Recording and Replaying with CanEasy

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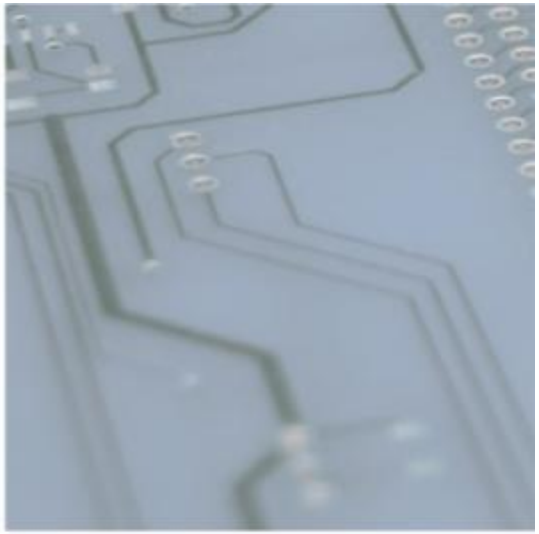

Sven Schuchmann

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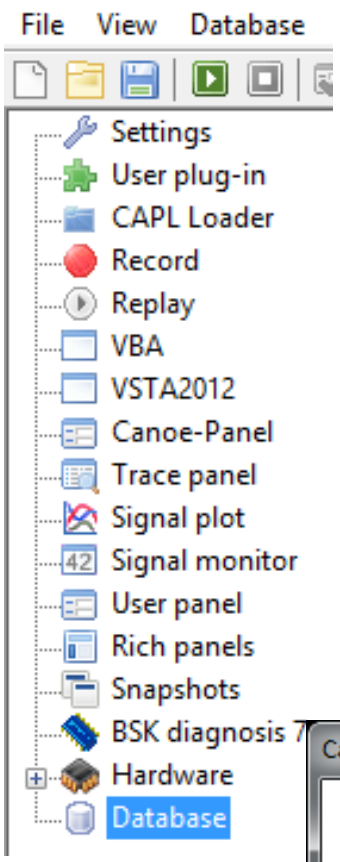
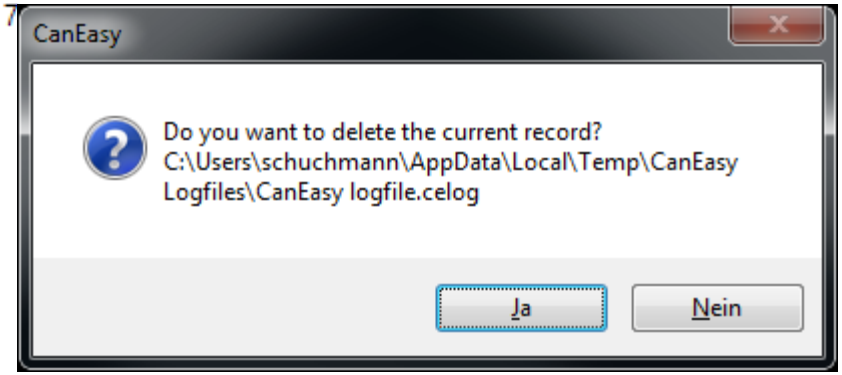
1. **Record**
2. Analyze
3. Replay

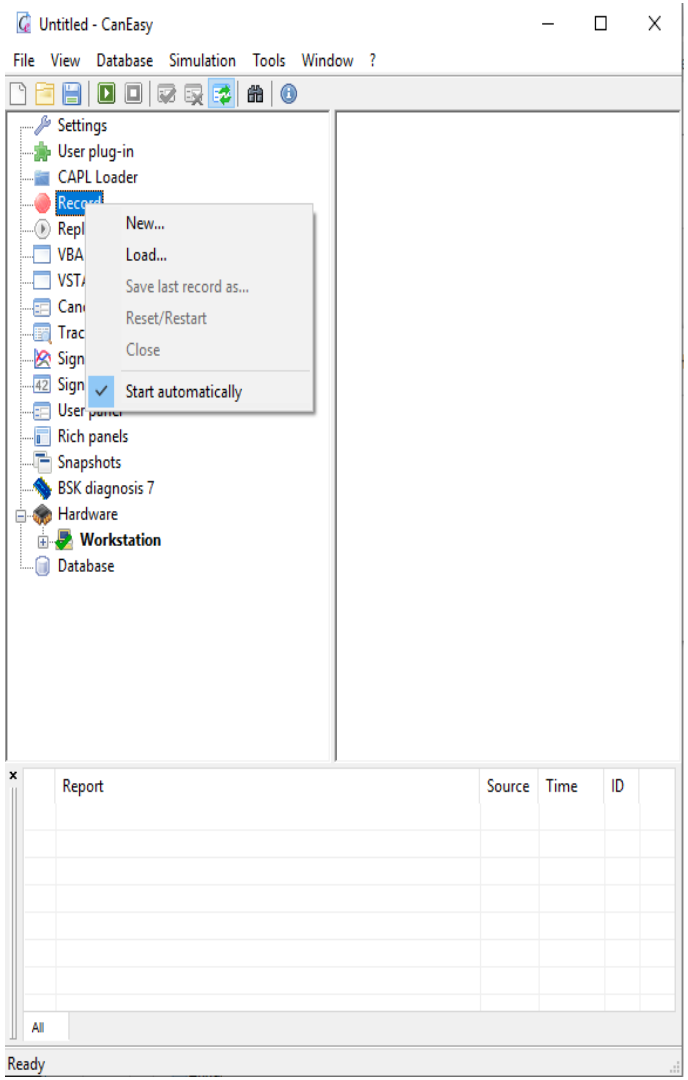
Record – Logging



- Recording will be started each time you start the simulation
- <u>Everything</u> will be recorded
- Logfiles will be in „%temp%\CanEasy Logfiles“
- “Trace panel” and “Signal Plot” get their data from record



