

SpaceWire Physical Layer Testing

TEC-SW/ED Final Presentation Days – Fall 2016

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Project: **SpaceWire Physical Layer Testing**

Target: 60k + 10 k CCN TRP-TAS Activity

Duration: 1 year (actual duration is 15 months)

Contractor(s): TAS-F Prime, TAS-I , 4 Links

Background: The SpW Standard calls for a Low Voltage Differential Signaling (LVDS) in the physical layer, **reliable SpW data communications can be difficult in the presence of induced noise, ground level differences, impedance mismatches** and other hazards associated with installation of a SpW network over a spacecraft.

Objectives: Aim of the ESA TRP/TAS study: To generate a set of test procedures and results to be used as an aid to the industry when designing a SpaceWire interface up to the Physical Layer

Objective 1: **To develop a SpaceWire test bench and to perform functional and environmental tests** according to a well-defined generic test procedure

Objective 2: To provide a **set of verified SpaceWire link interface implementation rules and guidelines**

