STEP File Analyzer and Viewer (SFA) – 22 February 2026

New versions of SFA and up-to-date Release Notes are only available in the GitHub Release directory. The NIST website is not being updated.

Minimum system requirements: Windows 10, Excel 2016, 64-bit computer. If Excel is not installed, then CSV files will be generated. Viewer files are shown in the default web browser and require an Internet connection. SFA has been tested with Windows 10 and 11. Windows Server is not supported.

The largest STEP file that can be processed to generate a spreadsheet is about 430 MB. Files over that size must use the Part Only option with the Viewer. Use F9 and F10 to decrease and increase the font size in the Status tab.

Files in the GitHub Release directory:

- **SFA-5.nn.zip** – Current executables
  - **STEP-File-Analyzer.exe** – SFA graphical-user-interface (GUI) version. The first time you run SFA, you will be prompted to install the IFCsvr toolkit (IFCsvrR300 ActiveX Component). Use the default installation directory. Antivirus software might warn that there is a security issue with SFA or the toolkit. Both are safe to install and run. With Microsoft Defender, click More Info and Run Anyway. If possible, install and run SFA from your home directory or desktop on the local C: drive.
  - **sfa-cl.exe** – SFA command-line version, no user interface. From a Command Prompt, change to the directory where sfa-cl.exe is located and enter: **sfa-cl.exe C:/pathname/mySTEPfile.stp** The command-line version will use either the default options, the options that were set the last time the GUI version was run, or custom options.
- **SFA-Release-Notes-5.nn.xlsx** – Current release notes
- **SFA-User-Guide-v7.pdf** – User Guide from October 2021
- **NIST-PMI-STEP-Files.zip** – Example AP242 files from the NIST CAD models

SFA crashing

Try these fixes if SFA crashes the first time you run it. (1) Set an environment variable. From the Windows menu, search for 'Edit the system environment variables'. On the Advanced tab, select Environment Variables. Then create a new System Variable and set ROSE_SCHEMAS to C:\Program Files (x86)\IFCsvrR300\dll You might need administrator privileges. (2) Uninstall the IFCsvr toolkit. Then run SFA as Administrator and when prompted install the IFCsvr toolkit for Everyone, not Just Me. If SFA still crashes immediately after the 'Connecting to IFCsvr' message, then there is no known fix available.

Missing GD&T symbols

If you are processing STEP AP242 files with semantic PMI, then some GD&T symbols might appear as question marks on worksheets for dimensions, tolerances, and equivalent Unicode strings. In this case, SFA will copy the required font file with the GD&T symbols, ARIALUNI.TTF, to C:/Users/yourname/AppData/Local/Temp/SFA. You must copy that file to C:/Windows/Fonts to install the fonts. You might need administrator privileges.

File or directory names

There might also be a problem running the software if the file or directory name contains accented, non-English, or symbol characters. The following directory would cause problems because of the accent in Teśt - C:/Users/NIST/Documents/Analyzer/Teśt. Rename the file or directory to remove any special characters.

Secure computing environments

Secure computing environments might require approvals to run SFA and associated programs. In addition to SFA itself, two other programs that might need approval are the IFCsvr toolkit installation files and Viewer software. Both programs are copied to C:/Users/username/AppData/Local/Temp/SFA. The IFCsvr toolkit install file is a .msi file. The Viewer is stp2x3d-part.exe along with dll's that are in stp2x3d-dll.zip

Use the option to manually save the spreadsheet if there are specific Excel options that need to be set before saving the file.

No Internet connection

If there is no outside Internet connection as required by the Viewer, then use the option on the More tab to 'Save X3D file generated by the Viewer' and display the resulting '.x3d' file in a free X3D viewer such as Octaga Player.

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