PDSBOT – AUTOMATED BULK. PDS TO .TIFF CONVERTER GUIDE

Revision: 1.1

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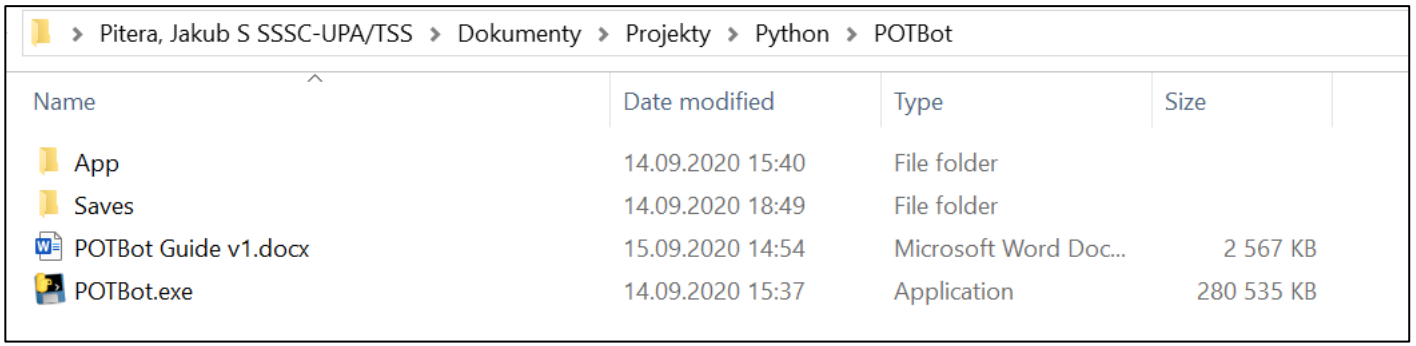
1 WELCOME

PDSBot is a standalone python-based tool that takes control over your machine allowing for automated conversion of .PDS files to .TIF image format using Schlumberger PDSView software.

1.1 Installation

- Download the contents to the Windows location.
- Main folder should look like on the picture:



1.2 Prerequisites

- Schlumberger PDSView installed (you can order it via ServiceNow)

You do not have to have Python installed to use this bot!

2 RUNNING THE BOT

2.1 Launching

Open PDSBot.exe in the main directory (feel free to create a convenient shortcut). Command window will pop up and after a short time the program will load.

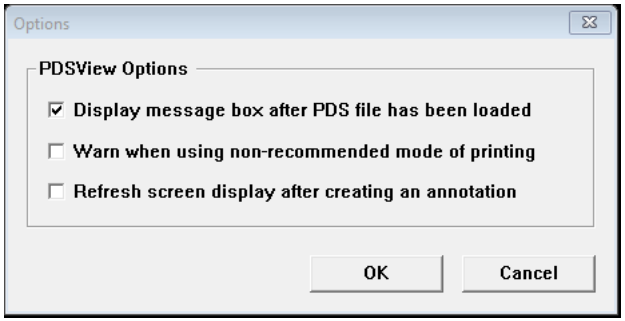
<Image Deleted>

Welcoming message provides brief description how to use the bot.

2.2 Preparing for conversion.

There are a few necessary things before starting the conversion.

- First of all, Schlumberger PDSView has to be opened and running.
- Second, in PDSView > File > Options the "Display message box after PDS file has been loaded" needs to be ticked. This has to be done only once. It allows the bot to recognize that PDS file has been loaded successfully.

