# CCNMTL

COLUMBIA CENTER FOR NEW MEDIA TEACHING AND LEARNING







#### **About Us**

CCNMTL is a service organization at Columbia University the goal of which is to enhance teaching and learning through the purposeful use of new media. We partner with faculty, providing them with as much support as they need in everything from the construction of course Web sites to the development of more advanced projects. CCNMTL is committed to remaining a leader in the field, engaging with its faculty partners in the reinvention of education for the digital age.



#### What we do

- Services
  - Course Web site development
  - Faculty consultations
  - Workshops
- Projects
  - Comprehensive large course solutions
  - Materials revolving around important texts
  - Training and testing environments
- Research and Development
  - Video Technologies
  - E-Seminars



#### **Services**

# Course Web site development

Faculty entrée to new media for teaching and learning.
 Building robust sites with multimedia elements.

# Workshops

 Teaching faculty to become self-sufficient users of technology. Presenting them with options for developing more robust features on their sites.

# Course Web site tool development

 Assisted in the development of campus-wide course management system, CourseWorks@Columbia

# Faculty Consultations

 Individualized, private consultations with faculty members about the use of new media in their teaching.



### **Project Development**

Advancing the purposeful use of new media for teaching and learning, CCNMTL develops projects in partnership with faculty who can shape them to fit their particular classroom context. As part of our research and development initiative, projects produced by CCNMTL are designed to be adapted for broader Columbia use, as well.

- CCNMTL projects support student inquiry in eight primary areas of innovation:
  - Multimedia Study Environments
  - Analytic & Communication Tools
  - Case Studies
  - Training Environments

- -- Field/Laboratory Solutions
  - -- Simulations
  - -- Digital Archives
  - -- Large Class Solutions



### **Multimedia Study Environments**

The primary goal of the Multimedia Study Environment (MSE) is to provide a resource that enhances the understanding and appreciation of a significant work of the contemporary educational canon. Based on a primary text, each MSE adds context to readings though direct links to glossaries of concepts and terms, profiles of related figures, videotaped commentary of Columbia faculty, film and music clips, historical photographs and artwork

#### Spotlight projects:

- Universal Declaration of Human Rights (2001) -- Faculty partner: Peter Danchin, School of International and Public Affairs
- The Artworld by Arthur C. Danto (2001) -- Faculty partner: Michael Kelly, Department of Philosophy





# **Analytic & Communication Tools**

From a digital briefcase (analytic) to a multimedia bulletin board (communication), CCNMTL has developed constructive devices that enable learners to invent, discover, create, change, test and recover particular encounters within a body of knowledge under study. These tools facilitate knowledge-building in order to foster the articulation, expression and representation of what is learned. They enable experts and novices alike to focus on the discovery of coherent structures, and to employ a full range of cognitive skills.

- Spotlight project:
  - CU Analyzer (2000) -- Project partner: Learn Technologies, Inc.



# **Digital Archives**

Digital archives are repositories of data, catalogued and organized in meaningful ways, that are accessible through the Web. They can include primary documents, graphics, sound resources, video and scholarly annotations and enable users — scholars and students alike — to examine large quantities of data, filtered through the selection process of the faculty editors, providing the equivalent of a small library or research trip.

- Spotlight project:
  - The Sonic Glossary (1998) -- Faculty partner: Ian Bent, Department of Music



#### **Case Studies**

Case-based learning is an educational practice central to numerous fields of instruction. A guided immersion into simulations of real-world scenarios, case-based learning supports the development of higher order critical thinking and a professional perspective to problem solving. The thoughtful application of new media — including video, audio, maps, search tools, and Web links — can increase the immediacy and realism of a case study, thereby improving the power of this proven teaching tool. CCNMTL is working with faculty partners in SIPA, the Law School, the School or Medicine and Dentistry, and many other departments to expand and enrich their portfolio of cases.

#### Spotlight projects:

- Rhode to Srebrenica (2001) --Faculty partner: Anne Nelson, School of Journalism
- Chad to Cameroon Oil Pipeline Project (2002) -- Faculty partner: J. Paul Martin, SIPA





#### **Simulations**

Based on the theory that one of the best approaches to learning is practice, simulations are constructed to immerse students in reality-based situations in which they must make decisions based on pedagogical objectives. Students develop questions and reasonable investigative approaches, gather data and information, test their hypotheses and present their findings within authentic and information-rich contexts, in order to learn about the field by thinking like a member of that practice community. Simulations can include complex tools and multimedia elements including databases, video, original documents and animations.

- Spotlight projects:
  - Brownfield Action (1999) -- Faculty partner: Peter Bower, Dept of Environmental Science, Barnard College
- NewsSim (2001)-- Facutly partner: John Pavlik, School of Journalism



# Field/Laboratory Solutions

Teaching and learning often take place outside of a traditional classroom setting — in laboratories, clinics, museums and nature preserves. In the health sciences arena, in particular, there is a strong tradition of service learning in which students learn while working in community-based facilities. CCNMTL exploits various technologies, including mobile computing, hand-held devices and multimedia Webbased technologies, to extend the classroom, enhance laboratory exercises, allow self-paced learning and provide a method for scholarly discourse.

#### Spotlight project:

- E-Biome (2000) -- Project partners: Center for Environmental Research and Conservation (CERC) and Center for International Earth
- Science Informational Network (CIESIN)



# **Large Class Solutions**

CCNMTL employs new media and digital technologies to design and model more productive learning environments for large enrollment classes. These projects enhance communications possibilities between and among teachers and students, enable wider access to enriched resources and provide increased opportunities for individualized attention and self-paced study.

- Spotlight project:
  - Critical Issues in Journalism (2001) -- Faculty partners: James
     Carey and Stephen Isaacs, School of Journalism



# **Training Environments**

Web-based training environments simulate the experience of one-to-one coaching between student and instructor, enabling the student to practice specific, designated skills. Each training environment specifies a learning objective, offers a brief introduction to the topic, sets a task for achieving that objective, provides feedback on the student's performance of the task and uses the student's performance to select the next task. Incorporating audio, video, image and print components, the programs maximize the benefits of technology to provide individualized instruction and assessment. Students can go back to different portions of the application to enhance their understanding of any lesson at any time, allowing them to progress at their own pace.

#### Spotlight project:

 Major Minor (2001) -- Faculty partner: Ian Bent, Department of Music, Columbia College



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