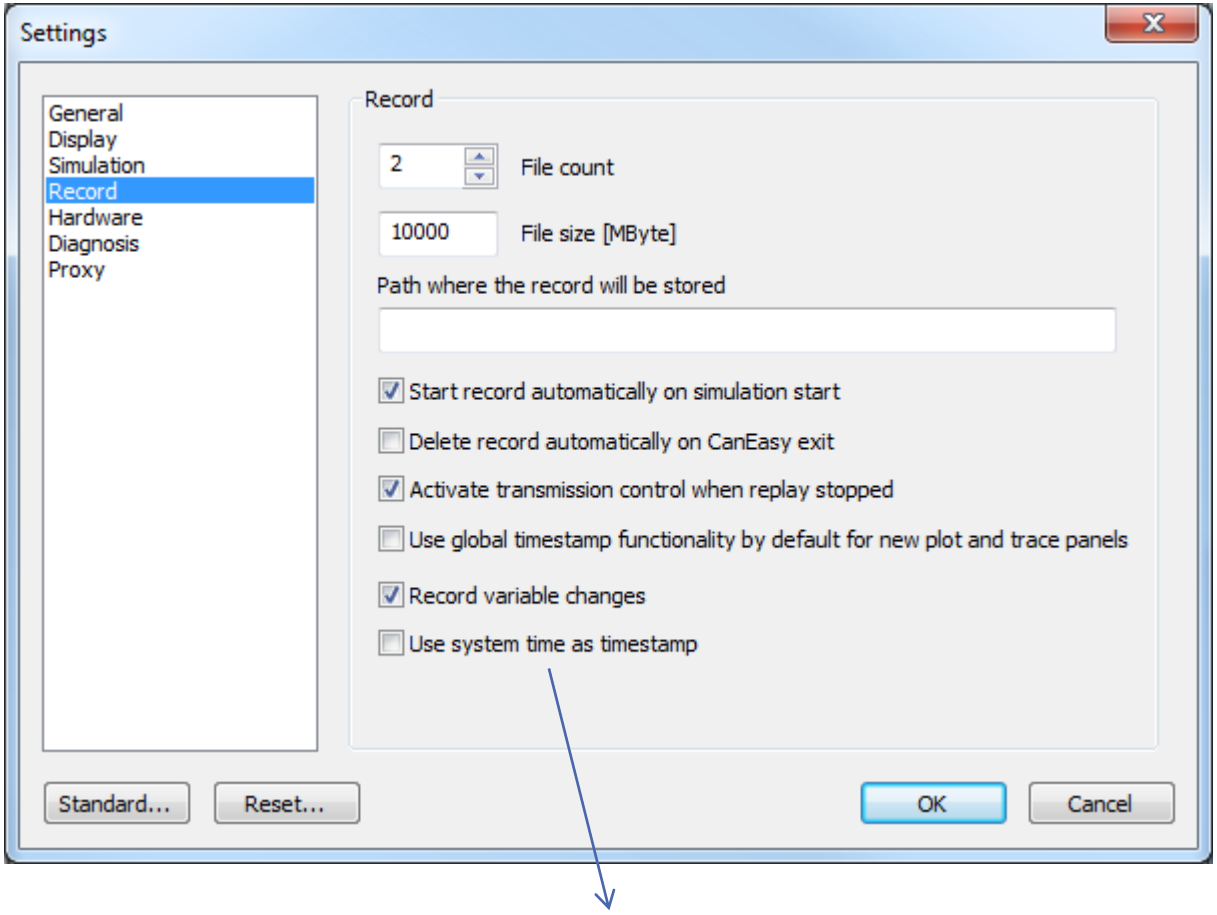
Record – Context Menu



- Save as…
  save for analyzing later

- Load…
  is for analyzing a record

Record – Settings



- Absolute “11:53:52.790” / Relative “0.101”

Record – Marker

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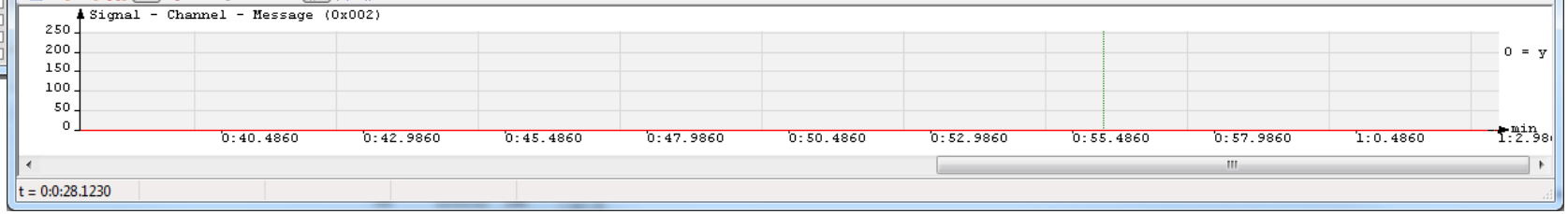
New trace 1

Timestamp	C	MsgID	Name	Rx	D	Data 0..7	Bus
00003.7000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00003.8000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00003.9000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00004.0000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00004.1000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00004.2000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00004.3000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00004.4000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00004.5000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00004.6000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00004.7000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00004.8000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00004.9000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00005.0000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00005.1000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00005.2000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00005.2110			*** Marker 7 ***				
00005.3000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00005.4000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00005.5000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00005.6000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00005.7000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00005.8000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00005.9000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel
00006.0000	1	0x002	Message	Tx	8	00 00 00 00 00 00 00 00	Channel

New plot 1



- Mark that "something" has happened around here

- Add a marker by pressing "F11"

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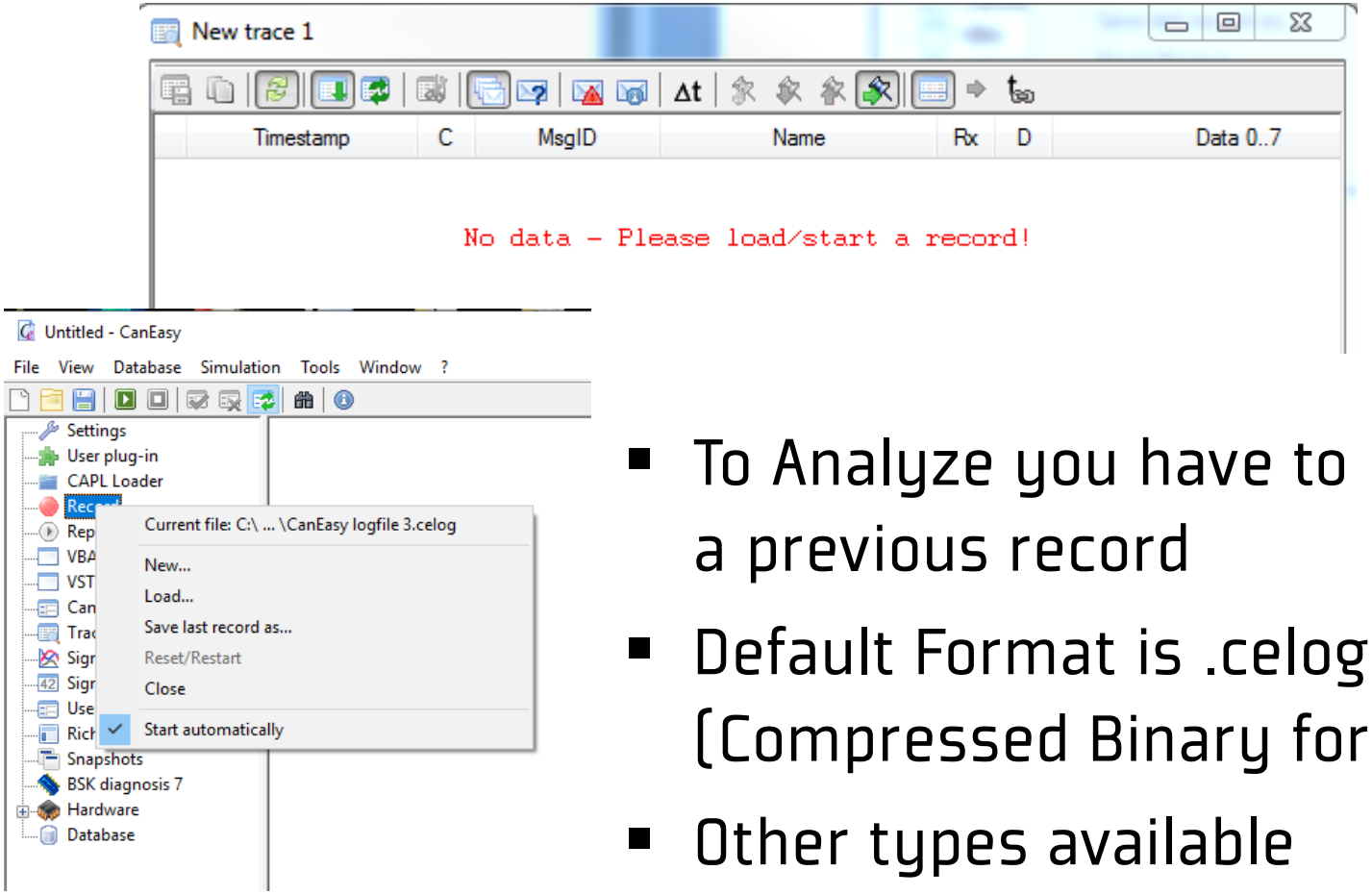
1. Record
2. **Analyze**
3. Replay