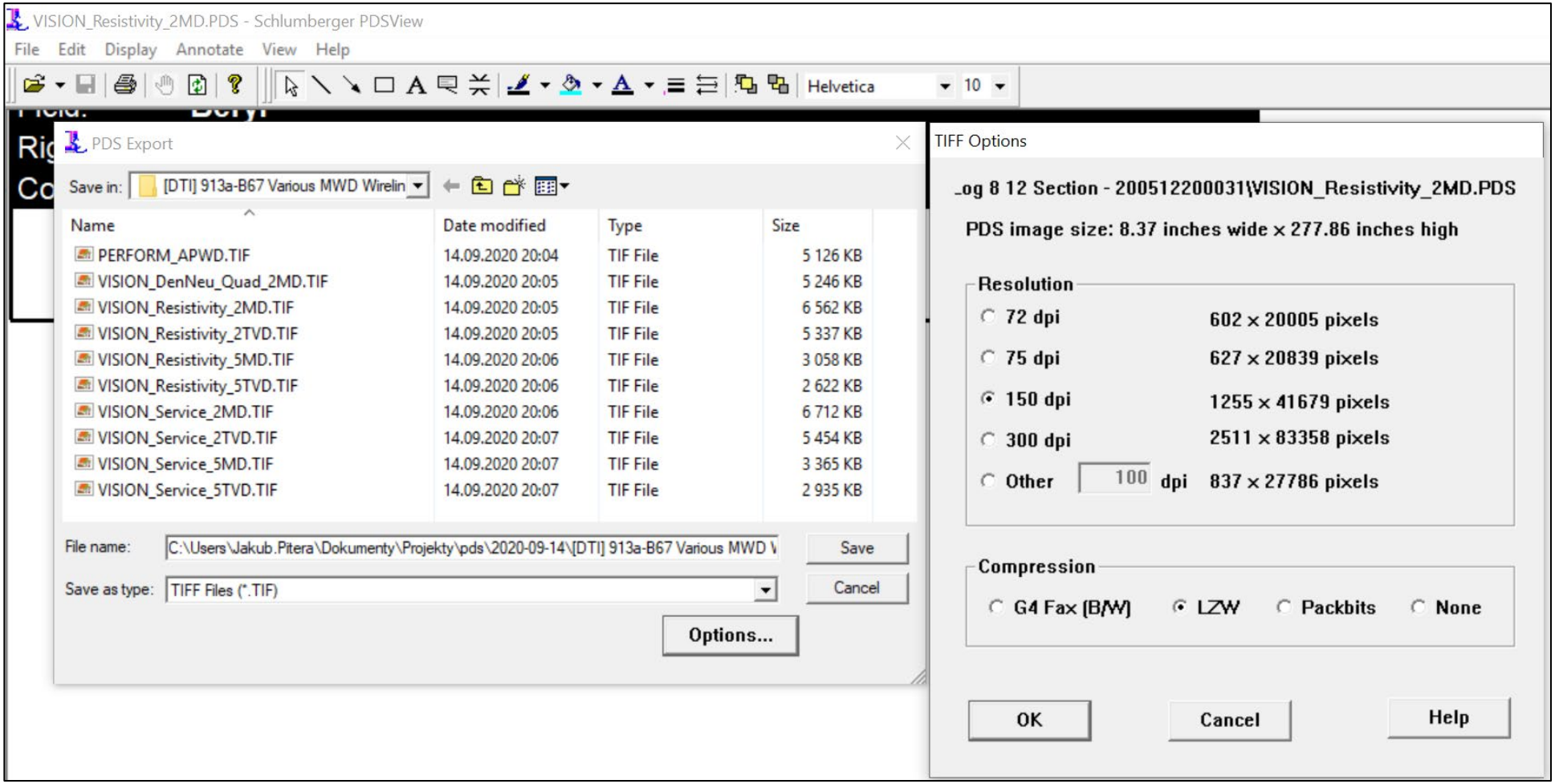


- PC Screen resolution should be 1920 x 1080. Program may not run properly otherwise.

2.2.1Setting .TIF resolution (DPI)

Desired DPI should be set up in PDSView manually before running the bot.

- Load up any .PDS in PDSView
- Go to File > Save as
- In the pop-up window, select "Save as type:" to "TIFF Files (*.TIF)" to unlock "Options…" button
- Click the "Options…" button and select DPI
  This has to be done only once. Increase the size of the "Save as" window in case the "Options…" button is not visible.


