Towards the Space and Beyond… step by step

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Once upon a time … Day 1

- Starting the journey to CLPT in Japan … at Hokkaido University
  - After around 17 hours of flight I reched Japan at Narita Airport … at 06:20 hrs
  - Once passing the passport checking … I was in Japan, it took well over 10 min
  - After that, I moved to ANA's deskhelp and wait for my next flight to Chitosse Airport…
  - Once in Chitose airport, as usual, I was aborded by a policeman, it might be because I'm quite charming. At the same time, I met Guillermo and with the UNISEC professor that took us to HokaidoUniversity

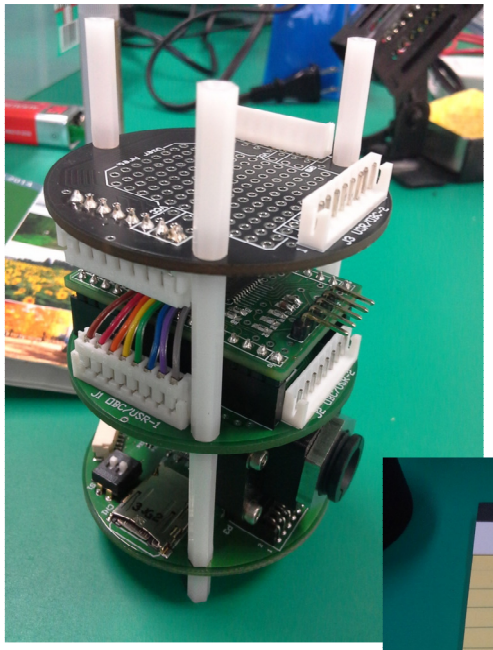
Once upon a time … Day 1

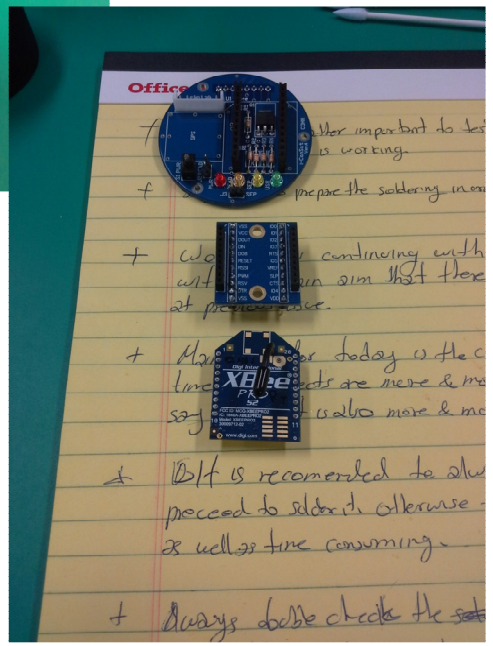
- At Hokkaido University
  - We meet whole CLPT5 team: Prof. Totani, Mr. Ogata, Mr. Takanashi, Mr. Masahiro (quite older brother), Mr. Kumar Das & Mr .Tejumola

- After introduction:
  - An overview of the full CanSat project was portraited
  - A few boards were distributed and from that point on the workshop was pretty much alive
  - By following the spot-on instructions on the manual, it was possible to fulfil quite a few requirenments rom basic welding to data buses addresses among many other not too small features

Can Satellite board welding and testing

- Day by day we advanced step by step
- Welding was something that I performed quite a few time ago
- Probably, the challenge came with PIC welding, personally after a couple of pics poorly welded,my board finally paid and it worked as a few of the asistant professors can testify
- Testing each one of the boards an later on by put them assembled together, I had some issues





Light, at the end of the tunnel

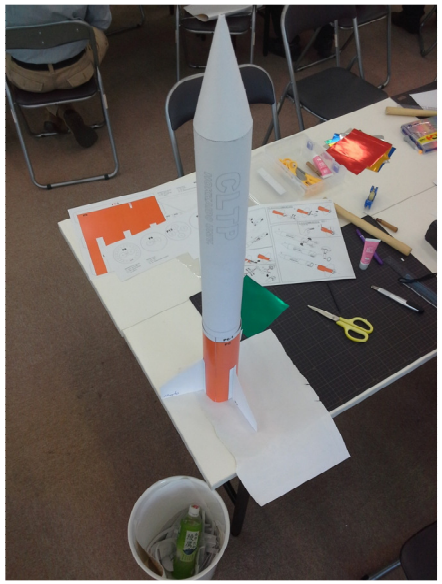
- After quite a few issues, the CanSatellite was finally …alive
- Terrain station linked to the GPS and the communcation between Gyro and Accelerometer
- Modification of the code and improvement of it to tail it as wished
- Time for a few tests were in progress such as:
  - Shock test
  - Vibration test
  - Random noise test
  - Parachute opening test
  - Random tests …

Advanced mission

- Once the basic CanSat was due, it was adviced to proceed to a further mission
  - Either a pressure sensor or a temperature sensor was implemented
  - I choose to use the pressure sensor with high resolution (16 bits)
  - Once it was added to the USER board, I proceed to test the terminals as well as the links between the developed code
  - After test a few useless attempts, I choose to not to use it and continue with the initial mission

Rocket paper design

- Once we moved to Akikawa at Uematsu Electronics Co
  - Rocket paper design as well as to improve the mission were widely adviced
  - It was a rather interesting experiment to put hands on into the fabrication of the rocket
  - Personally, it was a revenge due to I have deep issues with this kind of hands on training
  - At the end, it paids off and I did finish it and succesfully tested it at the Uematsu facilities



D-Day

- After tested, for several times, the CanSat and fabricate the rocket paper, it was tested …
- As shown in video and pics, the CanSat was alive for the entire test after and before the rocket was due
- After tested, the CanSatellite is ready to produce further experiments
- Whilst training, quite a few tailored routins in software as well as artisanal on welding are required to improve final behaviour of the CanSat

Further Work …

- Tranlate it to Spanish
- Develop further missions by using other processors
- Implement cansat networks in quite a few Universities in Mexico and Latin America
- Send students for training in several Space relaed areas
- Work
- Work
- Work
- …
- Work

Thank you

Any question?