Comments on SpaceWire-T Initial Protocol Definition

Takahiro Yamada (JAXA/ISAS)

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General

❖ The SpaceWire-T protocol developed by the University of Dundee and documented in the initial protocol definition document meets most of the timeliness requirements we presented at the tenth SpaceWire WG meeting held in February 2008.

❖ We support the separation of the reliability features from the timeliness features. The reliability features (like retransmission of lost data) can be defined in the future as a separate protocol (SpaceWire-R) that runs on top of SpaceWire-T and uses the features of SpaceWire-T.

❖ We have one comment regarding the usage of time-slots.

Time-Slots

❖ A time-slot is assigned to sets of channels.

❖ The channels contained in a set should have the same source node but can have different destination nodes.

❖ Different sets of channels shall not use any common network resource.

❖ Since the source node can control the traffic of all the channels in the set assigned to a time-slot, this extension of the usage of time-slots does not cause any problem.

❖ This extension is useful in cases where a node wants to

➢ Send timely data like commands to multiple nodes but it doesn't know when to send to what node in advance; or

➢ Receive timely data like report data from multiple nodes but it doesn't know when to receive from what node in advance.