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TWC/28/35
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UPOV

**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**

GENEVA

# TECHNICAL WORKING PARTY ON AUTOMATION AND COMPUTER PROGRAMS

## Twenty-Eighth Session
## Angers, France, June 29 to July 2, 2010

CPVO CENTRALISED DATABASE OF VARIETY DENOMINATIONS,
SYSTEM OF VARIETY DENOMINATION CHECKING,
ELECTRONIC OFFICE MANAGEMENT SYSTEMS DEPLOYED BY CPVO AND
CPVO ONLINE APPLICATION SYSTEM

*Document prepared by the Office of the Union*

This document contains the following presentations made by experts from the Community Plant Variety Office of the European Union (CPVO) at the twenty-eighth session of the Technical Working Party on Automation and Computer Programs:

Annex I: CPVO "Centralised database of variety denominations" presented by Mrs. Carole Bonneau;

Annex II: CPVO system of variety denomination checking presented by Mr. Patrick Lecoq;

Annex III: Electronic office management systems deployed by CPVO presented by Mrs. Laura Naie, and

Annex IV: CPVO online application system presented by Mr. Marc Rouillard.

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# Centralised database on variety denominations

1

## Aim

- Web based database released in 2005 for the purpose of testing similarity
- 618.000 denominations included

## Content

- CPVO data
- Data received from the European Commission
- OECD list
- National databases :
  - Register for plant breeder's rights and national listing



## Content

- Other registers of interest :
  - Commercial registers : Plantscope database (varieties commercialized in the Dutch auctions)
  - Fruit National Listing
  - Conservation varieties
  - Plant patent registers

# Content

- Data from non EU Member States are received from the UPOV Office for insertion into the CPVO Centralized database
- Data from EU Member States sent to the UPOV Office for inclusion into the UPOV CD Rom
  - Data exchange taking place every 2 months



# 3 formats of contribution

- SGML File format (text file used for the UPOV CD Rom)
- CSV files format
- Excel file format (very flexible for contributors)
- Processing data : time consuming

# Access

- The Centralized database is available for :
  - All EU contributors
  - UPOV
  - Breeder's associations : ESA and CIOPORA
  - All applicants for PVR and NL in the EU
  - The Benelux Office for Intellectual Property (other Trademark Offices on request)
  - Non EU authorities in Australia, Tunisia, Japan, Turkey, Croatia (other on request)



# When should we receive the data?

- Each time a given country publishes its national gazette
- The database should be updated with each publication

## Quality Checks

- All species Latin names are attributed the UPOV code :
  - UPOV codes requested when necessary to the UPOV Office
- Examples of incoherences reported to the contributors :
  - Modifications of variety identifiers (file n° )
  - Status of the variety not clear in the contribution
  - Dates (format…), duplicates



## Quality Checks

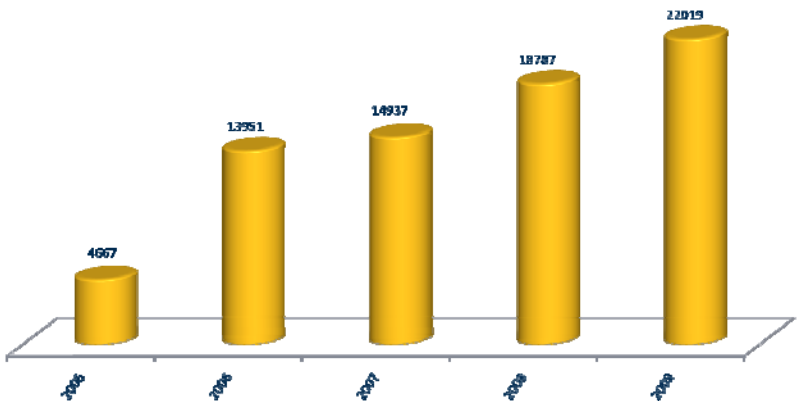
- Data received should comply with official publications :
  - Check performed manually
  - Reports to contributors sent with concrete examples

## Reports sent to contributors

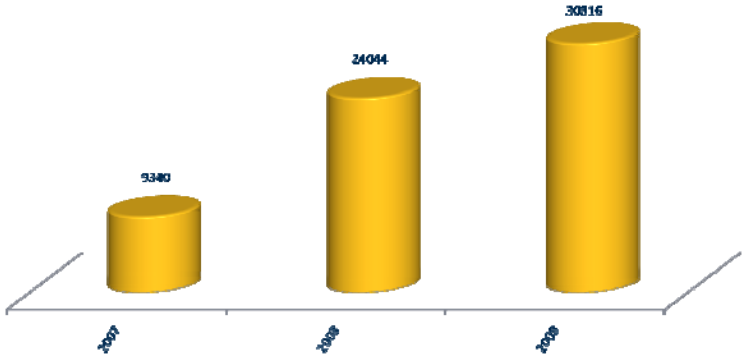
- To request for a complement of information
- To point out missing data
- Include suggestions for improvement



## Evolution of the number of tests from 2005 to 2010 (National Authorities)

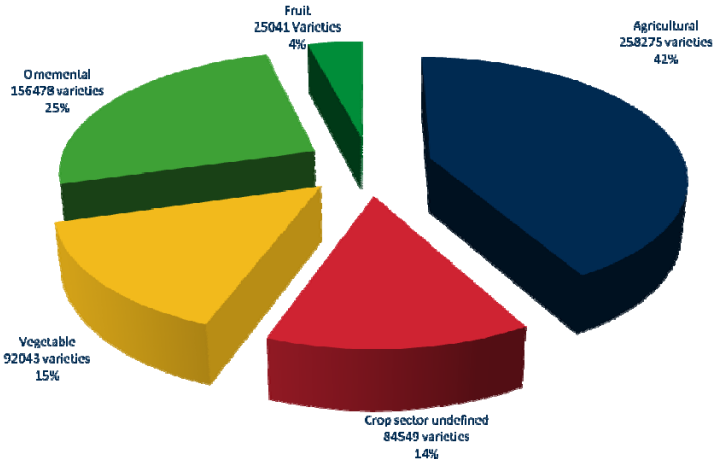


## Evolution of the number of tests
from 2007 to 2009 (Applicants and Procedural representatives)






## Content of the centralized database :
number of varieties per crop sector



## Conclusion

- Flexibility in accepting contributions
- 60% of a full time job
- Since 2010 :
  - Access to all UPOV Member possible on request
  - New project of cooperation with EU Member States : the Office gives advices on the suitability of denomination's proposals to National Authorities

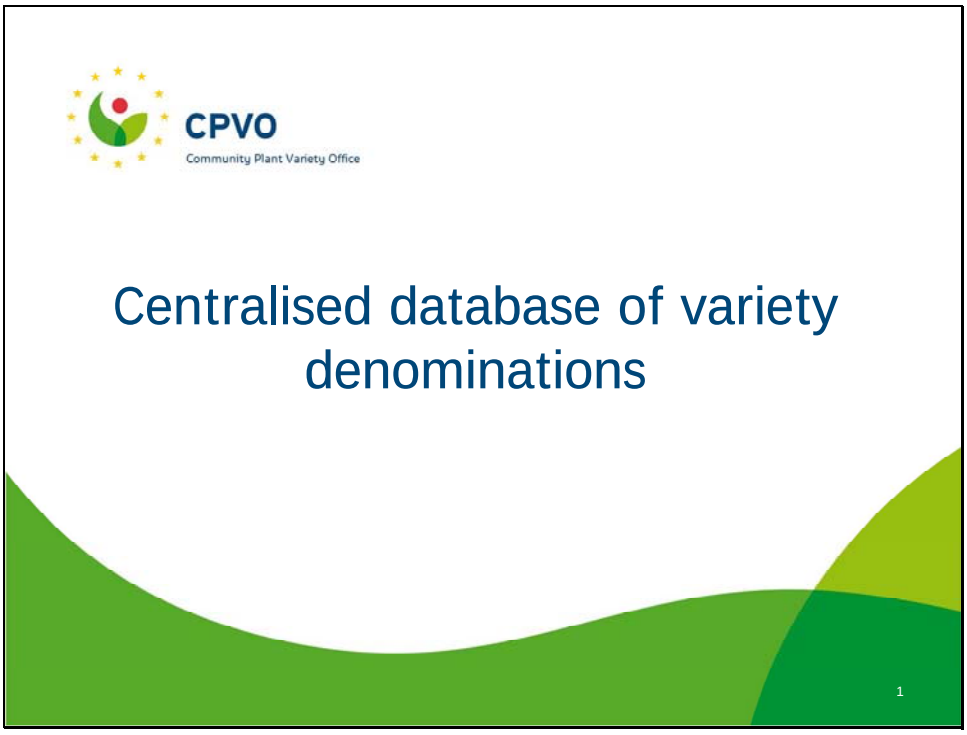


## Thank you for your attention.



[Annex II follows]

ANNEX II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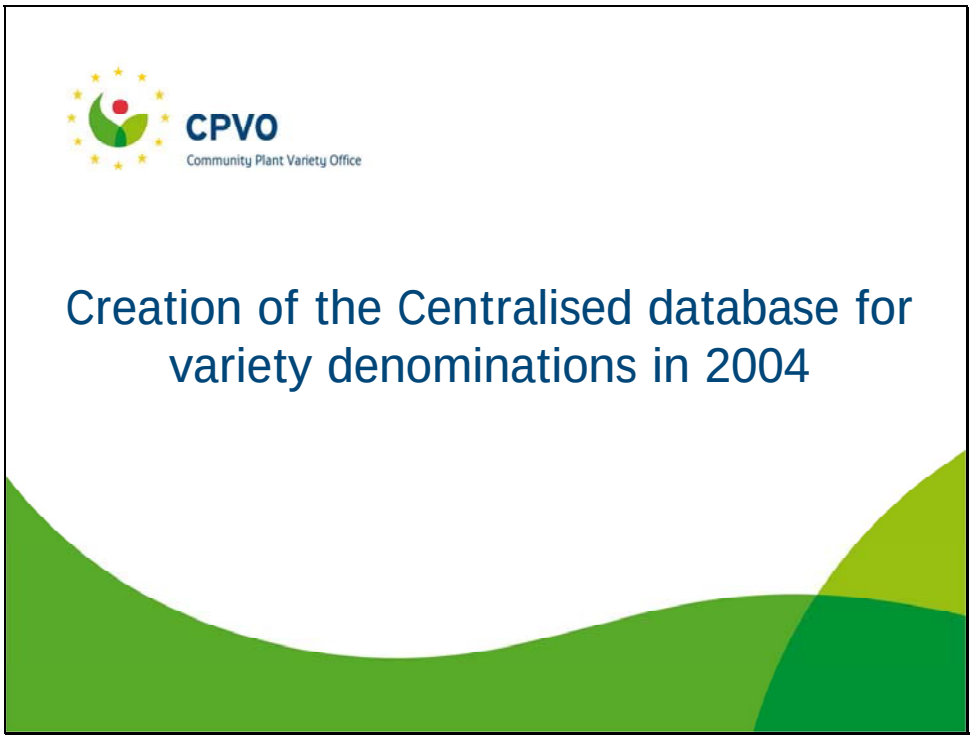
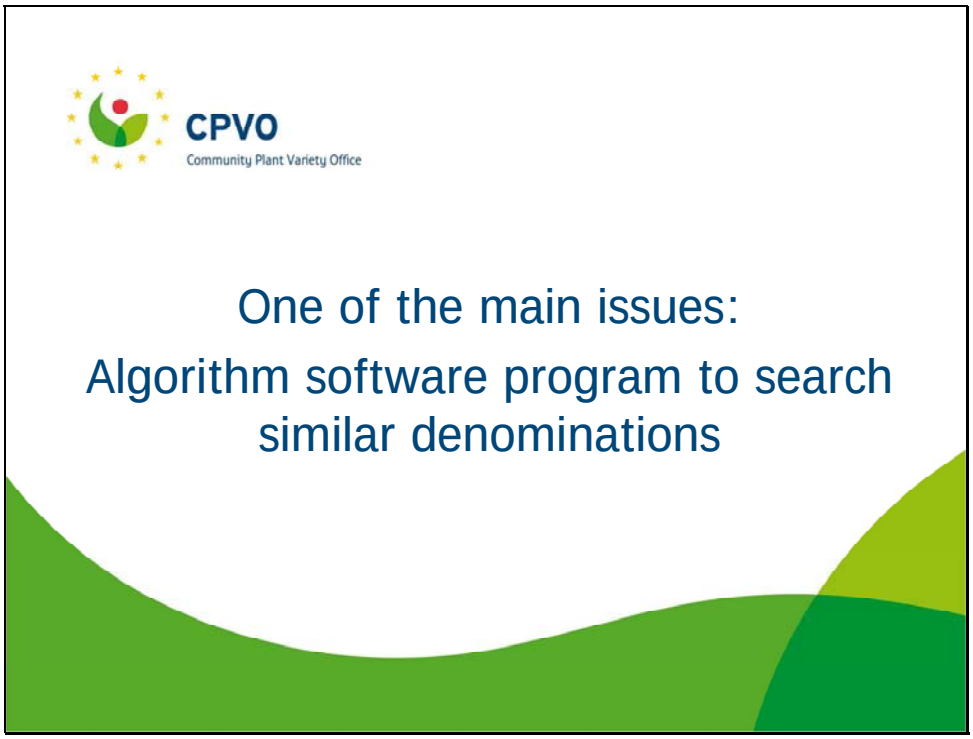
Centralised database of variety denominations
1


CPVO
Community Plant Variety Office
Creation of the Centralised database for variety denominations in 2004


CPVO
Community Plant Variety Office
One of the main issues:
Algorithm software program to search similar denominations

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CPVO visited BSA, NAK and GEVES:
CPVO chose the GEVES searching tool as a basis and tried to improved it.

