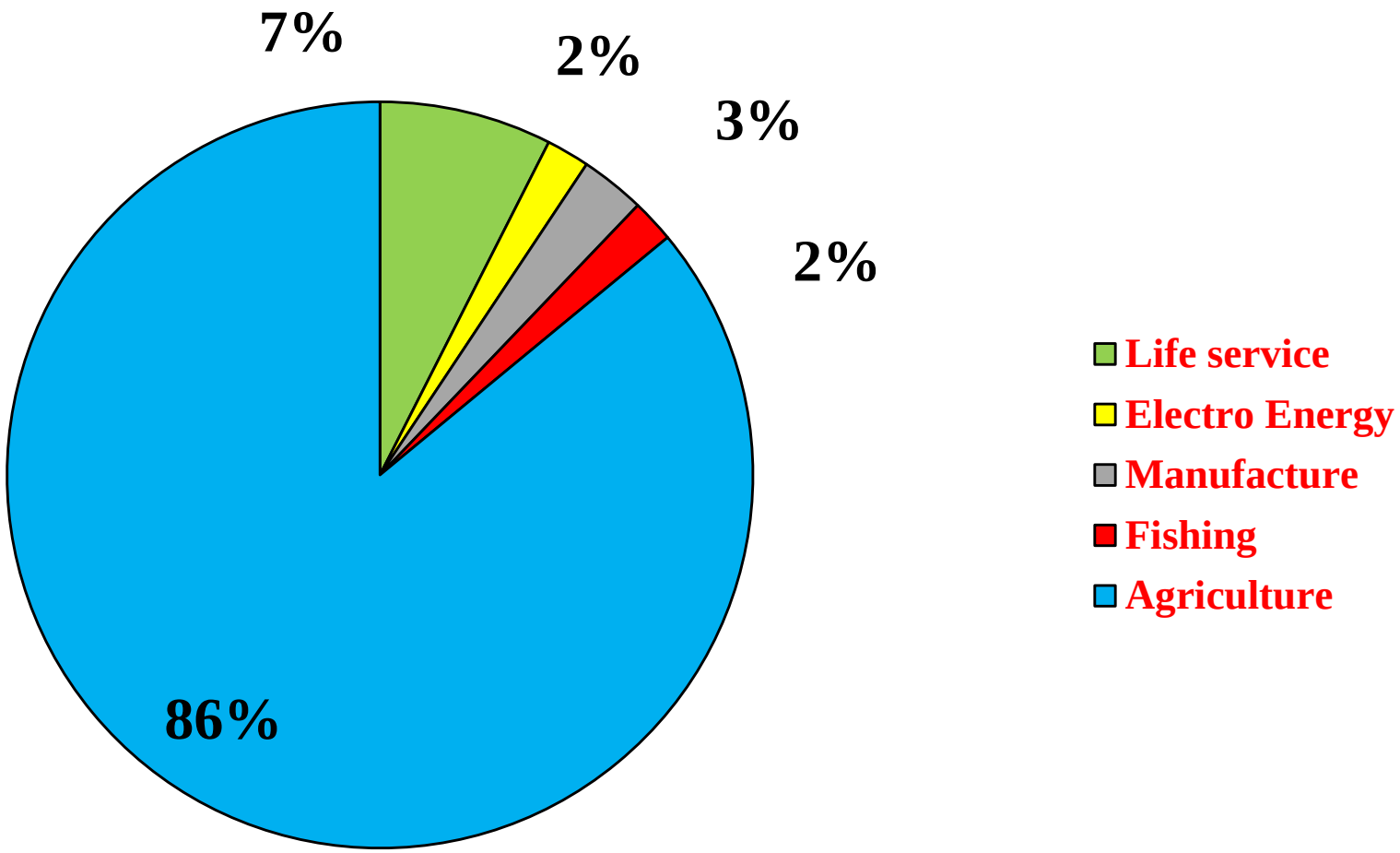
ADVANCED AUTOMATION IN WATERING IRRIGATION SYSTEM AND CONTROLLING WATERING PROCESS IN DISTANCE

ТИМИ

STATE OF QUESTION

- Agriculture is main part of human life because this sphere is important for physiologic and viability side of human as we know all micro and macro elements which important for human take by fruits and vegetables all of them result of agriculture and farmers work. All kind of life concentrate in physiologic parameters in our life this is meal so what is important for this vital sphere? of course water all type of plants and animals drink water all kind of life connected with water however nowadays it is big problem because drinking water is not a lot and it is just 0.3% of all water in the world and general part of them is ice and icebergs which situated in some part of world so what we can do? Correct answer is economize water and try to hold cost of this resource a main part of water outgoing in watering process because controlling and counting this process is difficult and takes lot many and time therefore general part of water will spent for nothing or we can call it side effect of general watering which use in main countries and drop irrigation some time can be used reason of this relief of land and natural factors .Answer of this questions is controlling process and count water flow by sensors and controllers due to fact that we count by sensors and control by controllers we can economize water and we can refuse main part of human work continuously we can reduced price of product and same time economize water which more important. Automation process give as chance to analyze vegetation process instant when we far from field not only analyze but watering and other process which important for vegetation of plants it can be not only advertizing in automation but can become real factor for rising economy and save drinking water in all world in process of this article we try to answer for this questions which give in top of article

