



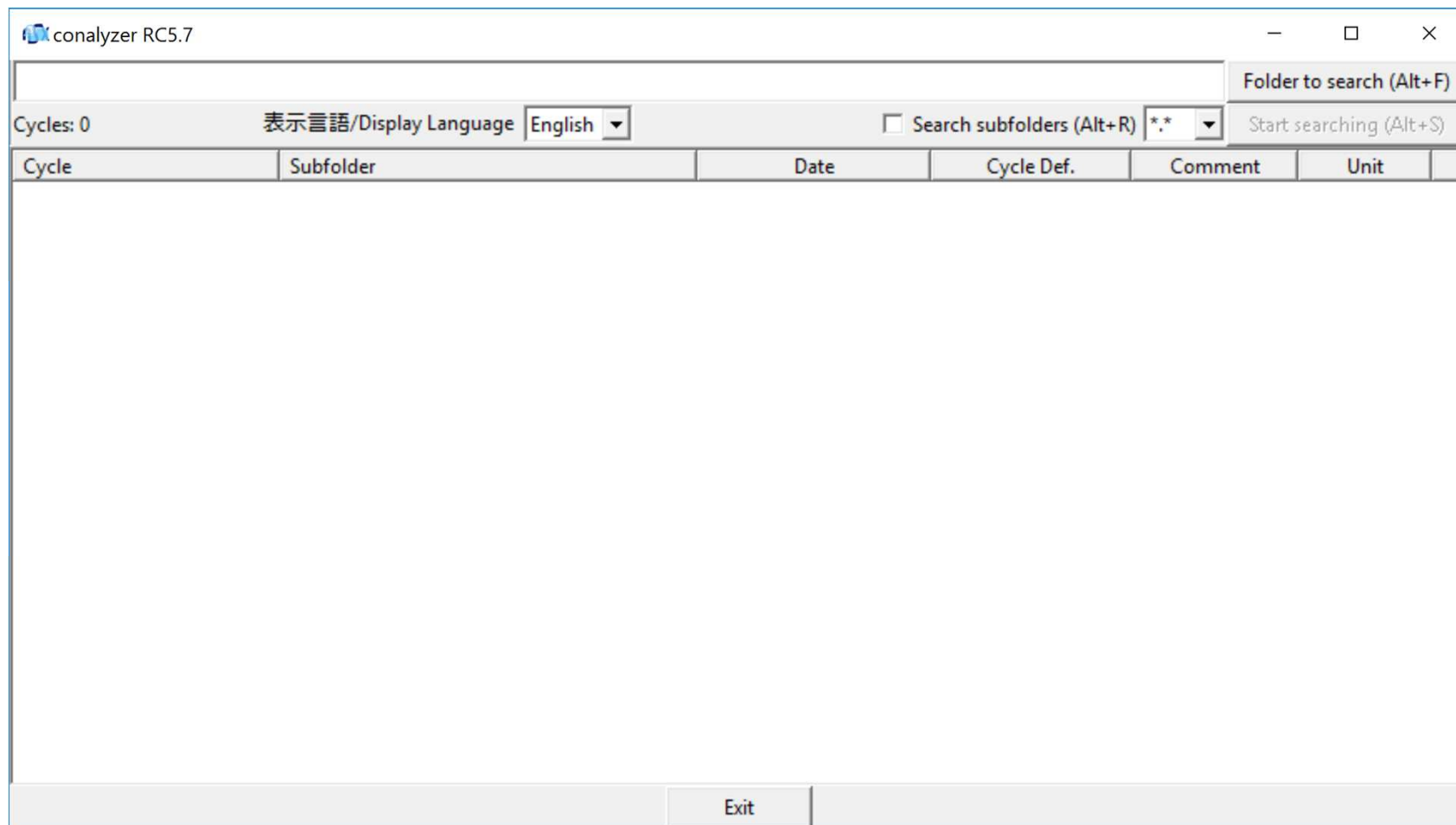
conalyzer RC5.7

Sample Case

June 30, 2017
NSXe Co. LTD

Start up screen

Specify the target folder



conalyzer RC5.7

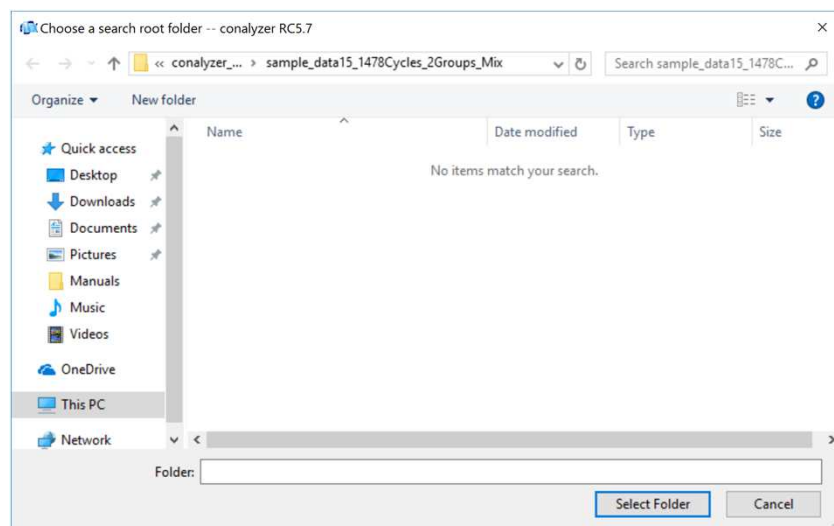
Folder to search (Alt+F)

Cycles: 0 表示言語/Display Language English Search subfolders (Alt+R) *.* Start searching (Alt+S)

Cycle	Subfolder	Date	Cycle Def.	Comment	Unit

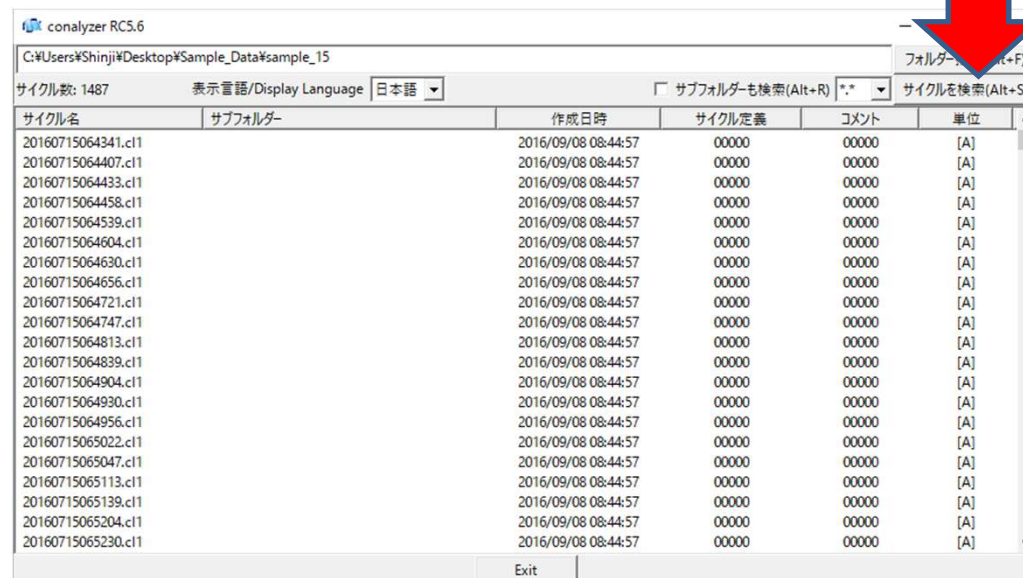
Exit

Specify the folder and search files



① Select folder

② Click to show files



Specify the folder and search files continued

conalyzer RC5.7

C:\Users\Shinji NAKAYAMA\Documents\conandesse\conalyzer_sample_data\sample_data15_1478Cycles_2Groups_Mix Folder to search (Alt+F)

Cycles: 1478 表示言語/Display Language English Search subfolders (Alt+R) *.* Start searching (Alt+S)

Cycle	Subfolder	Date	Cycle Def.	Comment	Unit
20160715063823.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064228.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064251.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064316.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064341.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064407.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064433.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064458.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064539.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064604.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064630.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064656.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064721.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064747.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064813.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064839.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064904.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064930.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064956.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715065022.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715065047.cl1		2017/04/01 11:44:27	00000	00000	[A]

Show the property Exit

- Double clicking or right clicking → click “Property”
- Only one file’s property is shown even if several files are chosen.

File property

Property of 20160715064251.cl1 -- conalyzer RC5.7

Item	Value
File name	20160715064251.cl1
Folder	C:\Users\Shinji NAKAYAMA\Documents\conandesse\conalyzer_sample_data\sample_data15_1478Cycles_...
Create	2017/04/01 11:44:27
Last_update	2016/07/15 06:42:52
File version	105
Old comment	SOFTROX comment
Interval	10ms
Number of data	1401
Range	0~5[V]
Scale Hi	125.000000
Scale Lo	0.000000
Unit	[A]
Trig Type	Software
Trig condition	↑ Rise
Trig Level	90.000000
Comment	
Mode	RMS
Ave term	100ms
Data No.2&3(cl1)	Max.Min.

To show property,
Double click the file or click right button.
Even if several files are selected, only one
file's property is indicated.

conalyzer RC5.7

C:\Users\Shinji NAKAYAMA\Documents\conandesse\conalyzer_sample_data\sample_data15_1478Cycles_2Groups_Mix

Cycles: 1478 表示言語/Display Language English Search subfolders (Alt+R) Start searching (Alt+S)

Cycle	Subfolder	Date	Cycle Def.	Comment	Unit
20160715063823.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064228.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064251.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064316.cl1			00000	00000	[A]
20160715064341.cl1			00000	00000	[A]
20160715064407.cl1			00000	00000	[A]
20160715064433.cl1			00000	00000	[A]
20160715064458.cl1			00000	00000	[A]
20160715064539.cl1			00000	00000	[A]
20160715064604.cl1			00000	00000	[A]
20160715064630.cl1			00000	00000	[A]
20160715064656.cl1			00000	00000	[A]
20160715064721.cl1			00000	00000	[A]
20160715064747.cl1			00000	00000	[A]
20160715064813.cl1			00000	00000	[A]
20160715064839.cl1			00000	00000	[A]
20160715064904.cl1			00000	00000	[A]
20160715064930.cl1			00000	00000	[A]
20160715064956.cl1			00000	00000	[A]
20160715065022.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715065047.cl1		2017/04/01 11:44:27	00000	00000	[A]

Property

Graph preview

(cl[145]: 15)

Overlay graph

Simple animation

(Setting=00000: 15)

Data density and Analysis

Save selection state

Restore selec. criteria

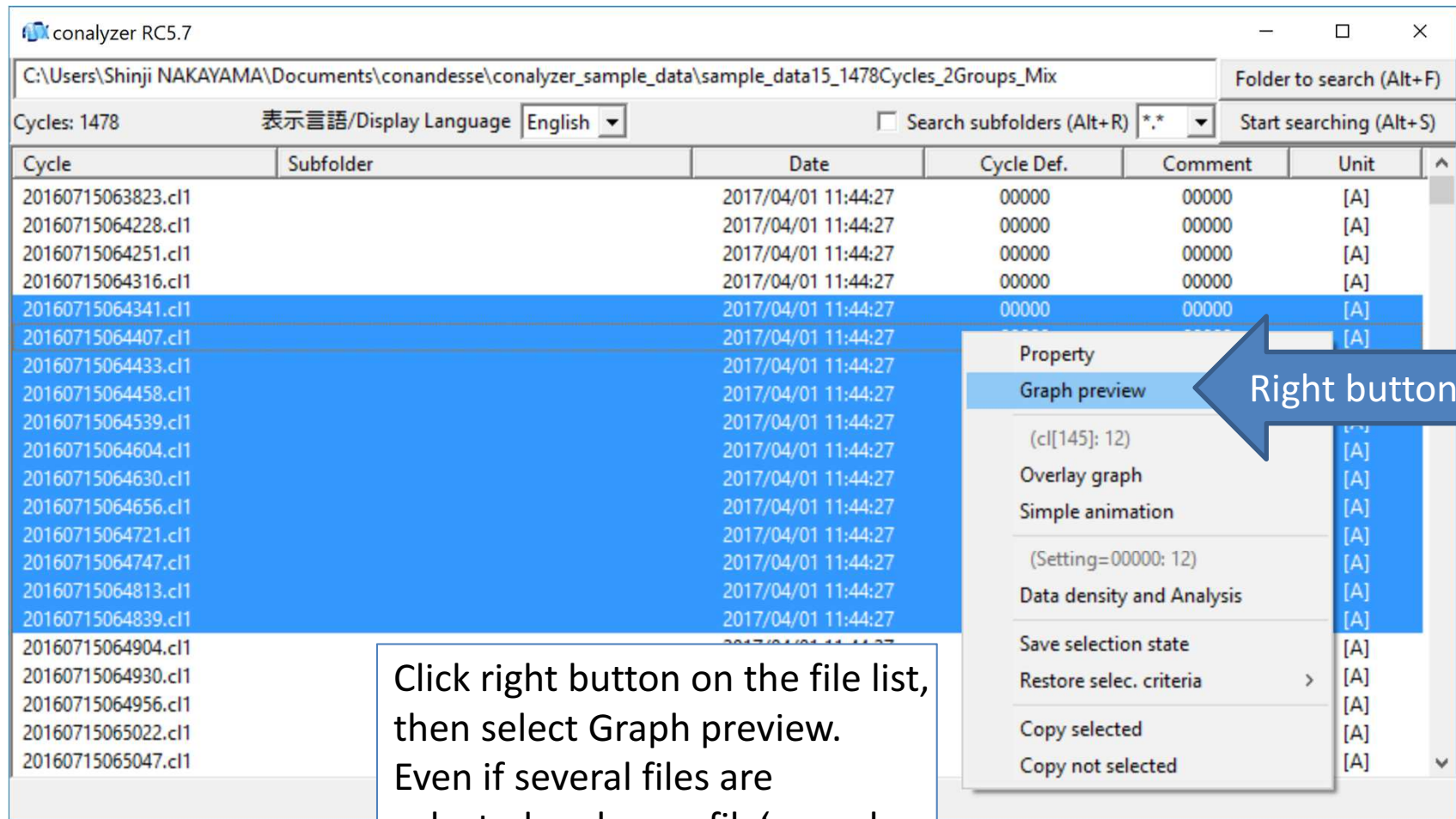
Copy selected

Copy not selected

Exit

Graph preview

Select files and click the right button



The screenshot shows the 'conalyzer RC5.7' application window. The main area displays a table of files with columns: Cycle, Subfolder, Date, Cycle Def., Comment, and Unit. A selection of files is highlighted in blue. A right-click context menu is open over the selected files, with 'Graph preview' highlighted. A blue arrow points to the 'Graph preview' option with the text 'Right button'.

