

CORDIC Barrel Shifter (1A)

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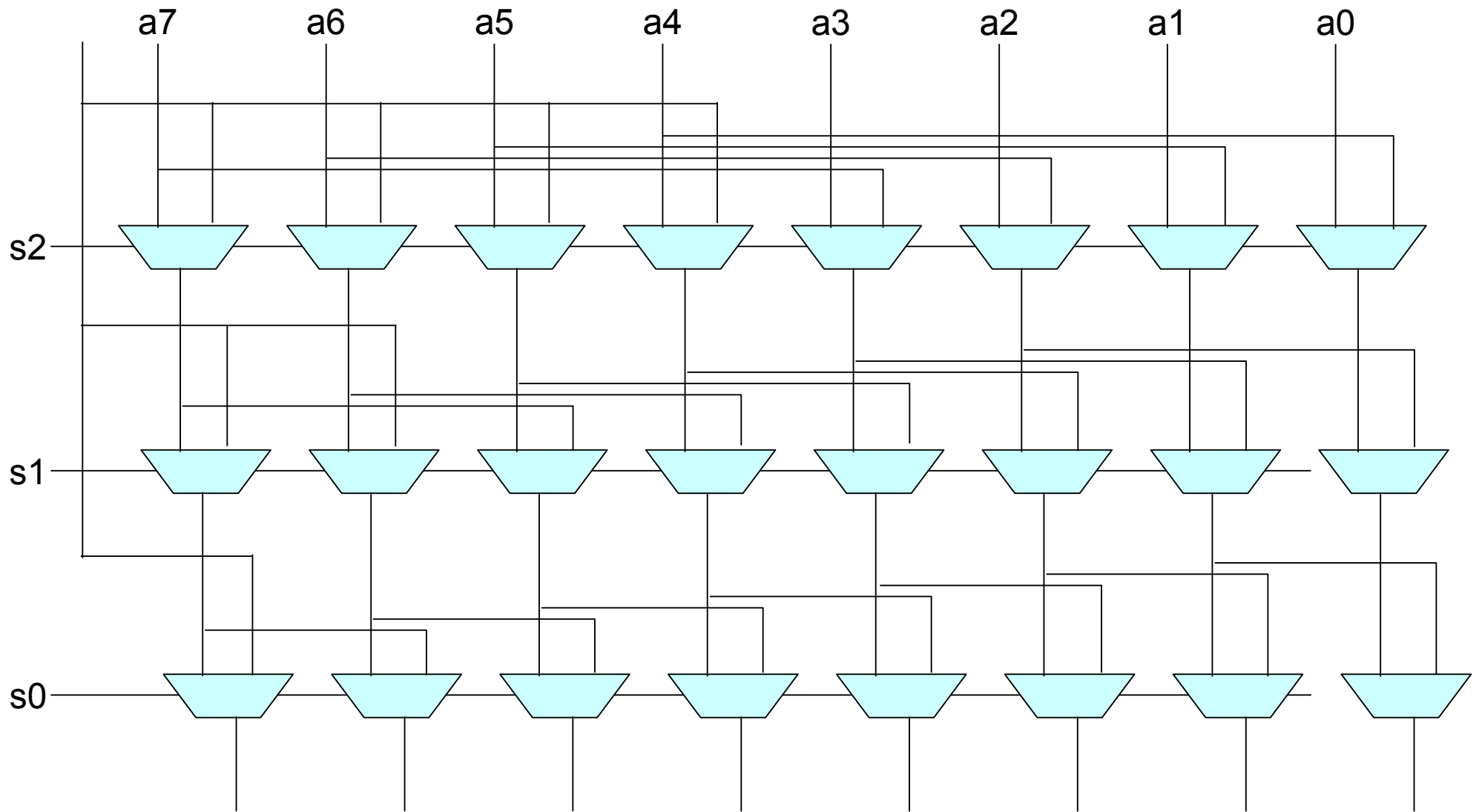
