USING A PUBLIC MESSAGE QUEUE TO PASS MESSAGES ACROSS PROCESS BOUNDARIES

The typical use case has one task (the "Receiver") in some memory space (RTP or the kernel) that pends, waiting for a message from another task. A task in some other memory space (the "Sender") then places a message onto the queue, to be read by the Receiver.

TASK GUIDE

Step	Action	Example
1	Create a project for each participant in the sharing of the queue.	
2	For the Receiver, the first task to execute, write code that does the following:	The code will look something like this: MSG_Q_ID_msgQId; int length; /*message length */ char *buffer; /* receive buffer */ buffer = malloc (100);
	a) Creates the queue and captures its ID b Loops, pending on a message being placed onto the queue, then printing a message when it is received	<pre>msgQId = msgQOpen("/m ", 10, 100,</pre>
3	For the Sender, write code that does the following: a) Attaches to (gains access to) the queue and captures its ID b) Loops, sending a message every 5 seconds, for example	<pre>The code will look something like this: SEM_ID_semId; char_message[] = { "Hello World!\n" }; msgQId = msgQOpen("/msgQ", 0, 0, 0, 0, 0); FOREVER{ msgQSend (msgQId, (char *) message, strlen(message)+1, 0, 0} taskDelay (sysClkRateGet() * 5); }</pre>

Key Points

- The msgQOpen () call is used either to create the public task initially or to gain access to it. The only difference is the OM_CREATE option.
- The example has been simplified to handle only string messages; the extension to other message types is straightforward.
- The basic dialog could also be extended to have multiple Senders (very common) and/or Receivers (less so). That extension is not covered here.

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