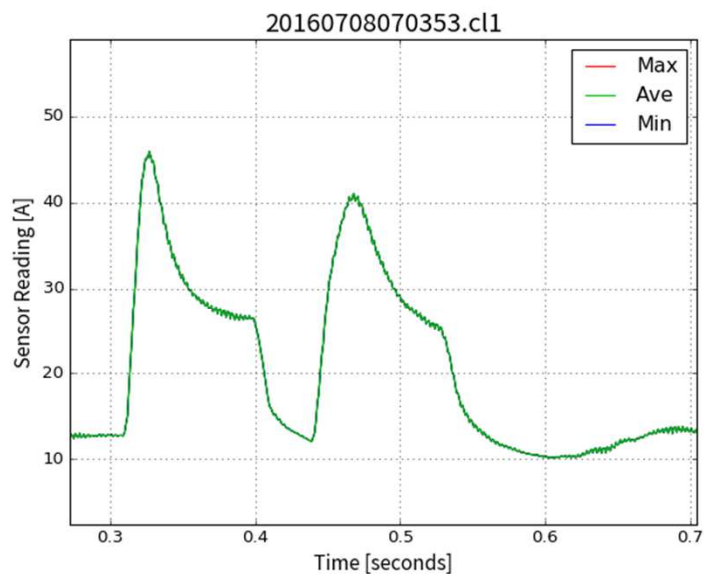
Cycle	Subfolder	Date	Cycle Def.	Comment	Unit
20160715063823.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064228.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064251.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064316.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064341.cl1		2017/04/01 11:44:27	00000	00000	[A]
20160715064407.cl1		2017/04/01 11:44:27			[A]
20160715064433.cl1		2017/04/01 11:44:27			[A]
20160715064458.cl1		2017/04/01 11:44:27			[A]
20160715064539.cl1		2017/04/01 11:44:27			[A]
20160715064604.cl1		2017/04/01 11:44:27			[A]
20160715064630.cl1		2017/04/01 11:44:27			[A]
20160715064656.cl1		2017/04/01 11:44:27			[A]
20160715064721.cl1		2017/04/01 11:44:27			[A]
20160715064747.cl1		2017/04/01 11:44:27			[A]
20160715064813.cl1		2017/04/01 11:44:27			[A]
20160715064839.cl1		2017/04/01 11:44:27			[A]
20160715064904.cl1		2017/04/01 11:44:27			[A]
20160715064930.cl1		2017/04/01 11:44:27			[A]
20160715064956.cl1		2017/04/01 11:44:27			[A]
20160715065022.cl1		2017/04/01 11:44:27			[A]
20160715065047.cl1		2017/04/01 11:44:27			[A]

Context menu options:

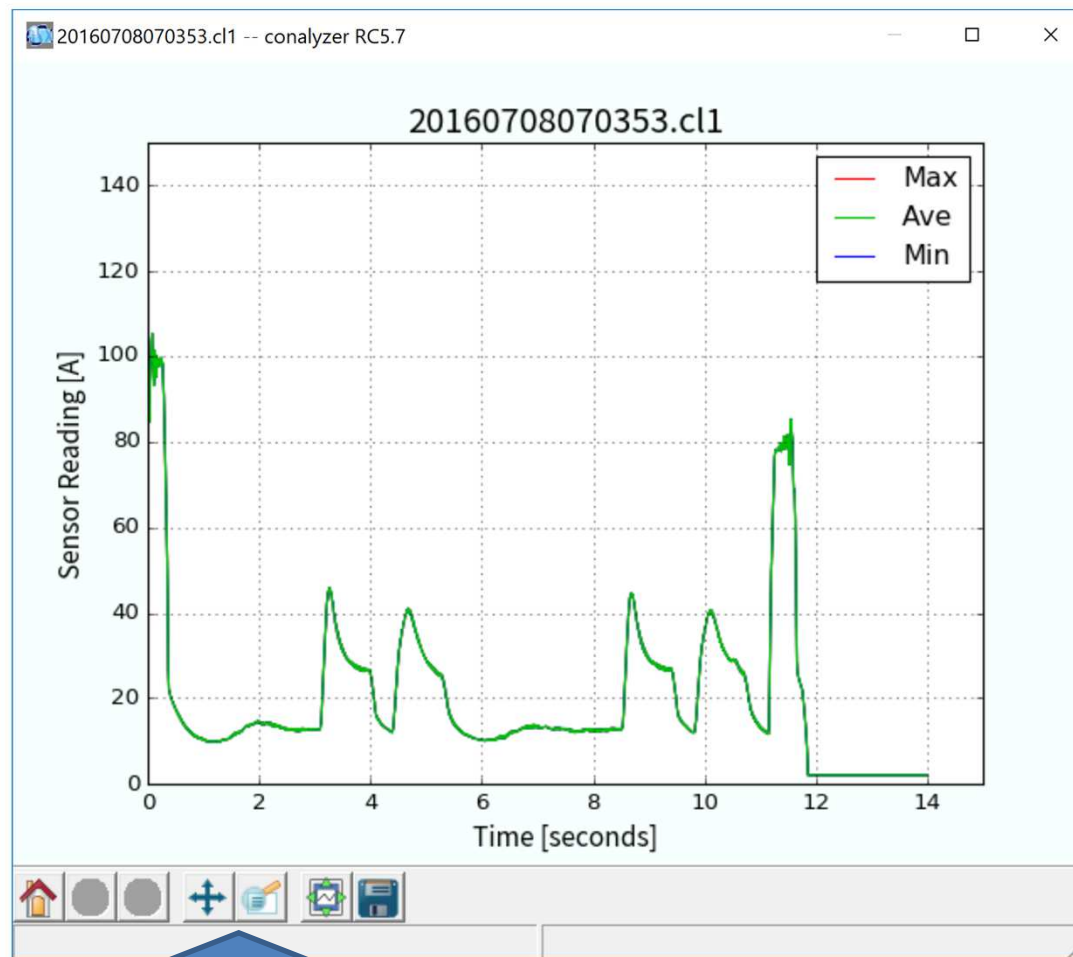
- Property
- Graph preview**
- (cl[145]: 12)
- Overlay graph
- Simple animation
- (Setting=00000: 12)
- Data density and Analysis
- Save selection state
- Restore selec. criteria
- Copy selected
- Copy not selected

Click right button on the file list,
then select Graph preview.
Even if several files are
selected, only one file's graph
is appeared

Graph preview

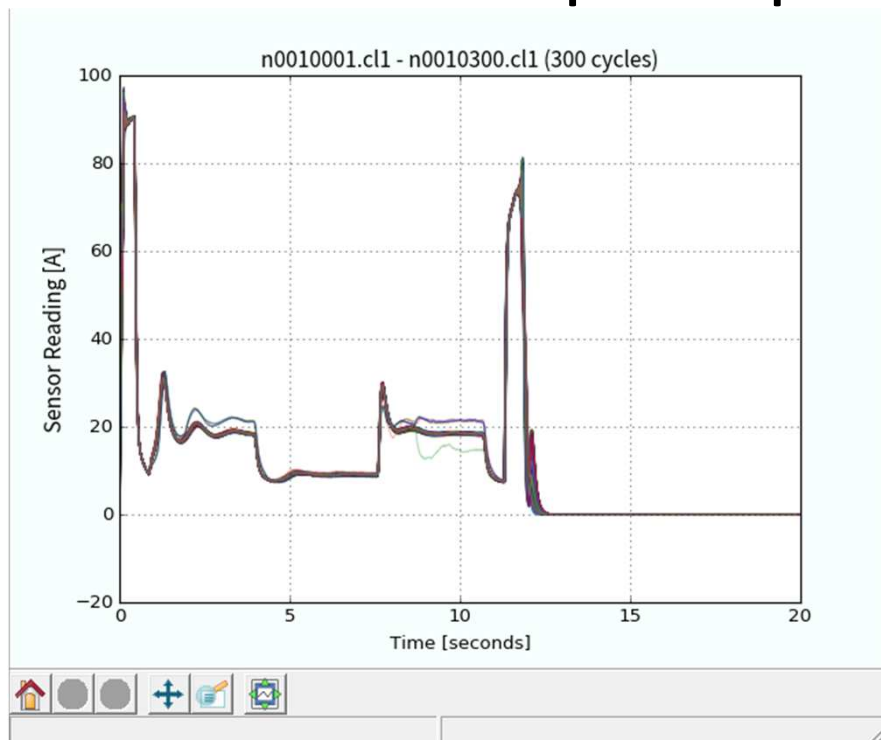


- Horizontal axis shows time.
[Sampling interval * data points]
- Buttons in the right bottom make it zoom, pan, adjust subplot parameters, and save snapshot to a file.



Overlay graph

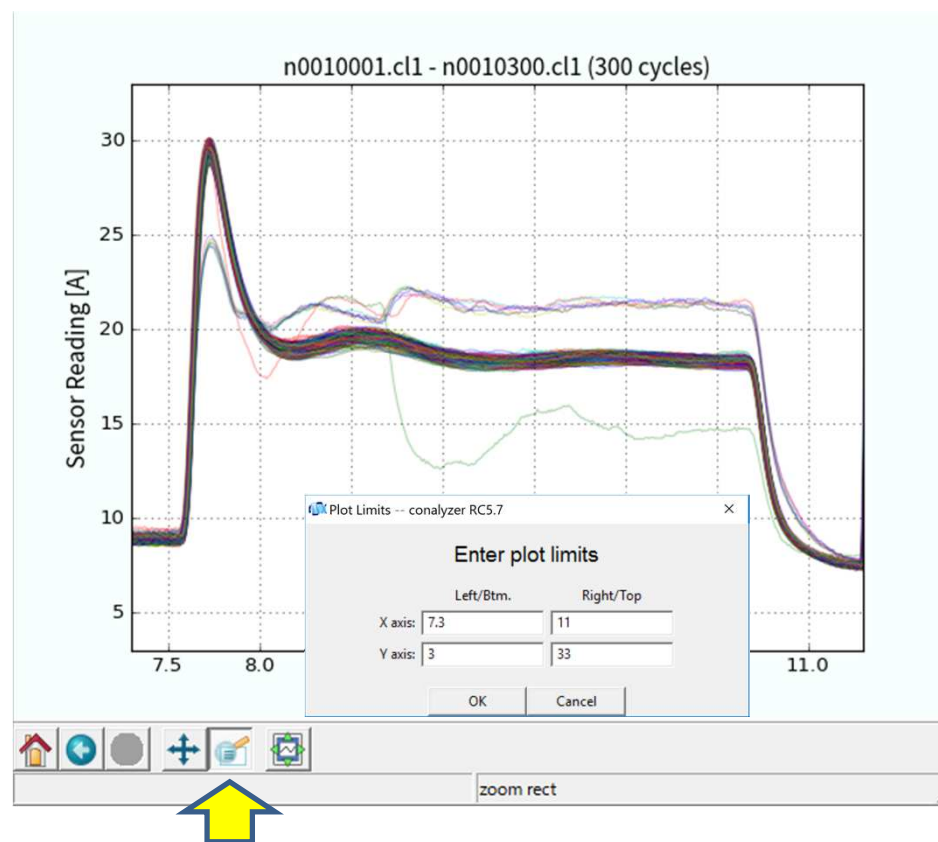
Max.300 cyclic measurements
are superimposed onto one graph



- Files of different type and various cycle conditions can be plotted.
- Only measured values are plotted. (without templates)
- Unit of horizontal axis is time[sec].
 - In case of pulse count, sampling interval is assumed to be 1msec.
- Zoom, pan, adjust margin, or save screen shot
- Number of cycles: Max. 300

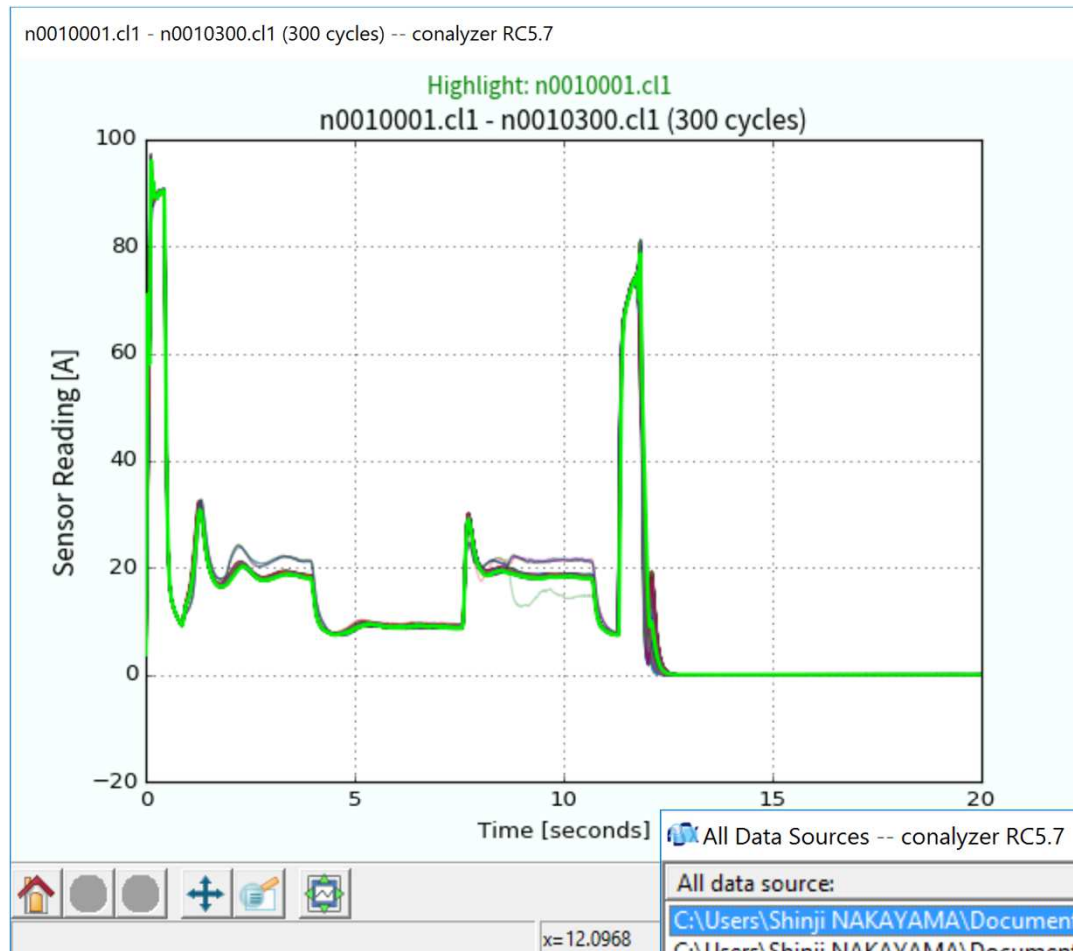
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- More than one file can be chosen by Shift or Ctrl + click.
- Click right button on the selected files.
→ Select Overlay graph



Zoom up (Double click to show the task box)

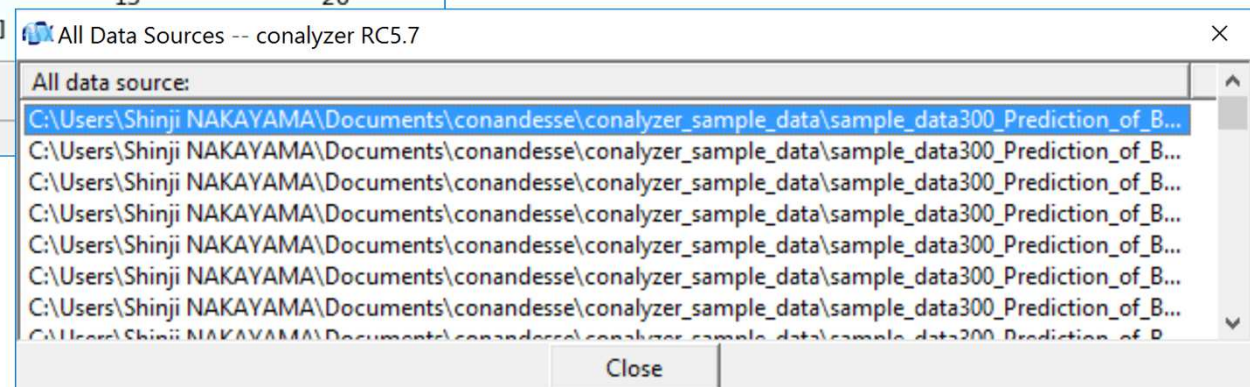
Indicate individual waveform in overlay graph



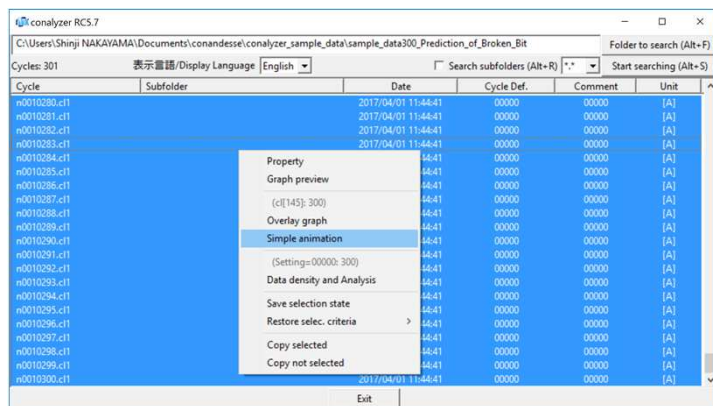
- Right clicking shows the file path.
- Indicated information can be copied and pasted into other applications.

