**What works and the challenges ahead in developing quality digital learning resources:
A Retrospective view of the *Premier Award for Excellence in Engineering Education***

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The development and use of high quality courseware are two iterative processes that are closely coupled. Without having high quality courseware available as a model and having data proving its effectiveness, faculty are justifiably hesitant to invest the time to integrate courseware into their curricula. At the same time, without having the courseware in demand by teachers, without the test-beds (classrooms or other settings) for evaluating the effectiveness of courseware, the university rewards (promotion & tenure) system does not encourage developers to produce their product. The cycle is being broken by bold developers who advance knowledge and practice by creating innovative pedagogy.

In the mid-1990's NEEDS—The National Engineering Education Delivery System—began exploring the issues surrounding quality of digital learning resources. NEEDS convened a national workshop of courseware developers, instructional designers, education and learning experts, and publishers to develop evaluation processes and procedures. NEEDS has devoted the majority of its efforts into developing the premier evaluation level through the *Premier Award for Excellence in Engineering Education Courseware*. In partnership with John Wiley & Sons, the *Premier Award* was initiated as a national competition 'to recognize high-quality, non-commercial courseware designed to enhance engineering education.' Since 1997 eleven learning innovations have been recognized through the *Premier Award*.

This paper will review what we have learned to date about effective uses of technology to enhance teaching and learning through the process of evaluating courseware for the *Premier Award*. We will discuss the effect of recognition on Premier Awardees as well as examine the factors that lead toward successful adoption or adaptation of digital learning resources.