

PDF3D Frequently Asked Questions

PDF3D Technology Overview Questions and Answers, covering both end-user and developer products.

1. Can I send 3D PDFs via Email?

Yes. 3D PDF files can be emailed, or distributed in any way you use other PDF files. However, 3D PDFs can sometimes be large, beyond the capabilities of email servers.

2. Can I put a 3D PDF interactive model into an existing PDF?

Yes. PDF3D SDK has a built-in facility insert on current page, append or prepend pages into an existing PDF documents without using any external tools. Alternatively,

You may use any 3rd party PDF concatenation tool or Adobe Acrobat, to easily place the 3D pages into an existing PDF file. In addition PDF3D-SDK can output a U3D file which can be loaded into Adobe Acrobat Pro Extended.

3. What happens when I print a page contain a 3D model?

The 3D image will appear in the printed version, exactly the way you left it during viewing. For example, open a door, zoom in, and click Print, and the printed version will have exactly that view. The 3D scene is printed at full device resolution, not just at screen resolution.

4. What version of Adobe Reader is required?

We recommend you install the latest. PDF3D-SDK is maintained with compatibility with the latest versions. The 3D PDFs come to life in Version 9.2 or "X" (version 10) of Adobe® Reader®. Earlier versions of Reader will tell the user they need to upgrade. Until the upgrade is done, a static 2D image will appear in place of the 3D experience. About 90% of internet users have some version of Adobe Reader installed. Adobe have distributed over 1 billion copies of Adobe Reader, so many will already be at the correct level.

5. How do I upgrade to the latest Adobe Reader version? Is it free?

Yes, it's free. Follow this link to get the latest version of Adobe Reader:

<http://www.adobe.com/products/acrobat/readstep2.html>

6. Does viewing 3D PDF files work on the Apple Mac OSX?

Yes, as long as you have a recent version, at Adobe Reader 9 or later to view the PDF files. Note the built in "Preview" in Mac OS X does not show interactive 3D content.

7. Do I need to buy Adobe Acrobat to view the files?

No, the FREE Adobe PDF Reader is all you need. Click on the following link to get the latest version.
<http://www.adobe.com/products/acrobat/readstep2.html>

8. After installing Adobe Reader, do I need a special plug-in?

No. Adobe PDF Reader has a basic 3D capability built-in and the 3D PDF files contain all the added functionality required.

9. Do I need a live internet connection to view the 3D content?

No. 3D PDFs work just fine when you are disconnected from the internet.

10. Are there use licenses or other restrictions on 3D PDF files?

No. You can use the 3D PDF as much as you like, for as long as you need, with no recurring license fees. Any PDF files produced using PDF3D technology may be distributed royalty free, the licenses only refer to the content generation software.

11. Are there site/location restrictions for the 3D part of the document?

No. The 3D experience window can be as large or small as you like, and you can use whatever aspect ratio works in your layout. (As long as it's rectangular.)

12. What are the minimum system requirements for the Acrobat Reader?

The 3D PDF will play on just about any computer with Adobe Reader Version 9 or later. On slower machines, the 3D image will update less frequently during animation. On machines with good graphics cards, the visual appearance will be much better, as Adobe Reader uses the 3D graphics hardware to accelerate display of high-quality visuals, using DirectX, OpenGL or a built-in software renderer.

13. What are the minimum system requirements for PDF3D SDK?

Generating the 3D PDF content takes more memory and more CPU time than viewing the result. As a consequence, the minimum specs are higher than for the Acrobat Reader. See current product details and release notes.

14. Is there a trial version of PDF3D SDK?

Yes, please contact the company and access to a trial version can be arranged. The trial version is time limited, normally 30 days.

15. Can I view 3D PDF files using Adobe Acrobat Professional?

Yes, Adobe Acrobat Professional Extended 9 gives you controls for 3D content similar to the free Adobe Reader, plus the ability to change the 2D layout, mark-up, etc.

16. Can the model contain 2D geometry?

Yes, any 2D or 3D geometric object can be used to generate a 3D PDF file. However the user will be able to rotate freely in 3D, so it depends on how you want to organise your scene content.