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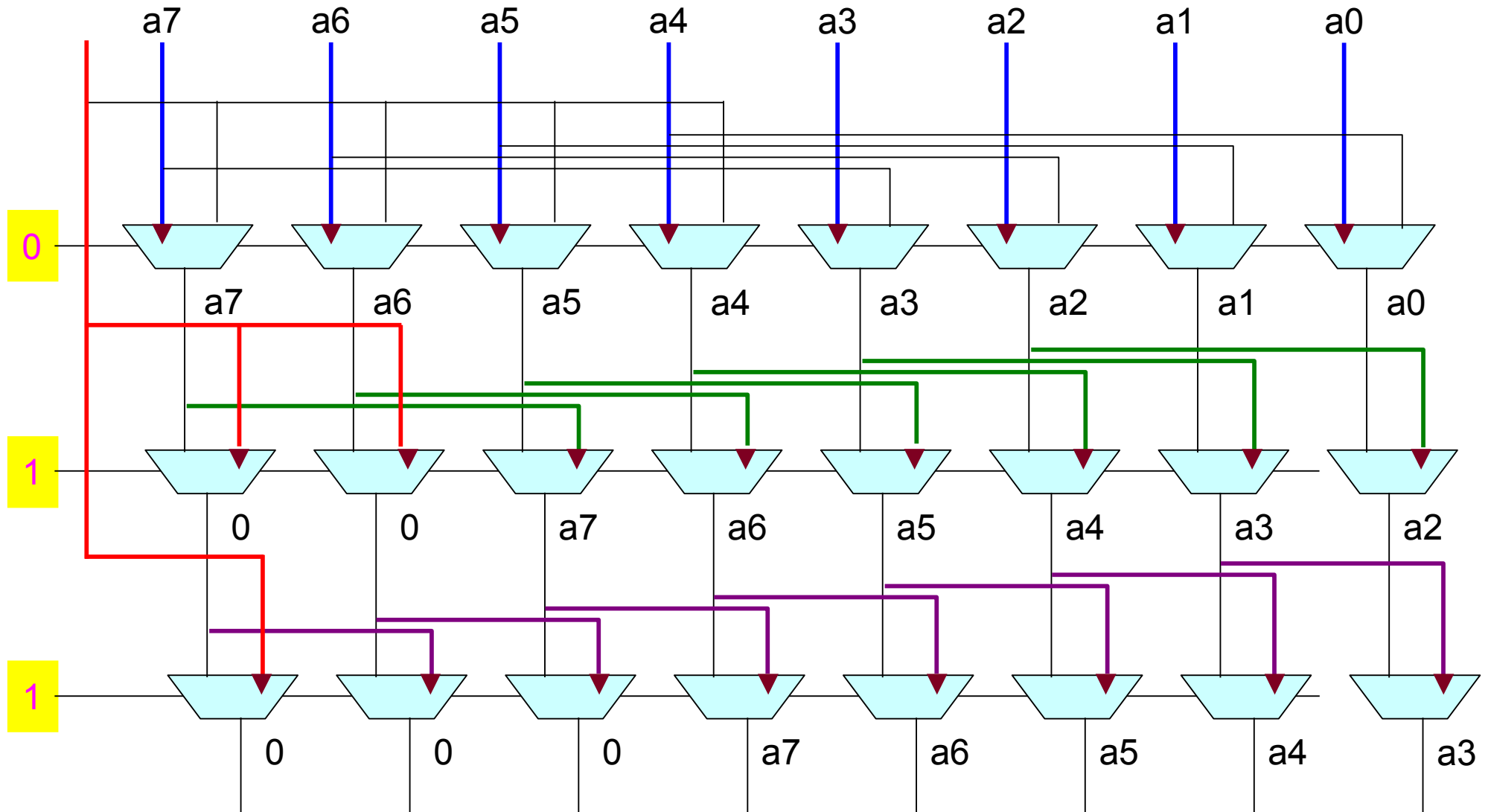
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