Duchifat-1: Life Saver Satellite

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Project's Goals Though looked hyper connected, our world has large areas yet to have communication infrastructure. Large gaps exist in areas such as African deserts and Asian jungles, and ~71% of the Earth is covered by water. The goal of the project was to design a search and rescue satellite, Duchifat-1, to provide coverage and assistance for life-threatening situations. Launching satellites requires large investment; therefore, a proper design should assure the mission's success. My contribution for the success of Duchifat-1 was writing the memory system code, testing the satellite functionality, integrating the components and supervising the launching at Yasny airbase in Russia. Procedures Used II worked 3 years researching space technologies as part of the ideology "learn-while-you-work", with the final goal to launch a high school student satellite. I used Auto Packet Reporting System protocol to determine the look of stress signals, and AX.25 protocol to transmit the stress signals back to the ground. To find bugs and lacking in the system, I forced the satellite through difficult situations. I was a part of the team sent out to Israel Aerospace laboratory for the mechanical, thermal and vibration tests. Results After almost one year from launch, the satellite works properly as expected. It transmits information to our ground station twice a day in average. Conclusion/Applications We, the young students of the project have proven beyond doubt that even early ages could be a resourceful manpower to the space industry. I am convinced that project as such raise the future generation of space scientists and engineers.

Awards Won: