Plenary Session IV: Understanding the Critical Relationship between the Internet of Things (IoT) and Artificial Intelligence in Higher Education

The intent of this session is to increase the audience’s awareness of the interdependence of the Internet of Things (IoT) and the evolving field of artificial intelligence (AI) specific to higher education. Under the umbrella of the Internet of Things phenomenon, higher education is experiencing a rapid, and complex convergence of Internet-enabled information gathering, processing, and interpretation capabilities. This fact is exacerbated by the continuous development and deployment of new personal, institutional, and community-wide data gathering and processing devices and systems. Furthermore, advances in the speed and processing power of computer infrastructure have spawned integration of AI tools that enable technology-enhanced teaching and learning, data-driven decision processes, and lower costs after the initial development, deployment, and integration cycles are completed. AI strives to mimic the abilities of the human brain to receive input, process information, and provide actionable output to solve complex problems in a shorter time period and with less margin for error than current digital engines.

Together, these evolving systems not only offer tremendous benefit to all participants, but also put considerable stress on the financial, policy, personnel, and legal assets of the entire higher education ecosystem. This session will feature a presentation and discussion designed to inform and stimulate future dialog to clarify the fact that IoT and AI are not separate initiatives. IoT and AI are fully integrated and mutually interdependent tools of the trade for higher education leaders.

Speaker:
Mark Johnson, chief technology officer and vice president of data architecture, Microelectronics Center of North Carolina (MCNC)

Facilitated Discussion on Understanding the Critical Relationship between the Internet of Things (IoT) and Artificial Intelligence in Higher Education

Facilitator:
Mike Abbiatti, WICHE vice president for educational technologies and WCET executive director

Biographical Information on the Speaker and Facilitator

Mike Abbiatti assumed the WCET leadership position in January 2015. Previously he was the director of the Southern Regional Education Board (SREB) Educational Technology Cooperative. Abbiatti was formerly associate commissioner for information and learning technology for the Louisiana
Board of Regents. He is the founding director of the successful Louisiana Board of Regents Electronic Campus, and former director of distance education for Louisiana State University. Abbiatti has been recognized by the Computerworld-Smithsonian Awards Program as a Laureate, signifying leadership in the design, deployment, and utilization of information technology for the benefit of Louisiana’s citizens, and is a past member of the EDNET Education Executive Advisory Board. Other national recognitions include the United States Distance Learning Association’s Most Outstanding Achievement by an Individual in K-12 Award, and *Electronic Learning* Magazine’s Distinguished Achievement Award through the Educator of the Year Program.

Mark Johnson’s career encompasses over 25 years of leadership experience in the management, engineering, and operations of Internet technologies. He is currently the chief technology officer and vice president for data architecture at MCNC. During Johnson’s tenure at MCNC, he has overseen the transformation of the North Carolina Research and Education Network (NCREN) from a simple series of point-to-point links to a sophisticated network of gigabit class connections, optical rings, and regional points of presence. During that same time period, he has managed a 1,000-fold increase in Internet usage. Johnson also has led MCNC’s regional and national networking activities as a founding member of the North Carolina Networking Initiative. In addition, he has been involved in Internet2 since its inception, serving in a variety of member leadership positions. He is a past chair of The Quilt, a national consortium of regional research and education network operators. From 2011 to 2012, Johnson served as the interim executive director for the US UCAN project intended to help connect 200,000 U.S. community anchor institutions like public libraries, schools, community colleges, research parks, public safety and health care institutions across the country to next-generation Internet-based applications. He led a local team that developed the initial concept for the NLR Experiments Support Center and won the competition for that service, as well as leading the local team that combined with Indiana University and the MAX GigaPoP to create the Internet2 Hybrid Optical and Packet Infrastructure (HOPI) support center.