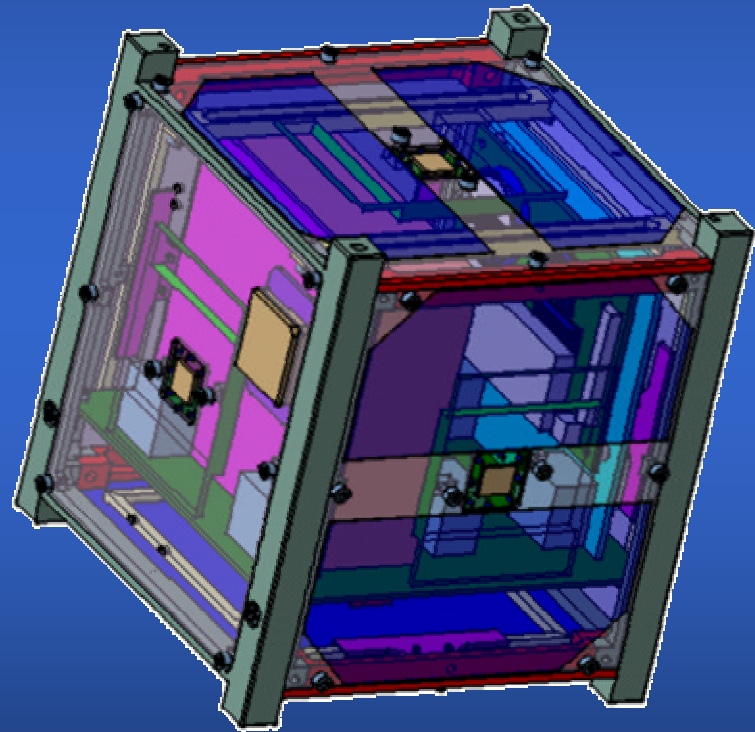


CubeSat Technical Aspects

Are student pico satellites worth to be supported ?



Artur Scholz

COMPASS-1 Project

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FH Aachen CubeSat

compass
one



Quick Overview

Objective: Education

Payload: VGA Camera

Team: 10 students

Timeline: Oct '03 – Apr '05

Next Milestone:

