This paper considers infinite-horizon stochastic games with hidden states and hidden actions. The state changes over time, players observe only a noisy public signal about the state each period,
and actions are private information. In this model, uncertainty about the monitoring structure does not disappear. We show how to construct a simple four-state automaton equilibrium in a repeated Cournot game.
Then we extend it to a general case and obtain the folk theorem using ex-post equilibria under a mild condition.