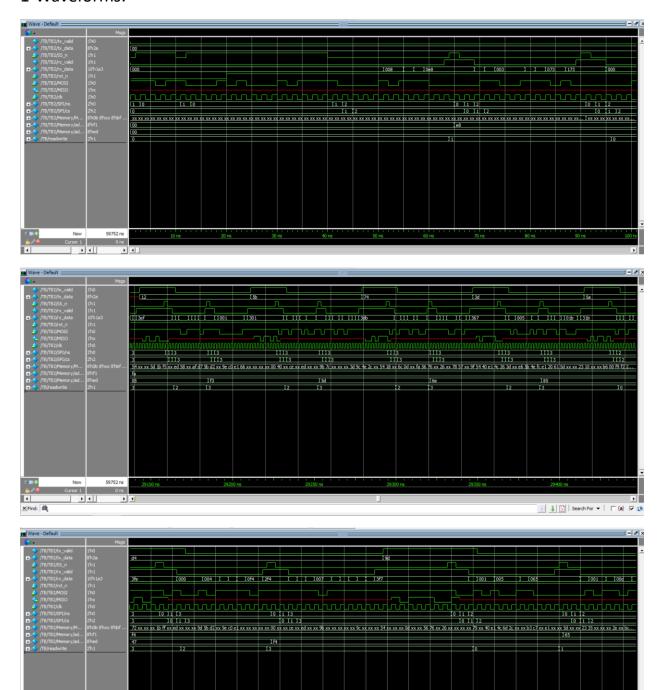
SPI Project

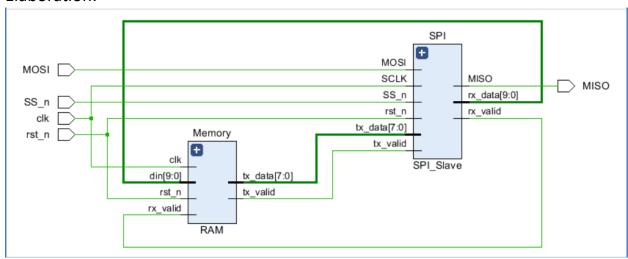
1-Waveforms:

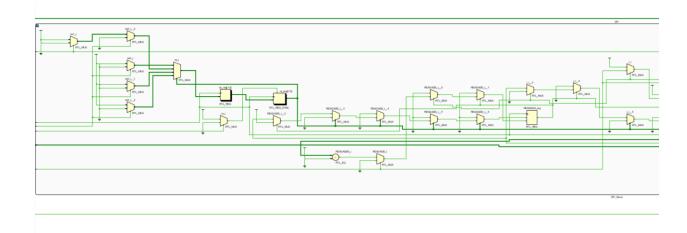
59752 ns Cursor 1 0 ns

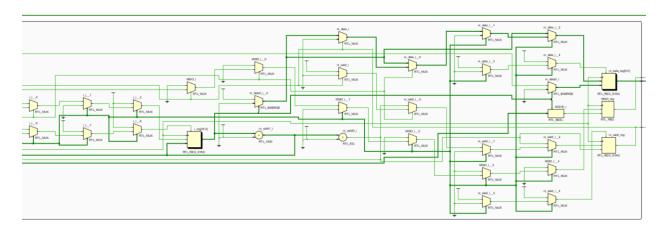


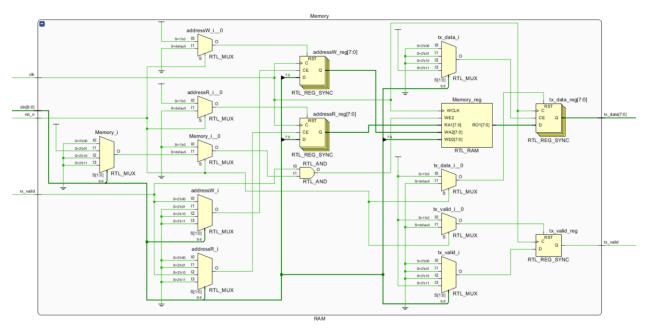
2-Synthesis:

