Positioning for the future

iSURVEY CapjetSwordSpeed

User manual

This document is under construction!

Error handling have not been thoroughly included in the Software and sudden errors without explanations may be experienced

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1 INTRODUCTION

Capjet Sword Speed was created by iSurvey for easier and faster filtering the Sword and Speed data from the Offshore Trenching operations. his Scripts is made especially for project 12308 - Nordlink on Polar King.

1.1 REQUIREMENTS

The software is stand-alone application, and there is no need for any additional software. Still, it is recommended to have some basic programs installed for full user experience. The software has only been tested on Windows 10 OS

The following software are recommended:

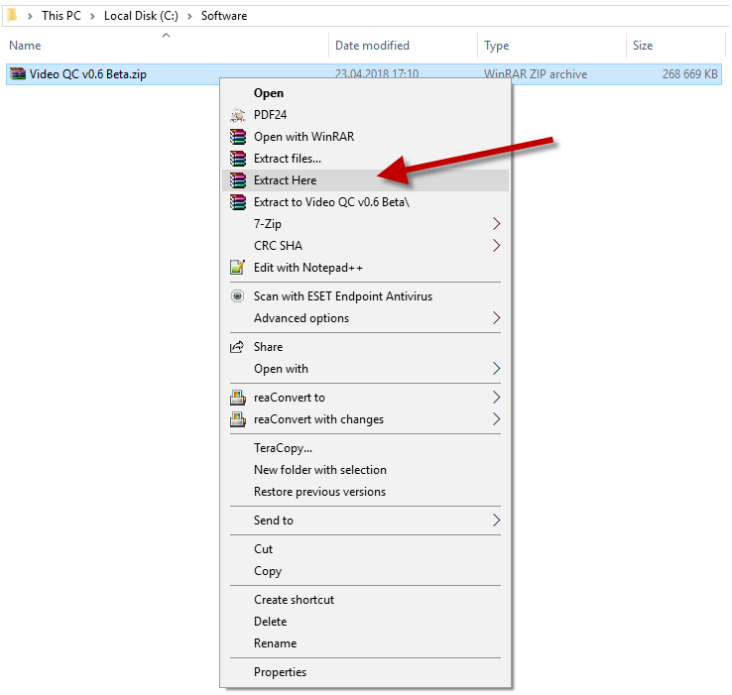
- PDF-reader, i.e. Acrobat Reader
- Notepad

Optional Software

- SQLite version 3, to get full access of the Masterfile DataBase

1.1.1 INSTALLATION OF VIDEO QC

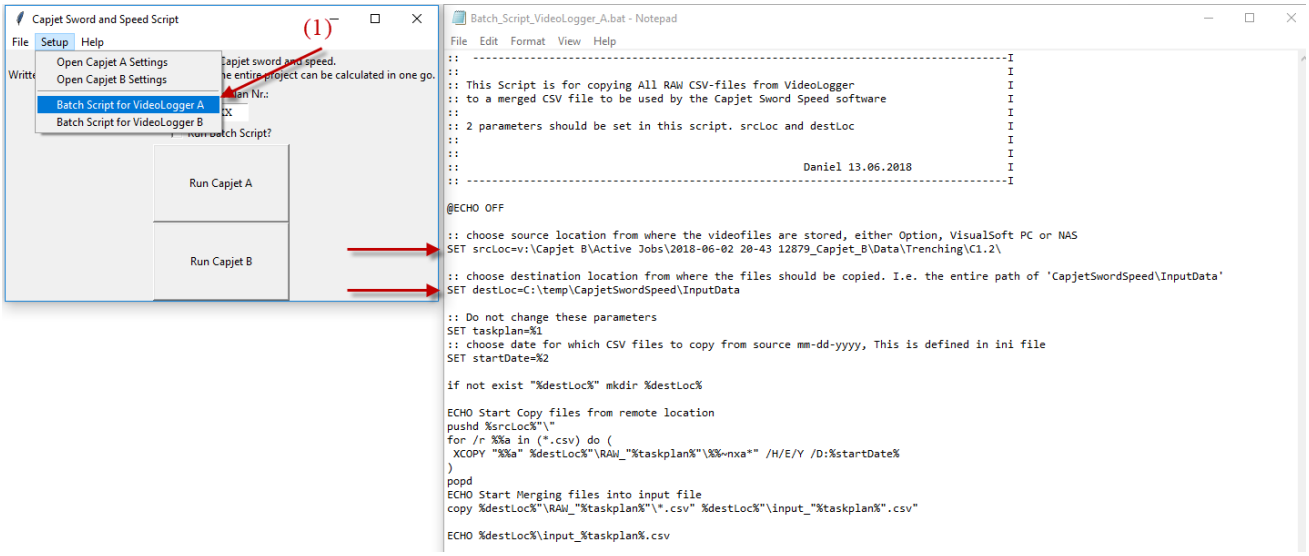
Extract the Zip File by right-click the file and choose Extract Here



2 STEP-BY-STEP MANUAL

2.1 CHOOSE FOLDER

Choose the source folder where the capjet trenching video is located. Also choose the destination where the CSV files should be copied. This could be a temp folder or '.\Capjet_Sword_Speed_v0.98\OutputData' (recommended).



