Télécom SudParis **T'SPace**

2nd French CanSat Competition
T'SPace – Chrysaor & Pegasus

August 24, 2010 - DGAEM

T’SPace

TELECOM SudParis

tspace@telecom-sudparis.eu

Our team

- Nicolas : structure
- **Emilien : electronics, structure, firmware**
- **Pascal : structure, firmware, communication**
- Baptiste : HMI
- **Victor : electronics, structure**
- Alexandre : communication
- **Pierre : electronics, video clip**
- Zakaria : communication
- Tiezhen : firmware, communication

CanSat projects
Pegasus & Chrysaor

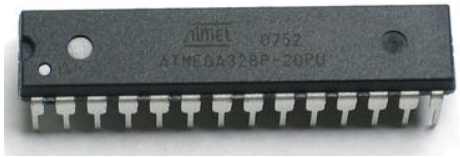
(following a project from 2009)

Missions in a volcanic area :

- Measuring pressure, temperature, humidity, CO_2 and CO
- Taking images during the flight
- Transmission to the ground

→ Open Class at the CanSat French competition

Electronics in the CanSats



- We use ATMega328 chips

- Programmed via Arduino open-source platform or via USBTiny

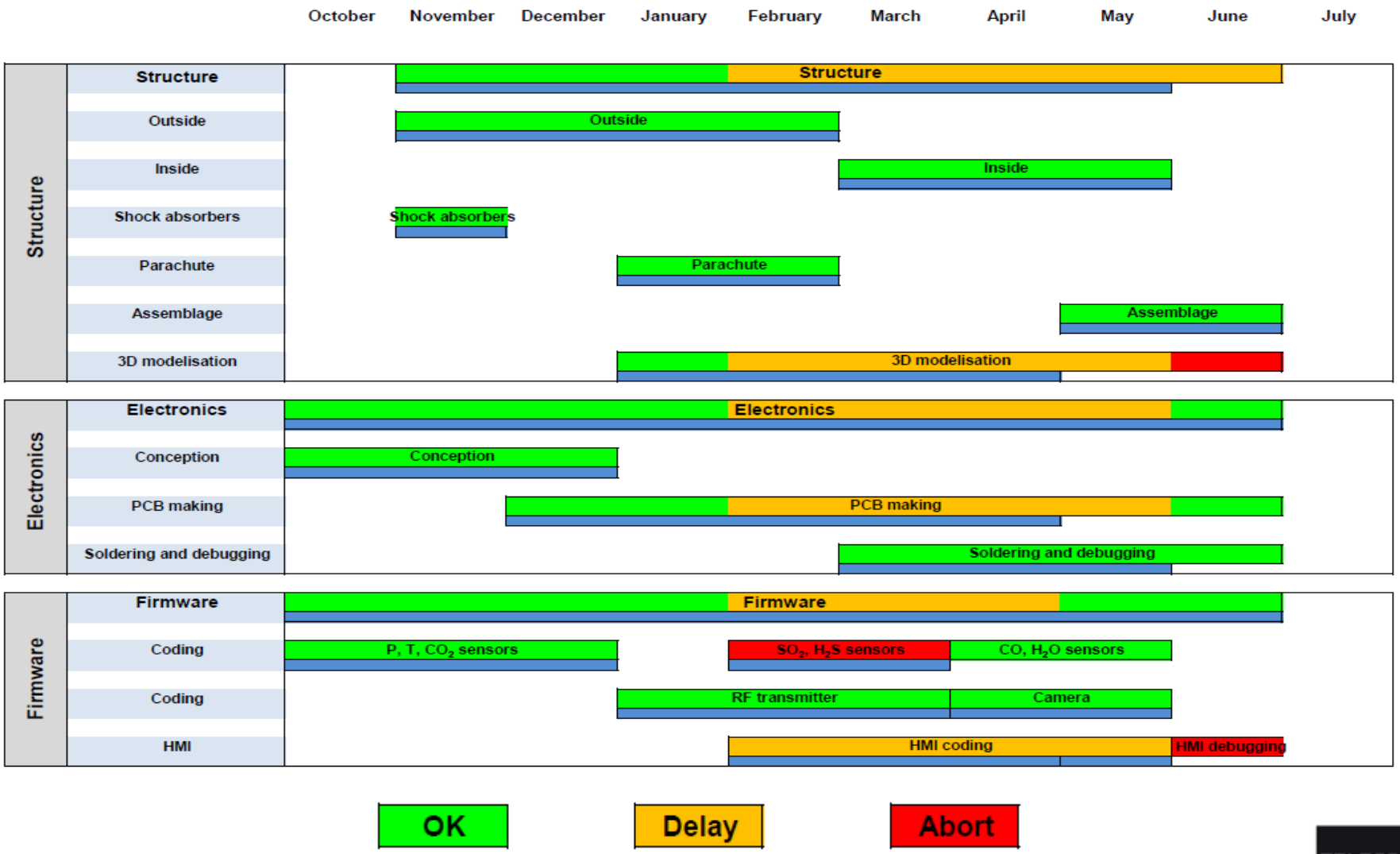
- Emitting module Adeunis RF (869.525 MHz) completed by a ground station

- Gas sensors
- Adapted portable camera

Structure of the CanSats

- Round parachute with 0.64 m² surface
- PVC tube, robust and lets RF pass through
- Several shock absorbers inside the tube
- Pegasus open at the side for the portable camera

Overall planning



Estimated budget

Our budget can only be estimated, for many pieces are retrieved from last year.

- **Chrysaor : total 335 €**

  structure and parachute : 35 € | misc. electronics : 60 €
  Arduino board : 30 € | sensors : 75 €
  RF transmitter : 135 €

- **Pegasus : total 395 €**

  structure and parachute : 35 € | misc. electronics : 60 €
  ATMega and USBTiny : 50 € | sensors : 75 €
  RF transmitter : 135 € | camera : 40 €

Biscarosse, August 2010

Balloon for CanSat launchings

Credits : CNES 2009

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