• Elaboration:

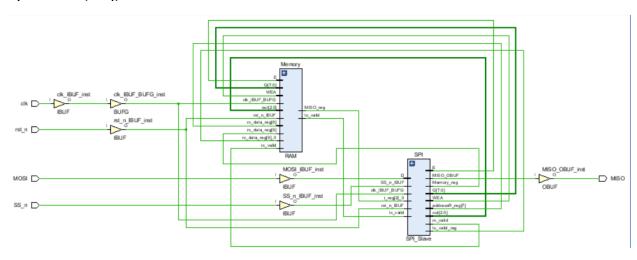


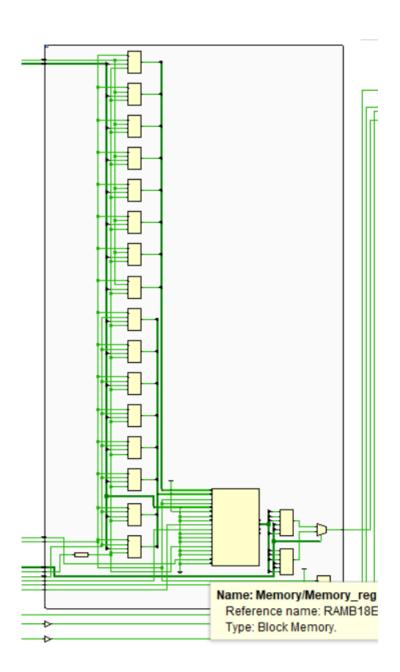


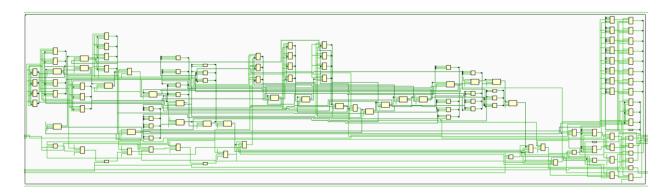




• Synthesis:(seq)



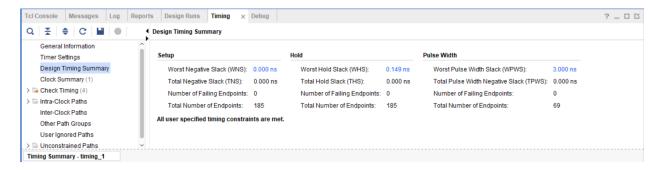




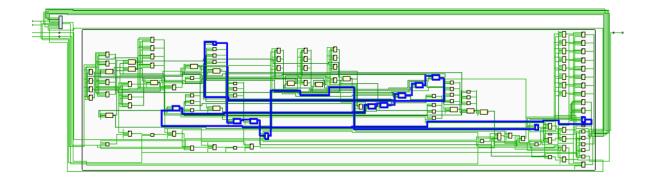
INFO: [Synth 8-5544] ROM "ns1" won't be mapped to Block RAM because address size (1) smaller than threshold (5)

State	New Encoding	I	Previous Encoding	
IDLE	00	ı	00	
CHK_CMD	01	I	01	
READ	10	I	11	
WRITE	11	I	10	

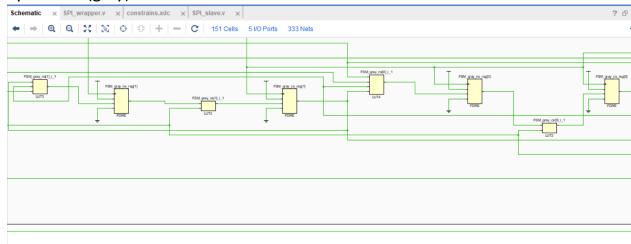
INFO: [Synth 8-3354] encoded FSM with state register 'cs_reg' using encoding 'sequential' in module 'SPI_Slave'



