Re: Find rare bugs − SEH and c++ exception handling

Source:
http://www.tech−archive.net/Archive/PocketPC/microsoft.public.pocketpc.developer/2006−05/msg00015.html

- *From*: "Markus Hofer" <mh@xxxxxxxxxxx>
- *Date*: Mon, 1 May 2006 16:32:58 +0200

Thanks a lot for your answer. I have already lots of assertions in place.
Unfortunately the bug occurs only "on the read" it's not that easy (or convenient) to run under the debugger (although I will do this as last resort). As the problem seems to appear in a background thread which has some real time requirements, I can't introduce MessageBoxes because they would make the application unusable.
It really seems that I neet a lot of patience.

Markus

> 2) add ASSERTs to check pointers and array references
> 3) add MessageBoxes to keep track of the program so you can find where in your code the symptom shows
> 4) patience. lots and lots of patience

<r_z_aret@xxxxxxxxxxxx> wrote in message
news:c51552h9a6r1nojlthfpk2u1qd09obrppi@xxxxxxxxxx

> Such pain is more common than any of us would like to admit. The basic cause is often a bad pointer or code that cleans up an array incorrectly. And the symptoms commonly occur far away from the actual bug. Some common methods:
> 1) run under a debugger and hope the debug window provides sufficient feedback. Adding calls to OutputDebugString will help
> 2) add ASSERTs to check pointers and array references
> 3) add MessageBoxes to keep track of the program so you can find where in your code the symptom shows
> 4) patience. lots and lots of patience
>
> I just used google (http://groups.google.com/advanced_group_search) to look up
> debug release
> in this newsgroup and got 242 hits. I think at least a few provide relevant and useful info.

On Fri, 28 Apr 2006 09:40:25 −0700, "Barry Bond [MS]" <barrybo@xxxxxxxxxxxxx> wrote:

> If the bug repros on the DeviceEmulator, then you might have some luck if you configure the emulator to display its debug console window for serial port 1. When the kernel detects an application exception, it logs

critical

> data about the exception out to the device's serial port.
>
> Barry
>
> "Markus Hofer" <mh@xxxxxxxxxxx> wrote in message news:u90stVsaGHA.4424@xxxxxxxxxxxxxxxxxxxxxxx
>
>> I'm currently hunting a "rare" bug in a MFC PocketPC program, which

causes

>> the program to just "disapear" from the screen. I'm using VS2005 and

the

>> program targets PocketPC 2003 devices. The same Executable also runs on
>> WM5
>> PocketPCs.
>>
>> The bug is not reproducible and occours without user interaction (there
>> are
>> some background threads in the application). How can I find such a bug?
>> I checked lots of documentation and googled on the Web, but could not

find

>> good method:
>>
>> a) Postmortem debugging / Dr. Watson
>> On WM5 it seems to be possible to write a crash dump (resp. Dr.

Wastson

Log) and to do
some postmortem debugging using the dump. Unfortunately all the
documentation I found
referenced Platform Builder but none mentioned VS2005. So I'm not

sure

whether it is at all
possible to do this with VS2005

b) Exception Handling
VS2005 supports SEH as well as C++ exception handling. SEH would
probably
report the crash,
but does not unmangel the stack (destructors are not called) which is

a

problem in multithreaded
programs (locks!).
C++ exceptions are not really helpful to find this bug, because it

does

not give you information about
the exception.
In the WIN32 Api there exists the function _set_se_translator that
allows
you to handle a SEH exception as
C++ exception. Unfortunately this function does not seem to exist for
the
PocketPC.

So whatever I tried, it did not work as expected. All ideas, comments,
recommendations and so ob are highly
appreciated.

Markus

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To reply to me, remove the underscores (_) from my email address (and please indicate which newsgroup and message).

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