Subject: Problem with UPP_HEAP and multithread
Posted by kov_serg on Thu, 08 Oct 2009 08:58:45 GMT
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I have serious problem with Upp memory allocation in multithreads. This problem dissapear if I don't use UPP_HEAP.

If I allocate, reallocate and free memory in different thread, I have strange bugs. If I force Defs.h "flagUSEMALLOC" problem doesn't occure. I think this is some kind of bug with heap monitor.

The simples example to reproduce this bug attached in file test.cpp (with option MT)

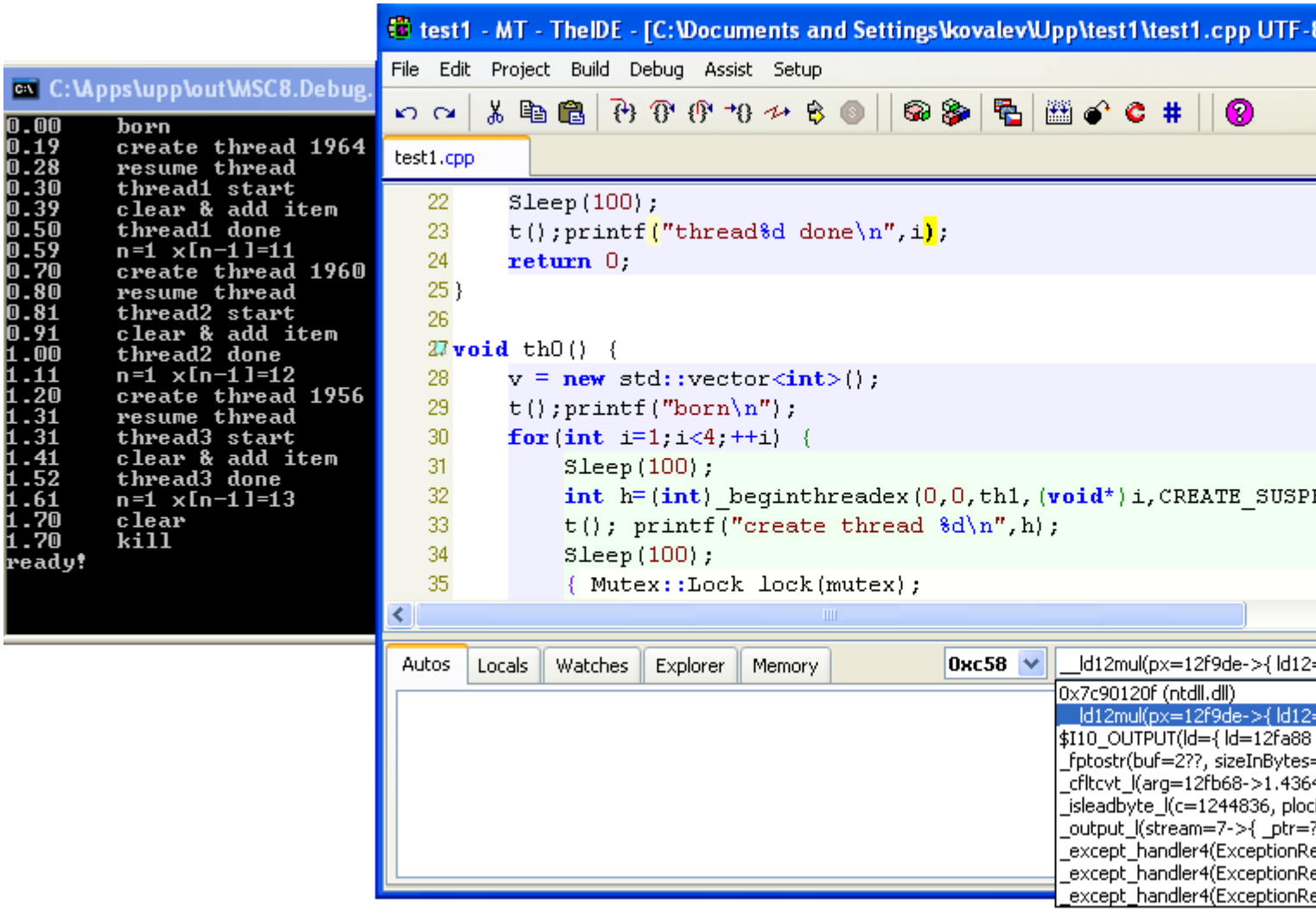
If I call th0(1) programm works fine.
But if argument th0(2) or more it will stop debugger in various places with out visible reason.
In real programm it cause unhandled exception when gui terminates or even fail on vector<>.clear inside GUI thread o_0.