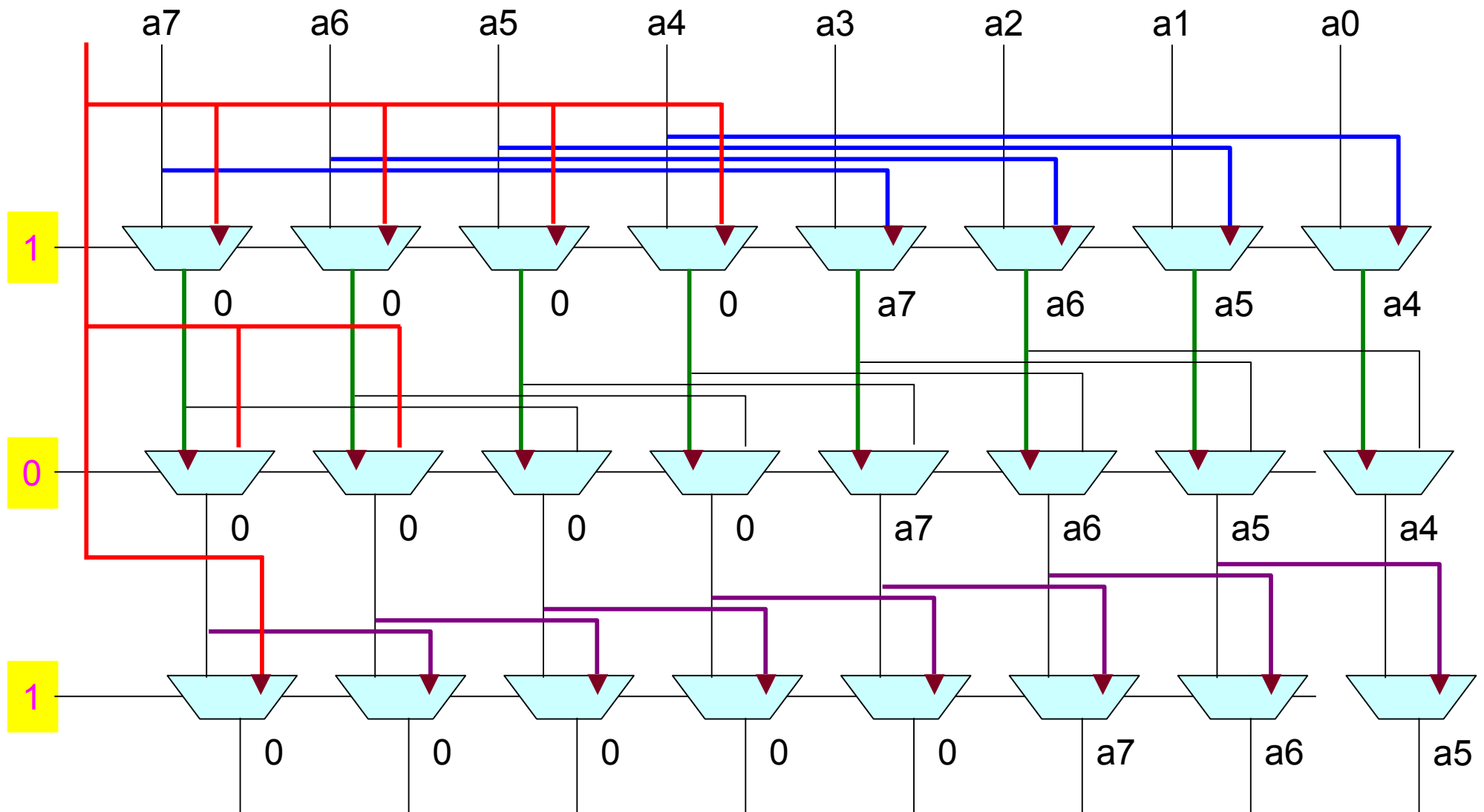
Mux-based Barrel Shifter



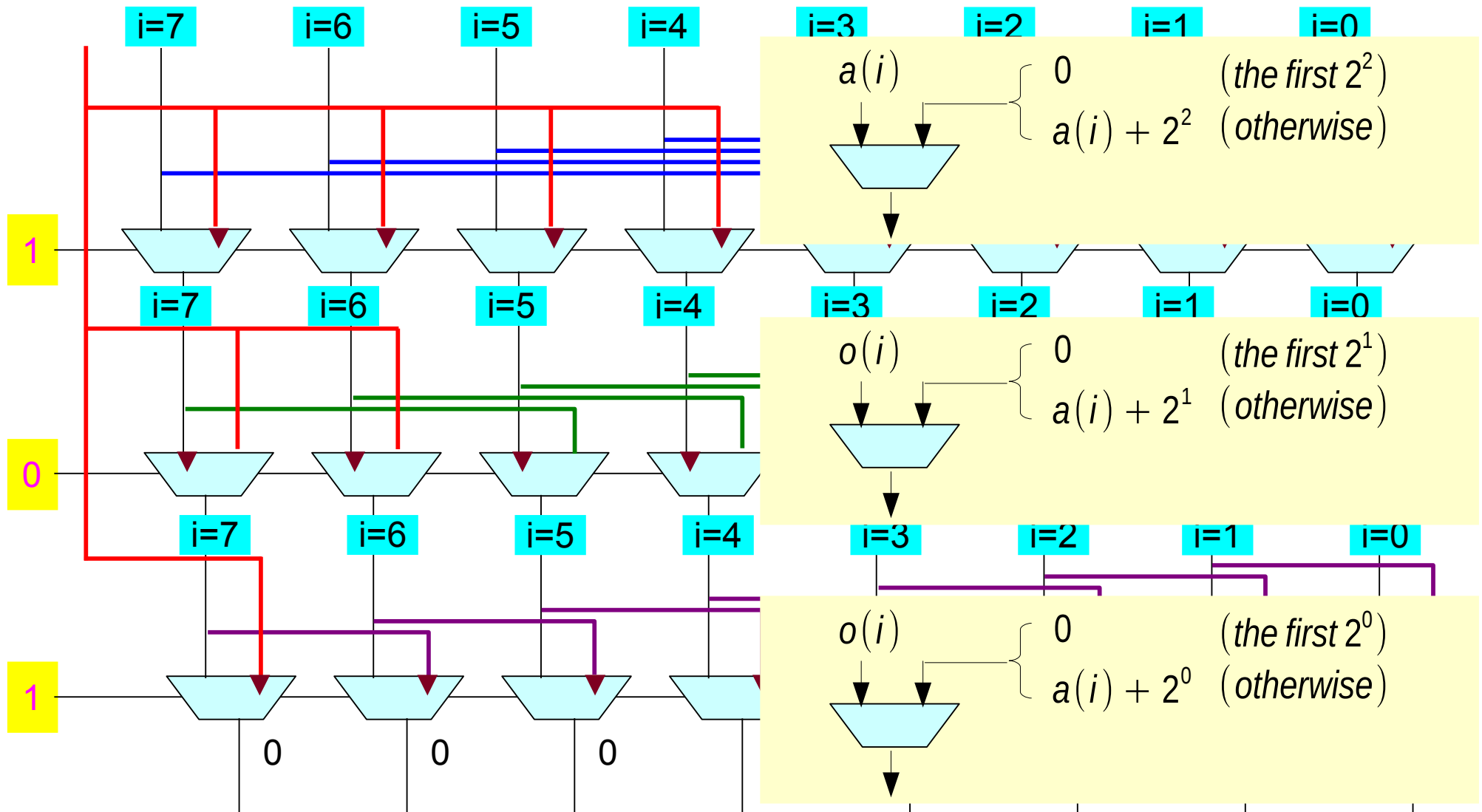
Example $s=011$ (1)



