

Committee on WIPO Standards (CWS)

**Seventh Session
Geneva, July 1 to 5, 2019**

3D TASK FORCE REPORT ON TASK NO.61

Document prepared by the 3D Task Force Leader

BACKGROUND

1. At the sixth session of the Committee on WIPO Standards (CWS), the Committee noted a proposal from the Delegation of Russian Federation that broader acceptance of 3D formats by Intellectual Property Offices (IPOs) could better serve user needs, and the use of 3D formats could allow more efficient methods of search and comparative analysis. As a result, Task No. 61 was established with the following description:

"Prepare a proposal for recommendations on three-dimensional (3D) models and images."

2. The CWS created the 3D Task Force (3DTF) to perform this task, with the Russian Federation designated as the Task Force leader. (See paragraphs 138 to 144 of the document CWS/6/34).

3. In November 2018, the International Bureau issued circular C.CWS.108 requesting nominations to participate in the Digital Transformation Task Force. Representatives from 14 IPOs were nominated to participate in the Task Force.

PROGRESS REPORT

4. A 3DTF wiki forum was established for discussions among the Task Force members. The Task Force leader prepared a review of the current situation on the use of 3D models for further discussion within the Task Force, including comments to which Task Force members shared their views and experience. The Task Force discussed and proposed the draft scope of the recommendations on 3D models for IPOs.

5. In order to collect information about the practices and expectations of IPOs and users (applicants) concerning the use of 3D, the Task Force drafted a questionnaire, which is reproduced as the Annex to the present document, and conducted a short survey within the Task Force.

6. The Task Force received the following outcomes of the internal survey within the Task Force:

- (a) EUIPO's RCD online filing service accepts the 3 file formats for 3D designs and has received in total 980 files;
- (b) 3D modeling files have been acceptable to apply for IPRs in Republic of Korea since related regulations were amended in 2010. 3DS, DWG, DWF, IGES, and 3DM are available formats in its filing system as representation of designs (even without 2D images) and more than 3,000 designs are filed to KIPO every year;
- (c) Japan Patent Office currently doesn't use any 3D models or images; and
- (d) The US Patent & Trademark Office currently accepts 3D models or images for Trademarks at the filing and examination stages.

7. The Task Force believes that for preparing proposals for WIPO recommendations on 3D models and images, it is important to collect the current practices and preferences on 3D models of the IPOs as well as industry and users. Therefore, the Task Force presents a draft questionnaire as reproduced in the Annex to this document for consideration by the CWS at this session, and request the Secretariat to issue a circular inviting IPOs to respond to the questionnaire. The Task Force is developing a second questionnaire to survey industry and users on their needs and preferences for 3D models, for consideration at the seventh session of the CWS.

DRAFT WORK PLAN

8. The Task Force discussed and proposes the following work plan for 2019-2020:

Action	Expected actions	Planned date
Establishment of the Task Force at the sixth session of the CWS	<ul style="list-style-type: none"> • Task Force established • IPOs invited • Discussion within the TF initiated • Draft questionnaire prepared 	CWS/6 October 2018 – January 2019 (completed)
Conducting a survey of current practices among TF members	The questionnaire disseminated among the TF members.	January 2019 (completed)
Collection and analysis of survey responses	Responses to the survey and comments on the questionnaire received and taken into account.	March 2019 (completed)
Drafting progress report	A draft progress report.	April 2019 (completed)
Presenting the progress report and draft questionnaire for consideration or approval at the seventh session of the CWS (CWS/8)	<p>Progress report and the questionnaire approved or comments received.</p> <p>Commence the survey among IPOs as well as users and industry.</p>	July 2019 (CWS/7)
Conduct survey of IPOs, users, and industry	<p>Issue circular to IPOs</p> <p>Task force members conduct outreach to users and industry</p> <p>Gather and analyze results</p>	late 2019
Prepare draft WIPO recommendations based on the survey results	<p>Discuss survey results with 3D Task Force members</p> <p>Identify areas of common ground</p> <p>Draft recommendations</p>	early 2020
Presenting the draft WIPO recommendations for consideration or approval at the eighth session of the CWS (CWS/8)	WIPO recommendations on 3D approved or comments received.	CWS/8 TBC

