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Assemblies of the Member States of WIPO

Fifty-Ninth Series of Meetings
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RECORDS OF WIPO MEETINGS

Document prepared by the Secretariat

INTRODUCTION

1.   The World Intellectual Property Organization (WIPO) produces and publishes records of all the meetings of its governing bodies, committees and working groups, which it organizes each year. The records, which include both audiovisual recordings and text-based reports, are important for enabling Member States to follow the discussions, as well as for institutional reporting and reference purposes. Recent developments in digital technologies offer opportunities to improve the speed and quality of services while also achieving significant cost efficiencies in relation to the production of meeting records. The present document proposes to pilot a new approach, which will provide enriched, digitally-indexed and searchable conference video recordings, complemented by automatically generated text records in the six United Nations (UN) languages using WIPO's Artificial Intelligence (AI) tools. If successful, this would enable a phased discontinuation of the current, highly resource-intensive production of verbatim meeting reports.

CURRENT RECORDS OF WIPO MEETINGS

2.   Meetings of the following categories are organized by WIPO:

(i)   Governing Bodies
- WIPO General Assembly and other Assemblies of the unions and treaties administered by WIPO
- Coordination Committee
- WIPO Conference

(ii)   Committees
- Program and Budget Committee (PBC)
- Standing Committee on Copyright and Related Rights (SCCR)
- Standing Committee on Patents (SCP)
- Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications (SCT)
- Committee on Development and Intellectual Property (CDIP)
- Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC)
- Committee on WIPO Standards (CWS)
- Advisory Committee on Enforcement (ACE), and

(iii)   Working Groups/Committees of Experts
- Patent Cooperation Treaty (PCT) Working Group
- Working Group on the Legal Development of the Madrid System
- Working Group on the Legal Development of the Hague System
- Working Group on the Development of the Lisbon System
- International Patent Classification (IPC) Revision Working Group
- IPC Committee of Experts
- Nice Committee of Experts

3.   The above bodies usually meet once or twice per year, and most produce a record of the meeting either in audiovisual format or in text or both. In 2018, WIPO organized 24 sessions of such meetings in Geneva.

4.   Currently, records of WIPO meetings consist of three products:

(a)   Audiovisual records. Webcasting services, including live streaming and video-on-demand (VoD), are provided for most of the above meetings (except for informal consultations during the meetings). Users can follow interventions from the floor in the original language, and in interpretation in English provided by professional interpreters engaged by WIPO. These audiovisual records are made available through the VoD archive on the WIPO public website for 12 months.

(b)   The Chair's Summary (text record of decisions taken at the meeting). At the end of each meeting, the Chair's Summary is presented in the six UN languages for adoption at the session.

(c)   A verbatim report (edited text record of the discussions and decisions). Verbatim reports are detailed text records which, in the absence of précis-writers, are produced and edited by the Secretariat on the basis of notes, outputs from external captioning service-providers engaged by WIPO, and audiovisual records. The final English version of the report is then translated into the other UN languages. The whole process is lengthy

(taking several months), cumbersome and costly (see the Annex for a breakdown of costs).

5.   Major shortcomings with regard to the current production of meeting records include, notably:
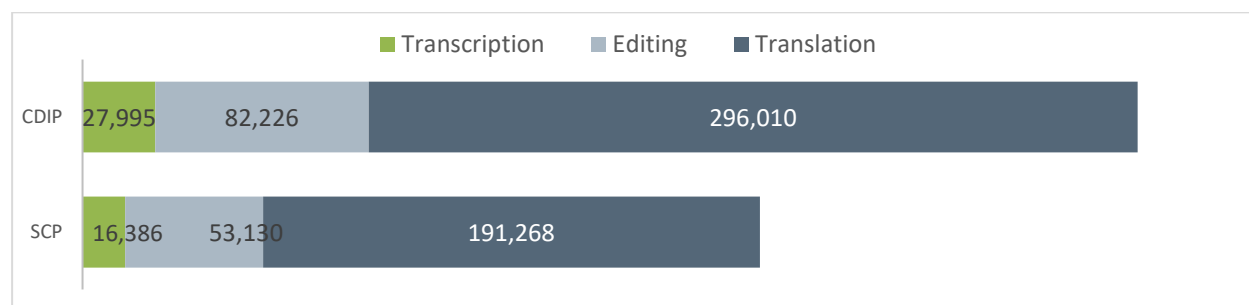
- Lack of any indexing or search functionality within video recordings, making it hard for users to locate particular interventions or agenda items;
- Detailed written records of meetings cannot be provided in a timely manner; and
- The preparation of verbatim reports is labor-intensive, requiring significant resources.

