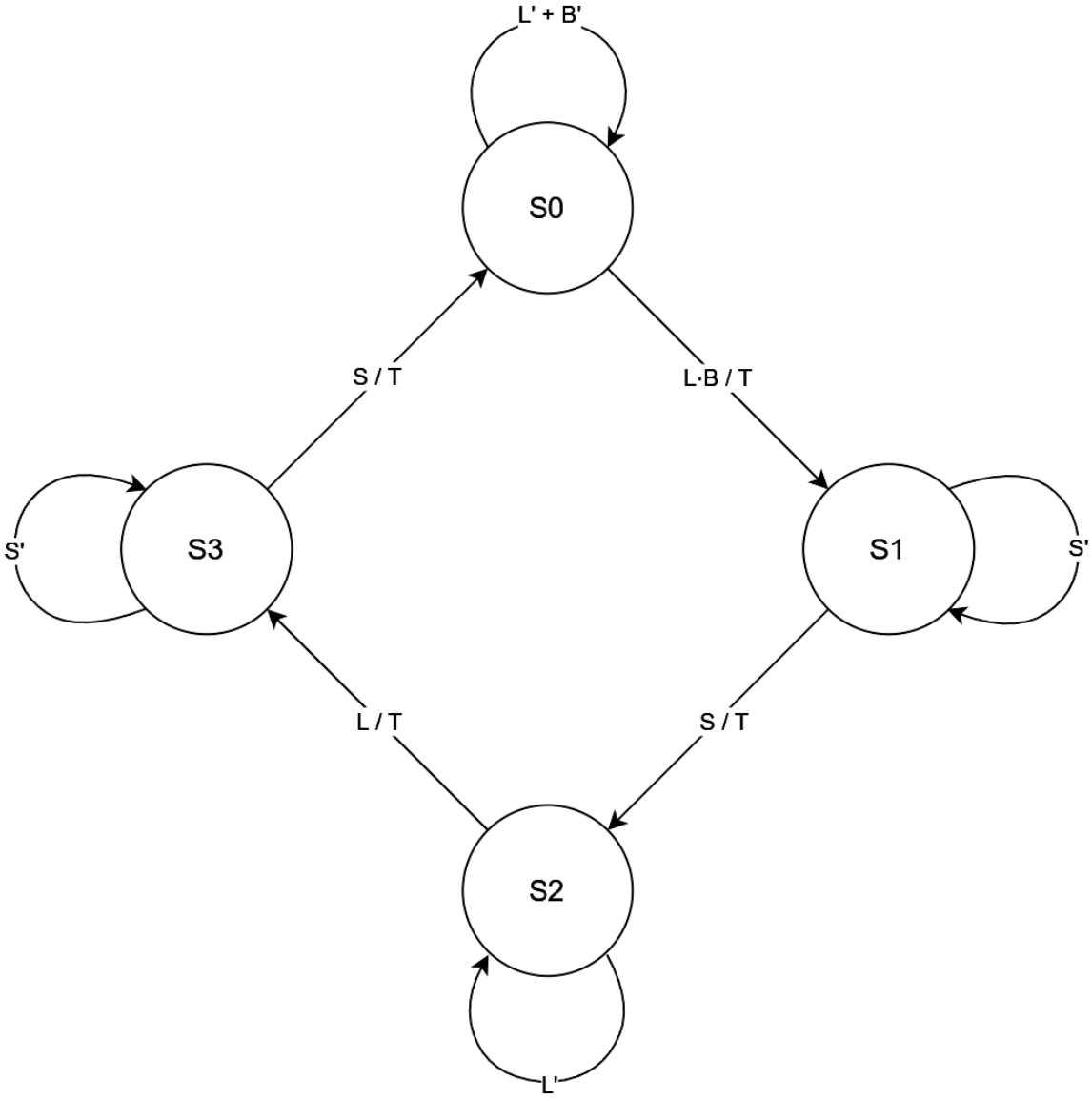
Traffic Light Controller Finite State Machine



Input signals:	Output signals:	States:
B: Crosswalk button S: Short time interval expired L: Long time interval expired B, B’ -> 1, 0 S, S’ -> 01, 00 L, L’ -> 11, 10	G, Y, R: Green, Yellow, Red ST, W, F: Stop, Walk, Flashing T: Start timer for S and L T, T’ -> 1, 0	S0: G, ST -> 00, 00 S1: Y, ST -> 01, 00 S2: R, W -> 10, 01 S3: R, F ->10, 10

State Table

Current State		Input	Next State		Output
G, Y, R	ST, W, F	B, S, L	$(G, Y, R)^+$	$(ST, W, F)^+$	T
00	00	10 + 0	00	00	0
00	00	11 · 1	01	00	1
01	00	00	01	00	0
01	00	01	10	01	1
10	01	10	10	01	0
10	01	11	10	10	1
10	10	00	10	10	0
10	10	01	00	00	1