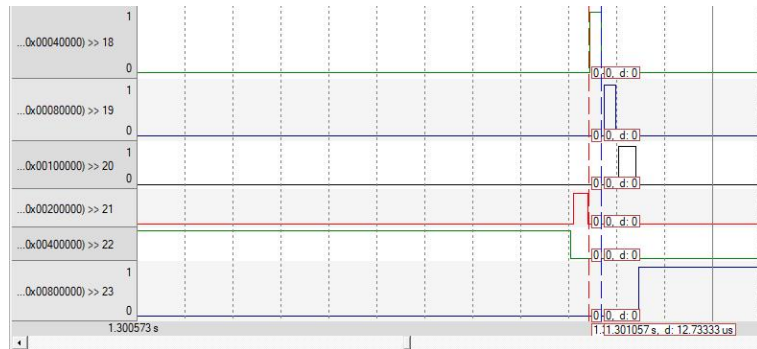# Verifying the Implementation of FreeRTOS EDF Scheduler
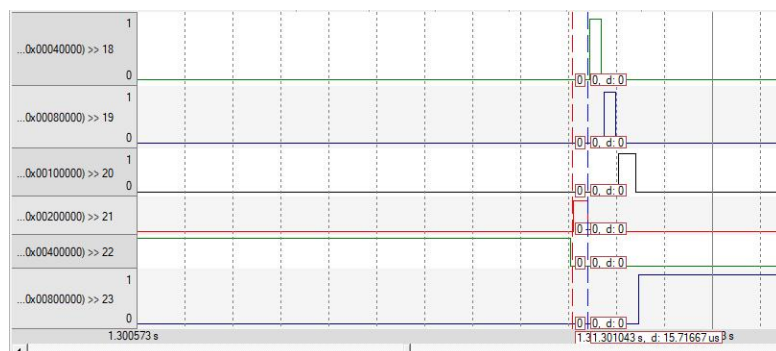
Tasks execution time:

Button1_Monitor, Button2_Monitor : 13 us
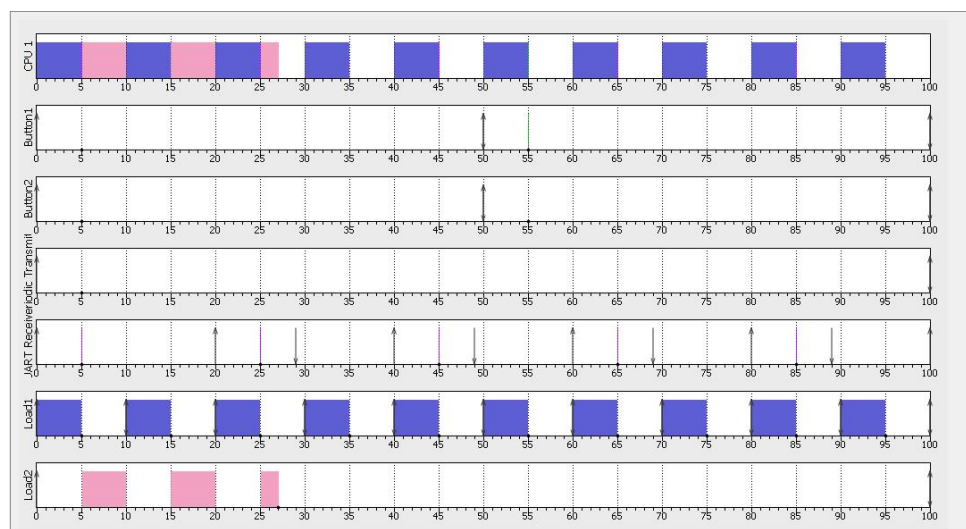

Periodic_Transmitter : 20 us

Uart_Receiver : 15 us

Load1_Simulation, Load2_Simulation : Given as 5 ms and 12 ms

Using Simso offline simulator

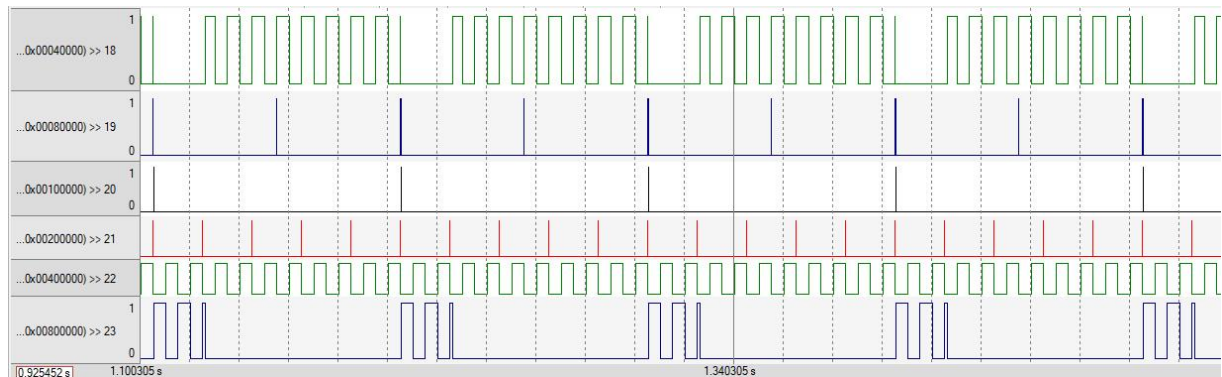|	Total load	Payload	System load
CPU 1	0.6215	0.6215	0.0000
Average	0.6215	0.6215	0.0000

The behaviour is as expected with a cpu load of almost 62%.

Using Keil run time analysis

Cpu_load is close to simso with 63% which is as expected

Name	Value	Type
cpu_load	0x00000063	int
total_time	0x0004432B	int
task_in	0x0004432B	int
task_out	0x0004432B	int
total_execution_time	0x000440BB	int
<Enter expression>		

Execution of tasks on the logic analyzer

Load 2 is pre-empting Load 1 as seen in simso.
All the tasks are behaving according to the given periods.
Tasks with lower deadlines are getting scheduled before higher
deadlines tasks with indicates that the implementation of the EDF
Scheduler is correct.