Freescale MQX RTOS Example Guide

The Taskq example

The Taskq code used to demonstrate how to use task queue to synchronize tasks.
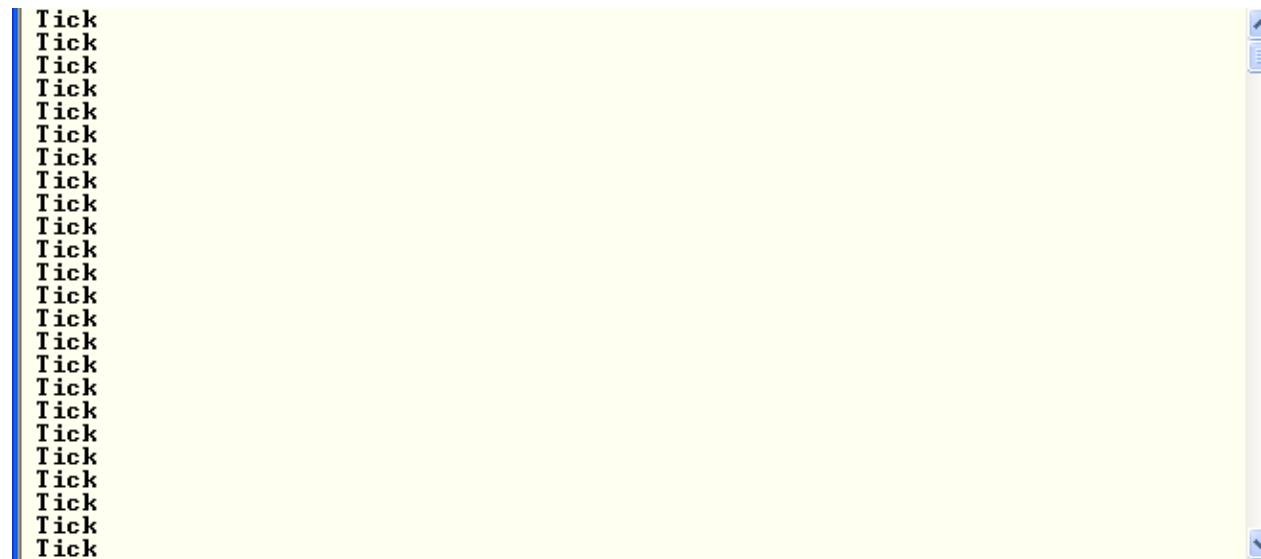
Service_task creates a task queue with FIFO queueing policy, Simulated_isr task and suspends itself in the task queue.

Simulated_isr_task resumes the task in the task queue

Running example

Start a terminal application on your PC and set the serial connection for 115200 baud, 8 data bits, 1 stop bit, no parity and no flow control.

The result will be as the following picture.

Explanning example

The flow of the task is described in the next figure.

There is a service_task that creates a task queue and simulated_isr_task tasks. Entering an infinite loop and suspending itself in the task queue. Simulated_isr_task task waits 200 ticks and resumes the first task in the task queue.

Flow chart

```
┌─────────────────┐                              ┌─────────────────┐
│                 │                              │                 │
│  Service_task   │                              │Simulated_isr_task│
│                 │                              │                 │
└────────┬────────┘                              └────────┬────────┘
         │                                                │
         ▼                              ┌────────────────►│
┌─────────────────┐                     │                 ▼
│                 │                     │        ┌─────────────────┐
│ Create task     │                     │        │                 │
│ queue           │                     │        │  Wait 200 ticks │
│                 │                     │        │                 │
└────────┬────────┘                     │        └────────┬────────┘
         │                              │                 │
         ▼                              │                 ▼
┌─────────────────┐                     │        ┌─────────────────┐
│                 │                     │        │                 │
│ Create          │                     │        │ Resume task     │
│ Simulated_isr_  │                     │        │ queue           │
│ task            │                     │        │                 │
└────────┬────────┘                     │        └────────┬────────┘
         │◄──────────────────┐          └─────────────────┘
         ▼                   │
┌─────────────────┐          │
│                 │          │
│ Suspend task    │          │
│ queue           │          │
│                 │          │
└────────┬────────┘          │
         └───────────────────┘
```