You can designate the plot limit by the number by double-clicking.

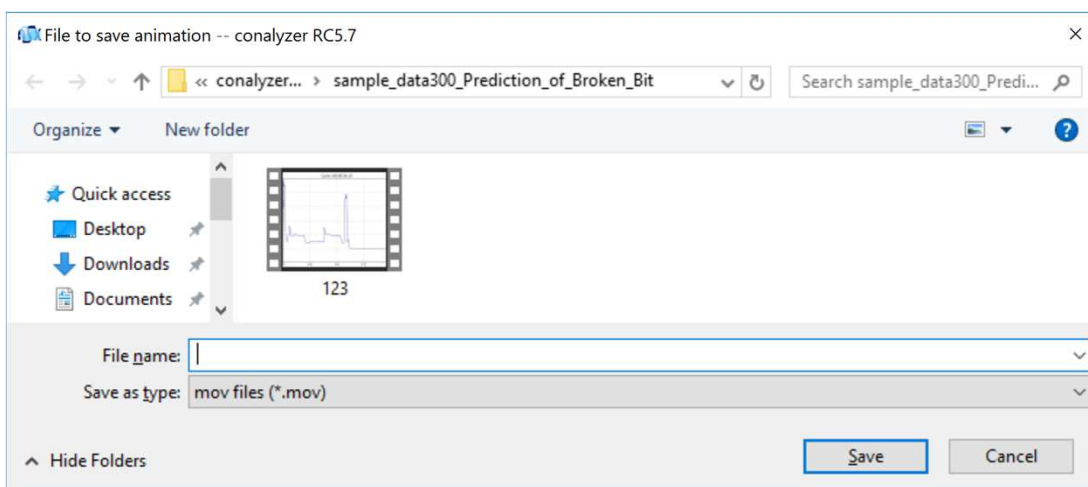
©NSXe Co.LTD



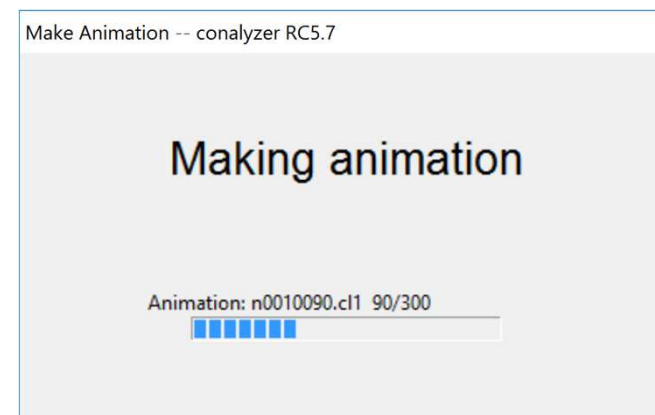
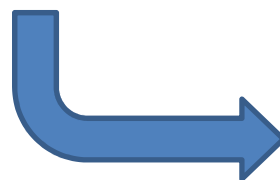
Simple animation



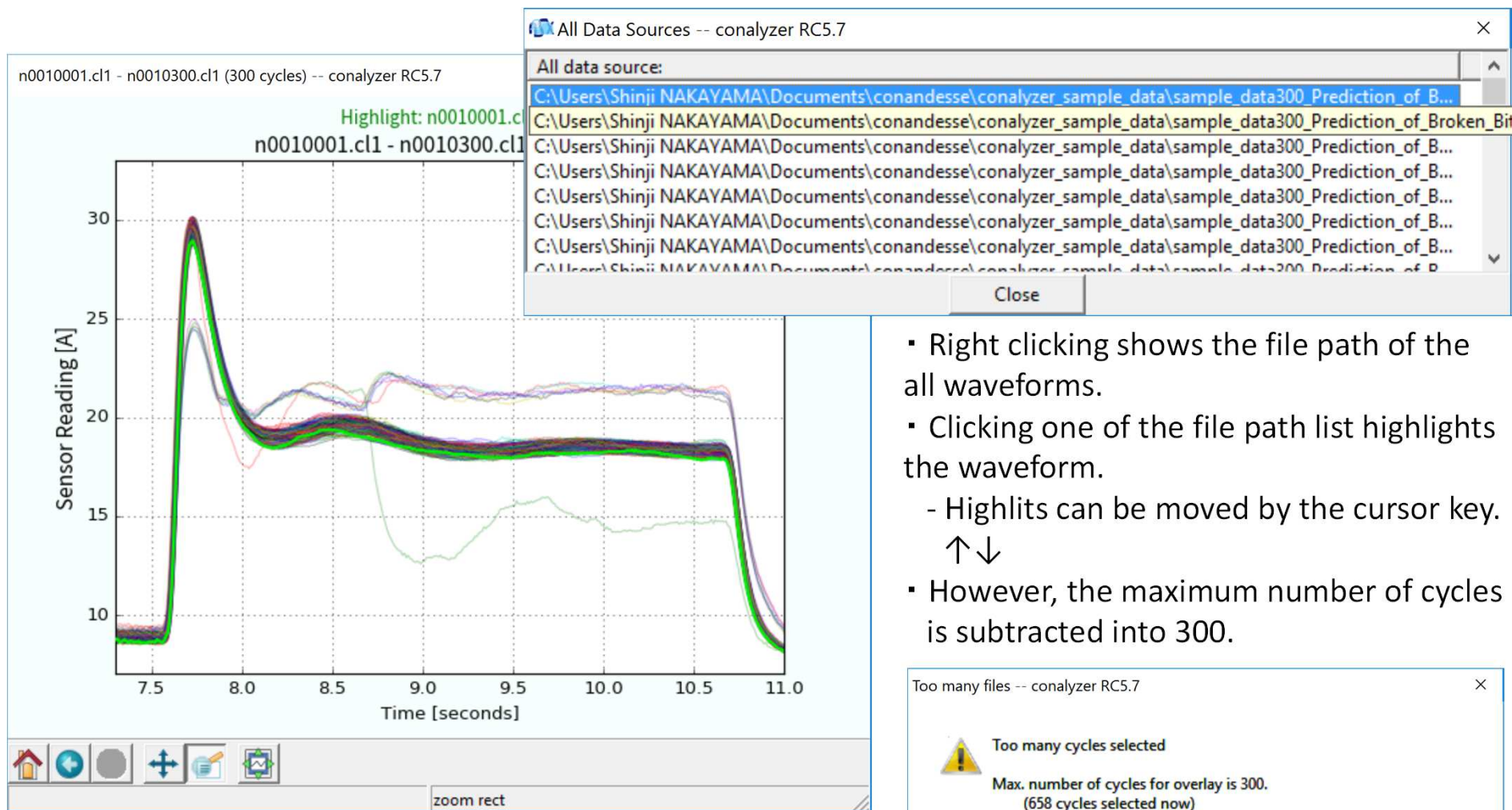
- The files of different cycle conditions can make an animation.
- X-axis indicates time [sec]
 - If it is pulse count data or unknown, the minimum interval (1ms) is taken.
- The file format can be MOV type and MP4 type:
 - MOV: - Viewed by Windows Media Player, QuickTime
 - The file size is big and the image quality isn't very good.
 - The animation is automatically played after generation.
 - MP4: - It uses x264 codec.
 - The file can't be played by Windows Media Player, or QuickTime.
 - VLC media player have been played the file.
 - The file size is small (about 50%) and good image quality.
 - The animation is automatically played by Windows Explorer after generation.
- If it begins, it isn't possible to cancel making an animation.



After the filename is input and the file type is selected, then an animation is made by clicking “Save”.

