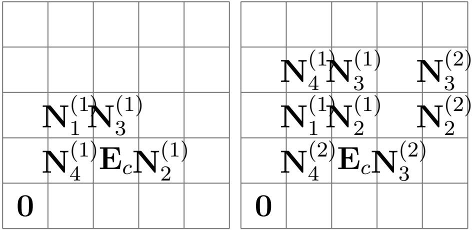

Illustrations of our recursive encryption algorithm. There is a two-dimensional plane with 3×3 pixels, where multiple events $\mathbf{E}_c$ are triggered in the center, and the rest of the pixels are on the mask for synthetic noise. In the 1st layer of the recursion (left), the algorithm synthesizes the noise $\mathbf{N}_i^{(1)}(i = 1, 2, 3, 4)$ in 4 spatial neighbors horizontally/vertically adjacent to $\mathbf{E}_c$, where $|\mathbf{N}_i^{(1)}| = |\mathbf{E}_c|$. The resulting $\mathbf{N}_i^{(1)} \cup \mathbf{E}_c$ will be the input of the 2nd layer of the recursion (right). The algorithm, which is blind to $\mathbf{N}_i^{(1)}$ and $\mathbf{E}_c$, synthesizes the noise $\mathbf{N}_i^{(2)}(i = 1, 2, 3, 4)$ based on the adjacent events.