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Testing phase of the algorithm in 2004:

The CPVO algorithm found the similar denominations found by the NL and DE software program.

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After 6 years of experience:

- No negative feedback from users
- Several improvements added
- Good ideas are welcome

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## Description of the searching tool:

## Based on the computation of a similarity score between denominations

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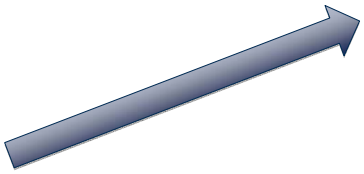
## similarity score between denominations

**Score = 0**
Identical words in the denominations



**Score >1,3**
Denominations not similar

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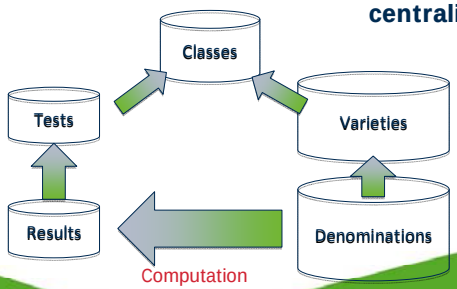
## Description of the CDVD database

**Denominations to be tested**

Submitted on the web site by users

4 000 tests per month

**Denominations of the centralised database**




Each denomination is linked to a variety

Denomination sent by UPOV and EU members.

**618 000** denominations in the database

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## First operations

- The denomination tested is cut in elementary words.
- Non latin standard characters are replaced
- Double letters are reduced to a single letter
- Exclusion of elementary word found in the list of words excluded for testing

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## Example: Denomination ‘Tänau TARI YELLOW’

- The word yellow is excluded from the tests.
- Words taken into account (WT) are :
  - TANAU,
  - TARI,
  - TANAUTARI,
  - TARIYELOW,
  - TANAUTARIYELOW

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## Second operation : building up a list of words of reference in the class

- List of the denominations attached to the class of the denomination tested.
- Exclusion of the words having a length really superior and inferior to the words tested

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## The principles of the similarity test

For each word tested, the procedure calculates a similarity score with each word of the reference list.
If the score is inferior to the threshold the denomination is selected into the result.

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## Detailed description of the similarity test

- Computation of Ki2: IF Ki2 inferior to the threshold then computation of :
  - Percentage of common letters
  - Percentage of non common letters
  - Percentage of difference of length
  - Rank of Kendall correlation
  - Sum = Similarity score

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•Computation of Ki2: Difference of number of letters between the word tested and the word of reference

•Formula : Ki2 = sum(di)$^2$/(Length(Word Tested)-1)(length(Word Reference)-1)

•Example ALADIN // DYLAN => Ki2 = 0,15. Ki2 inferior to 0,4, the computation continue

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Computation of the percentage of common letters

•Formula : Common letters = 1-(Nb of common letters)/ (length ( Word tested))

Example: ALADIN // DYLAN CL =1-4/6 = 0.33

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## Computation of the percentage of NON common letters

- Formula : Non Common letters = 1-(Nb of letters in word of reference and not in word tested)/ (length ( Word tested))
- Example : ALADIN and DYLAN NCL = 1/6 = 0.16

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## Computation of the percentage of difference of length

- Formula : DL = (Difference of length between the 2 words) /(length ( Word tested)
- Example : ALADIN and DYLAN DL=(6-5)/6 =0.16

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## Computation of the Kendall correlation

- Computation based on the position of the common letters of into the word tested and the word of reference
- Formula : **KC = 6 *sum(Di)$^2$/N*(N$^2$-1)**
- Example : ALADIN and DYLAN the common letters are A, L, D N. KC is equal to 0,05

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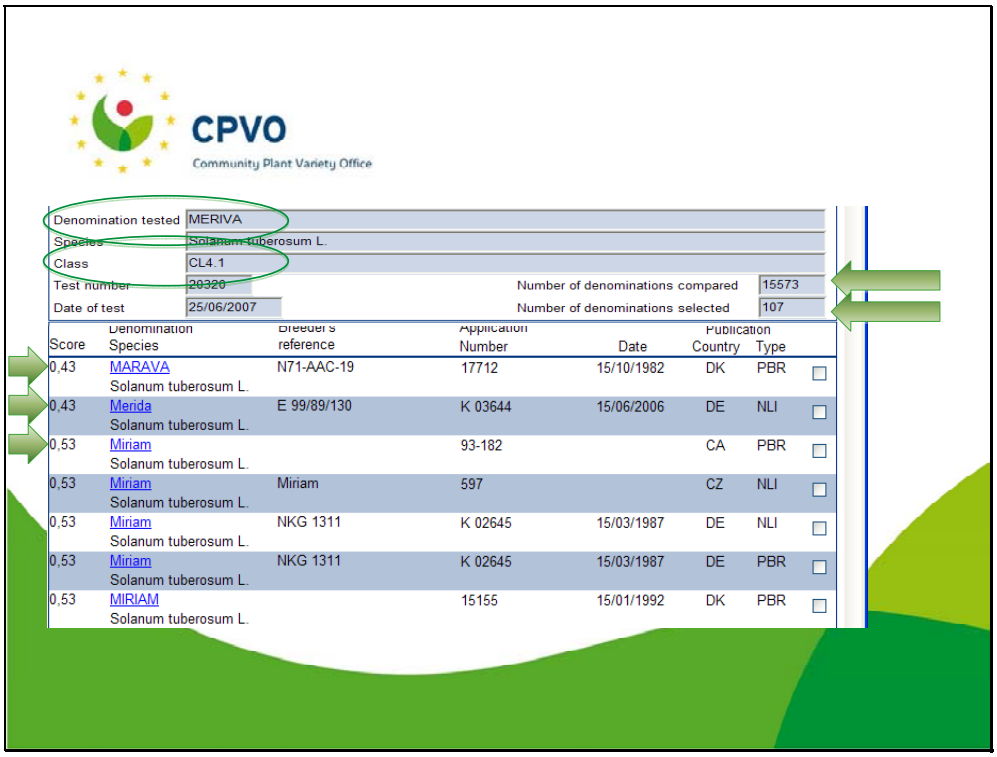
## Last step: Computation of the similarity score

- Similarity score= Kendall correlation + Common Letter + Non Common Letters + Difference Length

- If the similarity score is inferior to the thresold (1,2) then the denomination is selected in the result



[Annex III follows]

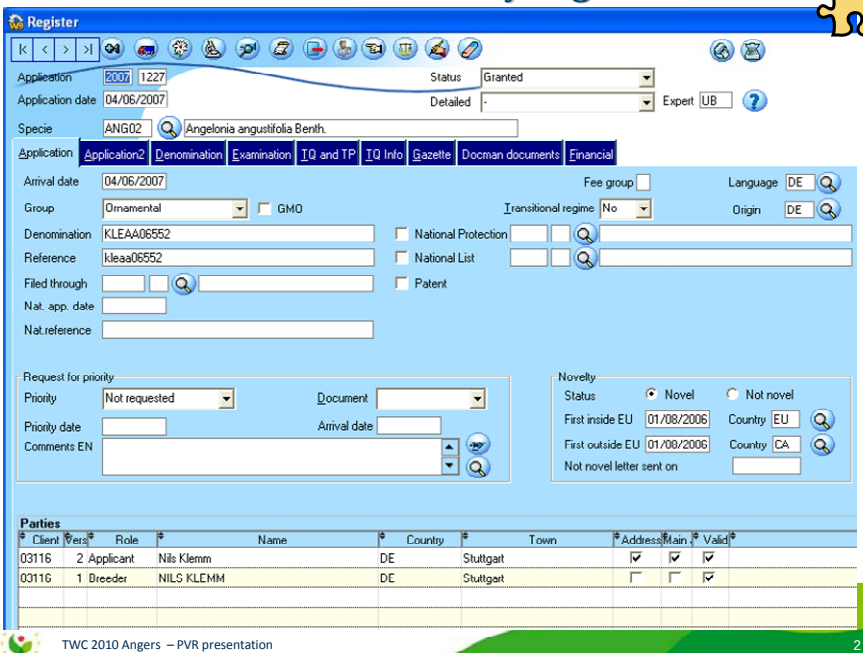
## PVR

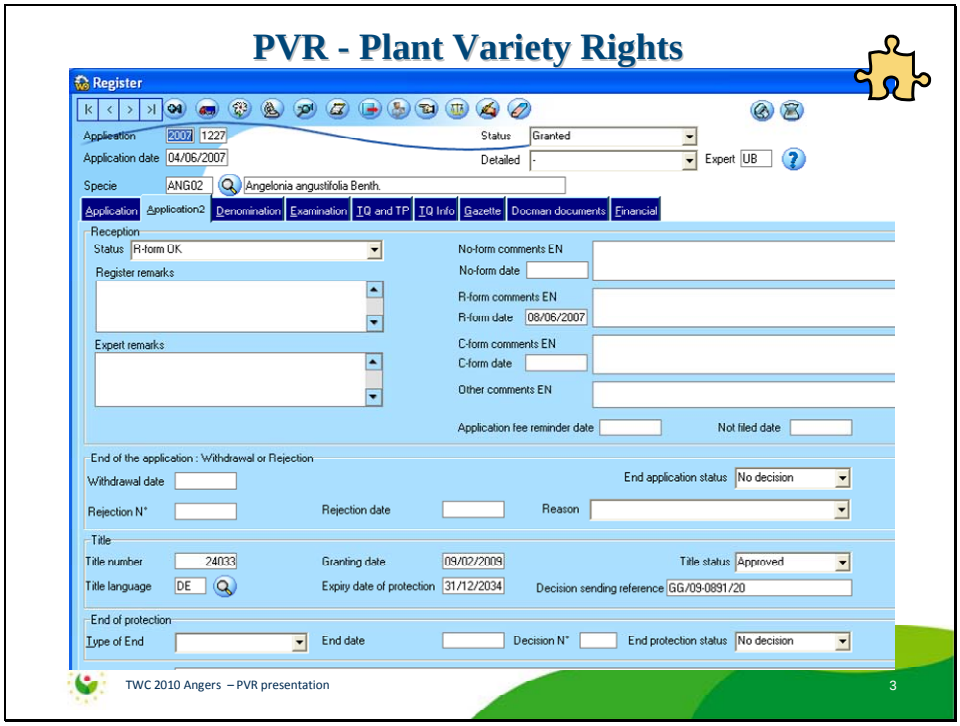
# Plant Variety Rights

- PIA5 – Budget and accountancy
- THP – Third party contacts
- Docman - Electronical archive
- Deno - Denominations
- Warnings - Night batch
- Gazette - Electronical publications
- OnLine - On line applications



