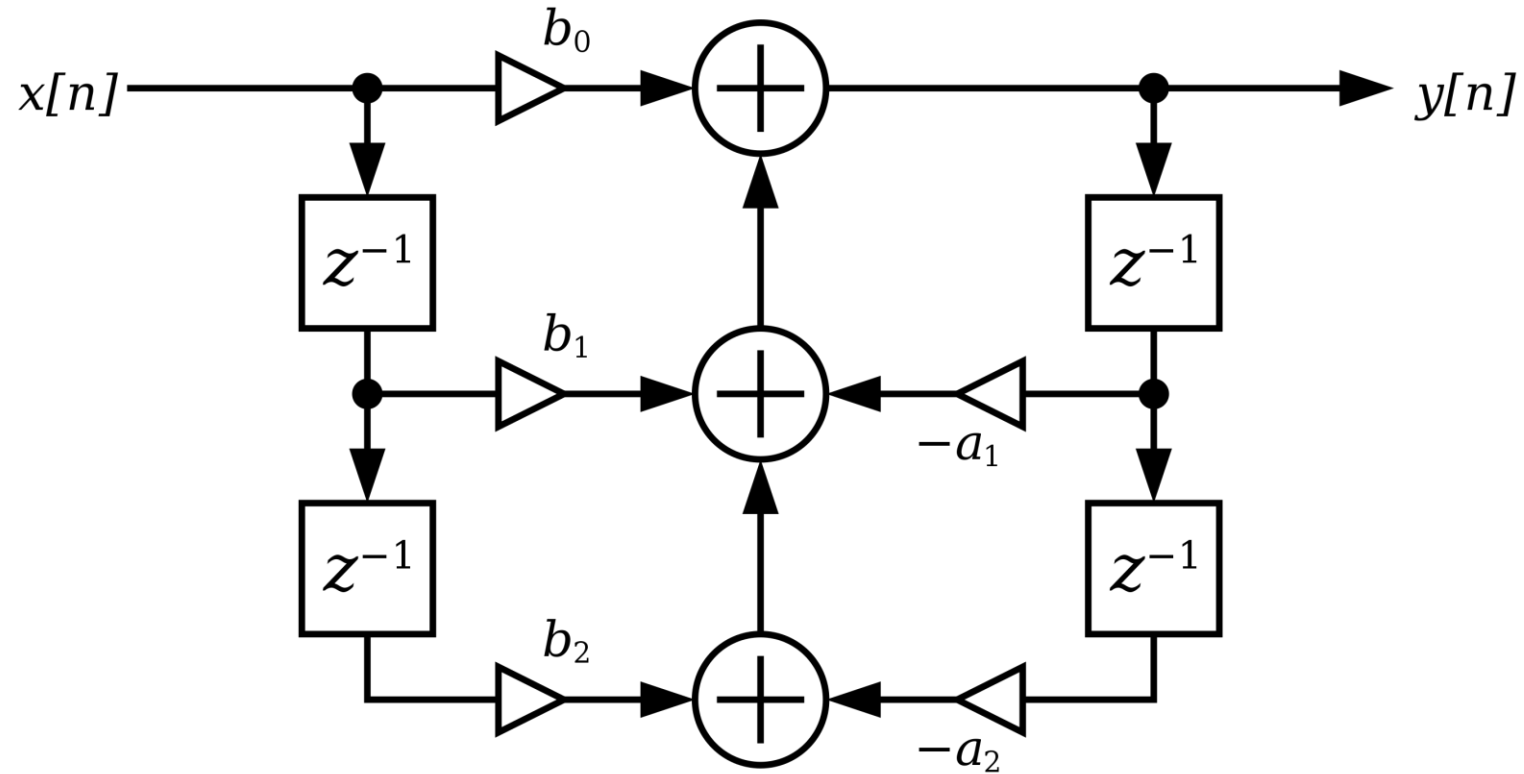


Discussion Section 13

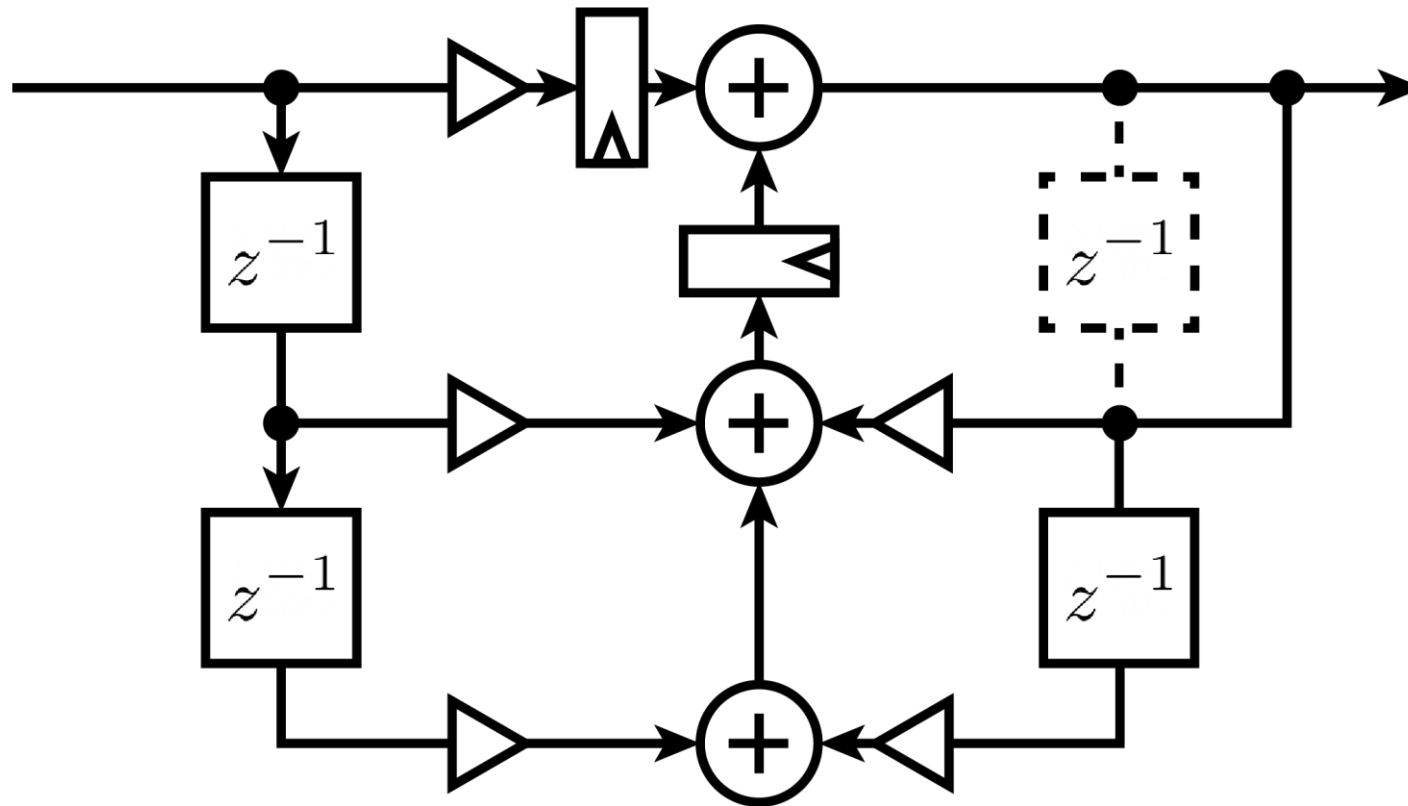
Sean Huang

April 30, 2021

