Software for Displaying High-Frequency Test Data

An easy-to-use, intuitive computer program was written to satisfy a need of test operators and data requestors to quickly view and manipulate high-frequency test data recorded at the East and West Test Areas at Marshall Space Flight Center. By enabling rapid analysis, this program makes it possible to reduce times between test runs, thereby potentially reducing the overall cost of test operations. The program can be used to perform quick frequency analysis, using multiple fast-Fourier-transform windowing and amplitude options. The program can generate amplitude-versus-time plots with full zoom capabilities, frequency-component plots at specified time intervals, and waterfall plots (plots of spectral intensity versus frequency at successive small time intervals, showing the changing frequency components over time). There are options for printing of the plots and saving plot data as text files that can be imported into other application programs. The program can perform all of the aforementioned plotting and plot-data-handling functions on a relatively inexpensive computer; other software that performs the same functions requires computers with large amounts of power and memory.

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