Termux-usb

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List or access USB devices.

Usage

termux-usb [-l | [-r] [-e command] device]

Options

```
-l              list available devices
-r              show permission request dialog if not already granted
-e command      execute the specified command with a file descriptor
                referring to the device as its argument
```

Details

Android doesn't allow direct access to usb devices, you need to request a file descriptor for the device from the Java API instead. This means that Linux usb software will need to be modified to work within Termux.

Here is a sample project to get started:

Make sure you have the Termux:API application installed. Set up the necessary packages within Termux.

```
pkg install termux-api libusb clang
```

Enable OTG (host) mode and insert a usb device. Wait for it to be recognised and verify it using the API:

```
termux-usb -l
```

Let's assume the device is /dev/bus/usb/001/002. Ask for permission to access it:

```
termux-usb -r /dev/bus/usb/001/002
```

Try using it from libusb. Save this sample code as usbtest.c: (download)

```
#include <stdio.h>
#include <assert.h>
#include <libusb-1.0/libusb.h>

int main(int argc, char **argv) {
    libusb_context *context;
    libusb_device_handle *handle;
    libusb_device *device;
    struct libusb_device_descriptor desc;
    unsigned char buffer[256];
    int fd;
    assert((argc > 1) && (sscanf(argv[1], "%d", &fd) == 1));
    assert(!libusb_init(&context));
    assert(!libusb_wrap_sys_device(context, (intptr_t) fd, &handle));
    device = libusb_get_device(handle);
    assert(!libusb_get_device_descriptor(device, &desc));
    printf("Vendor ID: %04x\n", desc.idVendor);
    printf("Product ID: %04x\n", desc.idProduct);
    assert(libusb_get_string_descriptor_ascii(handle, desc.iManufacturer, buf
fer, 256) >= 0);
    printf("Manufacturer: %s\n", buffer);
    assert(libusb_get_string_descriptor_ascii(handle, desc.iProduct, buffer,
256) >= 0);
    printf("Product: %s\n", buffer);
    assert(libusb_get_string_descriptor_ascii(handle, desc.iSerialNumber, buf
fer, 256) >= 0);
    printf("Serial No: %s\n", buffer);
    libusb_exit(context);
}
```

This utility shows some basic information about a usb device. It takes the device file descriptor as its only command-line argument. Let's compile it:

```
gcc usbtest.c -lusb-1.0 -o usbtest
```

Use the -e option of termux-usb to run ./usbtest with the correct file descriptor:

```
termux-usb -e ./usbtest /dev/bus/usb/001/002
```