

Fundamental Concepts of Digital Signal Processing

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This paper will provide the reader with a basic introduction to digital signal processing (DSP) and its application in a typical Project Argus station. First, DSP will be defined in a general way and several examples of its many applications will be briefly described. Next, the application of DSP to Project Argus will be described and compared (and contrasted) to other DSP applications. Finally, signal sampling and the Fourier Transform will be discussed in the context of processing Project Argus data. Signal sampling and processing strategies and trade-offs will be described and expressed as simple formulas or relationships that the current or prospective Project Argus participant can readily use.