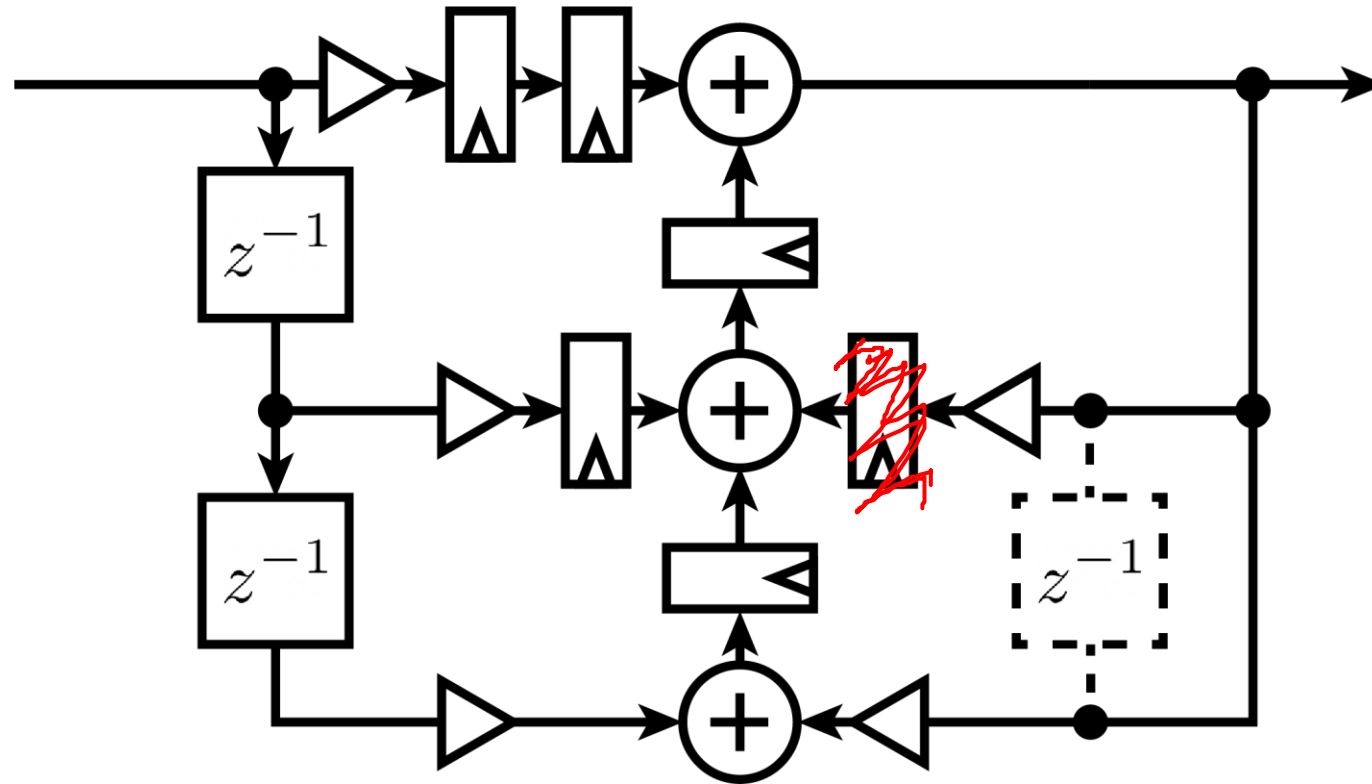
C-Slowing the Digital Biquad Filter



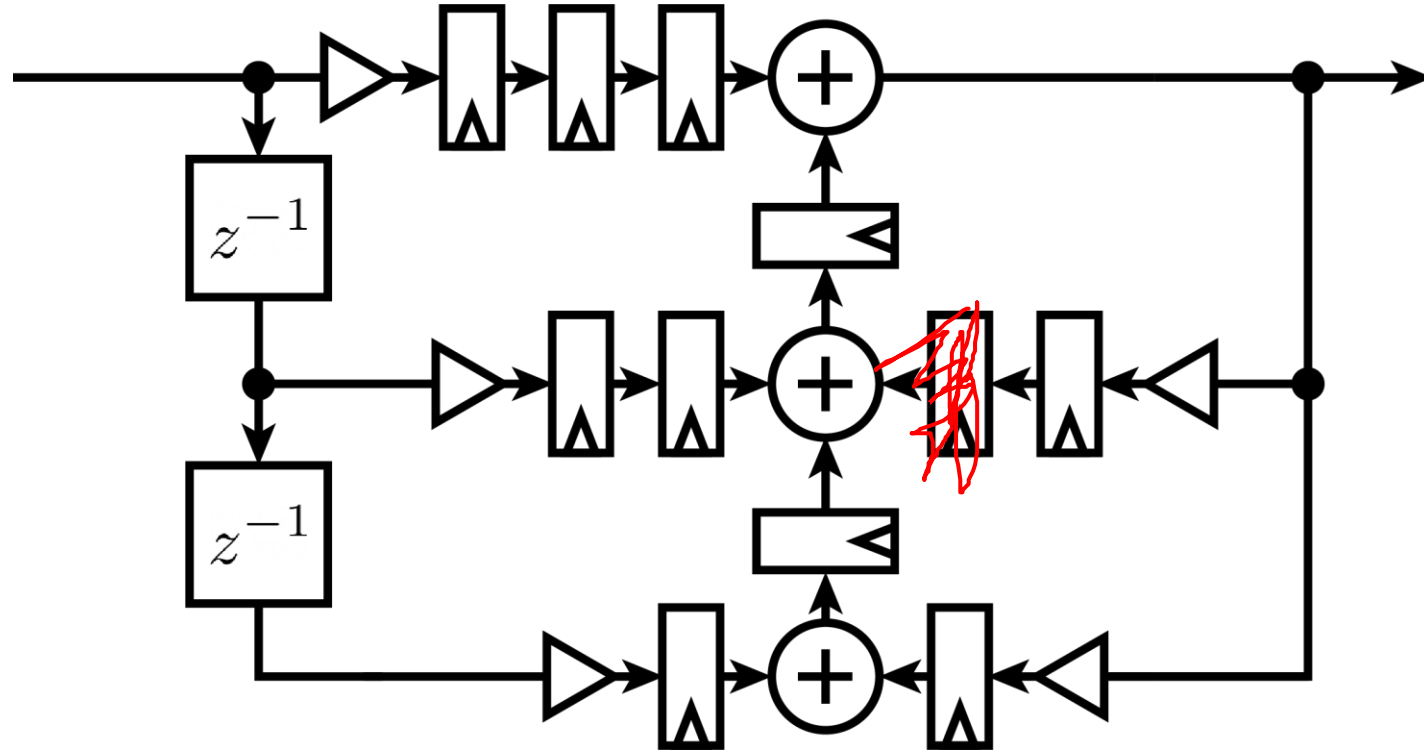
