

LITERATURE REVIEW

In “**Smart Water Quality Monitoring System**” by Mr. Kumar K explains that Water is one of the major compounds that profoundly influence ecosystem. But, nowadays it is been exploited heavily due to rapid industrialization, human waste and random use of pesticides and chemical fertilizers in agriculture, which leads to water contamination. Thus, a water monitoring system is necessary to observe the water quality in a large area such as lake, river, and aquaculture. As per the current world situation, Internet of Things (IoT) and remote sensing techniques are used in heterogeneous areas of research for supervising, congregate and analyzing data from the remote locations. In this paper, the suggested system is a minimal price real time water quality monitoring system in IoT environment. This system comprise of numerous sensors for assessing the physical and chemical parameter. The factors of water that can be assessed using these sensors are pH, turbidity, conductivity, dissolved oxygen. Using this system the real time quality of water bodies can be determined and the data uploaded over the Internet are analyzed.

Jayti Bhatt, Jignesh Patoliya entitled “**Real Time Water Quality Monitoring System**”. This paper describes to ensure the safe supply of drinking water the quality should be monitored in real time for that purpose new approach IOT (Internet of Things) based water quality monitoring has been proposed. In this paper, we present the design of IOT based water quality monitoring system that monitor the quality of water in real time. This system consists some sensors which measure the water quality parameter such as pH, turbidity, conductivity, dissolved oxygen, temperature and total dissolved solids (TDS). The measured values from the sensors are processed by microcontroller and this processed values are transmitted remotely to the core controller that is raspberry pi using Zigbee protocol. Finally, sensors data can view on internet browser application using cloud computing.

Nikhil Kedia entitled “**Water Quality Monitoring for Rural Areas-A Sensor Cloud Based Economical Project.**” Published in 2015 1st International Conference on Next Generation Computing Technologies (NGCT-2015) Dehradun, India. This paper highlights the entire water quality monitoring methods, sensors, embedded

design, and information dissipation procedure, role of government, network operator and villagers in ensuring proper information dissipation. It also explores the Sensor Cloud domain. While automatically improving the water quality is not feasible at this point, efficient use of technology and economic practices can help improve water quality and awareness among people.

Anuradha et al developed a **“Cost Effective System For Monitoring The Quality Of Water In Real- Time Using Iot”**. The developed method is a sensor based Water Quality Monitoring System that is used to measure chemical and physical parameters of water. The parameters like pH, temperature, turbidity and Total Dissolved Solids (TDS) of the water are measured using sensors and are processed by Raspberry Pi controller. Lastly, the measured sensor data is seen on the internet by using Thing Speak API. The distinctiveness of this work is that the water monitoring system is having many advantages such as high mobility, high frequency and the developed model uses low power. Quality parameters like ammonia, hardness, conductivity, fluoride, iron, chloride content can be also deliberated for measurement of quality of water and the measured values are used for checking the cleanliness of the water for numerous applications like daily requirements for industries and drinking water.

Michal Lom, Ondrej Pribyl, Miroslav Svitek entitled **“Industry 4.0 as a Part of Smart Cities”**. This paper describes the conjunction of the Smart City Initiative and the concept of Industry 4.0. The main reasons for the emergence of the Smart City Initiative are to create a sustainable model for cities and preserve quality of life of their citizens. The topic of the smart city cannot be seen only as a technical discipline, but different economic, humanitarian or legal aspects must be involved as well. In the concept of Industry 4.0, the Internet of Things (IoT) shall be used for the development of so-called smart products. Sub components of the product are equipped with their own intelligence. Added intelligence is used both during the manufacturing of a product as well as during subsequent handling, up to continuous monitoring of the product lifecycle (smart processes). Other important aspects of the Industry 4.0 are Internet of Services (IoS), which includes especially intelligent transport and logistics (smart mobility, smart logistics), as well as Internet of Energy

(IoE), which determines how the natural resources are used in proper way (electricity, water, oil, etc.). IoT, IoS, IoP and IoE can be considered as an element that can create a connection of the Smart City Initiative and Industry 4.0 – Industry 4.0 can be seen as a part of smart cities.

REFERENCES

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