## PVR - Plant Variety Rights




PVR - Plant Variety Rights
Register
Application 2007 1227
Status Granted
Application date 04/06/2007
Detailed -
Expert UB
Specie ANG02 Angelonia angustifolia Benth.
Application Application2 Denomination Examination TQ and TP TQ Info Gazette Docman documents Financial
Reception
Status R-form UK
Register remarks
Expert remarks
No-form comments EN
No-form date
R-form comments EN
R-form date 08/06/2007
C-form comments EN
C-form date
Other comments EN
Application fee reminder date
Not filed date
End of the application : Withdrawal or Rejection
Withdrawal date
End application status No decision
Rejection N°
Rejection date
Reason
Title
Title number 24033
Granting date 09/02/2009
Title status Approved
Title language DE
Expiry date of protection 31/12/2034
Decision sending reference GG/09-0891/20
End of protection
Type of End
End date
Decision N°
End protection status No decision
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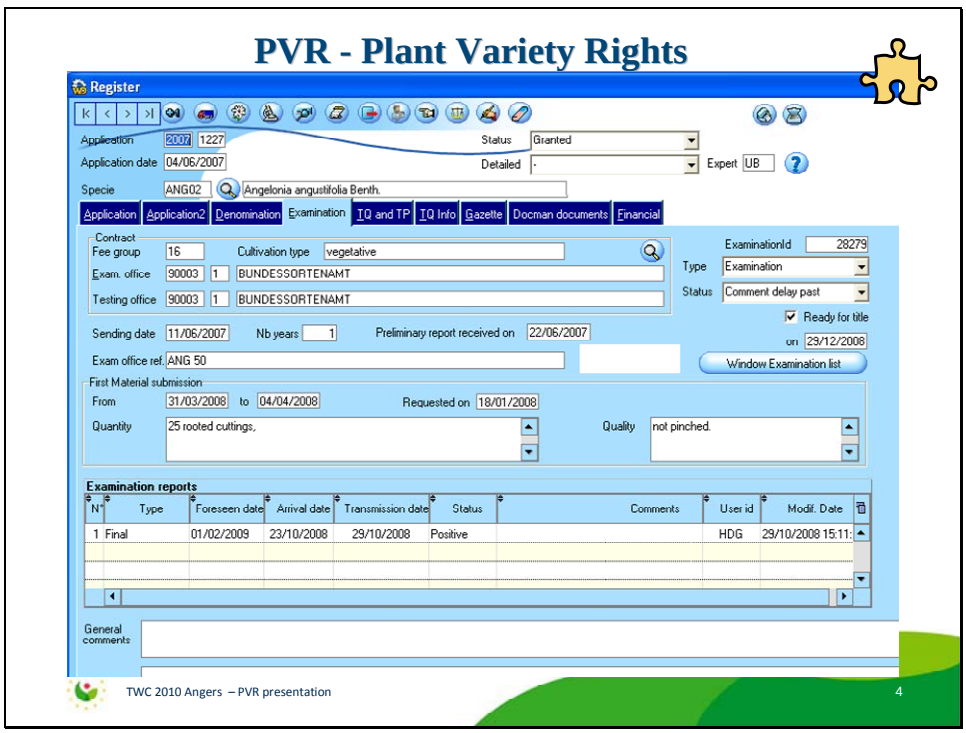
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Application Application2 Denomination Examination TQ and TP TQ Info Gazette Docman documents Financial
Contract
Fee group 16
Cultivation type vegetative
Exam. office 90003 1 BUNDESSORTENAMT
Testing office 90003 1 BUNDESSORTENAMT
ExaminationId 28279
Type Examination
Status Comment delay past
Ready for title
on 29/12/2008
Sending date 11/06/2007
Nb years 1
Preliminary report received on 22/06/2007
Exam office ref. ANG 50
Window Examination list
First Material submission
From 31/03/2008 to 04/04/2008
Requested on 18/01/2008
Quantity 25 rooted cuttings,
Quality not pinched.
Examination reports
N° Type Foreseen date Arrival date Transmission date Status Comments User id Modif. Date
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General comments
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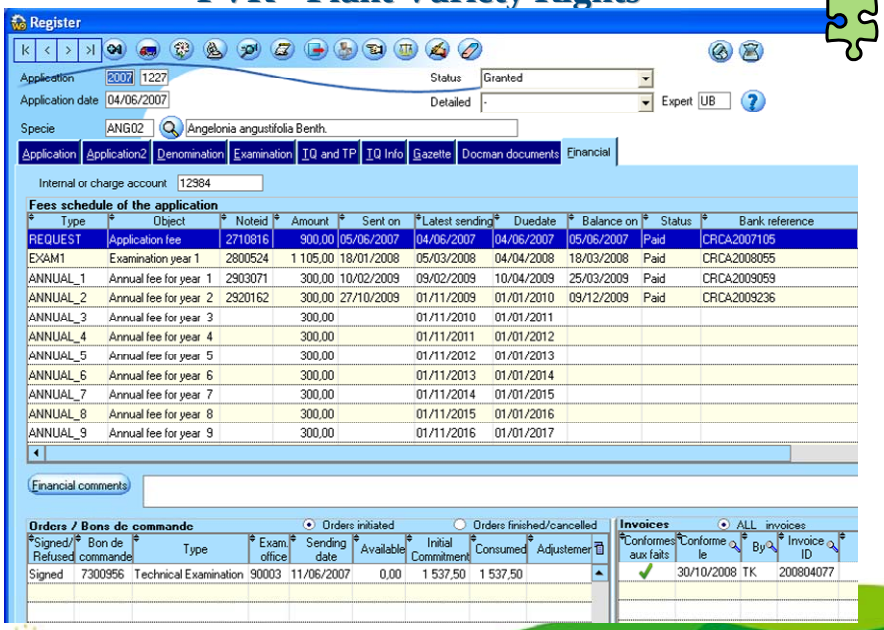
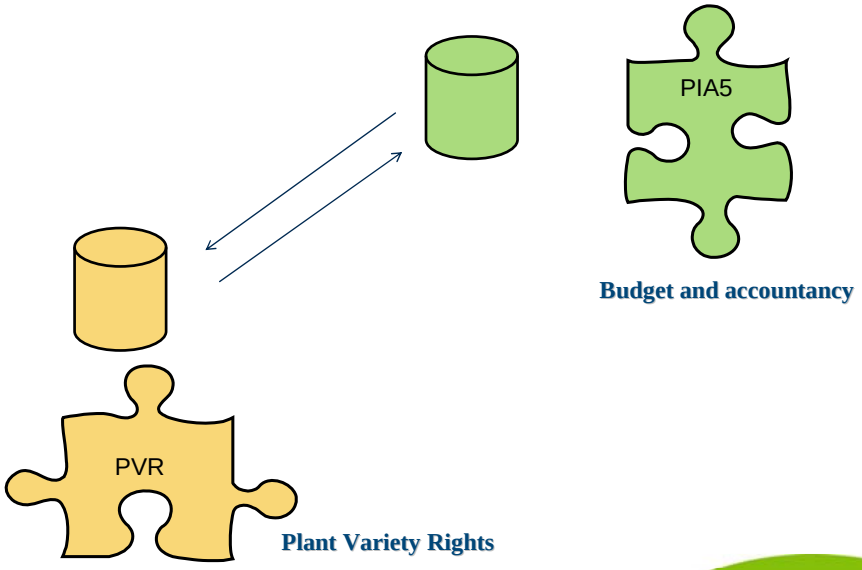
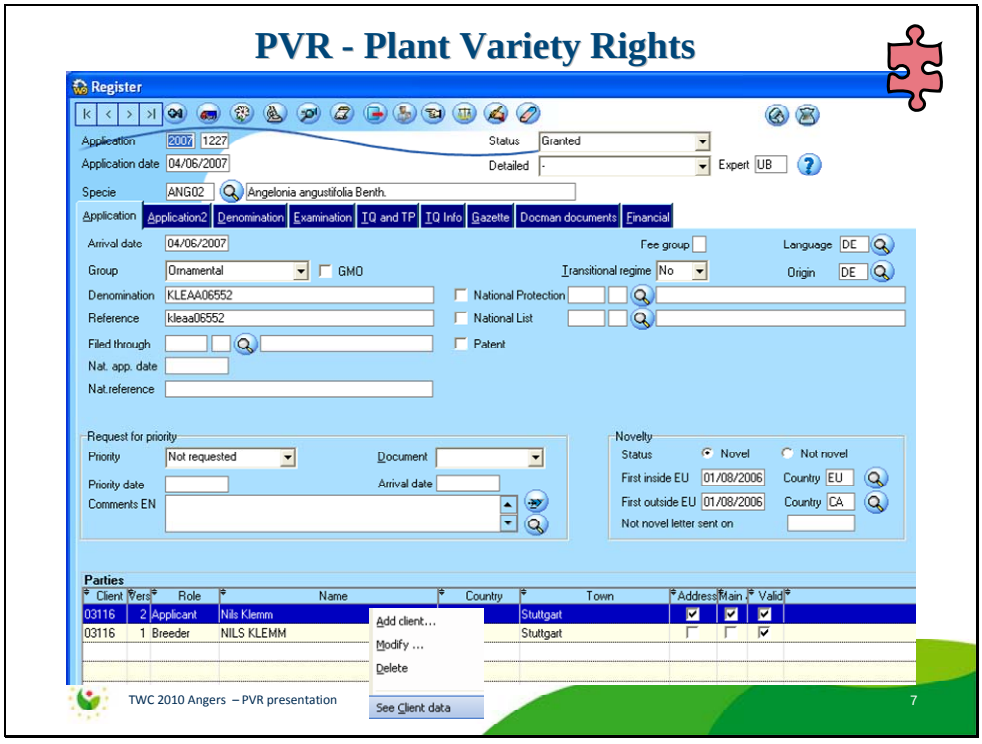
## PVR - Plant Variety Rights






## PIA5 - Budget and accountancy

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Detailed -
Expert UB
Specie ANG02 Angelonia angustifolia Benth.
Application Application2 Denomination Examination TQ and TP TQ Info Gazette Docman documents Financial
Arrival date 04/06/2007
Fee group
Language DE
Group Ornamental
GMO
Transitional regime No
Origin DE
Denomination KLEAA06552
National Protection
Reference kleaa06552
National List
Filed through
Patent
Nat. app. date
Nat.reference
Request for priority
Priority Not requested
Document
Priority date
Arrival date
Comments EN
Novelty
Status Novel Not novel
First inside EU 01/08/2006 Country EU
First outside EU 01/08/2006 Country CA
Not novel letter sent on
Parties
Client Vers Role Name Country Town Address Main Valid
03116 2 Applicant Nils Klemm Stuttgart
03116 1 Breeder NILS KLEMM Stuttgart
Add client...
Modify ...
Delete
See Client data
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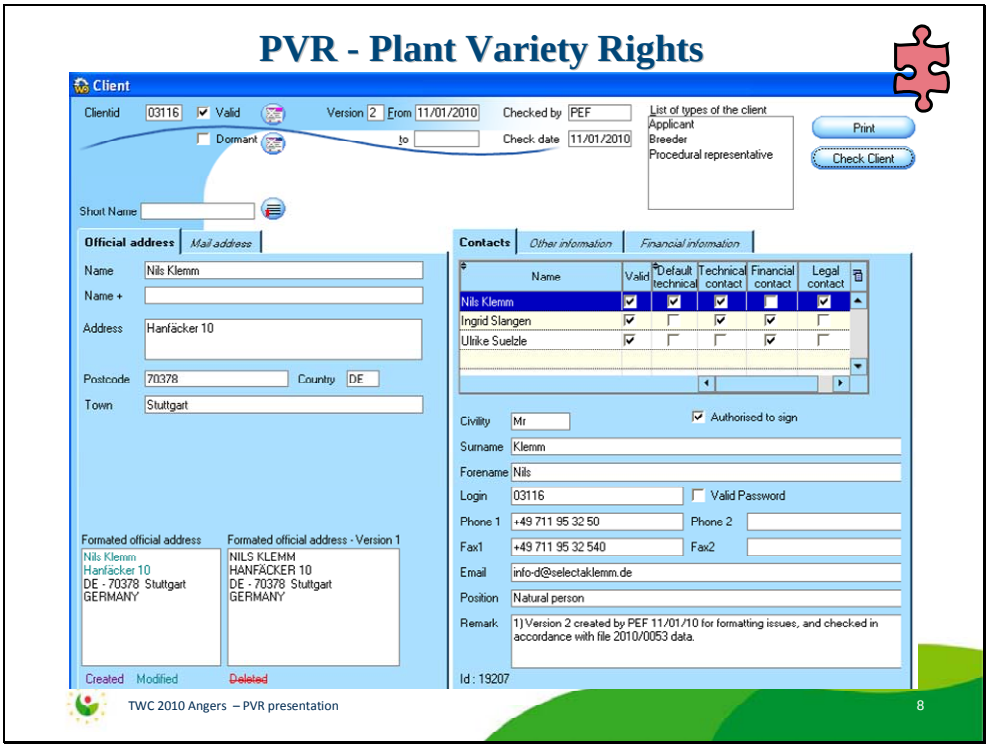
PVR - Plant Variety Rights
Client
Clientid 03116 Valid
Dormant
Version 2 From 11/01/2010
to
Checked by PEF
Check date 11/01/2010
List of types of the client
Applicant
Breeder
Procedural representative
Print
Check Client
Short Name
Official address Mail address
Name Nils Klemm
Name +
Address Hanfäcker 10
Postcode 70378 Country DE
Town Stuttgart
Contacts Other information Financial information
Name Valid Default technical Technical contact Financial contact Legal contact
Nils Klemm
Ingrid Slangen
Ulrike Suelzle
Civility Mr
Authorised to sign
Surname Klemm
Forename Nils
Login 03116
Valid Password
Phone 1 +49 711 95 32 50
Phone 2
Fax1 +49 711 95 32 540
Fax2
Email info-d@selectaklemm.de
Position Natural person
Remark 1) Version 2 created by PEF 11/01/10 for formatting issues, and checked in accordance with file 2010/0053 data.
Formated official address
Nils Klemm
Hanfäcker 10
DE - 70378 Stuttgart
GERMANY
Formated official address - Version 1
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HANFÄCKER 10
DE - 70378 Stuttgart
GERMANY
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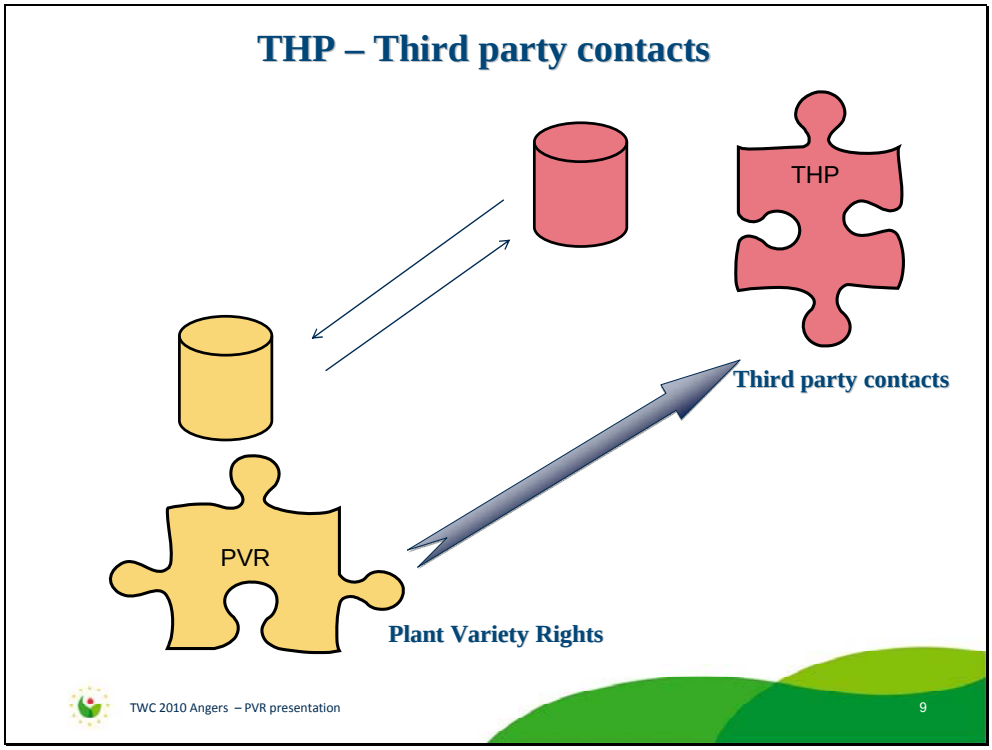
8


