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Subject: FileSel takes quite a lot of CPU on Windows

Posted by [Tom1](#) on Fri, 22 Apr 2022 21:32:56 GMT

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Hi,

Using FileSel (e.g. FileSel::ExecuteOpen()) takes a whole lot of CPU cycles on the background and it continues to dominate one CPU core for about half a minute after opening the FileSel dialog. This is on Windows. No such issue on Linux. You can see it on the Windows Task Manager by observing CPU usage (of e.g. UWord) when opening a file using FileSel. I looked back and noticed that this was already present in 2021.1 and remains there in 2022.1rc3.

Best regards,

Tom

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Subject: Re: FileSel takes quite a lot of CPU on Windows

Posted by [mirek](#) on Wed, 18 May 2022 08:11:01 GMT

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Tom1 wrote on Fri, 22 April 2022 23:32Hi,

Using FileSel (e.g. FileSel::ExecuteOpen()) takes a whole lot of CPU cycles on the background and it continues to dominate one CPU core for about half a minute after opening the FileSel dialog. This is on Windows. No such issue on Linux. You can see it on the Windows Task Manager by observing CPU usage (of e.g. UWord) when opening a file using FileSel. I looked back and noticed that this was already present in 2021.1 and remains there in 2022.1rc3.

Best regards,

Tom

Cannot reproduce.

That said, FileSel is loading icons for .exe files in the background. Could that be an explanation?

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Subject: Re: FileSel takes quite a lot of CPU on Windows

Posted by [Tom1](#) on Wed, 18 May 2022 10:30:14 GMT

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mirek wrote on Wed, 18 May 2022 11:11

That said, FileSel is loading icons for .exe files in the background. Could that be an explanation? It might... I did some testing and found out that if I have LAN enabled (as I normally do), the excessive CPU loading is present. If I disable network access, there is no such problem. It is not enough if I just disconnect the network drive mappings (SMB).

[EDIT: Irrelevant question removed.]

Best regards,

Tom

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Subject: Re: FileSel takes quite a lot of CPU on Windows

Posted by [Tom1](#) on Wed, 18 May 2022 11:42:08 GMT

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Mirek,

OK, now I can see it: I have a shortcut (link) on my desktop to an exe file on my server. So, the shortcut ("program1.exe - shortcut.lnk") points to "\\nas\share\program.exe". When I open FileSel, this causes the enormous CPU loading for quite some time.

If I map the \\nas\share to a network drive s: and change the shortcut to point to s:\program.exe, then the scanning proceeds much faster, just in a couple of seconds of CPU core domination.

How about making exe file icon loading optional through user configurable flag, such as: FileSel& LoadExeFileIcons(bool f); ?

BTW: Is it essential to load icons for network files at all?

Best regards,

Tom

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Subject: Re: FileSel takes quite a lot of CPU on Windows

Posted by [Tom1](#) on Wed, 18 May 2022 13:01:26 GMT

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Mirek,

It looks like a flag to avoid lookup of exe icons helps here. It needs just four lines of code added/changed in FileSel.

Add to class FileSel in FileSel.h:

```
bool load_exe_icons;
```

```
FileSel& LoadExeIcons(bool b = true)    { load_exe_icons = b; return *this; }
```

Add if condition to end of FileSel::SearchLoad() in FileSel.cpp:  
if(load\_exe\_icons) lazyicons.Start(list, d, WhenIcon);

Reset flag default value added in FileSel::FileSel():  
load\_exe\_icons=true;

For my use, I would nearly always use LoadExelcons(false); -- even as default -- as my default usage is to open documents, not exe files. However, setting load\_exe\_icons=true; by default, retains original default behavior.

Best regards,

Tom

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Subject: Re: FileSel takes quite a lot of CPU on Windows  
Posted by [mirek](#) on Thu, 19 May 2022 06:57:34 GMT  
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Tom1 wrote on Wed, 18 May 2022 13:42Mirek,

OK, now I can see it: I have a shortcut (link) on my desktop to an exe file on my server. So, the shortcut ("program1.exe - shortcut.lnk") points to "\\nas\share\program.exe". When I open FileSel, this causes the enormous CPU loading for quite some time.

If I map the \\nas\share to a network drive s: and change the shortcut to point to s:\program.exe, then the scanning proceeds much faster, just in a couple of seconds of CPU core domination.

How about making exe file icon loading optional through user configurable flag, such as: FileSel& LoadExeFileIcons(bool f); ?

BTW: Is it essential to load icons for network files at all?

Best regards,

Tom

Uhm, is this feature causing any problems? I mean, ok, CPU is high (for whatever reason, but my guess it is windows fault), but it runs in background and does not affect main thread. And I believe users do expect to see .exe icons after all...

Mirek

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Subject: Re: FileSel takes quite a lot of CPU on Windows  
Posted by [Tom1](#) on Thu, 19 May 2022 07:48:00 GMT

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Mirek,

I do understand that many/most users are happy with their applications when the computer interacts with them in a timely manner and show a nice GUI. But in my case some of my applications work on various timing sensitive external data streams (data-acquisition, network, serial, even low-latency audio processing) that just cannot wait for CPU without unwanted consequences. Therefore, I prefer to minimize all unnecessary loading of any system resources to ensure that the timing sensitive background tasks proceed without glitches.

I guess the flag solution (`LoadExelcons()`) shown above would serve both worlds.

Additionally, in any case it would not hurt to stop the background icon harvesting when the dialog is closed by the user.

Best regards,

Tom

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Subject: Re: FileSel takes quite a lot of CPU on Windows

Posted by [mirek](#) on Thu, 19 May 2022 07:55:12 GMT

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Tom1 wrote on Thu, 19 May 2022 09:48

Additionally, in any case it would not hurt to stop the background icon harvesting when the dialog is closed by the user.

Cannot do that - thread is deep in Win32, there is not good way how to interrupt it.

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Subject: Re: FileSel takes quite a lot of CPU on Windows

Posted by [Tom1](#) on Thu, 19 May 2022 08:30:32 GMT

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mirek wrote on Thu, 19 May 2022 10:55Tom1 wrote on Thu, 19 May 2022 09:48

Additionally, in any case it would not hurt to stop the background icon harvesting when the dialog is closed by the user.

Cannot do that - thread is deep in Win32, there is not good way how to interrupt it.  
OK, I see.

Hope you can include the `LoadExelcons()` though.

Best regards,

Tom

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Subject: Re: FileSel takes quite a lot of CPU on Windows

Posted by [mirek](#) on Thu, 19 May 2022 08:33:03 GMT

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FileSel::NoExelcons

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Subject: Re: FileSel takes quite a lot of CPU on Windows

Posted by [Tom1](#) on Thu, 19 May 2022 09:08:31 GMT

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Very good! Thanks Mirek!

Best regards,

Tom

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