

# Creating a Fonts Database for use With Solid Framework

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## Introduction

When a document is reconstructed from a PDF, Solid Framework must calculate the font specified in the PDF and determine if it is available for use. If not, Solid Framework finds an available font substitute with the closest matching metrics.

Until recently this was done using just the locally installed fonts. However if the conversion is performed on a machine with only a limited number of fonts (such as a Linux server) then a very poor result can occur.

To mitigate this problem a fonts database can be specified, in which case Solid Framework will use the fonts within the database rather than those that are locally installed.

This document describes how a fonts database can be created.

## Format of the fonts database

The fonts database is a PDF called "fonts.pdf<sup>1</sup>" that contains all of the characters from many different fonts.

## Creating the fonts file

Solid Documents has created a tool that can be used to create a fonts database file based on those fonts that are installed on the machine on which the tool is run. Once the tool has been run, the generated file can be used on another machine, and Solid Framework will be able to use those fonts without them being locally installed.

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<sup>1</sup> The fonts database file can be given an arbitrary name, but for the sake of this document we will assume that it is called fonts.pdf

## Creating a Fonts Database

### Requirements

The tool is designed to be used on a computer running a version of Windows that Solid Framework supports. For more information on this please see <https://solidframework.net/faq/>.







### Downloading the tool

The tool is called FontsToPdf.exe. There are a number of required libraries, and these have been added to a zipped archive that can be downloaded from

<https://downloads.soliddocuments.com/solidframework/fonts/fontstopdf.zip>

Download the file and extract the contents to a folder onto a Windows machine

Local Disk (C:) > FontsDatabase

Name	Date modified	Type	Size
 FontsToPdf.exe	21/08/2019 10:42 ...	Application	74 KB
 ImageTool.dll	21/08/2019 10:42 ...	Application extens...	967 KB
 msvcp120.dll	21/08/2019 10:42 ...	Application extens...	445 KB
 msvcr120.dll	21/08/2019 10:42 ...	Application extens...	949 KB
 PDFLibTool.dll	21/08/2019 10:42 ...	Application extens...	5,396 KB
 SPal.dll	21/08/2019 10:42 ...	Application extens...	804 KB

## Creating a Fonts Database

### Creating a fonts.pdf file based on locally installed fonts

Running FontsToPdf.exe will, by default, create a fonts database file that contains all of the fonts installed in the Windows Fonts folder on the local machine. Processing the individual fonts is fast, however creation of the PDF file that contains the fonts may take several minutes, so please be patient.

```
C:\FontsDatabase\FontsToPdf64.exe
519 of 546 processed
520 of 546 processed
521 of 546 processed
522 of 546 processed
523 of 546 processed
524 of 546 processed
525 of 546 processed
526 of 546 processed
527 of 546 processed
528 of 546 processed
529 of 546 processed
530 of 546 processed
531 of 546 processed
532 of 546 processed
533 of 546 processed
534 of 546 processed
535 of 546 processed
536 of 546 processed
537 of 546 processed
538 of 546 processed
539 of 546 processed
540 of 546 processed
541 of 546 processed
542 of 546 processed
543 of 546 processed
544 of 546 processed
545 of 546 processed
546 of 546 processed
The PDF file is creating...
```

After a few minutes the fonts.pdf will be created in the same folder. This is likely to be a large file.

Name	Date modified	Type	Size
fonts.pdf	21/08/2019 10:48 ...	Adobe Acrobat D...	460,470 KB
FontsToPdf.exe	21/08/2019 10:42 ...	Application	74 KB
ImageTool.dll	21/08/2019 10:42 ...	Application extens...	967 KB
msvcp120.dll	21/08/2019 10:42 ...	Application extens...	445 KB
msvcrl20.dll	21/08/2019 10:42 ...	Application extens...	949 KB
PDFLibTool.dll	21/08/2019 10:42 ...	Application extens...	5,396 KB
SPal.dll	21/08/2019 10:42 ...	Application extens...	804 KB

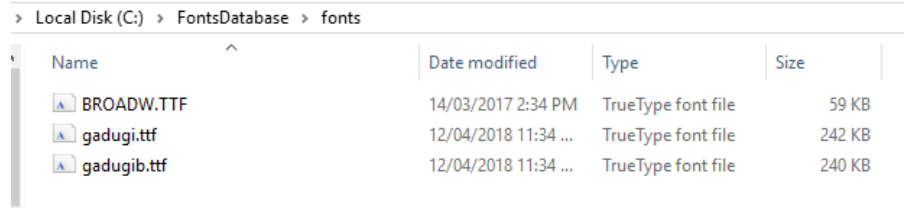
If you open this file in Solid PDF Tools then you can see the fonts that have been included.

