

6.6.2 61883-2 timing and synchronization

61883-2 formatted frames shall follow the same timing and synchronization rules as defined in IEC 61883-2 section 6, but using IEEE 802.1AS time in the **avbtp_timestamp** frame field instead of IEEE 1394 based cycle time in the **SYT** field. AVBTP talkers shall set the CIP header **SYT** field to all ones for all transmitted CIP packets and AVBTP listeners shall ignore the **SYT** field.

The talker shall transmit a valid time stamp value in the AVBTP timestamp field once every video frame period. The time stamp shall be transmitted in an AVBTP frame that meets the following conditions:

- packet_arrival_time_L ≤ time stamp value <<editors note: **Kevin’s comments: How can a talker guarantee this? Do we need to define how to split this 2 mSec budget up? Need to define the measurement point 1st – Don, Gauart Jones Apple & Rob Silfast Digidesign – editor’s 1st attempt is in Figure 6.56.5 below>>.**
- time stamp value – transmission_delay_limit ≤ packet_arrival_time_F

where:

packet_arrival_time_F is the IEEE 802.1AS time when the first bit of the packet which has the time stamp has arrived at the listener;

packet_arrival_time_L is the IEEE 802.1AS time when the last bit of the packet which has the time stamp has arrived at the listener;

transmission_delay_limit = default value of 2,000,000 nanoseconds (2 milliseconds) as allocated in Figure 6.56.5 for Class A. <<Editor’s Note: need to add Class B’s budget and figure too – 50 mSec?. Need to define a minimum buffering for all devices – Class A must have 2 mSec & Class B must have 50 mSec. >>

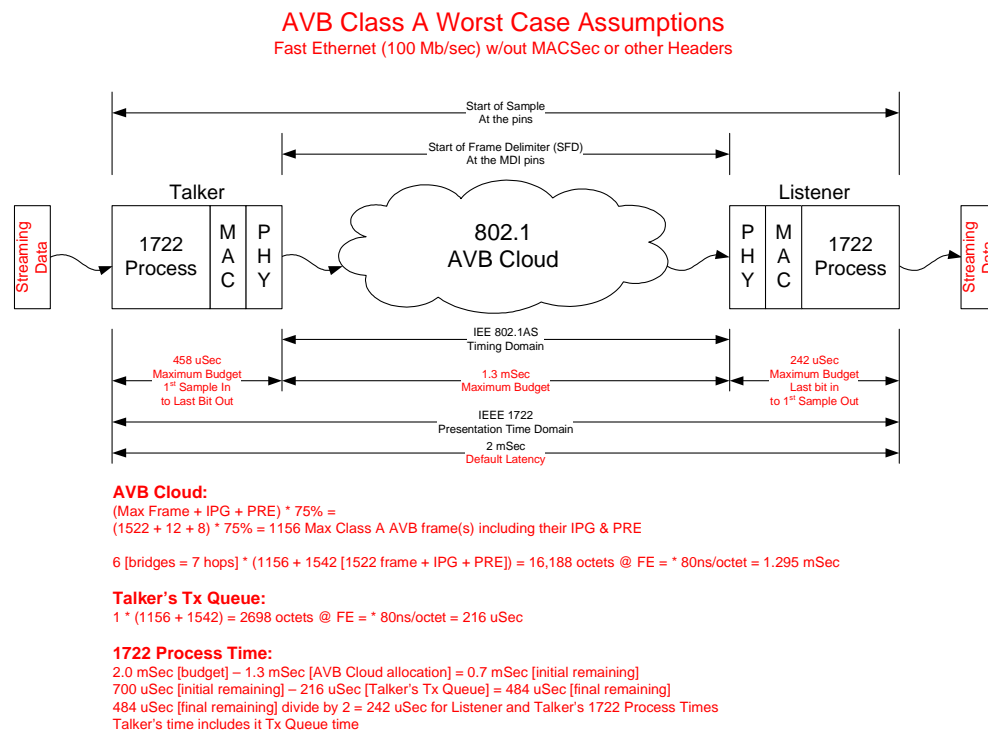


Figure 6.5—Presentation Time Allocation and Measurement Points

<<Editor’s Note: Presentation time is not Rendering time, i.e., media clocks will need to be filtered. Do we want to spec this? What about the accuracies of the Presentation times? >>