

## Windows 7, bitmap fonts and Microsoft Dynamics GP



David Musgrave 24 Nov 2009 5:00 PM

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I have a story to tell..... and it even has a happy ending.

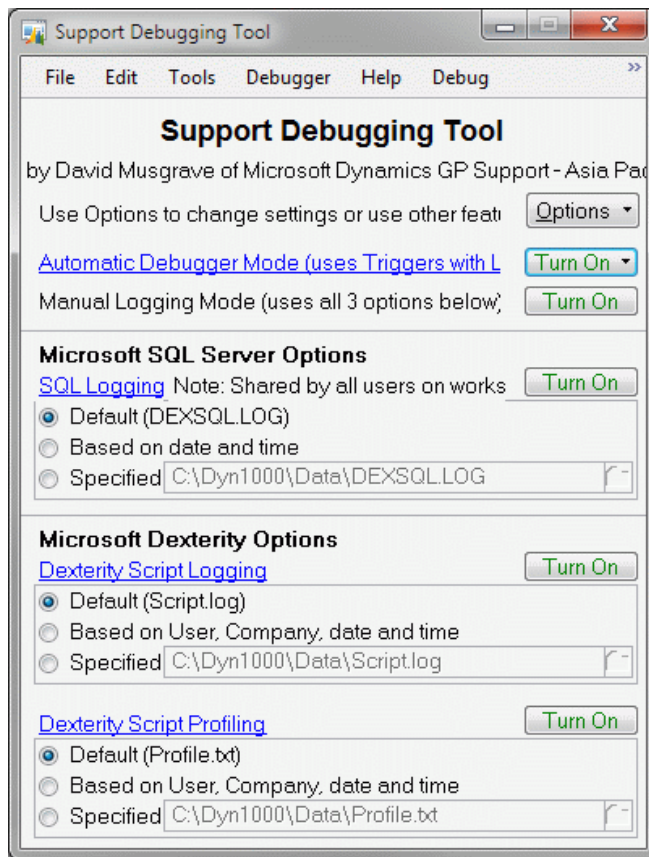
During the last week of August 2009, I was over in Sydney at the Microsoft Office in North Ryde for meetings and to catch up with my Australian based colleagues on the Asia Pacific support team for Microsoft Dynamics GP. While there I downloaded the DVD images for Windows 7; both the internal Microsoft IT Windows 7 Enterprise build and the Windows 7 Ultimate RTM build.



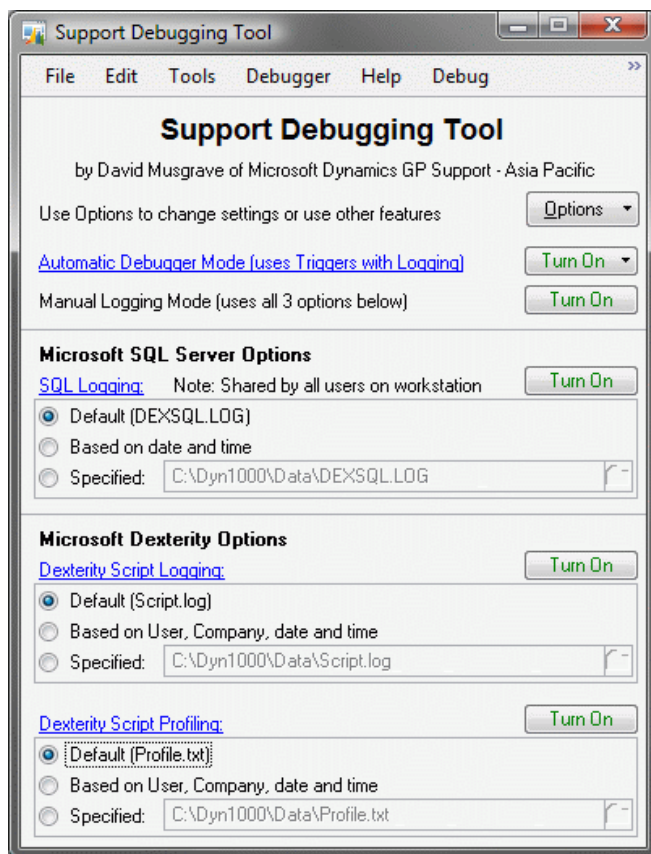
When I returned home in early September, I rebuilt my laptop with Windows 7 using the internal Windows 7 Enterprise install. I wrote about this at the time: [Windows 7 and Microsoft Dynamics GP](#).

