Let $A=(Q, q_0, \Delta, F)$ be a DMA accepting L.
An accepting run of A must be of the form

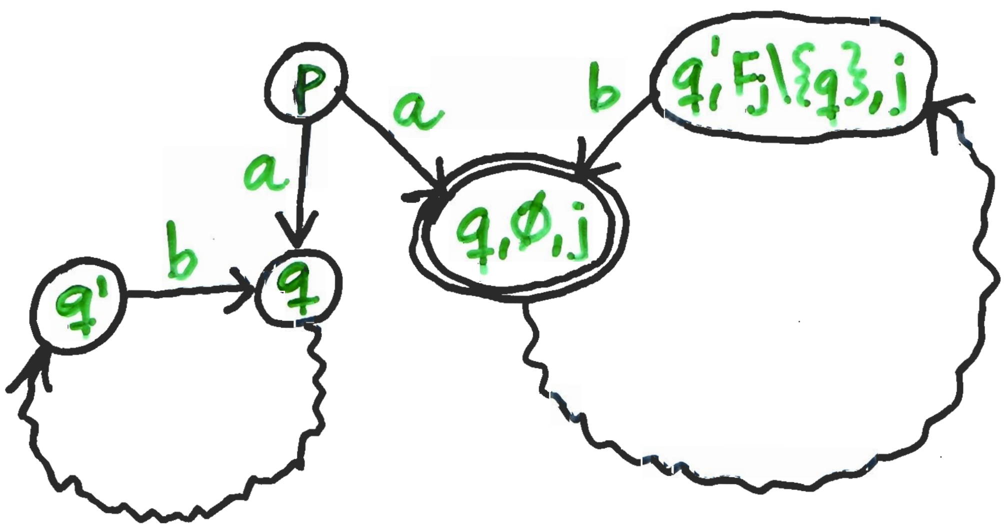
$$w_0 w_1 w_2 w_3 \ldots$$

where $S(w_1) = S(w_2) = S(w_3) = \ldots = F_j$, some $F_j \in F$.

Idea: "Guess" when F_j is entered,
Make sure that we never leave F_j,
And that all states in F_j are visited.

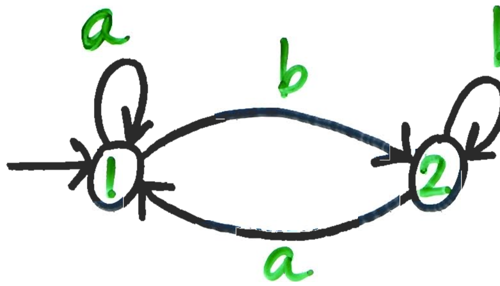
For each $q \in F_j$ add a new state (q, P, j) where $q \in F_j$ and $P \subset F_j$.

If A contains a transition $p \xrightarrow{a} q \in F_j$ then



$$\left[\quad S(w) = \{ q \mid q \in w \} \quad \right]$$

From deterministic Muller to Büchi



with $F = \{\{1,2\}\}$