

3D models and 3D images

Response ID:139 Data

1. Country code page

1. Please enter the two-letter country code corresponding to your Office or Organization.

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EP

Please enter your email address so we can contact you if we have questions about your response.

2. Questions page

This survey was approved by the seventh session of the CWS to collect information on practices and expectations of IPOs and users (applicants) for 3D models and 3D images.

Applicant Input

It is hoped that IPOs will consider the views of IP applicants, including industry, when formulating their responses. For this purpose, a Model Questionnaire For Industry On The Design Of Objects For IP Rights Protection Using 3D Models And Images has been prepared. IPOs are encouraged to consider this model questionnaire as a guide for them to collect relevant information on the views of applicants.

MODEL QUESTIONNAIRE FOR INDUSTRY ON THE DESIGN OF OBJECTS FOR IP RIGHTS PROTECTION USING 3D MODELS AND IMAGES

Glossary

3D model – An electronic file that is created by specialized software, for mathematically representing the surface of an object in three dimensions

3D Images – Images that represent objects displayed in three dimensions (length, depth, height), e.g. 3D photos, stereoscopy, etc.

3DS – A file format used by the Autodesk 3ds Max 3D modeling, animation and rendering software

DWF – Design Web Format

DWG – A file format widely used for CAD drawings

IGES – Initial Graphics Exchange Specification

OBJ – An open geometry vertex file format used for CAD and 3D printing

Raster image – An image that is composed of a map of points (pixels), referred to as a bitmap. Typical file formats for raster images include JPEG, TIFF, PNG and BMP

STL – Standard Tessellation Language - a file format native to the stereolithography CAD software created by 3D Systems

STEP – Standard for the Exchange of Product model data –an open ISO Standard which can represent 3D objects in Computer-aided design (CAD) and related information

Vector graphics – An image file that is composed of shapes formed of mathematical formulas and coordinates on a 2D plane. As opposed to raster images, vector graphics have the property of scaling infinitely without any degradation of quality

X3D – Successor of VRML, an Open ISO Standard XML format

Part 1. IP objects and stages of their lifecycle

2. 1.1. Does your office currently use 3D models or 3D images for IP objects within the office? If so, for which IP objects

Other (please specify): None

3. 1.2. Does your office consider using 3D models or 3D images for IP objects in the future? If so, for which IP objects

Not sure

4. 1.3. On which stages of IP objects' lifecycle does your office currently accept/implement 3D models?

	Filing of the application	Examination	Storage	Search	Publication	Data exchange	Other (please specify in comments)
Trademarks							
Industrial designs							
Patents in chemistry as a field of technology (e.g. chemical structures, biological structures)							
Patents (e.g. inventions and/or utility models) in other fields of technology except chemistry							
Integrated circuit topology							

Comments: The EPO does not currently accept 3D models in any part of the process

5. 1.4. Does your Office carry out any image transformations? If so, for which objects and on which stages?

	Filing of the application	Examination	Storage	Search	Publication	Data exchange	Other (please specify in comments)
Trademarks							
Industrial designs							
Patents in chemistry as a field of technology (e.g. chemical structures, biological structures)							
Patents (e.g. inventions and/or utility models) in other fields of technology except chemistry							
Integrated circuit topology							

Comments:

6. 1.5. On which stages of IP objects' lifecycle does your office consider accepting/implementing 3D models in the future?

	Filing of the application	Examination	Storage	Search	Publication	Data exchange	Not sure	Other (please specify in comments)
Trademarks								
Industrial designs								
Patents in chemistry as a field of technology (e.g. chemical structures, biological structures)							X	
Patents (e.g. inventions and/or utility models) in other fields of technology except chemistry							X	
Integrated circuit topology								

Comments:

Part 2. Existing practices and future plans

7. 2.1. Please describe existing practices/future plans for using 3D models and 3D images within your office

At the moment EPO does not support 3D models and images. EPO recognizes however that many inventions that applicants file are natively prepared and available as 3D models and the selection of an appropriate 2D perspective to render on the application requires additional effort and sometimes is also not meaningful during the Search process

Part 3. Regulations

8. 3.1. What laws and regulations concerning 3D models and 3D images are implemented within your jurisdiction?

