Sustainable Campus: Innovating Attendance Taking with The Use of Beacon-integrated Mobile App

ABSTRACT

Many institutions of higher learning (IHL) are moving towards the establishment of a sustainable campus. In addition, budget cuts in IHL demand innovative ways of transforming business processes for efficiency and savings. Attendance taking is one of the many routine processes in many settings ranging from seminars, trainings, meetings, workshops, and classes. Although it may seem insignificant, it actually uses huge amount of resources due to its frequency of practice. In any IHL, there can be up to a total of hundreds of meetings, classes, trainings, workshops, and seminars. In addition to the resources for printing, many pen and papers are used. Therefore, re-engineering of this practice can offer cost and time savings. With the advancement of technologies and the ubiquitous of mobile devices, this paper proposes an innovative way of taking attendance with the integration of beacon devices with mobile technologies. A beacon is a device that uses Bluetooth Low Energy to broadcast its universally unique identifier. This new technology offers advantages in terms of cost and indoor positioning over other technogies such as Global Positioning System, QR code, and Radio Frequency Identification.