

Intermediary agent in the holistic collaborative production distribution network model for SMMEs

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Abstract

The development of the holistic collaborative production distribution network model for SMMEs is based on the consideration of SMMEs characteristics. The designed network model offers the same role amongst participants and no dominant power who dictate other participants in the network. As a consequence, there must be an intermediary agent as a mediator to integrate, manage and coordinate the whole participants. This intermediary agent plays significant role in this model as it determines the agreed products and services standards as well as determines the participants' configuration to fulfil customer order. The agent would be a bridge for SMMEs collaboration and would become the main body of the developed collaborative network model.

Keywords

SMMEs, network database, intermediary agent, production distribution network

Biography

Mohammad Rizal Firmansyah is currently doing his PhD research degree at the University of South Australia under Indonesian Government Scholarship. He has worked in a Shipyard Industry for 1 year before being a Lecturer in Engineering Faculty Hasanuddin University, Indonesia. Since 2012, he became an International Member of the Society of Naval Architects and Marine Engineers (SNAME). He obtained his BA in Naval Architecture in 1997 from Hasanuddin University, Indonesia, MEng in Marine Material and Production Engineering in 2002 from 10 Nopember Institute of Technology, Indonesia and MEng in Manufacturing Management from University of South Australia in 2009. He has involved in a number of collaborative researches with Shipyard Industries in Indonesia as well as with Indonesian Classification Bureau. His research interests include manufacturing, production management, optimization, quality management, supply chain management and transfer of technology. Mohammad Rizal Firmansyah is the corresponding author and can be contacted at mohammad_rizal.firmansyah@mymail.unisa.edu.au.

Yousef Amer obtained his PhD in 2007 from the University of South Australia and developed a novel quantitative model to optimise supply chain processes using design for Six Sigma and fuzzy logic. He has worked in manufacturing and logistics for over 18 years. Dr Yousef Amer is a Lecturer and Program Director at the School of Advanced Manufacturing and Mechanical Engineering in University of South Australia. He has published many

international peer reviewed research papers in the research fields of supply chain management, sustainability in manufacturing, integration and performance measurement, and business process re-engineering, three book chapters and two books. He is a member of the Barbara Hardy Institute, the Council of Supply Chain Professionals (CSCMP), Logistics Association of Australia (LAA), Chartered Institute of Purchasing and Supply (CIPS) and the Performance Measurement Association (PMA).

Romeo Marian graduated from the Technical University of Cluj-Napoca, Romania, with a BE (Hons) in Mechanical – Mechatronics Engineering, specialising in design of Machine-Tools and Robots. He also completed a Master of Science, organised under a Tempus Programme of the European Union by a cluster of European Universities. His doctoral studies, at UNISA, concerned the modelling and optimisation of assembly operations using Genetic Algorithms. He has extensive research and development experience in research organisations, industry and academia in a number of areas – in which he published – ranging from MEMS to heavy engineering, from mechanical, thermal (heat exchange and combustion), electrical (high potential electric fields) systems, fluid mechanics, hydraulic drives, to welding. His recent preoccupations and teaching include artificial intelligence, quality management, logistics and supply chain management and optimisation.