UPOV

International Union for the Protection of New Varieties of Plants

Technical Working Party on Testing Methods and Techniques	TWM/1/6
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DUS CHARACTERISTICS IMAGE PROCESSOR

Document prepared by an expert from China

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The annex to this document contains a copy of a presentation on "DUS characteristics image processor", prepared by an expert from China, to be made at the first session of the TWM.

[Annex follows]

Introduction

DUS Characteristics Image processor

PART

1

Processing steps

Four steps to process an image:

1. Cropping

2. Adjusting the brightness

3. Labelling

4. Generating standard images

YEAR	2018	2019	2020	2021
Number of Image	777	593	813	1041
Days	10	8	4	5

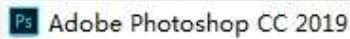# End of 2019

We began to design PS plug-in.

2020.5

We have made the plug-in.

We named it

DUS Characteristics image processor.

Advantages of plug-ins

First, this is a imageShop **plug-in**.

Ps Adobe Photoshop CC 2019

1

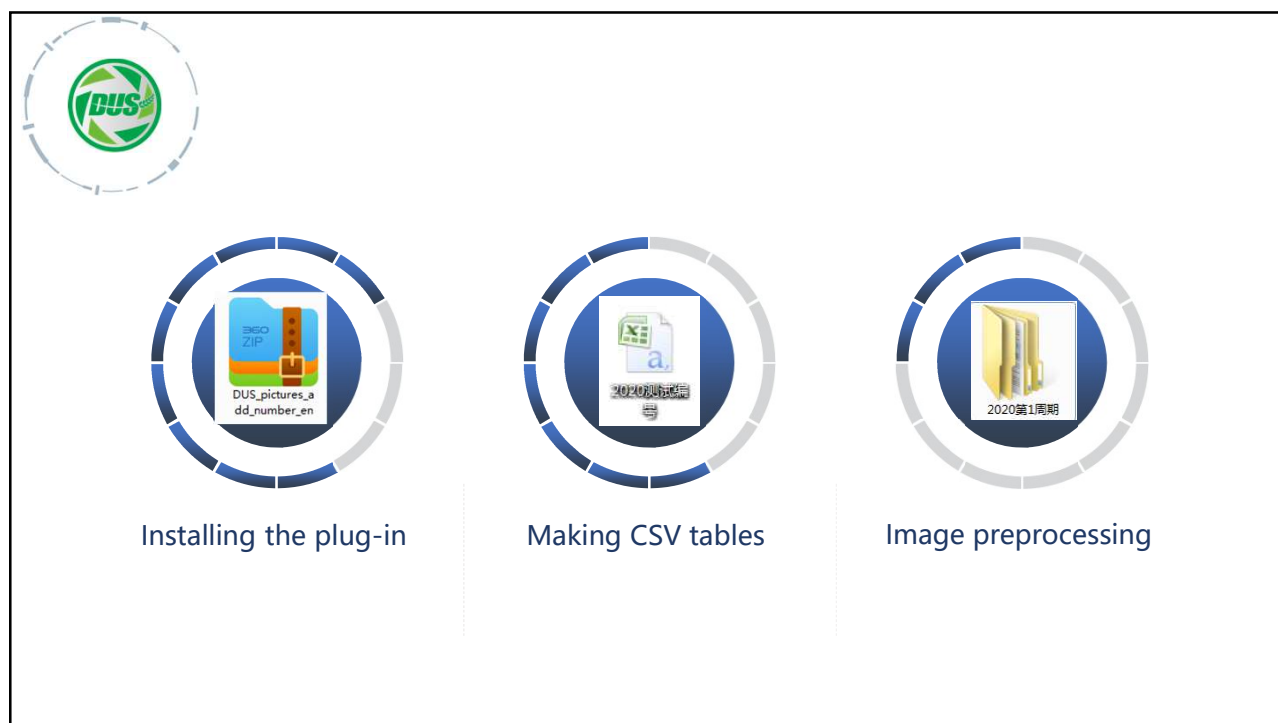Open images with
one click
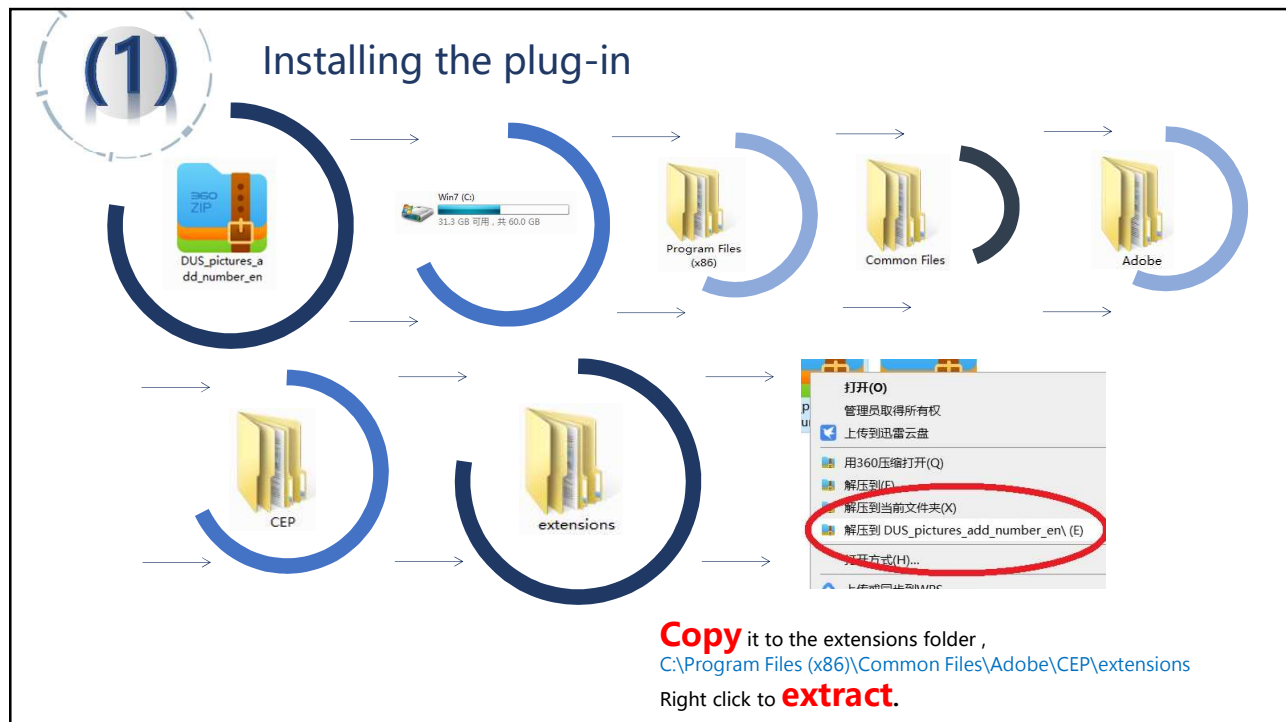
2