Analyze – Load a record



- To Analyze you have to load a previous record
- Default Format is .celog (Compressed Binary format)
- Other types available

Analyze – ASCII Files

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ASCII Logging Files (.ASC)

- Message-based format for reading and writing
- Standard ASCII representation
- Used for data exchange with third party programs or to include trace data in documents

ASCII:

```
// Configuration file: C:\x87366132.ltl
// Car: x2131
// Device: 3421412
date Dez. 3 16:34:20 2014
base hex  timestamps absolute
no internal events logged
   3.35516 1  B4323x         Rx D 8  72  E4  19  2F  14  00  00  00
   3.35522 6  52             Rx D 2  6C  60
   3.36716 1  B4323x         Rx D 8  73  E5  e9  24  e2  00  00  00
```

candump:

```
37101.646672) can1 410#0000000087720000
37101.652135) can0 0CFE60C9#FFFFFFFFFFFFFFFF
37101.652252) can0 0CFE62C9#FF03CFF700000000
37101.652300) can0 18EF10C9#FD003F0303000000
37101.653164) can1 296#3200000000000000
37101.657714) can1 208#2000000000000000
(1510737101.677197) can1 27F#FF
(1510737101.678158) can0 0CFE5FEB#5F8789771A050000
(1510737101.678537) can1 288#00004F03FFFF8025
(1510737101.711747) can1 201#0000486000002400
```

Analyze – Convert ASCII Files

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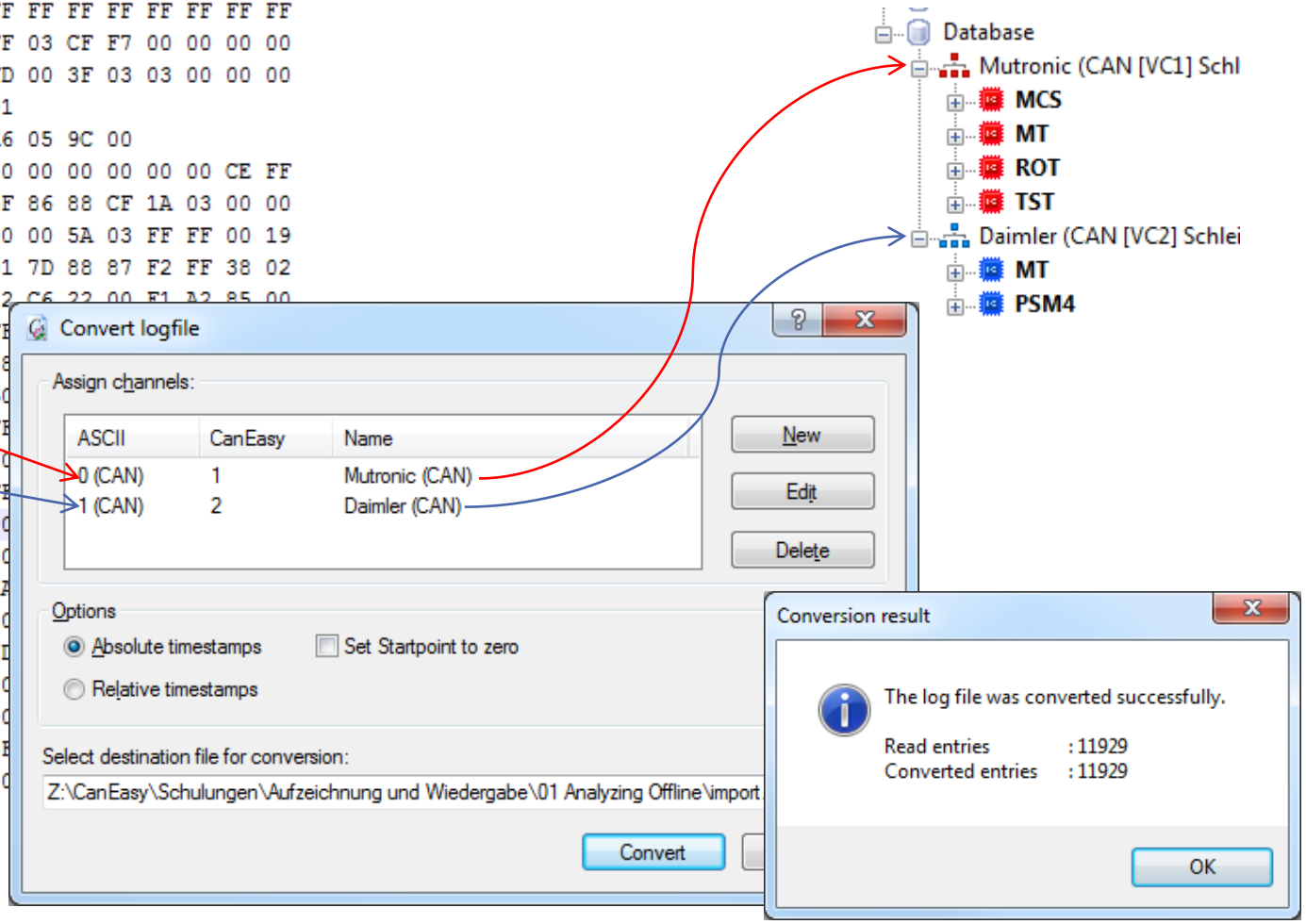
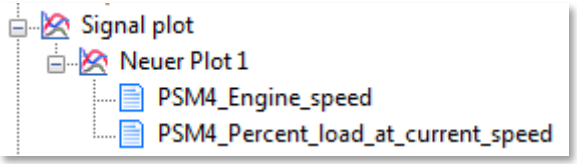
```
0.0000 1          288  Rx d 8  00 00 5A 03 FF FF 00 19
0.0050 1          296  Rx d 8  32 00 00 00 00 00 00 00
0.0250 1          510  Rx d 8  75 5E 00 00 75 5E 00 00
0.0377 0     0CFE60C9x Rx d 8  FF FF FF FF FF FF FF FF
0.0377 0     0CFE62C9x Rx d 8  FF 03 CF F7 00 00 00 00
0.0378 0     18EF10C9x Rx d 8  FD 00 3F 03 03 00 00 00
0.0418 1          200  Rx d 1  01
0.0444 1          184  Rx d 4  A6 05 9C 00
0.0454 1          202  Rx d 8  00 00 00 00 00 00 CE FF
0.0456 0     0CFE5FEBx Rx d 8  5F 86 88 CF 1A 03 00 00
0.0461 1          288  Rx d 8  00 00 5A 03 FF FF 00 19
0.0462 0     14EF80EBx Rx d 8  01 7D 88 87 F2 FF 38 02
0.0468 0     14EF81EBx Rx d 8  82 C6 22 00 F1 A2 85 00
0.0473 0     14EF82EBx Rx d 8  FF
0.0479 0     14EF83EBx Rx d 8  58
0.0484 0     14EF84EBx Rx d 8  B0
0.0489 1          27F  Rx d 1  FF
0.0490 0     14EF85EBx Rx d 8  00
0.0496 0     14EF87EBx Rx d 8  FF
0.0501 0     18FE61EBx Rx d 8  00
0.0787 1          402  Rx d 8  00
0.0793 1          204  Rx d 8  1A
0.0803 1          207  Rx d 8  00
0.0807 1          210  Rx d 8  4D
0.0913 1          312  Rx d 8  00
0.0923 1          214  Rx d 8  00
0.0956 0     0CFE5FEBx Rx d 8  5F
0.0959 1          288  Rx d 8  00
```

