

COORDINATION OF SUPPLY CHAINS ACTIVITIES: AN AGENT BASED APPROACH

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ABSTRACT. Companies operate in an environment increasingly demanding in terms of flexibility and reactivity. The introduction of the entities resulting from Distributed Artificial Intelligence (DAI) and Multi-Agent Systems (MAS) in the management of enterprises prove to be an interesting technology to simulate and reproduce the collaborative and adaptive behaviors of enterprises. This paper models the coordination of the various collaborative parties both inside and outside a supply chain using coordination methods of MAS mainly coalition formation mechanisms. In the first part, we give an overview of some existing approaches. In the second part, we present our agent modeling of supply chains, then we detail the coalition formation algorithm and we illustrate our approach with an example chosen in the industrial domain

KEYWORD : supply chains, multi-agent systems, coalitions formation, coordination.
