

AVVISO DI SEMINARIO

Giovedì 5 settembre 2019, ore 11:30, Sala Riunioni DINFO (Santa Marta)

Assistive mobile apps for people with sensory disabilities

Paraskevi Theodorou
Department of Digital Systems, University of Piraeus

Abstract. Two assistive android smartphone apps for blind and deaf people are being developed. The first app offers interactive indoor navigation for blind and visually impaired persons. Specifically, the app will implement a voice-instructed self-guided navigation service inside Museum exhibition halls and ancillary spaces. The application comprises an accurate indoor positioning system using proximity sensors at the exhibits and unobtrusive assistive tactile route indicators marked on the floor of Museum rooms. Furthermore, the application comprises an indoor positioning system for completely free movement inside internal spaces exploiting beacons fit around the place. The proposed application will be exploited in the Tactual Museum of the Lighthouse for the Blind of Greece, one of the 5 tactual museums worldwide, in order to implement a brand new “best practice” regarding cultural voice-guided tours targeting blind and visually impaired visitors. The second app will allow real time communication of deaf people using Speech to Text applications. It will record verbal speech in real time and display it as text through Android devices. The app will allow the display of multiple speech streams from corresponding wireless microphones by separating distinct speech.

Short CV. Paraskevi (Vanessa) Theodorou is a first year PhD candidate of the Department of Digital Systems at the University of Piraeus, Greece. She holds an MSc in Educational Science – Special Education, and an MSc in Technological Education in Digital Systems. She has a BSc in Digital Systems from the University of Piraeus. Her research interests lie in the fields of the development of mobile assistive apps for people with special needs, and the identification of best practices concerning the education and training of these groups of people in order to maximize their rates of technology adoption, with special focus on mobile apps for blind or deaf people. Aiming to acquire knowledge of the communication and education channels of these two groups, Ms. Theodorou learned the Braille writing system, as well as the Greek sign language. Prior to being a PhD candidate at the University of Piraeus, Ms. Theodorou participated in research concerning environmental education and methods and technologies for the improvement of the education and training of people with learning disabilities.