML/JavaScript by Uday Paul (Class of 2000). The images and annotation were edited by James R. Unnerstall, Ph.D. to enhance readability. This interactive Macromedia Flash online version was created by the ACCC Instructional Technology Lab at the University of Illinois at Chicago. Direct any questions to Dr. Unnerstall at jru@uic.edu.

Copyright © 2001 [University of Illinois at Chicago] All rights reserved.

Brainstem is an interactive learning module developed by the UIC College of Medicine and ported to Macromedia Flash by the UIC Instructional Technology Lab

List of Sections:

- Sacral Spinal Cord — 1 2
- Lumbar Spinal Cord — 1 2
- Thoracic Spinal Cord — 1 2
- Cervical Spinal Cord — 1 2
- Low Decussation of the Pyramids — 1 2
- Upper Decussation of Pyramids — 1 2
- Caudal Edge Olivary Nuclei — 1 2
- Mid-Olive — 1 2
- Vestibular Nuclei — 1 2
- Dentate Nuclei — 1 2
- Cochlear Nuclei — 1 2
- Pontine Medullary Junction — 1 2
- Abducens Nuclei — 1 2
- Trigeminal Nuclei — 1 2
- Upper End Fourth Ventricle — 1 2
- Rostral Pons — 1 2



UIC BRAINSTEM

brainstem - Netscape
_ □ ×

UIC BRAINSTEM

Conwell Anderson, PhD
Robert J McAuley, PhD

List of Sections:

- Sacral Spinal Cord — 1 2
- Lumbar Spinal Cord — 1 2
- Thoracic Spinal Cord — 1 2
- Cervical Spinal Cord — 1 2
- Low Decussation of the Pyramids — 1 2
- Upper Decussation of Pyramids — 1 2
- Caudal Edge Olivary Nuclei — 1 2
- Mid-Olive — 1 2
- Vestibular Nuclei — 1 2
- Dentate Nuclei — 1 2
- Cochlear Nuclei — 1 2
- Pontine Medullary Junction — 1 2
- Abducens Nuclei — 1 2
- Trigeminal Nuclei — 1 2
- Upper End Fourth Ventricle — 1 2
- Rostral Pons — 1 2

UIC Brainstem

Thirty pictures are labeled in a series of 60 images.

To begin, click a number next to an image name under the List of Sections, on the left pane. Click on the down or the up arrow, on the left pane, to see the rest of the sections.

When you select an image section number, an unlabelled image and top navigation bar appears on the right side. Click on show all, show previous, or show next to display the image labels, or, for interactive quizzes, click on take quiz. Press the home icon to return to this page, or click on quit or X to exit.

The Mac version of UIC Brainstem was ported to HTML/JavaScript by Uday Paul (Class of 2000). The images and annotation were edited by James R. Unnerstall, Ph.D. to enhance readability. This interactive Macromedia Flash online version was created by the ACCC Instructional Technology Lab at the University of Illinois at Chicago. Direct any questions to Dr. Unnerstall at jru@uic.edu.

Copyright © 2001 [University of Illinois at Chicago] All rights reserved.

quit

Brainstem is a highly interactive learning module, developed by the College of Medicine, and converted to Macromedia Flash by the ITL



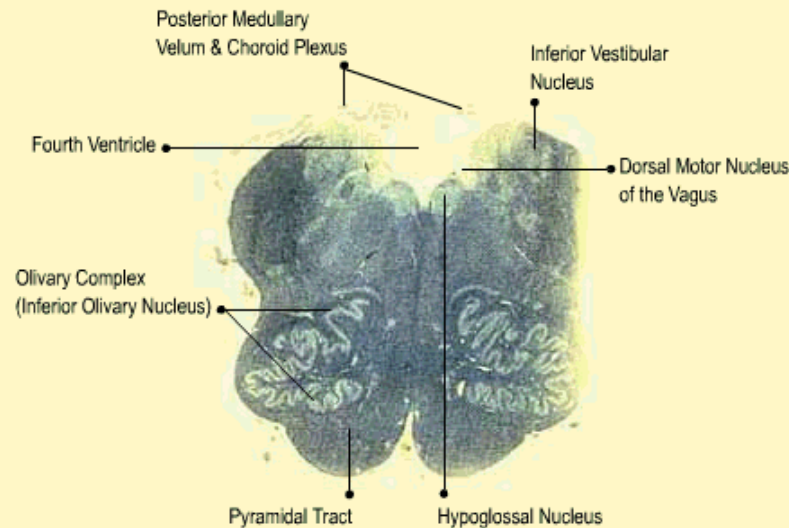
UIC BRAINSTEM

Conwell Anderson, PhD
Robert J McAuley, PhD

List of Sections:

- Sacral Spinal Cord — 1 2
- Lumbar Spinal Cord — 1 2
- Thoracic Spinal Cord — 1 2
- Cervical Spinal Cord — 1 2
- Low Decussation of the Pyramids — 1 2
- Upper Decussation of Pyramids — 1 2
- Caudal Edge Olivary Nuclei — 1 2
- **Mid-Olive** — 1 2
- Vestibular Nuclei — 1 2
- Dentate Nuclei — 1 2
- Cochlear Nuclei — 1 2
- Pontine Medullary Junction — 1 2
- Abducens Nuclei — 1 2
- Trigeminal Nuclei — 1 2
- Upper End Fourth Ventricle — 1 2
- Rostral Pons — 1 2

Mid-Olive 1



Brainstem can be found at:
<http://www.uic.edu/classes/anat>



UIC BRAINSTEM

brainstem - Netscape _ □ ×

UIC BRAINSTEM hide all ◀ show previous show next ▶ take quiz ⏠ quit

Conwell Anderson, PhD
Robert J McAuley, PhD

List of Sections:

- Sacral Spinal Cord — 1 2
- Lumbar Spinal Cord — 1 2
- Thoracic Spinal Cord — 1 2
- Cervical Spinal Cord — 1 2
- Low Decussation of the Pyramids — 1 2
- Upper Decussation of Pyramids — 1 2
- Caudal Edge Olivary Nuclei — 1 2
- **Mid-Olive** — 1 2
- Vestibular Nuclei — 1 2
- Dentate Nuclei — 1 2
- Cochlear Nuclei — 1 2
- Pontine Medullary Junction — 1 2
- Abducens Nuclei — 1 2
- Trigeminal Nuclei — 1 2
- Upper End Fourth Ventricle — 1 2
- Rostral Pons — 1 2

▼

Mid-Olive 1

Students learn by going through a number of cross-sections, viewing one label at the time or all the labels. They can take self-assessment quizzes at anytime.

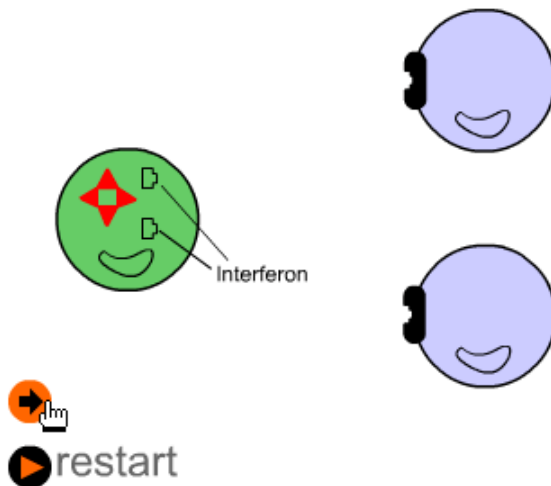


The Role of Interferon in preventing viral replication

Interferon refers collectively to a family of three proteins that nonspecifically inhibit viral replication inside host cells. In response to infection by a virus, various cell types secrete interferon into the extracellular fluid. Interferon then binds to plasma membrane receptors on nearby cells, whether they are infected or not. It also enters the circulation and reaches cells at far-removed sites. Thus cells can synthesize interferon provide it to cells that cannot.

How does interferon prevent viral replication? Its binding to the plasma membrane triggers the synthesis of several enzymes by the cell. If the cell is infected or eventually becomes infected, these enzymes block the synthesis of proteins the virus requires for replication. It must be reemphasized that interferon is not specific. Many, but not all, viruses induce interferon synthesis, and interferon in turn can inhibit the multiplication of many kinds of viruses.

The role of interferon in preventing viral replication.



Several cell types, when infected with virus, secrete interferon, which enters the interstitial fluid and blood and binds to interferon receptors on adjacent and far-removed cells.

Macromedia Flash is an ideal technology for developing highly-interactive multimedia-rich and rather engaging educational courseware.

The ITL is ready to help you create these type of learning modules.



