

Towards the Construction of an iTU for Sensitive Air-Cargo

Marjan LUKEŽIČ¹ and Roman GUMZEJ²

¹ University of Ljubljana, Faculty of Chemistry and Chemical Technology, Ljubljana, Slovenia

² University of Maribor, Faculty of Logistics, Celje, Slovenia

Abstract—The amount of air shipments with high added value is growing. With this kind of cargo, it shall be necessary to take into account its specific characteristics. If its specific properties are of critical importance, appropriate air-cargo freight containers that could maintain the prescribed microclimate conditions inside the unit should be used. At the same time, it is necessary to protect this kind of valuable air-cargo against loss and damage throughout the entire transport chain. To be able to fulfil these requirements, we are proposing the construction of an appropriate intelligent transport unit that could benefit from the arising Physical Internet and would enable appropriate handling and transportation of sensitive cargo.

Key words—Physical Internet, Internet of Things, Intelligent Transport Unit, Air-transport.

AUTHORS

M. Lukežič is with the Faculty of Chemistry and Chemical Technology, University of Ljubljana, Ljubljana, Slovenia (e-mail: marjan.lukezic@fkkt.uni-lj.si).

R. Gumzej is with the Faculty of Logistics, University of Maribor, Celje, Slovenia (e-mail: roman.gumzej@um.si).