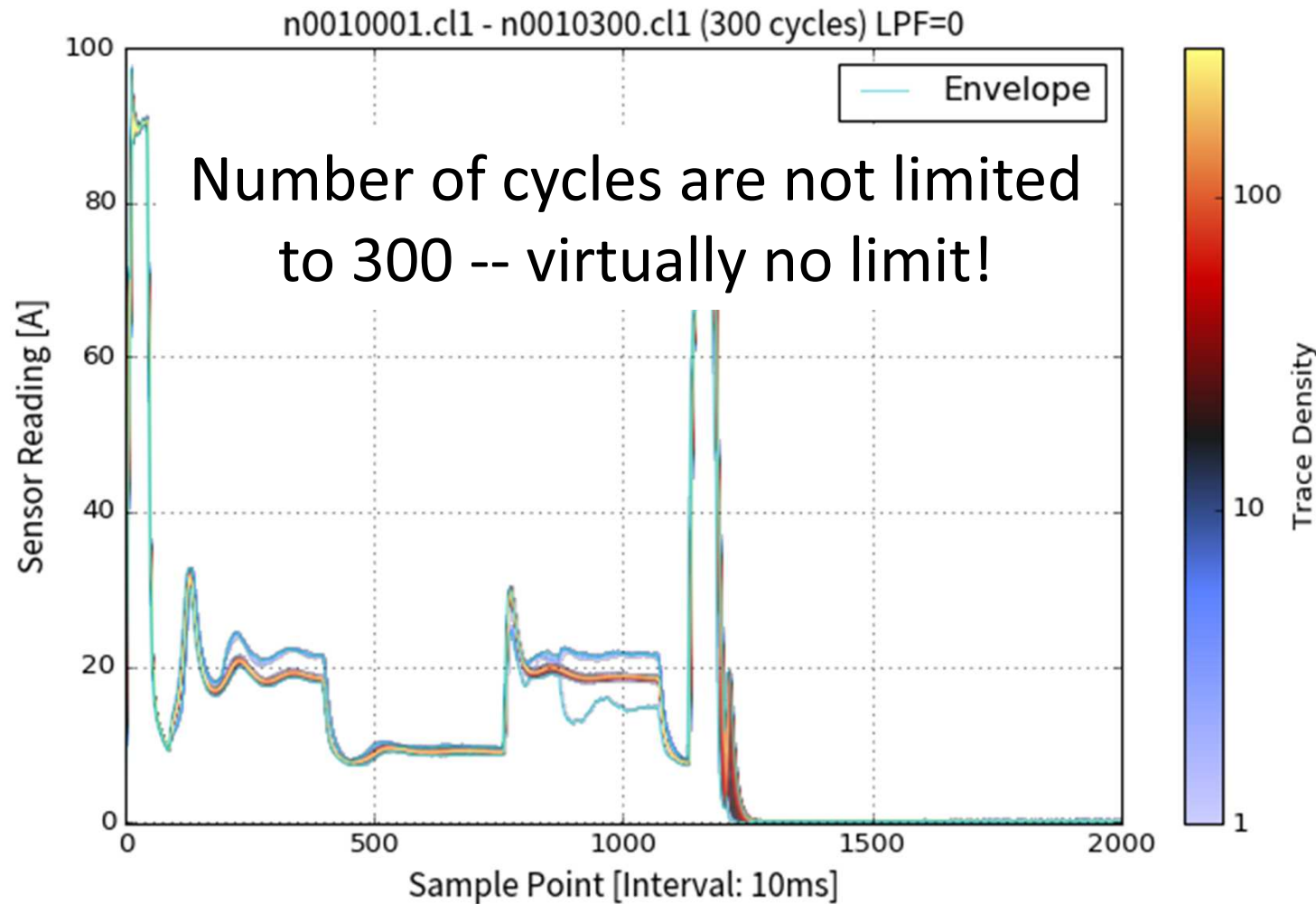


Indicate individual waveform in overlay graph

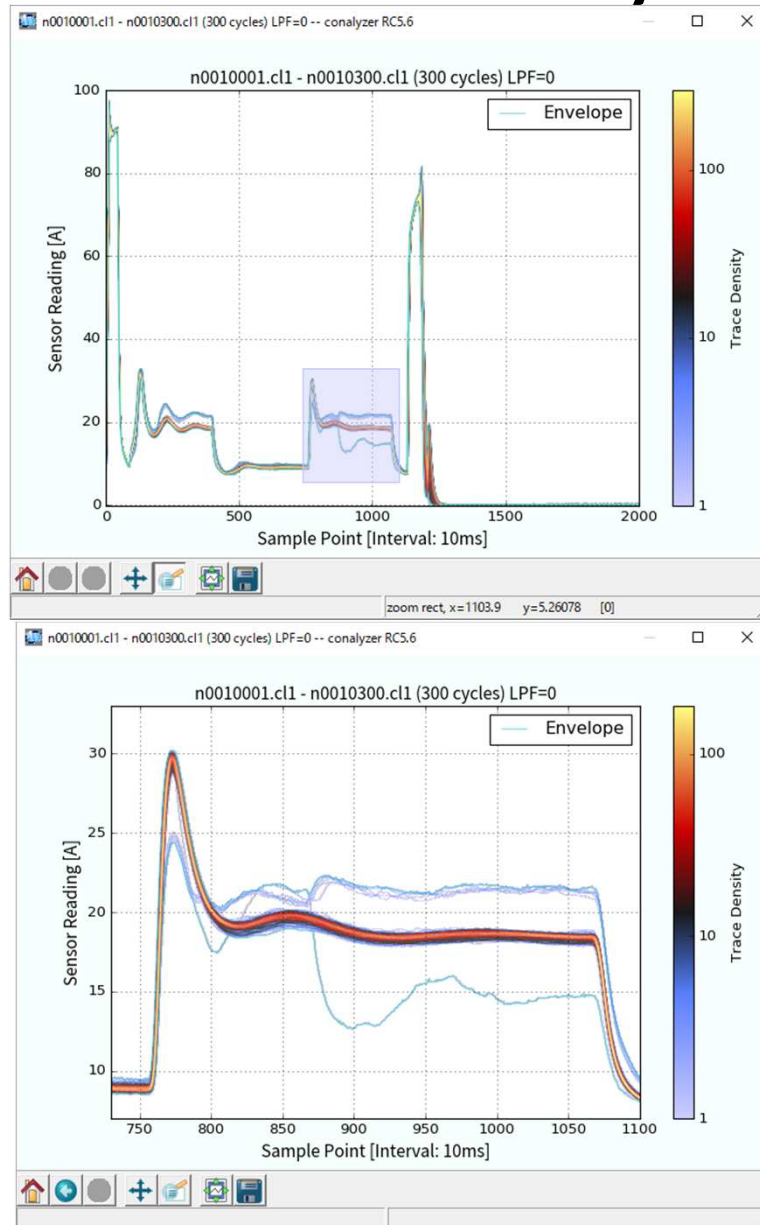


Data density and Analysis

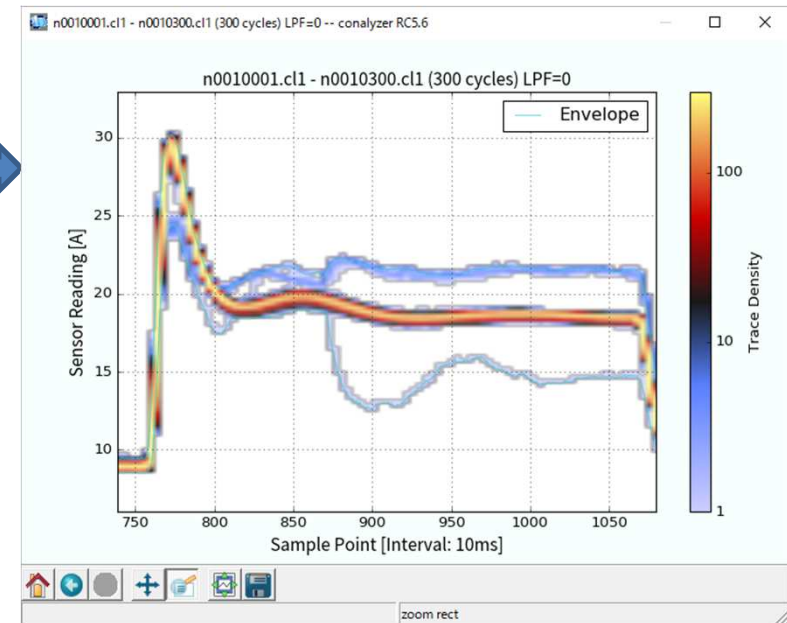
Repeatability by color classification



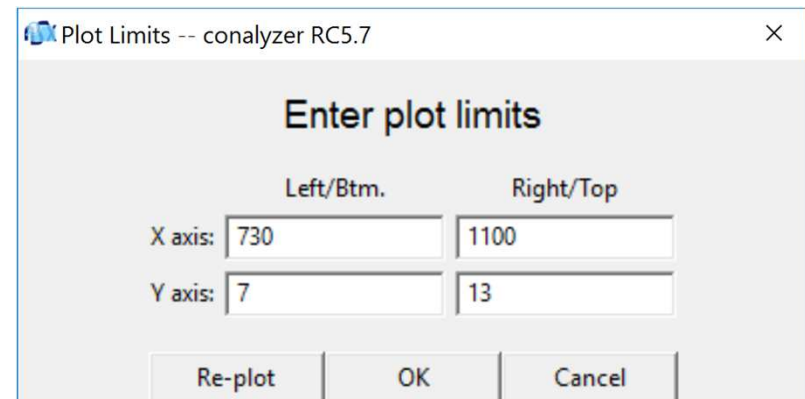
Data density and analysis [Zoom up]



Zoom up by
mouse
drugging



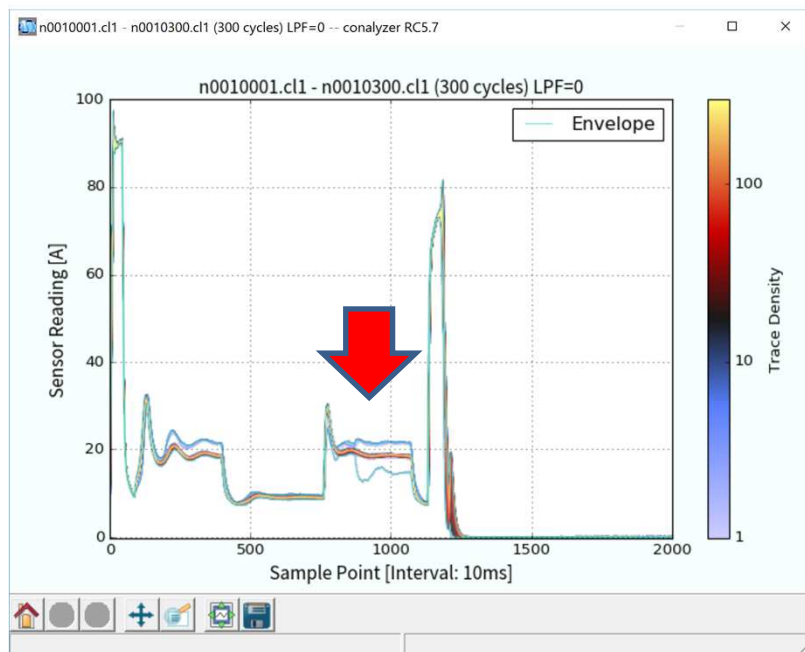
Double click and
click Re-plot



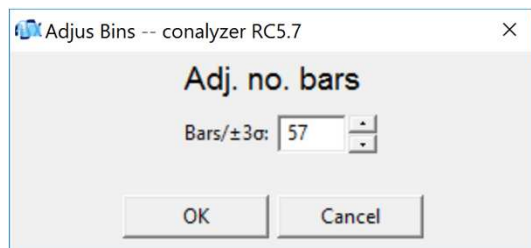
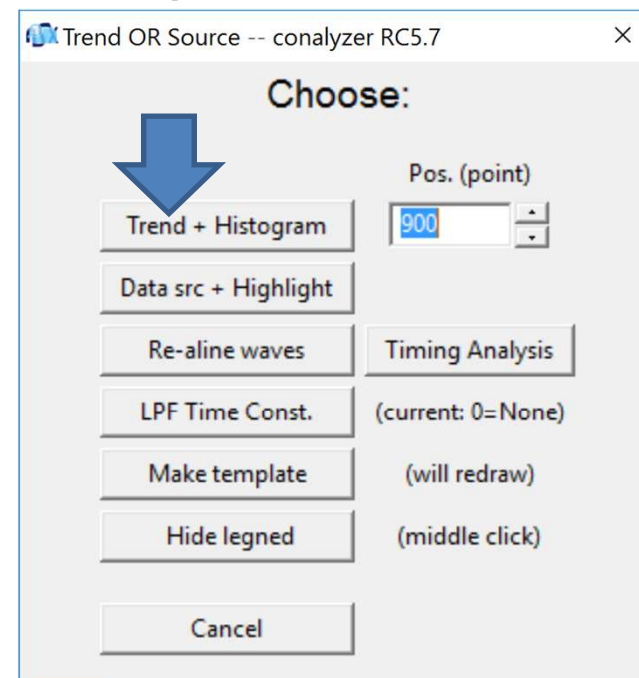
The Plot Limits dialog box is titled "Plot Limits -- conalyzer RC5.7". It contains a section "Enter plot limits" with two columns: "Left/Btm." and "Right/Top". The X axis values are 730 and 1100, and the Y axis values are 7 and 13. The dialog box has buttons for "Re-plot", "OK", and "Cancel".

Data density and analysis

Historical trend and Histogram

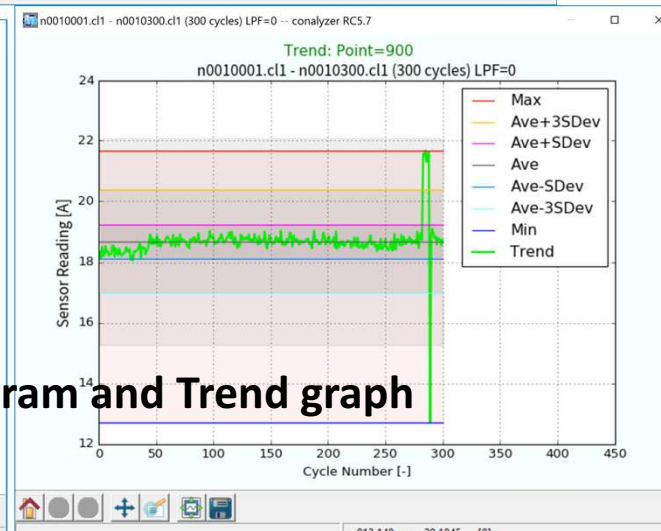
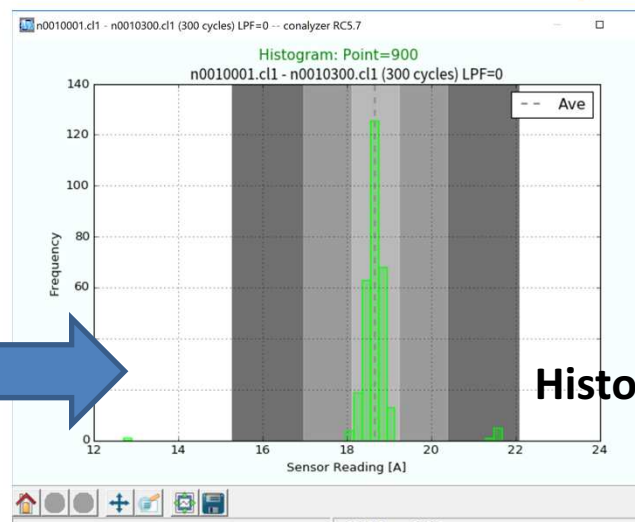


Right clicking
at the desired
data point.



Input the number of
bars by Right clicking .

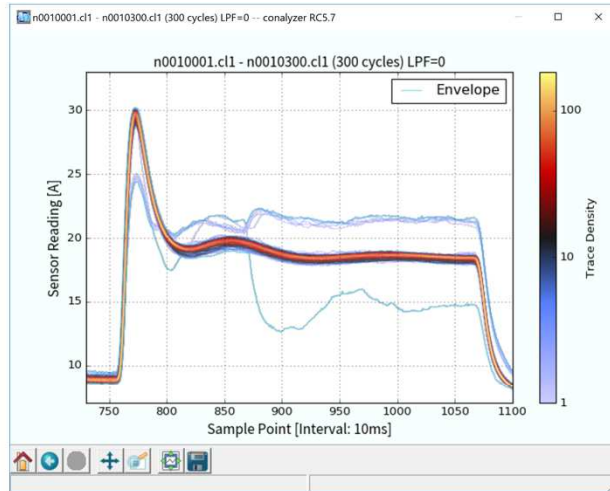
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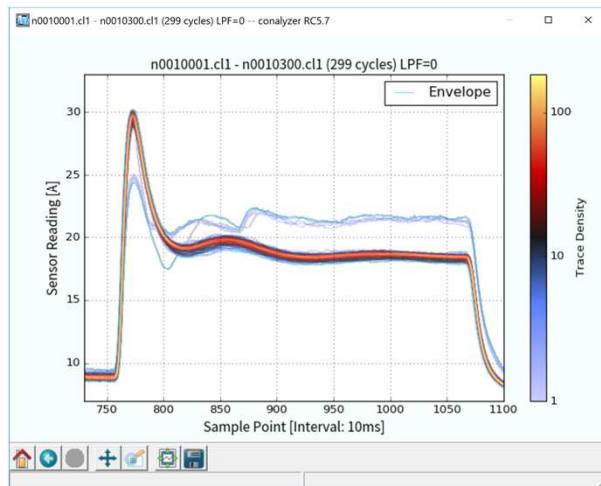
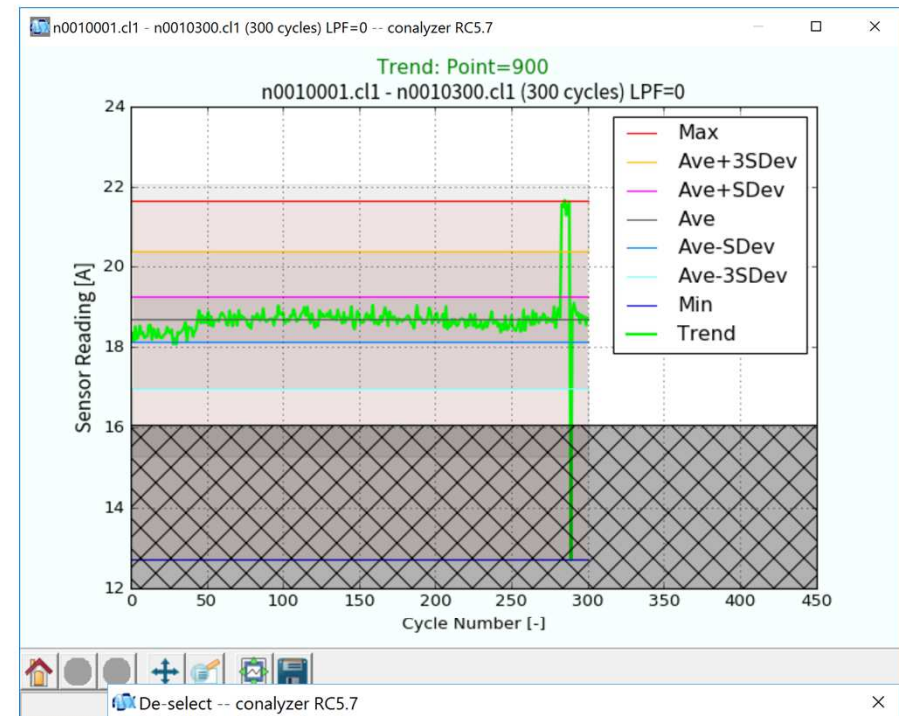
Histogram and Trend graph

Data density and analysis

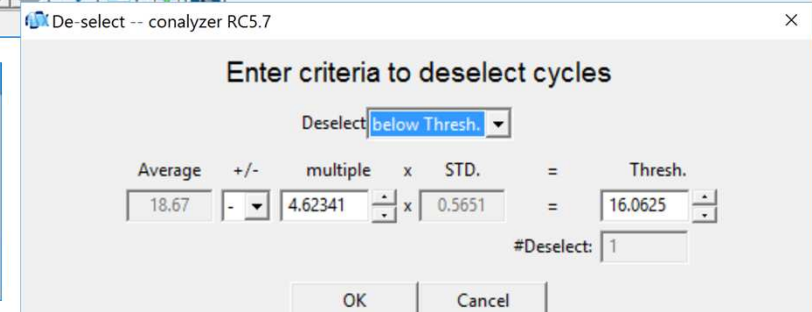
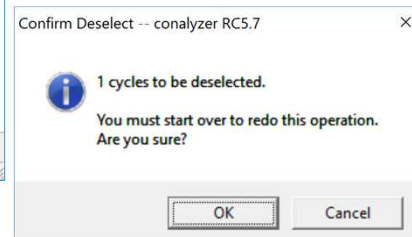
Eliminate outliers



