

**256955 NisB**

The Business Network of suppliers, distributors, customers and partners that a company acquires is becoming a competitive asset. The requirement is to continuously and dynamically optimize and adapt this network to the evolving business needs. The "protocol" of Business Networks is the semantic interoperability between businesses enabling the realization of business meaning from the data being communicated within the network. In principle, semantic interoperability is established by creating mappings between metadata and data elements that constitute the business documents that are exchanged among the nodes (businesses) of the network. This project will look into innovative low-cost means of establishing mappings for semantic interoperability while addressing the ever-changing structure of the business network. We claim that this goal can be achieved by employing the inherently low-cost peer-to-peer and pay-as-you-go mechanisms. Specifically, we refer to the following features of low cost business networking mechanisms as The Wisdom of the Network: \* As-you-Go Build-Up of the Mappings \* Know your Neighbors. A sub-network develops its own business terminology and even its own interpretation of the terminology \* Quick Setup. When a node joins a sub-network, it gets the mapping it needs and it benefits from the mappings accumulated in the sub-network \* Tolerating Incomplete Information \* Decentralized Control