

“A/V Clock” is a signal that does nothing but indicate significant instants in time. Typically, these instants are indicated by the edges of a square wave. The protocol chosen by each implementation defines which edges are important.

“A/V Data Frames” is a data stream containing data that is associated with each significant instant in time indicated by the “A/V Clock”. The way this data is transmitted and its timing relative to the “A/V Clock” is entirely dependent on the protocol chosen by each implementation.

The time stamper converts the significant instant indicated by the “A/V Clock” to a time value that can be used for 1722 time stamps. Since 1722’s time stamps have one-nanosecond precision, this process introduces at least one nanosecond of jitter. It is important to realize that implementations that utilize timers running at clock rates less than 1 GHz will introduce jitter greater than one nanosecond.

The simplest 1722 Talker would be paced by its input, meaning that the control block would create a complete 1722 media packet as soon as all the media data is available to do so. This includes calculating a presentation time based on the ingress time stamp. The Ethernet transmitter would then transmit as soon as it is able to do so.

A more complex 1722 Talker implementation may choose to periodically process incoming data in quantities greater than the minimum required for a single 1722 media packet. In this case, target transmission times for each 1722 media packet may need to be carefully calculated so that the transmitter can properly pace them.