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DEVELOPMENT AND APPLICATION OF BMDX FILE ANALYSIS SOFTWARE FOR 1553B BUS
COMMUNICATIONS

Abstract

The 1553B bus is a low-band communication method widely used to control and monitor multiple subsystems of satellites. Therefore, various commercial-off-the-shelf products are being developed and utilized, and software that displays and analyzes using the BMDX (Bus Monitor Data Files Extended) format is provided. The BMDX analysis software provided by the manufacturer has the advantage of being easy to use, but has limitations in screen display when analyzing a large number of data, and the displayed Hexa Decimal numbers have the disadvantage of being difficult to analyze intuitively. This paper describes the knowledge and insights gained by developing and utilizing software that analyzes BMDX data and displays it in CSV (comma separated values) format. The developed software is being usefully used in the test of the payload of the CAS500-4 (Compact Advanced Satellite 500-4) currently under development.