LNC

Problem Definition.

The problem consists in deploying robots in the arena to maximize the covered area.
The robots act as nodes of a sensor network and must maintain connection with each other in order to keep the network fully connected, while trying to cover the largest possible area.
We assume that the robots are equipped with communication and sensing devices characterized by a communication range and a sensing range, respectively.
Two robots are in connection with each other if their distance is smaller than the communication range.
Connected robots form a network.
The quality of the solution is defined as the area within the sensing range of all the robots belonging to the largest network, i.e., the network with most robots.
The area outside the arena is not considered in the solution quality computation.
Sensing and communication range are defined in the xml file.