# Time Synchronization Study Group Questions/Issues for AVB

Steve Carlson, TSSG Chair High Speed Design scarlson@ieee.org

- Link establishment delay
  - Delay through the PHY
    - Is this measured, or is it supplied?
  - Does the protocol expect to refresh or retain parameters if the link is dropped and re-established?
- Asymmetric path delay (upstream/downstream)
- Packet type to be timestamped
  - CFI said "certain" packets
  - Slide set on 7/14 said "each" packet
  - TX and RX identification will be different
  - How are these correlated?
- One-step or two step model?

- Can these frames be "on demand"?
- Identification and quantification of each "profile"
  - Capture as a table of each profile and its timing requirements, broken down as best as they can
  - Agree on definition of each item in the table
  - E.g., "what is the 802.1AS clock and where does it live?"
  - A 25Mhz clock has been mentioned several times--what clock are you referring to?
- What specific information is required from 802.3 and where does it ultimately need to end up?

- Make this document the start of an on-going, mutually-agreed upon "requirements document" that will be the definitive reference going forward
  - Version/revision control on this document will be owned by 802.3
- Define what the "interface" is that has been mentioned several times
- How does 802.1 AVB deal with the "hidden switch" problem
- What is the AVB definition of the "new" service interface

- Resolution of the timestamp counter
  - Initialization of counter
  - Is the timestamp counter linked to the PHY speed clock
  - More info on the requirement of the clock that is syntonised to increment the TS counter
  - And what is the agreed-upon definition of "syntonised" including tolerances?
- Map of the system's clock domains
- Please supply an exhaustive list of the existing 802.3 PHYs that AVB expects to operate over
  - And those you don't