

Semantic P2P Network for e-Business

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Abstract

Traditionally, e-Business uses Client/Server technologies. In this model, the consumers and producers do businesses through the third parties like Alibaba.com. When we investigate the more wide scope of e-Business such as e-Business corporations of many partners for the whole supply chain, the complex business activities are not easily modeled and implemented by several third parties. When a lot of Small to Medium Enterprises (SME) have their own Internet business servers and/or Enterprise Resource Planning systems, P2P technologies are the potential for the solution of the e-Business corporations.

This talk will introduce a different approach of e-Business based on semantic P2P Network--Virtual Hierarchical Tree Gird Organizations (VIRGO). Other than unstructured and DHT-based structured P2P networks, VIRGO keeps the semantic meanings of the nodes' roles in the communities. In VIRGO approach, the nodes are identified as domain names classified by the semantic meaning of roles in the organizations. The nodes construct the VIRGO network according to their domains, which form a coalition of vertical virtual organizations. In every node, on the top of VIRGO an intelligent agent is implemented to collect and analyze the related knowledge information such as the lowest price of a product among all nodes, and to make auxiliary business planning and decision.

This talk will give audience the concepts, framework, protocols about VIRGO, and the benefit of VIRGO approach for e-Business, especially about the intelligent agent on the top of VIRGO and distributed complex query by SQL-like statements.

Short Biography

Prof. Huang works on challenges about Grid and P2P computing. He has worked on e-Science and Grid computing since the beginning of 2000's. He was honored in Marquis Who's Who in the World 2006, Marquis Who's Who in the Science and Engineering 2006-2007, and Marquis Who's Who in Asia 2006-2007 due to his achievement of proposing Virtual and Dynamic Hierarchical Architecture for e-Science and Grid and VIRGO protocols. He serves as program committee member of many international conferences. He has contributed over 70 technical papers to various conferences and refereed journals.

Prof. Huang now is a Director of Network & Distributed Computing at Zhejiang Sci-Tech University (ZSTU). Prior to joining ZSTU, Prof. Huang worked as a Senior Research Associate in

the School of Computer Science at Cardiff University since 2004. Before working at Cardiff University, he developed many large software systems in several companies, as technical leader or department manager. He obtained his Ph.D. in Computer Science from Zhejiang University in 2003, Bachelor's From Nanchang University in 1982, and Master's from Hangzhou University in 1984.