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485Slave1_0.nxc
// FILE: 485Slave1_0.nxc - Works!
// DATE: 09/26/16 12:47
// AUTH: P. Oh
// DESC: Two NXT bricks connected together on their Port S4 (i.e. RS-485
communications)
// This code runs on Slave brick. 485Master1_0.nxc runs on Master brick.
// When Slave is off, then Master stops. When Slave is on, the Master
iterates

inline void WaitForMessageToBeSent()
{
    while(RS485SendingData())
        Wait(MS_1);
}

task main() {
    UseRS485(); // (1) Port S4 configured for RS485
    RS485Enable(); // (2) turn on RS485
    RS485Uart(HS_BAUD_DEFAULT, HS_MODE_DEFAULT); // (3) initialize UART to default
values
    Wait(MS_1); // (4) wait a bit so all's activated

    int i;
    byte buffer[];
    string msg;
    byte cnt;

    while (true) {
        msg = "Slave " + NumToStr(i);
        TextOut(0, LCD_LINE1, msg);
        // send the # of bytes (5 bytes)
        cnt = ArrayLen(msg);
        SendRS485Number(cnt);
        WaitForMessageToBeSent();

        // wait for ACK from recipient
        until(RS485DataAvailable());
        RS485Read(buffer);

        // now send the message
        SendRS485String(msg);
        WaitForMessageToBeSent();

        // wait for ACK from recipient
        until(RS485DataAvailable());
        RS485Read(buffer);

        i++;
    }

    // disable RS485 (not usually needed)
    RS485Disable();
} // end of main

```