Optimised Supply Strategy for Space applications as a vehicle for new technologies

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Introduction of new parts into space applications – a major challenge – why?

Because of

- very specific requirements such as
  - Radiation TID / SEE
  - Lifetime > 15 years
  - Low Quantities
  - High Qualification Costs
  - Extended Screening
  - High Reliability
  - Traceability

- very conservative customers
  - review and approval of each part used in a satellite

- the tremendous costs of satellite missions

**To repair a satellite is not a solution!**

**Failures on EEE parts level are simply not acceptable!**

**High cost pressure for the whole supply chain!**
Is miniaturisation in space equipment possible?

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It is possible and furthermore...

Source: Tesat-Spacecom GmbH

Future EPC Design?

It is possible and furthermore...

Necessary because of High Cost pressure in the market!
What is the way to bring new components or technologies into a space equipment?

Manufacturer

Manufacturer roadmap

Qualification (e.g. Airbus/Tesat; ESA; JAXA; DLA)

Introduction of parts into equipment

Equipment Customer Approval

Early Exchange of information and Aligning on Roadmap!

Airbus D&S roadmap

Redesign of equipment

Introduction of new design

Equipment Customer Approval

Airbus Defence & Space

2-5 years
How does a modern organisation ensure this challenging tasks?

Example EEE Centre Airbus Defence & Space 1/2

**Optimised Supply Strategy for Space applications as a vehicle for new technologies**

EEE Centre Airbus Defence & Space

Competence Centre for EEE parts and PCBs used in space applications in Airbus D&S!
How does a modern organisation ensure this challenging task? Example EEE Centre Airbus Defence & Space 2/2

Optimised Supply Strategy for Space applications as a vehicle for new technologies

- Electronics Business Lines and Space Systems
- External EEE parts customers

See next slides Tesat Parts Agency – Michael Mösken

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Thank you for the attention!

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EEE Centre: Benefits for worldwide customers via Parts Agency

EEE Parts Procurement, Quality and Engineering support

- Michael Moesken -
Overview

EEC Centre

Parts for Airbus + Tesat Equipment
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Procurement of parts to support Airbus + Tesat own equipment manufacturing

Parts Agency
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Procurement for external customers as required by the customers

Tesat hosts Europe’s largest EEE procurement agency

Procurement of > 75 M€/Year* HiRel EEE Parts *(10.200M¥)
Benefits

Favorable Commercial Conditions

- Benefits from combined high volume procurement of Airbus DS and Tesat needs
- Regular Quality Surveillance and Audits
- Schedule Commitment and permanent exchange

Unique Access to Resources

- Extensive pool of Engineers (approx. 150 empl.)
- Airbus DS and Tesat Alerts Management System
- Counterfeit Prevention
- Incoming Inspection, RVT, SCD, FA, PCB, etc... arrangement
Experience & Facilities

- Fully equipped EEE laboratories
- Controlled Parts storage

International Projects (examples):
- ExoMars, GALILEO, Sentinel 4, APSTAR-9

Japanese Projects:
- H-2A/B, HTV, ERG, ASTRO-H, GOSAT-2, SLATS
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