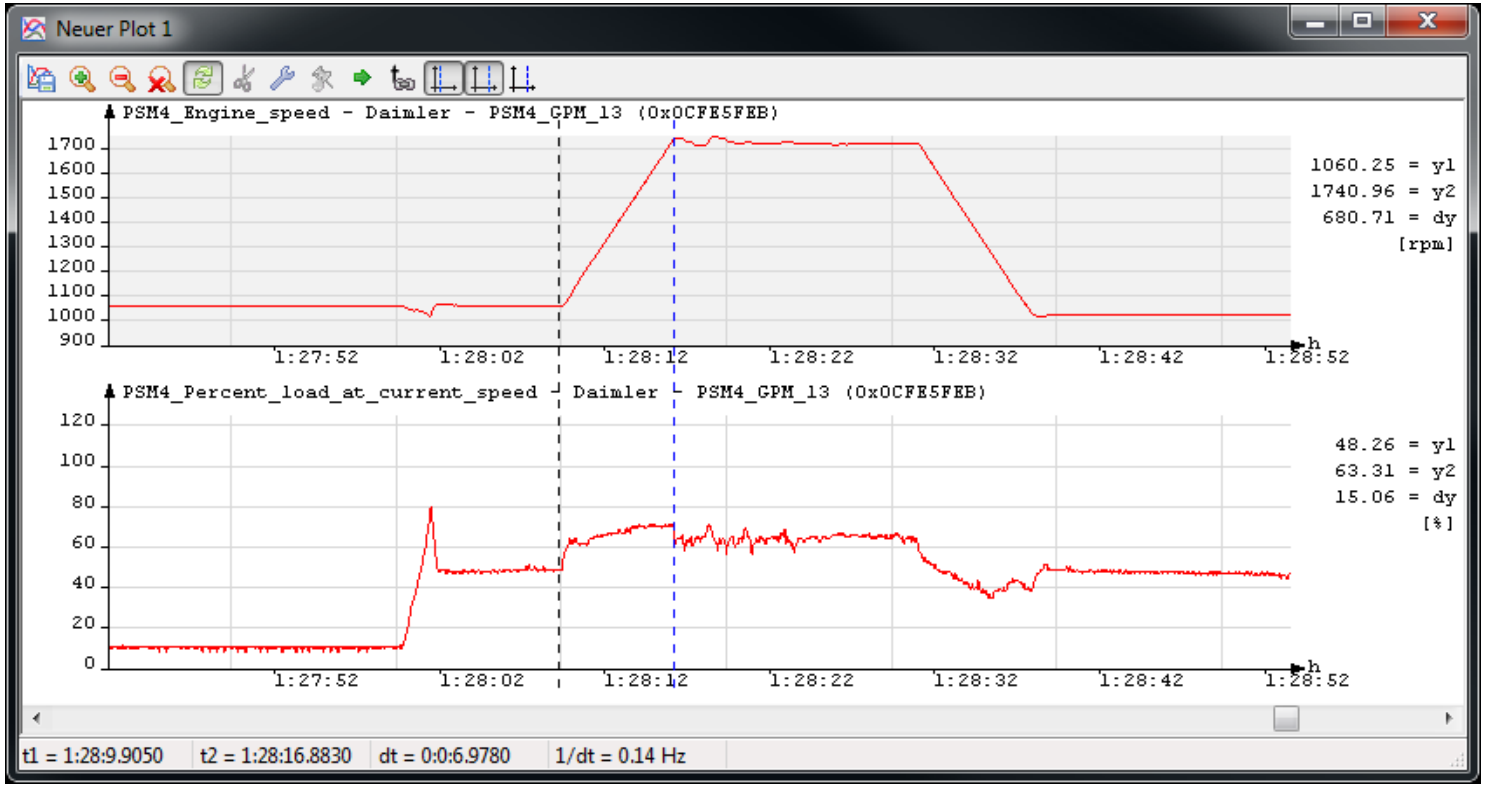


Analyze – Signal Plot



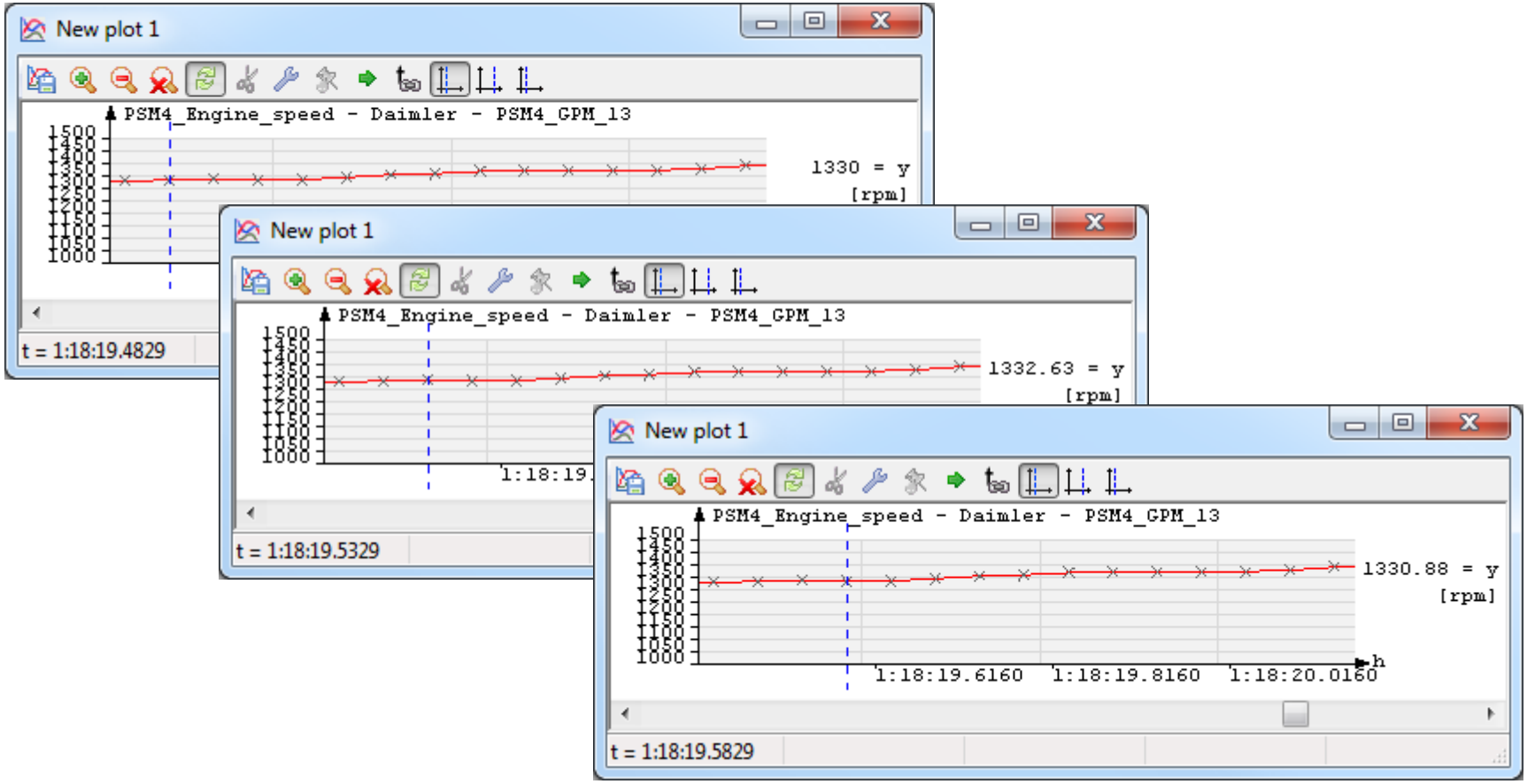
- Signal Plot gets data from record
- Zoom by Mouse-Wheel