9. *The CWS is invited to:*

(a) note the content of the present document;

(b) note the work plan of the 3D Task Force and encourage IPOs to participate in the Task Force discussions;

(c) consider and approve the questionnaire on use of 3D models reproduced in the Annex to this document for a survey of IPOs;

(d) request the Secretariat to issue a circular inviting IPOs to respond to the survey in the Annex, if approved by the CWS; and

(e) advise whether and how the Secretariat can administer the survey to industry and user groups with the second questionnaire referred to in paragraph 7 above.

[Annex follows]

DRAFT QUESTIONNAIRE ON THE USE OF 3D MODELS AND IMAGES IN IP DATA AND DOCUMENTATION

Glossary

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

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

Q1. IP objects and stages of their lifecycle

Q1.1. Does your office currently use 3D models or images for IP objects within the office? If so, for which IP objects:

- Trademarks
- Designs
- Inventions
- Utility models
- Integrated circuit topology
- Other (please specify: _____)

Q1.2. Does your office consider using 3D models or images for IP objects in the future? If so, for which IP objects:

- Trademarks
- Designs
- Inventions
- Utility models
- Integrated circuit topology
- Not sure
- Other (please specify: _____)

Q1.3. On which stages of IP objects` lifecycle does your office currently accept/implement 3D models?

a) Trademarks

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Other (please specify: _____)

b) Designs

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Other (please specify: _____)

c) Inventions

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Other (please specify: _____)

e) Utility models

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Other (please specify: _____)

f) Integrated circuit topology

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Other (please specify: _____)

e) Other (please specify: _____)

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Other (please specify: _____)

Q1.4. Does your Office carry out any image transformations? If so, for which objects and on which stages?

a) Trademarks

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Other (please specify: _____)

b) Designs

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Other (please specify: _____)

c) Inventions

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Other (please specify: _____)

e) Utility models

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Other (please specify: _____)

f) Integrated circuit topology

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Other (please specify: _____)

e) Other (please specify: _____)

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Other (please specify: _____)

Q1.5. On which stages of IP objects' lifecycle does your office consider accepting/implementing 3D models in the future?

a) Trademarks

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Not sure
- Other (please specify: _____)

b) Designs

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Not sure
- Other (please specify: _____)

c) Inventions

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Not sure
- Other (please specify: _____)

e) Utility models

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Not sure
- Other (please specify: _____).

f) Integrated circuit topology

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Not sure
- Other (please specify: _____)

e) Other (please specify: _____)

- Filing of the application
- Examination
- Storage
- Search
- Publication
- Data exchange
- Not sure
- Other (please specify: _____)

Q2. Existing practices and future plans.

Q2.1. Please describe existing practices/future plans for using 3D models and images within your office.

Q3. Regulations

Q3.1. What patent laws and regulations concerning 3D models and images are implemented within your jurisdiction?

Q4. Formats and technical tools

Q4.1. Which formats of 3D models or images does your office use at the moment? Does your office use the same or different formats for different stages of lifecycle: filing, examination, publication etc.?

Q4.2. Which formats of 3D models or images does your office consider using in the future? Does your office consider using the same or different formats for different stages of lifecycle: filing, examination, publication etc.?

Q4.3. 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

Q4.4. 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?

Q4.5. 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?

Q4.6. 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)

Q5. Specific requirements and limitations

Q5.1. 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.)

Q5.2. In your opinion, what would be the main requirements when choosing 3D file formats (open source, wide spread adoption, etc.)

Q5.3. In your opinion, what would be the main requirements when choosing tools for working with 3D files?

Q6. Any other comments

[End of Annex and of document]