Automatically unify
Image pixels and sizes

3

Add labels intelligently
without manual
operation

4

Automatically generates, saves and
renames labelling and none
labelling standard images in both
formats

Installing the plug-in
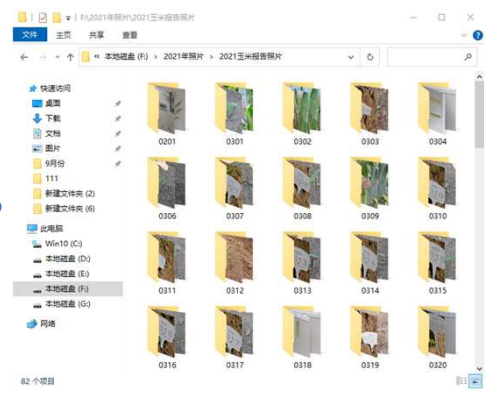
Making CSV tables

Image preprocessing

(1) Installing the plug-in

360 ZIP

DUS_pictures_add_number_en

Win7 (C:)
31.3 GB 可用，共 60.0 GB

Program Files (x86)

Common Files

Adobe

CEP

extensions

打开(O)
管理员取得所有权
上传到迅雷云盘
用360压缩打开(Q)
解压到(F)
解压到当前文件夹(X)
解压到 DUS_pictures_add_number_en\ (E)
打开方式(H)...
上传或同步到WPS

Copy it to the extensions folder ,
C:\Program Files (x86)\Common Files\Adobe\CEP\extensions
Right click to **extract**.

