The 7th NANO-SATELLITE SYMPOSIUM and The 4th UNISEC-Global Meeting

18-23 October 2016, Kamchia, Bulgaria

Micro/nano/pico Satellites: Innovations in Architecture, Technologies and Players

Group 1: The role of small satellite in the future of Earth Observation

Main Outlines

Presenter: Bogdan Konstantinov
Group Discussion number 1

Topic: The role of small satellite in the future of Earth Observation

- Ernest Constantine (Institut Teknologi Bandung - Indonesia)
- Alice Pellegrino (Sapienza - University of Rome - Italy)
- Lorenzo Arena (Sapienza - University of Rome - Italy)
- Bogdan Konstantinov (UNISEC Bulgaria, Technical University of Sofia - Bulgaria)
- Shoho Togo (Tokyo Gakugei University - Japan)
What we focused on
FLOCK of DOVES
PLANET LABS

SkySat constellation
Skybox imaging + Google

QB50 CubeSats Constellation

Facebook Nanosatellite Constellation

OPTICAL SENSORS
PASSIVE
• Need of light
• Problems in case of clouds coverage

DEPENDENT
INDEPENDENT

SAR SENSORS
ACTIVE
• All day
• All weather
• Need of a huge amount of power
FLOCK of DOVES
PLANET LABS

INDEPENDENT
Decreased revisit time
Better data

OPTICAL DOMAIN (5m)
What is next?
Msat: master (TX)
Ssats: slaves (RX)
Main features

• No need to download raw data
• Optimization of the downlink channel
  • Better link margin
Thank you!