

OUFTE-1

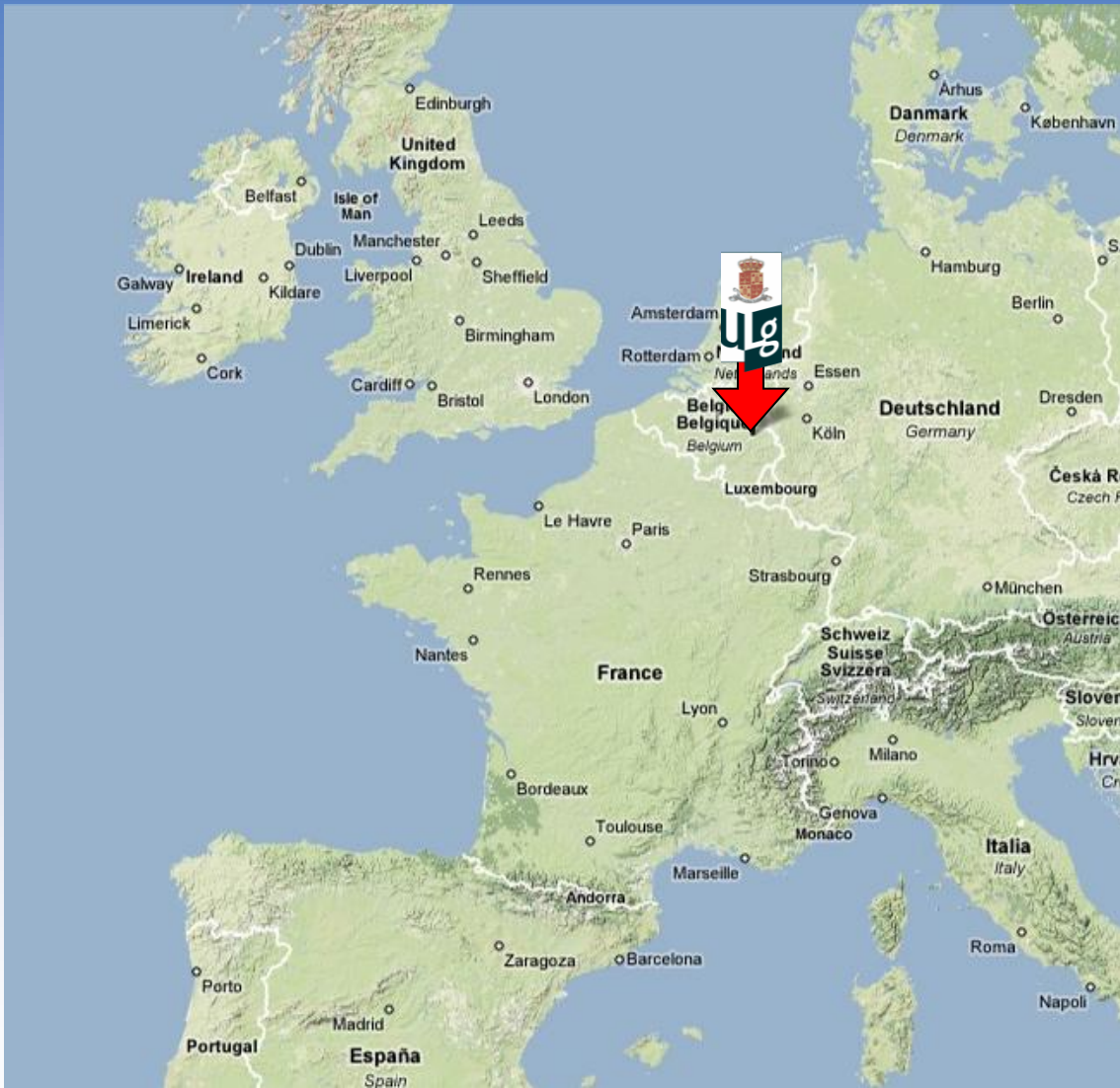
The educative nanosatellite
of the University of Liège,
BELGIUM