(2) Making CSV tables

Function: identify the correspondence between "folder name (i.e. variety field code)" and
"image label (i.e. test number)". Chinese and English are supported.

新建
Microsoft
Excel 2007
工作表 (2)

新建表格

	A	B
1	2018-xxx1A	0101
2	2018-xxx2A	0102
3	2018-xxx3A	0103
4	2018-xxx4A	0104
5	2018-xxx5A	0105
6	2018-xxx6A	0106
7	2018-xxx7A	0107
8	2018-xxx8A	0108
9	2018-xxx9A	0109
10	2018-xxx10A	0110
11	2018-xxx11A	0111
12	2018-xxx12A	0112
13	2018-xxx13A	0113
14	2018-xxx14A	0114
15	2018-xxx15A	0115
16		
17		
18		

第一列：标签文字
第二列：文件夹号

13	2018-xxx13A	0113
14	2018-xxx14A	0114
15	2018-xxx15A_2018-xxx15B	0115
16		

对比图像的标签
用"_"分隔

文件名(N): 新建 Microsoft Excel 2007 工作表 (2)
保存类型(T): CSV (逗号分隔)
作者:
Excel 工作簿
Excel 启用宏的工作簿
Excel 二进制工作簿
Excel 97-2003 工作簿
XML 数据
单个文件网页
网页
Excel 模板
Excel 启用宏的模板
Excel 97-2003 模板
文本文件(制表符分隔)
Unicode 文本
XML 电子表格 2003
Microsoft Excel 5.0/95 工作簿
CSV (逗号分隔)

另存为CSV格式文件

新建
Microsoft
Excel 2007
工作表 (2)

生成的CSV文件

Creating new document form

Column 1: label text
Column 2: folder number

Compare images with tags separated by "_"

Save as a CSV file

CSV file
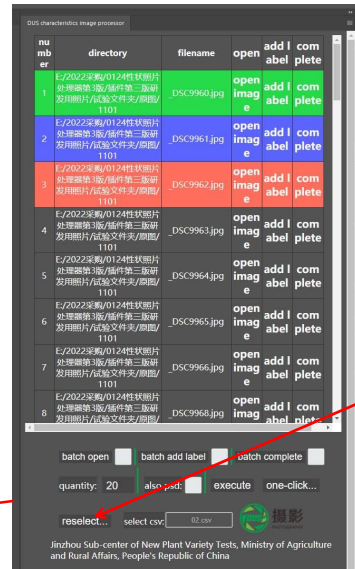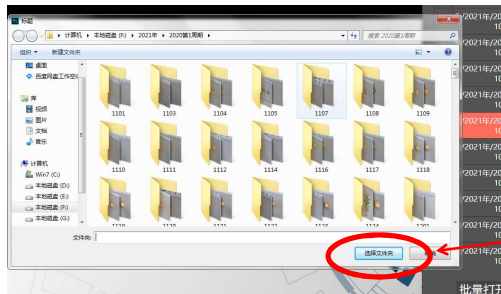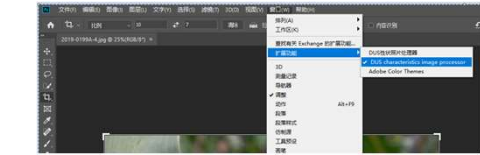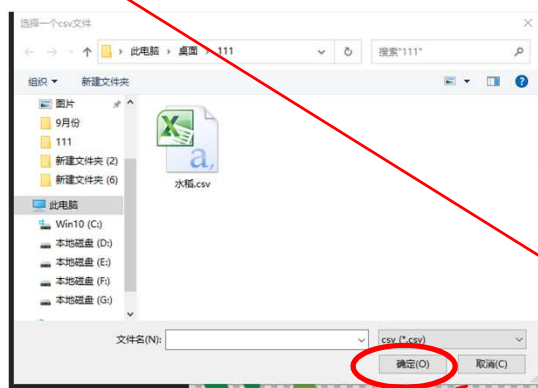
1.Open the PS software, and click Window - Extended Functions -DUS CHARACTERISTICS IMAGE PROCESSOR

Click reselect folder

Note: You can import multiple levels and folders, and plug-ins will sort images by folder location and image name

2. Select the CSV file

Note: CSV file must be added, otherwise invalid operation will happen.