Name	Type	Status
AgencyFB	Type0	Embedded
AgencyFB.Bold	Type0	Embedded
Algerian	Type0	Embedded
Areal	Type0	Embedded
Areal.Bold	Type0	Embedded
Areal.BoldItalic	Type0	Embedded
Areal.Italic	Type0	Embedded
ArealRoundedMTBold	Type0	Embedded
Bahrschrift	Type0	Embedded
BaskervilleOldFace	Type0	Embedded
Batang	Type0	Embedded
BatangChe	Type0	Embedded
Bauhaus93	Type0	Embedded
BellMT	Type0	Embedded
BellMT.Bold	Type0	Embedded
BellMT.Italic	Type0	Embedded
BerlinSansFB	Type0	Embedded
BerlinSansFB.Bold	Type0	Embedded
BerlinSansFBDemibold	Type0	Embedded
BernardMTC condensed	Type0	Embedded
BlackadderITC	Type0	Embedded
BodoniMT	Type0	Embedded
BodoniMT.Bold	Type0	Embedded

## Creating a Fonts Database

### Creating a fonts file for just a specific set of fonts

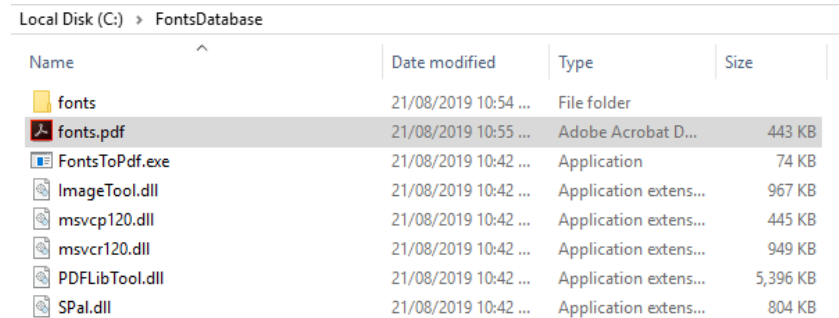
If you wish to create a database only containing specific fonts then copy these fonts to a folder called “fonts” located in the same folder as FontsToPdf.exe. This gives you control over exactly which fonts can be used when converting a PDF.



> Local Disk (C:) > FontsDatabase > fonts

Name	Date modified	Type	Size
BROADW.TTF	14/03/2017 2:34 PM	TrueType font file	59 KB
gadugi.ttf	12/04/2018 11:34 ...	TrueType font file	242 KB
gadugib.ttf	12/04/2018 11:34 ...	TrueType font file	240 KB

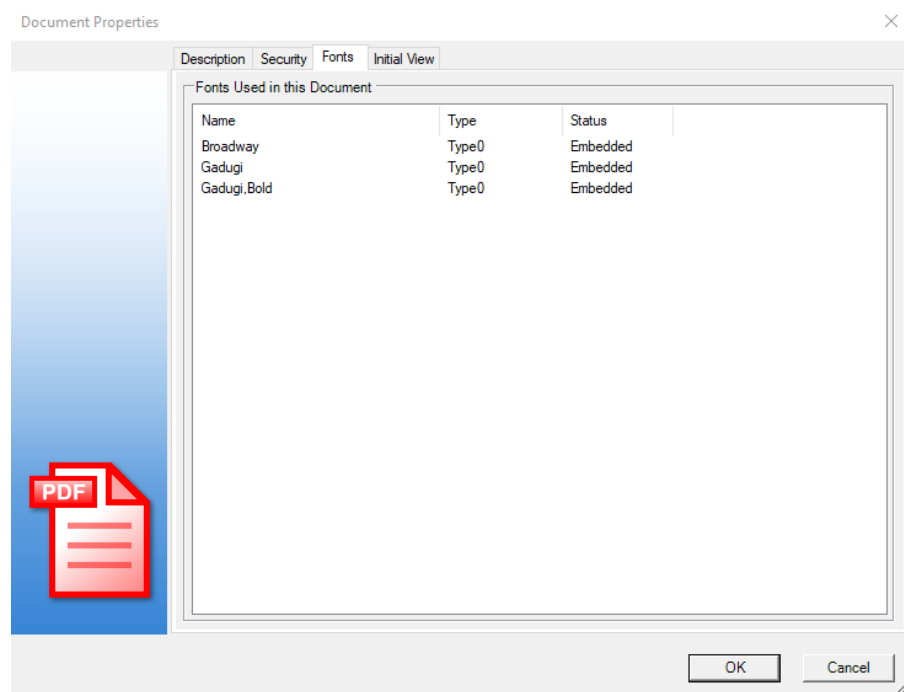
With fewer fonts included the fonts.pdf will be created more quickly and will be smaller.



