Qualifying Use Case Diagram Associations  
pp. 23-29  
Adenekan (Nick) Dedek and Benjamin Lieberman

Object-oriented software engineering methodology defines system requirements in the form of flow-oriented use cases. According to the OOSE approach, use cases should play a major role throughout the development process.

Use cases have five key stakeholders: customers, systems and business analysts, systems architects and developers, software testing and quality assurance engineers, and project managers. Given these stakeholders’ broad interests, the use case approach presents obvious challenges. The technique must provide information to a diverse group of people at different project phases. It must also describe the problem domain, the system requirements, and customer expectations correctly and completely.

The authors propose that conceptual use case diagrams can be created by considering the domain model and drawing upon the subject matter experts’ critical analysis.

Play-Centric Games Education  
pp. 36-42  
Tracy Fullerton

Digital games are now the second most popular form of entertainment after television. The extraordinary imagery in today’s games, comparable to that found in film and TV, coupled with its increasing complexity and realism, have broadened the appeal of electronic entertainment to include adults as well as adolescents and children. Similar to the explosion of interest in screenwriting and directing that accompanied the growth of the film and TV industries, many creative thinkers today see interactive entertainment as the most innovative and culturally pertinent mode of expression available to them.

The purpose of games education is not to fill the ranks of the game industry but to fully explore the nature of the medium, to gauge its potential, and to articulate a creative vision not limited by current technological capabilities. A play-centric approach to the study of games is a step toward that ultimate goal.

Game Design Education: Integrating Computation and Culture  
pp. 43-51  
Janet Murray, Ian Bogost, Michael Mateas, and Michael Nitsche

Electronic games are growing rapidly as a cultural form, a set of media technologies, and a global industry. Humanists look at these games as a new expressive genre like drama, opera, or movies; social scientists view them as a new form of collective behavior; computer scientists, engineers, and industrial designers find them a new focus of invention.

This industry demands an increasing supply of graduates trained not as generic programmers, artists, or producers, but as specialists in the particular technologies and techniques that drive the latest best sellers. Universities have responded to this demand with programs that fall into two categories: game production and game studies. Researchers at Georgia Tech are defining a third category, one that integrates technical and cultural knowledge by emphasizing research into the expressive potential of games.

Building a Game Development Program  
pp. 52-60  
Lawrence Argent, Bill Depper, Rafael Fajardo, Sarah Gjertson, Scott Leutenegger, Mario A. Lopez, and Jeff Rutenbeck

At the University of Denver, researchers approach game development as an interdisciplinary field requiring some appreciation for both the technical and creative side, with a deep passion in at least one area. In 2004, DU approved two new majors in game development that are built upon a four-way partnership between computer science, Digital Media Studies, Electronic Media Arts Design, and Studio Art.

They created this program with the following goals in mind: fostering a human emphasis and whole-brain education, increasing enrollments in computer science while developing a technically strong major, and allowing choices between subfields. Achieving these goals requires strong collaboration and an interdisciplinary approach.

As academics participating in the birth of a new discipline that has significant social impact, these researchers act as stewards responsible for exploring benevolent game applications as well as making game development more inclusive of women and underrepresented populations.

Evolving the Artist-Technologist  
pp. 62-69  
Ian Horswill and Marlena Novak

Computation currently plays a central role in the production of most cultural artifacts, whether as part of the medium itself or as a productivity tool. Yet art and computation are surprisingly poorly integrated, with most practitioners in one discipline receiving little or no training in the other. In the game industry, this can result in coworkers who can’t communicate or managers who don’t understand the people they manage.

Northwestern University’s Animate Arts Program seeks to train liberal artist-technologists who can bridge the art and computation divide—an exercise in both pedagogy and cultural engineering. The aim is to recruit students early in their college careers and provide them with an integrated, team-taught curriculum in the basic principles of new media. The program’s ultimate goal is to produce graduates with basic literacy in all the disciplines that underlie new media, regardless of their eventual profession or specialization.