

SAS Capable Signalling
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SAS stations on the ring

- SAS needs to know which stations on the ring has the SAS sublayer.
- This could be “signalled” using one of the following:
 - Special multicast address used for “undirected transmissions
 - Use one of the reserved bit in a frame indicating this was transmitted by an SAS.
 - Use one of reserved bits in the “station settings” ATT to indicate that this station supports SAS.

Signalling via Multicast

- A reserved multicast is used for “undirected transmission”
- Notes
 - SAS needs access to this address to learn associations
 - Need to ensure that using this group address does not cause any issues when received by a 802.17-2004 basic bridge or host.

Frame Reserved Bit

- Use one of the reserved bits in the ‘extended control’ field of the frame header to indicate that this frame was sent by a SAS layer.
- Notes:
 - Burns a reserved bit
 - Need to provide this bit to the SAS shim
 - May have impact on existing silicon (depends where the RPR frame header is assembled).

“Station Settings” ATT

- Use one of the spare bits in the station settings ATT
- Notes:
 - Information is distributed via topology protocol
 - Information is available to the SAS from the topology database.

Discussion

- SAS is an optional sublayer of the MAC
 - Logically has access to all internal data of the MAC, i.e. we don't need to "snoop" the MA_CONTROL.indicate because we can get data directly from the MA_CONTROL sublayer.
- Don't require the SAS status of a station to be sent frame by frame, but may do this if it makes learning easier.
- Need to get the ring local (including secondary) addresses into the ADB. Options include:
 - Learning from rx frames
 - Populate from topology process

Discussion (cont.)

- Ring Local population may have large impact to drop data path requirements.
 - What can we ask for on the drop path?
 - Need at least different processing based on contents of frame (e.g. DA, SAS bit in frame, etc)
 - Could check the topology database based on hop count as opposed to source MAC address. Doesn't matter from the standard point of view.
- Transmit path needs to be able to distinguish between ring local DA and remote DA.

