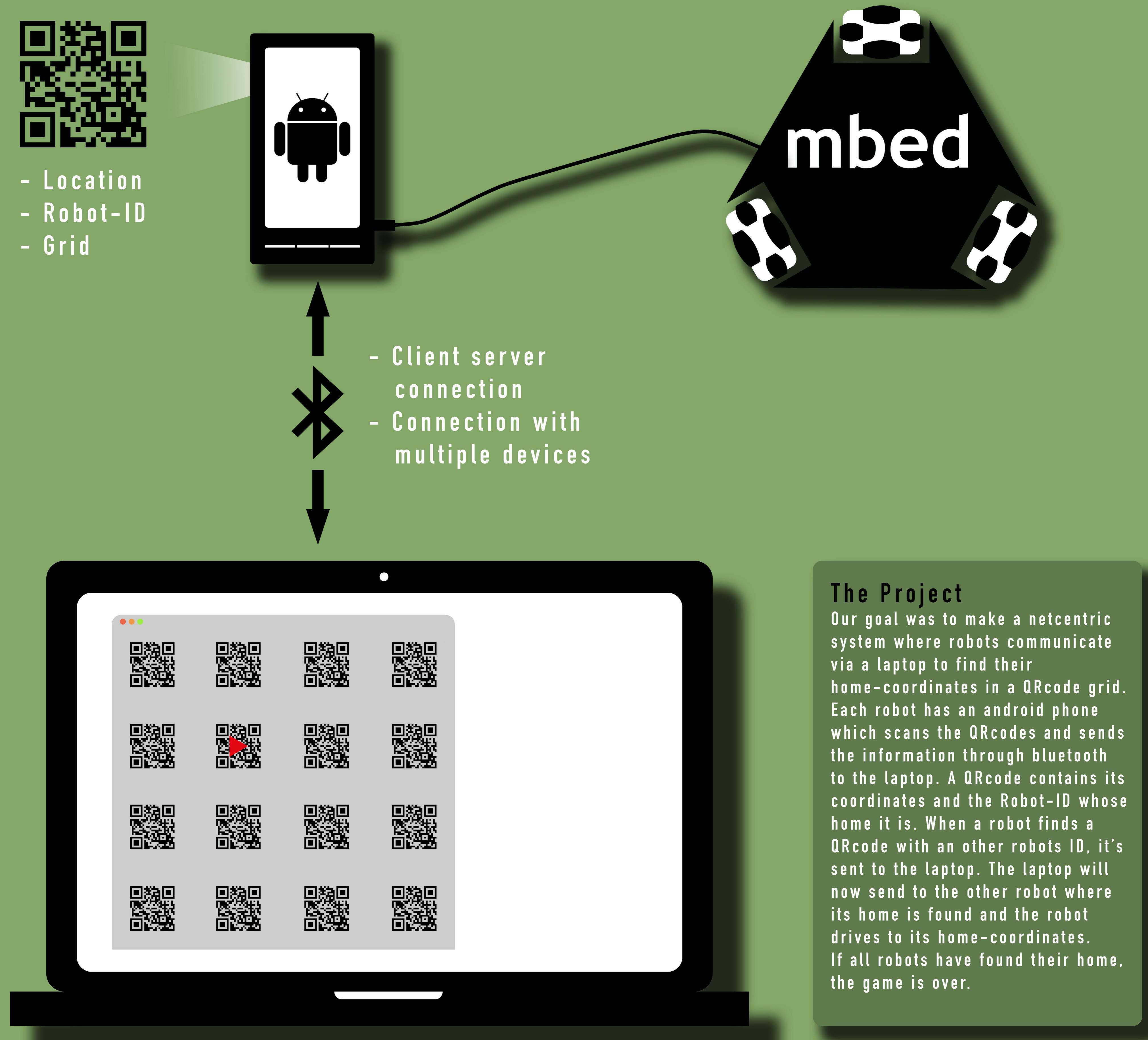


Big | independent Exploration Robot



Laptop

The laptop is the master of all the robots. It keeps track of every robot and tells them where to go. To avoid robots from colliding, it reserves a location on the map. To represent the map each time the phone scans a QRcode, it's shown on the right location in the GUI grid.

Phone

The phone is attached to the robot and connected with the mbed. The phone has a library for scanning the QRcodes. The data is sent through bluetooth, where the laptop is the server and the phones are the clients. The phone gets a confirmation back. When the robot wants to move, the phone asks for a confirmation that the location it wants to move to isn't reserved. If not, the laptop reserves this place for the robot.

Robot

The robot works with an mbed. This is used to control the robot itself. The robot gets instructions from the phone to drive randomly through the grid. When the robot knows where his home is, a shortest path route is provided by the phone. The robot uses a portable USB-charger so it's completely wireless.