The Role of Interferon in preventing viral replication

Interferon refers collectively to a family of three proteins that nonspecifically inhibit viral replication inside host cells. In response to infection by a virus, various cell types secrete interferon into the extracellular fluid. Interferon then binds to plasma membrane receptors on nearby cells, whether they are infected or not. It also enters the circulation and reaches cells at far-removed sites. Thus cells can synthesize interferon provide it to cells that cannot.

How does interferon prevent viral replication? Its binding to the plasma membrane triggers the synthesis of several enzymes by the cell. If the cell is infected or eventually becomes infected, these enzymes block the synthesis of proteins the virus requires for replication. It must be reemphasized that interferon is not specific. Many, but not all, viruses induce interferon synthesis, and interferon in turn can inhibit the multiplication of many kinds of viruses.

The role of interferon in preventing viral replication.



Several cell types, when infected with virus, secrete interferon, which enters the interstitial fluid and blood and binds to interferon receptors on adjacent and far-removed cells.

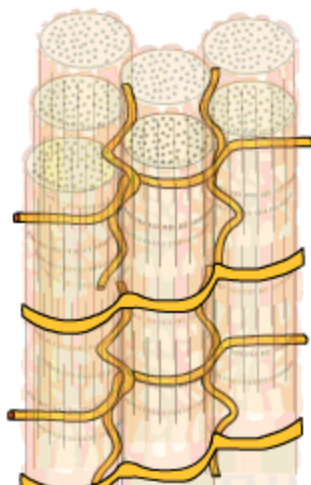


Flash is a very powerful tool for creating interactive animations that engage the students and facilitate learning



The gross physiology of skeletal muscle

It is for this reason that the membrane has a network of transverse tubules extending between the myofibrils and therefore activating the middle of the fiber.



Macromedia Authorware is another powerful tool well suited for developing interactive courseware for CD-ROM or Web delivery

Items covered in this animation:

- This animation describes how the basic building blocks of a muscle fit together. It shows the myofibrils bunched together with the lattice type network of the sarcoplasmic reticulum wrapped around them. It also shows how the network of transverse tubules lace their way through the structure and how they are continuous with the outer membrane of the myofiber. Finally the animation goes on to describe the connective tissue that holds the muscles together called the fascia. This exists on three major levels with the

Other useful technologies

- **Flash animations & Dynamic HTML**
 - Good for adding interactivity and special effects to hypermedia
 - Flash files are compact and integrate well with other hypermedia
See our [Intro to Flash](#) seminar materials
 - Flash and Dynamic HTML adds powerful programmability and layering
See our [Dynamic HTML](#) seminar materials



- Welcome
 - What is flash?
 - Support
 - Environment
 - Tools
 - Demos
 - Related links
-
- ACCC Seminars
 - ITL home page

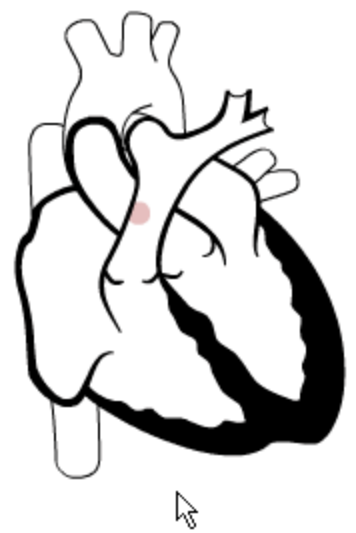
Rev. Mar 15/2000

Graphics Animation with Flash

- **Tweening** - the animation process in flash

- Red Blood Cell

Tweening



Macromedia Flash is the technology and tool to use for delivering engaging animations on the Web