Subsystem EMs till 12/04

Contents

educational

**Feasibility of CubeSat
from three points of
view**

scientific

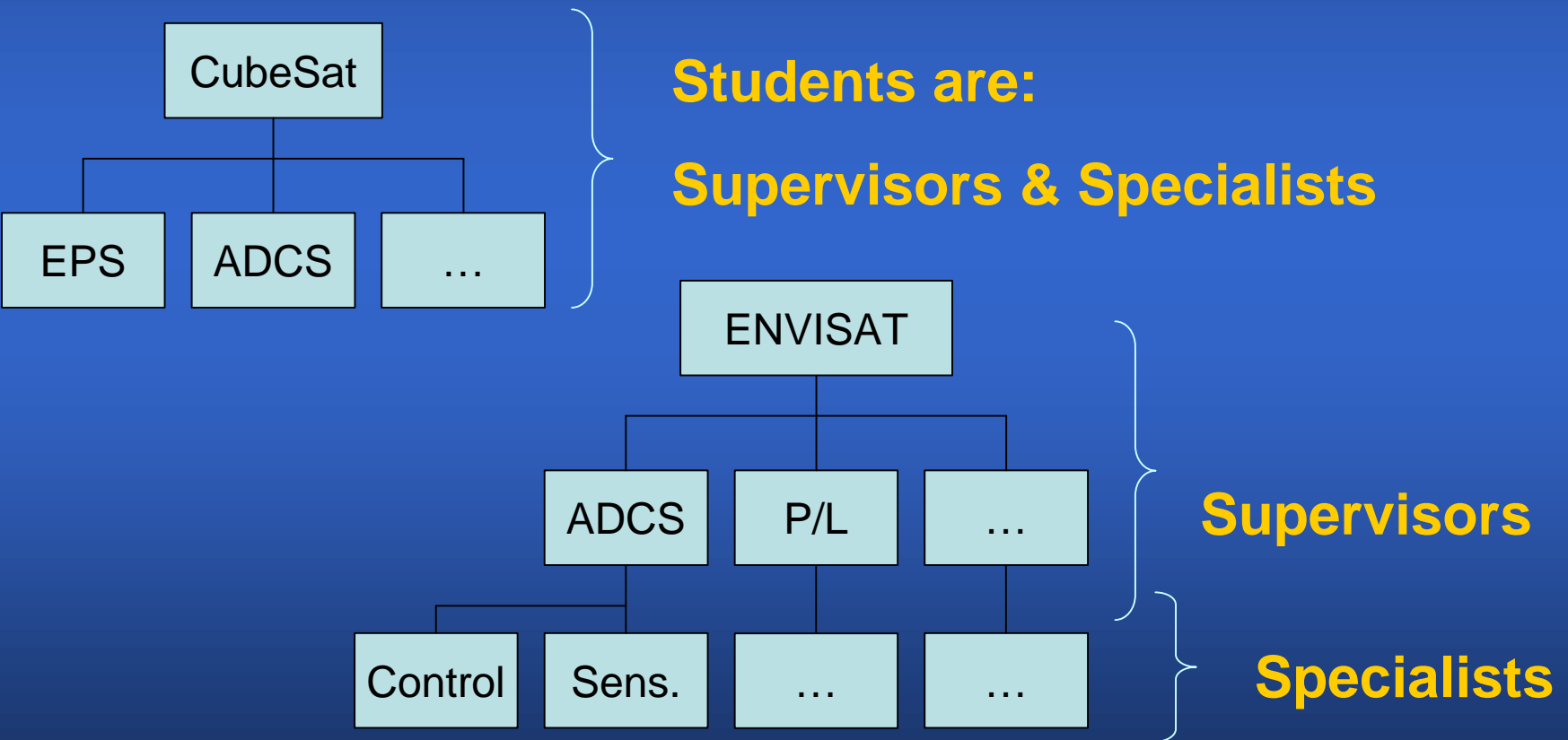
commercial

Educational

“The students love this one”

Educational

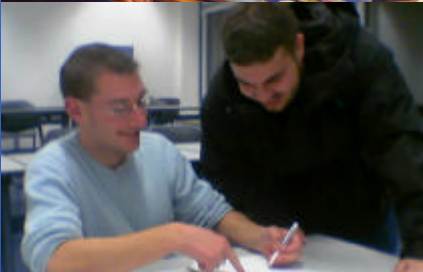
✓ System Engineering



Educational

✓ Teamwork

It's about 'human resource'
Manage time, work load, PR
Focus on common goal

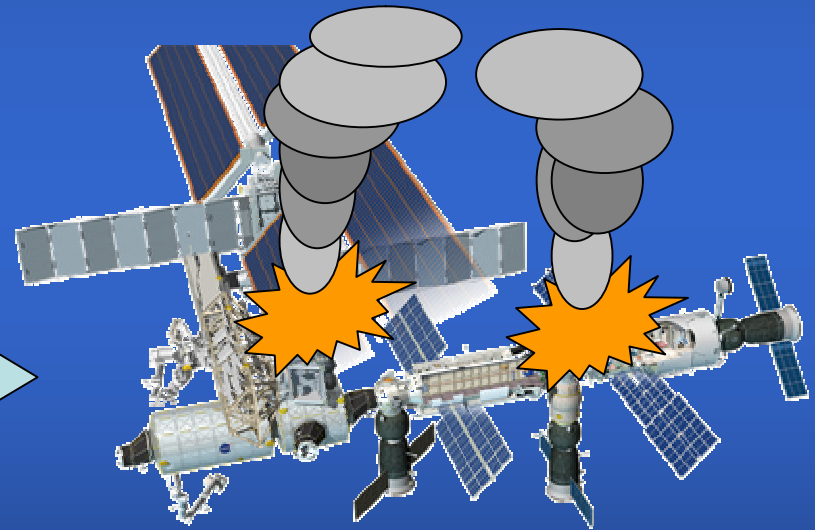


Educational Summary

As people learn & get
smarter



**Mistakes happen,
better now than later!**



**Projects become more
complex**

Scientific

“...and what is your payload?”

Scientific

Two Areas



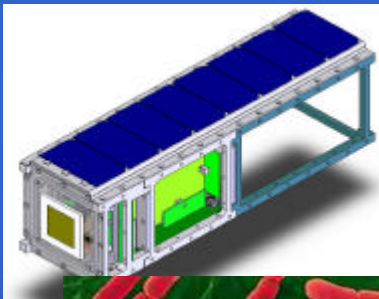
Experiments

**Technology
Demonstration**

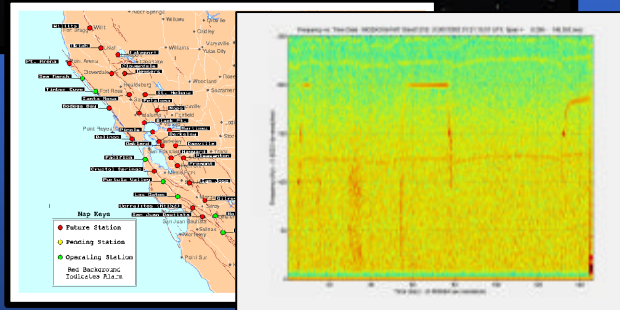
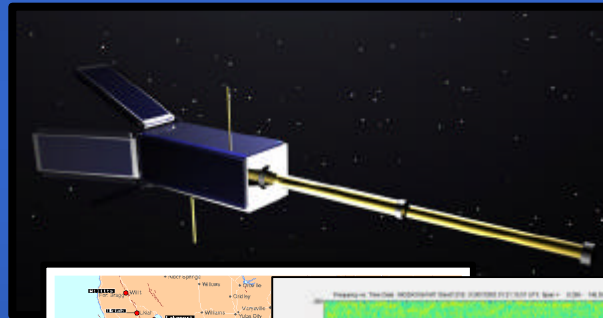
Scientific

