



**ESCCON 2019**  
**ESTEC 11-13 March 2019**

**Policy and Standardization Working Group report**

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# What is PSWG ?

PSWG is an European working group made of :

- Parts manufacturers
- Parts procurement companies
- Parts users
- Space agencies

4 meetings per year

It mainly aims at approving new ESCC generic specifications and at improving the ECSS standards regarding component procurement.

**PSWG is an European Working group about space parts procurement.**

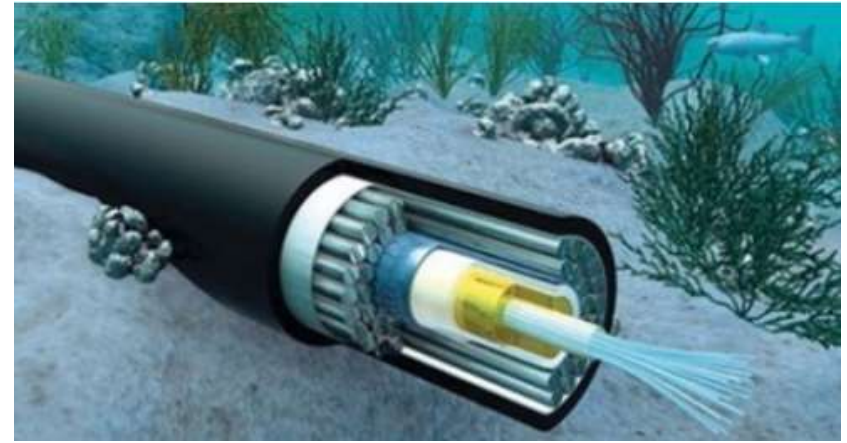




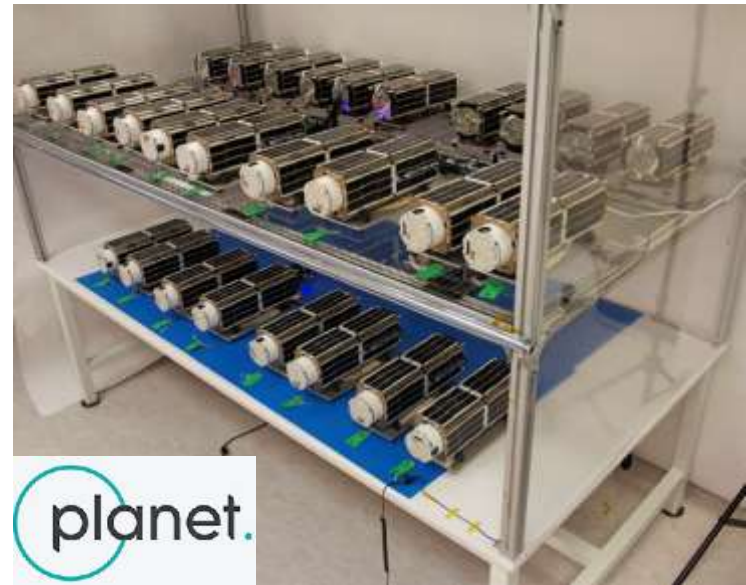
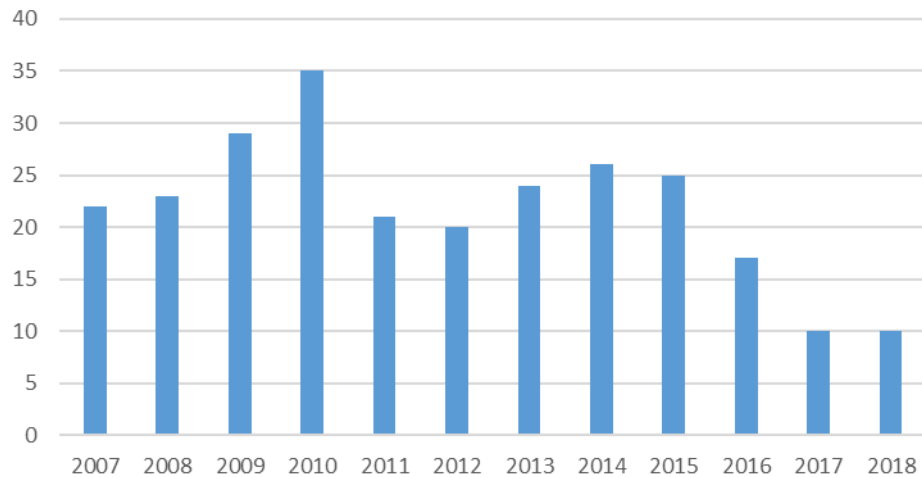
## Context

# Faster better cheaper revival

# Context : Faster, smaller, cheaper revival



COMSAT GEO satellites order



The space market is changing.



