5G in airports: challenges and use cases.

Pablo Vera-Soto, Juan Cantizani-Estepa, Raquel Barco and Sergio Fortes.

pvera@ic.uma.es, jce@ic.uma.es, rbm@ic.uma.es, sfr@ic.uma.es

Telecommunication Research Institute (TELMA), Universidad de Málaga E.T.S. Ingeniería de Telecomunicación, Bulevar Louis Pasteur 35, 29010 Málaga, Andalucía, Spain.

ABSTRACT

5G is the new generation of cellular communications that aims to provide high-throughput high-reliability connectivity to greatly diversified scenarios. With this objective, it shall act as a viable solution for environments as complex as an airport terminal, whose daily work cycle includes a wide range of diversified activities. As such, in this paper, 5G capacities are assessed, identifying those airport processes that can benefit from its application. From the proposed use cases, the monitoring of luggage trolleys is identified as a key use case that poses a problematic that is usually approached in a very inefficient way, due to the lack of information about the position and state of the trolleys. In this sense, a management system for the luggage trolleys using NarrowBand Internet of Things (NB-IoT) and Bluetooth Low Energy (BLE) is proposed.