3. Convenient functions

Batch Open: Fill in the quantity - click batch open

批量打开 ☐

打开数量: 20

Batch labelling: Click Batch labelling

批量加签 ☐

According to the CSV file, the name is "Test Number" and the image name is "Test Number _1/2/3/4"

Batch Complete: - Click Batch Complete

批量完成 ☐

One-click labeling: all images are automatically captured, unified pixel and size, standard images are generated, and renamed and saved

一键加签

※ The number of images varies, the processing takes several minutes to more than ten minutes, please wait patiently.

number	directory	filename	open	add label	complete
1	E:/2022采购/0124性状照片处理器第3版/插件第三版研发用照片/试验文件夹/原图/1101	_DSC9960.jpg	open image	add label	complete
2	E:/2022采购/0124性状照片处理器第3版/插件第三版研发用照片/试验文件夹/原图/1101	_DSC9961.jpg	open image	add label	complete
3	E:/2022采购/0124性状照片处理器第3版/插件第三版研发用照片/试验文件夹/原图/1101	_DSC9962.jpg	open image	add label	complete
4	E:/2022采购/0124性状照片处理器第3版/插件第三版研发用照片/试验文件夹/原图/1101	_DSC9963.jpg	open image	add label	complete
5	E:/2022采购/0124性状照片处理器第3版/插件第三版研发用照片/试验文件夹/原图/1101	_DSC9964.jpg	open image	add label	complete
6	E:/2022采购/0124性状照片处理器第3版/插件第三版研发用照片/试验文件夹/原图/1101	_DSC9965.jpg	open image	add label	complete
7	E:/2022采购/0124性状照片处理器第3版/插件第三版研发用照片/试验文件夹/原图/1101	_DSC9966.jpg	open image	add label	complete
8	E:/2022采购/0124性状照片处理器第3版/插件第三版研发用照片/试验文件夹/原图/1101	_DSC9968.jpg	open image	add label	complete

DUS characteristics image processor

batch open ☐   batch add label ☐   batch complete ☐

quantity: 20   also psd: ☐   execute   one-click...

reselect...   select csv: 02.csv   摄影

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4. Easy operation

【Open image】 After clicking this button, the display bar will be orange, indicating that the image has been opened. Can intercept, lighten and other operations .

【Add Label】 After clicking this button, the display bar will be blue, and the image without label has been saved. You can also manually adjust the label position, which defaults to the bottom center of the image.
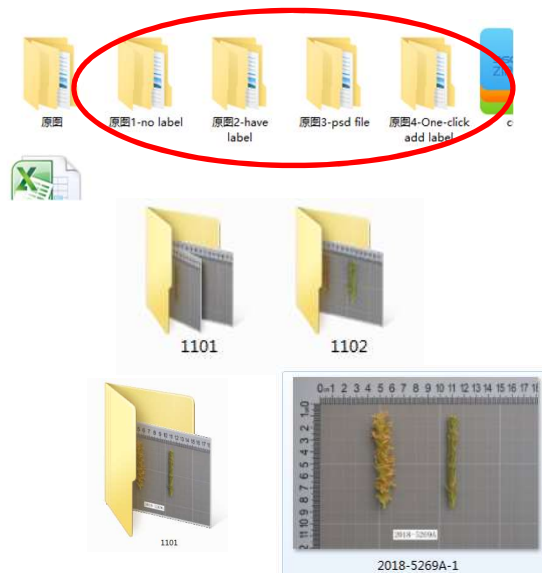
【 complete 】 Click this button, the display bar appears green, at this time the tagged image has been saved

Work progress can logged, no impact after system abort or crash.

5. Storage location of processed images

The plug-in automatically generates four folders: no labels, Labels, Psd files, and one-click checkin.

The processed images will be stored in the appropriate folder.

1101   1102

1101

2018-5269A-1

PART 4

Future plan

Version 2.0	Intellectualization future	Free for DUS testing
Defects:	1.Intelligent recognition horizontal and vertical version;	Our DUS system is free to use this software.
1. The current software is designed for horizontal images. It's not smart for vertical version;	2.Smart mobile label position;	We welcome your suggestions for improvement.
2. The label position of the comparison image needs to be adjusted manually.	3.Improve batch processing function;	
3. The batch processing function is not perfect.	4.Intelligent crop identification.	

THANKS

Jinzhou Sub-center CHINA

DUS

[End of Annex and of document]