THP – Third party contacts
THP
Third party contacts
PVR
Plant Variety Rights
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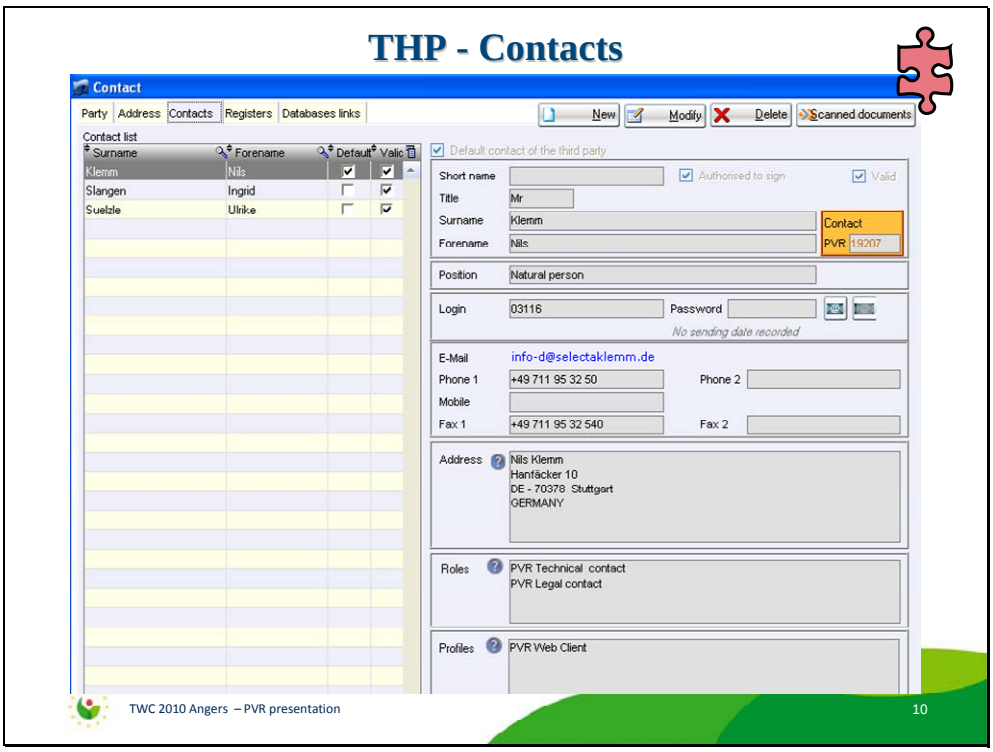
THP - Contacts
Contact
Party
Address
Contacts
Registers
Databases links
New
Modify
Delete
Scanned documents
Contact list
Surname
Forename
Default
Valid
Klemm
Nils
Slangen
Ingrid
Suelzle
Ulrike
Default contact of the third party
Short name
Authorised to sign
Valid
Title
Mr
Surname
Klemm
Forename
Nils
Contact
PVR 19207
Position
Natural person
Login
03116
Password
No sending date recorded
E-Mail
info-d@selectaklemm.de
Phone 1
+49 711 95 32 50
Phone 2
Mobile
Fax 1
+49 711 95 32 540
Fax 2
Address
Nils Klemm
Hanfäcker 10
DE - 70378 Stuttgart
GERMANY
Roles
PVR Technical contact
PVR Legal contact
Profiles
PVR Web Client
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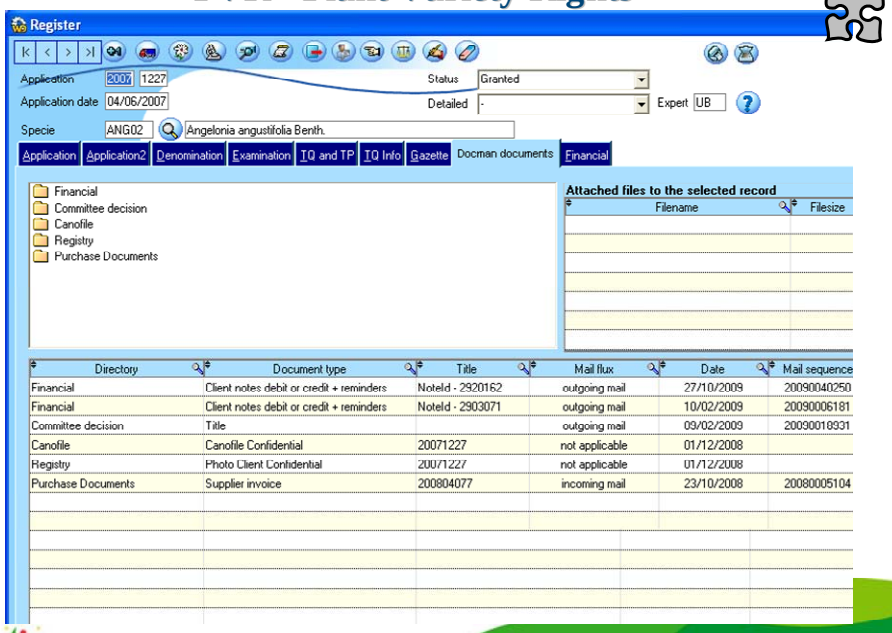
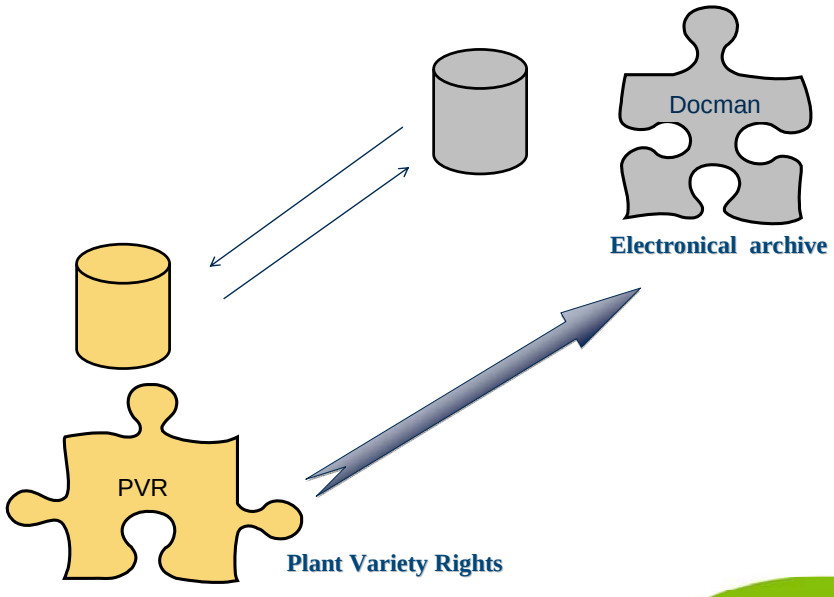
## PVR - Plant Variety Rights