✓ Experiments

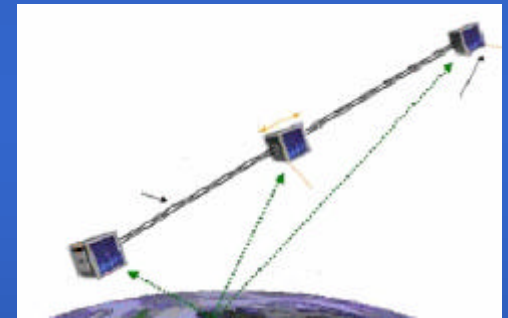
GeneSat-1



QuakeSat

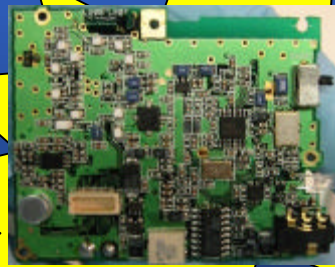
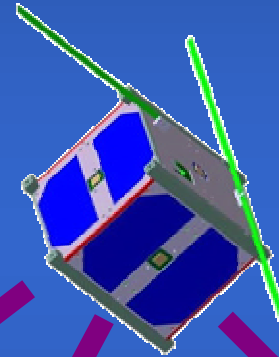
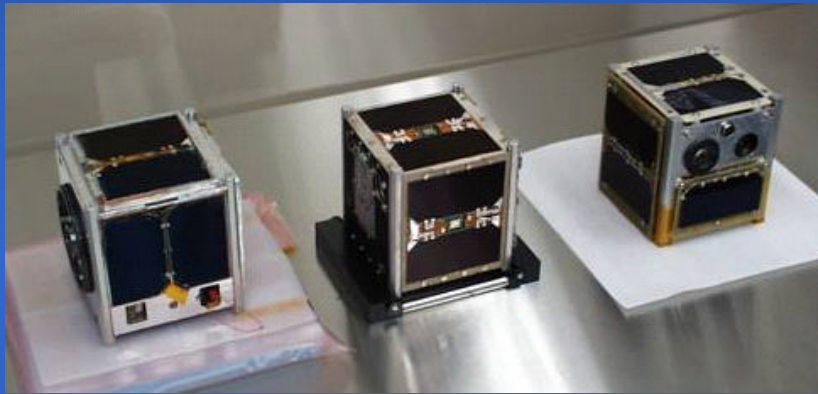


