International Journal of Trend in Research and Development, Volume 3(2), ISSN: 2394-9333
www.ijtrd.com

Smart Campus Using Android based Smart Phone

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Abstract- The Internet of Things (IoT) isn't solely concerning up business processes; however has additionally the potential to deeply impact the lifetime of many voters. The advances of rising technologies have broadened the means still because the applications of the web. With good property, physical objects area unit networked and can gain the flexibility to speak to every different. Constructing good field supported the IOT associate degreed cloud computing technology is an inevitable trend. However there are units several problems need to be excellent. One in all the queries is that the commanding style isn't excellent. The designer ignores to dig deeply the worth of knowledge resources, in order that the resources area unit tough to be shared. Moreover, the answer of education cloud isn't excellent, and faculties attach additional importance to workplace management than teaching and analysis. The vision of "The net of Things (IoT)" guarantees to boost the capabilities of objects and forms a sensible setting in order that folks can like the IoT revolution. Because the international population grows, the resources on earth area unit depleted quickly. So as to emphasis the advantages of reducing the consumption of energy. The proposition has been promoted on field of instructional establishments still.

Keywords- *Internet of Things (IOT), PIC Controller, WIFI.*

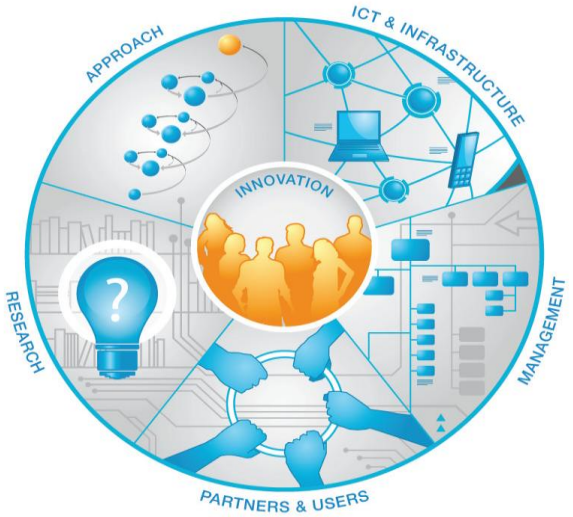
I. INTRODUCTION

The Advance of rising technologies has broadened the means in addition because the applications of the web. In different words, virtually each "object" may be a part of a network. With sensible property, physical objects area unit networked and can gain the flexibility to speak with one another. The vision of "The web of Things (IoT)" guarantees to boost the capabilities of objects and forms a wise atmosphere in order that folks will have the benefit of the IoT revolution. The IoT applications cowl the building of sensible cities, the got wind of sensible atmosphere, the availability of sensible public services, the arrange of e Health, and also the building of sensible home/office, etc. because the international population grows, the resources on earth area unit depleted quickly. So as to own a property earth, governments round the world place plenty of efforts to advocate the importance of the reduction of carbon production in addition on emphasize the advantages of reducing the consumption of energy. The proposition has been promoted on campuses of academic establishments in addition. Sensible field could be a stylish application within the paradigm of the IoT. The idea of constructing a "Smart field" implies that the establishment can adopt advanced ICTs (Information Communication Technologies) to mechanically monitor and management each facility on campus.

The benefits gained from building a wise field embody that the employment of all facilities becomes a lot of economical and also the energy consumed is decreased. 2 major ICTs that build the conclusion of IoT doable area unit the emergence of cloud computing and also the network of wireless sensors. In fact, cloud computing and wireless-sensor network along will give the foremost reliable, scalable, dynamic and compostable resources that the IoTs needed.

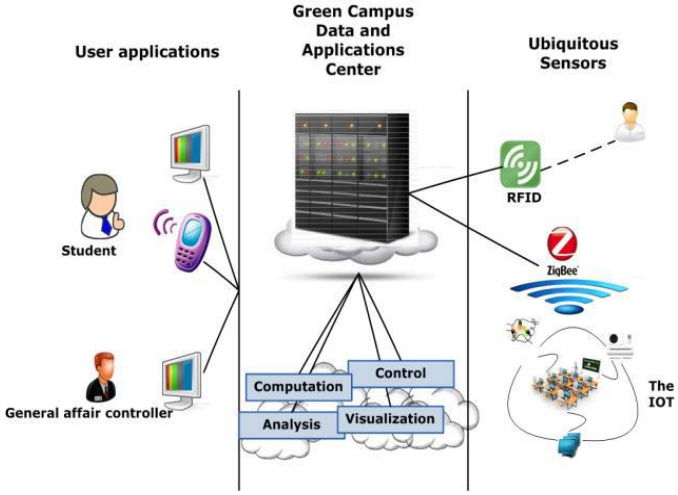
II. CONCEPT

At the heart of the SMART CAMPUS project are a number of concepts that have channeled the various developments incurred throughout the project. These concepts are: (1) Living Labs Methodology; (2) Intelligent Energy Management Systems; (3) Real-Time User Information; and (4) User Behavior Transformation.



