

Tomorrow's Training Grounds

HOW WILL YOU TRAIN YOUR STAFF two years from now? Or five years? Or 10? Content developers are already producing big-budget interactive video courses that look more like feature films than training manuals. Technologies such as virtual reality, artificial intelligence, and easy remote access promise to get employees involved like never before. Here's what's coming.



Haptics Still in a very early stage of development at university and government labs, including the MIT Touch Lab and Sandia National Laboratories, haptics is the study of how to bring the sense of touch to interactions between humans and computers. Haptic devices give students "force feedback," letting a mechanic, for example, feel how much force is needed to install a part in a virtual jet engine.

Wearable Computers They're already being used by the U.S. Air Force for digital note-taking during aircraft inspections. Future geekware may combine head-mounted displays (pictured), special keypads, speech recognition, and wireless broadband to give your employees immersive, hands-free access to interactive training material.

Mobile Learning Care to take in a video sales course delivered to your cell phone/PDA combo while you relax in the airport lounge? Not today—wireless bandwidth is too narrow. But e-learning vendors such as KnowledgeNet and SmartForce are already cranking out bite-size content chunks earmarked for your pocket mobile devices. Expect a surge in remote learning when the telecom giants finish building their broadband wireless networks, perhaps as early as 2004.

Virtual Teachers Also called avatars, these computer-generated teachers—working prototypes are in labs at the University of Southern California and North Carolina State University—combine virtual reality and artificial intelligence to demonstrate skills, answer questions, monitor students' progress, give advice, and even design custom courses.

Tele-Immersion Under development by a consortium of private researchers and universities, including Brown University and the University of North Carolina, tele-immersion is the ultimate in live collaboration. Using dozens of digital video cameras and lots of computer horsepower, tele-immersion can make you feel like you're working in the same room with someone located hundreds of miles away. Turn your head to the left and you're looking at the pictures hanging in his office, not yours. Digital teamwork of this magnitude remains 10 years away.