1. Initialize xA and xD to zero

2. $\forall k \in columns, \qquad \forall l \in filter$

   - $n = k - l$
   - if ($n \in columns$)
     $xA_k = W_{i,n} * hA_l$
     $xD_k = W_{i,n} * hD_l$

3. Transfer back to W
   $W_i = xA|xD$

And the column transform is represented by:

1. initialize yA and yD to zero

2. $\forall k \in rows, \qquad \forall l \in filter$

   - $n = k - l$
   - if ($n \in columns$)
     $yA_k = W_{i,n} * hA_l$
     $yD_k = W_{i,n} * hD_l$

3. Transfer back to W
   $W_j = yA|yD$