Local Disk (C:) > FontsDatabase

Name	Date modified	Type	Size
fonts	21/08/2019 10:54 ...	File folder	
fonts.pdf	21/08/2019 10:55 ...	Adobe Acrobat D...	443 KB
FontsToPdf.exe	21/08/2019 10:42 ...	Application	74 KB
ImageTool.dll	21/08/2019 10:42 ...	Application extens...	967 KB
msvcp120.dll	21/08/2019 10:42 ...	Application extens...	445 KB
msvcr120.dll	21/08/2019 10:42 ...	Application extens...	949 KB
PDFLibTool.dll	21/08/2019 10:42 ...	Application extens...	5,396 KB
SPal.dll	21/08/2019 10:42 ...	Application extens...	804 KB

Opening this file in Solid PDF Tools will also show that it contains only the specified fonts.

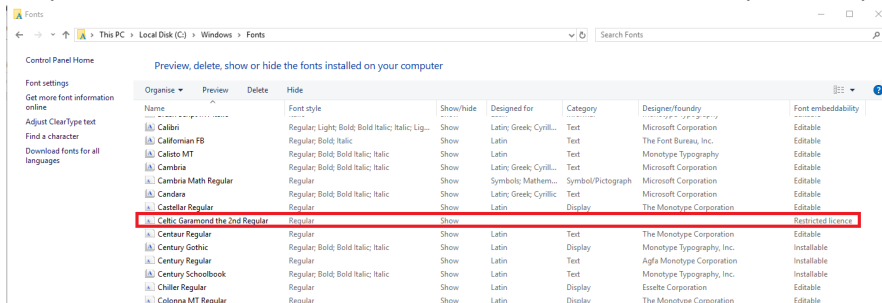


## Creating a Fonts Database

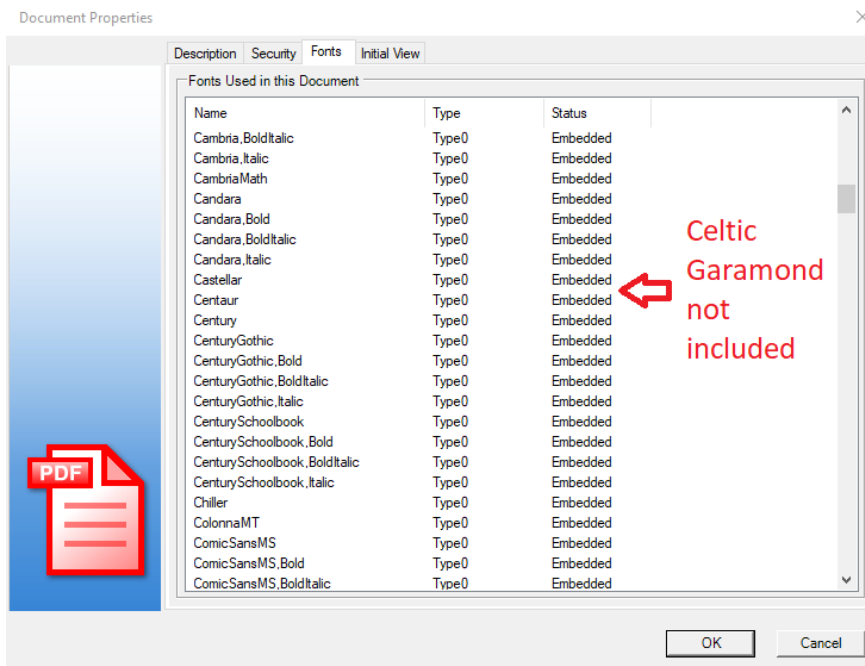
### Fonts that are not included in the Fonts Database

Font creators specify use permissions that can restrict the ability to embed the font.

Only fonts that are “Installable”, “Editable” or with “Print and preview” permissions will be embedded.



If Font Embeddability is “Restricted licence” (for example “Celtic Garamond the 2<sup>nd</sup> Regular<sup>2</sup>”) then it will not be included in the fonts.pdf.



Other constraints of the tool is that only TrueType and OpenType fonts are supported. Any .fon type fonts will not be included.

<sup>2</sup> See <http://www.abstractfonts.com/font/2910>