Contents

1   Goethe's temperature measurement

- Key Characteristic of a Digital Signal

    1. Series of measurements, taken at regular interval
    2. Each sample has a discrete amplitut

- Moving Average

$$y[n] = \frac{1}{N} \sum_{m=0}^{N-1} x[n-m]$$

$$= \frac{1}{N}x[n] + \underbrace{\frac{1}{N} \sum_{m=1}^{N-1} x[n-m] + \frac{1}{N}x[n-N]}_{y[n-1]} - \frac{1}{N}x[n-N]$$

$$= y[n-1] + \frac{1}{N}(x[n] - x[n-N])$$

- n: average of the last capital N obervations

- N: window of observation over which average is computed

- Engineers Scientist Guide Chapter 15