Special Track on

Games and Entertainment

Digital games and entertainment are a modern area of enormous economic potential and of serious potential social impact. In fact, the video game industry has surpassed the revenue of the box office motion picture industry and the recorded music industry. Computers with advanced graphics capabilities have contributed to the immersive interactive experience that attracts many to spend as much of their leisure time playing video games as watching television. However, the artificial intelligence (AI) behind games and our understanding of knowledge usage in these interactive worlds has remained relatively undeveloped. This track looks at games and entertainment primarily from two views: digital games knowledge media and interactive computer game AI.

Digital games knowledge media addresses the interdisciplinary endeavor of understanding games as knowledge media systems. How knowledge is represented in games; how knowledge contributes to the interactive experience of game playing, immersion, and flow; how relevant knowledge is utilized in games for the social impact of game playing; and how to base game design on explicit knowledge management are areas of focus.

With the advancement of console and computer systems towards more computational power, specialized processing units, and multiple core CPUs, along with the maturing of the graphics capabilities, game developers are dedicating more time and CPU cycles to game artificial intelligence in the next generation of interactive games. Efficient theories, techniques, and tricks that improve the intelligence of games, adversaries, allies, and the overall experience are in great demand. The opportunities for conducting research to solve the difficult problems of interactive AI are challenging, numerous, and interesting.