Freescale MQX RTOS Example Guide

ISR example

This document explains the ISR example, what to expect from the example and a brief introduction to the API used.

The example

The example uses the system timer to illustrate the use of interrupt in MQX. The interrupt handler for system timer is invoked whenever a system tick times out and number of times the interrupt occurs is displayed over the output terminal. The input parameter to function _time_delay_ticks() is used to visualize the number of times the system timer interrupt happens.

Running the example

The user only needs to do compilation of MQX libraries, ksdk library and the example without any further step.

Then we compile the project isr_lite.

If the platform supports floating point, you have to disable floating point in <MQX_folder>\rtos\mqx\config\mcu\<board>\mqx_sdk_config.h:

#define MQXCFG_ENABLE_FP   0

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Explaining the example

The application example creates a task named main_task. The task main_task does following jobs.

- install new interrupt handler for system timer.
- enter the time delay of 200 ticks.
- print out number of times the system timer interrupt happened.

The application example also defines new interrupt handler for the system tick timer called new_tick_isr() which increments a count of interrupt happened and then invoke the original interrupt handler for the system tick timer.

The following output is expected on the terminal.

```
isr - HyperTerminal
File  Edit  View  Call  Transfer  Help

Tick count = 200




Connected 0:02:16        Auto detect    Auto detect    SCROLL    CAPS    NUM    Capture    Print echo
```