$$u_{1}[n] \xrightarrow{u_{2}[n]} \mathcal{H}(z) = (\mathbf{I} - \mathbf{A}z^{-1})\mathbf{B} \xrightarrow{s_{1}[n]} \mathbf{u}[n] \xrightarrow{s_{2}[n]} \mathbf{u}[n] \xrightarrow{\mathbf{A}z^{-1}} \mathbf{s}[n]$$