

0708/20

## **Telemetry Dynamic Simulator (TDSIM)**

### **Tips and Tricks**

This is a list of notes that don't really fit anywhere, but are of use in your operation of the TdSim system.

- If your major frame rate is greater than about 5000 Hertz, and you are using a shared memory interface application (Initial Values or Post Wd), then you'll have to fake your PCM frame setup out to have more minors per major (adding an SFID counter WdAlg dll if you have minor frames), because there needs to be some time between passing the data back and forth between the shared memory application and the TdSim application.
- If you are using a shared memory interface application, or a WdAlg Function, ensure you read the associated help file that goes with it. Pressing a button to Insert FSP/SFID or adding the CRC if your TdSim interface doesn't want you to can really mess you up. You also need to know which kind of shared memory application you are using so you can press the appropriate button on the Advanced Controls section to enable the communication.
- Latency – This is a difficult one to figure out, depending on what you are doing. At a minimum there are 3 FPI buffers of latency from process to output of the card. Two are for the ping-pong buffers on the card itself, and one is for the buffer in the card driver. If latency is a major issue with you, then you have to minimize the FPI setting, as low as possible, without saturating the CPU load to where you start losing data. If you really want to see what your latency is, then one way to do it is to add an embedded time WdAlg to your data and have the decom sync to the IRIG generator on your TdSim card. Then you can process the data from the stream time received versus the embedded time in the stream. Suggest you use IRIG G for your time code, for higher resolution time (without relying on fly wheeling of time).
- If you have this system installed on the same PC as LDPS, then it is generally beneficial to point your archive directory and decom setup directory in your options to the LDPS archive directory and User\ServerFiles\DDbase directory and your parameter database directory to User\SeverFiles\PDbase directory.