

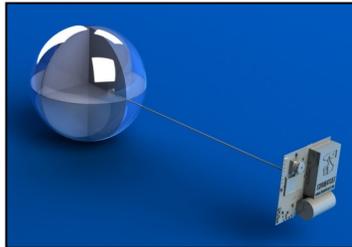
The Thumb Report

Tiny satellite + tiny cost + tiny timescale = HUGE RESULTS

August 2016

ThumbSat Continues to Improve

Thanks to the philosophy of the ThumbSat team of building early, testing frequently and iterating improvements, the Engineering and Qualification models of the ThumbSat satellite hardware have progressed through a number of versions over the past few months.



The engineering team have conducted tests most of the summer to the ThumbSat circuitry and subsystems like the GPS, IMU and Rattatosk radio system. Some of the tests showed several minor improvements that could be made to improve efficiency, power consumption or improvements in simplifying manufacturing.

Those changes are being implemented now, and the newest version of the ThumbSat satellite should begin the production cycle soon!

At the same time, v2.2 of the ThumbNet tracking station has been released to a small handful of testers and volunteers for assembly and functional testing and the results are beginning to come back. The positive (and negative!) feedback has been amazing.

The comments will be reviewed and the recommendations for design improvements will be implemented in the coming weeks and a new round of testing will begin.

By continuously building and testing, ThumbSat continues to develop the best possible hardware systems while using time most efficiently. That's critical for such a small team and one of the ways we are keeping costs down and Unlocking Space For Everyone!

"...it would be good for students to put ideas and concepts out there, to challenge their thinking and also hopefully encourage them to get passionate about a future in this sort of field of science."

*-Coen Smit,
Parklands High School,
Australia*



Our ThumbNet station operator Yuriy, from Russia, built a disc antenna using an old soviet computer hard drive platter!

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The beautiful CICESE campus on Ensenada Bay, Mexico

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ThumbSat Invited to Work With CICESE

In an effort to continue our international cooperation with universities and research groups, ThumbSat is excited to announce a discussion taking place between ThumbSat and the Ensenada Center for Scientific Research and Higher Education (CICESE), for expansion of the ThumbSat facilities.

The Center for Scientific Research and Higher Education at Ensenada (in Spanish: Centro de Investigación Científica y de Educación Superior de Ensenada, CICESE) is a public research center sponsored by the National Council for Science and Technology of Mexico (CONACYT) in the city of Ensenada, Baja California, and specializes in Earth Sciences, Oceanography and Applied Physics.

It's facilities include multiple buildings which house laboratories, classrooms, a specialized library, and supercomputing equipment, all of which are used by researchers at the PhD level for advanced scientific research.

ThumbSat personnel have toured the CICESE facilities and been invited to discuss establishing a laboratory of its own at the research center.

In addition to the existing ThumbSat facilities at the CONACYT center in Tijuana, the opportunity of being in such close proximity to some of the brightest minds in Mexico, while working at CICESE, would give ThumbSat engineers and technicians access to information, technologies and processes that will benefit all phases of the company.

ThumbSat would like to thank the staff of the Center for Scientific Research and Higher Education at Ensenada for their hospitality. We look forward to a long and prosperous relationship!

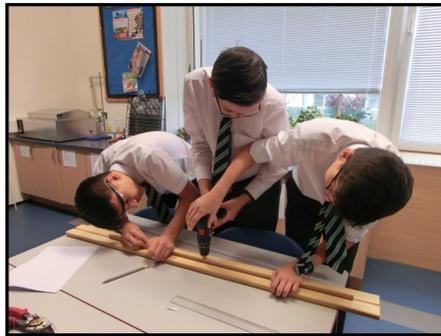
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The English International School, Prague

It took no time for the students at The English International School, Prague to get their station up-and-running! According to Marketa, Science Technician for the school, the team, which primarily consists of three Year 10 students (others participate as they can), needed no help in following our [ThumbNet Yagi antenna guide](#). So far they have caught international ham discussions and are hoping to listen in to the International Space Station!

Thank you for participating in ThumbNet!



Our ThumbNet volunteers at The English International School, Prague

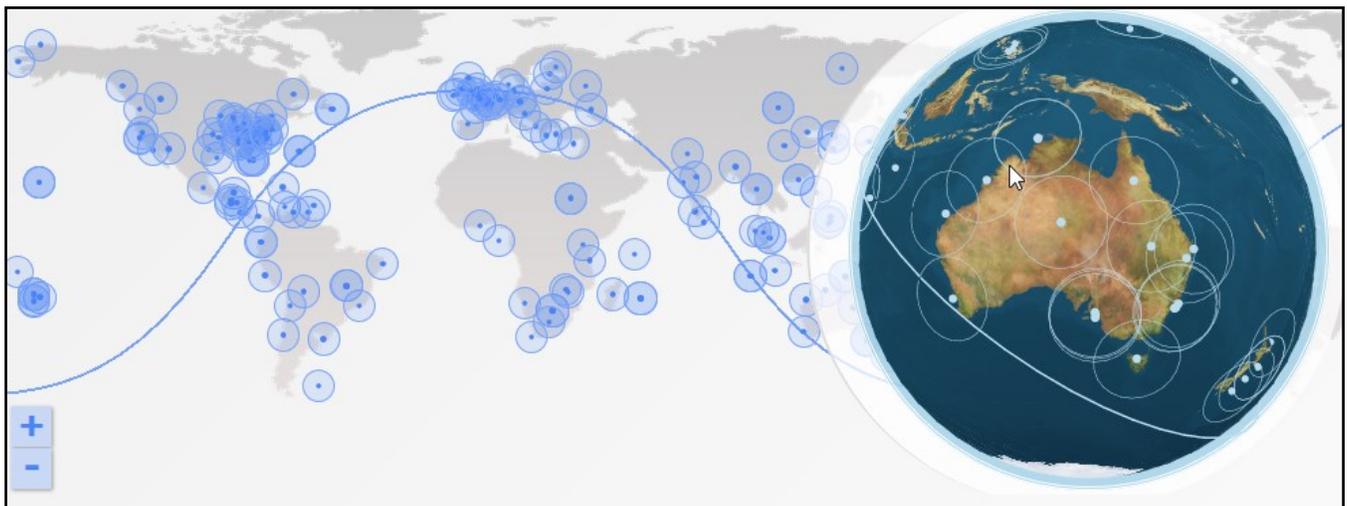
School is Back in Session!

We hope that everyone enjoyed their break and is excited about the upcoming school year!

The time off did not deter teachers from signing up for ThumbNet! We have had 25 new stations register since our [June newsletter](#) and look forward to hearing how they are implementing ThumbNet into their curriculum.

Although we currently do not have any ThumbSat constellations in orbit, by joining our ThumbNet network the students will be able to construct the antenna and start to experiment/listen to terrestrial and space radio, thus preparing them for tracking our satellites!

Sign up for ThumbNet [here!](#)



Changing SDR Radio Forever!



In the coming weeks, ThumbNet will release a completely new SDR receiver for use with the tracking stations and by SDR hobbyists around the world.

This completely new design will radically challenge the way SDR receivers are designed and used!

Stay tuned...no pun intended!



Our ThumbNet volunteers from Nova International School in Sudan making progress on their antenna!

ThumbSat: Unlocking Space for Everyone!

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