college-level anatomy students learn the bones and important landmarks of the skull. The software has two main features: 1. A collection of Quicktime VR movies that allow the user to rotate and view the skull and its bones in three dimensions. 2. An interactive "textbook" that contains high quality 2-D images, descriptive text and many embedded activities to encourage interaction with the content. This presentation will demonstrate the product and provide an overview of QuickTime VR, including technical requirements and hardware/software costs. The Bones of the Skull won the 1999 Sandoz/Slice of Life Student Software Award.

The impact of establishing a virtual university: a case study at NUST
Nomusa Dlodlo, National University of Science and Technology, Zimbabwe

The purpose of establishing any university is to cater for the educational needs of the surrounding community. In developing countries universities fail to cope with large numbers of applicants. The reason is that the number of universities in such countries is limited due partly to historical circumstances and partly due to financial constraints. The exercise of building brick and mortar universities and acquiring skilled staff to run them is expensive.

A Distributed Maritime Simulation Training Environment based on HLA
Mirko Dobermann, Computer Graphics Center ZGDV, Germany; Harro Kucharzewski, MarineSoft GmbH, Germany

A new approach for advanced training systems is the integration of computer simulation into such applications, allowing students to experiment in complex scenarios. The presentation introduces a distributed simulation-based training scenario generated in a distributed environment, which that offers extended functionality for interaction and demonstration within a maritime training scenario application. The main objectives of the solution are threefold: to set up and establish a distributed simulation-based training environment, to provide real-time interaction functionality during run-time, as well as an integrator already available simulators that are currently on the market. The infrastructure for this simulation is based on HLA/RTI, while which already offers functionality to couple embedded applications with networked simulation applications. The Computer Graphics Center in Rostock (ZGDV) currently focuses on maritime scenarios related to competency training for crews aboard and ashore. The development of the simulation environment is part of a research project in collaboration with regional enterprises in the Maritime sector.

Human Anatomy Predissection Lecture-On-Demand at The National University of Singapore
Gilles Doiron, National University of Singapore, Singapore

The NUS Integrated Virtual Learning Environment (IVLE) was developed so that staff and students could use this information technology infrastructure to communicate, exchange documents and information, discuss, chat, and access custom learning materials and course related web sites. IVLE also enabled the university to consider new pedagogical approaches, which would utilise its campus-wide broadband access to meet specific teaching and learning needs. A "lecture-on-demand" (LoD) delivery was seen as a viable tool that would allow students to take more responsibility for their learning and enable them to have greater control over their time schedule. With the collaboration of the Faculty of Medicine, the Center for Instructional Technology and the Centre for Development of Teaching & Learning, a prototype anatomy pre-dissection LoD, "The Abdominal Wall & Inguinal Canal", was produced. This paper examines the design and development issues addressed in building the prototype. Field test data on the technical reliability, and ratings, and comments from student feedback are presented.

ExploraGraph and CINEMA
Aude Dufresne, Univ. of Montreal, Canada; Claire Isabelle, Univ. of Moncton, Canada; Roger Nkambou, Univ.of Montreal, Canada; Yan Laporte, Univ. of Montreal, Canada; Frank Ferront, Univ. of Montreal, Canada

The ExploraGraph interface was designed to facilitate interaction in the context of distant learning. It was developed as an alternative to simple web interaction, in order to increase flexibility, visibility, and structure in the learning environment. It may be used as a front end to existing courses on the web and to support learner in them. The ExploraGraph Navigator makes it possible to navigate through conceptual graphs with automatic arrangement of elements, zoom and "fish eye" effects. Each node of the graph may have a description attached to it and may give direct access to an application, a document or an Internet site. Graphic structures may thus be used to represent the organization of tools, activities, concepts or documents. The Navigator offers each user a tool to specify his goals and the system can support him, using multiple modalities: Hypertext, graphical cues, Ms Agents avatars, voice, visual demonstrations and force feedback guiding.