AI Supply and Demand Agents on the WWW

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Global virtual enterprises, with their own existing and rapidly developing commerce structures have begun to emerge. Such virtual enterprises are supported by a global information infrastructures. These information structures are being supported by new sources of information on the world-wide web (WWW).

Although there has been an explosion of such passive on-line information resources, there are some problems with these databases. First, many potential users may not even be aware of the databases. For example, many users are just becoming aware of the existence of data on the WWW. Second, in most cases users require time and other resources to learn how to use the different available databases.

Intelligent "agent-based systems" provide one approach that might be used to facilitate the use of these databases. Agent-based systems are systems that employ intelligent and autonomous agents to solve the problem under concern. Agents are typically computational processes with goals and methods that can be used to accomplish those goals. Agent-based systems in the literature have primarily explored "information gathering problems," i.e., the demand for information. For example, agents may be given the role of gathering information to meet a variety of needs.

In order to better understand some of the developments that have taken place, this paper proposes a perspective of demand and supply agents. Supply agents provide information to demand agents. In particular, supply agents (effectively) configure information for information consumers. Supply agents may be either originators or intermediaries. Originators develop the information and place it on the WWW in its original form. Intermediaries take existing information or addresses to that information, on the WWW and place it in a form and location that facilitates access to the information. Intermediaries also may be originators of some information.

The paper illustrates this perspective through some examples. Then the paper empirically investigates that perspective using data gathered from sources about AI on the WWW.

The complete paper features an extensive list of addresses featuring AI on the WWW. In addition, a few new lists are created to facilitate location of AI resources.