Amandine Denis

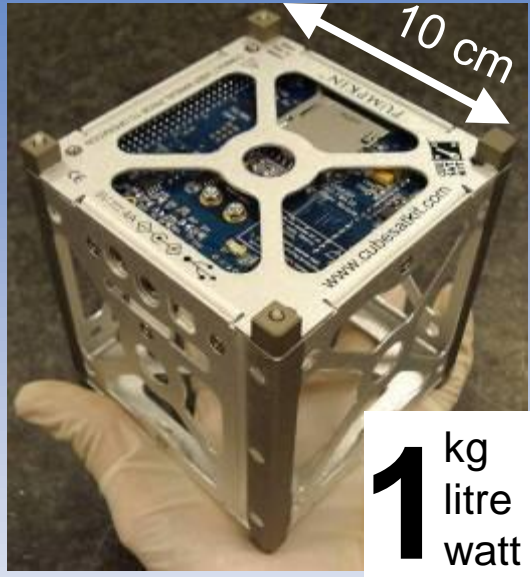
Jonathan Pisane

Liège ?

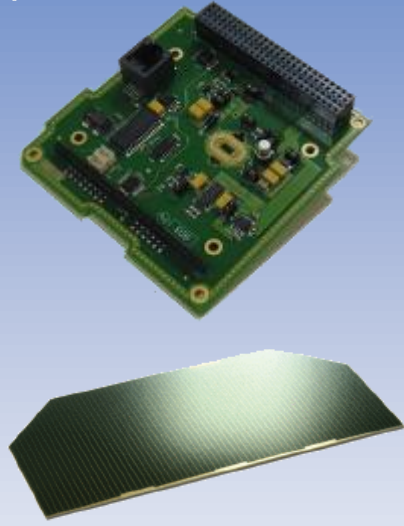


1. The OUFTI-1 project
2. Mission objectives
3. Organization
4. Various actors
5. Involvement of the students
6. Lessons learned
7. Conclusions

1. The OUFTI-1 project



CubeSat standard



Three payloads



VEGA Maiden Flight:
October 2010

➔ How to maximize hands-on space education ?

