

Aspire Wiki - ObjectWeb - iBuddy

[Aspire :: Bundles :: iBuddy](#)

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This bundle provides a service and a command to control one or more iBuddies connected to the host

The i-Buddy is a small blinking and moving USB figurine initially designed as a MSN live avatar. This actuator can be used in SOHO (Small Office Home Office) usecases.

The bundle provides

- a org.ow2.aspirefid.ibuddy.service.IIBuddy service per plugged iBuddy
- a command 'ibuddy' for the Felix shell

Installation

Windows Uninstall all the iBuddies devices already installed in 'Configuration Panel'>'System'>'Hardware'>'Device Manager'>'HID devices'

- copy the file IBUDDY.INF in the system
- copy libusb0.dll C:/windows/system32/
- copy libusb0.sys C:/windows/system32/drivers/

Install TBC Linux

On Fedora 13 64 bits :

- Plug the iBuddy
- Install libusb, libusb-devel (for Fedora), version 0.1
- Compile libusbjava project for your architecture (the libusbjava bundle in the repo is ready for 32 bits)
 - You have to patch libusbjava and the iBuddy bundle to let it work correctly (see next section)
 - You may need to change the file system.properties, to point /lib64/ instead of /lib/
- Prepare the libusbjava bundle by adding the compiled libusbjava.so in src/main/resources/
- Install and start bundles, the ibuddy may be found (ibuddy list)

You need to be root to access the iBuddy. Patches for Linux libusbjava

In order to send data to the iBuddy, it needs to be not used by the kernel, done by `usb_detach_kernel_driver_np()`

Add a call to it in LibUsbJava.cpp, in function `Java_ch_ntb_usb_LibusbJava_usb_1claim_1` interface (line 639) :

```
JNIEXPORT jint JNICALL Java_ch_ntb_usb_LibusbJava_usb_1claim_1interface(JNIEnv *env, jclass obj, jlong dev_handle, jint interface) { clearLibusbJavaError(); // Add this int err = usb_detach_kernel_driver_np((usb_dev_handle *) dev_handle, interface); if(err < 0) return err; return usb_claim_interface((usb_dev_handle *) dev_handle, interface); }
```

iBuddy bundle

In file `org/ow2/aspirefid/ibuddy/service/IBuddyDescriptor.java` : change claimed interface from 0 to 1, line 73

Build

Artifact

Command

The bundle provides a command for the Felix shell The subcommands are:

```
ibuddy list : List connected Ibuddys with id ibuddy <id|*> rotate <interval> <directions: left|right>: rotate every interval (>=200) time(in milliseconde) to the directions (eg : ibuddy 0 rotate 500 left right left) ibuddy <id|*> flap <intensity> <number of flaps>: flap with
```

Aspire Wiki - ObjectWeb - iBuddy

```
specific intensity(>=75) (eg ibuddy 0 flap 75 10) ibuddy <id|*> head <interval>
<colors:none|yellow|blue|white|violet|cyan|green|red> : change head color every interval(in ms)
(eg : ibuddy * head 500 yellow red blue) ibuddy <id|*> heart <interval> <status:on|off> : change
heart status every interval (in ms) (eg : ibuddy * head 500 yellow red blue) ibuddy <id|*> reset
: reset the ibuddy (eg : ibuddy * reset)
```

Remark:

The command can execute in parallel several actions on a set of connected iBuddies

For instance,

```
ibuddy 0 rotate 1000 left right left right left right flap 75 30 head 1000 red yellow none cyan
yellow heart 1000 on off on off on off on off ibuddy 1 rotate 1000 left right left right left
right flap 75 30 head 1000 red yellow none cyan yellow heart 1000 on off on off on off onis
interpreted as>>iBuddy 0 will excute all those actions in parallel : ROTATE : [1000, LEFT,
RIGHT, LEFT, RIGHT, LEFT, RIGHT] FLAP : [75, 30] HEAD : [1000, RED, YELLOW, NONE, CYAN, YELLOW]
HEART : [1000, ON, OFF, ON, OFF, ON, OFF, ON, OFF]>>iBuddy 1 will excute all those actions in
parallel : ROTATE : [1000, LEFT, RIGHT, LEFT, RIGHT, LEFT, RIGHT] FLAP : [75, 30] HEAD : [1000,
RED, YELLOW, NONE, CYAN, YELLOW] HEART : [1000, ON, OFF, ON, OFF, ON, OFF, ON]
```

- The first parameter is the duration in milliseconds of the action
- The second parameter of the FLAP action is the number of times of the wing flapping with a duration indicated in the first argument

Other links

-
- "hacking the USB i-buddy" <http://cuntography.com/blog/?p=17>
 - <http://www.jraf.org/static/maven/sites/ilibibuddy>
 - <http://sourceforge.net/projects/usbsnoop>

[Aspire :: Bundles :: iBuddy](#) (en)

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