Administrative and Legal Committee	**CAJ/78/8**
Seventy-Eighth Session **Geneva, October 27, 2021**	**Original:** English **Date:** October 12, 2021

UPOV DENOMINATION SIMILARITY SEARCH TOOL

Document prepared by the Office of the Union

Disclaimer: this document does not represent UPOV policies or guidance

EXECUTIVE SUMMARY

1.   The purpose of this document is to report on developments concerning the development of a UPOV denomination similarity search tool.

2.   The CAJ is invited to note the latest situation concerning the possible development of a UPOV denomination similarity search tool.

BACKGROUND

3.   The CAJ, at its seventieth session, held in Geneva, on October 13, 2014, noted that the Working Group for the Development of a UPOV Denomination Similarity Search Tool (WG-DST) had agreed that the function of a UPOV similarity search tool would be to identify those denominations that were similar to existing denominations to the extent that they would require further, individual consideration before deciding if the denomination was (sufficiently) different from existing denominations (see document CAJ/70/10 "Report on the Conclusions", paragraph 27).

4.   The Working Group on Variety Denominations (WG-DEN), at its fifth meeting, held in Geneva, on October 30, 2018, agreed that the Office of the Union should restart its work to explore possibilities to improve the UPOV Denomination Similarity Search Tool in conjunction with the Community Plant Variety Office of the European Union (CPVO) (see document UPOV/WG-DEN/5/3 "Report", paragraph 28).

5.   The CPVO algorithm is a rule-based algorithm that has provided efficient results. Nevertheless, CPVO reported to the Office of the Union that there might be some possibilities to improve the results of the algorithm.

6.   The Office of the Union consulted WIPO machine-learning experts in order to explore the possibility of using machine-learning techniques in conjunction with the CPVO algorithm to maximize the efficiency of UPOV denomination similarity tool.

7.   The use of machine-learning techniques requires the following:

- large number of real cases where the denomination has been rejected. Data from the PLUTO; database can be used but will not be sufficient;
- reasons why a denomination is rejected should be structured in the form of checkboxes;
- problem to be solved needs to be clearly identified.

8.   The CPVO agreed to share information on denomination rejections with the reasons why denominations were rejected, in a structured format, in order to enhance the machine-learning approach.

9.   The WG-DEN, at its sixth meeting, held in Geneva, on October 29, 2019, considered document UPOV/WG-DEN/6/3 "UPOV denomination similarity search tool" and received a presentation on developments concerning a UPOV denomination similarity search tool by the Office of the Union.

10.   The WG-DEN noted the plans for the development of a UPOV denomination similarity search tool and agreed that the developments on this matter should be reported to the CAJ for consideration in conjunction with the discussion on draft of document UPOV/EXN/DEN for the possible inclusion of reference to a UPOV denomination similarity search tool (see document UPOV/WG-DEN/6/5 "Report", paragraphs 6 and 7).

11.   The CAJ, at its seventy-sixth session, held in Geneva on October 30, 2019, noted the developments reported in document CAJ/76/6 Add. concerning the possible development of a UPOV denomination similarity search tool (see document CAJ/76/9 "Report", paragraph 40).

12.   The CAJ, at its seventy-seventh session, held in Geneva on October 28, 2020, considered document CAJ/77/7 (see document CAJ/77/7 "UPOV denomination similarity search tool", paragraphs 12 to 17, document CAJ/77/9, paragraphs 51 to 55, and document CAJ/77/10 "Report", paragraph 44).

13.   The CAJ, at its seventy-seventh session, held in Geneva, on October 28, 2020, noted that at a workshop organized with the CPVO and the Office of the Union, held on November 21, 2019, it was concluded that the CPVO algorithm was performing well and that, for the time being, it would not be a suitable use of resources to seek improvements to the algorithm for the purposes of checking the similarity of variety denominations. However, it was agreed that it would be useful to explore possibilities for the variety denomination search tool to consider aspects other than similarity, particularly with regard to checking for characteristics of the variety (see document CAJ/77/7 "UPOV denomination similarity search tool", paragraph 12).

