

## **INHERITANCE IN DISTRIBUTED ENVIRONMENT\***

M. Parlione, Istituto di Analisi dei Sistemi ed Informatica

\*Work developed at IASI-CNR during the doctoral activity

The main feature of object-oriented languages is the class inheritance since it allows the code reuse in organized way. Nevertheless, in the area of distributed object-oriented middleware, such as the commercial CORBA implementations or Sun Java RMI, only the interface inheritance is supported. Starting from the early works of [1] and [2] and borrowing some ideas from the mobile agent technology, this paper proposes some possible solutions to the issue of inheritance among distributed classes. The scenarios conceived are manifold: a code distribution system, a distributed class hierarchy with sliced instances, and a mobile class approach. Furthermore, the paper introduces the on-going development experience of a prototype based on the first proposal that supports a kind of inheritance among classes available in several Java Virtual Machines.

- [1] H. Gründer and K. Geihs. Reuse and inheritance in distributed object systems, International Workshop TreDS'96. Lecture Notes in Computer Science, 1161, Oct. 1996. [2] John K. Bennett. Experience with Distributed Smalltalk. Software Practice and Experience, 20(2), Feb. 1990.