56800/E SCI Hands-On Exercise
Task Description

Develop a monitor application that uses SCI in messages between PC and DSC56F801x EVB.

HyperTerminal (Console) for CAN Data Display via RS232,
- Bits/sec : 9600
- No parity : none
- Stop bit : 1
- Hardware : None
Approach

- Use Processor Expert Beans to implement Target System application
  - AsynchroSerial
  - Download and Execute on 56F801x Demo Board
Click File pull down menu
Select PE stationary
Type SCI Exercise inside the dial box
Select MC56F8013VFAE project stationery
PE template is shown on.
- Kick AsynchroSerial Bean under Communication PE menu
- Then, kick Baud rate dial box under the properties of Bean Inspector AS1:AsynchroSerial
Type 9600 baud rate inside the dial box
Select Generate Code ‘SCI Exercise.mcp’ under PE pull down menu to generate the code.
Open up the SCI_Exercise.c:main file to edit user code.
Select PE Bean SendChar for sending out characters
Put PE Bean SendChar to SCI_Exercise.c:main by Drag-n-Drop Methods.
Made more characters to send out by Copy-n-Paste methods.
We need to wait for the 1st character send out completely if we want to send out 2nd character in SCI communication.

kick Methods page of Bean Inspector
AS1:AsynchrSerial
Enable GetRxIdle PE Bean by kicking this dial box
Enable GetTxComplete PE Bean by kicking this dial box
Scroll up the screen to reach GetTxComplete PE Bean by kick the scroll bar.
Put PE Bean GetTxComplete to SCI_Exercise.c:main by Drag-n-Drop Methods.
Modify it as while statement.
Make every `while` statement for every character sending out.
Kick Yes to update the code.
Kick green arrow to download the code to 56F801xEVB.
```c
#include "AS1.h"
/* Include shared modules, which are used for whole project */
#include "PR_Typeno.h"
#include "PE_Error.h"
#include "PR_Const.h"
#include "TO_Map.h"

void main(void)
{
    // Processor Expert internal initialization. DON'T REMOVE THIS!
    // End of Utility Code
    /* Write your application code here. The following code will not be compiled.
    #include "AS1.h"
    #include "PR_Typeno.h"
    #include "PE_Error.h"
    #include "PR_Const.h"
    #include "TO_Map.h"
    
    void main(void)
    {
        /* Processor Expert internal initialization. DON'T REMOVE THIS!
         * End of Utility Code
         */
        /* Write your application code here. The following code will not be compiled.
         */
    }
```

The image shows a screenshot of a programming environment with code displayed and a project being built. The code snippet is also included in the image.
Kick green arrow to run the code inside 56F801xEVB.
Invoke HyperTerminal for getting the characters from 56F801xEVB.
Type the name you want
Select your PC COM port for communication
Select 9600 baud rate, 8 data bit, no parity, 1 stop bit, none flow control

Then, kick OK
“Hello” is shown on the HyperTerminal screen
Summary
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- Understand the hardware and software support available for the 56800E Hybrid Controller product line.

- Demonstrated the ease of developing applications using CodeWarrior development tools with Processor Expert™ technology.
Thank You!!!