Component Based Software Development in the Undergraduate Information Systems Curriculum

Allen Parrish
Brandon Dixon[1]
The University of Alabama
Department of Computer Science
Tuscaloosa, AL 35487

and

David Hale
Joanne Hale[2]
The University of Alabama
Area of Management Information Systems
Tuscaloosa, AL 35487

Keywords: Component-based software, binary components, COM, CORBA, Java Beans

Abstract

Component-based software development (CBSD) has existed in one form or another for a number of years. The idea of constructing modular software has long been recognized as advantageous within the software community, even dating back to the early days of FORTRAN programming with subroutines and libraries serving as "components." Over the past several years, advances in the enterprise computing and client-server communities have generated renewed interest in the concept of CBSD, bringing the terms "component" and "component-based software development" into widespread use within the commercial software community. However, current popular references to these terms are typically with regard to popular "middleware" technologies (COM, CORBA, Java Beans, etc.), making much of the current dialog in the area of CBSD considerably different from the classical perspective. This workshop will consist of an overview of component-based software development, including binary component technologies such as Windows Dynamic Link Libraries, COM, CORBA and Java Beans. The presentation will focus on ways to integrate these technologies into the information systems curriculum, with an emphasis on separating important fundamentals from commercial hype, as well as from the mechanical button-pushing activities associated with various development "wizards." A large portion of the workshop will involve the expository presentation of class-tested case studies using these technologies. Participants will be given class handouts and CDs containing class materials.

[1] {parrish, dixon}@cs.ua.edu
[2] {dhale, jhale}@cba.ua.edu