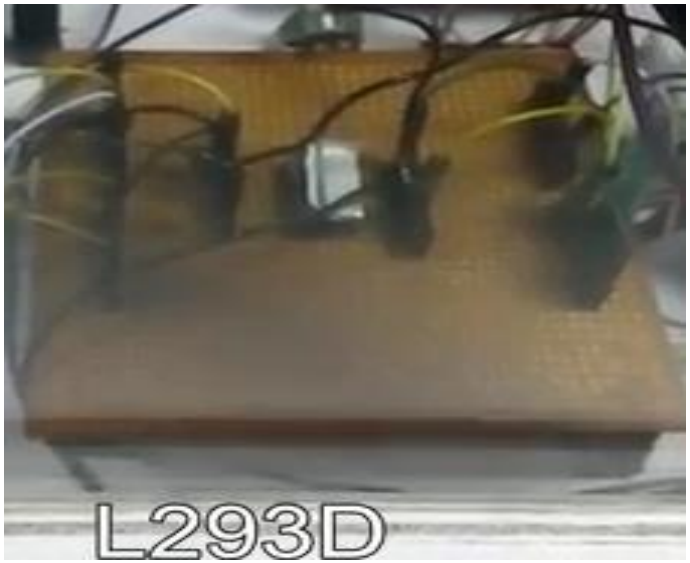
Using of water in spheres



MATERIALS AND METHODS OF INVESTIGATION

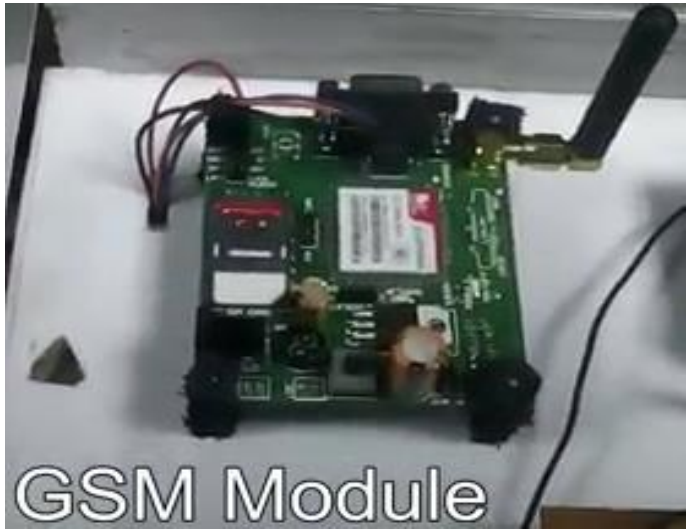
- Let's look to model working algorithm

- MSP430G2553 launch pad
- pH sensor
- GSM model
- LM340T-15 controller
- L-293D driver unit