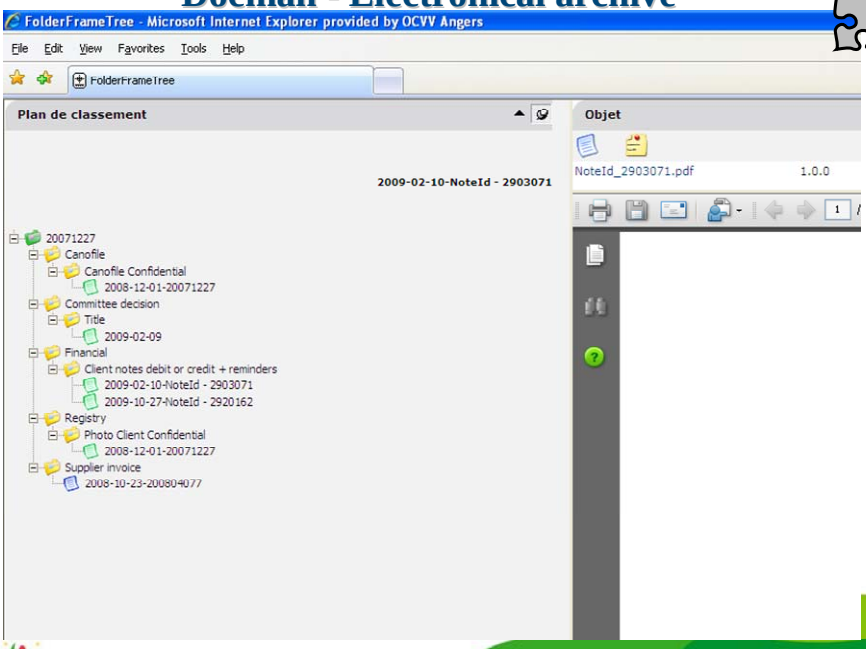





## Docman - Electronical archive

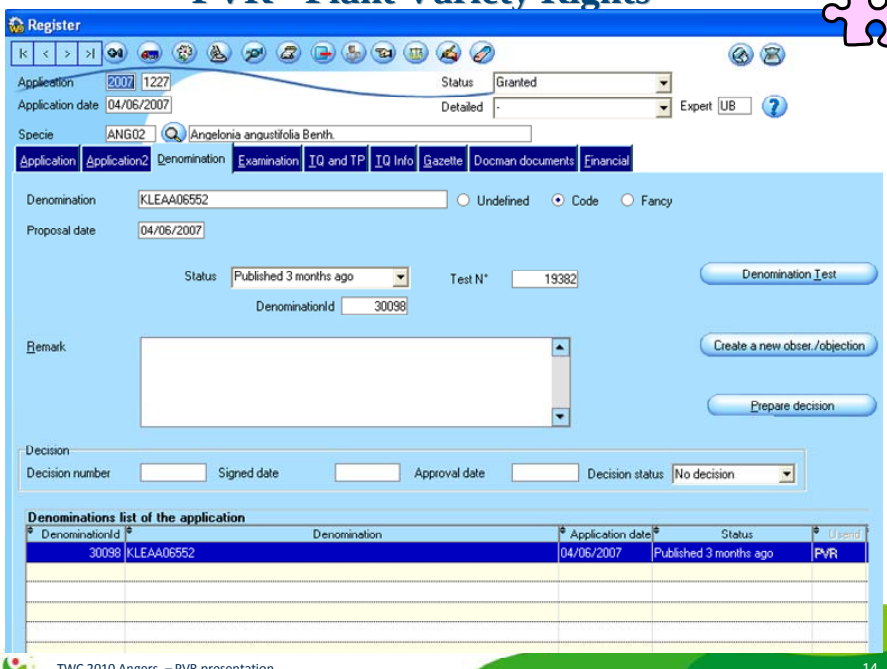


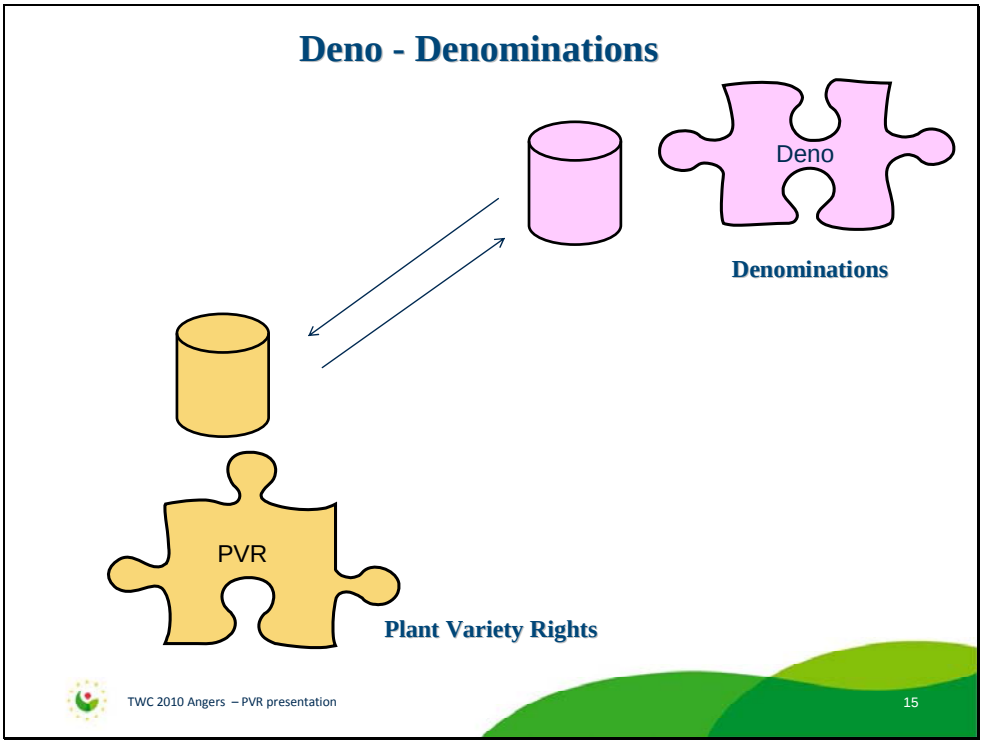
## Docman - Electronical archive






## PVR - Plant Variety Rights




Deno - Denominations
Deno
Denominations
PVR
Plant Variety Rights
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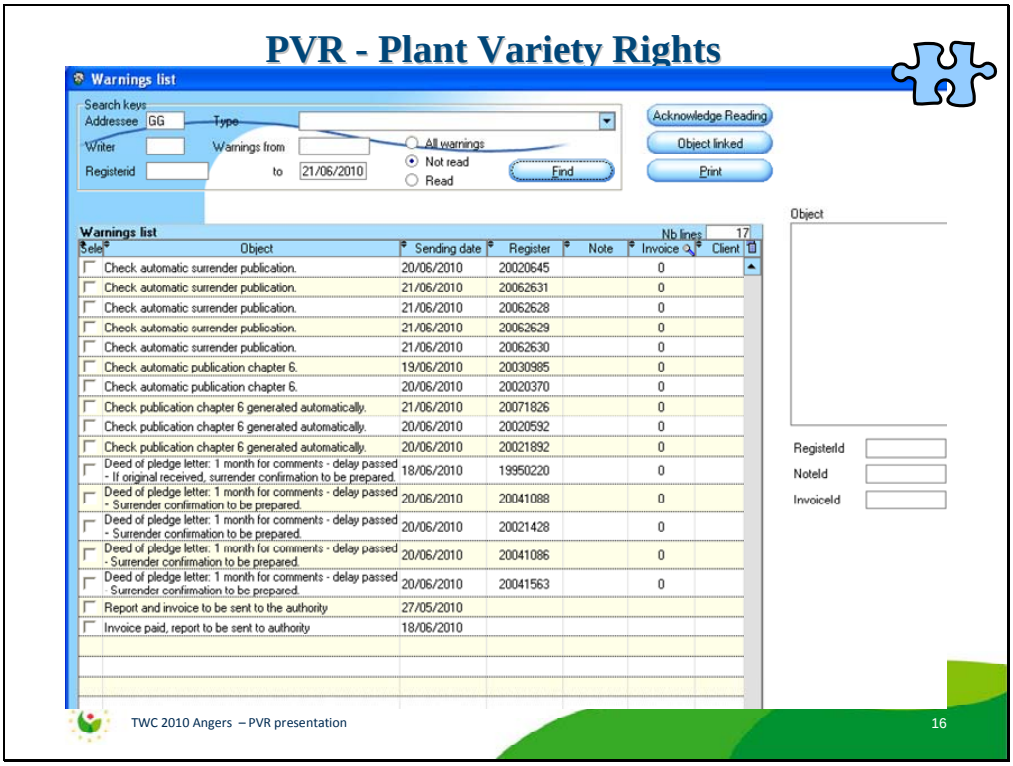
PVR - Plant Variety Rights
Warnings list
Search keys
Addressee GG
Type
Writer
Warnings from
Registerid
to 21/06/2010
All warnings
Not read
Read
Find
Acknowledge Reading
Object linked
Print
Warnings list
Nb lines 17
Sele Object Sending date Register Note Invoice Client
Check automatic surrender publication. 20/06/2010 20020645 0
Check automatic surrender publication. 21/06/2010 20062631 0
Check automatic surrender publication. 21/06/2010 20062628 0
Check automatic surrender publication. 21/06/2010 20062629 0
Check automatic surrender publication. 21/06/2010 20062630 0
Check automatic publication chapter 6. 19/06/2010 20030985 0
Check automatic publication chapter 6. 20/06/2010 20020370 0
Check publication chapter 6 generated automatically. 21/06/2010 20071826 0
Check publication chapter 6 generated automatically. 20/06/2010 20020592 0
Check publication chapter 6 generated automatically. 20/06/2010 20021892 0
Deed of pledge letter: 1 month for comments - delay passed - If original received, surrender confirmation to be prepared. 18/06/2010 19950220 0
Deed of pledge letter: 1 month for comments - delay passed - Surrender confirmation to be prepared. 20/06/2010 20041088 0
Deed of pledge letter: 1 month for comments - delay passed - Surrender confirmation to be prepared. 20/06/2010 20021428 0
Deed of pledge letter: 1 month for comments - delay passed - Surrender confirmation to be prepared. 20/06/2010 20041086 0
Deed of pledge letter: 1 month for comments - delay passed - Surrender confirmation to be prepared. 20/06/2010 20041563 0
Report and invoice to be sent to the authority 27/05/2010
Invoice paid, report to be sent to authority 18/06/2010
Object
RegisterId
NoteId
InvoiceId
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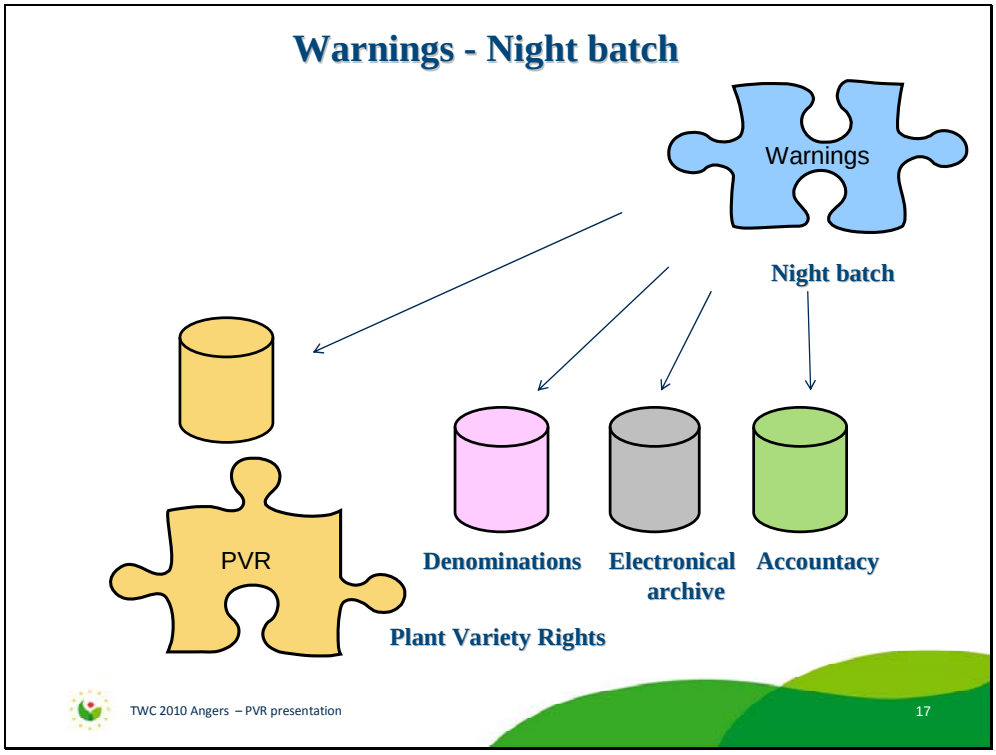
Warnings - Night batch
Warnings
Night batch
PVR
Denominations
Electronical archive
Accountacy
Plant Variety Rights
TWC 2010 Angers – PVR presentation
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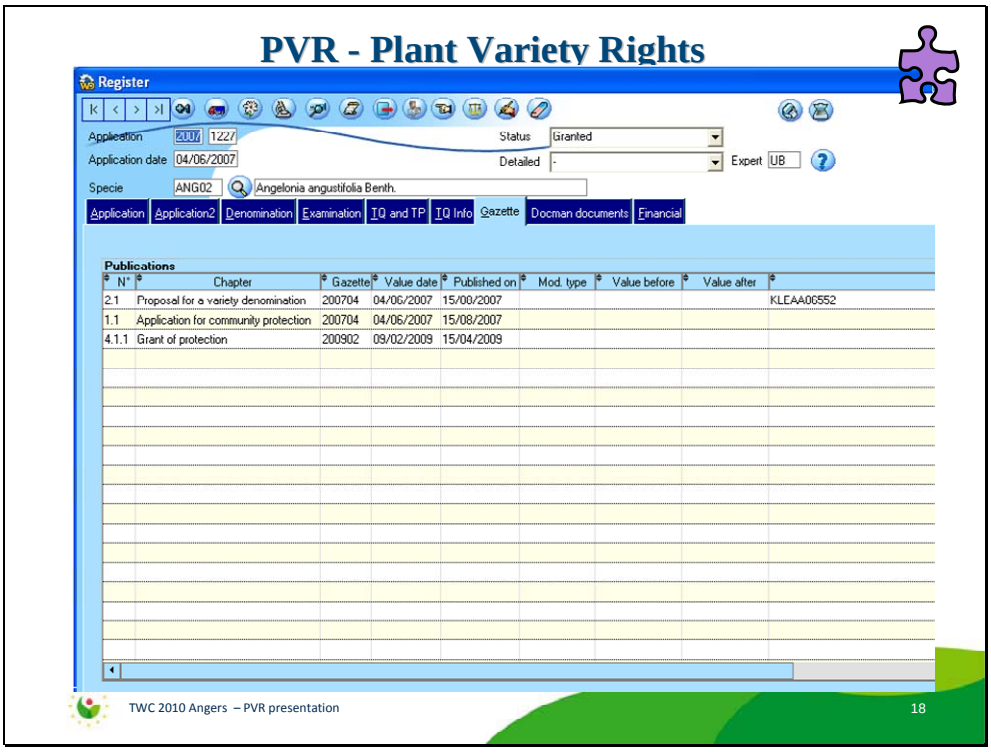
PVR - Plant Variety Rights
Register
Application 2007 1227
Application date 04/06/2007
Specie ANG02 Angelonia angustifolia Benth.
Status Granted
Detailed -
Expert UB
Application Application2 Denomination Examination TQ and TP TQ Info Gazette Docman documents Financial
Publications
N° Chapter Gazette Value date Published on Mod. type Value before Value after
2.1 Proposal for a variety denomination 200704 04/06/2007 15/08/2007 KLEAA06552
1.1 Application for community protection 200704 04/06/2007 15/08/2007
4.1.1 Grant of protection 200902 09/02/2009 15/04/2009
TWC 2010 Angers – PVR presentation
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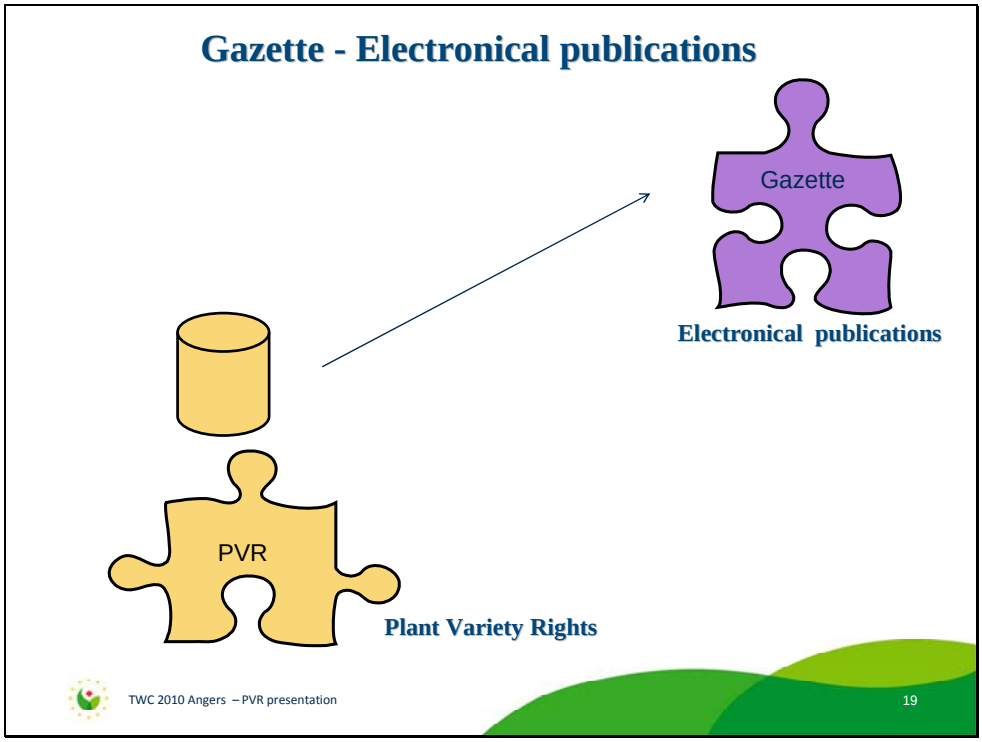
Gazette - Electronical publications
Gazette
Electronical publications
PVR
Plant Variety Rights
TWC 2010 Angers – PVR presentation
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Gazette - Electronical publications
Official Gazette - Microsoft Internet Explorer provided by OCVV Angers
http://www.cpvo.europa.eu/main/en/home/documents-and-publications/official-gazette
File Edit View Favorites Tools Help
Official Gazette
CPVO
Community Plant Variety Office
About the CPVO News Filing an application Technical Examinations Payment Community Plant Variety Rights Documents Databases
Search
Home > Documents > Official Gazette
Official Gazette of the CPVO
After the decision of the President of the Office of 16/11/2009, the 6 official gazettes and the S2 gazette will be exclusively available in digital format, free of charge, on the website of the Office.
2010 issues will be downloadable from this page (see hereunder).
Older issues will be freely downloadable from the Archive page to which you will find a link below and where they will be referenced by years. 2009 to 2001 issues are available in pdf format. Please be aware that gazettes from 2000 to 1995 are scanned versions of hard copies, files are bigger and take longer to download.
Paper copies of pre-2010 CPVO Publications will be for sale, if printed versions are still available (please consult the inside back cover of the digital copy for further details)
The Official Journal of the Community Plant Variety Office (the Official Gazette) is published in nearly all official languages of the European Union.
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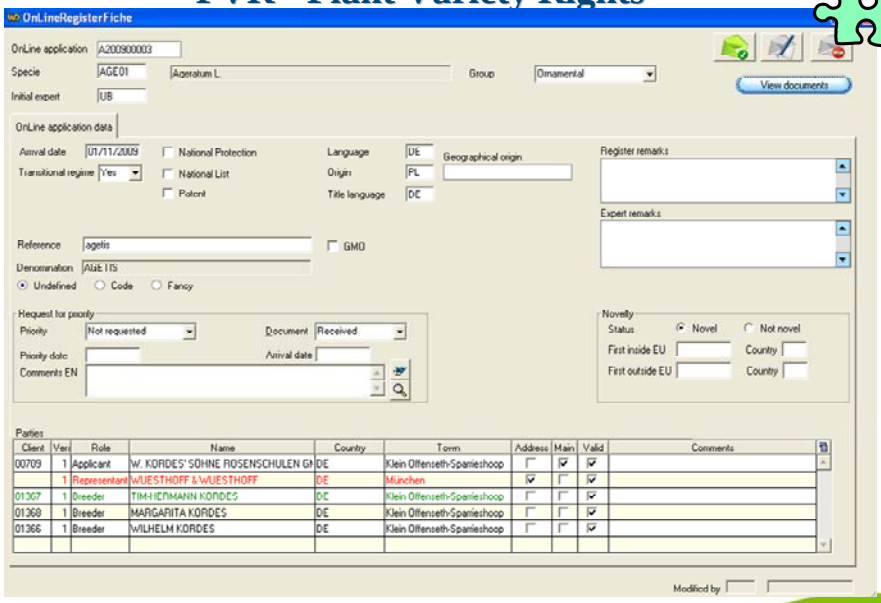
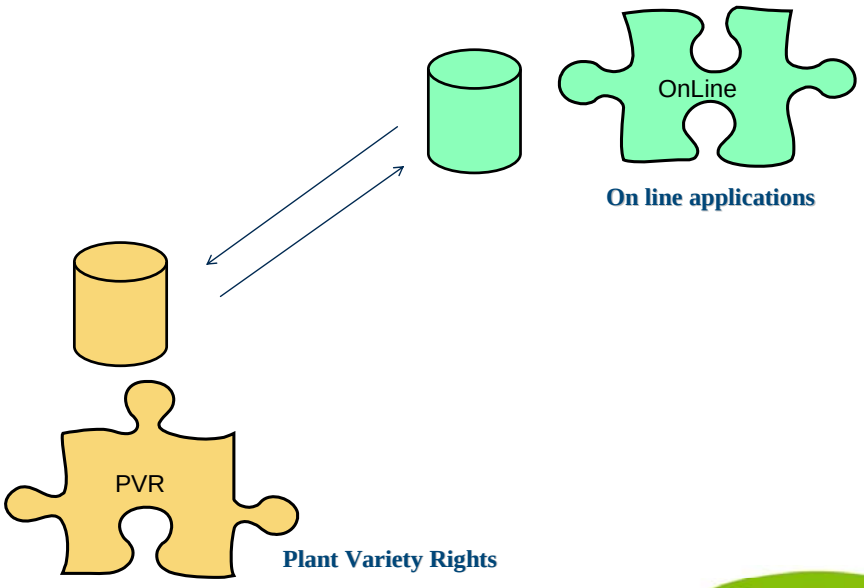
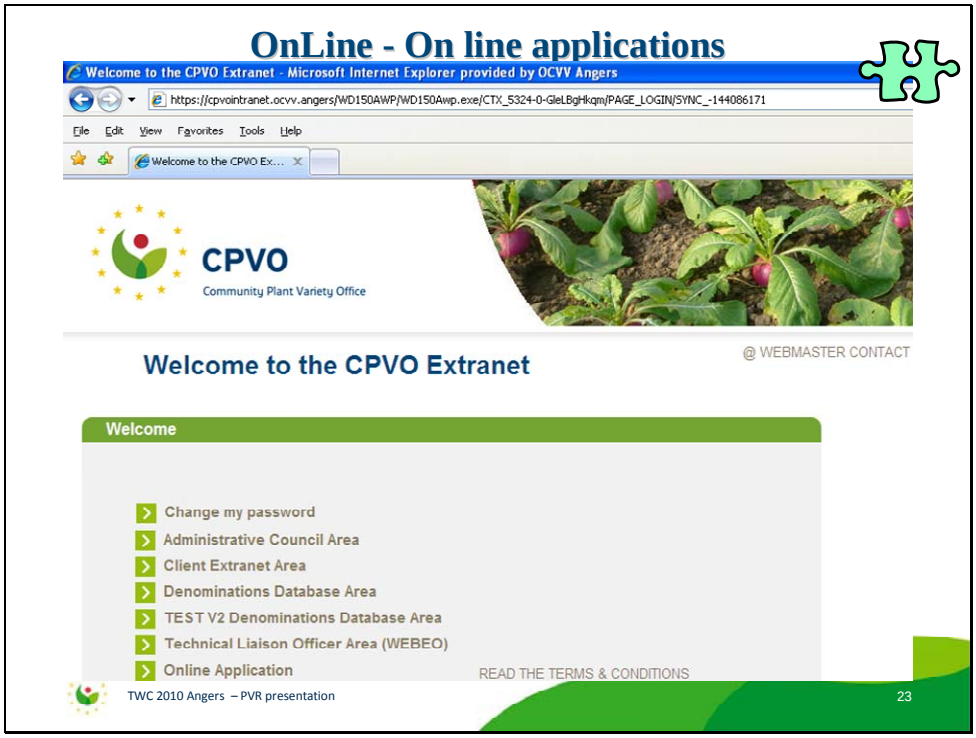
## PVR - Plant Variety Rights

