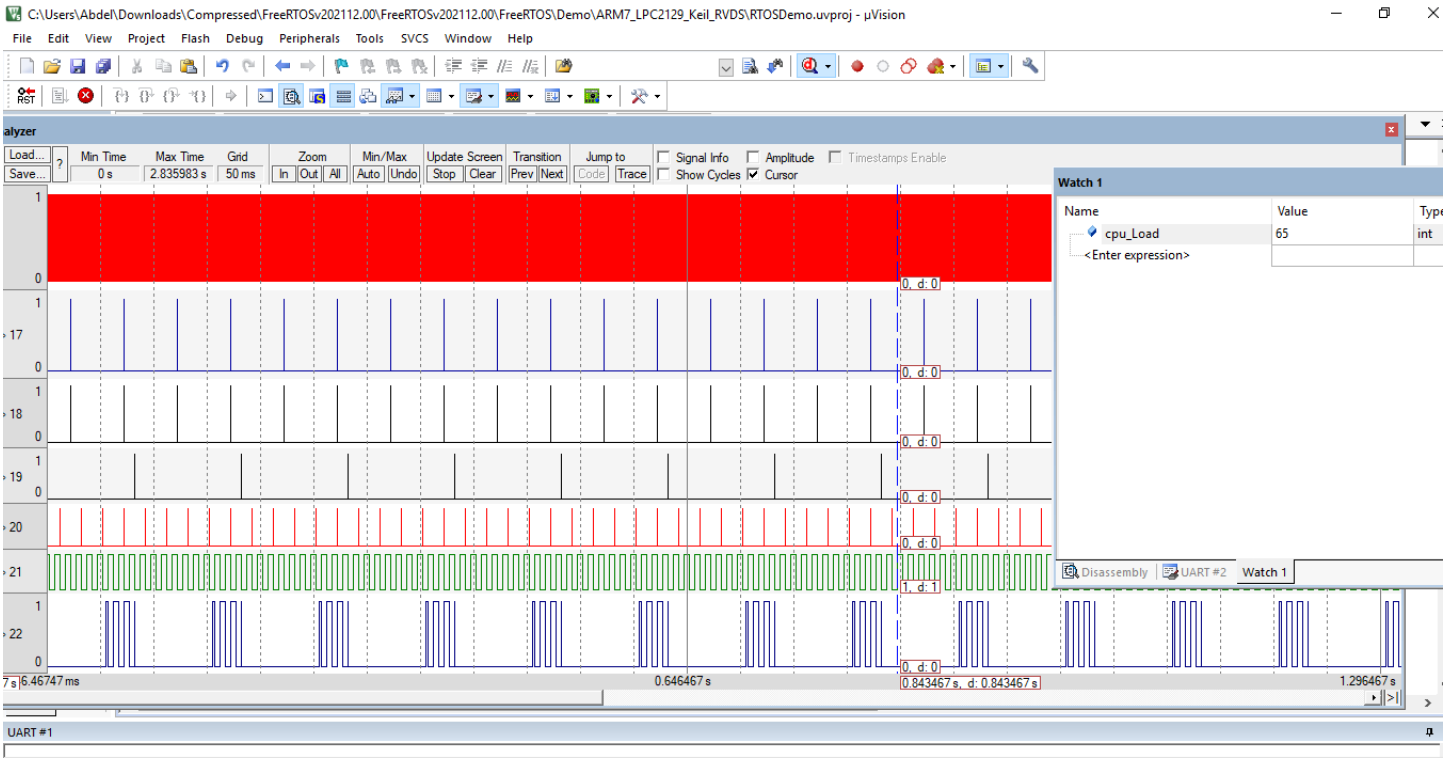
