

The FST for the Soundex algorithm requires multiple intermediate tapes, and therefore requires multiple FSMs. The output of the first FSM will be the input to the 2nd, and the output of the second will be the input to the 3rd. The output of the 3rd is the correct output for the Soundex algorithm. The notation used on the FSM arrows is $X:Y$, where X is the input and Y is the output. To increase legibility, I have used ranges for some X and Y values, and I have colored arrows different colors in the 2nd FSM. These colors have no purpose other than for legibility. I am using EOF to denote the end of the string I am reading.