2.2 SETUP *.INI FILE [DEFAULT]

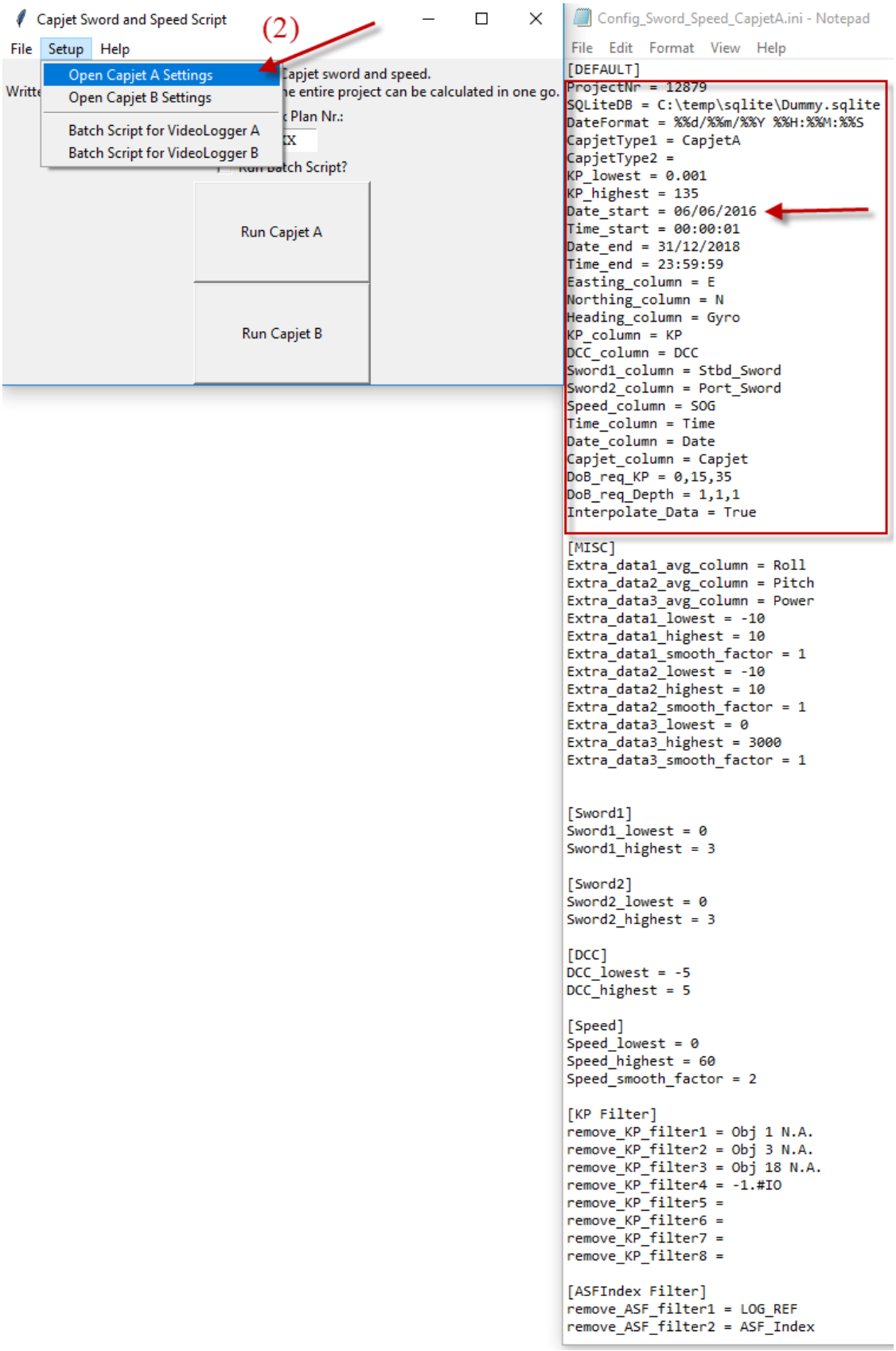
Open CapjetX Settings (INI file) and setup how the CSV file looks like. Also define the start and end date and time of your dataset or your task plan. Choose data format, should be the same as in the csv file. NB! If you open the CSV file in excel the date/time format may have changed for display purposes only.