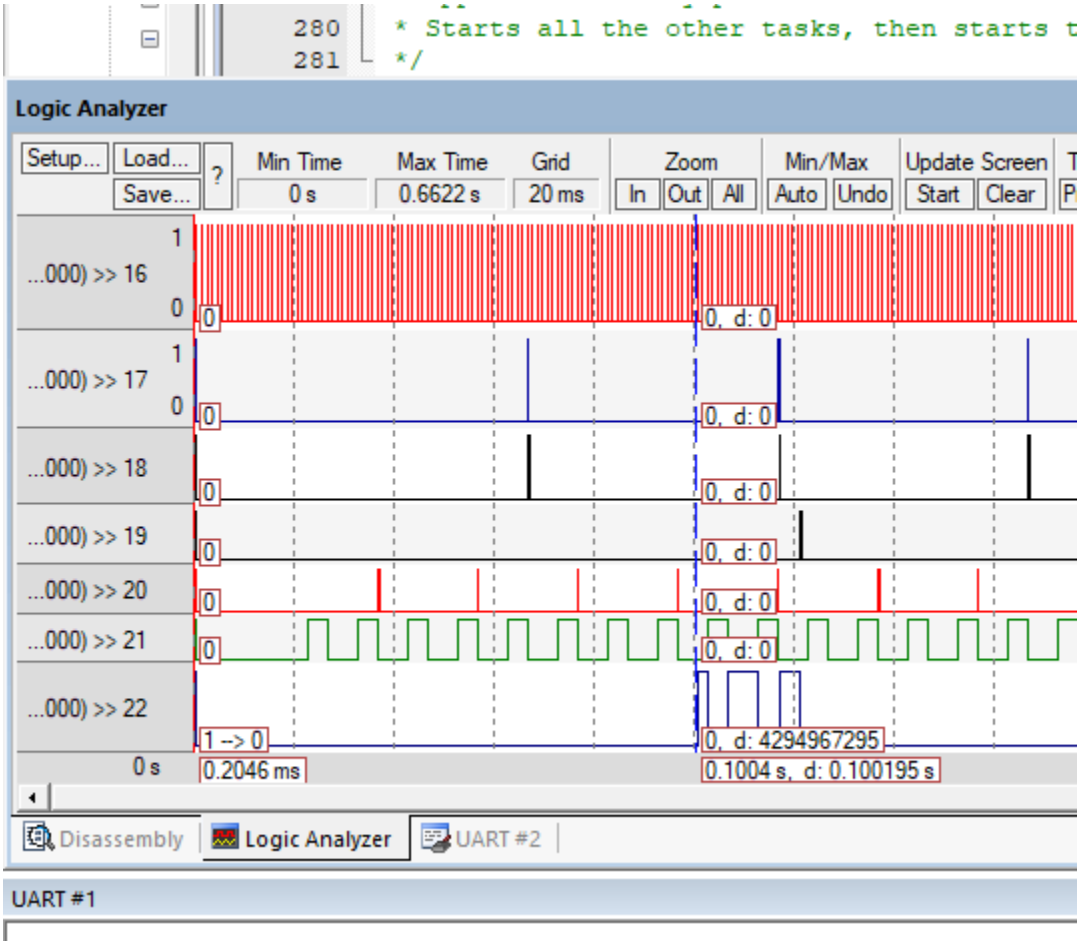
Logic Analyzer View



