

**Low-cost, short-term development or high-data-rate,
multi-stream, mulit-data type telemetry
acquisition/processing system using an off-the-shelf
integrated Telemetry Front End.**

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ABSTRACT

This paper explores the effects the new breed of off-the-shelf integrated telemetry front end (TFE) packages have on the cost and schedule of the development cycle associated with real-time telemetry acquisition/processing systems. A case study of an actual project involving replacement of the Holloman AFB sled track telemetry processing system (TPS) with a system capable of simultaneously supporting up to twenty (20) asynchronous data streams is profiled. Notable among the capabilities of the system are; support for PCM, PAM, FM, IRIG and Local time streams; incoming data rates up to 10 Megabits/sec/stream; data logging rates over 16 MegaBytes/sec and the use of local area networks for distribution of data to real-time displays. To achieve these requirements within a manageable cost/schedule framework, the system was designed around an integrated TFE sub-system. Comparisons are drawn between several aspects of this projects development and that of an earlier developmental system which was completed by PSL within the last 16 months.