

Project Number: IST-2001-33234
Project Acronym: PEPITO
Title: PEer-to-Peer Implementation and TheOry
Peer-to-peer Oz platform (1)
Due date: project month 18
Delivery Date: 2003-06-30
Responsible Partner: UCL
Participating Partners: UCL, SICS

| | |
|-----------------|------------------------------|
| Deliverable no: | D3.5 |
| Title: | Peer-to-peer Oz platform (1) |
| Workpackage no: | WP3 |
| Due date: | 18 |
| Delivery date: | 18 |

Short Description

This deliverable is mainly intended to present the progress in workpackage 3 (WP3) with respect to the development of a “peer-to-peer Oz platform”, a task towards the objective of extending Oz-Mozart with peer-to-peer abstractions. Additionally, it reports on the integration of the Distributed Subsystem – DSS, developed in WP4, into the Oz programming language.

We designed and implemented a first prototype of a peer-to-peer Oz platform, as a library, called: Peer-to-Peer System – P2PS. The P2PS library is developed in Oz on Mozart and it implements DKS and GSChord, distributed hash table based algorithms developed in WP2.

By making use of different algorithms developed in WP2, P2PS is organized in to a structured overlay network offering efficient point-to-point, multicast and broadcast communication primitives, as well as low cost overlay network management.

Consequently, the report introduces the P2PS library describing its architecture and its API. Then an example and two collaborative applications (namely, PostIt and Matisse-P2P) using the P2PS library are presented.

The report also describes a point-to-point bidirectional session manager with fault detection for Oz-Mozart which is used by P2PS as a transport module. Finally, the report shows the relationship between P2PS and other workpackages in the PEPITO project as well as the P2PS relation to DSS.

The P2PS library is delivered as a software package containing the source code together with an API documentation and a user tutorial. It can be found in the attached documents of this deliverable together with an article about Matisse-P2P to be published in the Eurologo conference.

| | |
|-----------------------|-----------|
| Partner owning: | UCL |
| Partner contributing: | UCL, SICS |
| Available to: | Public |