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THE VIRTUAL WOOD SCIENTIST

Imagine that you are in a small, dimly lit room. Atonal sounds flow up the walls to the ceiling. You are sitting in a Captain Kirk type chair amid an array of display panels that encapsulate your field of vision. The voice and visage of Dr. Torrivinen of Finland, an expert in wood evaporation under plasma bombardment, describe how to modify your adhesive formulation to prevent a total meltdown. A beeper pulses through the display to remind you of an impending meeting with the students in Intro 200---"Wood Science in the Information Age." You give your regards to Dr. T, and using the telepresence capabilities of local high schools and corporate centers, you begin your general lecture to 700 students enrolled from around the world.

There may not be any wood scientists jacked into CyberSpace yet, but virtual reality and surfing the Internet have become part of popular culture and have begun to fundamentally change the way people interact with each other, as well as with machines. FAX machines, computers, networking, e-mail, and coming technologies such as virtual reality, cellular networks, intelligent software agents, and the information superhighway prove that the only thing certain is that change is inevitable. Specifically, there is a fundamental change in the way information is utilized and distributed. This will have far-reaching consequences for all wood science professionals.

How do we position ourselves to take advantage of these changes? Take the most critical issue in our profession, the lack of undergraduate students and the decrease in number of undergraduate programs. High schools are using Internet-based discussion groups but represent only a portion of the 60 million people using the Internet. If a set of modules on the use of engineered composites to replace structural timbers from old-growth trees or other environmentally positive aspects of wood science were available, there would certainly be increased awareness and interest. This would be an extremely low-cost way to distribute information and to contact interested people worldwide! Another network-based information service would be the development of a World Wide Web (WWW) home page dedicated to wood science. Such systems allow for easy delivery not only of text, but also of pictures, sound, and short movies. Telepresence and distance learning capabilities now permit the delivery of outreach/short courses to industrial sites. A logical extension would be to have wood science experts develop and offer courses that could be tapped by other regional universities for feeder courses and to offer course-sharing between wood science programs. Indeed, a proposal on distance learning was introduced at the last SWST annual meeting in Portland, Maine, by Professor Terry Amburgey from Mississippi State University.

From a research viewpoint, it is now possible through teleconferencing for several individuals from around the world to work on a shared computer white-board to write ideas while simultaneously seeing the other individuals and listening to their voices! This offers tremendous savings in travel time and cost. It is available right now. What will change is availability and cost.

We must take advantage of these opportunities. Furthermore, we need to incorporate this information and perspective into the wood science curriculum. Requiring a student to take one programming class in Basic just doesn't "hack" it anymore. Students need to know the rudiments of vision systems, frame grabbers,

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data acquisition, and instrument interfaces. The equipment in industry is becoming more sophisticated, and our students need to be comfortable in interacting at that level.

The beauty of this new technology is that it can enable an individual or a small group of people to disseminate information and interact with people on a global scale. If we do not leverage this technology and change our way of doing business, others surely will and we will end up getting sawdust kicked in our face. Just knowing about wood is not enough. Tomorrow's wood technologist will also need to be a sophisticated technology user.

After a rousing information-dispensing session, you quickly call up the latest weather display from the NOAA satellite and get ready to call it another day. Before leaving, you instruct the librarian program to search the network information sources for the three most recent references on the use of neural network controls in intelligent structural panels. As you leave the office and walk toward the transport bay, you are suddenly seized with a bodily glow of contentment, resulting from the joys of being a virtual wood scientist.

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