SpaceWire Working Group Meeting 6

Conclusions

Ph. Armbruster TEC-ED

Cables and Connectors

- NASA to ask Gore to provide cable characterization reports justifying deviations from SpW standard cable (higher cable gauge, matched connectors)

RMAP

- Deltas w.r.t Draft E are of limited extend (error reporting, CRC specification style)
- ESA to introduce a Draft F section on SpW WG Web site
- some “GAP” features (e.g. directed read) can be considered pending a description is provided to the WG

CCSDS SOIS

- streamlining process in progress at ESA level. Cf corresponding presentation. To be confirmed after the CCSDS Rome meeting. GB available end of June. RB available by the end of 2006.
- Current status presented by S. Parkes with specific focus on SpW related aspects.

Synchronization, time codes, interrupts

Input Nasa:

Single Time-Code (TC) master is restrictive

- Many systems would like to have more than one TC master
- Current standard may be easily extended to four

Input Jaxa:

- Refer to corresponding presentation. Concept introduced in RMAP Draft E.

Input UoAI:

- Refer to corresponding presentation. (impact on reserved bits in TCs).

Input ESA:

- Presentation on SpW for Robotics application: typically a control loop implementation (with real time requirements, data obsolescence handling). The need is recognized and this axis must be studied in detail (checking other similar requirements and proposed solutions)

SpW Routers: (Nasa Comments)

- Definition of priority scheme and group adaptive routing is loose.
- Possible confusion : GAR to be used for bandwidth sharing whereas some users see this as a mechanism to implement redundancy.
- Proposal: Address this point in the SpW-Hbk

Many satellite architectures require redundancy at Physical level

- Transparency to user is preferred: Autonomous switch-over
- This is something that should be addressed by standard
- NASA has an implementation for Physical level redundancy

SpW Links Routing on backplanes

Input from Jaxa : see presentation

Input from UoD: see presentation

SpaceFibre

Input from UoD : see presentation

Input from Nasa: see presentation

Complements and Evolution(s) for the standard

- PID for packets defined by CCSDS
- ESA to propose a scheme for the SpW-Hbk