VISION_Resistivity_2MD.PDS - Schlumberger PDSView
File Edit Display Annotate View Help
Helvetica 10
PDS Export
Save in: [DTI] 913a-B67 Various MWD Wirelin
Name Date modified Type Size
PERFORM_APWD.TIF 14.09.2020 20:04 TIF File 5 126 KB
VISION_DenNeu_Quad_2MD.TIF 14.09.2020 20:05 TIF File 5 246 KB
VISION_Resistivity_2MD.TIF 14.09.2020 20:05 TIF File 6 562 KB
VISION_Resistivity_2TVD.TIF 14.09.2020 20:05 TIF File 5 337 KB
VISION_Resistivity_5MD.TIF 14.09.2020 20:06 TIF File 3 058 KB
VISION_Resistivity_5TVD.TIF 14.09.2020 20:06 TIF File 2 622 KB
VISION_Service_2MD.TIF 14.09.2020 20:06 TIF File 6 712 KB
VISION_Service_2TVD.TIF 14.09.2020 20:07 TIF File 5 454 KB
VISION_Service_5MD.TIF 14.09.2020 20:07 TIF File 3 365 KB
VISION_Service_5TVD.TIF 14.09.2020 20:07 TIF File 2 935 KB
File name: C:\Users\Jakub.Pitera\Dokumenty\Projekty\pds\2020-09-14\[DTI] 913a-B67 Various MWD
Save as type: TIFF Files (*.TIF)
Save
Cancel
Options...
TIFF Options
_og 8 12 Section - 200512200031\VISION_Resistivity_2MD.PDS
PDS image size: 8.37 inches wide x 277.86 inches high
Resolution
72 dpi 602 x 20005 pixels
75 dpi 627 x 20839 pixels
150 dpi 1255 x 41679 pixels
300 dpi 2511 x 83358 pixels
Other 100 dpi 837 x 27786 pixels
Compression
G4 Fax (B/W) LZW Packbits None
OK
Cancel
Help

2.3 Conversion

2.3.1Initiating

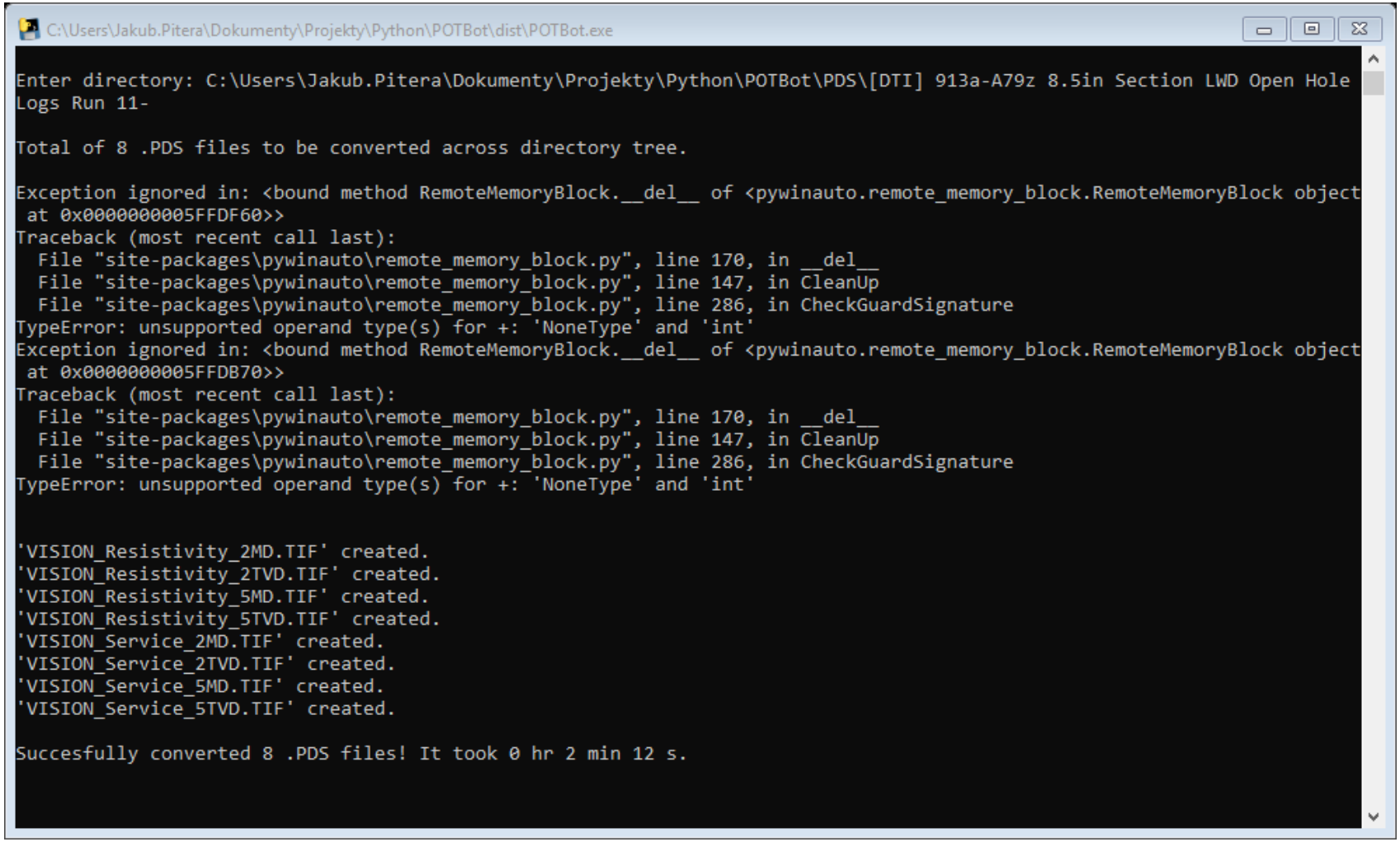
To start up the automated conversion using PDSBot enter a full path of a directory you wish to be converted to the prompt. To do that, copy whole contents of the Windows Explorer path (e.g. "*C:\Users\Jakub.Pitera\Dokumenty\Projekty\Python\PDSBot\PDS\[DTI] 913a-A79z 8.5in Section LWD Open Hole Logs Run 11-*"). PDSBot will load all the .PDS files across that directory tree (including files in that folder and ALL the sub-folders) into PDSView one by one. It is not an issue if the files in other formats are also present. Finally, press "Enter" to start. In that moment, bot will take control over your mouse and keyboard.