III. EXISTING SYSTEM

The hardware system uses the RFID technology but it depends on the IOT which is used to setup the connection between the computer and the users. Though the RFID is cheaper it's not more effective when compared to the other technologies.



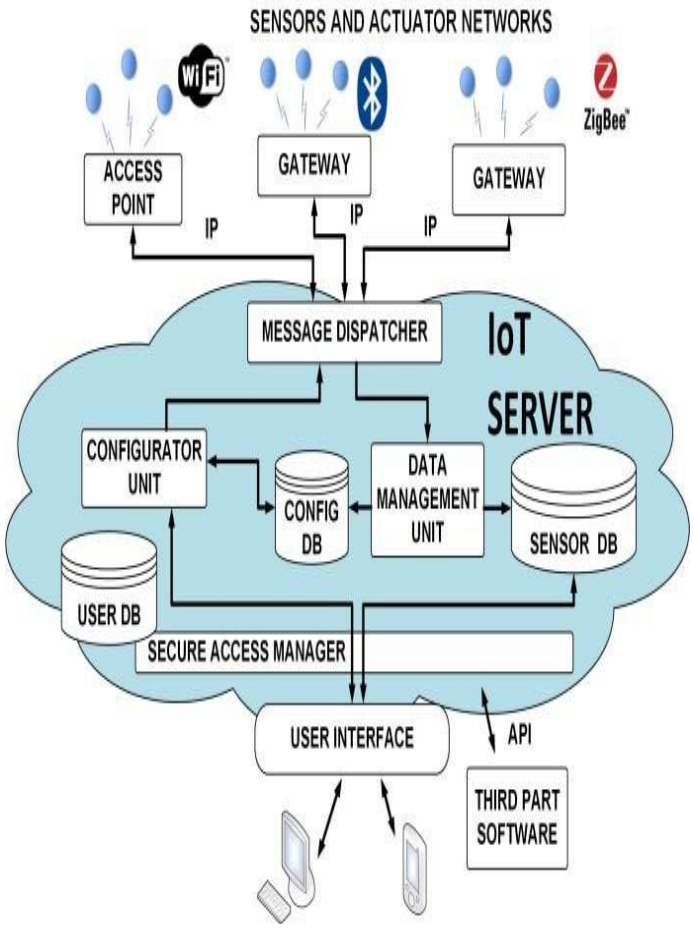
All the data collected, including the data read by the RFID, the status of each of the computers in the lab as well as the temperatures of the computer room, are sent to the center of data application.

IV. DEMERITS

- Radio frequency: 2.4 GHZ band.
- Data rate: 38400 bits/s (minimum).
- Distance: only 10 meters long.
- Number of channels: it is able to search up to 32 channels only.
- Energy consumed: up to 30% is succeeded

V. PROPOSED METHODOLOGY

Smart campus includes portal architecture, management and service, smart management, infrastructure, etc. Smart campus system integrates hardware device of digital school, and cloud storage as the means of data storage is applied. In this methodology we use the concept of IOT and the WI-FI tech. The WI-FI is determined based on the two categories such as the WI-FI with internet and the WI-FI without the internet i.e. the functioning observed inside the campus and outside the campus. The concept of without internet depends upon the WI-FI range but it does not require any internet access.

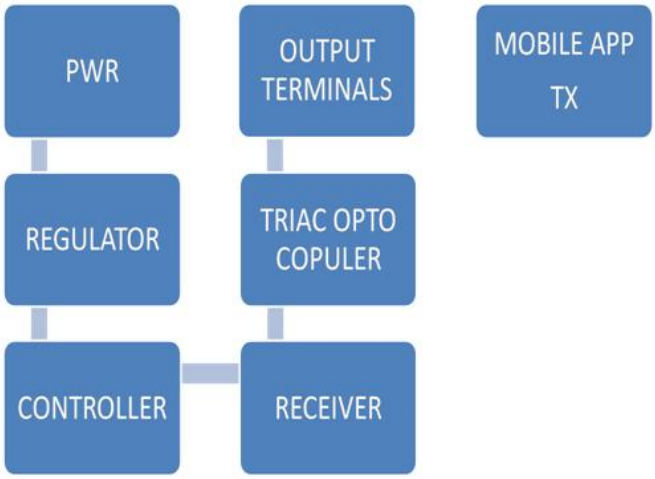


While in the case of the with internet concept the controller kit is interfaced with the internet and it doesn't depends on the range to get access. The receiver gets interfaced with the mobile internet i.e. It posses ON or OFF condition during the process of App access or a control.