Networking

Systems & Services

Student Computing

Instructional Support

Faculty Tutorials

Getting Help

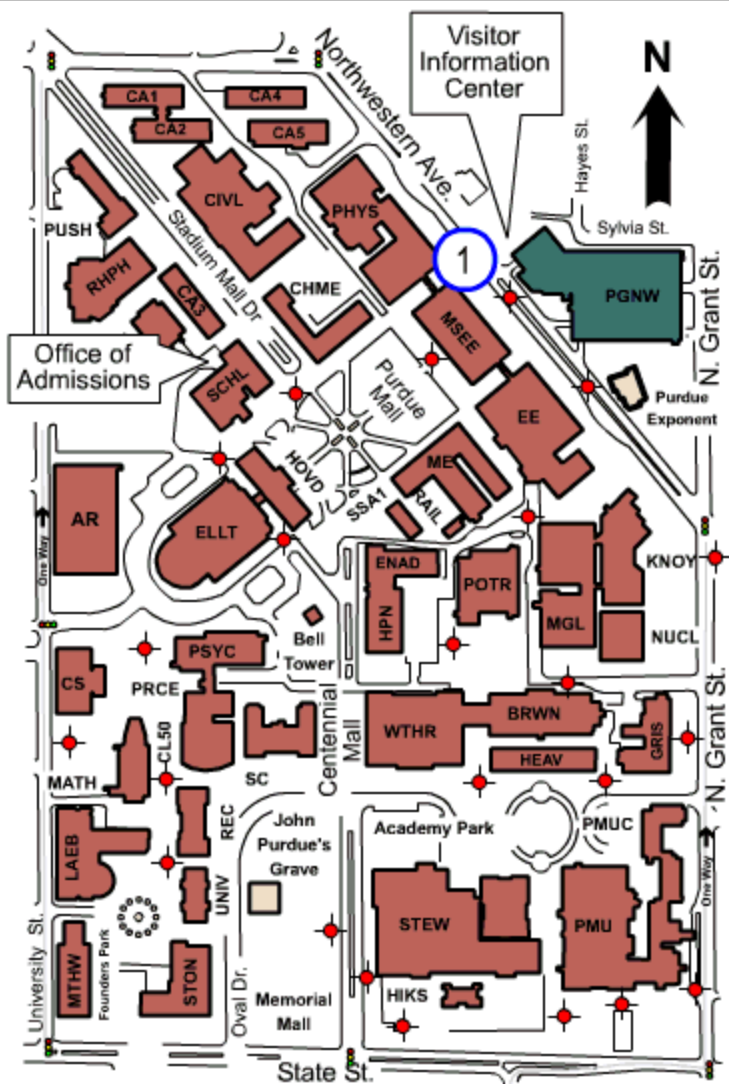


computing@uic

The Academic Computing and Communications Center supports the educational and research needs of the university. This interactive tutorial reviews the computing facilities, resources and services available at UIC.

computing@uic





Visitors Information Center

Your tour begins in front of the **Visitor's Information Center** to the Northeast, which is attached to the Northwestern Parking Garage. As shown in the image, Northwestern Avenue runs from southeast to northwest. To the west/southwest is the **Materials and Electrical Engineering Building** which houses electrical and computer, materials and nuclear engineering laboratories, offices, and classrooms.

© Copyright 1999, Purdue University. All rights reserved.

Flash is also a powerful tool for developing complex Web applications, like this virtual campus tour at Purdue

Contacting the ITL

- ITL home page:
<http://www.accc.uic.edu/itl>
- Email: [**itl@uic.edu**](mailto:itl@uic.edu)
- Phone: (312) 996-9824

ACCC home page:

<http://www.accc.uic.edu>

ITL-East

- **ITL-East — Room 401 CCC**
(all the way in the back of computer lab)
- **Open Hours**
 - Tuesdays and Wednesdays, from 1-5pm
 - Can stop without an appointment
- **By appointment**
 - Visit ITL home page and click on “making reservations”

ITL-West

- **ITL-West — Room 181 BGRC**
 - (behind the CSO consultant's desk)
- **Open Hours**
 - Mondays and Thursdays, from 1-5pm
 - Can stop without an appointment
- **By appointment**
 - Visit ITL home page and click on “making reservations”

Other campus resources

- Library InfoTech Arcade

- Locations:

- East: 1-310 Main Library

- West: LHS, Lower Level

- Scheduling: 312-996-2716

- Email: arcade@uic.edu

- Home page:

- <http://www.uic.edu/depts/lib/arcade>

Other campus resources

- Teaching and Learning Center
 - Location: 102 DH
 - Email: teaching@uic.edu
 - Phone: 312-413-9166
 - Home page: <http://www.uic.edu/depts/oa/tlc>
- Other resources:
<http://www.uic.edu/index.html/computing.shtml>

Other campus resources

- **What are REACH members?**

Members of various departments, computer experts, resident experts and ACCC liaisons, who help and give advise to colleagues in their departments.

- For more information, see:

- <http://www.accc.uic.edu/reach>

Related links

- Blackboard CourseInfo Resource Page
 - <http://www.accc.uic.edu/itl/blackboard>
- ACCC Computer Seminar Materials
 - <http://www.accc.uic.edu/seminars/materials.html>
- UofI Online Resource Page
 - <http://www.accc.uic.edu/itl/uionline>
- ACCC Computer Lab Reservation
 - <http://www.accc.uic.edu/pclabs/roomres.html>