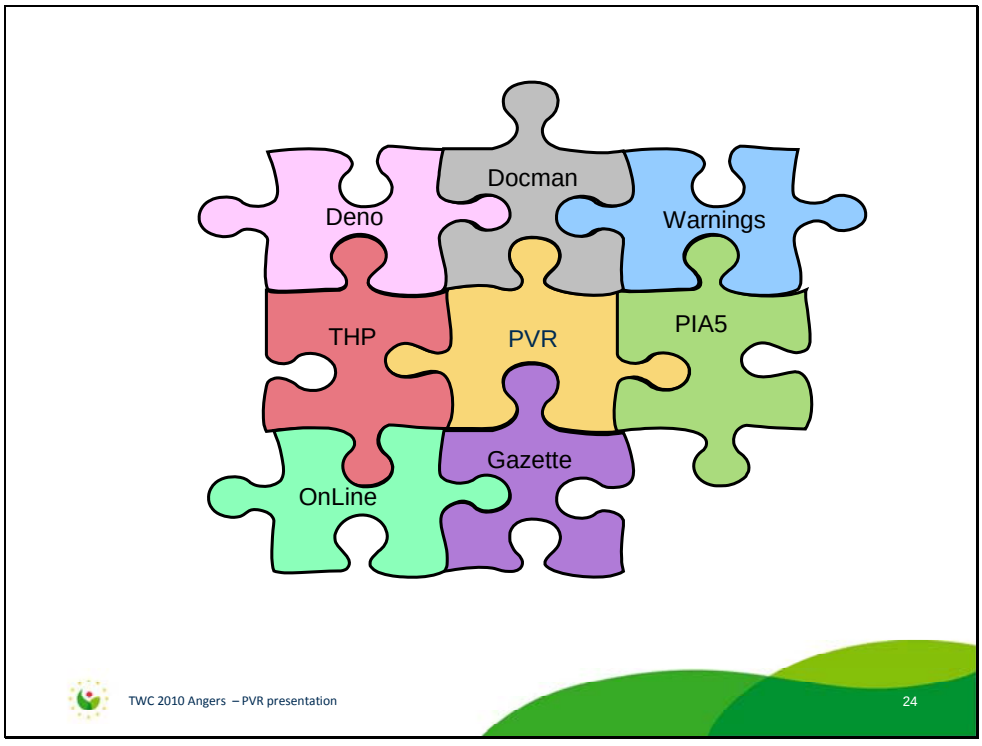





## OnLine - On line applications






[Annex IV follows]

