

$$|\Psi_0\rangle = \frac{1}{\sqrt{2}} \left[\left| \begin{array}{c|c|c|c} \hline & & & \\ \hline \end{array} \right\rangle + \left| \begin{array}{c|c|c|c} \hline & & & \\ \hline & \square & & \\ \hline & & & \\ \hline & & & \\ \hline \end{array} \right\rangle + \left| \begin{array}{c|c|c|c} \hline & & & \\ \hline & & \square & \\ \hline & & & \\ \hline & & & \\ \hline \end{array} \right\rangle + \left| \begin{array}{c|c|c|c} \hline & & & \\ \hline & & & \square \\ \hline & & & \\ \hline & & & \\ \hline \end{array} \right\rangle \right] \\ + \left| \begin{array}{c|c|c|c} \hline & & & \\ \hline & & \square & \\ \hline & & & \\ \hline & & & \\ \hline \end{array} \right\rangle + \dots \right]$$