SMART IRRIGATION SYSTEM

Smart irrigation systems tailor watering schedules and run times automatically to meet specific landscape needs. These controllers significantly improve outdoor water use efficiencies.

Main objective-

The main objective of this project was to design, construct and test an automatic irrigation control system.
General objectives:

1. Recognize the need for water saving in irrigation systems.
2. Provide sufficient water to plants when required.
3. Reduce the number of workforce in the farm.
4. Storing the excess of water and can be reused.

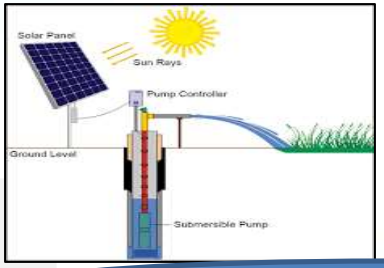
User requirements-

- Low cost
- User friendly
- Easy to operate
- Portable

COMMUNITY VISIT TO RAVALKOLE

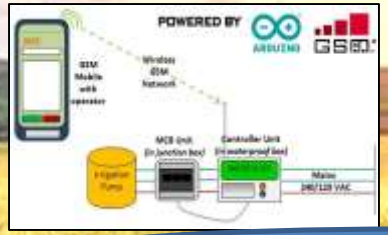
EXISTING SOLUTIONS-

SOLAR IRRIGATION SYSTEM



DISADVANTAGES-
- Cost
- Weather Dependent
- Solar Energy Storage Is Expensive
- Uses a Lot of Space
- Associated with Pollution

GSM BASED IRRIGATION SYSTEM

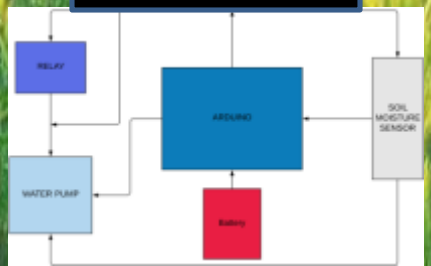


DISADVANTAGES-
- Need Qualcomm licence
- Can be used only in a specific range of area
- Not automatic

SMART SPRINKLERS

DISADVANTAGES-
- Sprinkler pores block due to dust particles
- Water droplets tend to settle on big leaves
- Due to wind the droplets drift away

BASIC DESIGN



BUSINESS MODEL

REQUIREMENT -

- Arduino Uno
- Soil moisture sensor
- Water pump
- 5V Two Channel Relay
- Jumper wires
- Breadboard
- Battery

MERITS-

- Using the automated irrigation system optimizes the usage of the water by reducing wastage of water.
- The proposed controller eliminates the manual switching mechanism used by the farmers.

DEMERIT-

Failures occur because of human error in setting and maintaining the system.

TEAM-07
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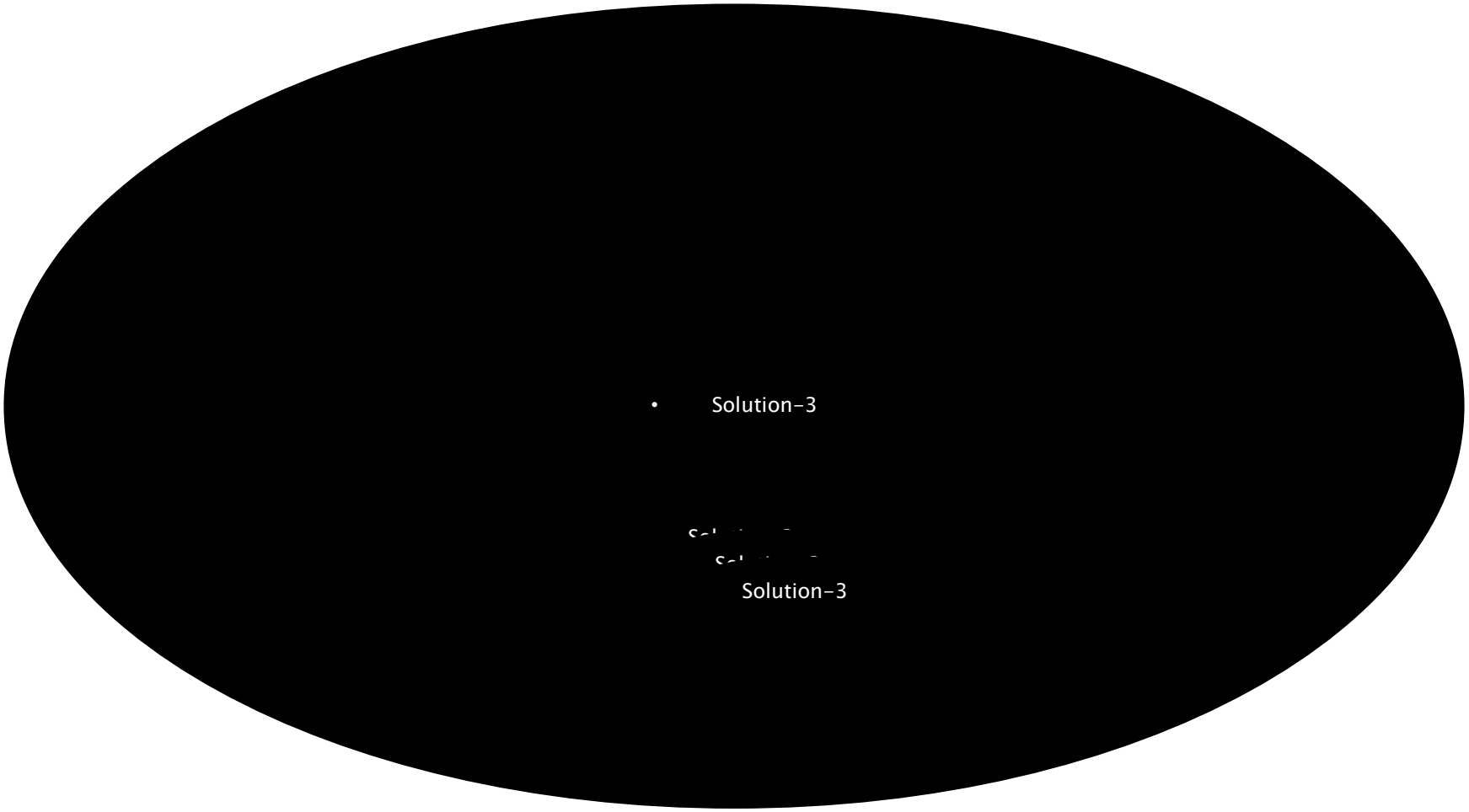
Solution-3
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