





Bringing together the consultancy support of Space Advisory Council with the products and solutions from SSBV Group.



SSBV Background

- Established as Satellite Services BV (SSBV) in 1985
- Privately owned
- Operating for over 25 years with a focus on the International aerospace industry
- Transforming into a multi-national organisation, organised in a group structure and active in different domains (Aerospace, Defense & Security, Remote Sensing & Monitoring)
- Headquarters and largest operational base in The Netherlands, main subsidiary in United Kingdom (Portsmouth); group companies located in 6 countries
- Overall group staff base: >100, mainly composed of engineering staff
- Over the years, SSBV has created a range of products, for which the Intellectual Property (IP) is self-owned and accessible throughout the SSBV Group companies
- As of 2010, expansion of group activities through strategic / friendly take-over (COMDEV UK – RF Test solutions / EONIC BV/ Roving) and Joint Ventures



Areas & Activities



On-Board Electronics & Small Subsystems



Airborne & Space-based SAR Instruments



Precision Airdrop & Air Vehicle Recovery Systems



Small Satellite Sensors & Avionics



RF Spectrum Recording & Monitoring Systems



TTC, High-Rate Modems & Processing Systems



RF Test Systems



Electrical Ground Support Equipment (EGSE)



Product Examples

SEA

Satellite Engineering Academy

12 Engineers in Training per year for a
period of 3 Years

CPUT Graduates from the F'SATI Programme

NewSpace Facility

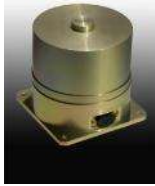


- Located in Somerset West (Q1 2014)
- Completely refurbished facility with offices, labs, test room and clean-room(Q2 2014)
- Circa 500 square meters across two floors (circa 150m² clean area)
- Facilities: Assembly & Lab space
- ISO-7 / Class-10.000 (Class 100 bench) clean-room including production/re-work benches
- Clean dark-room for optics calibration



Reliable Smallsat Products

- Today's commercial smallsat market has an increasing need for reliable sensors and subsystems based on existing and "off-the-shelf" solutions.
- NewSpace activities geared around a "lean" yet high-quality engineering and verification approach that has been applied to a number of AOCS products originally developed by SSBV-UK
- Not the same as intensive "ESA" like qualifications and TRLs, but ESA processes materials and assembly
- Partnership approach: NewSpace invests in (re)qualification of technology, existing or proof-of-concept design and its commercialisation
- NewSpace will actively pursue new product development and flight qualification (e.g. TDS-2, UPM-Sat)
- Target market: Export - 'commercial' smallsats



Flight Quality Manufacture

- ESA qualified assembly and inspection
- ECSS based processes (ISO 9001 planned)
- Space qualified materials
- Full traceability and EIDP
- From BoM to tested unit or any sub-process



Flight Composite Manufacture

- Antenna reflectors
- Solar Panels
- Optical Instrument benches
- Spacecraft Structures
- Radiator panels



RF Test Systems

- Pulsed (TR) Module test systems
- Module test systems
 - LNA
 - Power amplifier
 - Down converter
- Payload test systems
- Special Test Equipment (STE)
 - Command and telemetry interface
 - Switching units
- LabView test software
 - Instrument drivers
 - Measurement science
 - Customised GUI
 - Analysis routines
 - Embedded firmware

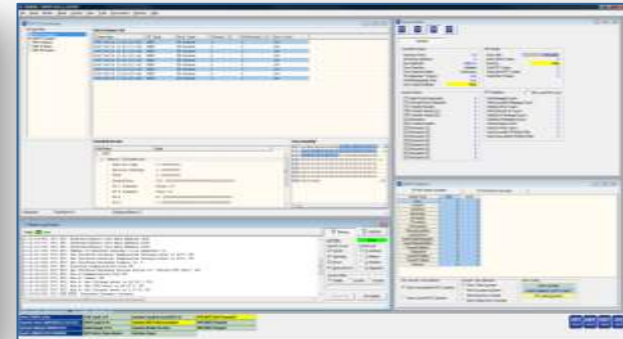
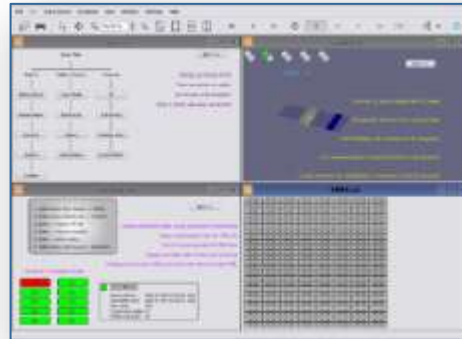


CMDVS

- State-Of-The-Art Software framework used in almost all SSBV systems
- Provides:
 - **C**ontrol
 - **M**onitoring
 - **D**ata Processing &
 - **V**isualisation



Incl. support for database driven TM/TC, Test language / scripting, Synoptics and API based control and monitoring of both SSBV and COTS hardware and software components.



Summary

- NewSpace operates in many domains and can offer different products, services and project based activities in areas related to:
 - Reliable Smallsat sensors / subsystems
 - Instrument/Payload, System and Sub-system Assembly, Integration and Test (AIT)
 - Equipment Test Systems & Services (RF, Instrument/Payload, Subsystem)
 - Operational Ground Segment (RF, Modem & baseband equipment, ground terminals, M&C systems)
 - FMCW SAR sensors and SAR data processing in Ground-, Airborne- and Space applications
 - Military systems – SIGINT, GPS guided parafoils
 - Space quality manufacturing (and test)
 - Composite systems for space application (Vanguard)



Thank you for your attention

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