

A) SPW-RT protocol

Comments

Y. Sheynin proposed to clarify the use of Group Adaptive Routing vs. using path addressing. Clarify some terminology. (i.e. end to end flow control instead of just flow control, Best Effort RT)

Provide examples of encapsulating RMAP and other SpW protocols with RT protocol.

Provide some figures for the Timeslots period and its relationship with the size of the PDU.

Provide information about the relationship between the timeslot period and the scheduling of a Real-Time OS.

Impact of the SpW 10-X timeouts in synchronous designs.

Agreed to provide what is required to implement RT. Agreed to provide feedback in the future if a device can not implement RT.

Propose to use Real time vs. Soft Real Time instead of Synchronous vs. Asynchronous.

Provide failure cases, including TimeCode distribution, with FDIR techniques.

Consider network with different link speeds and provide examples.

Include a SpW protocol stack overview.

Considering not using ACK for best effort and reserved.

Agencies and Industry interest

Agencies

UoStPb-Roscosmos: interested in the concept and the technology. Require more documentation before going into prototyping.

NASA: very interested if the RT concept includes a whole Hard Safety system design. They will look into resources available for prototyping.

JAXA: expects receiving a prototype before starting implementing RT.

Companies

- Astrium have been doing some prototyping with existing protocols like Flexray.
- SciSys have been implementing a new protocol with reliability but without end to end flow control.
- In general there is an interested in the concepts of the RT protocol. Take action to look into available resources.

Future work:

Agreed to provide RT v2.0 in August.

B) SpW-Protocols (ECCS-E50-11)

RMAP

Endiannes	Advantages	Disadvantatges
Non specified	RMAP is defined as a byte transfer protocol. Application can chose the endiannes that is better.	Software byte reordering is required when a node implements Big endian and the other implements little endian
Big endian		Hardware byte reordering may be required at both communication ends.

Specify in the RMAP specification table if a device with multiple links considers the first byte of the return path as the output link of the device.

Agreed to further discuss the document with C.Taylor in relation with SOIS compliance.

Agreed to provide last comments until public exposition begins on middle July.

Comments CCSDS Packets

Two actions on ESTEC/C. Taylor

- Provide guidance on the definition and use of various packet types
- Assist in the development of a service interface