Freescale MQX Example Guide

The lwmsgq example

This client/server model shows communication and task synchronization using message passing.

Server task initializes the message queues, creates three client tasks, and then waits for a message.

After receiving a message, the task returns the message to the sender.

Client task sends a message to the server_task and then waits for a reply.

Running the example

Start HyperTerminal on the PC (Start menu->Programs->Accessories->Communications).
Make a connection to the serial port that is connected to the board (usually will be COM1).

Set it for 115200 baud, no parity, 8 bits and click OK.

After running the MCU, you will see the printed message as the following picture.

bwmsgq - HyperTerminal

File Edit View Call Transfer Help

```
C
Client Task 2
Client Task 1
Client Task 0
  C
  B
  A
Client Task 0
Client Task 1
Client Task 2
  A
  B
  C
Client Task 1
Client Task 0
  B
  A
Client Task 0
Client Task 1
Client Task 2
  A
  B
  C
Clio_
```

Connected 0:01:08   Auto detect   115200 8-N-1   SCROLL   CAPS   NUM   Capture   Print echo

Explanation of the example

The flow of the tasks is described in the next figure. There is a server task that receives all the incoming data and responds to them. There are three client tasks. Each client sends a message to the server and receives the answer back from it.

Sever task
→ create server messages queue
→ create client messages queue
→ message received?
  No →
  Yes → Response to sender

Client task n
→ Send message to server queue
→ Receive message