6.   The resources required for producing the verbatim reports of WIPO meetings in the six UN languages are estimated to have amounted to a total cost of 2.6 million Swiss francs for the 2018/2019 biennium (see Annex for details). The breakdown is as follows:

- 160,718 Swiss francs for meeting transcription (external captioning service);
- 534,151 Swiss francs (calculated based on standard costs per grade in 2019) for verbatim report editing, representing 650 days, or 2.95 years of work for a WIPO staff; and
- 1.9 million Swiss francs (calculated based on average cost per word in 2018) for translation, representing 14 per cent of the total biennial non-personnel translation budget in 2018/19.

7.   For cost analysis purposes, the 2018 verbatim reports of two committees are taken as examples, namely the CDIP and the SCP.

Graph 1: Illustration of cost breakdown for verbatim reports of CDIP and SCP Committees[1]

	■ Transcription	■ Editing	■ Translation
CDIP	27,995	82,226	296,010
SCP	16,386	53,130	191,268

RELEVANT WIPO AI TOOLS (*WIPO S2T* AND *WIPO TRANSLATE*)

8.   *WIPO S2T* is an internally developed, AI-powered speech recognition system, which automatically generates text transcript from oral interventions (speech-to-text). The AI model of *WIPO S2T* was trained using in-domain data, i.e. the audio and text records of previous WIPO meetings. This is the main reason why *WIPO S2T* has unique strengths in processing WIPO and IP-related terms as well as interventions by WIPO delegates from all geographical regions.

9.   *WIPO Translate* has been developed for many years now, and achieved breakthroughs in neural machine translation (NMT) in 2016. The Secretariat has tested and proved that the accuracy and quality of the automatically translated texts of verbatim reports using *WIPO Translate* into the other five UN languages are acceptable. It would, in future, also be possible

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[1] Cost is biennium-based and in Swiss francs; Both CDIP and SCP Meetings are held twice a year, hence a total of four meetings per biennium.

to extend the coverage of *WIPO Translate* to other languages, if the Secretariat can obtain and use the necessary amount of good data sets in the respective language pairs with English for training the corresponding AI model of *WIPO Translate*. For translation of patent application related documents in the PCT registration system, the latest neural network version of *WIPO Translate* covers nine languages pairs[2]. As the training of the AI algorithm of *WIPO Translate* is domain-specific, audio data of conferences in the target language pair with English is essential to the expansion to other languages.

PROPOSAL

10. A new system for producing records of WIPO meetings is proposed to address the shortcomings referred to above, and to achieve the following objectives:

- respond more effectively to the needs of the Member States;
- deliver faster, more efficient, digital records of meetings to replace the existing system of verbatim reports;
- deliver more cost-effective services thereby generating major cost savings;
- continue to support the six UN-language policy for meeting records; and
- increase the value and usefulness to Member States of audiovisual conference recordings.

11. To this end, the Secretariat proposes to leverage both commercially available audiovisual technologies, plus WIPO's own AI tools (*WIPO S2T* and *WIPO Translate*). The proposal consists of three elements, as follows:

(a) Enriched VoD recordings with digital indexing to enable easy navigation and search by agenda item or speaker, as well as integrated access to relevant meeting documents.

(b) Replacement of verbatim reports by a complete, fully automated speech-to-text transcript in English, synchronized with the video recording, and with automated translations into the other five UN languages.

(c) Phased implementation. During an initial trial phase (Phase One) from October 2019 to September 2020, the replacement of verbatim reports by automated transcripts and translations will be tested at the four sessions of the CDIP and SCP. In the light of the experience gained, Member States would be asked to decide in October 2020 whether the new system should be extended in Phase Two to other WIPO meetings.

12. As referred to above, the CDIP and SCP were selected in view of the volume of their most recent verbatim reports (98 pages and 63 pages respectively). The total estimated cost savings in the 2020/2021 biennium would be 667,015 Swiss francs (CDIP: 406,231 Swiss francs; plus SCP: 260,784 Swiss francs). If Member States decide to extend the new system to all WIPO meetings from October 2020 (excluding the Assemblies and extraordinary sessions of Treaty organizations), it is estimated that WIPO could save approximately an additional 736,956 Swiss francs in 2021.

13. The enriched, digitally indexed VoD system is a commercial, off-the-shelf solution. An early deliverable of the Integrated Conference Services Platform project, it will replace WIPO's current webcasting and VoD system, and will be implemented for all WIPO meetings from October 2019 onwards. This will not be affected by eventual decisions regarding verbatim reports.

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[2] English with any of other nine PCT publication languages: Arabic, Chinese, French, Russian, Spanish, German, Japanese, Korean, Portuguese.

