Visual Learning of Materials Processing: Experiences with the ViMS Courseware and its Dissemination

*Tim Anderson, University of Florida*

One of the authors (Russ) has developed a multimedia instructional package intended primarily for use as a supplement in introductory courses in Materials Science. The courseware is entitled Visualization in Materials Science (ViMS) and is available in Windows CD-ROM format (ISBN 0-534-95736-6, Brooks-Cole Publishing). Another author (Anderson) has explored its use in a senior level materials course in the Chemical Engineering program. This presentation will first convey experiences with using ViMS in the classroom, with an emphasis on integrating nanomaterials processing concepts. ViMS was developed with leveraged support from the NSF funded SUCCEED Engineering Education Coalition and has been used at over 60 Universities in the U.S. and Canada. Two other authors associated with SUCCEED coalition (Serow and Zorowski) have studied factors which may be responsible for the broad dissemination of this product. Using prior research and theory on the diffusion of innovation as guidelines, it was discovered that ViMS benefited from three principal factors. These were: first, a high level of product quality, achieved in part through active solicitation of user input; second, active partnering with external organizations; and third, relatively low product costs.