1-hyperperiod

=100MS



2-Offline Simulator Simso

Model data

General | Scheduler | Processors | Tasks

id	Name	Task type	Abort on miss	Act. Date (ms)	Period (ms)	List of Act. dates (ms)	Deadline (ms)	WCET (ms)
1	TASK T1	Periodic	No	0	50	-	50	.018
2	TASK T2	Periodic	No	0	50	-	50	.018
3	TASK T3	Periodic	No	0	100	-	100	.050
4	TASK T4	Periodic	No	0	20	-	20	.68
5	TASK T5	Periodic	No	0	10	-	10	5
6	TASK T6	Periodic	No	0	100	-	100	12

Results

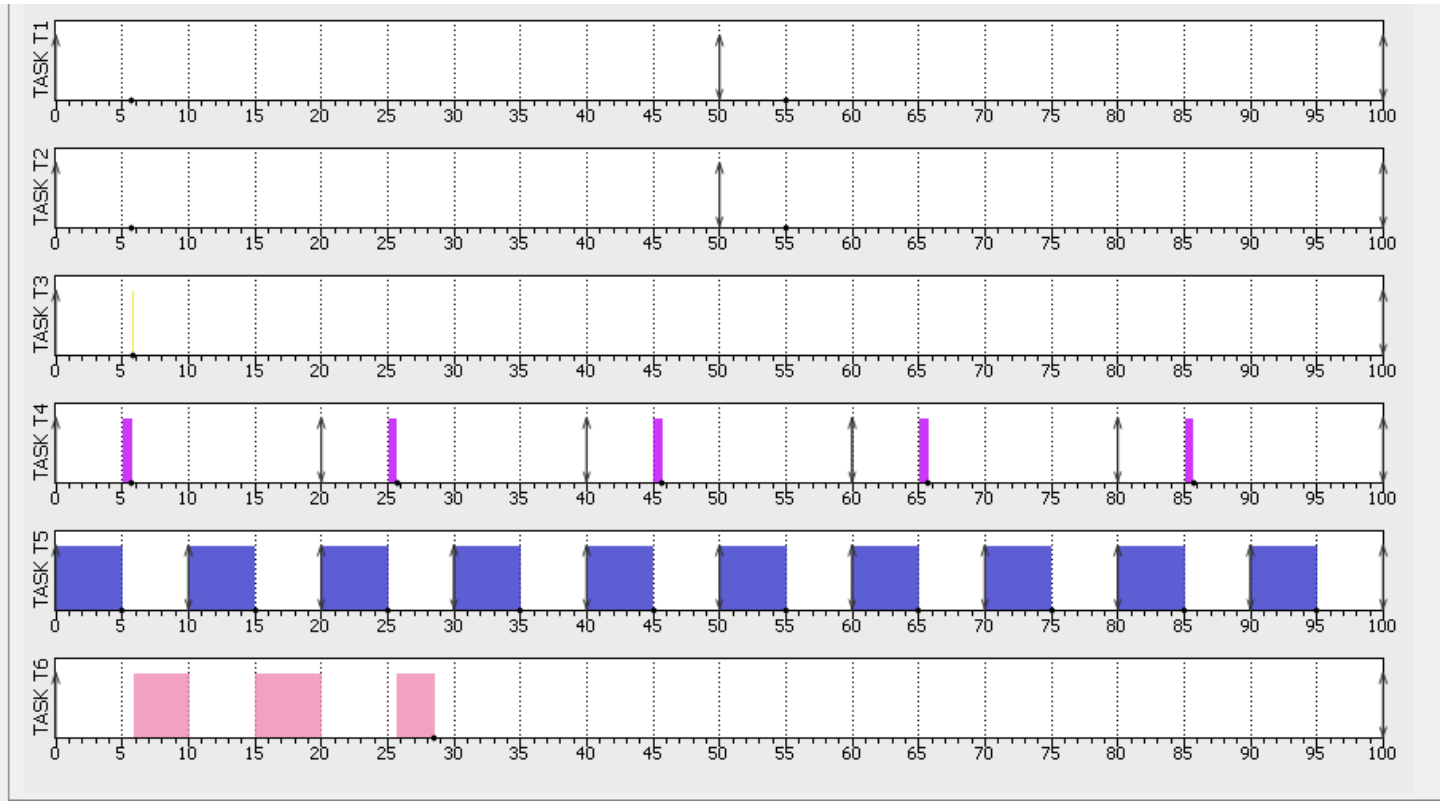
General | Logs | Tasks | Scheduler | Processors

Observation Window:

from 0.00 to 100.00 ms

Configure...

	Total load	Payload	System load
CPU 1	0.6552	0.6552	0.0000
Average	0.6552	0.6552	0.0000



3-system schedulability using URM

$$\sum_{k=1}^{n} \frac{Ci}{Ti} \leq U = n\left(2^{1/n} - 1\right)$$

N=6 //Number of taskes

.65< .73

system is schedulable

4-System schedulability using time demand analysis techniques.

$$w_i(t) = C_i + \sum_{k=1}^{i-1} \left\lceil \frac{t}{p_k} \right\rceil C_k$$

U = Total Utilization
C = Execution time
P = Periodicity
N = Number of tasks

1- **Load_1_Simulation**
W1(10)=5 <10
Load_1_Simulation is schedulable.

2- **Uart_Receiver**
W2(20)=.68+5=5.68<20
Uart Receiver is schedulable.

3- **Button_2_Monitor**
W3(50)=.18+5.68+5=10.86<50
Button 2 Monitor is schedulable

4- **Button_1_Monitor**
W4(50)=.18+5.68+5+10.86=21.72<50
Button 1 Monitor is schedulable

5- **Periodic_Transmitter**
W5(100)=.05+ 5+5.68+10.86+21.72=43.31<100
Periodic Transmitter is schedulable.

6- **Load_2_Simulation**
W6(100)= 43.31+21.72+10.86+5.68+5=86.57<100
Load_2_Simulation is schedulable.