If you are using dual monitors (two screens) then it is advised to move PDSBot console window to the right screen. You will be able to track progress as the PDSView will be moved and maximized on the left screen.

2.3.2Program is running

Once the automated conversion is initiated, PDSBot will output the total number of .PDS files found across provided directory tree. Followingly, PDSView will be moved to the leftmost screen and maximized. The cycle of conversion begins. .PDS file will be loaded, ending with notification. Next, the bot will export it to a TIF file, saving it in the same folder it was loaded from (with the same file name but different extension). Once saved one conversion cycle completes and the program will start loading another file. Bot will keep iterating over every file in the list.

In the console, there will be a message telling total number of files to be converted. Next, there will be exception error message which is to be ignored (connected to computing memory difference between applications). Followingly, whenever .TIF file is successfully exported PDSBot will notify it has been created along with a file name and relative path (meaning in which sub-folder)


C:\Users\Jakub.Pitera\Dokumenty\Projekty\Python\POTBot\dist\POTBot.exe
Enter directory: C:\Users\Jakub.Pitera\Dokumenty\Projekty\Python\POTBot\PDS\[DTI] 913a-A79z 8.5in Section LWD Open Hole Logs Run 11-
Total of 8 .PDS files to be converted across directory tree.
Exception ignored in: <bound method RemoteMemoryBlock.__del__ of <pywinauto.remote_memory_block.RemoteMemoryBlock object at 0x0000000005FFDF60>>
Traceback (most recent call last):
File "site-packages\pywinauto\remote_memory_block.py", line 170, in __del__
File "site-packages\pywinauto\remote_memory_block.py", line 147, in CleanUp
File "site-packages\pywinauto\remote_memory_block.py", line 286, in CheckGuardSignature
TypeError: unsupported operand type(s) for +: 'NoneType' and 'int'
Exception ignored in: <bound method RemoteMemoryBlock.__del__ of <pywinauto.remote_memory_block.RemoteMemoryBlock object at 0x0000000005FFDB70>>
Traceback (most recent call last):
File "site-packages\pywinauto\remote_memory_block.py", line 170, in __del__
File "site-packages\pywinauto\remote_memory_block.py", line 147, in CleanUp
File "site-packages\pywinauto\remote_memory_block.py", line 286, in CheckGuardSignature
TypeError: unsupported operand type(s) for +: 'NoneType' and 'int'
'VISION_Resistivity_2MD.TIF' created.
'VISION_Resistivity_2TVD.TIF' created.
'VISION_Resistivity_5MD.TIF' created.
'VISION_Resistivity_5TVD.TIF' created.
'VISION_Service_2MD.TIF' created.
'VISION_Service_2TVD.TIF' created.
'VISION_Service_5MD.TIF' created.
'VISION_Service_5TVD.TIF' created.
Succesfully converted 8 .PDS files! It took 0 hr 2 min 12 s.

