

1 Prelab

1. The early late gate method works by taking samples at least 3 points (A, B, C) of the signal. If $C > A$, then the samples are traveling uphill. If $C < A$, then the samples are traveling downhill. The difference between A and C is proportional to the timing error, and is used in computing the error. If B is positive, then uphill means sampling happened early and downhill means that sampling happened late, and visa versa if B is negative. Figure 1 show examples of samples being early, late, and on-time.

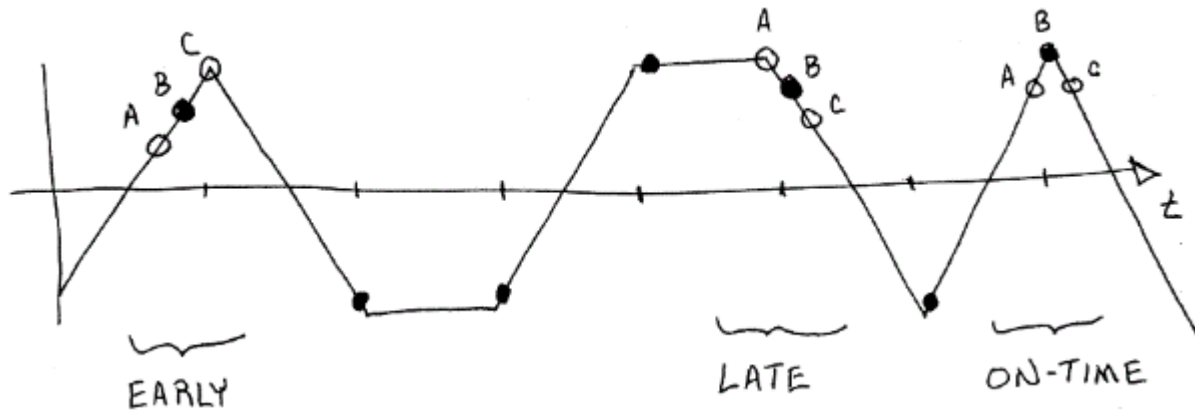


Figure 1: Examples of Early-Late Gate

2. Polynomial filter can be used to resample data by

2 Lab

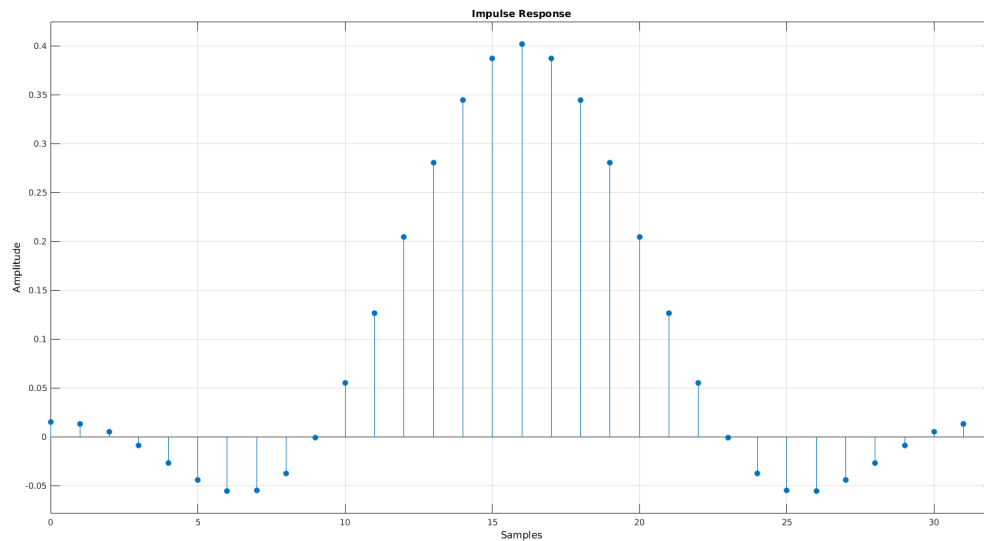


Figure 2: Impulse Response of Raised Cosine Function

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