L293D


Soil Moisture Sensor


MSP430G2553 launchpad

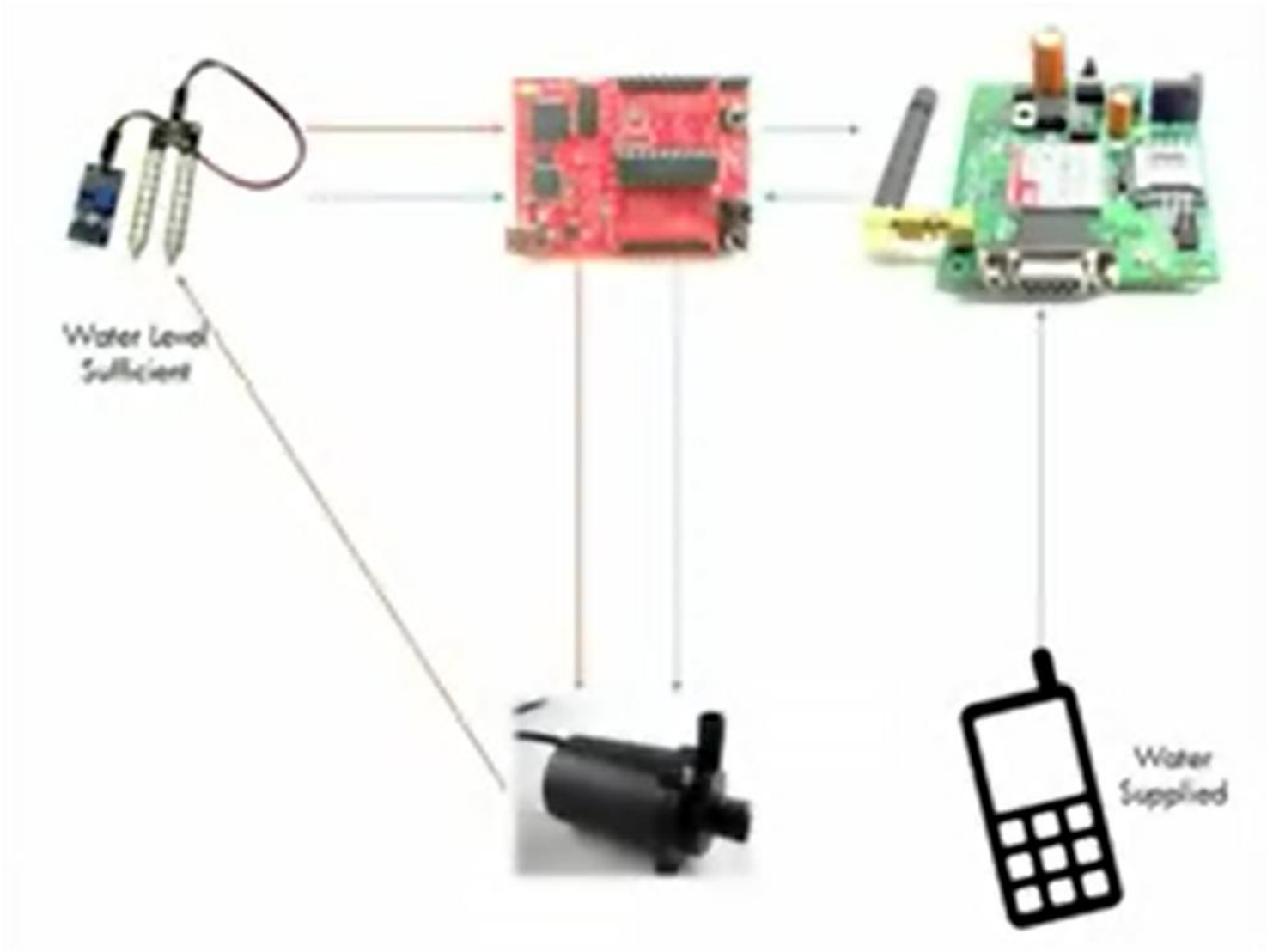

GSM Module

Advantages of this system

- Control of watering process in distance an two or more than places in same time
- Economize of water by monitoring
- low payment and decreasing of unneeded work power

How we can do it?

pH Range		
5.0 – 5.5	**5.5 – 6.5**	**6.5 – 7.0**
Blueberries	Barley	Alfalfa
Irish Potatoes	Bluegrass	Some Clovers
Sweet Potatoes	Corn	Sugar Beets
	Cotton	
	Fescue	
	Grain Sorghum	
	Peanuts	
	Rice	
	Soyabeans	
	Watermelon	
	Wheat	

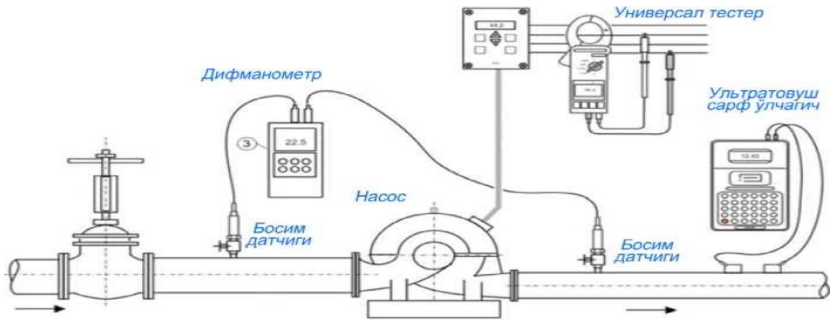

Water Level
Sufficient
Water
Supplied

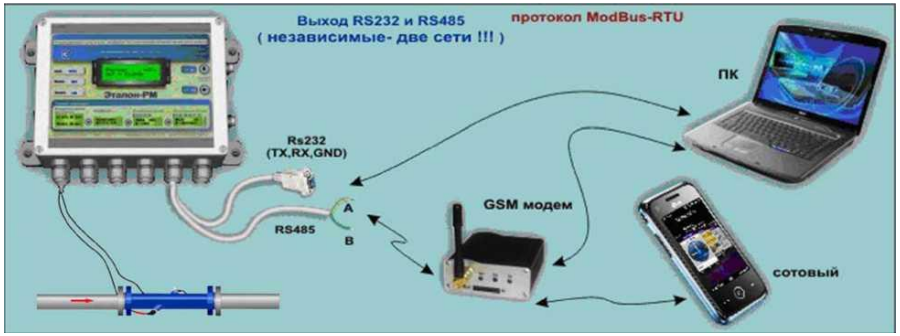
What we will have if…?

- We can use incorporating video capturing to farm owner as MMS to know total crop condition and we can monitoring watering and pH range in same time
- If we can connect to near weather station we can know upcoming weather changes and we can stave off negative consequence

Where we can use this system in Uzbekistan

- In all places where we can make distance control for example in tomato hotbeds in far fields in pump stations





Thank you for your attention