Example $s=101$ (2)

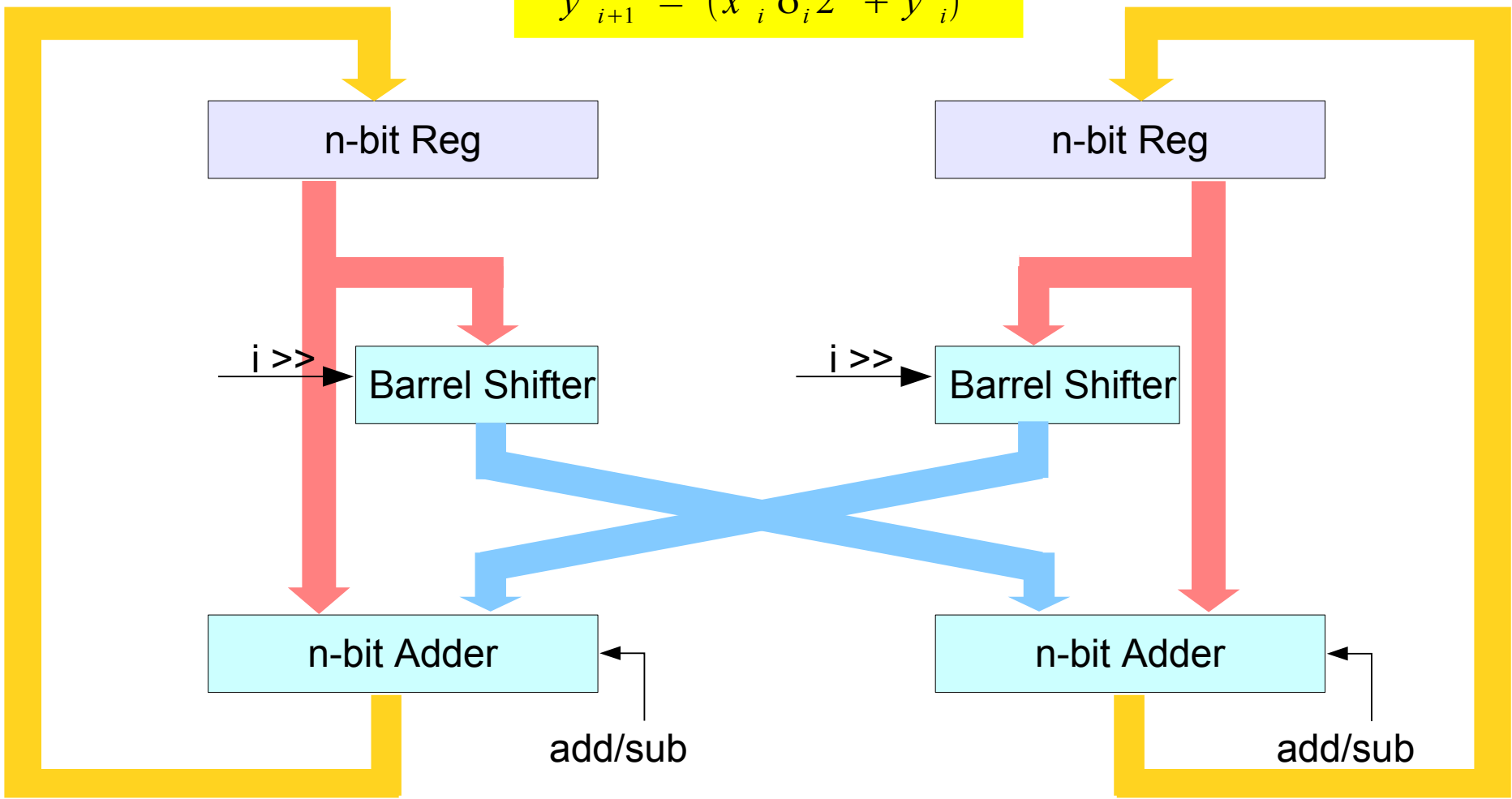


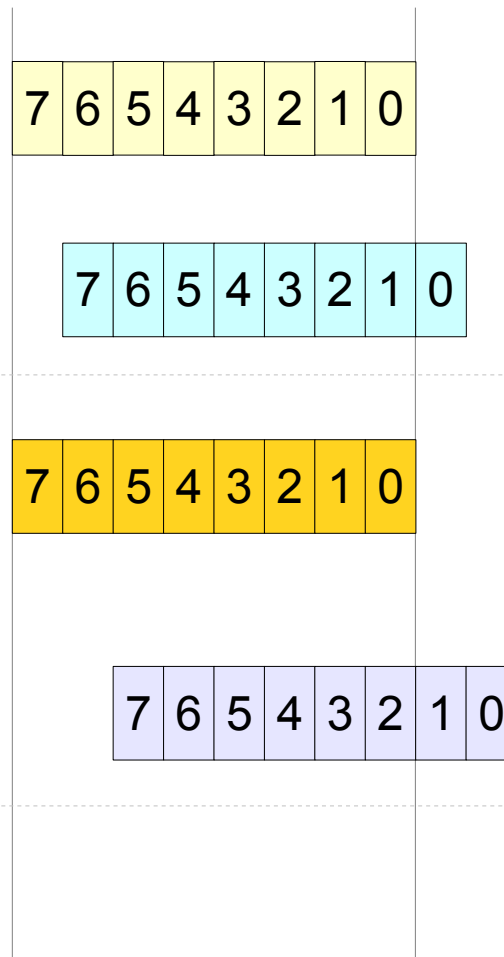
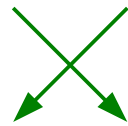
