

Multi Agent System Architecture Oriented Prometheus Methodology Design for Reverse Logistics

Authors : F. Lhafiane, A. Elbyed, M. Bouchoum

Abstract : The design of Reverse logistics Network has attracted growing attention with the stringent pressures from both environmental awareness and business sustainability. Reverse logistical activities include return, remanufacture, disassemble and dispose of products can be quite complex to manage. In addition, demand can be difficult to predict, and decision making is one of the challenges tasks. This complexity has amplified the need to develop an integrated architecture for product return as an enterprise system. The main purpose of this paper is to design Multi agent system (MAS) architecture using the Prometheus methodology to efficiently manage reverse logistics processes. The proposed MAS architecture includes five types of agents: Gate keeping Agent, Collection Agent, Sorting Agent, Processing Agent and Disposal Agent which act respectively during the five steps of reverse logistics Network.

Keywords : reverse logistics, multi agent system, prometheus methodology

Conference Title : ICITE 2015 : International Conference on Information Technology and Engineering

Conference Location : Barcelona, Spain

Conference Dates : August 17-18, 2015