

Re: Identify USB Keyboard Device Instance For Each Character Dynamical

Source:

<http://www.tech-archive.net/Archive/Development/microsoft.public.development.device.drivers/2006-01/msg00528.html>

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 - *Date:* Sat, 14 Jan 2006 11:48:12 -0800
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look at the kbfilt example in the DDK, your life will be much easier. you can easily hook into the scan code reporting mechanism by using the service callback as demonstrated in the sample. no irps, just an array of packets. from there you can decide which elements of the array you report up to the class driver.

to determine which device you are filtering, in your AddDevice routine you run your algorithm. Typically this would be looking at a devnode registry key that your INF put down during installation that tells you the type of device. you store this value in the device extension of your devobj. in the callback routine, you are passed teh devobj, so it is a simple core at that point in time.

finally, if you still have control of the hw, put the barcode stuff into a separate top level collection. that is the whole point of HID, you separate out different functions into separate pieces.

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"cdavis999" <cdavis999@xxxxxxxxxxxxxxxxxxxxxxxx> wrote in message news:141B0008-9679-441E-B434-69C77437D7FA@xxxxxxxxxxxxxxxxxxx
>I have two USB keyboard devices attached to my target WinXP/SP2 box. One
> device is actually a USB barcode scanner that functions as a keyboard and
> one
> actually is a USB keyboard. My debugger output below shows the devstack
> for
> each device object under my kbdclass driver object. (The reason you see
> the
> SysInternals Ctrl2cap filter driver is because I've been using the code in
> the Ctrl2capReadComplete function to peek at the scan codes.)
>

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> What I'm trying to understand is whether it is possible to
> programmatically
> distinguish the IRPs from the barcode scanner from the IRPs from the
> actual
> keyboard. I would like to intercept and redirect the barcode input before
> it
> passes into the Windows keyboard input processing and is tied to
> interpretation as messages by a windows procedure with keyboard focus. So
> I
> need to evaluate the DO origin for each character.
>
> Can a specific (IRP that contains keystroke data) be associated somehow
> with
> the specific device object that originated it? (In my case, the
> KeyboardClass2 DO with the Device Instance string
> "HID\ Vid_065a&Pid_0001\6&223cc4d1&0&0000" is my barcode scanner.)
>
> I would be grateful for any insight into possible approaches to solving
> this
> problem. I would also like to know it's infeasible or crazy. Also, as a
> newcomer to driver development I would appreciate any correction to any
> obvious misunderstandings on my part.
>
> Thanks very much!
>
> Debugger Output:
>
> kd> !drvobj kbdclass
> Driver object (866fd5e8) is for:
> \Driver\Kbdclass
> Driver Extension List: (id , addr)
>
> Device Object list:
> 860a5030 86697030 866fe030
>
> kd> !devstack 860a5030
> !DevObj !DrvObj !DevExt ObjectName
> 8621d020 \Driver\Ctrl2cap 8621d0d8
>> 860a5030 \Driver\Kbdclass 860a50e8 KeyboardClass2
> 86535020 \Driver\kbdhid 865350d8
> 864e20f8 \Driver\hidusb 864e21b0 0000005d
> !DevNode 86699518 :
> DeviceInst is "HID\ Vid_065a&Pid_0001\6&223cc4d1&0&0000"
> ServiceName is "kbdhid"
>
> kd> !devstack 86697030
> !DevObj !DrvObj !DevExt ObjectName
> 86277020 \Driver\Ctrl2cap 862770d8
>> 86697030 \Driver\Kbdclass 866970e8 KeyboardClass1
> 864e75a8 \Driver\kbdhid 864e7660
> 86792920 \Driver\hidusb 867929d8 0000005b

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> !DevNode 86276468 :
> DeviceInst is "HID\VID_413c&PID_2003\6&15c34ccb&0&0000"
> ServiceName is "kbdhid"
>
>

• *Follow-Ups:*

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- ◆ **Re: Identify USB Keyboard Device Instance For Each Character Dynam**
 ◇ From: cdavis999

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