2. Mission objectives

Fun and education

Design of the OUFTI-1 system

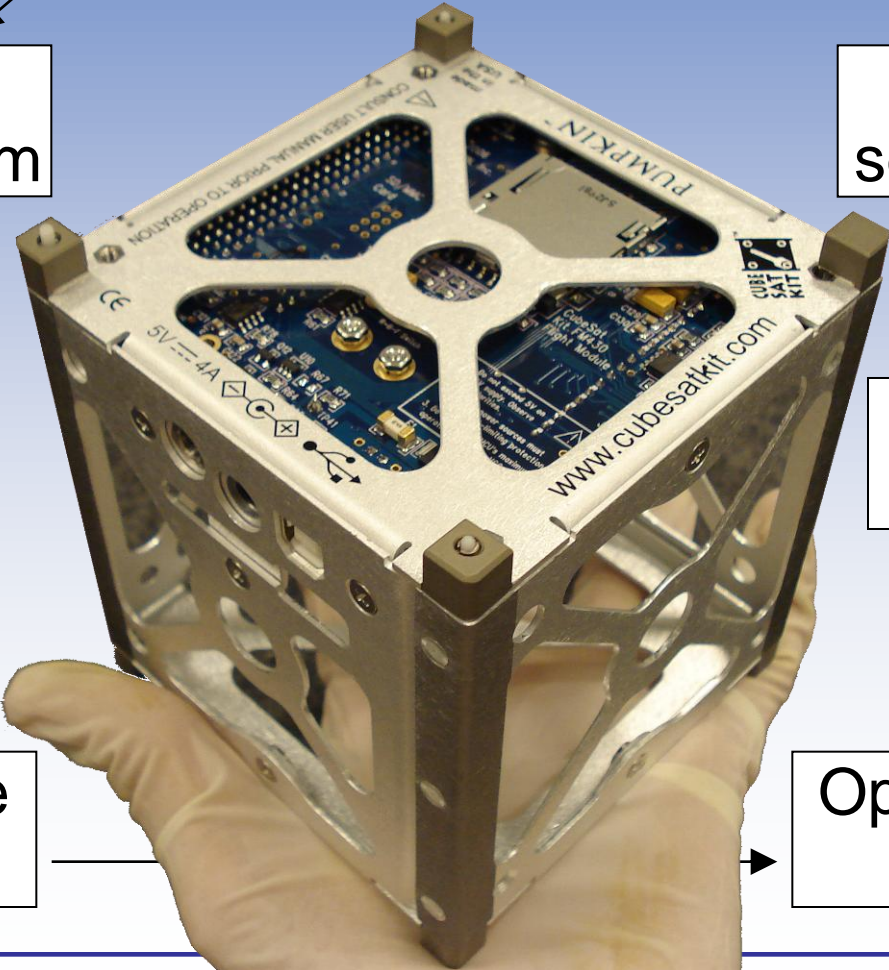
Operating the secondary payloads

Launch of OUFTI-1

Having the D-STAR functional

Satellite alive in space

Operating the satellite



3. Organization

Work Package 1 (WP1)
- 1 task
- 1 student
- 1 advisor
- 1 specialist

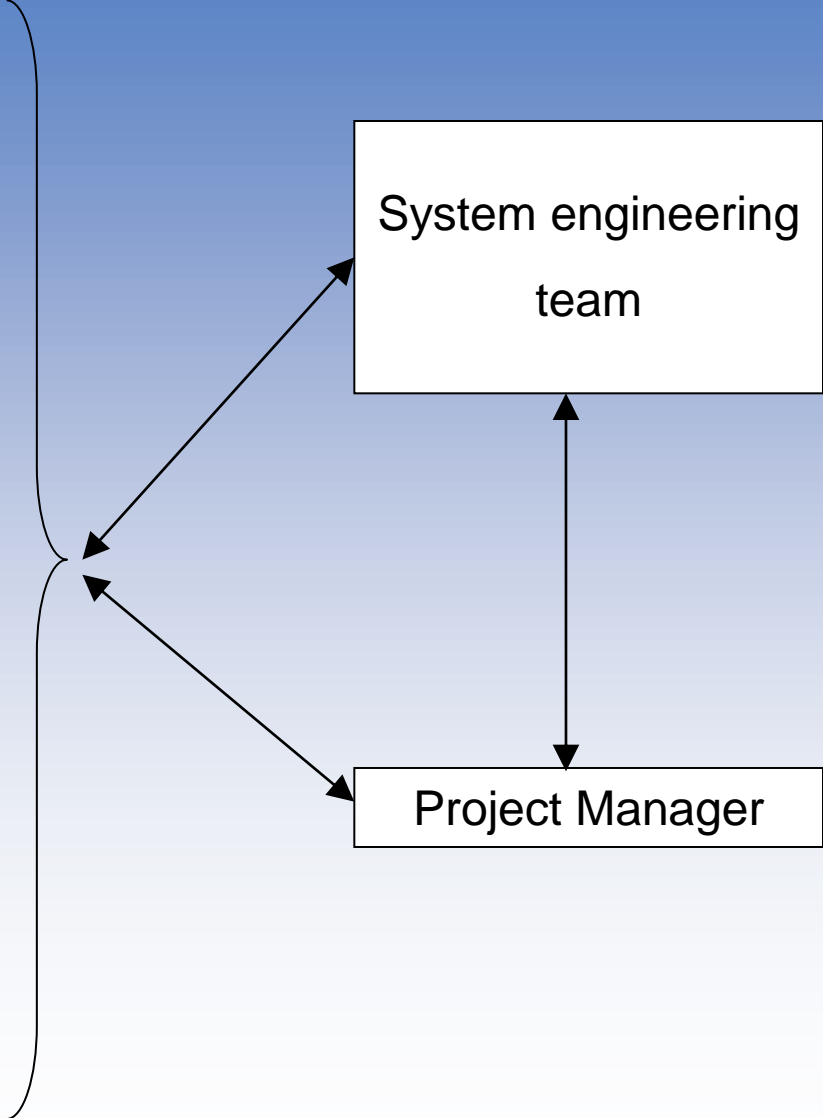
WP2

WP...