14.   The CAJ, at its seventy-seventh session, also noted the following:

> "[d]ocument UPOV/INF/12 'Explanatory notes on variety denominations under the UPOV Convention' states as follows:

> "2.3.1 Characteristics of the variety

> The denomination should not:

>> "(a)   convey the impression that the variety has particular characteristics which, in reality, it does not have;

>> *Example:* a variety denomination 'dwarf' for a variety which is of normal height, when a dwarfness trait exists within the species, but is not possessed by the variety.

>> "(b)   refer to specific characteristics of the variety in such a way that the impression is created that only the variety possesses them, whereas in fact other varieties of the species in question also have or may have the same characteristics; for example where the denomination consists solely of descriptive words that describe attributes of the variety that other varieties in the species may also possess.

>> *Example 1*: 'Sweet' for a fruit variety;

>> *Example 2*: 'Large white for a variety of chrysanthemum.

>> "(c)   convey the impression that the variety is derived from, or related to, another variety when that is not, in fact, the case;

>> *Example:* a denomination which is similar to that of another variety of the same species or closely related species, e.g. 'Southern cross 1'; 'Southern cross 2'; etc., giving the impression that these varieties are a series of related varieties with similar characteristics, when, in fact, this is not the case.

> "2.3.2 Value of the variety

> The denomination should not consist of, or contain, comparative or superlative designations.

>> *Example:* a denomination which includes terms such as 'Best', 'Superior', 'Sweeter'."

15.   In the case of checking for denominations, the denomination should not "convey the impression that the variety has particular characteristics which, in reality, it does not have". The purpose of a feature in the variety denomination search tool would not be to make a judgement on the suitability of a denomination but to alert the examiner to the presence of a characteristic in the denomination that might need to be considered.

16.   The TG Template contains a database of characteristics included in UPOV Test Guidelines and, in the case of members of the Union participating in UPOV PRISMA, characteristics included in the individual authorities' test guidelines. These characteristics are available in English, French, German and Spanish, and the UPOV PRISMA navigating and output languages (if provided by UPOV PRISMA participating members of the Union). On that basis, the characteristics in the TG Template would provide a good basis for checking for denominations containing characteristics.

17.   The CAJ, at its seventy-seventh session, noted the conclusion of the CPVO and the Office of the Union that the CPVO similarity algorithm is performing well and that, for the time being, it would not be a suitable use of resources to seek improvements to the algorithm for the purposes of checking the similarity of variety denominations.

18.   The CAJ agreed that the Office of the Union explore with the CPVO possibilities for the variety denomination search tool to consider checking denominations for characteristics, as set out in paragraphs 14 to 16 of document CAJ/77/7.

19.   The CAJ agreed to report to the CAJ, at its seventy-eighth session, on the outcome of that exploration.

20.   The CAJ considered a draft of document UPOV/EXN/DEN/1 "Explanatory Notes on Variety Denominations under the UPOV Convention". The CAJ noted that any work on a tool for checking for characteristics would need to reflect the guidance in document UPOV/EXN/DEN/1, once adopted.

DEVELOPMENTS SINCE THE SEVENTY-SEVENTH SESSION OF THE CAJ

21.   The Office of the Union launched the new version of PLUTO on October 11, 2021. The CPVO Similarity Factor algorithm remains as the default option in the denomination search functionality. The Office of the Union has been informed that the CPVO has no immediate plans to discontinue using the Similarity Factor algorithm, which is subject to regular improvements. However, the CPVO does not exclude possible alternative solutions, the advantages of which would have to be evaluated through a comparative study. The Office of the Union will continue to monitor developments with a view to cooperating as far as possible.

> 22.   *The CAJ is invited to note the latest situation concerning the possible development of a UPOV denomination similarity search tool.*

[End of document]