hz1.png -- dubugger stop in unknown place without visible reason. (test.cpp)
hz2.png -- screen shot from other program when this problem occure. (real project) I have exceptions from delete operator. Usually from vector<>.clear(). Exception may occure on different delete operators. And behaviour is very unstable.

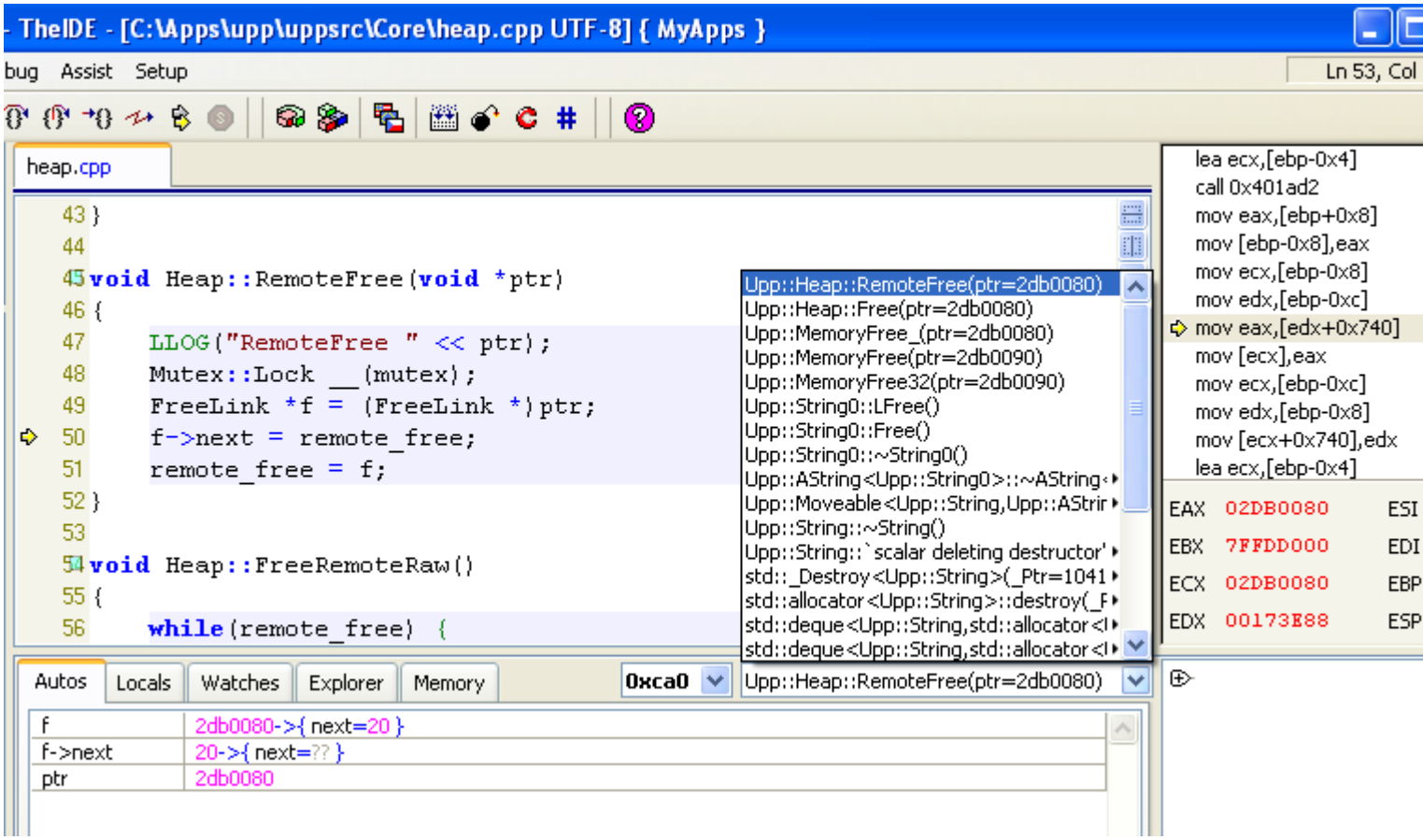
Upp version: SVN.643

File Attachments

1) test.cpp, downloaded 459 times
2) hz1.PNG, downloaded 692 times



3) hz2.PNG, downloaded 730 times



Subject: Re: Problem with UPP_HEAP and multithread
Posted by kov_serg on Thu, 08 Oct 2009 09:00:30 GMT
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Sorry wrong tesp.cpp

File Attachments
1) test1.cpp, downloaded 441 times

Subject: Re: Problem with UPP_HEAP and multithread
Posted by mirek on Thu, 08 Oct 2009 09:39:07 GMT
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Please, compiler version...

And you DO have MT flag in main config, rigth?

Mirek

Subject: Re: Problem with UPP_HEAP and multithread
Posted by mirek on Thu, 08 Oct 2009 09:39:37 GMT
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kov_serg wrote on Thu, 08 October 2009 04:58Upp version: SVN.643

Ehm, could you try something more recent?

Mirek

Subject: Re: Problem with UPP_HEAP and multithread
Posted by mirek on Thu, 08 Oct 2009 09:47:49 GMT
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Tried with MSC9 and MSC71, no crash

BTW, using beginthreadx has a problem with UPP_HEAP -> there is per-thread heap cache that needs to be freed at the and of thread, which is not possible to implement automagically with beginthreadx.

Use Thread class instead. (Or, if you insist, call MemoryFreeThread at the end of thread).

Subject: Re: Problem with UPP_HEAP and multithread
Posted by kov_serg on Thu, 08 Oct 2009 10:02:53 GMT
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OS: WindowsXP SP3 32bit
Compiler: Microsoft (R) 32-bit C/C++ Optimizing Compiler Version 14.00.50727.762 for 80x86

I release 1607 the situation is the same.