Signal Plot – Cursors



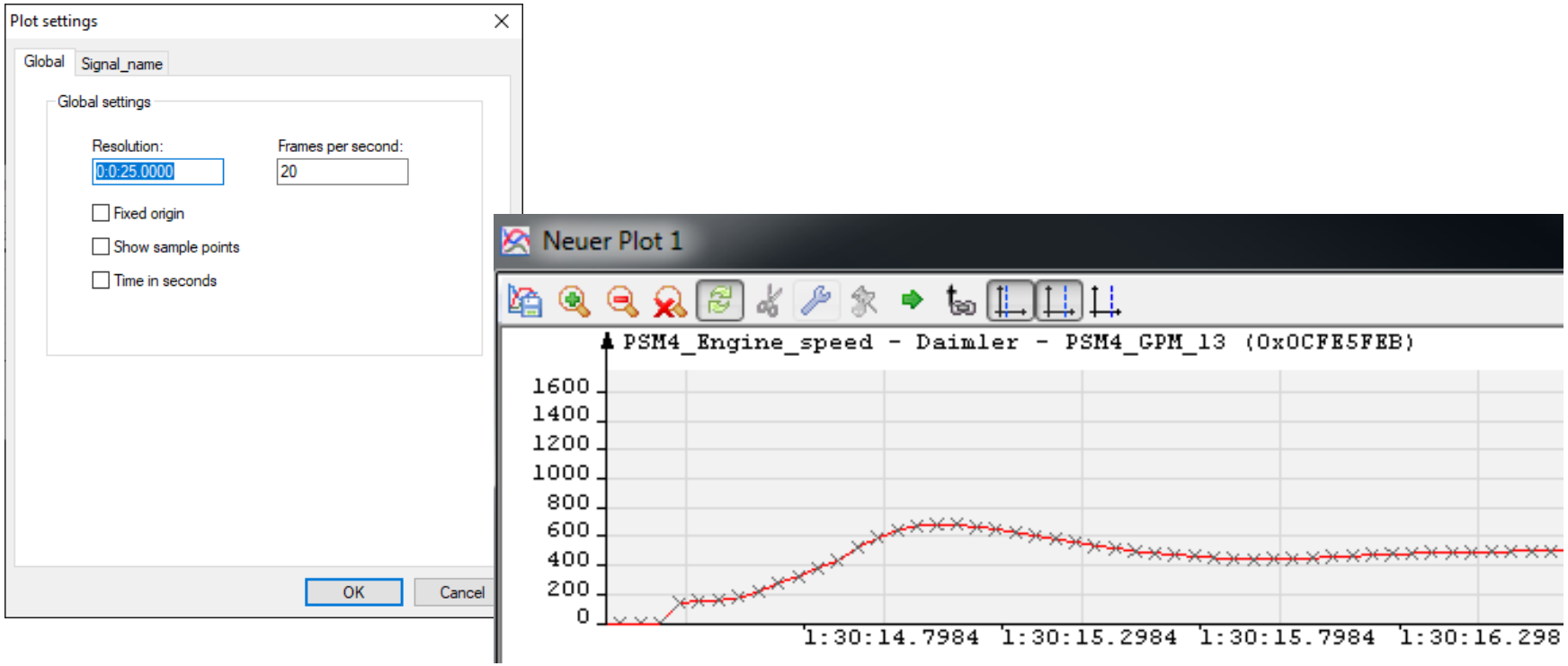
- Place Cursors to measure time and values

Signal Plot – Jump to Value Changes



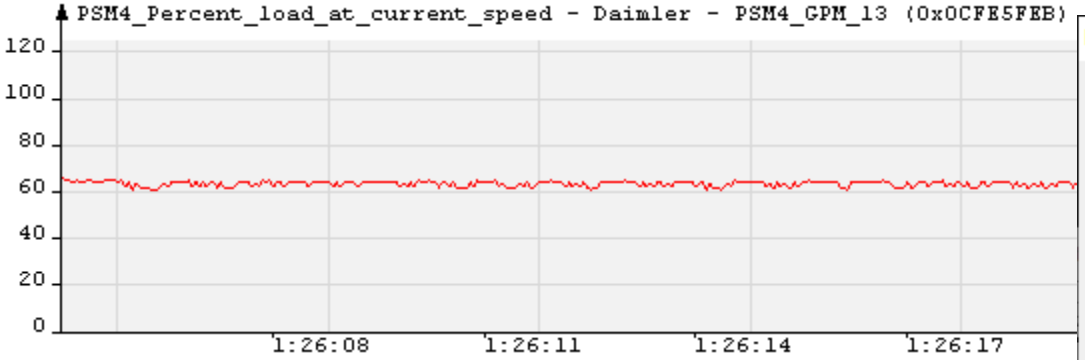
- Press “Alt + Right” to move cursor to next value change