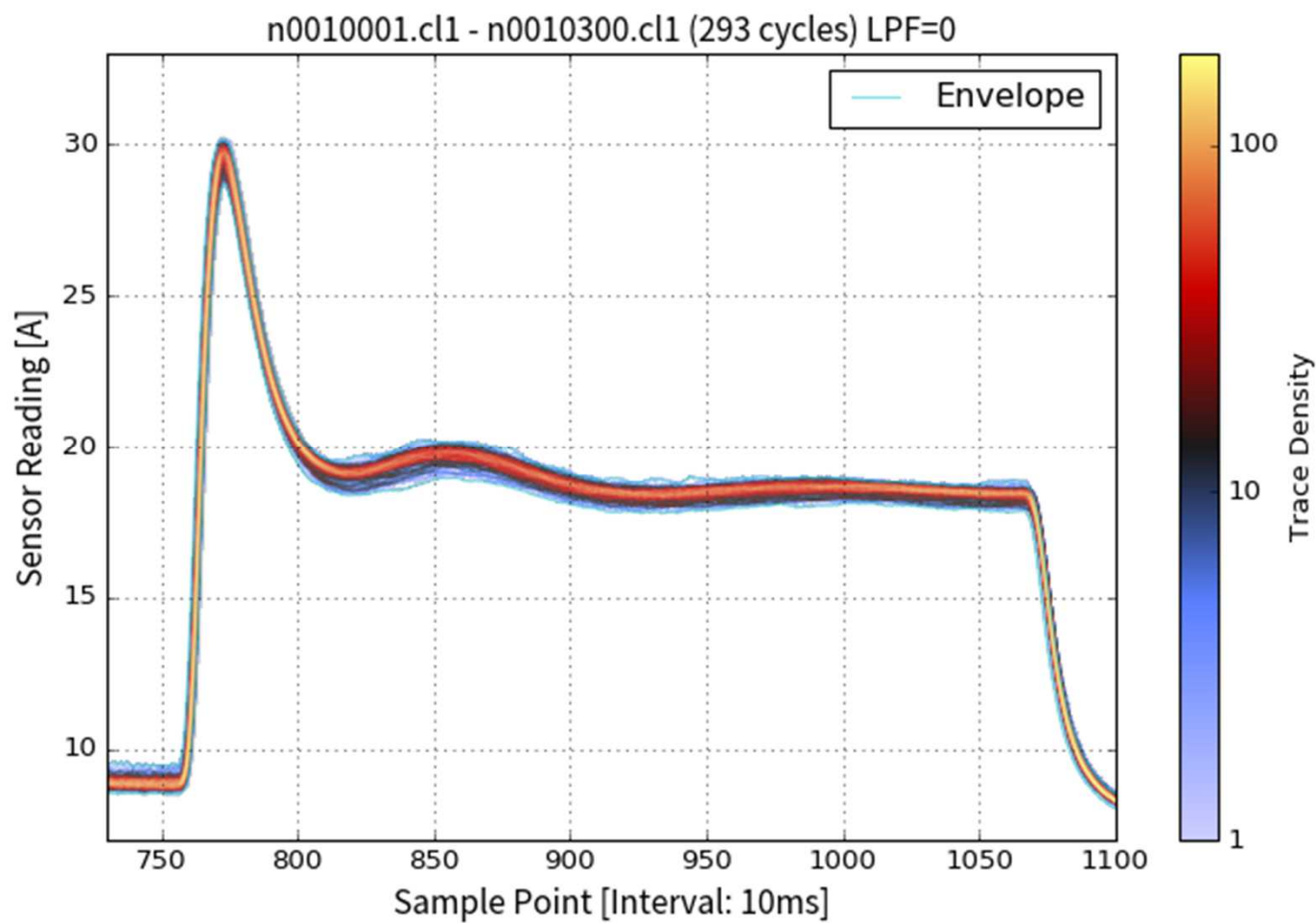
On the trend graph, a right click at the desired location can close the target waveform files.



Re-plot without unnecessary files.

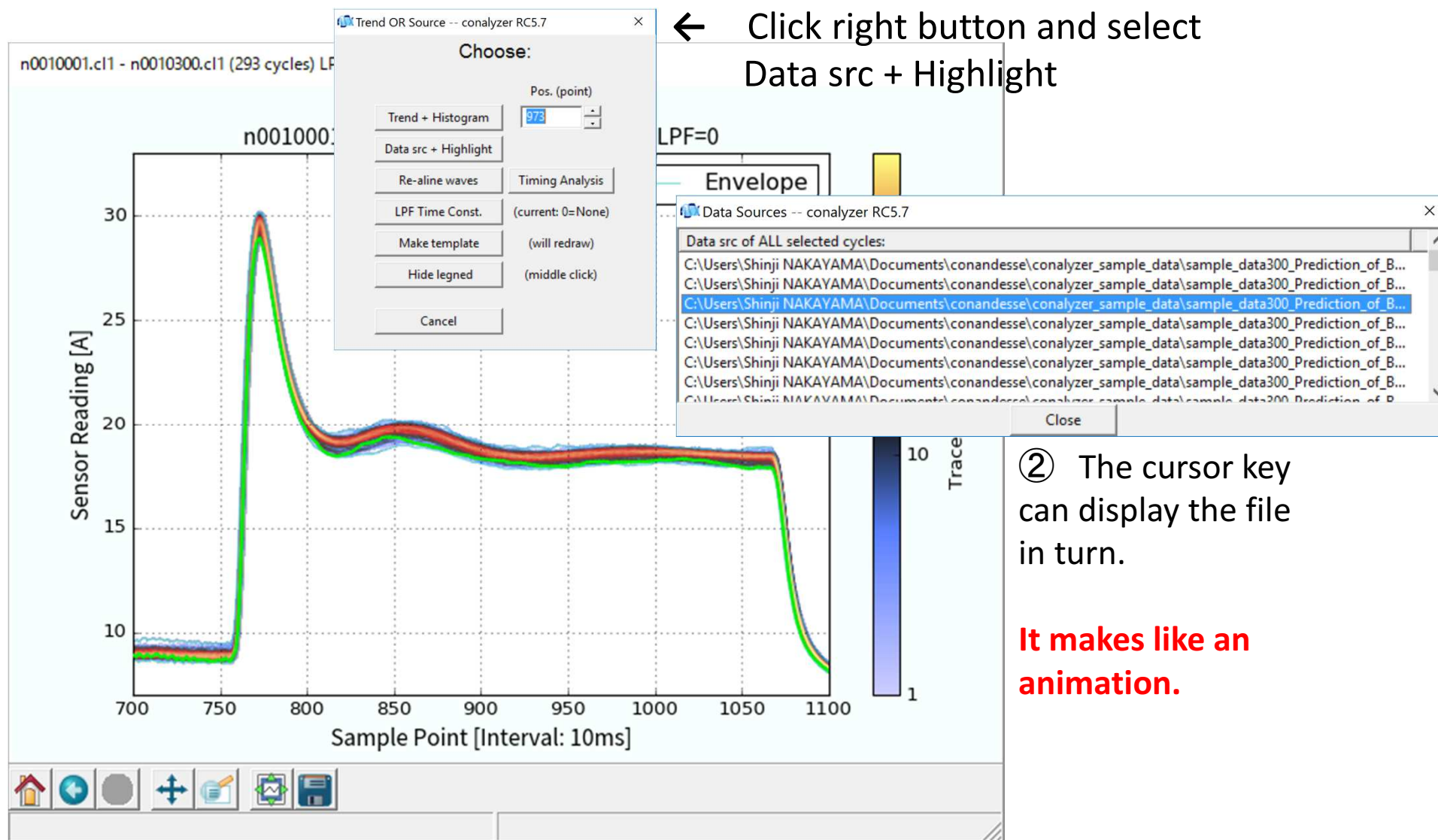


Outliers are removed



Data density and Analysis

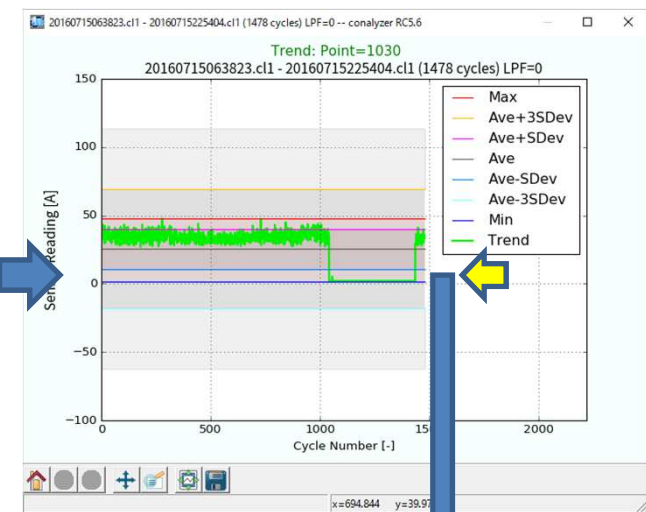
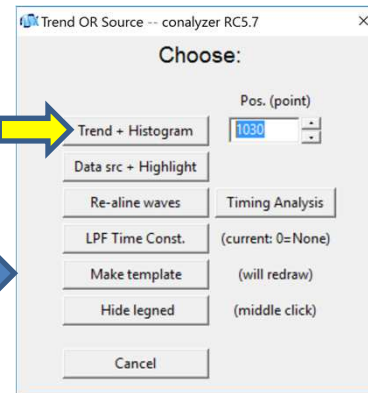
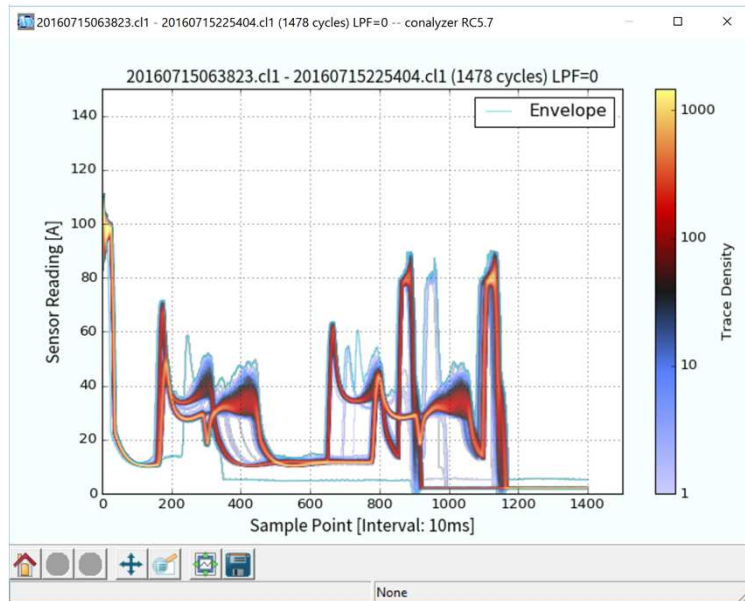
Individual cycles like animation



② The cursor key can display the file in turn.

It makes like an animation.

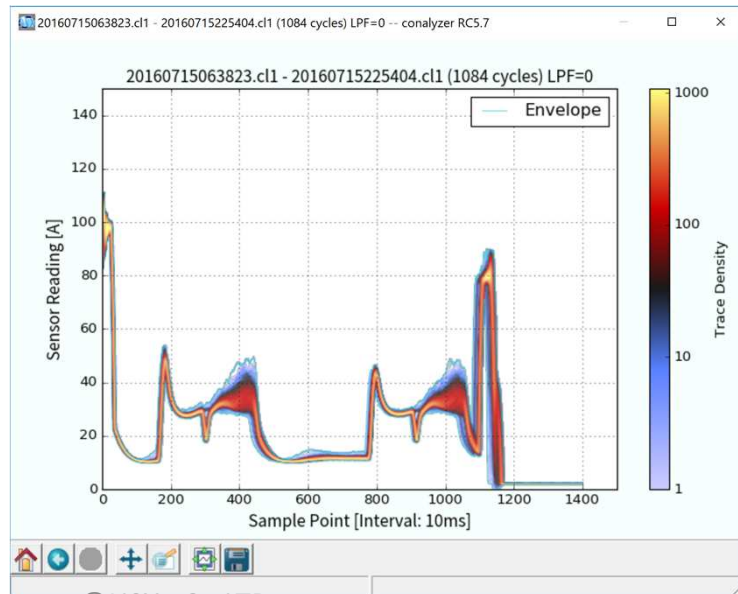
Assorting different cycles



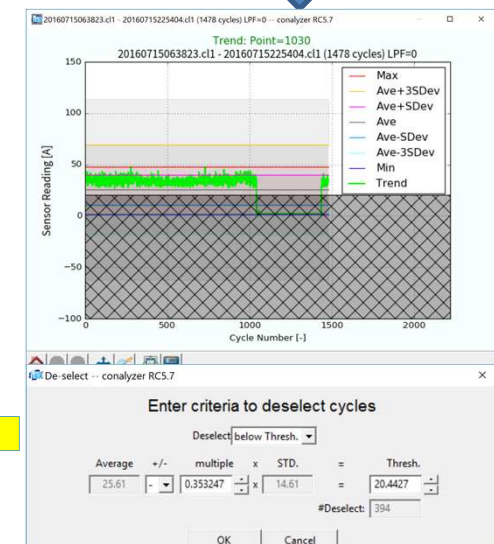
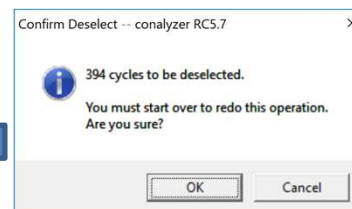
The historical trend at specified data point can be shown by right clicking.

Close the different cycles.

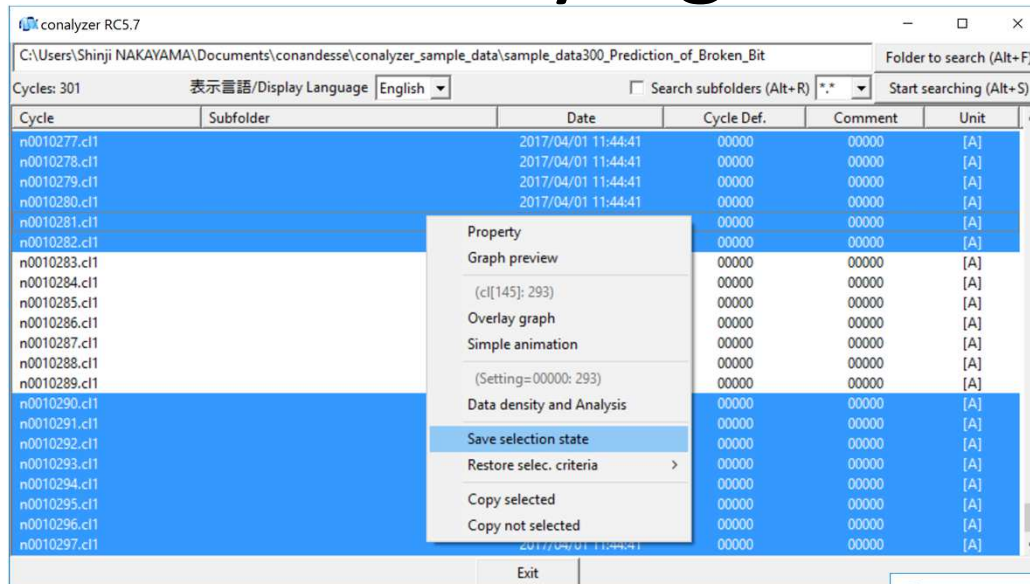
By right clicking



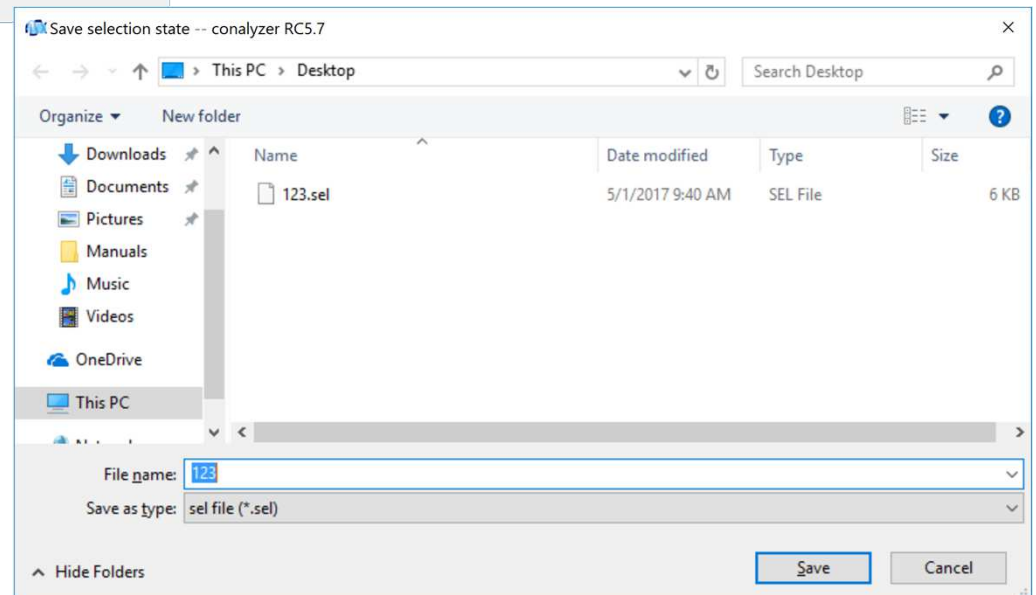
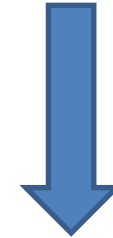
Unnecessary waveforms are eliminated.