C-Slowing the Digital Biquad Filter



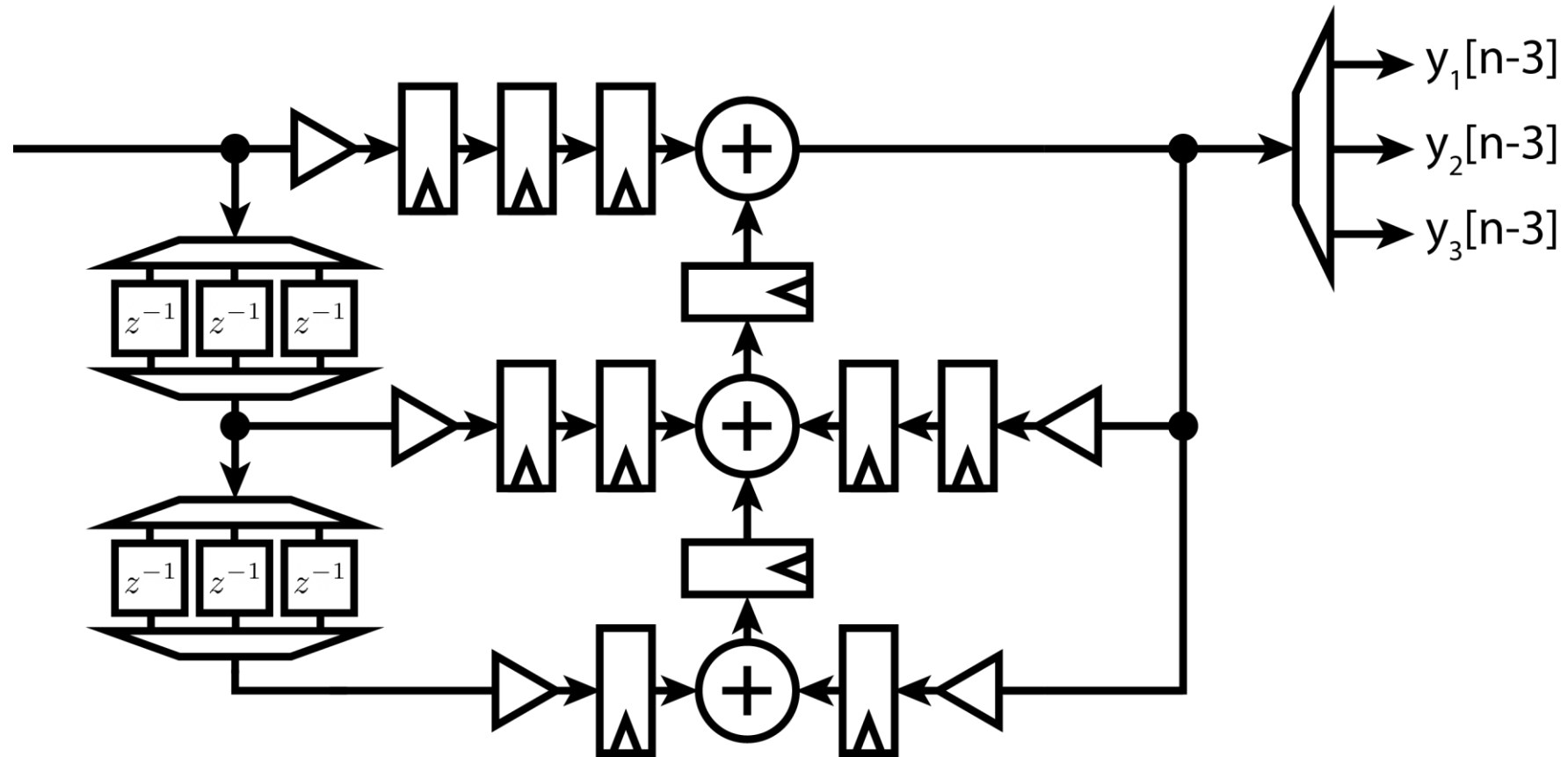
C-Slowing the Digital Biquad Filter