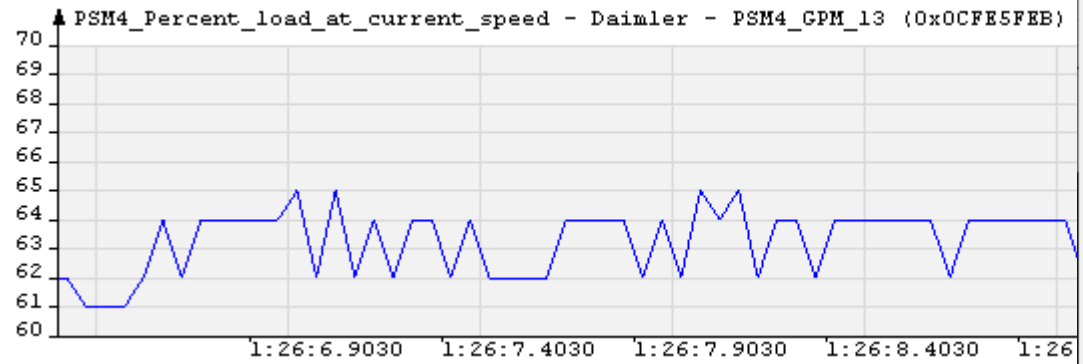
Signal Plot – Sample Points

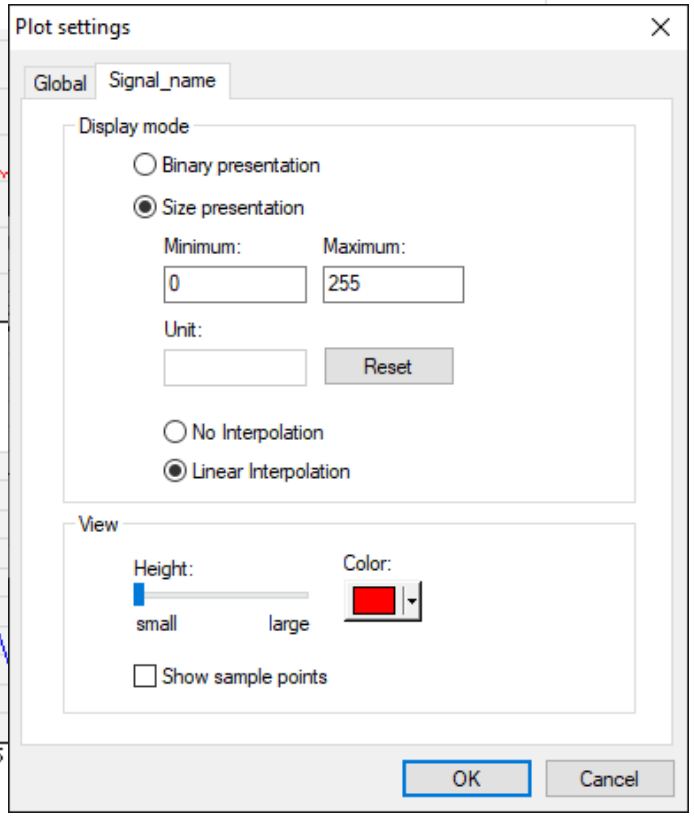


- Activate "Show sample points" to see when message has arrived (x)