ANNEX IV

CPVO
Community Plant Variety Office

# CPVO Online Applications

28th Session of the TWC

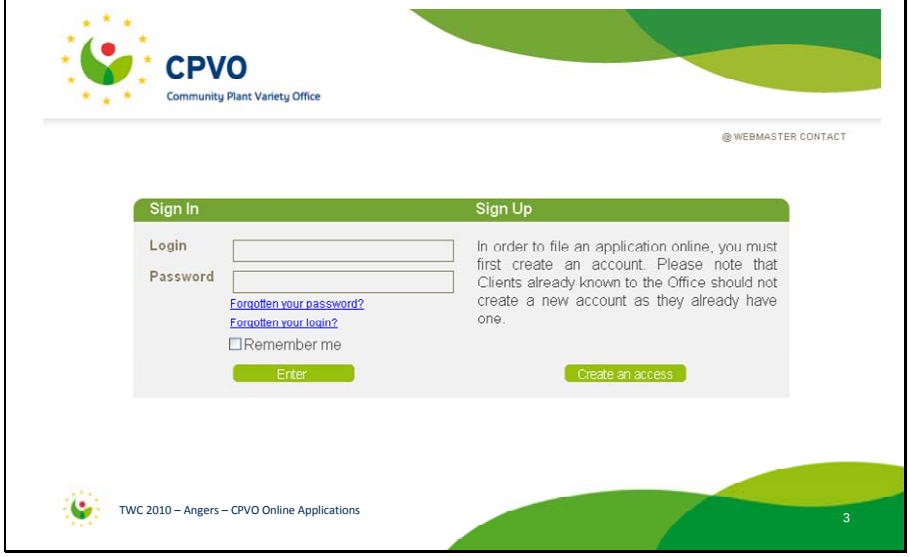
Angers, France - June 29 to July 2, 2010

Marc Rouillard – Webmaster/Web Project Manager

## Identification system

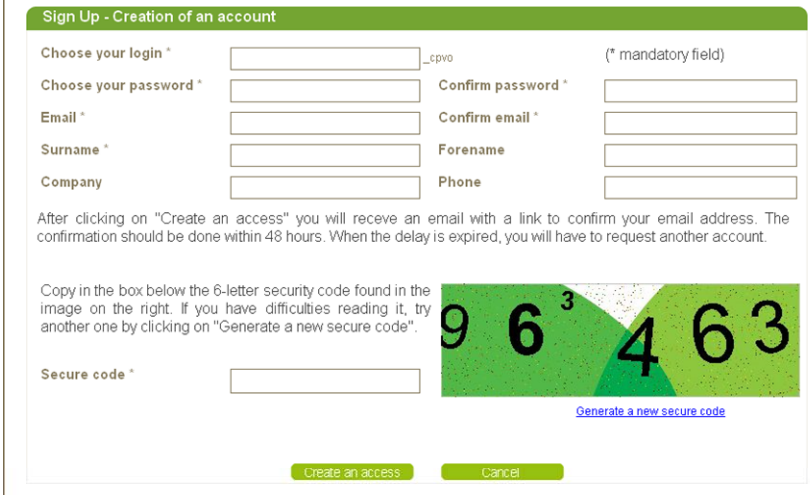
- Two-folded:
  - clients known to the CPVO
  - Temporary accounts allowing online applications
- Data volume:
  - around 3500 known users (380 active).
  - low number of temporary users

# Identification system






# Identification system

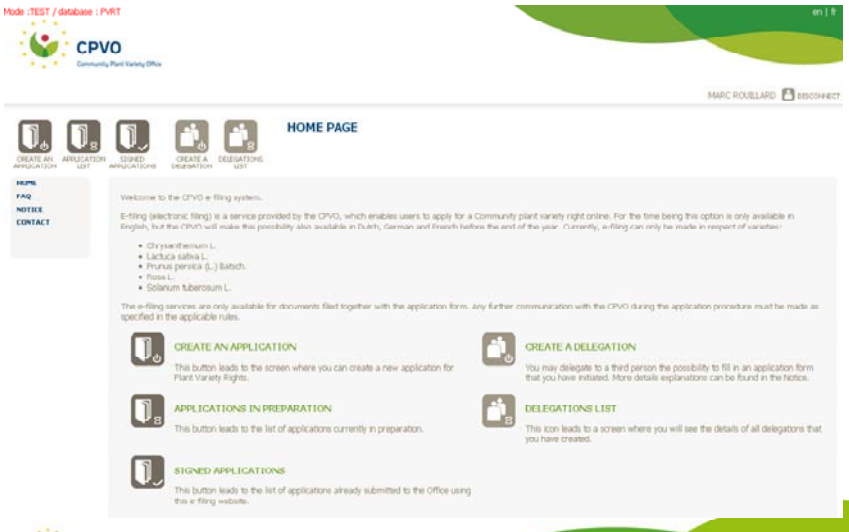


## Identification: technical specifications

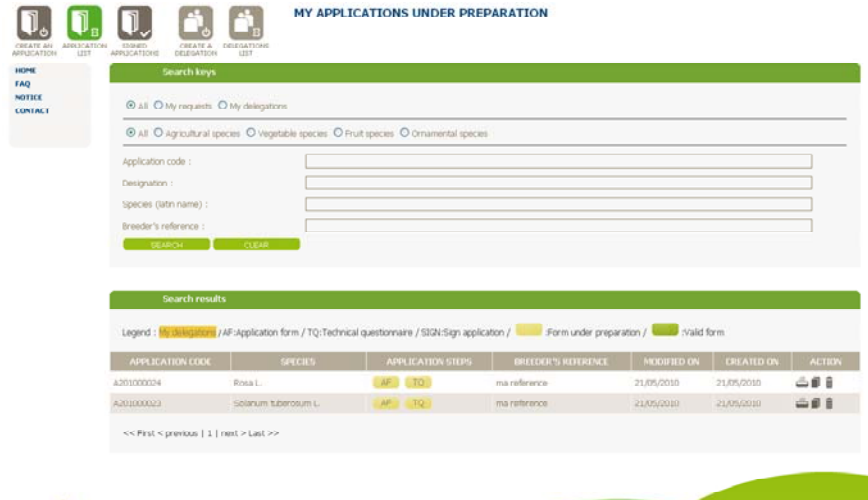
- Website made with PCSoft's Webdev
- Oracle 10i database
- Microsoft IIS6 webserver



## Front Office: overview of client side

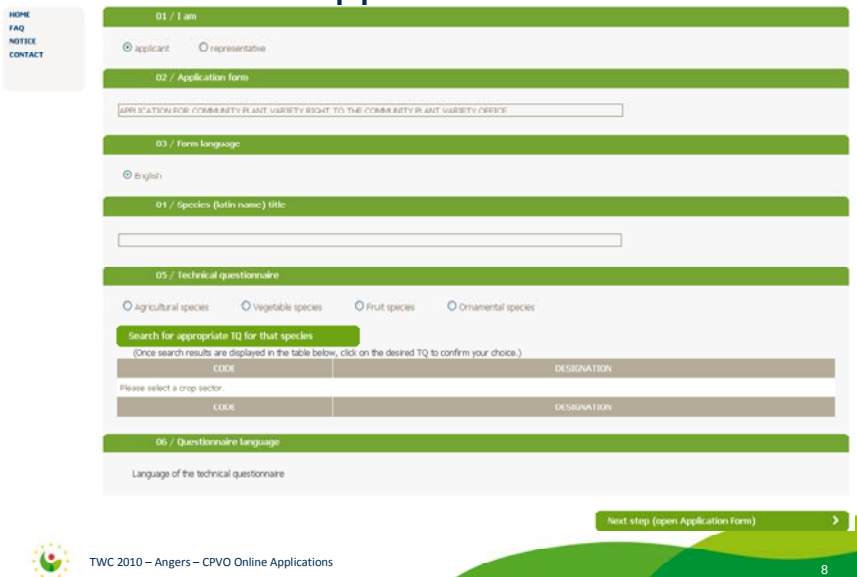


## Front Office: overview of client side

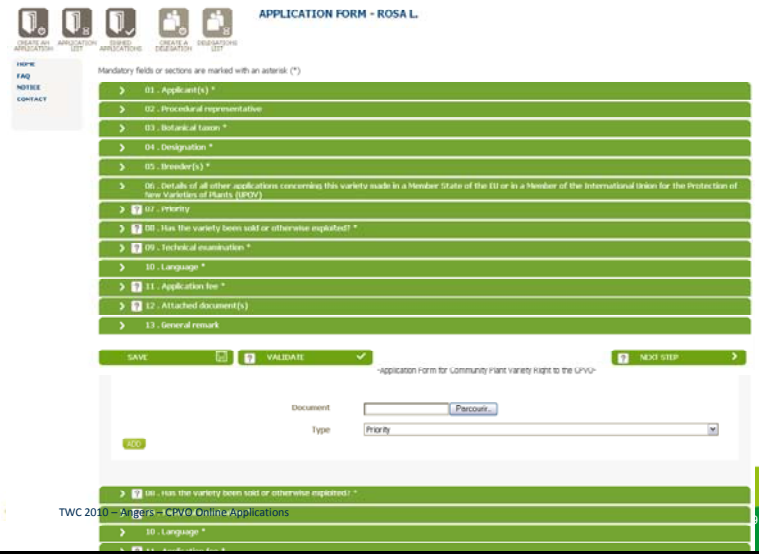





## Front Office: application creation

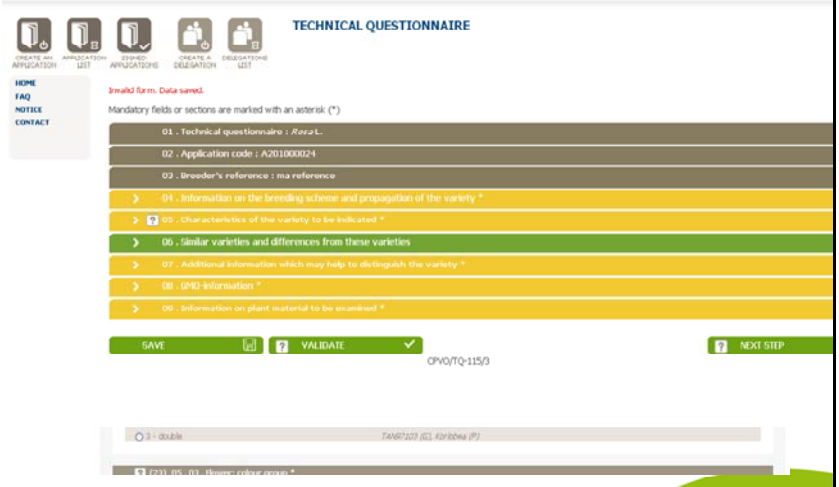


## Front Office: administrative form






## Front Office: technical questionnaire



## Front Office: miscellaneous actions

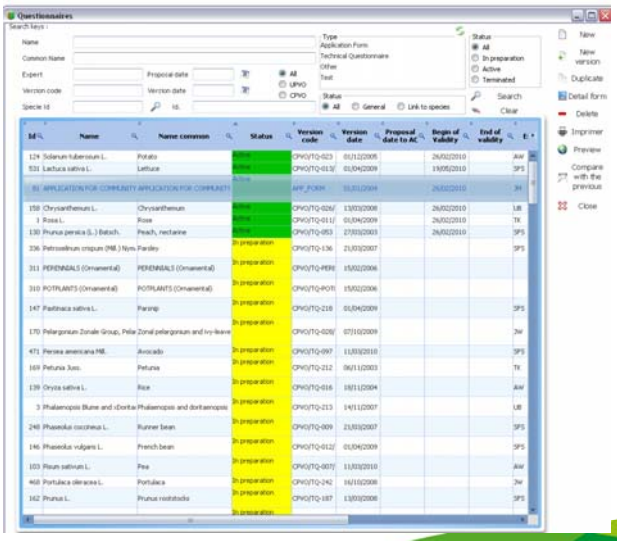
- Duplicate application: AF only
- Attach files (PDF, JPEG,PNG)
- Print application (PDF documents AF TQ)
- Delegate access
  - Define list of applications
  - Define access period
  - Delegate can modify, save/validate but not sign



## Front Office: technical specs

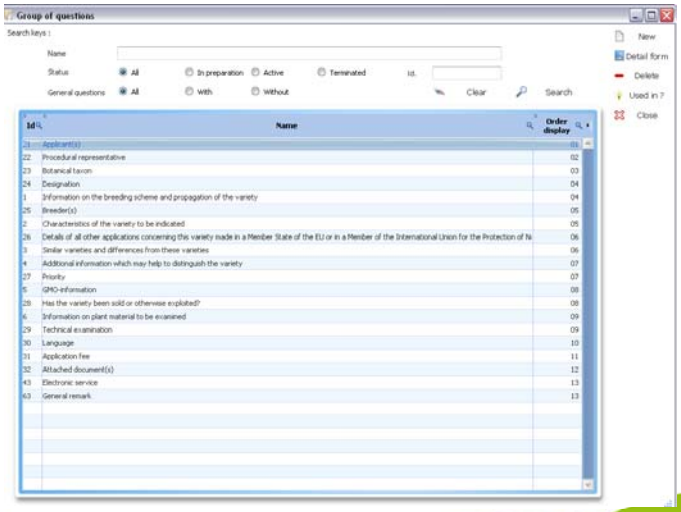
- Framework: Zend Framework (PHP)
  - Open source, free, MVC paradigm
- Application server: Zend Server
  - Caching, monitoring, debugging
- Oracle 10i database
- Microsoft IIS6 webserver
- Helicon Isapi Rewrite extension

