SpaceWire Backplanes - Invitation to Tender

ESTEC
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The need for a SpWBP specification

User needs for a SpW backplane specification:
1. Reduce NRE development costs for avionics systems.
2. Satisfy use of both SpaceWire and next generation HSSL.
3. Highly reliable and scalable architecture.
4. Standardised way of implementation

Meeting these needs may be achieved by:
1. Prototyping and agree on a common denominator for the SpaceWire backplane.
2. Fund activities to aid prototyping and development of standardisation proposals.
3. Formalise a SpW Backplane standard within the ECSS framework.
1. **SpW Backplane Specification, SEA/ A.Senior**, Draft 1 B presented at 14\textsuperscript{th} WG
2. **SpW Backplane connectors, routing topology and pin assignment**, Osaka University / M. Nomachi, presented at 14\textsuperscript{th} WG
3. **Generic Avionic Backplane using Quadrixal Insert Connectors**, Alex Kisin, MEI Inc. & Glenn Rakow, NASA/GSFC
4. **Modular Architecture for Robust Computation (MARC)**, ESA funded activity led by SEA Ltd (UK)
5. **Evaluation for the prototype SpWBP and Investigation of Standard topology for SpWBP**, Mitsubishi Electric, MELCO, Osaka University, JAXA ISAS
So far there is no standardised solution for SpaceWire connections over the backplane defined.

In this activity the different possible architectures of active and passive backplanes shall be traded-off.

A suitable, impedance matched backplane connector shall be found.

A SpaceWire Backplane specification shall be defined that can be used as input for the backplane standardisation work.
1. Tentative dates for AO 1-6692:
   a. ITT issue - end of Q1 2011
   b. ITT closure – mid Q2 2011
2. Procurement Policy:
   a. C(1), non-primes including SME’s
3. Price range: 100-200 KEURO

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