$$s_j^{i,t+1} = \begin{cases} \begin{cases} s_j^{i,t} \ \text{(if } b_j^{i,t} = 1 \text{ with the probability } \mu) \\ 0 \text{ or } 1 \text{ (if } b_j^{i,t} = 1 \text{ with the probability } 1 - \mu) \end{cases} \\ 0 \text{ or } 1 \text{ (otherwise)} \end{cases}$$