

Technical Working Party on Automation and Computer Programs

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INFORMATION RETRIEVAL FROM UPOV DATABASES USING NATIONAL SYSTEMS

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EXECUTIVE SUMMARY

1. The purpose of this document is to report on a new way to retrieve easily the data from the GENIE and the TG template databases, using system-to-system communication.
2. The TWC is invited to note the availability of web services to retrieve information from the GENIE and TG Template databases and the demonstration that will be made to the TWC at its thirty-fifth session.
3. The structure of this document is as follows:

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GENIE DATABASE

4. Some PVP offices use robots to retrieve Genie DB information, which can result in dense traffic and the UPOV server crashing.
5. Therefore, UPOV has made available a web service that allows searching in the GENIE database for UPOV Codes, botanical names and common names in different languages.
6. The use of the GENIE database web service also allows automatic retrieval and improves performance, efficiency and data accuracy. For example, it provides the possibility to:
 - retrieve to most recently updated records of: UPOV codes; botanical names; and common names (see “UPOV Code List” below)
 - search for a record using keywords. Keywords can be related to UPOV codes, botanical names or common names in different languages (see “UPOV Code Detail for a given keyword” below)

UPOV Code List:

8. The web service is available at: <https://webaccess/genie/upovcode/UpovCodeList>

Output (IN JSON Format) :

```
{
  "upovCodeList":
  [
    {
      "upovCode": "COPRI",
      "principalBotanicalName": "Coprinus",
      "otherBotanicalName": "Coprinus",
      "commonNameEN": "",
      "commonNameFR": "",
      "commonNameDE": "",
      "commonNameES": ""
    },
    {
      "upovCode": "COPRI_COM",
      "principalBotanicalName": "Coprinus comatus mull ex fv",
      "otherBotanicalName": "Coprinus comatus mull ex fv",
      "commonNameEN": "",
      "commonNameFR": "",
      "commonNameDE": "",
      "commonNameES": ""
    },
    {
      "upovCode": "COPRO_REP",
      "principalBotanicalName": "Coprosma repens A. Rich.",
      "otherBotanicalName": "Coprosma repens A. Rich.",
      "commonNameEN": "",
      "commonNameFR": "",
      "commonNameDE": "",
      "commonNameES": ""
    }
  ],
  "responseCode": "1",
  "responseMsg": "SUCCESS"
}
```

UPOV Code Detail for a given keyword

9. The web service is available at: <https://webaccess.wipo.int/genie/upovcode/UpovCodeInfo/{keyword}>

Output (IN JSON Format) :

```
{
  "upovCodeList" :
  [
    {
      "upovCode": "COPRI",
      "principalBotanicalName": "Coprinus",
      "otherBotanicalName": "Coprinus",
      "commonName": "",
      "cropSpecificForm": "1"
    },
    {
      "upovCode": "COPRI_COM",
      "principalBotanicalName": "Coprinus comatus mull ex fv",
      "otherBotanicalName": "Coprinus comatus mull ex fv",
      "commonName": ""
    }
  ],
  "responseCode": "1",
  "responseMsg": "SUCCESS"
}
```

TG TEMPLATE DATABASE

10. In order to facilitate drafting of individual authorities' test guidelines, UPOV characteristics and their states of expression are now retrievable in all available languages using the UPOV TG web services.

11. Given a TG code and a language code, it is possible to retrieve:
- List of characteristics (Chapter 8)
 - List of Technical questionnaire characteristics (Chapter 10)

List of Characteristics

12. The Web Service is available at: <https://www3.wipo.int/upovRestServices/upovCode/CharacteristicList>

13. For example, in the case of Turnip (**TG code=37**), it is possible to retrieve the list of characteristics in English (**EN**) using:

<https://www3.wipo.int/upovRestServices/upovCode/CharacteristicList?tgCode=37&languageCode=EN>

Output (IN JSON Format) :

```
{
  "responseCode": 1,
  "message": "SUCCESS",
  "characteristicOrderList": [
    {
      "characteristicOrder": 1,
      "name": "<p style=\"cursor: auto;\">Ploidy</p>\n"
    },
    {
      "characteristicOrder": 2,
      "name": "<p style=\"cursor: auto;\">Leaf: attitude</p>\n"
    },
    .....
    {
      "characteristicOrder": 30,
      "name": "<p style=\"cursor: auto;\">Root: shape of base</p>\n"
    },
    {
      "characteristicOrder": 31,
      "name": "<p style=\"cursor: auto;\">Root: time of harvest
maturity</p>\n"
    }
  ]
}
```

14. Characteristic names are in HTML format in order to keep formatting requirements such as underlined, bold or italic.

List of TQ Characteristics

15. The Web Service is available at:

<https://www3.wipo.int/upovRestServices/upovCode/TQCharacteristicList>

16. For example, in the case of Turnip (**TG code=37**), it is possible to retrieve the list of TQ characteristics in English (**EN**) using:

<https://www3.wipo.int/upovRestServices/upovCode/TQCharacteristicList?tgCode=37&languageCode=EN>

Output (IN JSON Format) :

```
{
  "responseCode": 1,
  "message": "SUCCESS",
  "tqCharacteristicsPojo": [
    {
      "characteristicOrder": 0,
      "name": "<p style=\"cursor: auto;\">Ploidy</p>\n"
    },
    .....
    {
      "characteristicOrder": 1,
      "name": "<p style=\"cursor: auto;\">Leaf: green color</p>\n"
    },
    {
      "characteristicOrder": 12,
      "name": "<p style=\"cursor: auto;\">Root: shape of top</p>\n"
    },
    {
      "characteristicOrder": 13,
      "name": "<p style=\"cursor: auto;\">Root: shape of base</p>\n"
    }
  ]
}
```

List of States of Expression

17. Given a TG code, a characteristic order and a language code, it is possible to retrieve the list of states of expression as indicated in chapter 8.

18. For example, in the case of Turnip (**TG code=37**), it is possible to retrieve the list of states of expression in English (**EN**) for the first characteristic using:

<https://www3.wipo.int/upovRestServices/upovCode/SOEList?tgCode=37&languageCode=EN&characteristicsOrder=1>

Output (IN JSON Format) :

```
{
  "responseCode": 1,
  "message": "SUCCESS",
  "soeList": [
    {
      "soeValue": "diploid",
      "soeNote": 2
    },
    {
      "soeValue": "tetraploid",
      "soeNote": 4
    }
  ]
}
```

List of States of Expression of a TQ characteristic

19. Given a TG code, a sequence number and a language code, it is possible to retrieve the list of states of expression as indicated in Chapter 10.

20. For example, in the case of Turnip (**TG code=37**), it is possible to retrieve the list of states of expression in English (**EN**) for the first TQ characteristic using:
<https://www3.wipo.int/upovRestServices/upovCode/TQSOEList?tgCode=37&languageCode=EN&SequenceNumber=1>

Output (IN JSON Format) :

```
{
  "responseCode": 1,
  "message": "SUCCESS",
  "soeList": [
    {
      "soeValue": "light",
      "soeNote": 1
    },
    {
      "soeValue": "very light",
      "soeNote": 3
    },
    {
      "soeValue": "medium",
      "soeNote": 5
    },
    {
      "soeValue": "dark",
      "soeNote": 7
    },
    {
      "soeValue": "very dark",
      "soeNote": 9
    }
  ]
}
```

2. A demonstration of the use of these web services will be made to the TWC at its thirty-fifth session.

21. The TWC is invited to note the availability of web services to retrieve information from the GENIE and TG Template databases and the demonstration that will be made to the TWC at its thirty-fifth session

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