CapjetType1 is an important filtering parameter. The program will only validate the data that contains this string. In 2017 we had the same string interfaced to both VideoLoggers and on that project we had to filter on CapjetA, CapjetB or to keep both. This year we will only have CapjetType1 defined.

Set the column name as in the CSV file.

DoB_req_KP and DoB_req_Depth is just a vector that will be plotted in the same figure as the sword depth. It displays the depth of burial.

Interpolate_Data should by default be put to False. But if you have a lot of small gaps it can be turned on after QC-ing the data.



2.3 SETUP *.INI FILE [MISC]

Defines extra columns to be filtered and smoothed and will be exported with the other data. If they are not in use you need to insert a ‘dummy’ column, i.e. 3 x depth etc.

```
[MISC]
Extra_data1_avg_column = Roll
Extra_data2_avg_column = Pitch
Extra_data3_avg_column = Power
Extra_data1_lowest = -10
Extra_data1_highest = 10
Extra_data1_smooth_factor = 1
Extra_data2_lowest = -10
Extra_data2_highest = 10
Extra_data2_smooth_factor = 1
Extra_data3_lowest = 0
Extra_data3_highest = 3000
Extra_data3_smooth_factor = 1
```

2.4 SETUP *.INI FILE [SWORD, DCC, SPEED, FILTER]

Defines filters how to remove outliers.

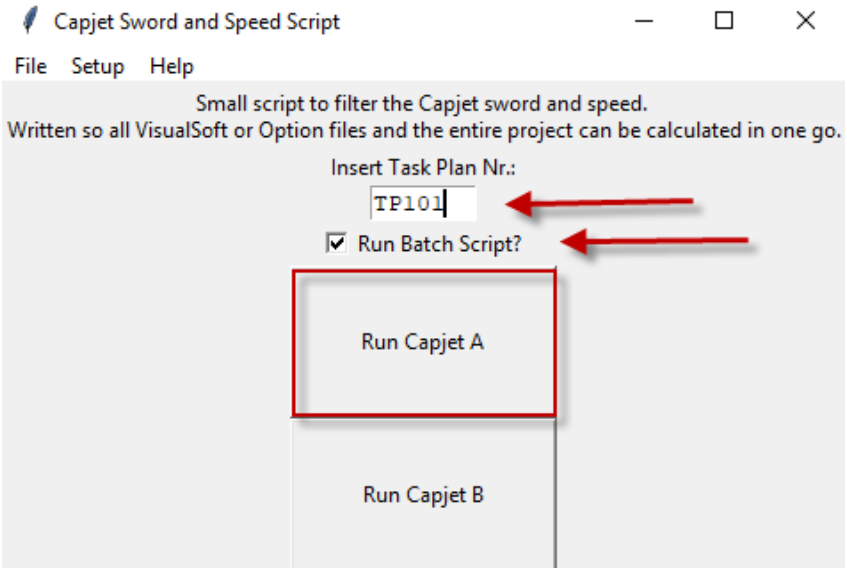
```
[Sword1]
Sword1_lowest = 0
Sword1_highest = 3

[Sword2]
Sword2_lowest = 0
Sword2_highest = 3

[DCC]
DCC_lowest = -5
DCC_highest = 5

[Speed]
Speed_lowest = 0
Speed_highest = 60
Speed_smooth_factor = 2

[KP Filter]
remove_KP_filter1 = Obj 1 N.A.
remove_KP_filter2 = Obj 3 N.A.
remove_KP_filter3 = Obj 18 N.A.
remove_KP_filter4 = -1.#IO
remove_KP_filter5 =
remove_KP_filter6 =
remove_KP_filter7 =
remove_KP_filter8 =

[ASFIndex Filter]
remove_ASF_filter1 = LOG_REF
remove_ASF_filter2 = ASF_Index
```

2.5 RUN SCRIPT

Insert trenching tasknumber. This will be used when uploading to Masterfile database, export filename and exported CSV file.