14.   The production of the Chair's Summary of decisions would remain unchanged.

15.   The following table summarizes the features of the current situation and the proposed approach.

Table 1: Comparison of the Current and the Proposed Systems for Meeting Records

CURRENT	PROPOSED
Video-on-demand	**Enriched video-on-demand**
- available next day online; - in original spoken language (floor) and English interpretation; 3-hour long video segments with no additional functionality (e.g. no search, navigation).	- available <u>same day</u> online; - in original spoken language (floor) and English interpretation (i.e. no change); - <u>digitally indexed</u> to enable easy <u>navigation/search by agenda item or speaker</u>; - integrated access to <u>the document(s)</u> under discussion.
Chair's summary of decisions	**Chair's summary of decisions**
available on final day of the meeting in all UN languages.	(no change)
Verbatim Report	**Audiovisual records with full Speech-to-Text (S2T) transcript and automated translations**
- published online several months after the meeting; - in all UN languages; - labor intensive, human-edited transcripts, plus human translation.	- complete, editable <u>text transcript</u>, which can be checked against <u>synchronized video display</u>; - available <u>same day</u> online; - transcript in English, and automated translation into other UN languages using *WIPO Translate* embedded in the *WIPO S2T* site. - fully searchable, synchronized text and video; - AI-based, fully automated.

MANAGEMENT OF THE NEW SYSTEM AND FURTHER DEVELOPMENT

16.   WIPO considers the security and integrity of data crucial to successful implementation and provision of services. While data contained in the published audiovisual and text records of WIPO meetings are not confidential, the Secretariat will deal appropriately with any sensitivity associated with personal data as well as data integrity to mitigate any concern about data forgery or manipulation of meeting records. The Secretariat will continue to apply WIPO's robust, state-of-the-art digital technologies to mitigate any security risk.

17.   The Secretariat is concerned to narrow technology and digital gaps for accessing and sharing records of WIPO meetings. For users in countries where the Internet is not fast or reliable, other methods may be explored for making parts of the audio records downloadable on demand.

18.   The Secretariat will make WIPO AI Tools (*WIPO S2T* and *WIPO Translate*) available free-of-charge to WIPO Member States governments, and to the UN organizations, with consequent potential cost reductions across the UN system. Several UN organizations have already indicated strong interest in the use of WIPO's new AI tools. Upon request, *WIPO Translate* has been offered to 11 UN organizations and other intergovernmental organizations. The Secretariat will also make the AI tools available on agreed terms and conditions to

interested private entities. The Secretariat may have to strengthen its capacity to deal with increasing demands from public and private organizations for WIPO AI tools. In disseminating WIPO AI technologies, the management of intellectual property included in WIPO AI tools should strike an appropriate balance between wider dissemination of AI technologies and the protection of the core value of WIPO AI tools and WIPO's brand by concluding well-balanced contracts with users of WIPO's services.

*19.	The Assemblies of WIPO, each in so far as it is concerned, are invited to take a decision on the proposal described in paragraph 11 of this document.*

[Annex follows]

COST ANALYSIS OF THE CURRENT RECORDS MANAGEMENT OF WIPO MEETINGS

All costs in Swiss Francs

WIPO Verbatim Reports - Cost overview

Meetings	Average Report Length (number of pages)	Cost Analysis (based on average time spent on editing and costs) per Biennium				
		Transcription	Editing		Translation	Total
		Cost	Time Spent (Working Days)	Cost	Cost	Cost
[1] Main Bodies						
WIPO Assemblies	• 260	14,534	133	109,423	393,921	517,878
Coordination Committee	19	-[1]	9	7,801	28,083	35,882
Sub-total [1]		14,534	143	117,224	422,004	553,760
[2] Committees						
PBC	75	13,922	57	47,122	169,637	230,680
CDIP	98	27,995	100	82,226	296,010	406,231
SCT	35	11,724	35	29,095	104,742	145,561
SCP	63	16,386	65	53,130	191,268	260,784
SCCR	72	20,913	73	60,299	217,074	298,286
IGC	58	28,217	89	72,738	261,855	362,810
Sub-total [2]		119,157	420	344,610	1,240,586	1,704,352
[3] Working Groups						
PCT	70	8,981	36	29,517	106,260	144,758
Madrid	72	10,228	37	30,360	109,296	149,884
The Hague	15	4,199	7	6,114	22,011	32,324
Lisbon	15	3,620	8	6,325	22,770	32,715
Sub-total [3]		27,027	88	72,316	260,337	359,681
Total		**160,718**	**650**	**534,151**	**1,922,927**	**2,617,793**

[1] Cost of transcription is included under WIPO Assemblies

[End of Annex and of document]