



$$\begin{bmatrix} C'_{f1} & \dots & C'_{f200} \\ C'_{r1} & \dots & C'_{r200} \\ C'_{w1} & \dots & C'_{w200} \\ C'_{l1} & \dots & C'_{l200} \\ C'_{s1} & \dots & C'_{s200} \end{bmatrix} = \begin{bmatrix} 1-t_f & 0 & 0 & 0 & 0 \\ 0 & 1-t_r & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ t_f & t_r & 0 & 1-t_{lit} & 0 \\ 0 & 0 & 0 & t_{lit} & 1-r_h \end{bmatrix} \begin{bmatrix} C_{f1} & \dots & C_{f200} \\ C_{r1} & \dots & C_{r200} \\ C_{w1} & \dots & C_{w200} \\ C_{l1} & \dots & C_{l200} \\ C_{s1} & \dots & C_{s200} \end{bmatrix}$$

$$A^{t+1} = M A^t$$

$$\begin{bmatrix} R_{f1} & \dots & R_{f200} \\ R_{r1} & \dots & R_{r200} \\ R_{w1} & \dots & R_{w200} \\ R_{s1} & \dots & R_{s200} \end{bmatrix} \sim \begin{bmatrix} r_f & 0 & 0 & 0 & 0 \\ 0 & r_r & 0 & 0 & 0 \\ 0 & 0 & r_w & 0 & 0 \\ 0 & r_r & 0 & 0 & r_h \end{bmatrix} \begin{bmatrix} C_{f1} & \dots & C_{f200} \\ C_{r1} & \dots & C_{r200} \\ C_{w1} & \dots & C_{w200} \\ C_{l1} & \dots & C_{l200} \\ C_{s1} & \dots & C_{s200} \end{bmatrix}$$

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