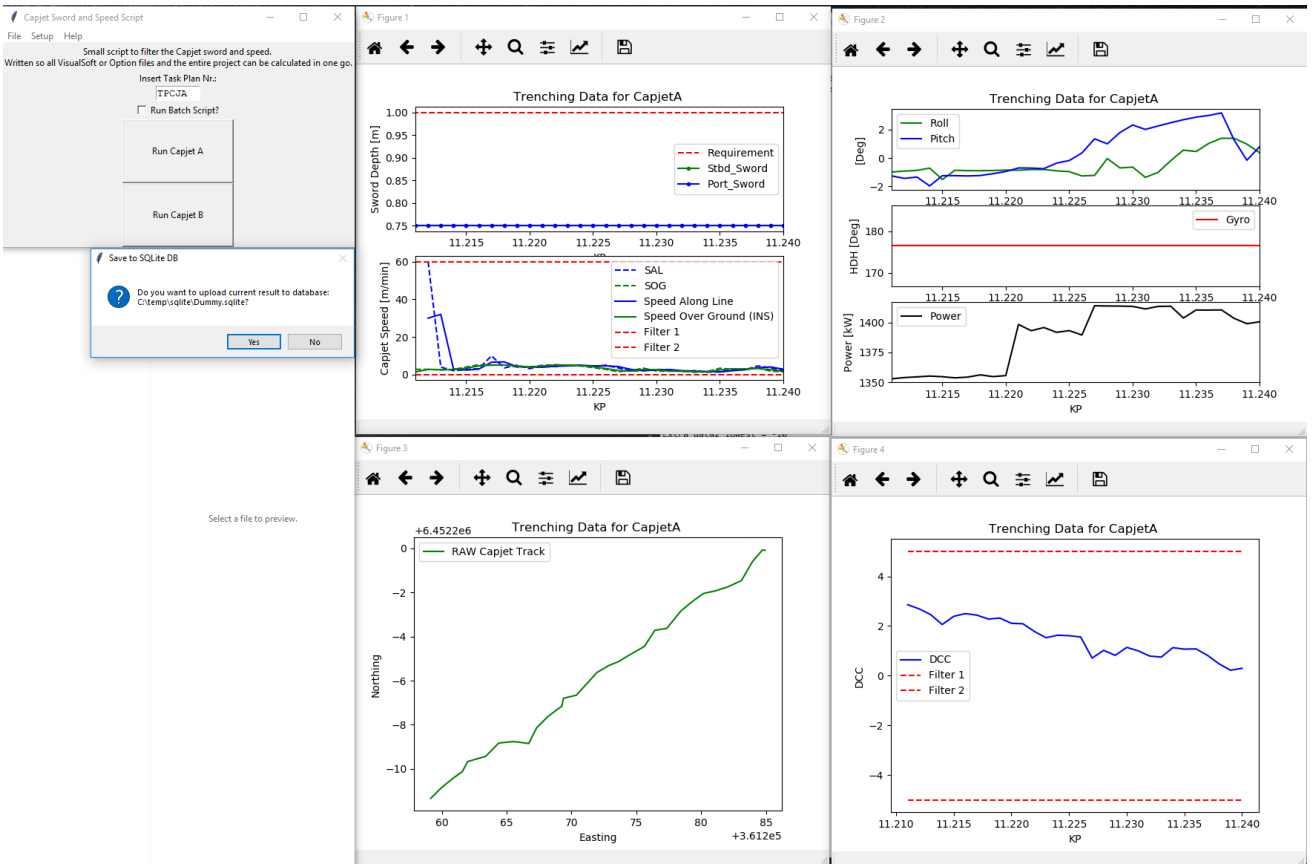
Run Batch Script is used when you need to copy the files from source (defined in batch script)

If this is not ticket the script will look for the Capjet_Sword_Speed_v0.98\InputData\input_TP101.csv file in the program folder. You can fake this if the program doesn't run.



2.6 TEST

You can run the software by choose taskplat TPCJA and unticking run Batch Script. Then click the Run Capjet A button and you should get the following result with a question if you want to save the data to the dummy database.



ENCLOSURE A

TODO – LIST

2018-10-06: Better smoothing function. If position smoothing is too high the track is a bit wrong in start and end

2018-10-06: Implement re-calculation of KP and DCC. DCC is often wrong in NaviPac, filtering does not work as it should

2018-10-06: Possibility to use Kalman filtering

2018-10-06: Reduce the script to use only one button and to select the setup *.ini file instead

ENCLOSURE B

DEVELOPMENT HISTORY

2018-06-14 - Capjet_Sword_Speed_v0.98:

First release with SQL Masterfile database integration.

Includes integrated windows batch script for copying raw csv files to local destination.

2018-10-06 - Capjet_Sword_Speed_v1.07:

Include smoothing Depth in ETR PROC file