

SpaceWire Working Group Meeting 10

Introduction and Agenda

Ph. Armbruster TEC-ED

Introduction and objectives

The meeting will focus on two main topics:

- The first one will deal with **Real Time aspects (SpW-RT)**, related services and protocols for SpaceWire networks, enabling Command and Control applications using SpW. (Convenors Ph. Armbruster and S. Parkes)
- The second main focus is **SpaceFibre** (Convenor: M. Suess, ESA/ESTEC)

Other topics:

- SpW development status
- SpW Test, Verification and “Certification” (Convenor Y. Sheynin, UoStPg)
- *SpW Backplanes* (Convenor M.Nomachi, UoO)
- SpW and Plug and Play (Convenor G.Rakow, NASA/GSFC)
- SpW Deployment and Handbook (Convenor, B. Cook, 4Links)
- SpaceWire International Conference 2008 – Osaka/Nara 4-5-6 of November 2008 - (M. Nomachi, UoD-JAXA)

Day 1: Wednesday 20th of February (AM) - Plenary session - Einstein

9:00 Welcome and Introduction, Ph. Armbruster, ESA

9:10 **Session 1: SpaceWire Real Time**

- Introductory Presentations
 - On-board SpW Networks and Real-time aspects, W. Gasti, ESA
 - SpW for Cmd&Ctrl, D. Jameux, ESA

10:15-10:30 *Coffee break*

- Time-Triggered Techniques for Quality of Service over SpaceWire, W. Steiner, TTTech Computertechnik AG
- SpaceWire-RT Requirements, S. Parkes, UoD
- Use Case Study for SpaceWire-RT, T. Yamada, JAXA/ISAS
- Discussion

Technical note: SpaceWire-RT Requirements

13:00 *Lunch Break*

Day 1: Wednesday 20th of February (PM) - Plenary session - Einstein

14:00 **Session 2.a: SpaceWire developments status**

- SMCS116SpW, J. Ilstad, ESA/Estec
- SpaceWire Router: SpW_10X, P. Fabry, ESA/Estec
- Remote Terminal Controller: SpW-RTC device, J. Ilstad, ESA/Estec
- SpW-RTC Development Suite, S. Habinc, Gaisler Research
- Recent ASIC developments by NEC, NEC
- Remote Memory Access Protocol : RMAP, ECSS-E50-11 Standard, M. Suess, ESA/Estec

- PID Application: PID for CCSDS Packet Transfer, Ph. Armbruster, ESA/Estec

15:45 *Coffee break*

16:00 **Session 2.b: SpaceWire SpW Test, Verification and “Certification”**

- SpaceWire Test, Verification and Certification Requirements and Approaches. Y. Sheynin, St. Petersburg State University of Aerospace Instrumentation.
- SpaceWire – Test, Validation and Certification: Experiences, Thoughts, and Ideas for Discussion. B.Cook & Paul Walker, 4Links Limited
- An innovative method for SpaceWire Test and Verification. G. Magistrati, Carlo Gavazzi Space S.p.A.
- SpaceWire Conformance Tester and Validation Software, Star Dundee

17:30/18:00 *End of meeting, Day 1*

Day 2: Thursday 21st of February (AM)- Plenary session - Einstein

9:00 **Session 3: SpaceFibre**

- MLAS mission use of SpaceFibre (30'), G. Rakow, NASA
- SpaceFibre optical physical layer (30'), J.Toivonen, PATRIA
- Details of the SpaceFibre CODEC (90'), S. Parkes, UoD
- Comments on the SpaceFibre outline specification (30'), G. Rakow, NASA
- Collation of SpaceFibre Requirements, P. Walker, 4Links
- Discussion

Technical note: SpaceFibre Outline Specification

13:00 *Lunch Break*

Day 2: Thursday 21st of February (AM) - Plenary session - Einstein

14:00 Session 4: Other topics, Part II

- *SpW BackPlane*
- SpW and Plug and Play (Convenor G.Rakow, NASA/GSFC)
 - Introduction, G. Rakow, NASA/GSFC
 - Adapting SpaceWire PnP to RMAP and Other Recent Changes, P. Mendham, UoD

15:00 – 15:15 Coffee break : Demo UoD – PnP and SpW Router

- SpW Deployment and Handbook (Convenor, B. Cook, 4Links)
 - First survey of needs, ideas and potential undertakings, B. Cook, 4Links
 - ESA Internal SpaceWire Wiki - A Conceptual Assessment, H. Helzenius, ESA
 - TopNet pilot demonstrations: First returns of experience, R. Vitulli, ESA
- SpaceWire International Conference 2008 – Osaka/Nara 4-5-6 of November 2008 - (M. Nomachi)

17:00 Wrap-Up, ESA/Ph. Armbruster

17:15 *End of WG Meeting 10*

Inter-Agency Meeting, Friday 22nd of February (AM)

9:15 – 12:30

Room Dj124y – Restricted to SpW WG Steering Committee members

Documents:

- SpaceFibre Outline Specification
- PID Application: PID for CCSDS Packet Transfer
- SpaceWire-RT Requirements