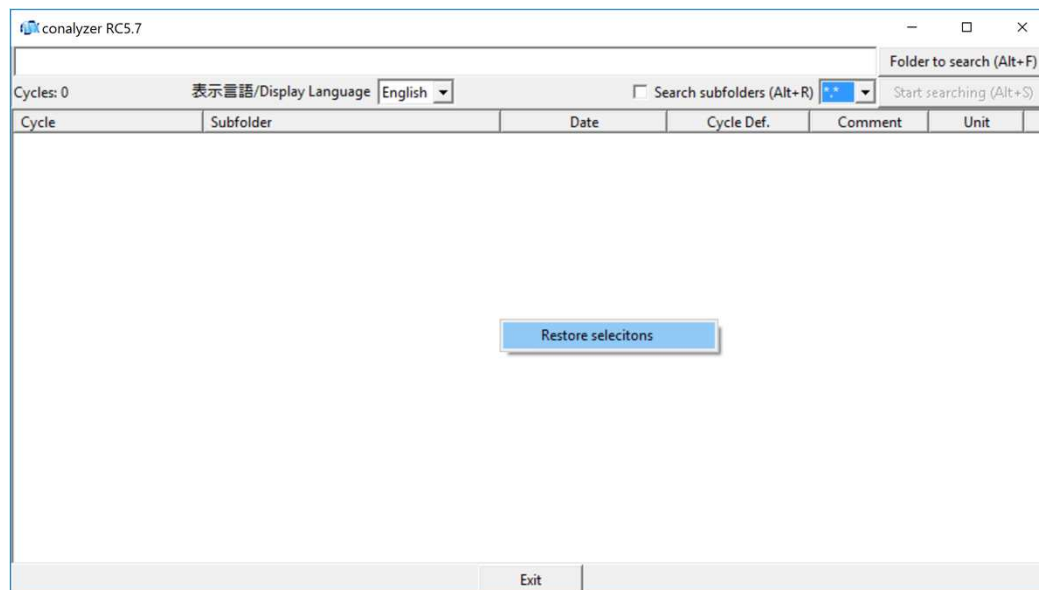
You can save file list with the selection status by right clicking on the list.



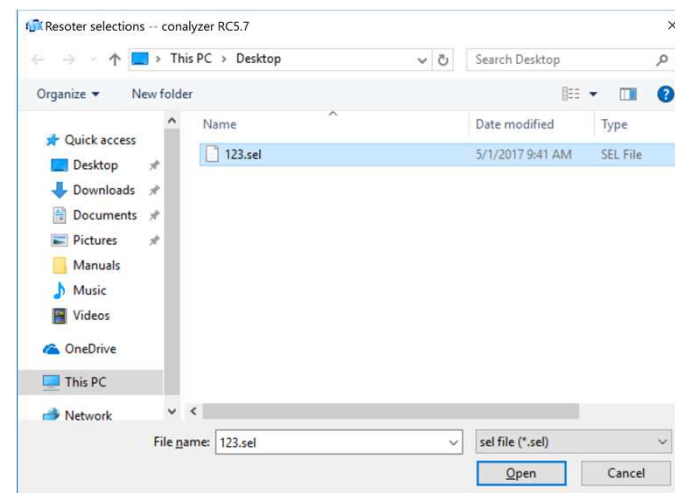
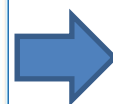
① Save the selected status by right clicking.



Restore at start-up screen



② Restore the saved selection criteria at start-up screen by right clicking.

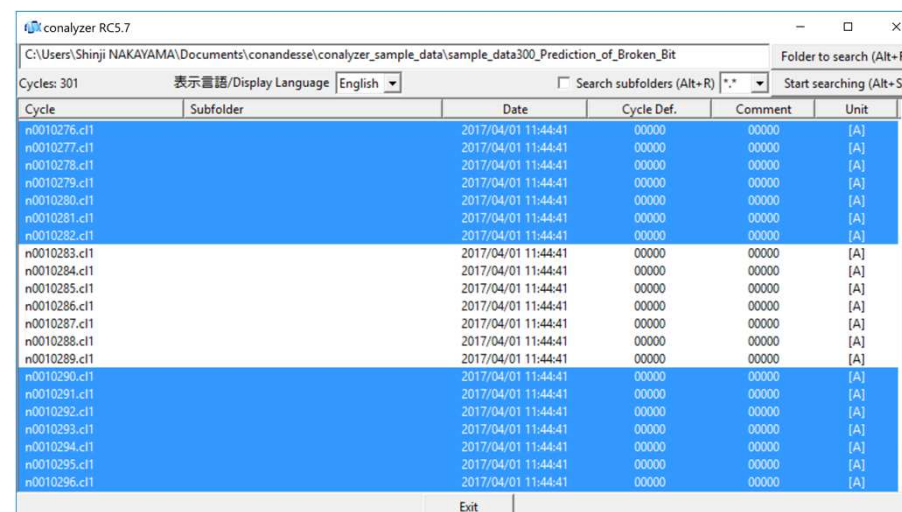
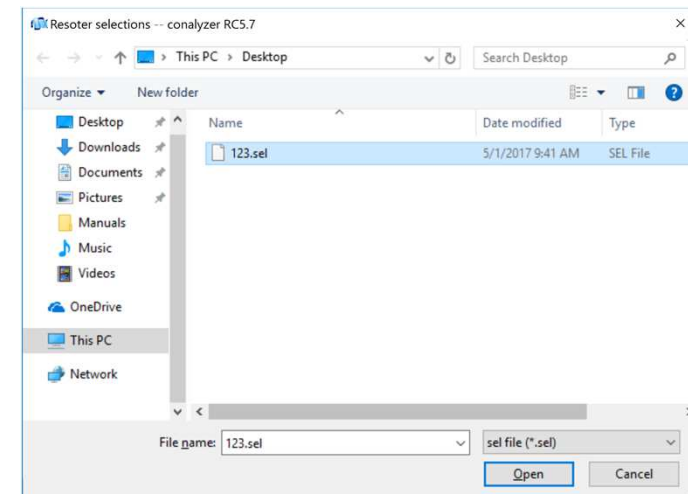
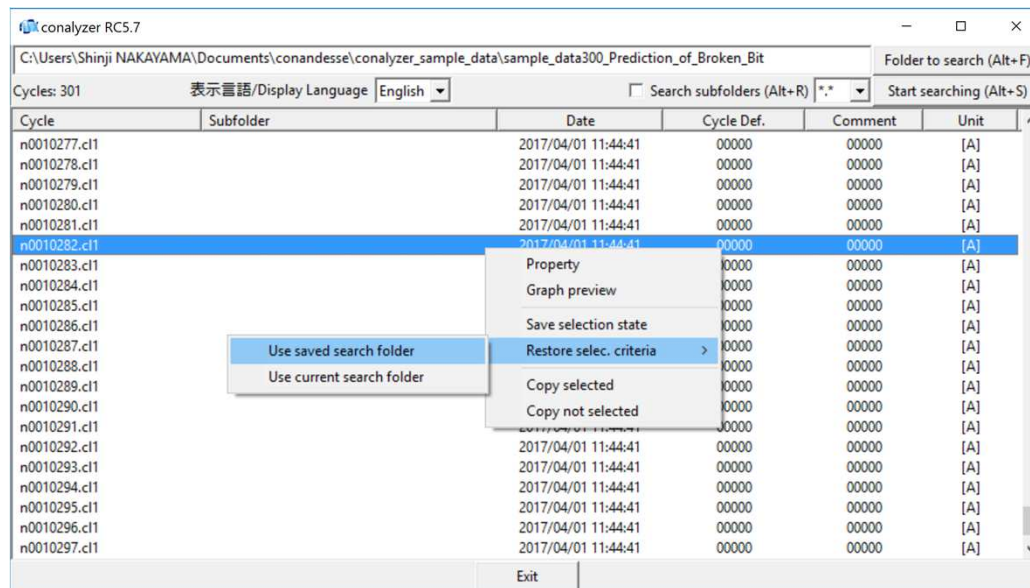


Cycle	Subfolder	Date	Cycle Def.	Comment	Unit
n0010276.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010277.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010278.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010279.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010280.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010281.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010282.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010283.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010284.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010285.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010286.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010287.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010288.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010289.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010290.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010291.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010292.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010293.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010294.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010295.cl1		2017/04/01 11:44:41	00000	00000	[A]
n0010296.cl1		2017/04/01 11:44:41	00000	00000	[A]

Restore the saved selection criteria



- ② You can restore the saved selection criteria. However, be aware that the file list may change.



Notes on submenu items

(1) Use saved search folder

- **Choose this item when the target data and surrounding folder tree are unchanged since you saved the ".sel" file.**

(2) Use current search folder

- **Choose this item when the target data has been either moved or copied.**
- **You must set the "Folder to search" first. You will not see the submenu if you fail to do this.**

Advanced use of selection state files



The saved file can be used as a historical log.

- The file includes the status for each file in the list, whether it was selected or not.
- The information is saved as a text file.
- Thus you can open it with Notepad, Excel or other similar applications.
- You can examine when the unselected waveforms are recorded.

Example of saved selection status file

1	conandesse cl Bronwer saved file selection criteria
2	C:\conandesse_data\2016\07\06
3	*.*
4	
5	20160706090255.cl1,No
6	20160706090324.cl1,No
7	20160706090349.cl1,Yes
8	20160706090414.cl1,Yes
9	20160706090438.cl1,Yes
10	20160706090503.cl1,No

1st row : File format identification.

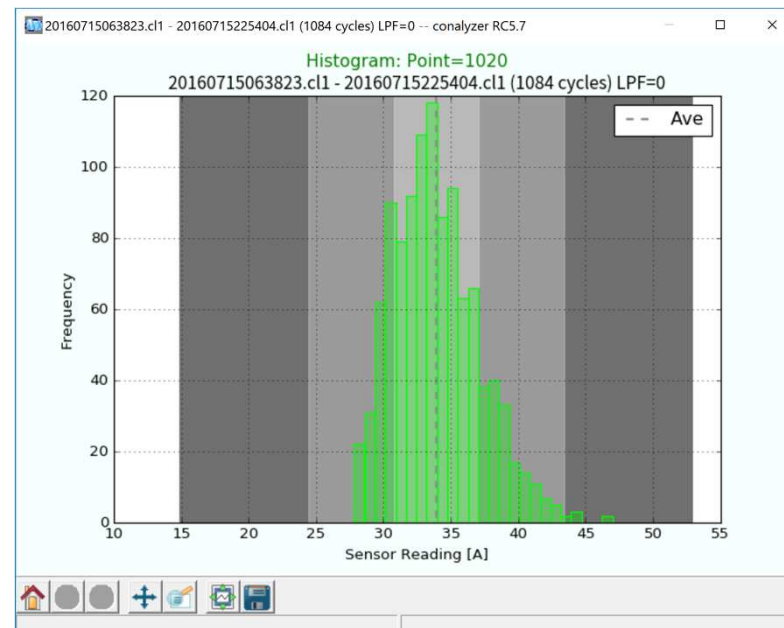
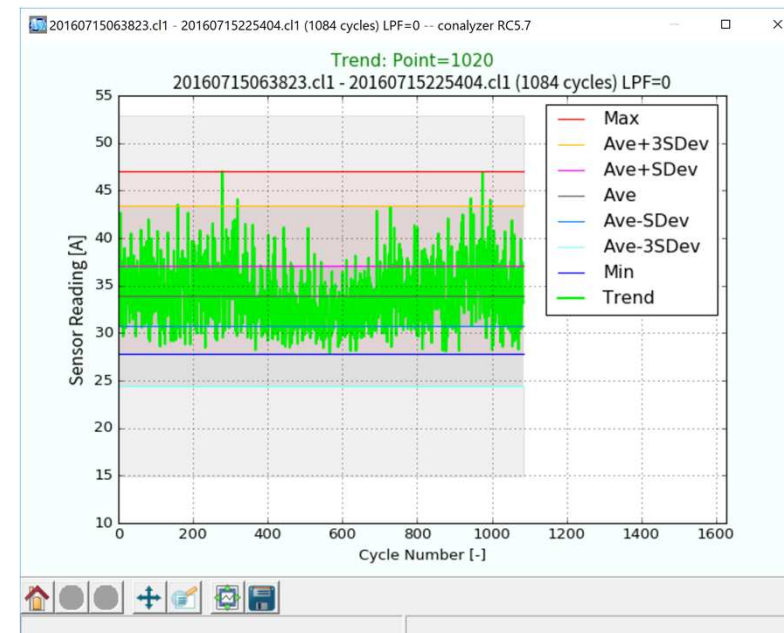
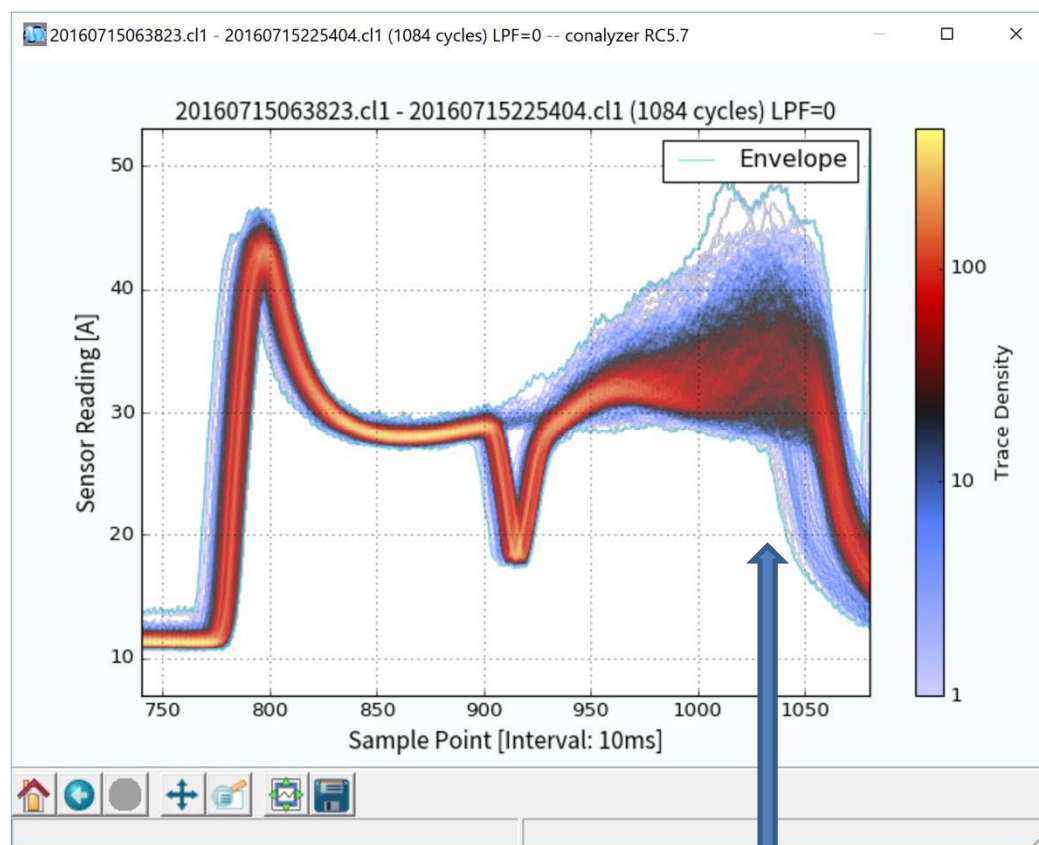
2nd row : Root folder of file search.