What I did not mention in the previous article is that I noticed that the font size in Microsoft Dynamics GP (and some other older applications) was incorrect. Eventually (after two weeks of not being able to fix the font issue), I rebuilt my machine with the Windows 7 Ultimate install and the problem was gone. At the time I believed that it was somehow related to the internal build only and so would not affect people outside of Microsoft. Thus there was no reason to write about it publically on the blog.

Here is an example of what I mean, using the main window of my favourite add on product, the [Support Debugging Tool for Microsoft Dynamics GP](#). I am not biased really.... :-)



The window should look like this:



The issue affects the Dexterity "System" font used by Microsoft Dynamics GP. It has also shown up in some older applications which use the same font. This font is actually the bitmap MS Sans Serif font at the Windows level but is called "System" in the Dexterity development environment. Most newer applications use fonts as specified by the Window's themes and so do not have any issues. Note there is a font at the Windows level called "System", but that is not related to this issue.

In the screenshots above, you will notice that the prompts and fields on the window, which use the MS Sans Serif font, are displayed a couple of points bigger than they should be, this causes the writing to get cut off and the window to look ugly. Also note that the fonts in the window title bar, the menu bar and the heading are the same size in both screen shots and that they are smoothed using ClearType... this is because they are using TrueType scalable fonts and not a bitmapped font.

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Moving forward in time about 3 months.....

I came across a [newsgroup post](#) in which Andrew Cooper mentioned that the fonts on his system were bigger than they should be. This sounded very familiar and meant that the issue was not limited to inside Microsoft and so would need to be investigated again.

Below is a summary of what is happening and the details of the fix required. Thanks to Peter Constable of the Windows 7 Development team for helping explain what was happening.

Research showed that many users with high resolution monitors (particularly LCD flat screens) were running the monitors at lower resolutions than the native resolution of the screen. This was usually because at the native resolution, the fonts were becoming too small to read, so the users would decrease the resolution.

Windows includes a facility to increase font and window sizes while keeping the screen at the native resolution. This is a much better method of increasing the font size as it can produce much smoother images by using many more, smaller pixels. The really significant issue is, unlike CRT monitors, flat-panel LCD monitors have a fixed pixel size, or "resolution", and that when users change to a lower resolution (in order to increase text size) the system has to re-sample the lower-resolution display image into its fixed resolution causing a significant degradation in display quality: not just text looks worse, everything looks worse.

A change was made for Windows 7, to set the screen resolution to the monitor's native resolution and if the screen is over a certain resolution to default the font size 120 DPI (dots per inch). This is approximately 125% of normal 96 DPI (100%). When the system defaults to 125% DPI it also adjusts the MS Sans Serif font to be bigger. If the user then decides to set the DPI back to 100%, then TrueType fonts, which are scalable, adjust as expected. But the bitmap MS Sans Serif font does not: it remains at the larger size, hence our issue. This problem does not occur if Windows 7 keeps DPI at 100% when it is first installed.

In my case, the internal Windows 7 Enterprise build had an appropriate video driver for my machine and was able

to go to the native resolution (1920 x 1200) and default to 125% DPI. As my machine is older, when I installed the Windows 7 Ultimate build, it did not have the video driver and so defaulted to a lower resolution at 100% DPI. Once I installed the video driver from Windows Update, I was able to get to the native resolution and remain at 100% DPI. Because the initial setting was 100% DPI, the MS Sans Serif font was the correct size.

I realised that the issue is not an internal problem, but can occur on any Windows 7 system that has a high resolution monitor for which drivers can be found during the initial install and so default with 125% DPI. If the user returns to 100% DPI, the MS Sans Serif bitmap font will remain larger.

