

T1 (P: 5, E: 2.5 D: 5)

T2 (P: 15, E: 4.5 D: 15)

T3 (P: 20, E: 3.5 D: 20)

$U = \sum (E/P)$ for all tasks

$$= (2.5/5) + (4.5/15) + (3.5/20) = 0.975$$

$$U_{rm} = 3 \cdot (2^{1/3} - 1) = 0.799$$

$U > U_{rm}$ then the system is guaranteed to be not schedulable

And will be a task that misses its deadline

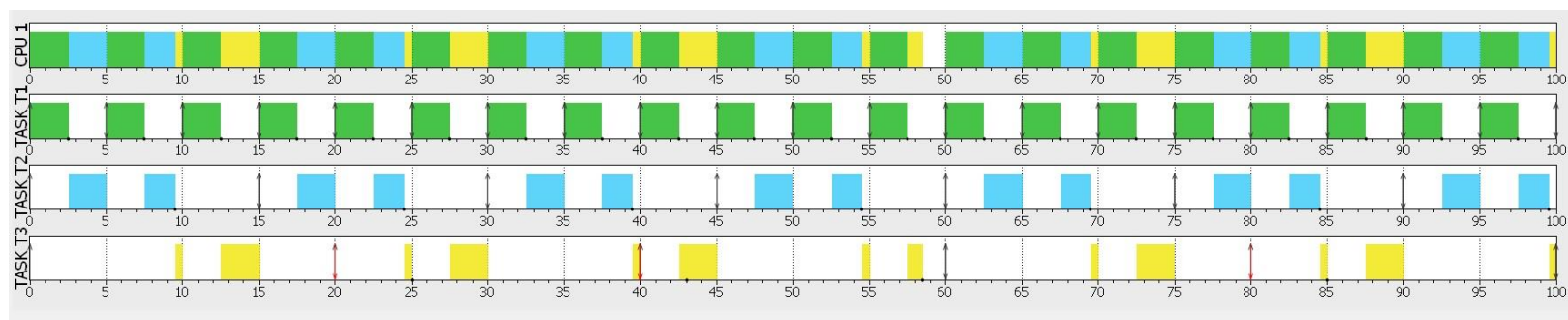
Manual calculations:

$T_1 (P: 5, E: 2.5, D: 5)$
 $T_2 (P: 15, E: 4.5, D: 15)$
 $T_3 (P: 20, E: 3.5, D: 20)$

$$U = \left(\frac{2.5}{5} \right) + \left(\frac{4.5}{15} \right) + \left(\frac{3.5}{20} \right) = 0.975$$
$$U_{rm} = 3 \times (2^{\frac{1}{3}} - 1) = 0.799$$

$U > U_{rm} \rightarrow$ system guaranteed not schedulable.

Simulation:



Task 3 misses its deadline

from 0.00 to 100.00 ms				Configure...
	Total load	Payload	System load	
CPU 1	0.9850	0.9850	0.0000	
Average	0.9850	0.9850	0.0000	