

$$F(\mathbf{x}) = \phi_{cell}(\mathbf{x}) \wedge \phi_{start}(\mathbf{x}) \wedge \phi_{move}(\mathbf{x}) \wedge \phi_{accept}(\mathbf{x})$$

$$\phi_{cell}(\mathbf{x}) = \bigwedge_{1 \leq i, j \leq t} \left[\left(\bigvee_{s \in C} x_{i,j,s} \right) \wedge \left(\bigwedge_{\substack{s, t \in C \\ s \neq t}} (\overline{x_{i,j,s}} \vee \overline{x_{i,j,t}}) \right) \right]$$

$$\phi_{accept} = \bigvee_{1 \leq i, j \leq t} x_{i,j,q_{accept}}$$

$$F(\mathbf{x}) = \phi_{cell}(\mathbf{x}) \wedge \phi_{start}(\mathbf{x}) \wedge \phi_{move}(\mathbf{x}) \wedge \phi_{accept}(\mathbf{x})$$

$$\begin{aligned} \phi_{start}(\mathbf{x}) = & x_{1,1,\#} \wedge x_{1,2,q_0} \wedge \\ & \left(\bigwedge_{j=1}^n x_{1,2+j,w_j} \right) \wedge \\ & \left(\bigwedge_{j=n+3}^{t-1} x_{1,j,\sqcup} \right) \wedge x_{1,t,\#} \end{aligned}$$

$$F(\mathbf{x}) = \phi_{cell}(\mathbf{x}) \wedge \phi_{start}(\mathbf{x}) \wedge \phi_{move}(\mathbf{x}) \wedge \phi_{accept}(\mathbf{x})$$

$$\phi_{move} = \bigwedge_{\substack{1 \leq i < t \\ 1 < j < t}} ((i, j) - \text{window is legal})$$

$$\bigvee_{(a_1, a_2, a_3, a_4, a_5, a_6)} (x_{i, j-1, a_1} \wedge x_{i, j, a_2} \wedge x_{i, j+1, a_3} \wedge x_{i+1, j-1, a_4} \wedge x_{i+1, j, a_5} \wedge x_{i+1, j+1, a_6})$$

is a legal window