

The One Bus Illusion

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Harness reduction is a recurrent topic, but evolution on the topic seems to be difficult. “I’m involved in missions for 20 years and did not see a significant change on this over the years”

Nevertheless it seems to make sense to think about it. A huge satellite has (SPCD 2013 – Malagoli)

- 50.000 connections
- 1.000 connectors
- 20.000 meters of wires
- harness mass exceeding 100kg

The basic idea is to make better use of the available bandwidth of the harness which is being used in our satellites. We will focus on the payload side and show how different communication and power needs can be combined. The approach will show the potential to significantly reduce the amount of harness by applying SpaceFibre and Space-PowerLink technology developed in TEC-ED.