??? In designer ancors don't work any more while resize. Why?
They work in SVN.643

Thanks luzr.
But MemoryFreeThread not defined in all versions of build

Subject: Re: Problem with UPP_HEAP and multithread
Posted by kov_serg on Thu, 08 Oct 2009 10:06:59 GMT
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With MemoryFreeThread works perfect. Thanks!

Subject: Re: Problem with UPP_HEAP and multithread
Posted by mrjt on Thu, 08 Oct 2009 10:25:31 GMT
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kov_serg wrote on Thu, 08 October 2009 11:02
??? In designer ancors don't work any more while resize. Why?
They work in SVN.643

There's a new button up at the top (next the grid and red 'ignore min size' buttons) that disables springs.

Subject: Re: Problem with UPP_HEAP and multithread
Posted by mirek on Thu, 08 Oct 2009 10:53:29 GMT
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kov_serg wrote on Thu, 08 October 2009 06:06With MemoryFreeThread works perfect. Thanks!

That is quite weird and very likely just accidental.

Omitting MemoryFreeThread just avoids ugly silent memory leak, but should not affect the stability.

-> I recommend more testing.

Mirek

Subject: Re: Problem with UPP_HEAP and multithread
Posted by mirek on Thu, 08 Oct 2009 10:57:29 GMT
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BTW, are you 100% sure that printf is reentrant/MT safe?

Maybe you can try just to add mutex for printf...

Mirek

Subject: Re: Problem with UPP_HEAP and multithread
Posted by kov_serg on Sun, 11 Oct 2009 08:31:06 GMT
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Here is printf and Sleep only for simplicity. In real code there is no printf at all. Just operations with array mutex and events. And if UPP_HEAP disabled program working stable. This is indeed overloaded new and delete operators comes into play. In case then MemoryFreeThread called before thread end it works fine, but without it it begins falling into a parts after second thread

creation.