

# Re: OHCI IssueBulkTransfer problem

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*Source:*

<http://www.tech-archive.net/Archive/WindowsCE/microsoft.public.windowsce.platbuilder/2006-08/msg01225.html>

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- *From:* "David Liao \ (MS)" <[davli@xxxxxxxxxxxxxxxxxxxxxxxx](mailto:davli@xxxxxxxxxxxxxxxxxxxxxxxx)>
  - *Date:* Thu, 31 Aug 2006 10:36:53 -0700
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If you have USB Bus Trace, it would be easier to identify the problem. From your description, it looks like it is certainly Data Toggle issue, the ResetPipe suppose to call SetClearFeature to clear ENDPOINT\_HALT.

There are two possibility here, one is SetClearFeature is never send out by USB OHCI or SetClearFeature is send out but your function device ignor it.

To idenditfy which one, you need USB Bus trace.

David Liao

"MrTom" <[thomas.nelson@xxxxxxxxxxxxx](mailto:thomas.nelson@xxxxxxxxxxxxx)> wrote in message  
[news:1156977597.155252.274350@xx](mailto:news:1156977597.155252.274350@xx)

Here is the order of events. Each packet is one or more ascii characters.

```
IssueBulkTransfer( ...USB_IN_TRANSER | USB_SHORT_TRANSFER_OK...)
//Pack sent before transfer timeout and received and returned
IssueBulkTransfer( ...USB_IN_TRANSER | USB_SHORT_TRANSFER_OK...)
//Pack sent before transfer timeout and received and returned
IssueBulkTransfer( ...USB_IN_TRANSER | USB_SHORT_TRANSFER_OK...)
//Pack sent before transfer timeout and received and returned
```

```
IssueBulkTransfer( ...USB_IN_TRANSER | USB_SHORT_TRANSFER_OK...)
// Transfer is allowed to timeout
```

```
IssueBulkTransfer( ...USB_IN_TRANSER | USB_SHORT_TRANSFER_OK...)
//Pack sent before transfer timeout but nothing is received/returned so
we get another
// timeout The USB Analyzer shows pack was sent over wire with correct
toggle and
// host replied with ACK If a second packet is sent before the timeout
it will be received
// and returned or if we can let it timeout again and it will be
received and returned by
// the next IssueBulkTransfer
```

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IssueBulkTransfer( ...USB\_IN\_TRANSER | USB\_SHORT\_TRANSFER\_OK...)  
//Pack sent and received/returned before transfer timeout

When the packet that is lost is sent, CHW::UsbInterruptThread( ) never wakes up, in otherwords m\_hUsbInterruptEvent is never signaled until the second packet is sent, yet the USB Analyzer shows the lost packet was correctly transfered over the wire.

The packet is only lost if the number of received IssueBulkTransfers before the timeouted out transfer was an odd number.

-Tom

David Liao (MS) wrote:

My opinion, after you have timeout on transfer, Data integrity has gone. You need re-sync anyway. This because you are cancelling the transfer, You don't know cancel transfer has data or not.

From your describe, either data has get into your canceled transfer or DATA toggle is no long sync between the Host and Function.

You probably should take look at how data is present on the USB Bus by using USB Bus Analyzer.

David Liao

"MrTom" <thomas.nelson@xxxxxxxxxxxx> wrote in message [news:1156960905.010409.162890@xx](mailto:news:1156960905.010409.162890@xx)

I have tried ResetPipe after a timeout but it has no effect. When we look at the traffic on the wire with a monitor the data looks to be transfering with no NAKs and no lost data and the toggle bit looks fine even when I do not do a ResetPipe.

Tom

David Liao (MS) wrote:

Did you use com client liberay which located at public\common\oak\drivers\usb\class\common ? if Yes, did you know after timeout, the

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transfer will be close  
automaticall?. If trasfer closed without  
completion, it means it  
cancel  
current driver.  
So, after cancelling, you have to reset the  
pipe in order to sync with  
you  
usb client side(because of data toggle bit).

David Liao  
"MrTom" <thomas.nelson@xxxxxxxxxxxx>  
wrote in message  
[news:1156793859.539202.180430@xx](mailto:news:1156793859.539202.180430@xx)

We are running into a  
problem with  
IssueBulkTransfer on the  
OHCI  
stack  
when trying to talk with the  
TI TUSB3410 RS-232 to  
USB device under  
Windows Mobile 5.0.

I do IssueBulkTransfer with  
USB\_IN\_TRANSER |  
USB\_SHORT\_TRANSFER\_OK  
flags set. I get the first  
packet and all packets as  
long as the  
data  
keeps coming. As soon as  
the data pauses and I get a  
timeout on the  
IssueBulkTransfer I may or  
may not get the next packet.

If I had received an even  
number of packets before  
the timeout I  
will  
not lose data. If I had  
received an odd number of  
packets before the  
timeout I will lose the first  
packet after the timeout.

I am testing by connecting  
the RS-232 end of the  
device to a

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terminal  
emulator and I send a single  
character in each packet.

This works under the UHCI  
stack on one of our other  
platforms.

I am wondering if this is the  
same problem reported here  
earlier  
under  
the subject: "OHCI bug in  
CTransfer". That post ended  
saying the  
problem was fixed in CE6  
Beta. I did a diff with the  
CE6 Beta OCHI  
code  
and so far I don't see  
anything obvious that would  
fix this problem.

Any comments would be  
greatly appreciated.

Tom