

# **SPACE SHUTTLE DATA FORMATTER DSI MODEL 7303 SYSTEM**



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This abstract describes the hardware and software necessary for reserialization of asynchronous imbedded image data.

The purpose of the DSI Model 7303 System is to reformat space shuttle imbedded (Payload Data Interleaver) PDI data. The system consists of two decoms, a DSI model 7303A and a DSI Model 7303B. The input to the 7303A box is OI or NSP data (NRZ-L & CLOCK). The 7303A Frame syncs to the OI or NSP data. The 7303A is front panel programmed to strip out only the imbedded PDI data and pass this data to the 7303B Decom.

The 7303B Frame syncs to the PDI frame sync pattern. A second strip zone defines which words in the PDI frame get passed to the FIFO. A 24K byte ring FIFO Buffer is used to buffer data before reserialization for output.

The serial output rate is a function of how many programmed PDI words per second are stripped out and the FIFO management status. The output bit rate is from a microprocessor controlled NCO. This system Makes possible real time video of Shuttle PDI data.