

Forum: [綜合應用](#)

Topic: USB HID Telephony Device

Subject: Re: USB HID Telephony Device

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usb_headset 看起來好像不是HID 的裝置,因為沒有看到類似HID的Descriptor
我現在做法是用keyboard 的範例來改, descriptor 用USB-IF 的Descriptor Tool 產生Telephony
descriptor, 然後直接替換掉Keyboard 範例原本的descriptor, 載入後, 電腦指認出是HID裝置, 認
不出是Telephony, Telephony Descriptor 如下

```
hid_kbd_report_desc = {
    {
        //0x95, 0x01,    /*REPORT_COUNT (1)*/
        0x05, 0x0B,    /*USAGE_PAGE (Telephony Devices)*/
        0x09, 0x01,    /*USAGE (Phone)*/
        0xA1, 0x01,    /*COLLECTION (Application)*/
        0x09, 0x07,    /*USAGE (Programmable Button)*/
        0xA1, 0x02,    /*COLLECTION (Logical)*/
        0x05, 0x09,    /*USAGE_PAGE (Button)*/
        0x19, 0x01,    /*USAGE_MINIMUM (Button 1)*/
        0x29, 0x06,    /*USAGE_MAXIMUM (Button 6)*/
        0x75, 0x03,    /*REPORT_SIZE (3)*/
        0x15, 0x01,    /*LOGICAL_MINIMUM (1)*/
        0x25, 0x06,    /*LOGICAL_MAXIMUM (6)*/
        0x81, 0x00,    /*INPUT (Data,Ary,Abs)*/
        0xC0,    /*END_COLLECTION*/
        0x05, 0x0B,    /*USAGE_PAGE (Telephony Devices)*/
        0x09, 0x06,    /*USAGE (Telephony Key Pad)*/
        0xA1, 0x02,    /*COLLECTION (Logical)*/
        0x05, 0x09,    /*USAGE_PAGE (Button)*/
        0x19, 0x01,    /*USAGE_MINIMUM (Button 1)*/
        0x29, 0x0C,    /*USAGE_MAXIMUM (Button 12)*/
        0x25, 0x0C,    /*LOGICAL_MAXIMUM (12)*/
        0x75, 0x04,    /*REPORT_SIZE (4)*/
        0x81, 0x00,    /*INPUT (Data,Ary,Abs)*/
        0xC0,    /*END_COLLECTION*/
        0x05, 0x0B,    /*USAGE_PAGE (Telephony Devices)*/
        0x09, 0x20,    /*USAGE (Hook Switch)*/
        0x09, 0x29,    /*USAGE (Alternate Function)*/
        0x09, 0x2C,    /*USAGE (Conference)*/
        0x09, 0x25,    /*USAGE (Transfer)*/
        0x09, 0x26,    /*USAGE (Drop)*/
        0x09, 0x23,    /*USAGE (Hold)*/
        0x09, 0x2B,    /*USAGE (Speaker Phone)*/
        0x25, 0x07,    /*LOGICAL_MAXIMUM (7)*/
        0x75, 0x03,    /*REPORT_SIZE (3)*/
        0x81, 0x00,    /*INPUT (Data,Ary,Abs)*/
    }
}
```

```

0x05, 0x0C, /*USAGE_PAGE (Consumer Devices)*/
0x09, 0xE0, /*USAGE (Volume)*/
0x15, 0xFF, /*LOGICAL_MINIMUM (-1)*/
0x25, 0x01, /*LOGICAL_MAXIMUM (1)*/
0x75, 0x02, /*REPORT_SIZE (2)*/
0x81, 0x02, /*INPUT (Data,Var,Abs)*/
0x75, 0x04, /*REPORT_SIZE (4)*/
0x81, 0x03, /*INPUT (Cnst,Var,Abs)*/
0x15, 0x00, /*LOGICAL_MINIMUM (0)*/
0x25, 0x01, /*LOGICAL_MAXIMUM (1)*/
0x05, 0x08, /*USAGE_PAGE (LEDs)*/
0x09, 0x3A, /*USAGE (Usage Selected Indicator)*/
0xA1, 0x02, /*COLLECTION (Logical)*/
0x05, 0x0B, /*USAGE_PAGE (Telephony Devices)*/
0x09, 0x07, /*USAGE (Programmable Button)*/
0xA1, 0x02, /*COLLECTION (Logical)*/
0x05, 0x09, /*USAGE_PAGE (Button)*/
0x19, 0x01, /*USAGE_MINIMUM (Button 1)*/
0x29, 0x02, /*USAGE_MAXIMUM (Button 2)*/
0x95, 0x02, /*REPORT_COUNT (2)*/
0x91, 0x02, /*OUTPUT (Data,Var,Abs)*/
0xC0, /*END_COLLECTION*/
0xC0, /*END_COLLECTION*/
0x05, 0x08, /*USAGE_PAGE (LEDs)*/
0x09, 0x3B, /*USAGE (Usage In Use Indicator)*/
0xA1, 0x02, /*COLLECTION (Logical)*/
0x05, 0x0B, /*USAGE_PAGE (Telephony Devices)*/
0x09, 0x07, /*USAGE (Programmable Button)*/
0xA1, 0x02, /*COLLECTION (Logical)*/
0x05, 0x09, /*USAGE_PAGE (Button)*/
0x19, 0x01, /*USAGE_MINIMUM (Undefined)*/
0x29, 0x06, /*USAGE_MAXIMUM (Undefined)*/
0x95, 0x06, /*REPORT_COUNT (6)*/
0x91, 0x02, /*OUTPUT (Data,Var,Abs)*/
0xC0, /*END_COLLECTION*/
0x05, 0x0B, /*USAGE_PAGE (Telephony Devices)*/
0x09, 0x29, /*USAGE (Alternate Function)*/
0x95, 0x01, /*REPORT_COUNT (1)*/
0x91, 0x02, /*OUTPUT (Data,Var,Abs)*/
0xC0, /*END_COLLECTION*/
0x05, 0x08, /*USAGE_PAGE (LEDs)*/
0x09, 0x3C, /*USAGE (Usage Multi Mode Indicator)*/
0xA1, 0x02, /*COLLECTION (Logical)*/
0x05, 0x0B, /*USAGE_PAGE (Telephony Devices)*/
0x09, 0x73, /*USAGE (Message)*/
0xA1, 0x02, /*COLLECTION (Logical)*/
0x05, 0x08, /*USAGE_PAGE (LEDs)*/
0x09, 0x3D, /*USAGE (Indicator On)*/
0x09, 0x40, /*USAGE (Indicator Fast Blink)*/

```

```
0x09, 0x41, /*USAGE (Indicator Off)*/
0x75, 0x02, /*REPORT_SIZE (2)*/
0x91, 0x00, /*OUTPUT (Data,Ary,Abs)*/
0xC0, /*END_COLLECTION*/
0xC0, /*END_COLLECTION*/
0x75, 0x05, /*REPORT_SIZE (5)*/
0x81, 0x03, /*INPUT (Cnst,Var,Abs)*/
0xC0 /*END_COLLECTION*/
}
};
```