**DCOP general setup**:

The raspberry pis are all connected to AggieAir using usb wifi adapters.

All pis have the same username and password:

Username: pi

Password: raspberry

|  |  |
| --- | --- |
| 172.24.45.110:2552 | Pi1 |
| 172.24.89.230:2553 | Pi2 |
| 172.24.36.25:2554 | Pi3 |
| 172.24.6.110:2555 | Pi4 |
| 172.24.18.96:2550 | Agent Monitor |

Their IP’s are as follows:

Pi 1-4:

These pis were used to house the agents and, in early implementations with a centralized approach, would send their variable values to the Agent Monitor. In the Akka implementation of the DCOP solver, all agents must have A: an XML file detailing the agent’s variables, the domains they fall within, and their relations to other variables, and B: a configuration file which tells Akka what IP address / port to use to send messages to that particular agent. For each problem (every directory just below the home directory on each pi) XML files and config files were stored in ~/[problem]/test/agents and ~/[problem]/test/config respectively.

In the latest implementation, each pi has its own database, to which the agents record and continually update their variable values.

Agent Monitor:

A single agent which was originally used for solving the problem in a centralized way. While it is not central to the implementation of the DCOP Solver at this point, it is useful as a single place to send messages to all agents or for testing purposes (i.e. it is a debugging tool).