MAST



Scientific

✓ Technology Demonstration



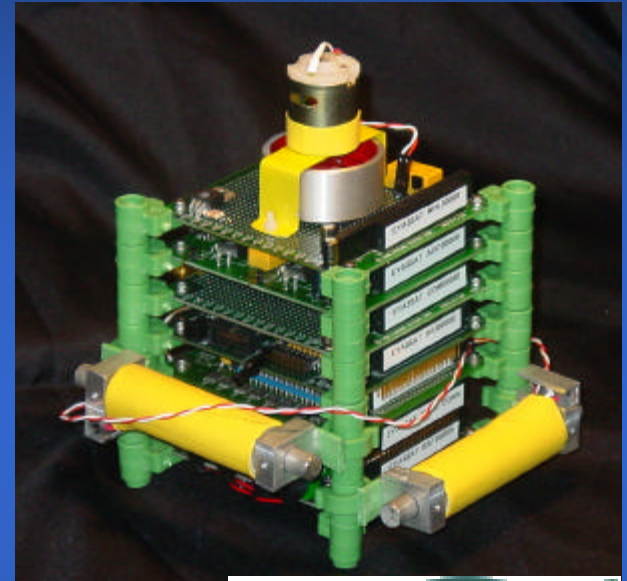
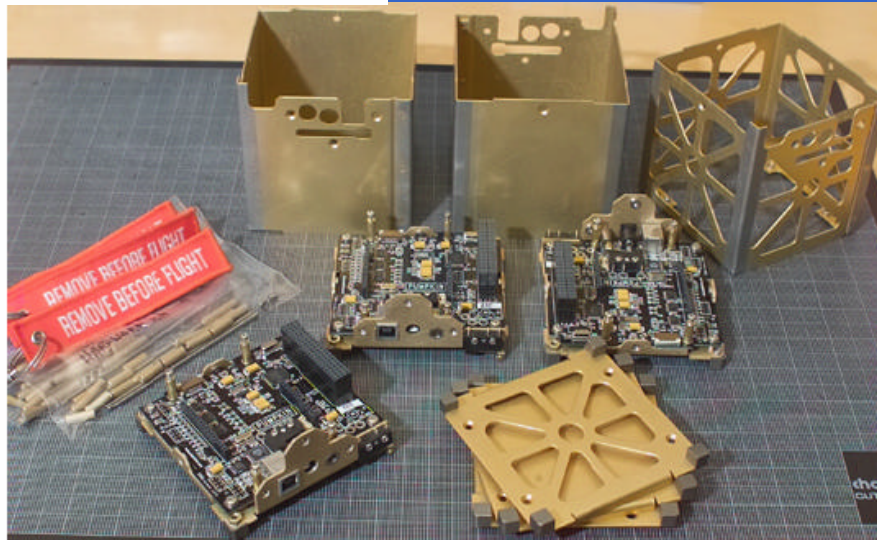
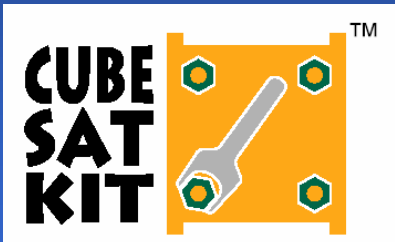
Scientific Summary

- Your experiment is very tiny, light and low power?
=> Considered to put it in a CubeSat!
- The outcome can be exactly what you want,
for very low costs!

Commercial

*Is there a way to make money
with it?*

Commercial



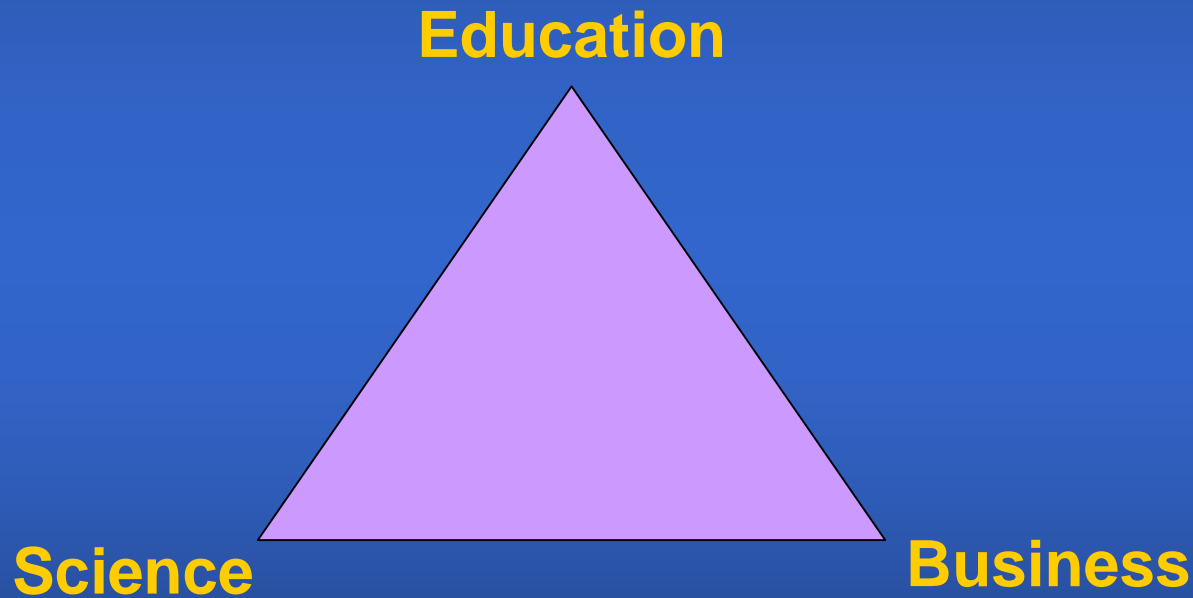
Commercial

Summary

- This area is not well covered yet.
- One user market is already defined:
The developers themselves.
- Are there more ideas?...
(Constellation, Communication Missions, EO...)

Conclusion

Yes, Student Pico Satellites are worth to be supported!



Put equal weight on all aspects to benefit most

Foster the CubeSat Idea

- Forum for CubeSat Developers & User
- Workshops
- Suggestions?...



Sponsors & Partners



Thanks for your interest!

CubeSat Forum at

www.raumfahrt.fh-aachen.de