

ENVIRONMENTAL SAT

Delhi Ganesh , Krishna Kanth J , Sriram P , Mr. A . Antony Charles

Student , Department of EEE , Jeppiaar Institute of Technology, Chennai, India

Student , Department of EEE , Jeppiaar Institute of Technology, Chennai, India

Assistant Professor , (Department of EEE , Jeppiaar Institute of Technology, Chennai, India)

ABSTRACT

Wireless communication has huge growth, specifically satellite-based communication is a major player. Satellites can cover a much larger geographical area than conventional ground-based systems can. Satellites have the unique ability to cover the Globe entirely. The Environmental Satellite breaks the barrier and can be used for detecting and measuring Environmental issues like Pollution and Contamination of the ozone layer. The Case is built to last by using advanced 3D printing and Compound Materials & internal circuits are well tested and graded to work well even on Uncertainty and Extreme Condition.

I. INTRODUCTION

The Nanosatellites are diversified into three major groups namely, CanSat, CubeSat & AsymmetricalSat. Nowadays, our environment is getting polluted and being destroyed at a massive rate than ever before. Our Project mainly focuses on detecting, measuring, analyzing, and giving real-time statistics and data of toxins and polluting components which are being released by Firms and the Automotive World everyday. By doing this, we can create Awareness and able to Control those as much as possible.



II. METHODOLOGY

The Methodology of the project is two divisions namely the Arduino part and receiving part. First, we will launch the satellite using any mode of vectors like Rocket or even drone for low-level launch. Then, the motor code in Atmega will be activated and all the Sensors will be woken up by the power source. And, we will receive signals hereby the ground station. All data will be noted and used for analytical purposes.

III.MODELLING & ANALYSIS

The actual modelis shownin this section. The Case is built with High-grade Stainless steel to withstand extreme conditions. Sensors are perfectly placed with the center of gravity in mind.

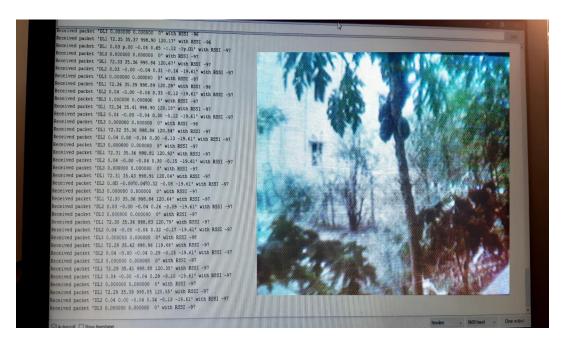




IV. RESULTS & DISCUSSION

The Launch is controlled and after launch, collecting required statistics and dynamic values with Maximum accuracy are achieved.







V. CONCLUSION

The economical nature of implementation, short preparation time, and simplicity ofdesign compared to other satellite-related projects makethis concept an excellent practice opportunity for sophomores to take their first step in space-related projects. We are responsible for choosing the way the mission is fulfilled, the CanSat design& purpose, components integrity, Operation verification, launch prequel, data analysis, and team organizedandsplitting up the workload. It is a scale design, creation, and launching of a real satellite. The process for developing a CanSat is a learning process calledSociety problem-based learning, a new learning method in which the sophomore is the primary priority and the one who will solve the problems.

VI.ACKNOWLEDGEMENTS

We wish to express our sincere gratitude to parents for their priceless help, co-operation, andencouragement during our project. We are very much grateful to MANAGING DIRECTOR, Dr. N. MARIE WILSON B. Tech., M.B.A., Ph.D., and we also express our sincere gratitude and profound thanks to our PRINCIPAL, Dr. L.M. MERLIN LIVINGSTON M.E., Ph.D., who helped us throughout this project work. We would like toexpress our sincere appreciation and gratitude to our project Coordinator Mr A Antony charles M.E., (Ph.D) Assistant Professor Jeppiaar Institute of Technology, Department of Electrical and Electronics Engineering for his guidance and constant support throughout the project. We also wish to thank all the faculty members, research scholars, and technicians of the Department of Electrical and Electronics Engineering for their priceless guidance.



VII. REFERENCE

- "Automated Sensor system", International Journal of Advanced Research in Computer science
 &SW Engineering, February 2013.
- 2. "Controlling & displaying system for Satellites", IJCET, Vol.3, pp. 297-307, July/Sept2012.
- 3. J.Mustafa, R.Kothari, R.Naik, "Space and above System" in UACEE International Journal of Computer Science and its Applications Volume 1: Issue 1 [ISSN 22503750].
- 4. N. A. SamSudin, "Customizable WirelessSystem with Real-time Sensor feed-back", 2011, IEEE Symposium on Wireless Technology & applications(ISWTA), September 25-28,2011, Langkawi, Malaysia.
- 5. "Nanosatellites: Space and Ground Technologies, Operations and Economics", RogerioAtem de Carvalho Jaime Estela Martin Langer, 13 March 2020.
- 6. "All about Satellites", 19 February 2016, S. K. Das.