Topic of the Speech:
Applications of IoT and Cloud Platform Incorporating AI and
VR Technologies

Professor Baoguo Yao
China Jiliang University
China

Professor Baoguo Yao received his PhD degree from Dalian University of Technology, China in 2004. Prof. Yao had worked in The Hong Kong Polytechnic University for seven years from 2000 to 2007, and worked in Zhejiang University from 2007 to 2009. Now, he is a professor in the Department of Mechanical Engineering, School of Mechanical and Electrical Engineering, China Jiliang University. His research interests include materials characterization and testing, IoT technologies and cloud platform, textile bioengineering and informatics, test method and instrumentation.

Prof. Yao has undertaken six national and provincial funds and state key projects as the project principal, including two NSFC (National Natural Science Foundation of China) projects, and one project of Zhejiang Provincial Natural Science Foundation of China. He has published more than 30 journal papers and conference papers (10 SCI cited and 15 EI cited, including three papers in top SCI journals). Prof. Yao was a recipient of the first prize in the Scientific and Technological Progress of the Ministry of Education, China in 2002.

TBIS

Applications of IoT and Cloud Platform Incorporating AI and VR Technologies

Bao-Guo Yao[*]

College of Mechatronics Engineering, China Jiliang University, Hangzhou, 310018, China

[*]Presenter's email: yaobg@hotmail.com

ABSTRACT (NO MORE THAN 500 WORDS:)

IoT (Internet of Things) means things and things or people and things are connected with each other by advanced technology. They can communicate with each other in a new way. IoT has three layers of system architecture: perception, network and application. The perception and network layers depend on hardware technologies, such as RFID, ZigBee, Infrared technologies, wireless sensor network (WSN) technology, and communications network. In the application layer, the cloud platform and cloud computing are the key technologies, as well as the user interface for visual presentation to customers. Furthermore, the cloud platform is the core of IoT applications based on Big Data.

IoT has a lot of applications in our life, such as intelligent transportation, intelligent logistics, public safety, environment protection, individual health and so on. Nowadays, IoT has more and more applications in intelligent transportation, intelligent fire fighting, intelligent manufacturing, and online experiencing, especially by integrating artificial intelligence (AI) and virtual reality (VR) technologies. In an intelligent transportation system incorporating AI technologies, some novel functions are available, such as face recognition, behavior analysis, and driver assistant by monitoring and automatic alarming system.

IoT technologies incorporating AI and VR have broad application prospects in textiles and clothing industry, such as intelligent garment manufacturing, virtual fitting platform for wearing experience during design stage, and Big Data platform for extending the applications of smart e-textile electronics and wearables.