

This note presents a model for switched asynchronous sequential machines (ASMs) and utilizes corrective control to solve their model matching problem. A switched ASM comprising a number of single ASMs or submachines can change its mode or the submachine in which it is operating in an asynchronous mechanism. We obtain a matrix expression for the reachability of switched ASMs, based on which we present the existence condition and design algorithm for a corrective controller that matches the stable-state behavior of the closed-loop system to that of a reference model. The corrective controller for switched ASMs provides not only control input characters but also switching signals to utilize the reachability of each submachine in generating required feedback paths. The constraint on the switching operation caused by the asynchronous mechanism is also discussed.