Under the EPC no provision exists that deals with 3D models or 3D images. Drawings forming part of a patent application must be executed as black and white line drawings (see R 46 EPC). Otherwise they are formally deficient and must be re-

filed. 3D models and 3D images that are not displayed as black and white line drawings would thus be formally deficient and would have to be re-filed.

As to the document formats for electronic filings, the EPO currently accepts XML and PDF formats in accordance with the Administrative Instructions under the PCT, Part 7 and Annex F (see OJ EPO 2018, A45).

Part 4. Formats and technical tools

9. 4.1. Which formats of 3D models or 3D images does your office use at the moment? Does your office use the same or different formats for different stages of lifecycle: filling, examination, publication etc.?

N/A

10. 4.2. Which formats of 3D models or 3D images does your office consider using in the future? Does your office consider using the same or different formats for different stages of lifecycle: filling, examination, publication etc.?

EPO does not handle at the moment any 3D format. From the 3D formats proposed by ROSPATENT in the document CWS/6/22 tabled during the CWS/7, the X3D could be a good candidate because it is an ISO standard (and XML based) and can therefore be combined with existing XML Schemas in the same way as MathML.

11. 4.3. Please provide us with your suggestions and proposals on formats and reasons why you suppose them to be important (a list of formats to consider) except mentioned in items 6.1, 6.2

12. 4.4. Which technical tools does your office currently use to work with 3D models (i.e. viewers, converters, etc.)? Are these standard tools commercially available, or do you consider using any special tool developed for your Office or by your Office?

EPO does not currently support 3D formats.

13. 4.5. Which technical tools does your office consider using in future work with 3D models (i.e. viewers, converters, etc.)? Are these standard tools commercially available, or do you consider using any special tool developed for your Office or by your Office?

Ideally X3D formats should be readable by common Web browsers without the need for plugins or applets. X3D format is designed to be as integrated into HTML5 pages as other XML standards such as MathML and SVG. Any tool that EPO will internally use to read X3D formats would likely be possible to integrate with its new IT generation tools with the minimum effort. The same for e-filing, which should potentially also be able to accept/convert other formats submitted by the applicants to the one selected by EPO

14. 4.6. Please provide us with your suggestions and proposals on tools and reasons why do you suppose them to be important (a list of tools to consider)

Part 5. Specific requirements and limitations

15. 5.1. Please provide us with preferable specific file requirements? Should they be the same or different for different objects and stages (i.e. limitations and restrictions for 3D files, size (Mb) and format of 3D model for storing, processing, and sharing, etc.)

Performance, ergonomic, scalability, formats interoperability, future proof (archiving). Any tools chosen must follow the most widely used standard by the relevant industries.

16. 5.2. In your opinion, what would be the main requirements when choosing 3D file formats (open source, wide spread adoption, etc.)

Wide spread adoption

17. 5.3. In your opinion, what would be the main requirements when choosing tools for working with 3D files?

see 5.1

Part 6. Expectations concerning the use of 3D

18. 6.1. Which specific advantages and/or drawbacks do you expect from 3D models and 3D images regarding search, for instance prior art search?

19. 6.2. Do you expect that applicants will comply to provide 3D models which fulfill the defined standards?

Part 7. Other

20. 7.1. Do you have any other comments?

3. Review Page

You have reached the end of the survey questions. Your answers have been saved.

If you or your colleagues wish to revise your answers later, you can use the link emailed to you with the Save and Continue option in the top right of this page. The Review or Back button below will return you to your answers.

When you are ready to submit your final answers, click the Submit button below. You will no longer be able to edit your responses after clicking Submit.

You may download a copy of your answers:

4. Thank You!

Thank you for taking our survey. Your response is very important to us.