@142.86 MHZ



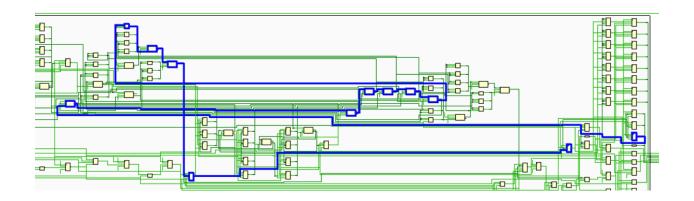
• Synthesis:(gray)



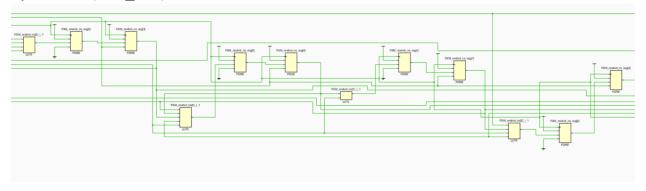


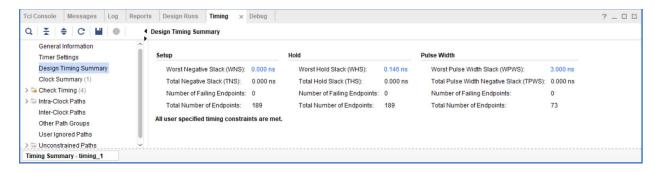
@142.86MHZ

State	New Encoding	Previous Encoding
IDLE	00	00
CHK_CMD	01	01
READ	11	11
WRITE	10	10



• Synthesis :(one_hot)

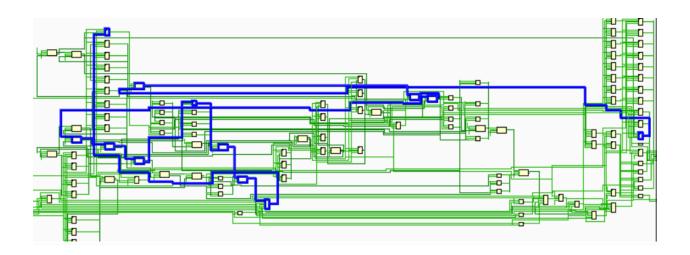




'@142.86 MHZ

State	 	New Encoding	Previous Encoding
IDLE CHK_CMD READ WRITE	 	0001 0010 0100 1000	00 01 11 10

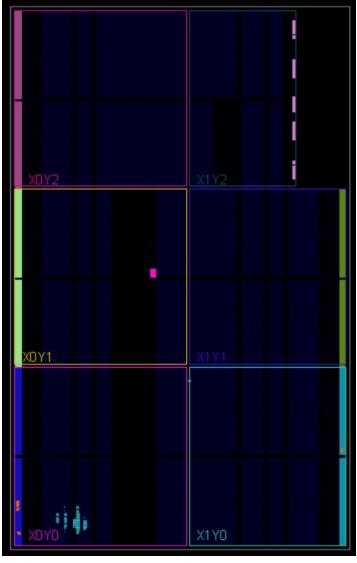
INFO: [Synth 8-3354] encoded FSM with state register 'cs_reg' using encoding 'one-hot' in module 'SPI_Slave'



Implementation:

Since gray and seq had the same timing implementation is done with gray .

Schematic:





Name	Slice LUTs (20800)	Slice Registers (41600)	F7 Muxes (16300)	Slice (815 0)	LUT as Logic (20800)	LUT Flip Flop Pairs (20800)	Block RAM Tile (50)	Bonded IOB (106)	BUFGCTRL (32)
∨ N SPI_wrapper	51	66	1	37	51	8	0.5	5	1
■ Memory (RAM)	3	17	1	5	3	0	0.5	0	0
SPI (SPI_Slave)	48	49	0	36	48	7	0	0	0

- > La Vivado Commands (3 infos, 2 status messages)
- > Elaborated Design (10 infos, 13 status messages)
- > 🔓 Synthesis (2 warnings, 31 infos, 11 status messages)
- > 🚡 Synthesized Design (1 warning, 9 infos, 6 status messages)
- > [a Implementation (92 infos, 225 status messages)
- > 🚞 Implemented Design (10 infos, 5 status messages)