

principal agents. C, a computer manufacturer, has two subordinates, M and U. M produces monitors, and knows C as its superior and U as its co-worker. U produces central processing units (CPUs), and similarly knows C as its superior and M as its co-worker. Both M and U share two subordinates (X and Y). C knows of  
5 another agent P as a peer who produces printer ink and toner cartridges. P has a subordinate T that produces printer ink and toner cartridges.

Co-workers are agents in the same organisation who have no authority relation between them while peers are agents belonging to different organisations.

In the example, the production of a computer requires the base unit (CPU  
10 and monitor) as well as an appropriate printer.

In the environment are three additional support agents: an agent nameserver (ANS) which provides a white-pages facility for agent address look-up; a broker agent (PC\_Broker) which provides a yellow-pages facility through which agents find other agents capable of performing a task; and a database proxy agent  
15 (DB) whose sole function is to store and retrieve messages from proprietary databases on demand from visualisers. These agents also communicate in the common agent communication language (ACL). Finally, there is the visualiser agent itself (Visual).

Use of any of the tools in the suite requires that once the tool is launched  
20 users connect to one or more nameservers. In a multi-agent system environment, nameservers contain the names and addresses of all "live" agents in the environment. Thus, connecting to a nameserver involves sending a request to the nameserver to list all agents in the environment and any agents which later come online. In an environment with many nameservers, the user can select which to  
25 connect to, effectively filtering the visualisation effort to a subset of agents of interest.

## 5.1 The Society Tool

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The society tool of the visualiser sends out three types of request messages.

### Society Tool Messages