2.3.3Bulk conversion completed

When the conversion successfully completes, PDSBot will inform the user with a message. It will output the total number of converted files along with the time it took. In that moment, you can safely regain control over mouse and keyboard. You can close the PDSBot console now.

In case the console was not visible (thus the user is not seeing the end message) feel free to assume the bot has stopped if it is not moving mouse or loading anything for some time.

2.4 Terminating prematurely

User can interrupt the program early and regain control of his machine by focusing on PDSBot console (activating it with mouse) and pressing "CTRL" + "C" hotkey. Secondary way of termination is moving the mouse to the far-right upper corner of the screen. The program will exit, and the console will close. It is advised to make this action fast as the bot will be also manipulating mouse and keyboard.

2.5 Resuming terminated conversion

There is a built-in method of continuing interrupted conversion. This is to help user in the scenario where a huge volume of files is being converted and circumstances force an early termination. PDSBot is saving a log of every bulk conversion in the folder 'Saves'. The log is a list of files remaining to be converted from the batch. In order to resume conversion, follow these steps:

1. Open the PDSBot.exe as regular.
2. Enter "CONTINUE" keyword into the prompt
3. Enter a full path to the save filename (e.g. *"C:\Users\User\PDSBot\dist\Saves\ PDSBot_20200914_154118.txt"*)
4. Press "Enter" to start the conversion from the point it was interrupted.

```
Enter directory: CONTINUE

Enter save filepath: C:\Users\Jakub.Pitera\Dokumenty\Projekty\Python\POTBot\dist\Saves\ POTBot_20200914_154118.txt
```

2.6 Notes

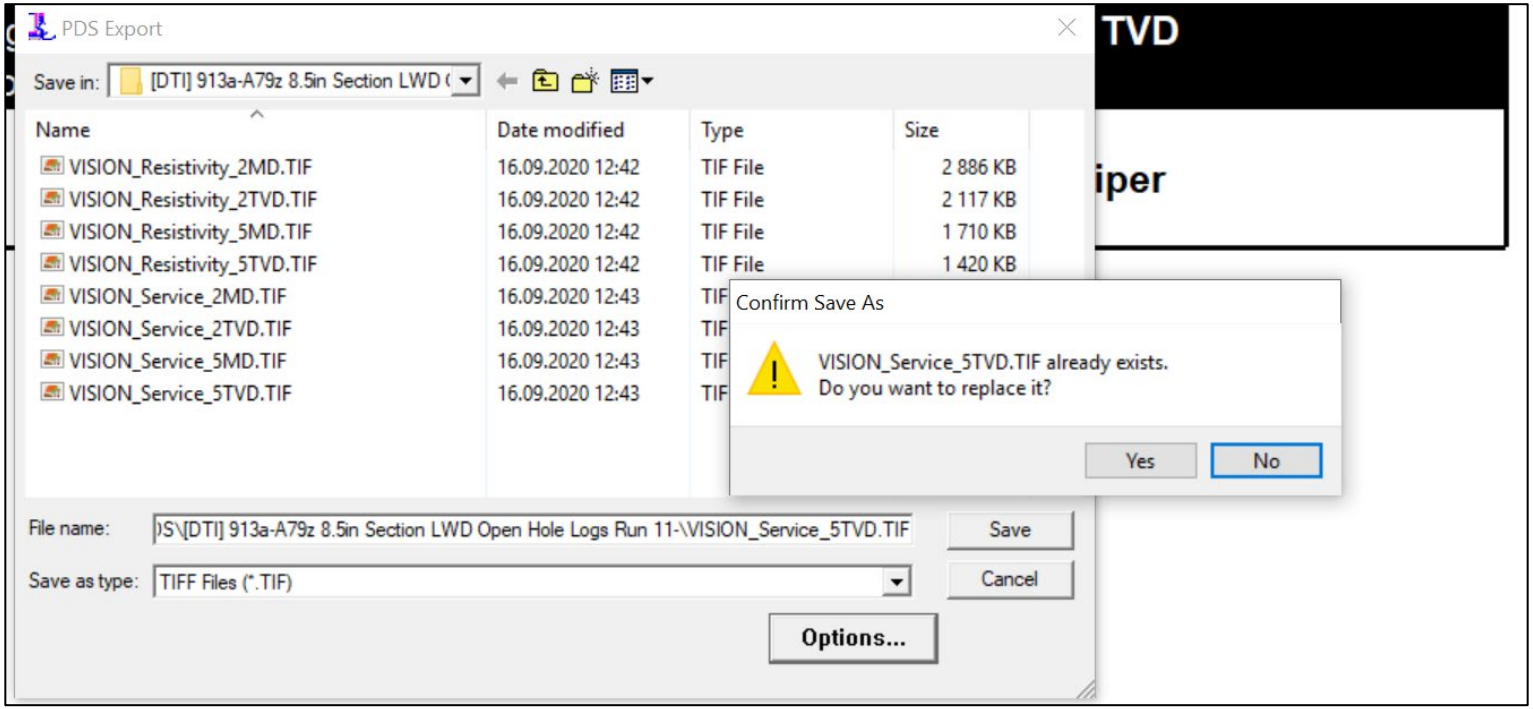
- When the program is running do not manipulate mouse and keyboard as it will probably cause the conversion to fail.
- The windows won't lock down (sign you off) nor hibernate when the PDSBot is running. Feel safe to leave it running during the night.