3rd row : File type filter.

4th row : Search sub folders flag.

5th row and onward: File name and status (selected=Yes | No.)

Zoom, Trend graph, Histogram



Trend OR Source analyzer RC5.7

Choose:

Pos. (point) 1020

Trend + Histogram

Data src + Highlight

Re-align waves

Timing Analysis

LPF Time Const. (current: 0=None)

Make template (will redraw)

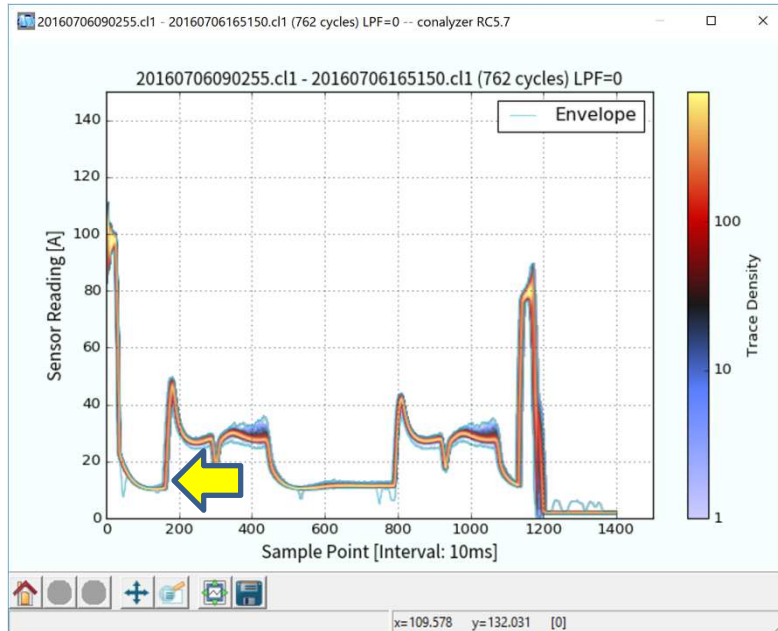
Hide legned (middle click)

Cancel

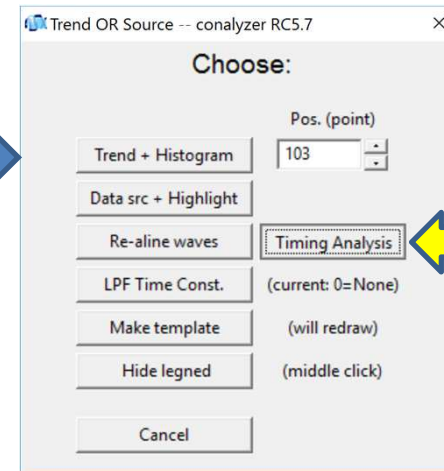
Historical trend graph and histogram at 1020th data point.

Timing Analysis

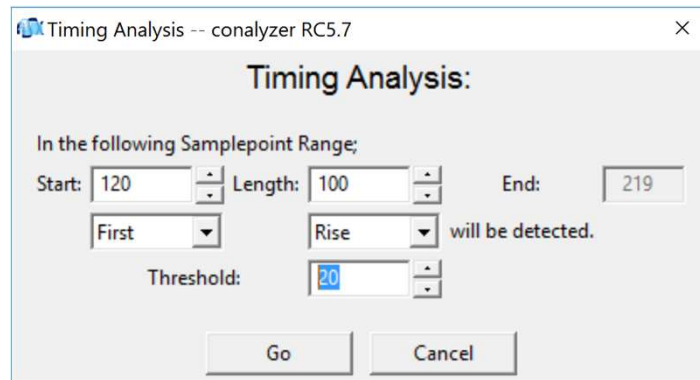
Plot data points (timing) at specified measured value.



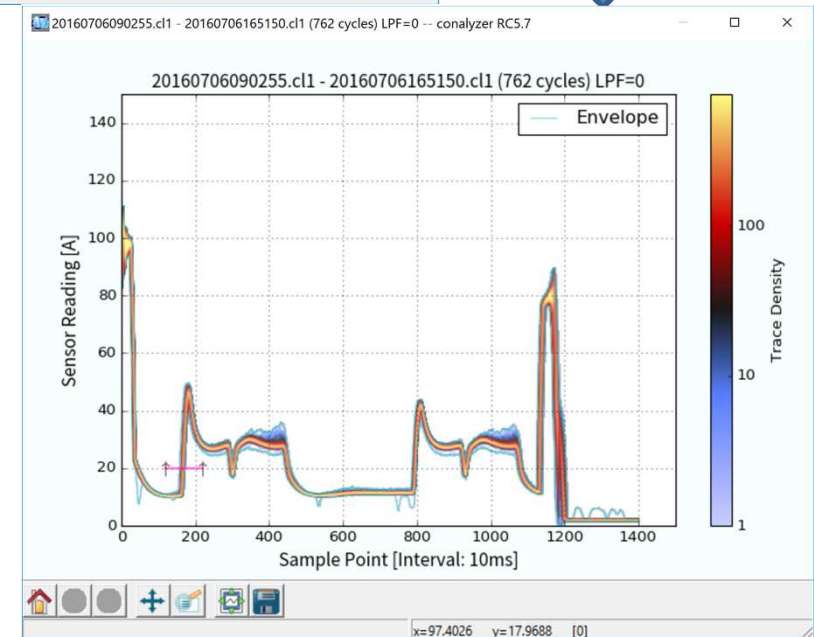
Right clicking at specified point.



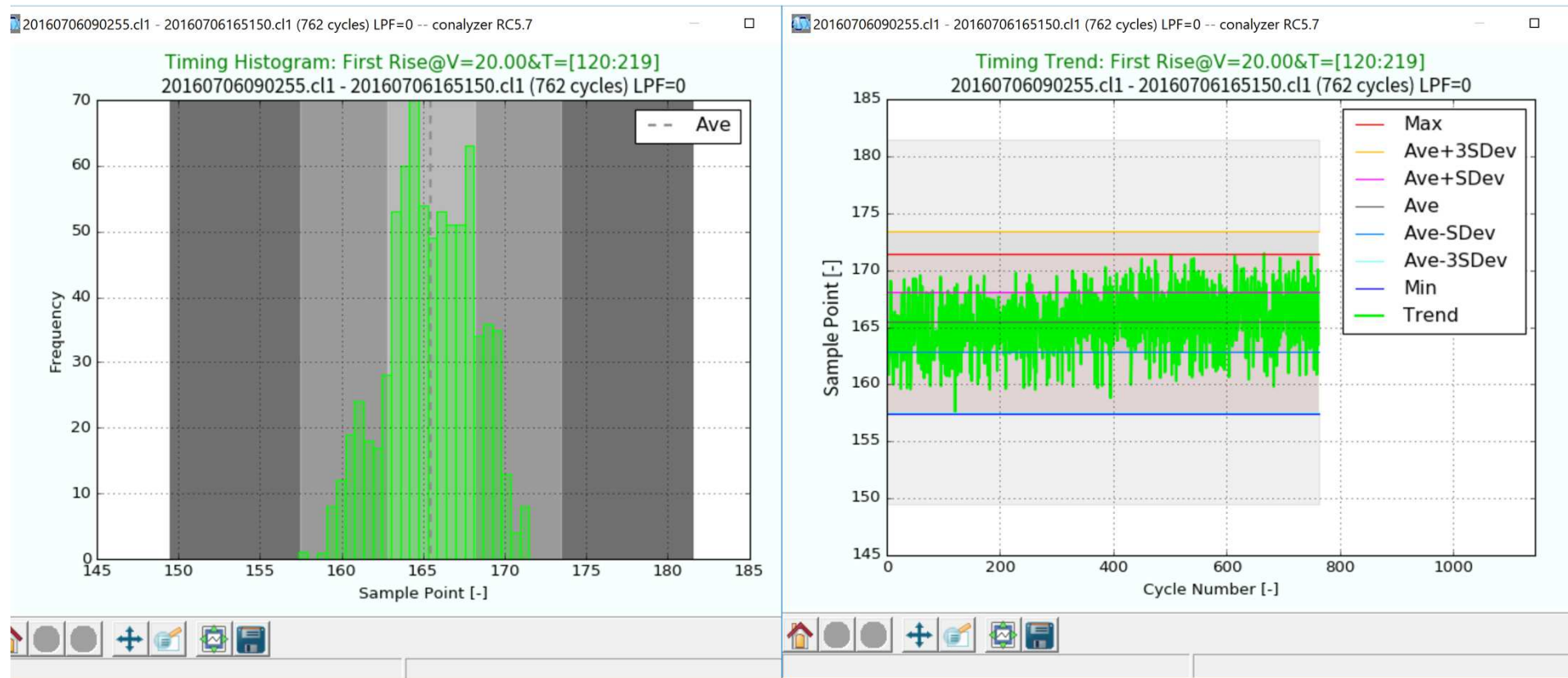
Click "Timing Analysis"



Specify the confition



Timing Analysis [Result]

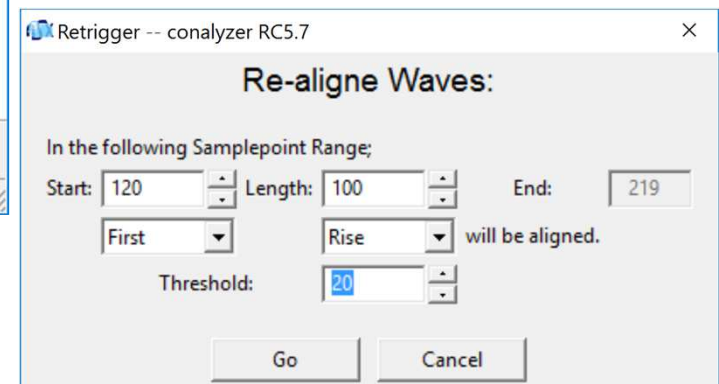
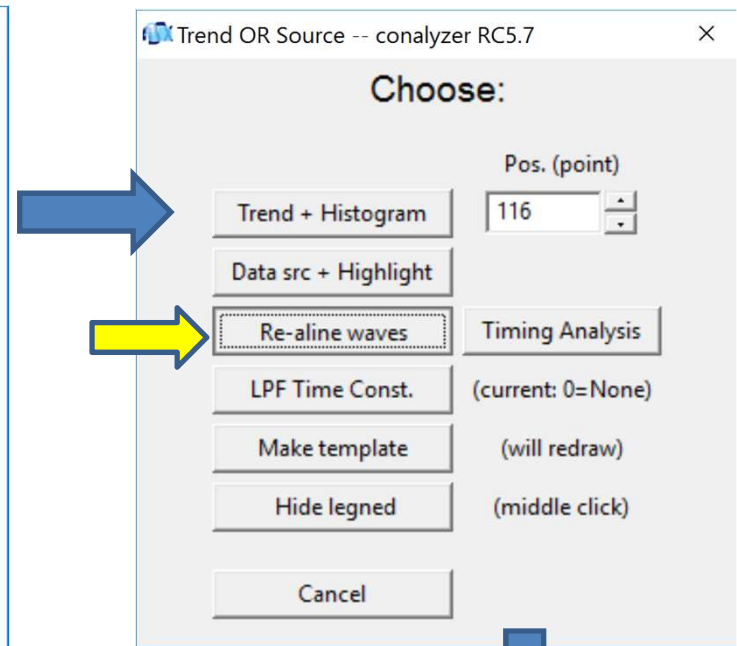
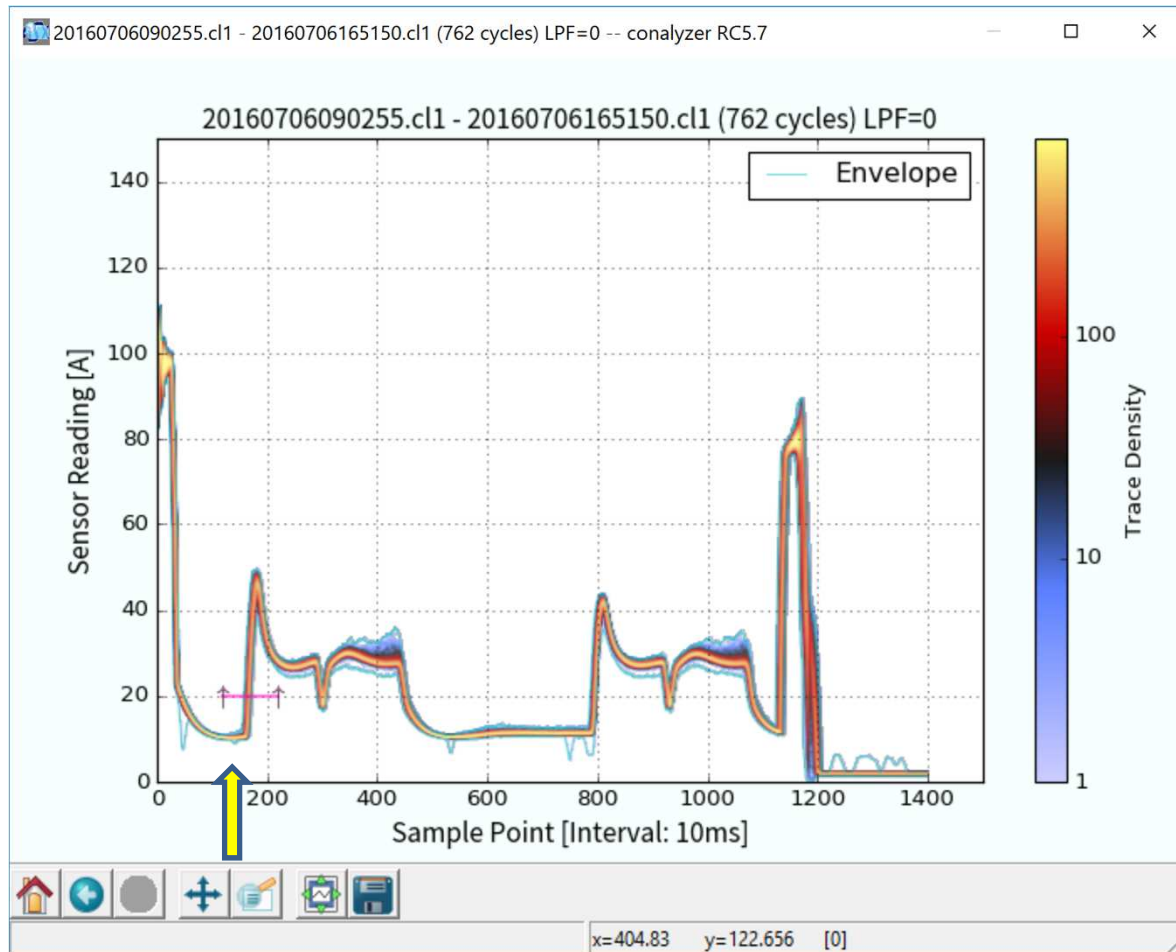


Timings at upward passing at 20A are plotted.