Signal Plot – Modify Size

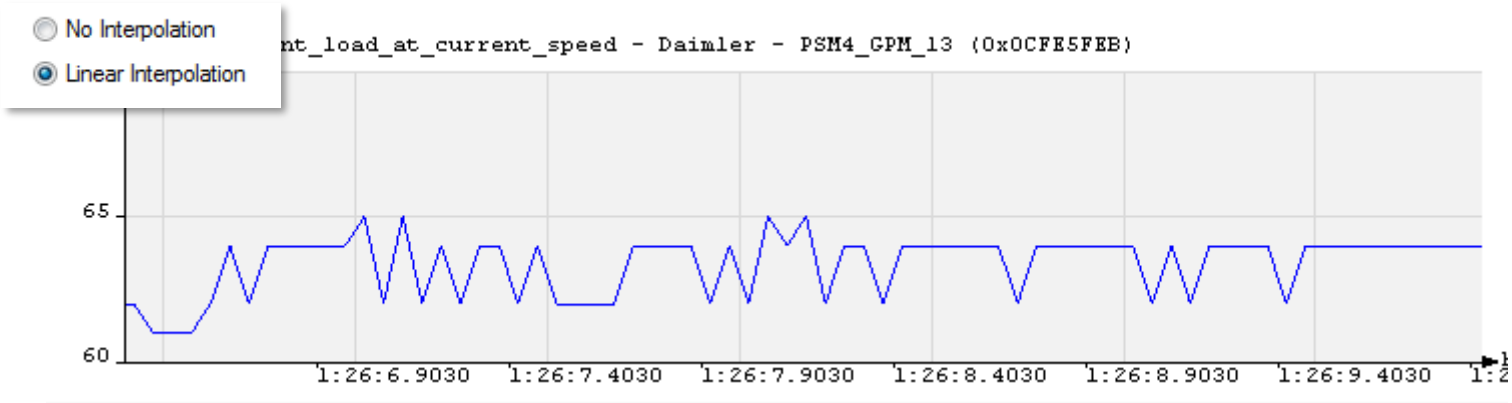


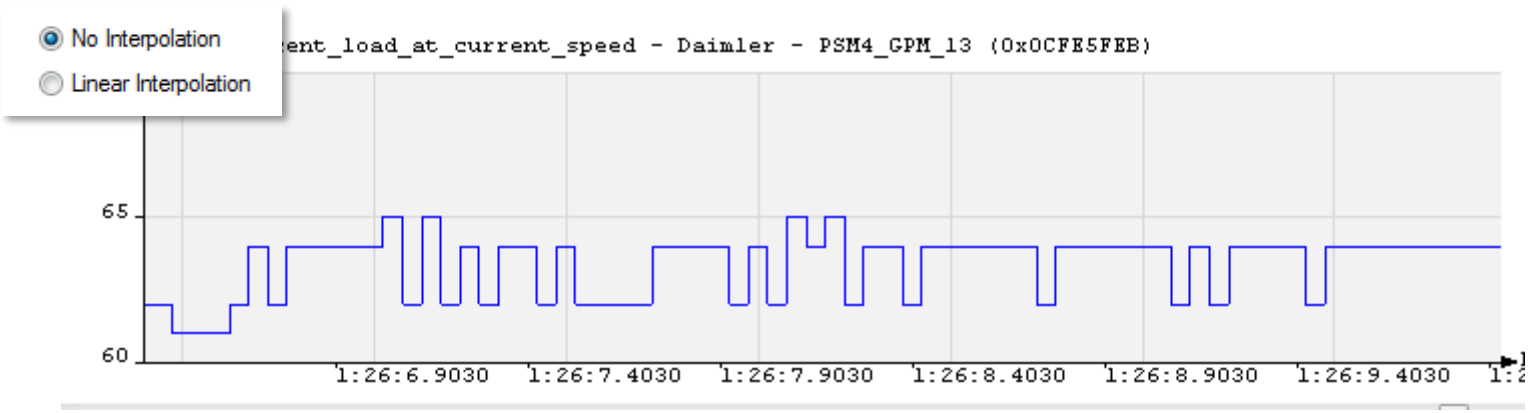




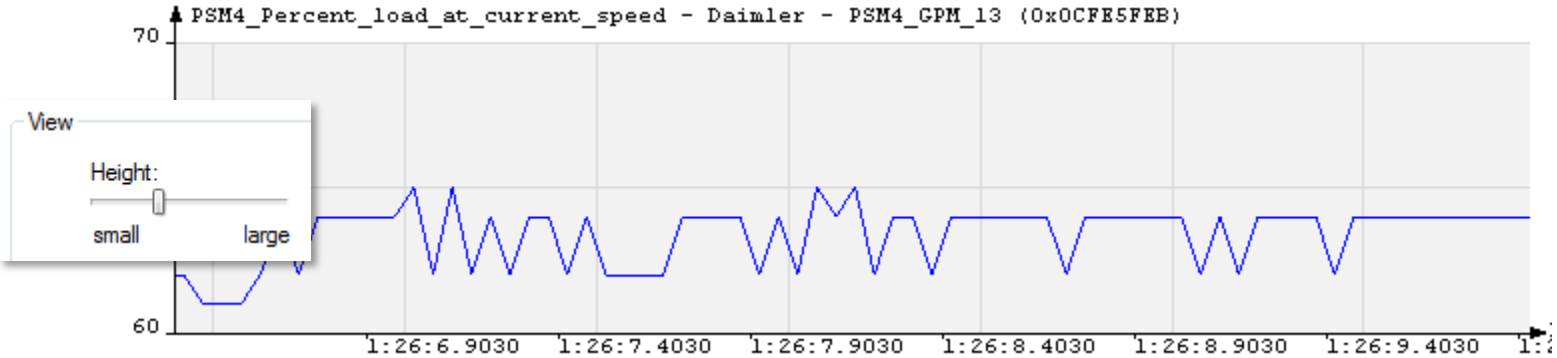
- Modify "Size presentation" to zoom in

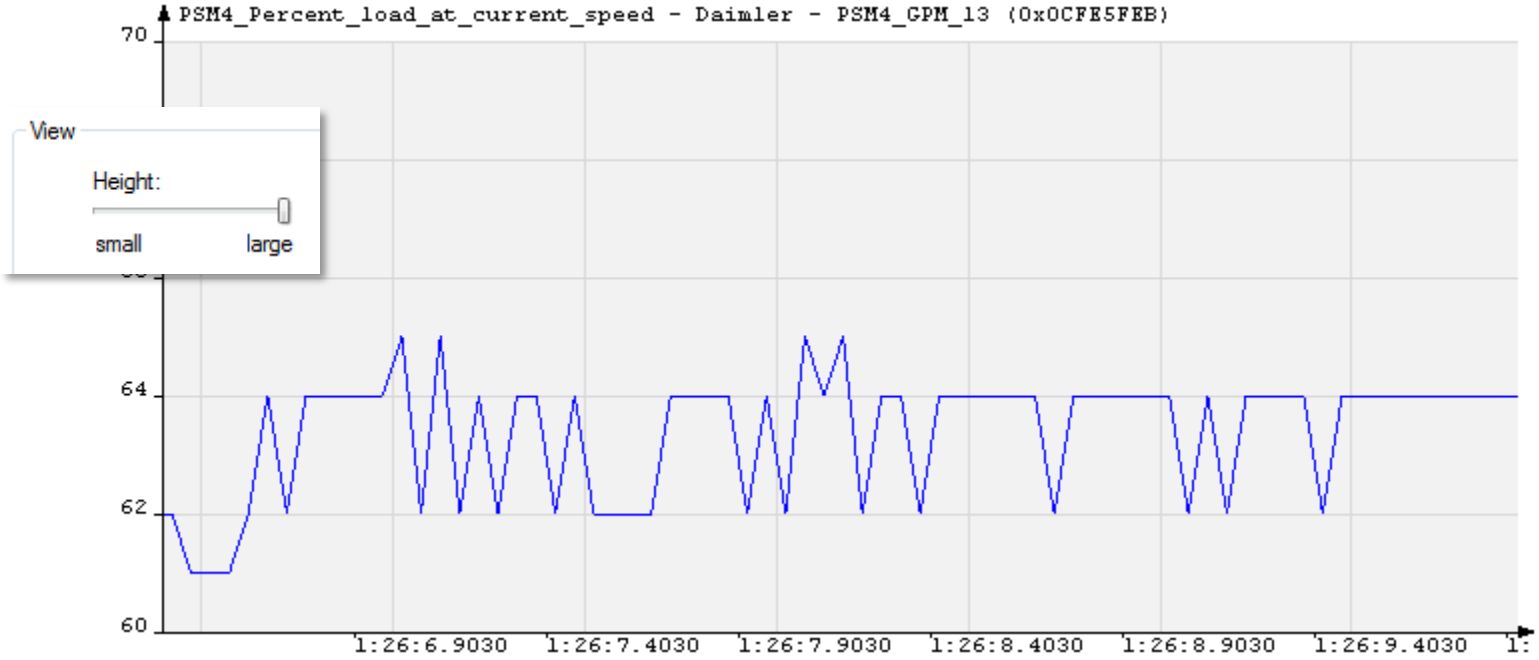
Signal Plot – Interpolation





Signal Plot – Height





Signal Plot – Export Signal to ASCII

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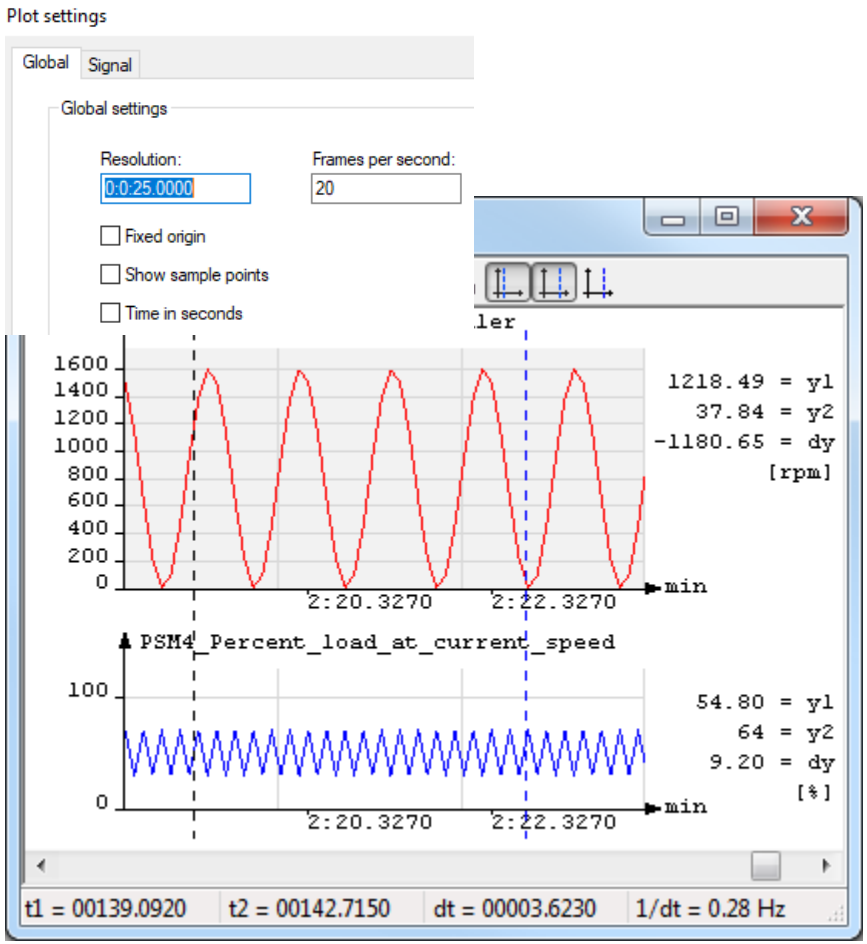
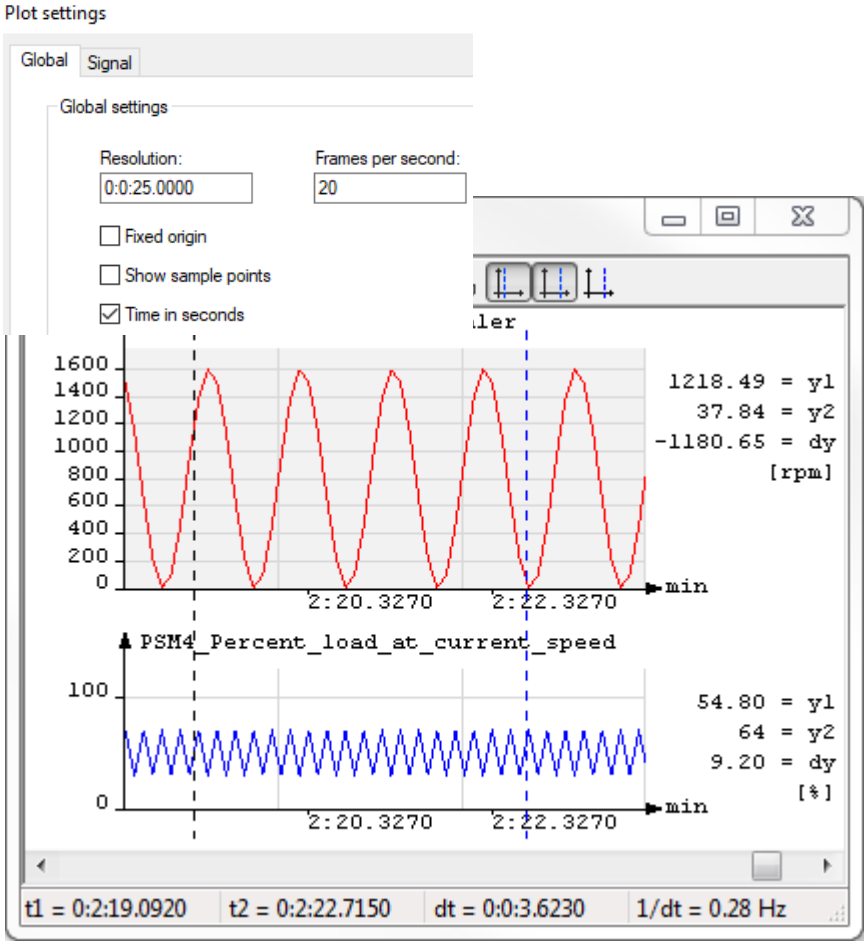
export.txt

```
Measured value export for PSM4_Percent_load_at_current_speedt(ms) %
313455  0
313506  0
313555  0
313605  0
313655  0
313706  2
313755  5
313806  7
313856  10
313906  12
313956  15
314006  16
314055  19
314106  20
314155  23
314206  24
314255  26
314306  28
314355  29
314406  29
314456  29
314506  29
314556  29
314606  29
314656  29
314706  28
314756  28
314806  26
```