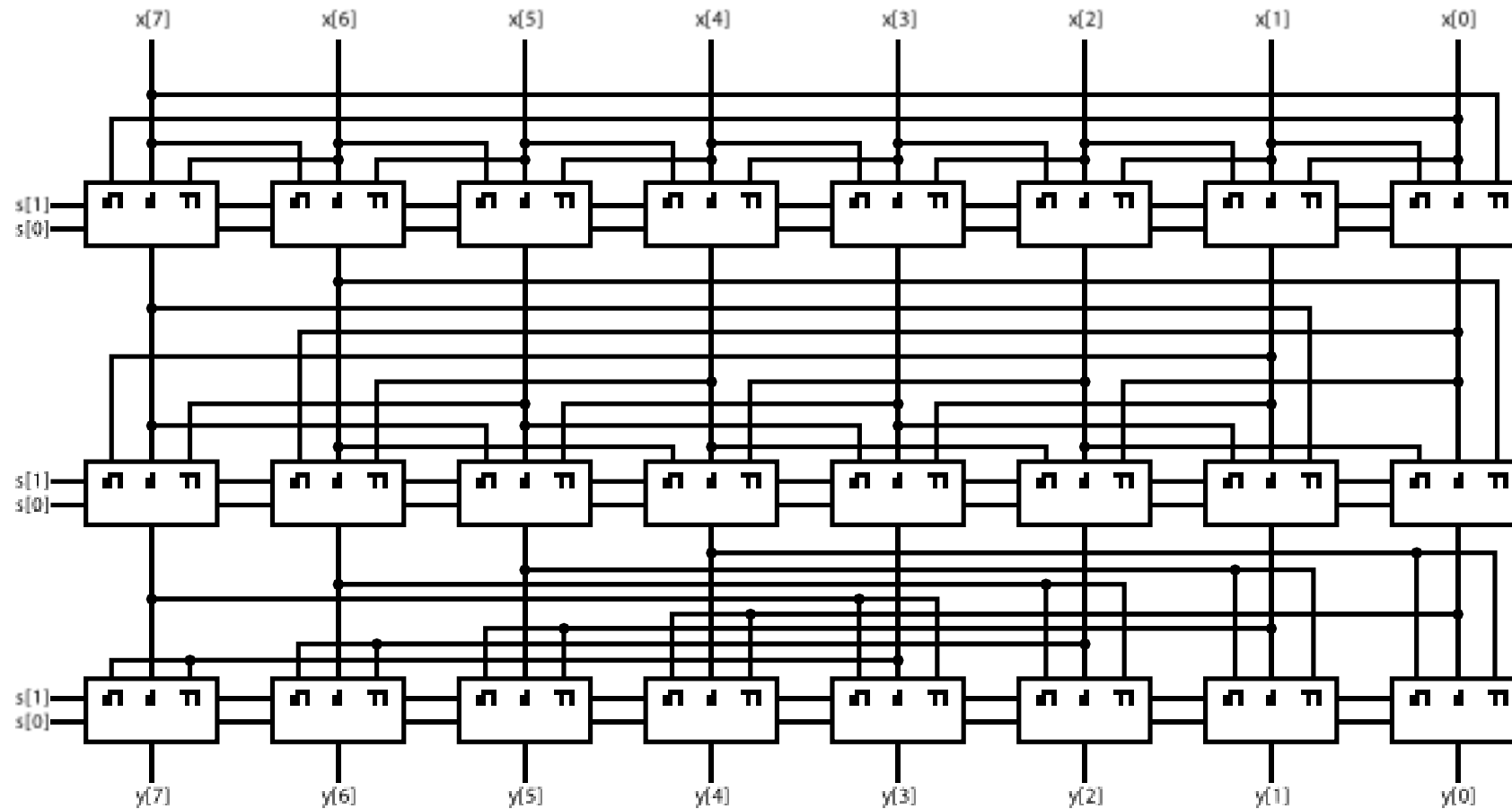
C-Slowing the Digital Biquad Filter



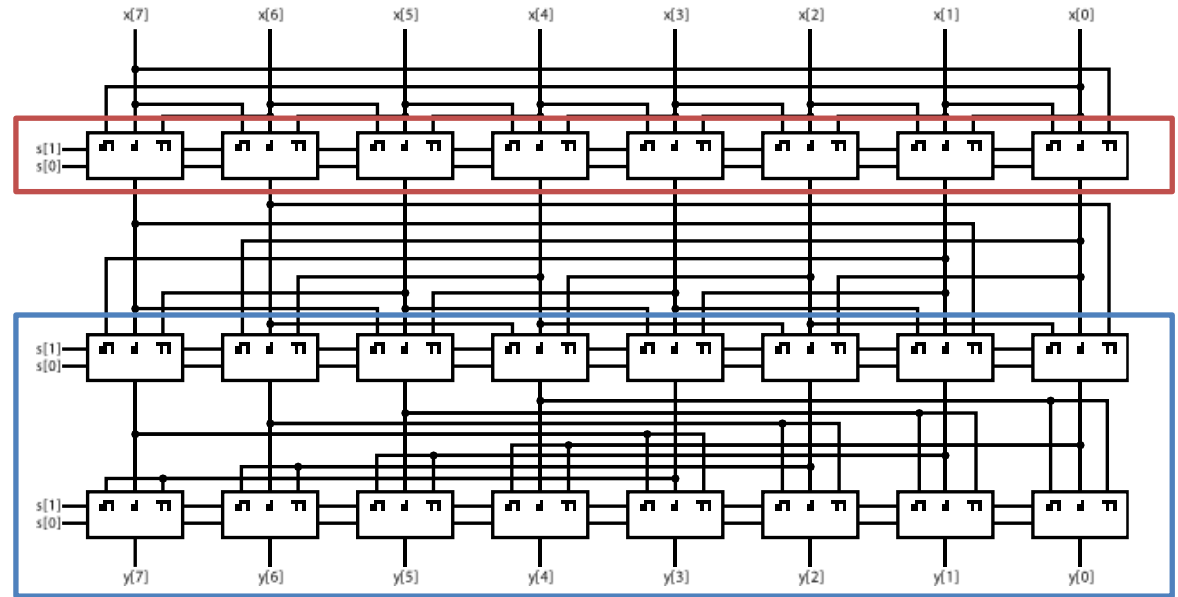