**To be or not to be**  
**“customer oriented” ?**  
**That is a question for ESCC**



# To be or not to be “Customer oriented”

In my opinion, here are the 3 drivers of the ESCC system :

1. **Readability – trustworthy** : ESCC is a kind of brand. **Confidence in the ESCC parts quality** shall be high.
2. **Parts manufacturer oriented** : ESCC shall support **European component suppliers**.
3. **Parts customer oriented** : ESCC shall support space projects by providing **innovative and competitive parts**. ESCC shall bring **added value** in the supply chain.

ESCC system has 3 different “customers”.

These 3 drivers are (of course) not always aligned.

To find the right balance between these drivers is a challenge.



# Audits of High volume manufacturing line

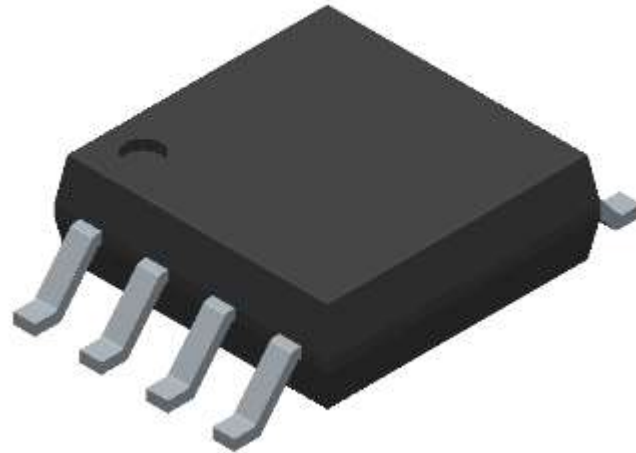


# Audits of High volume manufacturing line

- Audits of manufacturing line are mandatory to qualify a part in the ESCC system.
- However, audits of high volume production line looks questionable (in particular, audit of very large wafer fab).
- It induces the following question :

A « one size fits all » audits policy looks questionable.

A future challenge would be to clarify this audit policy.



# ESCC specification for plastic parts

# ESCC specification for plastic parts

- For performance and cost reason, plastic packaging of rad tolerant parts looks very interesting.
- Plastic packaging assembly is made in high volume assembly lines.
- Two qualification ways of these plastic parts are under study :

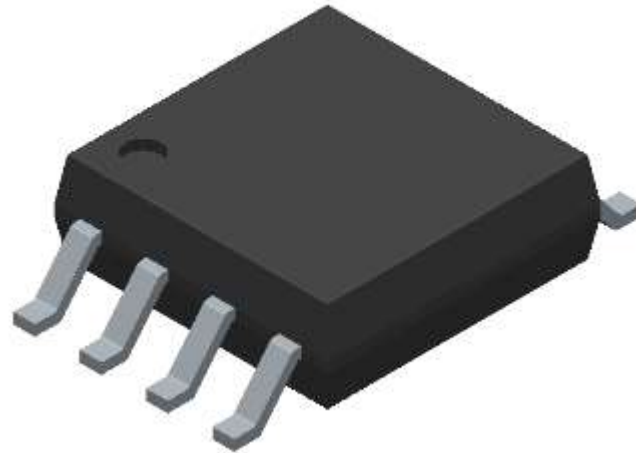
## ESCC9000-P

- ESCC9000 principle :
  - PID+ evaluation
  - periodic LAT
  - 100% burn-in
- This qualification way looks usual and comforting. But is it adapted to high volume plastic assembly line ?

## Enhanced Commercial Level

- “Enhanced Plastic” Principle :
  - strong evaluation
  - Periodic data review : PID change study, qualification results obtained for non space customers.
- No periodic LAT, no screening.
- This qualification way => major change

Two qualification ways of parts in plastic package are under study.



# ECSS standard for COTS procurement

# ECSS standard for COTS procurement

- Standardization can help to maximize compatibility, interoperability, safety, repeatability, or quality. It creates the conditions for competition.
- Ongoing modification of the ECSS standard regarding COTS procurement. (ECSS-Q-ST-60-13)
- 3 main topics :
  - Authorization of **pure tin** parts without re-tinning.
  - **Automotive** level recognition
  - Commercial **passive** parts introduction
- Main difficulties :
  - How to measure trust in a part ?
  - Passive COTS => High diversity of parts technologies.
  - Test at board level to be introduced ?

COTS procurement rely on trust assessment.

We hope to issue a new COTS procurement ECSS standard in 2019 but it is not an easy task.