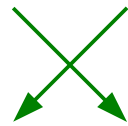
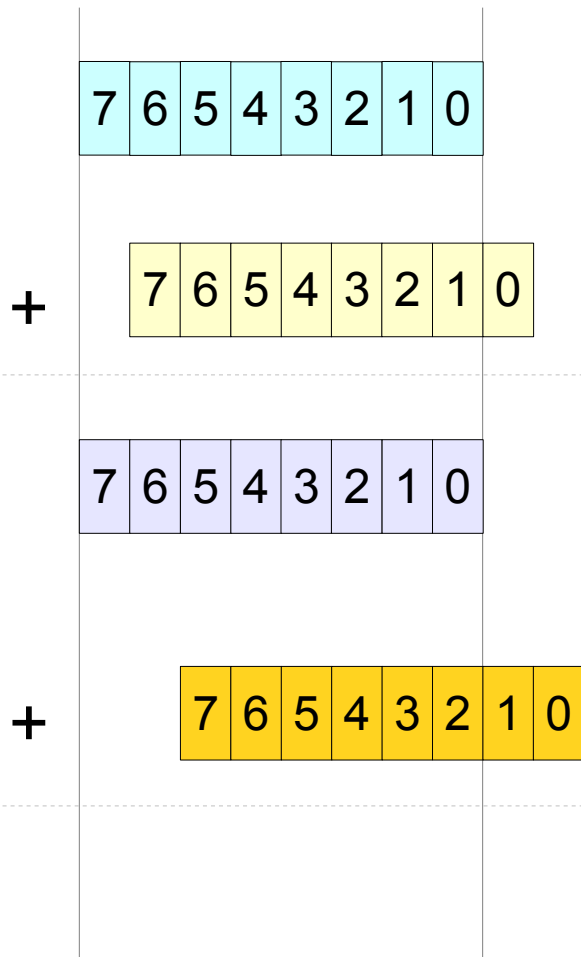
Example $s=101$ (2)



$$x'_{i+1} = (x'_i - y'_i \sigma_i 2^{-i})$$

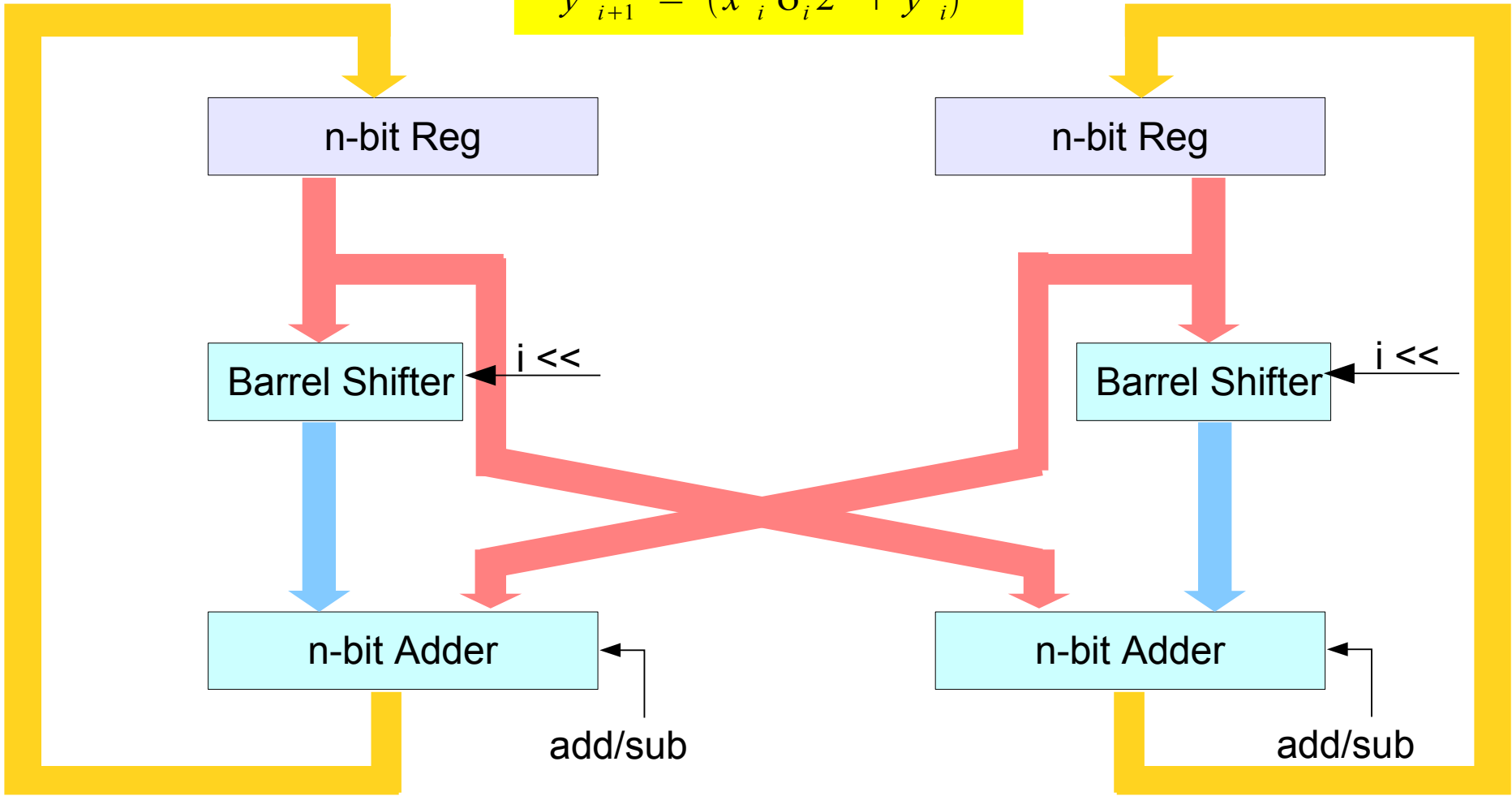
$$y'_{i+1} = (x'_i \sigma_i 2^{-i} + y'_i)$$

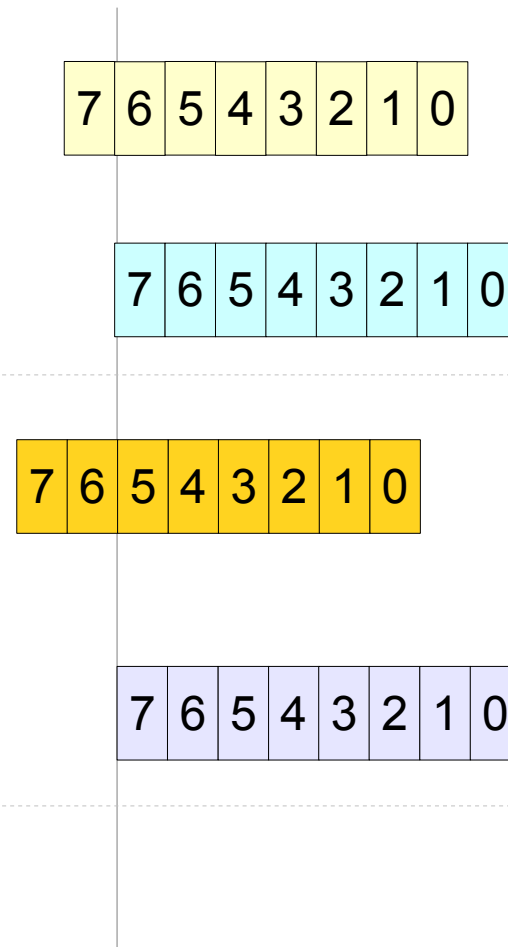