The solution took a while to find, but is really simple. We just need to make some registry changes and reboot.

**Note: The registry changes do not take effect until the system has been restarted. You MUST reboot after making the registry changes.**

The Registry setting HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Fonts\MS Sans Serif 8,10,12,14,18,24 is set to SSERIFF.FON on a system which started at 125% DPI. The setting is set to SSERIFE.FON on a system which started at 100% DPI. Notice that one character of the file name changes from F to E.

The actual font files used might be different on Windows systems for other languages or code pages. See the table below for the file names:

125% DPI font file	100% DPI font file
SSERIFF.FON	SSERIFE.FON
SSERIFFE.FON	SSERIFEE.FON
SSERIFFG.FON	SSERIFEG.FON
SSERIFFR.FON	SSERIFER.FON
SSERIFFT.FON	SSERIFET.FON
SSEF1255.FON	SSEE1255.FON
SSEF1256.FON	SSEE1256.FON
SSEF1257.FON	SSEE1257.FON
SSEF874.FON	SSEE874.FON

While we are fixing the MS Sans Serif font, we can also fix the MS Serif and Courier fonts. These are the Registry settings MS Serif 8,10,12,14,18,24 and Courier 10,12,15 values in the same registry key. See the table below for the file names:

125% DPI font file	100% DPI font file	125% DPI font file	100% DPI font file
SERIFF.FON	SERIFE.FON	COURF.FON	COURE.FON
SERIFFE.FON	SERIFEE.FON	COURFE.FON	COUREE.FON
SERIFFG.FON	SERIFEG.FON	COURFG.FON	COUREG.FON
SERIFFR.FON	SERIFER.FON	COURFR.FON	COURER.FON
SERIFFT.FON	SERIFET.FON	COURFT.FON	COURET.FON
SERF1255.FON	SERE1255.FON	COUF1255.FON	COUE1255.FON
SERF1256.FON	SERE1256.FON	COUF1256.FON	COUE1256.FON
SERF1257.FON	SERE1257.FON	COUF1257.FON	COUE1257.FON

To fix the system you need to change the settings to new file names (changing the appropriate letter from F to E) and reboot.

**Note: The registry changes do not take effect until the system has been restarted. You MUST reboot after making the registry changes.**

Below are the contents of Font Fix.reg file to make the changes for an English system:

```
Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Fonts]
"MS Sans Serif 8,10,12,14,18,24"="SSERIFE.FON"
"MS Serif 8,10,12,14,18,24"="SERIFE.FON"
"Courier 10,12,15"="COURE.FON"
```

**An archive of the Font Fix.reg file for an English system is also provided as an attachment at the bottom of this post.**

While I have focussed on the MS Sans Serif bitmap font (as this is the one used by Microsoft Dynamics GP) as well as the MS Serif and Courier fonts, this issue is likely to affect other bitmap fonts. Other bitmap fonts can be found in the \Windows\Fonts folder as \*.FON files and in the same registry location.

**Note:** Build 18 of the [Support Debugging Tool](#) adds a user interface for making the registry changes discussed in this post.

I hope you find this information helpful.

David

**02-Dec-2009:** Please see follow up post: [More on Windows 7, bitmap fonts and DPI settings](#).

**09-Dec-2009:** Further highlighting of the need to reboot after making registry changes.

**31-Aug-2014:** Build 18 of the Support Debugging Tool adds a user interface for making the registry changes discussed in this post.



Font Fix.zip

## Comments

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[Victoria Yudin](#) 25 Nov 2009 5:14 AM

David,

Thank you so much for documenting all of this!

-Victoria



[David Musgrave](#) 25 Nov 2009 4:08 PM

From DynamicAccounting.net

<http://msdynamicsgp.blogspot.com/2009/11/solving-win-7-font-issues-with-dynamics.html>



[Mielyn](#) 26 Nov 2009 1:08 PM

David, as always, you are a Dexterity leader for us. :) Thank you!



