



(y_{ik} is the a
t/f & it is not
(-) - m
y <
(+) - 1)

$$I_i = V_i (a^2 - a) y_{ik} + (V_i - V_k) a y_{ik}$$

$$I_k = V_k [(1 - a) y_{ik} + a y_{ik}] - V_i a y_{ik} = (y_{ik} V_k - a V_i)$$

∴ A t/f with an off nominal tap of 1:a (pu) can be represented in the above TL network.