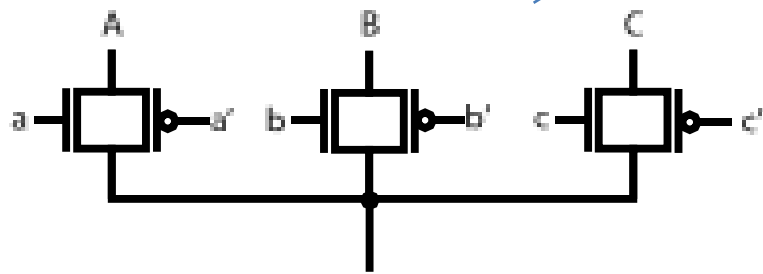
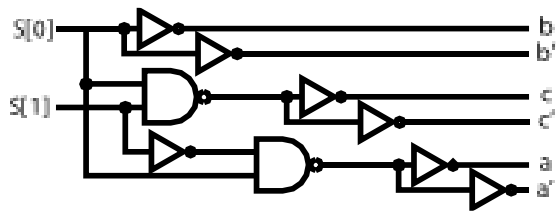
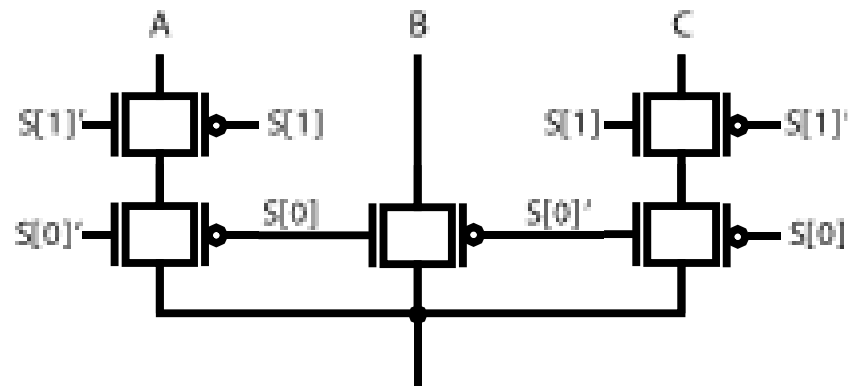
C-Slowing the Digital Biquad Filter



Logarithmic Shifter



Logarithmic Shifter



Timing and Hold Time Violations

- Metastability
 - DFF can store a value in between 0 and 1
- Failure to hold
 - DFF output updates too early
- Race condition
 - One path faster than another

