Abstract:

In the modern computing paradigm there is increasing demand for programs to be able to interoperate in order to solve complex problems or to serve a user in the accomplishment of time intensive activities. Such systems should be compatible with each other; this can prove difficult in an open environment which allows development by different people, in different languages.

Agent based computing aims to solve this issue with each ‘autonomous component’ communicating with its peers by means of exchanging messages in the form of an Agent Communication Language (ACL). Such a language is not concerned by the content of a given message; it merely serves as a standard by which systems can communicate.

In the development of “Mobile Agent Systems” the fundamental approach is that the agent can migrate to another host and continue its execution. Thus, paving the way for an entirely new way of Mobile Distributed Computing.

This seminar aims to provide an introduction into the sphere of distributed computing known as mobile agent systems, review the benefits of having a mobile agent environment and highlight many of the security issues with which it is currently plagued. The Jade framework will be utilised to give examples of such mobile systems.

This should be considered as part of a series of seminars, paving the way for further discussion on “Formal Policies in Agent Systems” and the “SaNTA Agent Security Framework”.

Title: Mobile Agents in Distributed Environments - Principles and Paradigms
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