17. Will PDF3D SDK accept true 3D volumetric models?

No, VOXEL models, or 3D space-filling grids are not supported. The input model should be composed of geometric primitives such as triangles, and in version 1.1 points, lines, in the following release quadrilaterals, NxM 2D grids, etc. Similarly, 3D volume elements such as tetrahedral or hexahedra are not supported.

PDF3D SDK supports models containing triangle meshes, lines and points, arrows, cubes, spheres, cylinders, cones, 3D labels, elevation grids, etc. See technical documentation and sample gallery for more details.

18. Will PDF3D SDK accept NURBS or other spline or BREP surfaces?

No, at present spline surfaces are unsupported, they must be tessellated for conversion, as NURBS are not currently available through PDF3D-SDK, however PDF3D supports both U3D and PRC standards, and PRC includes Nurbs and other BREP surfaces. These maybe exposed through the API at a later date TBD.

19. Can I view or create 3D PDFs on Linux?

Yes, Adobe have released a version of their Adobe Reader for Linux that includes 3D viewing support. See the Adobe Reader website for details. The PDF3D-SDK system is also available to generate 3D PDF files on both 32 and 64-bit Linux platforms. See Release notes for the current platforms.

20. May we use PDF3D SDK within Linux applications, using GCC compiler?

Yes, PDF3D SDK is packaged for Windows and Linux. Please see current release notes for supported platforms.

21. Can we mix text and 3D graphics on the same PDF page?

Yes, the 3D viewport can be arbitrarily specified to be placed in any rectangular area on the page. PDF3D SDK also includes a full API for generating 2D text, line and area graphics, and full JPEG, PNG, TIFF, BMP images. Using the injection mode, a 3D view can also be placed in an existing 2D document.

22. Can the new page with 3D content be placed inside an existing ordinary PDF document?

Yes. PDF3D SDK has a built-in facility insert, append or prepend pages into an existing PDF document without using external tools.

23. Can I add PDF3D services into my Visualization ToolKit (VTK) based application?

Yes, PDF3D SDK includes documentation and source code examples of adding 3D PDF support into VTK Scenes, including loading .vtk or .3ds files.

24. What User Interface is used with PDF3D SDK, and is it configurable?

The PDF3D SDK at the core does not include or depend on any GUI, user interface, or menu system. Any of these may be added according to application developer choices. In fact it can be used without any menus, such as within a batch or web-server environment. The PDF3D Converter application “PDF3D ReportGen” provides an easy-to-use menu user interface for file conversions, if needed, using QT user interface techniques.

25. Why would I consider PDF3D SDK given that the Acrobat Pro Extended 9 product is available from Adobe?

Acrobat Pro Extended (from Adobe) is a commercial application sold on a per-seat basis and allows set up and generation of 3D PDF files. There are also OEM packaging of Acrobat available for licensing. It assumes you already have a 3D model available, either in some other format for using file converters or by using an screen-grab. If you develop your own software application and wish to add 3D PDF generation for your users, then you could simply export models to an intermediate file format and ask each user to buy Acrobat3D. On the other hand if you integrate PDF3D SDK inside your application then your users do not have to buy or learn any extra package. With Acrobat X (version 10), native 3D generation support is no longer available from Adobe, must be obtained from 3rd parties, including PDF3D from Visual Technology Services.

26. The PDF/E ISO standard references both U3D and PRC subsystems. Which are supported by PDF3D?

Both U3D and PRC are available. U3D is available through an optimized implementation, including Right Hemisphere Compression extension for smaller file generation. PRC encoding, generation is supported

(decoding, reading is not currently available for commercial release). PRC encoding, especially using the highly compressed tessellation methods (PRC-HCT) yield much higher compression rates than U3D, and are generally more efficient for complex scenes.

27. How are PDF/E compliant, valid files generated?

By enabling a simple toggle control, PDF3D can produce PDF/E compliant files. These files follow the current guidelines in the draft ISO specifications. Since PRC is still in working ISO draft stage, not yet formally adopted, the generated files are compliant to a draft standard. The Adobe Acrobat Preflight analysis tools have not yet been updated to recognize PRC encoding, so only U3D encodings will currently show validation. In both U3D and PRC cases, the Adobe Reader will show our assertion of PDF/E standards compliance. Note that if you create PDFs containing other unrelated elements, custom page javascripts, these may break PDF/E compliance. Visual Technology Services is not held responsible for any content generated using PDF3D tools.

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