LibUc Porting Guide

Developpers guide

Alexis Jeandet

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Chapitre 1

Stream devices

Introduction This familly is composed of all the devices that threat data as an unaddressed stream. For example SPI and UART are both streams devices, a sofware or hardware FIFO is olso a stream device.

1.1 The stream device representation

The stream device is represented by a standard structure.

```
struct streamDev
{
        int writen(void* data,int n);
        int write(void* data);
        int readn(void* data,int n);
        int read(void* data);
        int streamPt;
        void* dev;
}
```

1.2 UART

1.2.1 Generals :

On many microcontrolers you can use **U**niversal **A**synchronous **R**eceiver **T**ransmitter, in order to provide a standart access to this device you have to implement th folowing functions :

- uart_t **uartopen**(int) ;
- **uartclose**(uart_t) ;
- **uartsetup**(uart_t,int,int) ;
- **uartputc**(uart_t, char) ;
- char **uartgetc**(uart_t) ;
- **uartputstring**(uart_t,char*) ;
- **uartgetstring**(uart_t,char*) ;

1.2.2 Details

Openning uart

uart_t **uartopen**(int)

This function has to open N^{e} **uart** device, so it has to perform basical configuration such as powering up the device ...This finction has also to return the pointer to the devicce handle.

Closing uart

uartclose(uart_t)

Configure uart

uartsetup(uart_t,int baudrate,int cpuclk)

Sending a char through uart

uartputc(uart_t, char)

Receiving a char from uart

char **uartgetc**(uart_t)

Sending a string through uart

uartputstring(uart_t,char*)

Receiving a string from uart

uartgetstring(uart_t,char*)

Chapitre 2

Addressed devices

Introduction This familly is composed of all the devices that threat data as an addressed space. For example IIC and memories are both addressed devices.