

## **The TRADE AGENTS Project**

### **Autonomous Systems of Trade Agents in E-Commerce**

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The usage of internet in commercial activities is starting to emerge in the USA and also in Europe: Commercial activities via internet are gradually changing the daily practice and future possibilities. This opens many new possibilities, opportunities, and challenges in both commerce and ICT.

Marketplaces typically consist of autonomous parties that interact with each other in several ways. Examples are product advising, sales negotiation, information providing, etc. In daily life, the number of parties and products is limited, due to space and time constraints. In e-commerce, such constraints do not need to exist, and a wide variety of suppliers, products, and clients becomes readily available. The *Trade Agents project* addresses the automation of several important trade and sales phases via internet, to enable to deal with these new aspects of trade in e-commerce.

Agent technology can enhance electronic market places by the autonomicity of the software agents: a software agent is a piece of software that is autonomous, and that is owned by some party. Current software agents are, however, still rather basic; e.g., choices and preferences must be set very explicitly. This makes it hard to efficiently and conveniently deal with commercial and human settings. Adaptiveness and flexibility are important issues to make such systems accepted and integrated. Therefore, the Trade Agents project focusses on the following areas:

- customisation of services: e.g. adaptive profiling of customers and social information filtering. Commercial aspects are marketing and customer relations management, or the detection of potential needs and interests of customers.
- brokering, negotiations (sales), and dealing: e.g. trading in electronic marketplaces, shopping malls, or financial markets.

In the Trade Agents project, this is tackled by research and development of

- adaptive agents and implicitly learning software, for e.g. profiling and negotiation.
- automated interaction and transactions systems, for e.g. negotiation and brokering.
- modeling and design techniques for agent systems (technologies and architectures), for e.g. profiling, brokering, and dealing.

The aims of the project will enhance the possibilities of e-commerce e.g. by enabling customisation/personalisation of services (in both business-to-customer en business-to-business); by customer relations management; by automated matching and sales/negotiation (between customers and suppliers/products); and by providing the required security and privacy. Thus, the exploitation of giant internet market-places can be made more accessible, manageable, and efficient for both customers and companies.

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