VI. ISSUES OF SMART CAMPUS

Constructing sensiblefieldsupported the IOT and cloud computing technology is an inevitable trend. However there areseveralproblemsought to be good. One in all the queries is that the commandingstyleisn'tgood. The designer ignores to dig deeply the worthof knowledge resources, in order that the resources aretroublesome to be shared. Moreover, the answer of education cloud isn'tgood, and colleges attach a lot of importance to workplace management than teaching and analysis. Anyway sensible field is that the higher stage. We should always pay a lot of attention on style during this stage. The opposite drawback is that the knowledge customary. At present, there are several manufactures of RFID label and device, the standards are numerous and not compatible caused by this development. Cloud computing technology is troublesometo induce a whole unified management and effective management, there forewe should always produce a collection of standards for data formatting and create the sensory knowledge be shared and managed simply. Within the future, sensible field wants the large breakthrough on data assortment, chip analysis and programmed algorithmic rule.

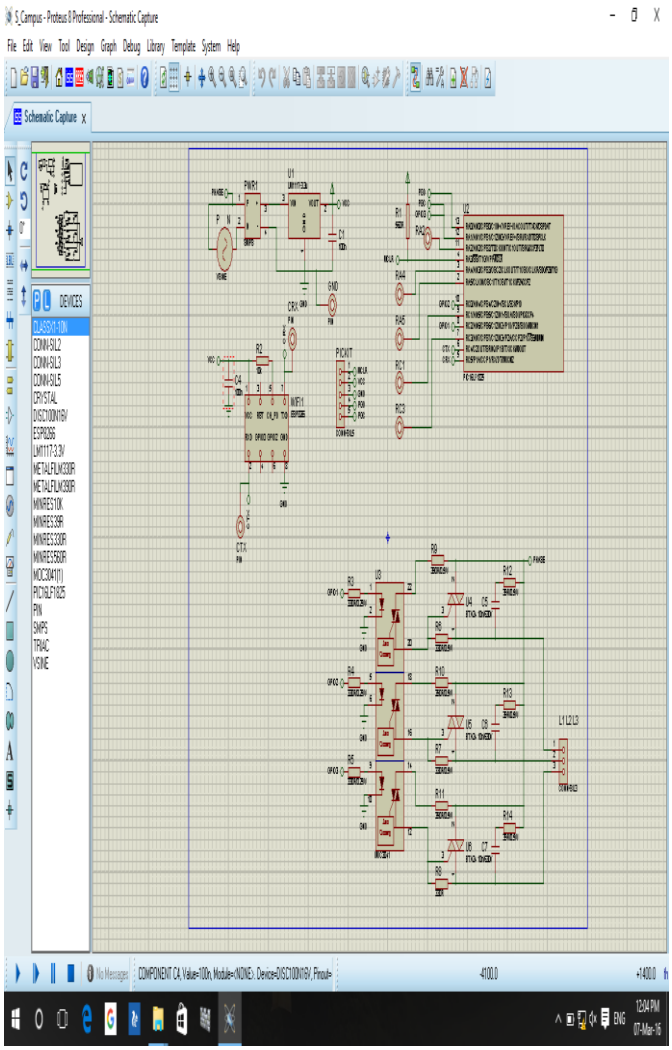
VII. HARDWARE BLOCK RESPRESENTATION



By the functioning of these hardware we can also have intelligent management in logistics, such as school consumer, intelligent light, intelligent parking. Teachers and students use one-card consumer in school anywhere. All the light and parking spot in school become a part of the IOT, smart campus system controls the lights under these circumstances. We can also have a new management mode in the library by IOT. Library takes the information feed into electronic also have the tag.

These tags combine the mobile phone, library card and other physical objects. User can get the resources required at anywhere through GPS technology. The new mode can realize the communication between user and library, user and resource.

VIII. STIMULATION MODULE



IX. ADVANTAGES

- Campus can be accessed without the internet.
- It possess an low power consumption.
- It is a user friendly one.
- Mobile controllable.
- Fault detection can be easily identified with the short span of time.

X. APPLICATIONS

- Smart industries
- Smart hospitals
- Smart banking sector
- Entertainment malls

CONCLUSION

This adopts the idea of the "Internet of Things" to construct the inexperienced field which is able to notice the thought of energy-saving. The objects of our work embody the computers, air conditioners and alternative electrical appliances. The contributions delivered by this idea include:

1. The pc labs are often managed expeditiously. A lot of labs are open only the demand is increasing.
2. The utilization of the computers is monitored in the least times. This mechanism decreases the quantity of idle power-on computers.
3. The air conditioners are turned on only the temperatures reach a planned level. As a result, a lot of energy are saved

The idea of constructing a wise field is simply the primary step in our establishment. This idea shows a way to build up the IoT to manage pc labs. The performances of current project are examined unendingly. Succeeding part is to create the IoT round the whole field. Hopefully, as a better establishment, we are able to show some leadership and demonstrate our responsibilities to the society.

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