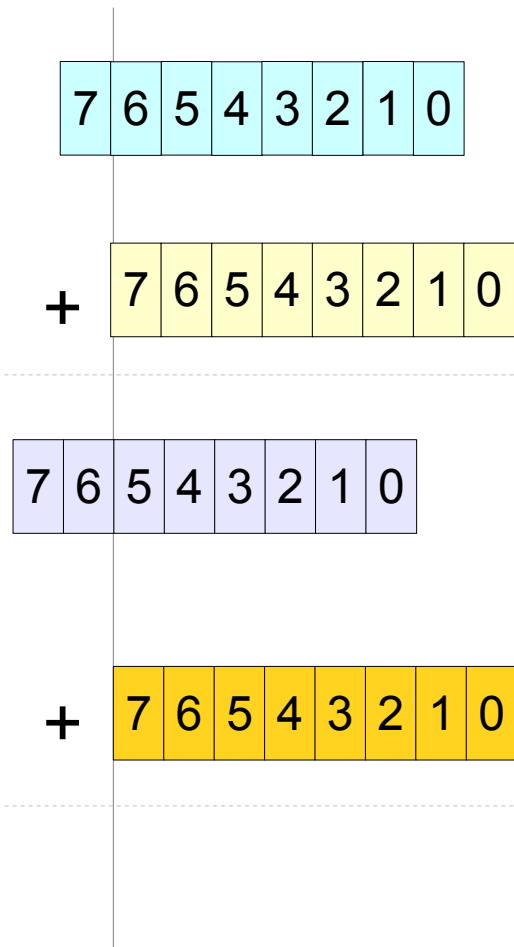




$$x'_{i+1} = (x'_i - y'_i \sigma_i 2^{-i})$$

$$y'_{i+1} = (x'_i \sigma_i 2^{-i} + y'_i)$$





Angle

References

- [1] <http://en.wikipedia.org/>
- [2] M. R. Pillmeier, "Design Alternatives for barrel shifters"