2.7 Additional circumstances

In the situation you started the conversion with the same .PDS file that was already opened, PDSView will ask "Do you want to re-load the current file?". In this case, simply click yes as the bot will pause to allow you to decide.

<Image deleted>

Similar situation can happen if bot is trying to save a .TIF file that already exist. You can freely click 'Yes' to replace the previous file if asked.


PDS Export
Save in: [DTI] 913a-A79z 8.5in Section LWD (
Name
Date modified
Type
Size
VISION_Resistivity_2MD.TIF 16.09.2020 12:42 TIF File 2 886 KB
VISION_Resistivity_2TVD.TIF 16.09.2020 12:42 TIF File 2 117 KB
VISION_Resistivity_5MD.TIF 16.09.2020 12:42 TIF File 1 710 KB
VISION_Resistivity_5TVD.TIF 16.09.2020 12:42 TIF File 1 420 KB
VISION_Service_2MD.TIF 16.09.2020 12:43 TIF
VISION_Service_2TVD.TIF 16.09.2020 12:43 TIF
VISION_Service_5MD.TIF 16.09.2020 12:43 TIF
VISION_Service_5TVD.TIF 16.09.2020 12:43 TIF
Confirm Save As
VISION_Service_5TVD.TIF already exists.
Do you want to replace it?
Yes
No
File name:)S\[DTI] 913a-A79z 8.5in Section LWD Open Hole Logs Run 11-\VISION_Service_5TVD.TIF
Save as type: TIFF Files (*.TIF)
Save
Cancel
Options...
TVD
iper

3 FINAL WORDS

This bot was built using Python3 and open-source libraries

- Pyautogui
- Pywinauto
- Opencv

3.1 Running with python script

For python users there is an alternative method of using the tool by running PDSBOT.py instead of executable file. You can find python file in the *'Source code'* folder. On your local disc, please move PDSBOT.py to the main folder before running.

3.1.1 Creating conda environment

Below are Anaconda Prompt commands to create suitable environement for PDSBot needed to run this python script.

```
conda create -n PDSBot python=3.6
conda activate PDSBot
conda install -c conda-forge pyautogui, pywinauto
conda install opencv
```

For non-conda users please use pip alternative commands.

3.2 Version history

VERSION	DATE	DESCRIPTION/CHANGES
1.0	16-SEP-2020	Preparation of the document
1.1	24-SEP-2020	Added 'Running with python' and 'Version history'