

3D models and 3D images

Response ID:179 Data

1. Country code page

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

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CZ

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

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

Industrial designs

Trademarks

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:

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	X	X	X	X	X	X	
Industrial designs		X	X	X	X	X	
Patents in chemistry as a field of technology (e.g. chemical structures, biological structures)	X	X	X	X	X	X	
Patents (e.g. inventions and/or utility models) in other fields of technology except chemistry	X	X	X	X	X	X	
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	X	X	X	X	X	X		
Industrial designs	X	X	X	X	X	X		
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:

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

No concrete plans, but we are interested in exploring current possibilities.

Part 3. Regulations

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

We are not aware of any specific laws governing the area of 3D images or models in IP specifically.

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.?

None used currently.

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.?

Same format throughout the lifecycle would be ideal given the difficulties with format conversions. Recently IPO CZ has received a suggestion from the academic field for the consideration of a format called U3D.

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

U3D - embeddable within PDFs (native support), meaning no special software solutions needed for viewing and basic examination of the models

OBJ - widely adopted, open format, already in use by EUIPO

X3D - extension of VRML format, open, already in use by EUIPO

STL - popular in the fields of rapid prototyping and 3D printing despite its drawbacks (poor memory and computational efficiency)

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?

None used currently.

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?

Adobe Acrobat (viewer with native support of U3D file format)

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.)

We would prefer accepting a single file format that could be kept throughout the lifecycle. However given that a wide array of file formats is used within the industry, a need might arise to accept at least a few of the most popular formats during the application step. Consensus among the IP offices and organizations on one exchange format would be welcomed in order to facilitate data exchange.

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

open source, easily parsed (XML based), platform ambiguous, already in use by the industry

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

Price and availability, ease of use

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?

Advantages: unambiguity, potential to employ advanced statistical methods within prior art search (e.g. machine learning), future proofing

Drawbacks: complexity, difficult implementation, cost

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

Industry leaders might adopt well to the new practice, but overall we don't expect fast adoption.

Part 7. Other

20. 7.1. Do you have any other comments?

Unless 3D models are required when submitting an application (such a requirement is not realistic in our opinion), the advantages described in 6.1. might have limited impact.

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.