WPn

System engineering team

Project Manager



4. Various actors

Students
(university + engineering schools)

Professors

Industrials



Ham-radios

Graduates

... and family!

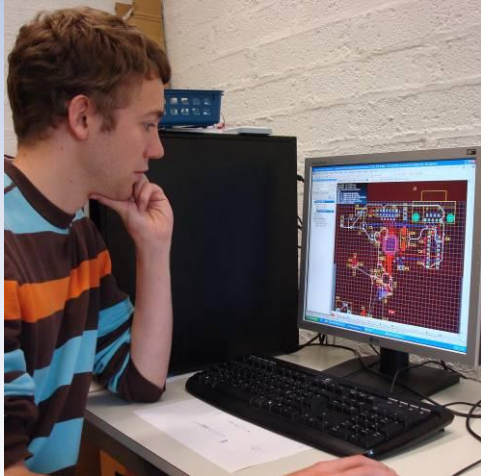
And also: ESA, manufacturers, general public, scientists, ...

5. Involvement of the students

Unusual MS thesis:



Team spirit



Industrial approach



Discussions & decisions

Communication

➔ Students involved in all topics !

6. Lessons learned (1)

1. Need for full-time project manager and well-defined organization chart
2. Technical issues are not the most time-consuming
3. Multidisciplinary team: not easy to manage, but really enriching
4. Strong interest & support from academics, ham-radio community, industrial, and general public
5. Real & great CubeSat community spirit

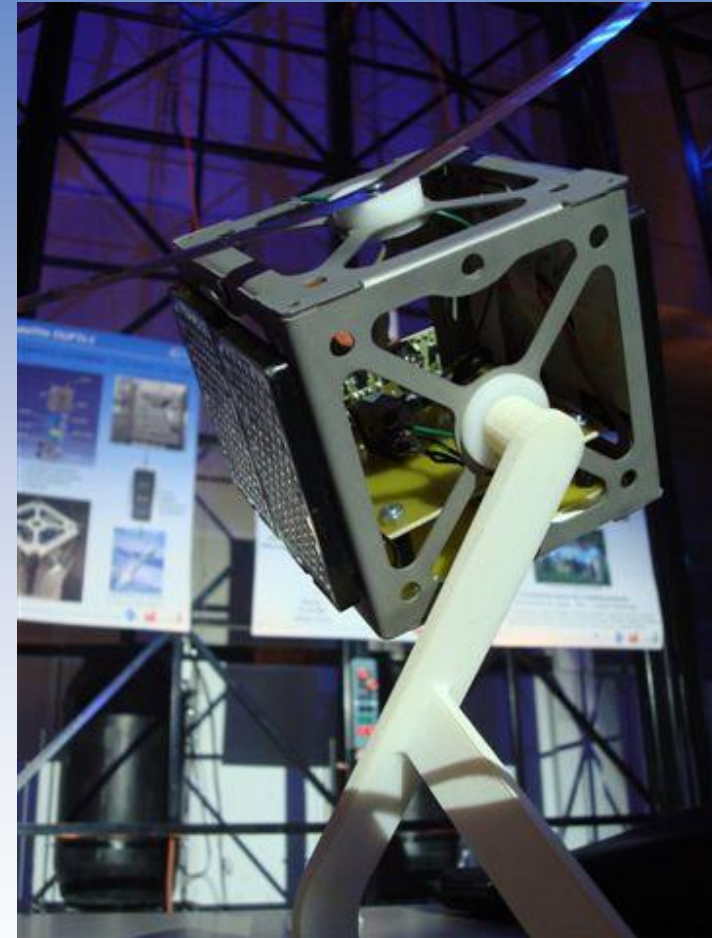
6. Lessons Learned (2)

6. Crucial need for rigorous documentation
7. Everybody (not only students) learns !
8. Interfaces can not be managed by students
9. Autonomy and initiative spirit must be learned

7. Conclusions

→ How to maximize hands-on space education ?

- Give education the priority amongst the objectives ;
- Organize your team:
 - efficiently
 - in a way that gives the students freedom and various contacts...
 - ...but within well-defined interfaces ;
- Really involve the students in all topics, technical or not ;
- **Have fun !**





Thank you for your attention !

