

Portuguese “Smart Luggage” may be adopted by airports worldwide

The Portuguese “Mala Segura” or Safe Luggage Consortium has developed a smart, global, luggage localisation and monitoring system, based on the incorporation into a suitcase’s wall of RFID (Radio Frequency Identification), WSN (Wireless Sensor Network) and GPS/GSM (Global Positioning System) tags. The system allows a user to track the location of their bags - for example, to determine whether they have been embarked onto the aircraft, train or coach – by means of a simple mobile phone application.

The project was carried out by ANA – Aeroportos de Portugal, in partnership with three companies and two R&D institutions (SETSA - Sociedade de Engenharia e Transformação, Critical Software, Tecmic - Tecnologias de Microeletrónica, INOV-Inesc Inovação and PIEP- Pólo de Inovação em Engenharia de Polímeros, of University of Minho).

The solution was developed according to IATA’s specifications, this institution supporting the introduction of RFID for baggage tracking worldwide. A few selected airports already use this technology, with self-adhesive RFID tag labels placed on the outside of bags. These cost approximately 10 eurocents per passenger, with the cost being reflected in the air fare. It may therefore easily be realised that by incorporating the tag into the actual suitcase, this cost will be incurred only once, at the time of purchase of the bag.

In January, the Safe Luggage consortium submitted a patent request to the Portuguese Institute for Intellectual Property (INPI) with a view to obtaining protection for the system, states Bruno Pereira da Silva, member of the executive commission of the Safe Luggage Consortium. The project had 30 months duration and a budget of 2.5 million euro, with a part-financing of 1.5 million euro by QREN (Quadro de Referência Estratégica Nacional). In 2009, per day 10 thousand bags went missing across airports within the EU and 90 thousand worldwide. This translates to 600 thousand bags per week or three million per month (worldwide), with a (non-trivial) cost to airlines of three billion euro.

The Safe Luggage Consortium presented its solution to the IATA Baggage Working Group’s annual meeting - involving airports and airlines at a global level - which took place on the 22nd and 23rd March.

The Safe Luggage solution was presented as a new vision in the implementation of RFID baggage tracking, and believes it has the potential to give renewed impetus to this trend. This had effectively slowed to a halt as the result of the high cost of solutions based on throw-away RFID labels.

The consortium is planning to present a further in-depth study of its solution – taking into account the most deep involvement of the luggage manufacturers - at the next IATA Baggage Working Group, scheduled for October 2011.

Consortium



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