# Back Office: overview

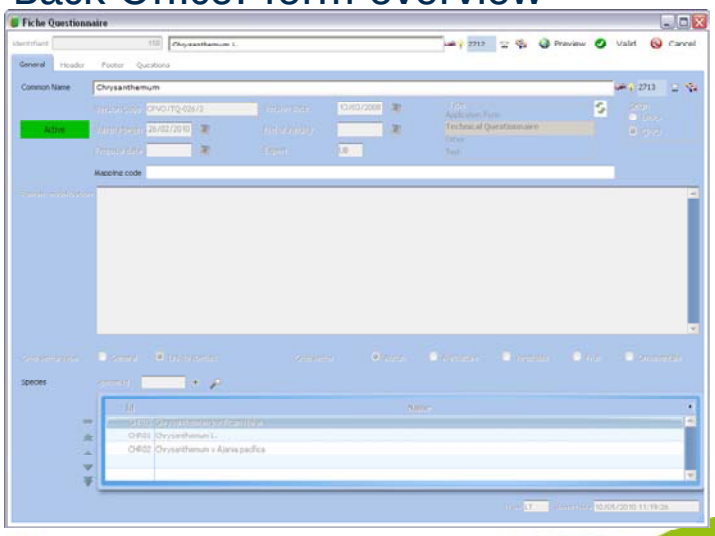




# Back Office: group level

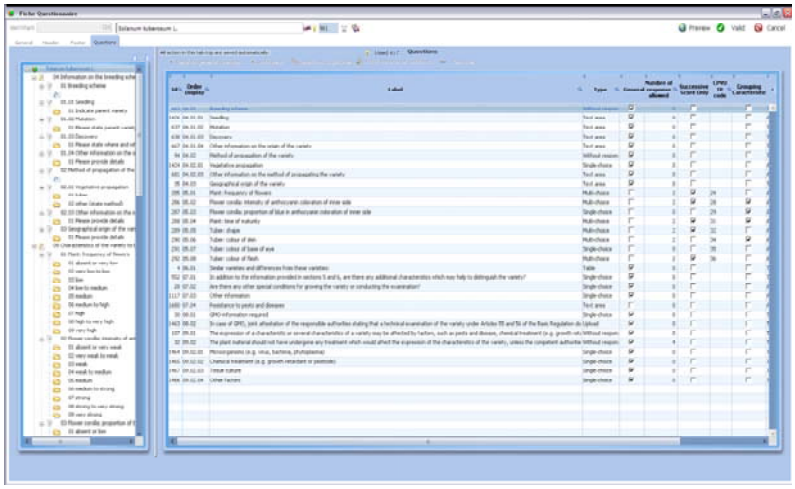


## Back Office: form overview

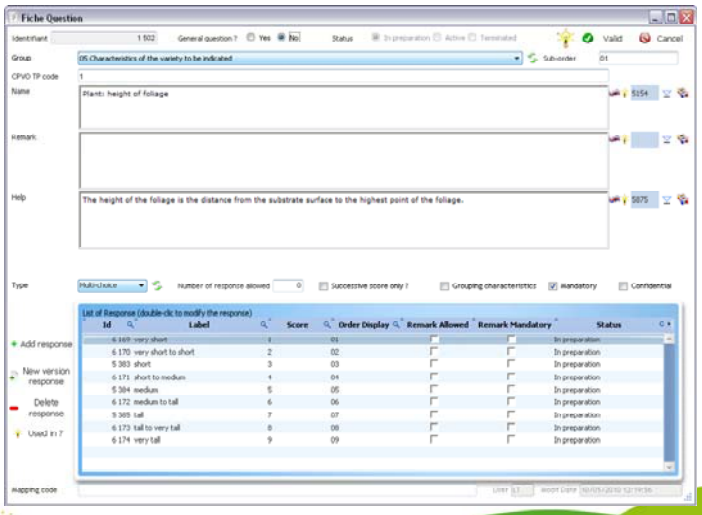





## Back Office: form overview

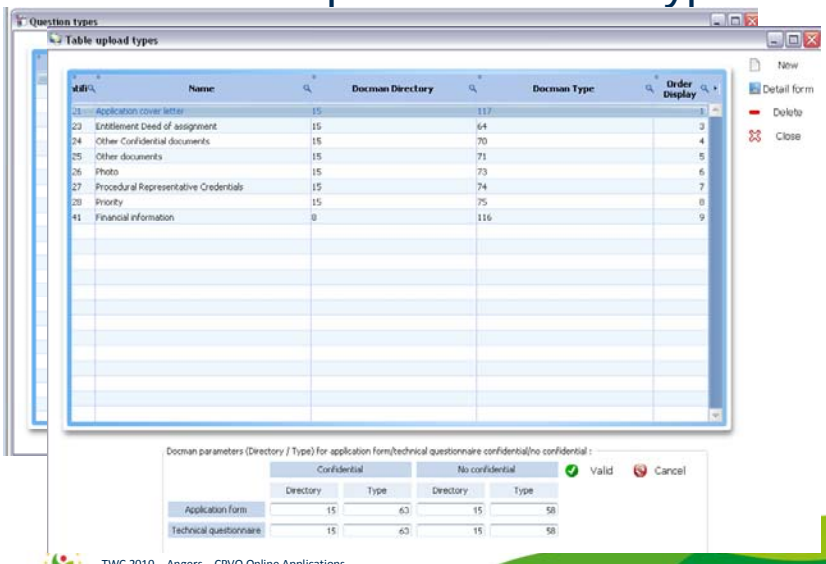


## Back Office: question level

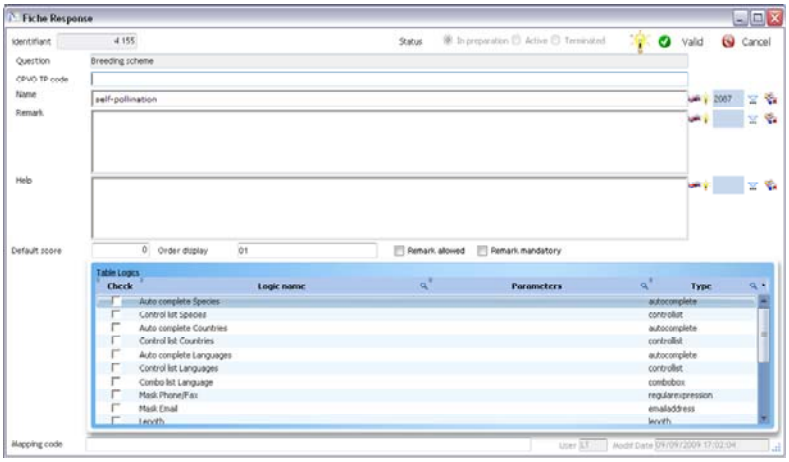





## Back Office: question level > types

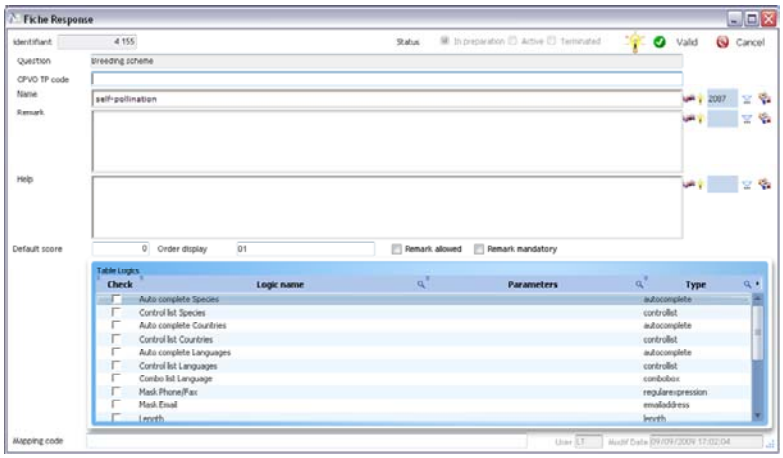


# Back Office: response level

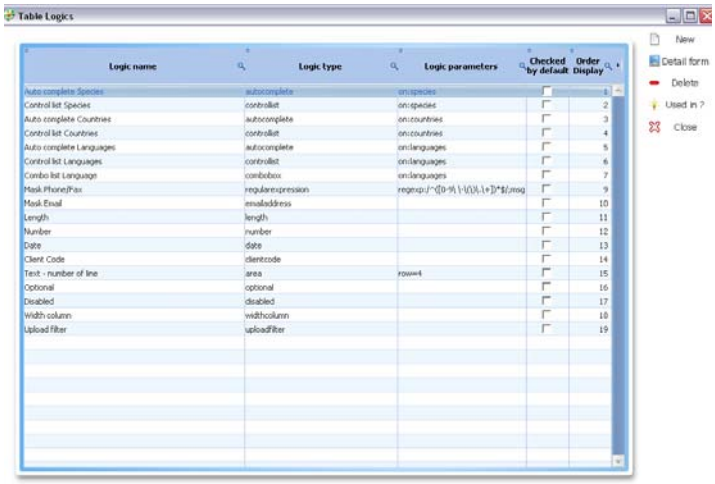





# Back Office: response level

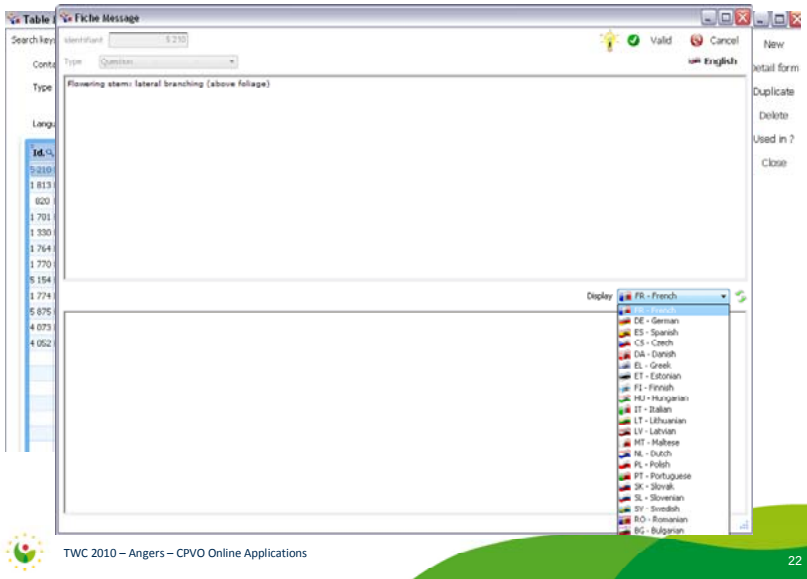


## Back Office: response level > logics






## Back Office: handling messages



## Back Office: general questions and versioning

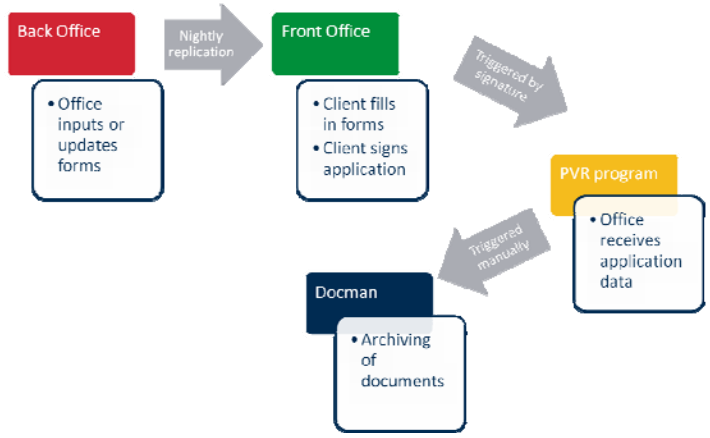
- General questions: shared between forms. Less maintenance but heavier developments.
- Versioning
  - at forms level
  - at question level



## Back Office (updating forms): specs

- Windows client developped w/ PCSoft Windev (speed and rich interface)
- Oracle 10i database
  - Use of constraints, triggers, jobs and replication
- Front office used for preview and production of blank PDFs

## Basic data flow






## Key points

- For the Office:
  - Less typing, staff focus on control
  - Automatic controls on forms: less needs to go back to applicants
  - Faster: no more scanning stage
  - Integrated in PVR Back Office and Docman (Electronic Document Management System)
  - In the future:
    - More automatic controls on forms (cross-questions)
    - Developments to meet breeders' wishes after 1st experience
    - Extension of the system to other species
    - Possibly e-signature

## Key points

- For the clients:
  - Re-use previous applications (faster)
  - Apply 24/24*7/7, no more postal delays
  - Online help
  - In the future:
    - Possible fees reduction?
    - Re-use of applications in several EU countries (share with National Offices) and possibly UPOV? [not cost neutral]
    - Possible e-signature for all documents?



CPVO
Community Plant Variety Office

## Thank you for your attention.



[End of Annex IV and of document]