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/*
  SDTest
  Read Data from an SD card, output it to pins at a specified rate
*/
#include "simpletools.h" // Include simple tools

const int DO = 22, CLK = 23, DI = 24, CS = 25;

const int BufferCount = 4;

char Buffer[BufferCount][512];

volatile bool BufferFull[BufferCount];

volatile bool StopSending = false;

void OutputDataThread(void *par);

const int OutputStackSize = 40 + 32;

static int OutputStack[OutputStackSize];

int main(void) // Main function
{
  for(int i=0; i<BufferCount; i++)
  {
    BufferFull[i]=false;
  }

  StopSending=false;

  cogstart( &OutputDataThread, 0, OutputStack, sizeof(OutputStack) );

  sd_mount(DO, CLK, DI, CS);

  File *fp;

  fp = fopen("testdata.txt", "rb");

  int bufferToRead = 0;

  int readResult = 0;

  while(true)
  {
    while( BufferFull[bufferToRead] == true )
    {
      ;
    }
  }
}

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putChar( '0' + bufferToRead );

readResult = fread( Buffer[bufferToRead], 1, 512, fp);

if( readResult > 0)
{
    if(readResult < 512 )
    {
        memset( Buffer[bufferToRead] + readResult, 0, 512 - readResult );
    }

    BufferFull[ bufferToRead ] = true;

    bufferToRead = (bufferToRead + 1) % BufferCount;

}

else

{

break;

}

}

StopSending = true;

fclose(fp);

while( true )
{
;
}

}

void OutputDataThread(void *par);
{
    int OutputRate = 53000;

    int OutputDelay = clkfreq / OutputRate; //Was: _clkfreq / OutputRate (removed _)

    int bufferToSend = 0;

    int PinMask = (1<<0) | ( 1<<1) | ( 1<<2) | (1<<3);

    int DataShift = 0;

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DIRA |= PinMask;

DIRA |= (1<<26);

int clockTick = CNT;

while( StopSending == false )
{
    while( BufferFull[bufferToSend] == false )
    {
        clockTick = CNT;
    }

    for int i=0; i<512; i++ )
    {
        int data = Buffer[bufferToSend][i] & 0x0F;

        clockTick += OutputDelay;

        waitcnt( clockTick );

        OUTA = (OUTA & ~PinMask) | (data << DataShift);
    }

    if( bufferToSend == 0 )
    {
        OUTA = OUTA ^ (1<<26);
    }

    BufferFull[bufferToSend] = false;

    bufferToSend = (bufferToSend+1) % BufferCount;
}
}

```

Error File:

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SDTest.c:11:6: error: variably modified 'Buffer' at file scope
SDTest.c:13:1: error: unknown type name 'bool'
SDTest.c:13:15: error: variably modified 'BufferFull' at file scope
SDTest.c:15:1: error: unknown type name 'bool'
SDTest.c:15:29: error: 'false' undeclared here (not in a function)
SDTest.c:21:12: error: variably modified 'OutputStack' at file scope
SDTest.c: In function 'main':
SDTest.c:36:3: error: unknown type name 'File'
SDTest.c:38:6: warning: assignment from incompatible pointer type [enabled by default]
SDTest.c:44:9: error: 'true' undeclared (first use in this function)
SDTest.c:44:9: note: each undeclared identifier is reported only once for each function it appears in

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SDTest.c:53:5: warning: passing argument 4 of 'fread' from incompatible pointer type [enabled by default]
c:\program files (x86)\simpleide\propeller-gcc\bin\..\lib/gcc/propeller-elf/4.6.1/../../../../propeller-elf/include/stdio.h:136:10: note: expected 'struct FILE *' but argument is of type 'int *'
SDTest.c:79:3: warning: passing argument 1 of 'fclose' from incompatible pointer type [enabled by default]
c:\program files (x86)\simpleide\propeller-gcc\bin\..\lib/gcc/propeller-elf/4.6.1/../../../../propeller-elf/include/stdio.h:108:7: note: expected 'struct FILE *' but argument is of type 'int *'
SDTest.c: At top level:
SDTest.c:88:1: error: expected identifier or '(' before '{' token
Done. Build Failed!
```

Click error or warning messages above to debug.