

SAS-2 SNW-3 Definition T10/06-355r1

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References

- 05-397r5 (Newman) SAS-2 Startup Training Sequence
- 06-354r0 (Finch) Startup Training Sequence Proposal
- 06-295r1 (Wassal/Watson) SAS-2 Speed Negotiation
- 06-324r0 (Wassal) SAS-2 Modifications to SAS Speed Negotiation

SNW-3 Description

- As in 06-354, maintain RCDT for the clock system to switch and stabilize before starting to transmit at the new speed.
- Leverage the already existing robust mechanism for COMWAKE/COMSAS detection.
- Use COMWAKE to synchronize the start of the SNTT period (START bit)
- Use COMWAKE to indicate a '1' bit, and DC idle for a COMWAKE period (2 200 OOB) to indicate a '0' bit.
- This effectively results in 74 bit-times in SNTT (see next slide).
- First bit is the START bit above.
- Second bit-time indicates an INIT bit, which is set to '1' if this is the first attempt at speed negotiation and '0' otherwise
 - i.e., if the sent and received INIT bits do not match, then restart speed negotiation from the beginning (likely hot plug).

SNW-3 Description (cont.)

- SNTT period of 163 840 OOBIs, less 2x COMWAKE period of 12 000 OOBIs, gives us 159 440 OOBIs which corresponds to 72 bits at a COMWAKE period of 2 200 OOBIs. ((56 bits + 8 CRC bits) + 8 STOP bits).
- Use 8 8-bit timeslots, each followed by a RESYNC bit set to '1'.
- Use the last 8-bit timeslot as a CRC that covers the data portion (previous 7 8-bit timeslots) in SNTT.
- If the CRC fails, restart OOB sequence.

SNW-3 Diagram

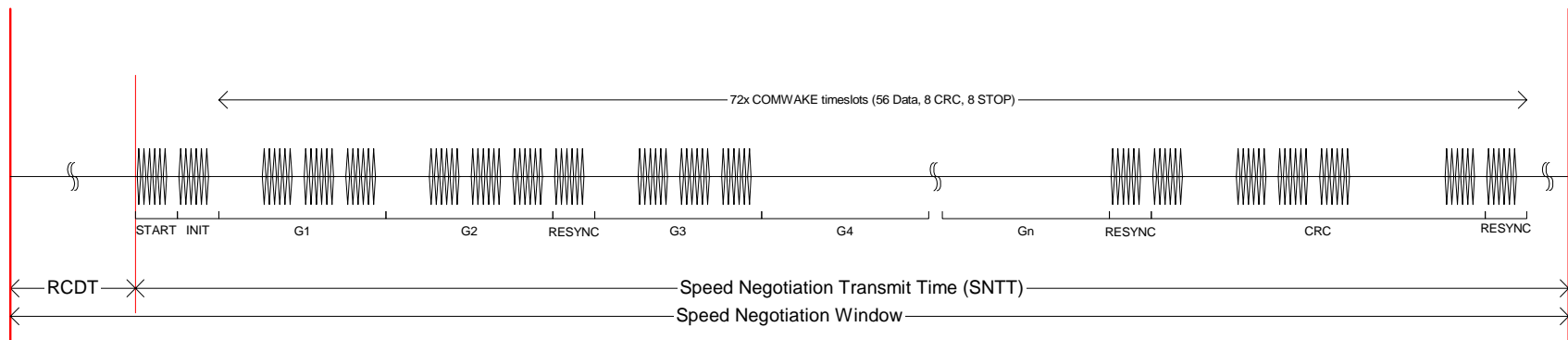
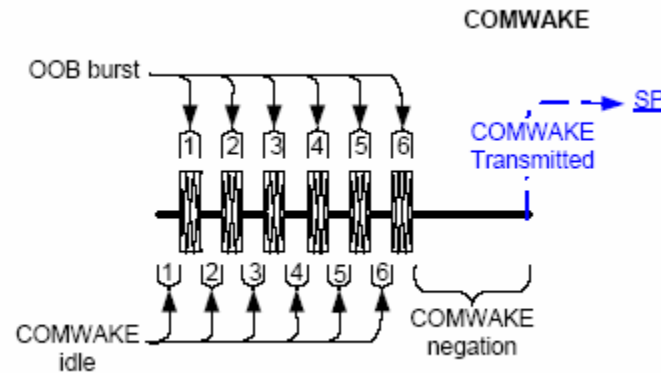


Figure 1 – SNW-3

SNW-3 Details

- Coding of information is TBD
- After SNW-3 completes we begin the Final Speed Negotiation window as discussed earlier (06-324, ref 05-397)
 - If the final SNW fails, we consider downgrading the options, and restart OOB. Subsequent SNW-3 windows will have the INIT bit cleared.
- Use of COMWAKE allows re-use of current detection circuitry.
- For selection of rate, for the Final SNW, we select the highest common rate.
 - What about SSC options? What priority do we use to select SSC?



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