$$P(A_{t}, O|Y_{0:t}) = P_{\cap}(A_{t}, O|Y_{0:t}) + P_{\ominus}(A_{t}, O|Y_{0:t})$$

$$P(Y_{t} = 0|A_{t}, O)$$

$$P_{\cap}(A_{t}, O|Y_{0:t}) = \emptyset$$

$$P(A_{t}|u_{1:t})$$

$$P(A_{t}|u_{1:t})$$

$$P(A_{t}|u_{1:t})$$

$$P(A_{t}, O|Y_{0:t})$$

$$P(A_{t}, O|$$