V-axis : Data point H-axis : Cycle number

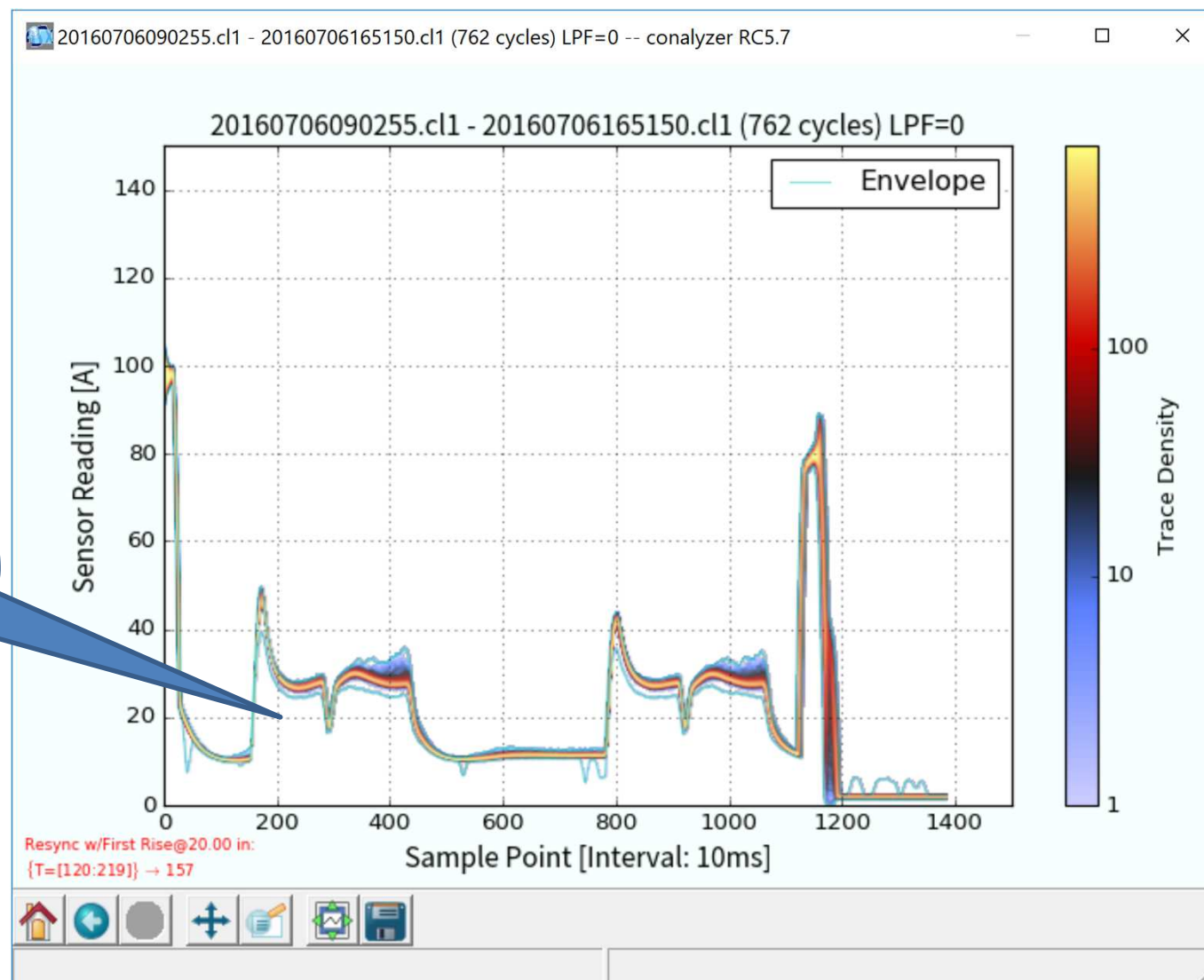
Re-align waveforms

At the specified measured value.

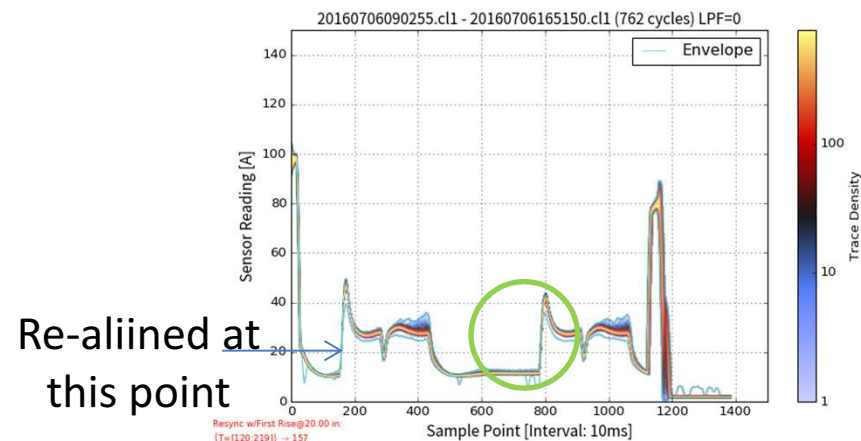
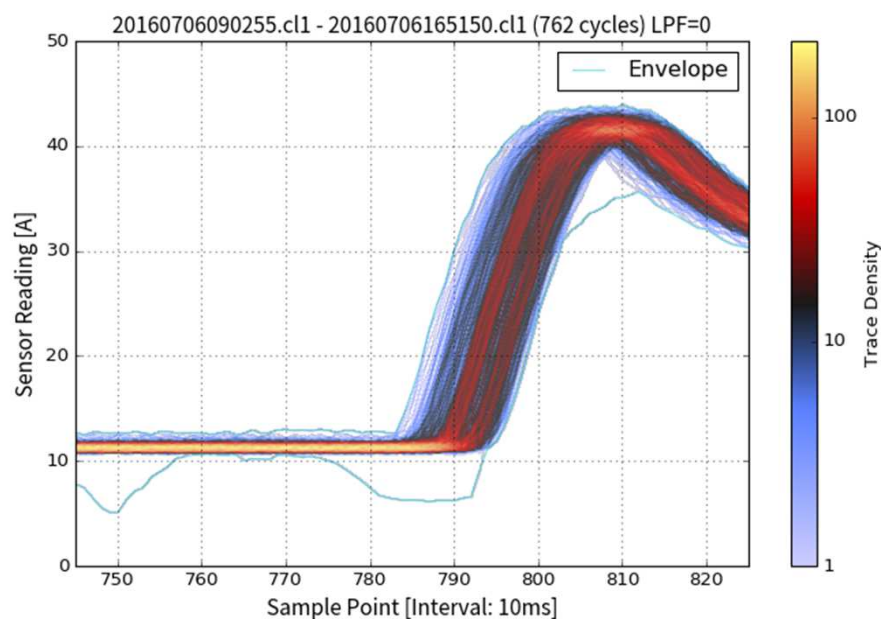


Re-aligned waveforms

Re-align
at this
point



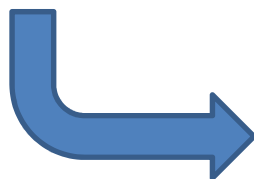
Just visualized



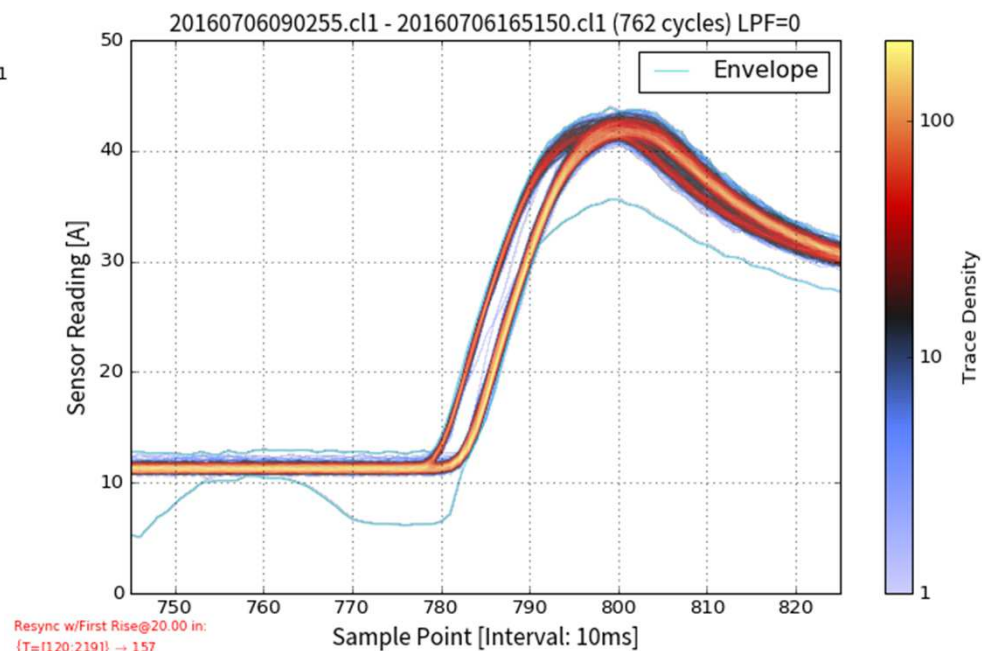
Re-aligned at
this point

[The time just after the drill bit hit the work.]

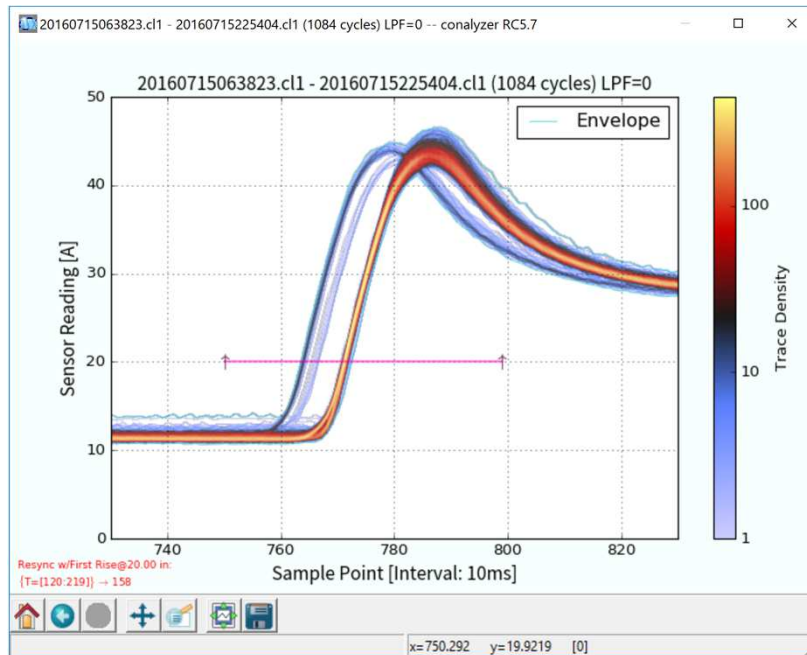
Re-align the
waveforms



After re-aligned at the first process,
the irregularity became clear.



Timing Analysis after re-alignment



Now it is obvious that about 30 ms earlier timing was detected every 4 cycles.

Timing Analysis: conalyzer RC5.7

In the following Samplepoint Range;

Start: 750 Length: 50 End: 799

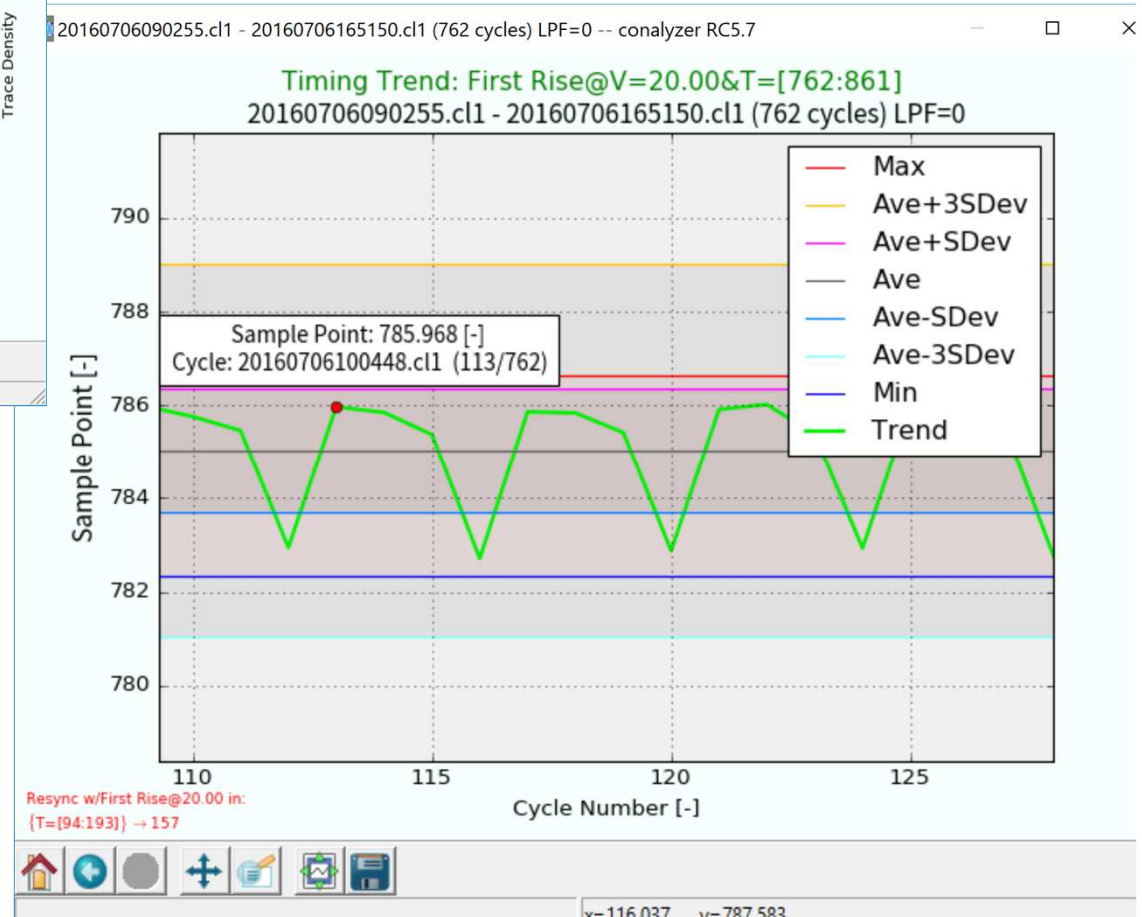
First Rise will be detected.

Threshold: 20.0

Go Cancel

Timing analysis of upward passing at 20A.

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Appropriate use of [Overlay graph] and [Data density and Analysis]

Overlay graph	<ul style="list-style-type: none"> ▪ Compare the waveforms for process case studies. ▪ It is useful to search the proper operating condition.
Data density and Analysis	<ul style="list-style-type: none"> ▪ Many cycles in the same condition can be analyzed in detail. ▪ It is useful after the proper operating condition is fixed.

Comparison of [Overlay graph] and [Data density and Analysis]

Item	Overlay graph	Data density and Analysis
Different cycle definitions	○	× (※1)
Maximum number of cycles	300 (※2)	Unlimited
Highlighted a file in the overlaid graph	○	○
Save the graph snap shot	× (※3)	○
Historical trend and histogram	×	○
Re-align the waveforms	×	○
Timing analysis	×	○
Specify LPF parameters	×	○
Make templates	×	○
Turn on/off the legend	×	○

※1: If different cycle definitions exist in the selection, only the majority are indicated.

※2: If the selected files are greater than 300, they are thinned down to 300.

※3: You can obtain screen shots with other apps like Snipping Tool.