[IainS](#) 27 Nov 2009 10:13 PM

This has been driving me nuts for a few weeks now. I have been deploying Windows 7 images from a Windows Deployment Server and have recently resorted to disabling the video driver so that it did not default to 125% Font Size on installation to avoid the problem ever happening. However I could not fix existing affected machines.

Thank you so much for finding and documenting this.

Why oh why has MS done this without giving some hint as to why this is being done, and allowing us to turn it off if we don't want it.



[Igor](#) 8 Dec 2009 1:30 PM

Hi, i have done what is suggested and still get the same result. Large font displayed. What i did was: Downloaded the reg file, and clicked run.



[Patrick Roth](#) 8 Dec 2009 1:46 PM

And then rebooted?



[Val](#) 4 Jan 2010 11:51 PM

My system was OK till I did change the locale settings for non-Unicode programs, and everything became messed up.

The problem is solved partially with fontfix.reg, but unfortunately my Spyder 2 profile loader is now

using font that is bold or some other type of the font like System. I am going insane with it.



David Musgrave 5 Jan 2010 10:54 PM

Hi Val

If you can find a machine that has the fonts working as desired, you could export the entire registry settings from that machine and import them onto your machine, that should "fix" your issue.

Export your registry settings first as a backup.

David



Valentine 6 Jan 2010 8:07 AM

Hey , i had been experiencing this problem for a couple of days, i didnt know why , so i dw'ed ur regfix , it worked , and after a 3rd reboot it was back like b4 (messed up ) i used the fixer again it didnt work this time, so what i did was to check what exactly ur fix was rllly modifying so i followed the key , and GUESS WHAT ? i installed a game 2 days ago (lef4dead) and now the

[HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Fonts] had some fonts within with their current data value changed to WHERE i installed the game! and the fonts in question were those that u described in ur fix :O , now the problem is , what should i do from here ? should i change the data value like the others are ? ( 10 fonts currently have data value changed to the game location :S ) but i dont know the default values , or should i delete them ? (if i do that i know something terrible will happen ) thx in advance !



Valentine 6 Jan 2010 9:05 AM

AH , nvm , i just fixed it :D , i deleted the all the locations from the value data of every affected font and only let intact the name of the font in the value data xD woot !!



Robin 25 Feb 2010 12:47 PM

Hi. Recently I got the font issue on win7 as well. I tried your fix. it worked for google chrome and other windows apps only thing it didnt work for was Counterstrike-Source and as you can see my console is kinda messed up:

<http://img19.imageshack.us/img19/5748/47234840.jpg>

Impossible to read. I'm going nuts here. Tried alot of things different resolutions and reinstalling the game aswell. So what do you think I should do?



Patrick Roth 25 Feb 2010 1:43 PM

Robin,

The definitive solution would be to contact Microsoft Windows support as this type of issue would fall under their support team.

patrick



David Musgrave 25 Feb 2010 4:31 PM

Hi Robin

I would agree with my colleague Patrick that you should log a support case. However, I would first try the game developer to find out what font files and settings they are using.

Then you might be able to repair these files or settings to fix the console font.

Also, have you tried re-installing the games since applying the font fix from my blog post.

David



Alan Lewis 9 May 2010 2:25 PM

Thanks so much for this article. I upgraded to Windows 7 from XP and a Microsoft Access Database (which was displaying fine in XP) exhibited over-sized fonts in several locations.

It turns out that MS Sans Serif (which is used as a default font for displaying text on Access forms) was missing from the font list in MS Access (2003 version).

It was present just after installing Windows 7, but then when I changed the display fonts from 125% to 100% it disappeared from the font list in Access and screwed up several forms. Reinstalling Windows 7 made no difference.

I applied the registry fix you detailed above, and lo and behold MS Sans Serif has returned (the forms must have been using a substitute font - maybe Arial - which was too large). All is back to normal.

I have written this up on my blog at <http://calmit.org/ms-sans-serif-missing-windows-7/>

<http://calmit.org/>

Many thanks

Alan Lewis



Brent 12 Jul 2010 9:14 AM

Nice! Great fix. Thanks a lot for the detailed description.



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