1) No reset delay, no mismatch
   \[ T \Delta = \frac{T}{2} \]  
   \[ f = \frac{f}{2} \]

2) Reset delay, no mismatch
   \[ T \Delta = T \]  
   \[ f = \frac{f}{2} \]  
   \[ \frac{T}{2} \]

3) Reset delay, mismatch
The pulses

Area under the pulses

Type I pull

then with a much smaller

Act. Feed through

Loop filter input:

\[ \left( \frac{1}{z^7} \right) \]
There are no transistors.

* Initiated when transistors work on both high & low clock

Phase detector for