Signal Plot – Time in Seconds



- [s].SSSS



- hh:mm:ss.SSSS

Signal Plot – Fixed Origin

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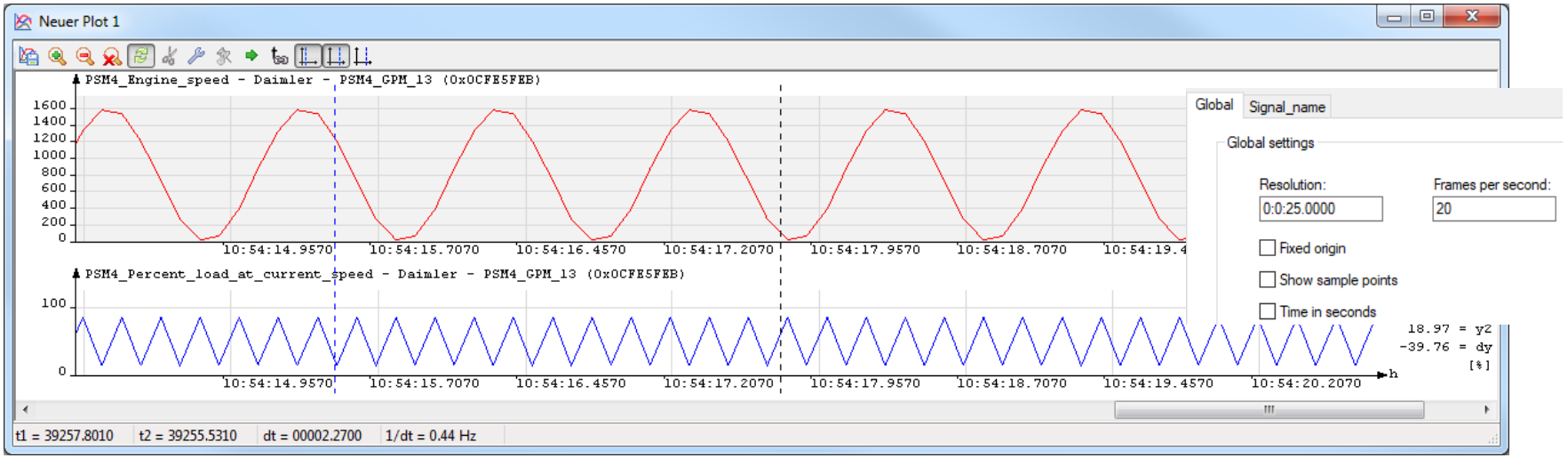

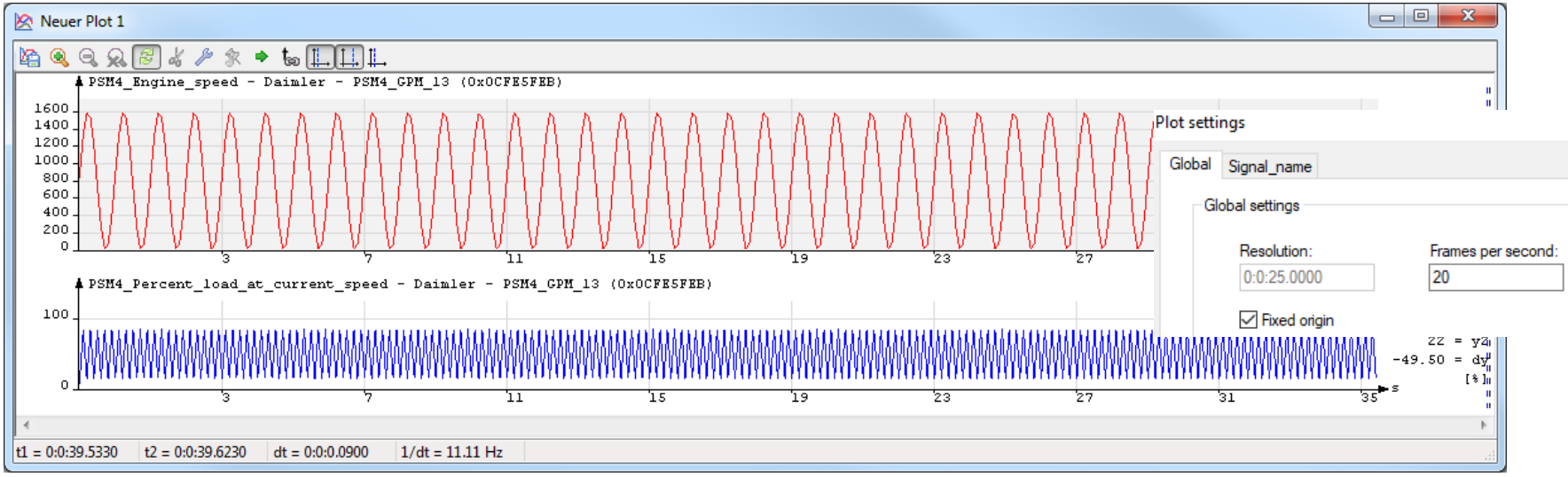

Analyze – Trace panel

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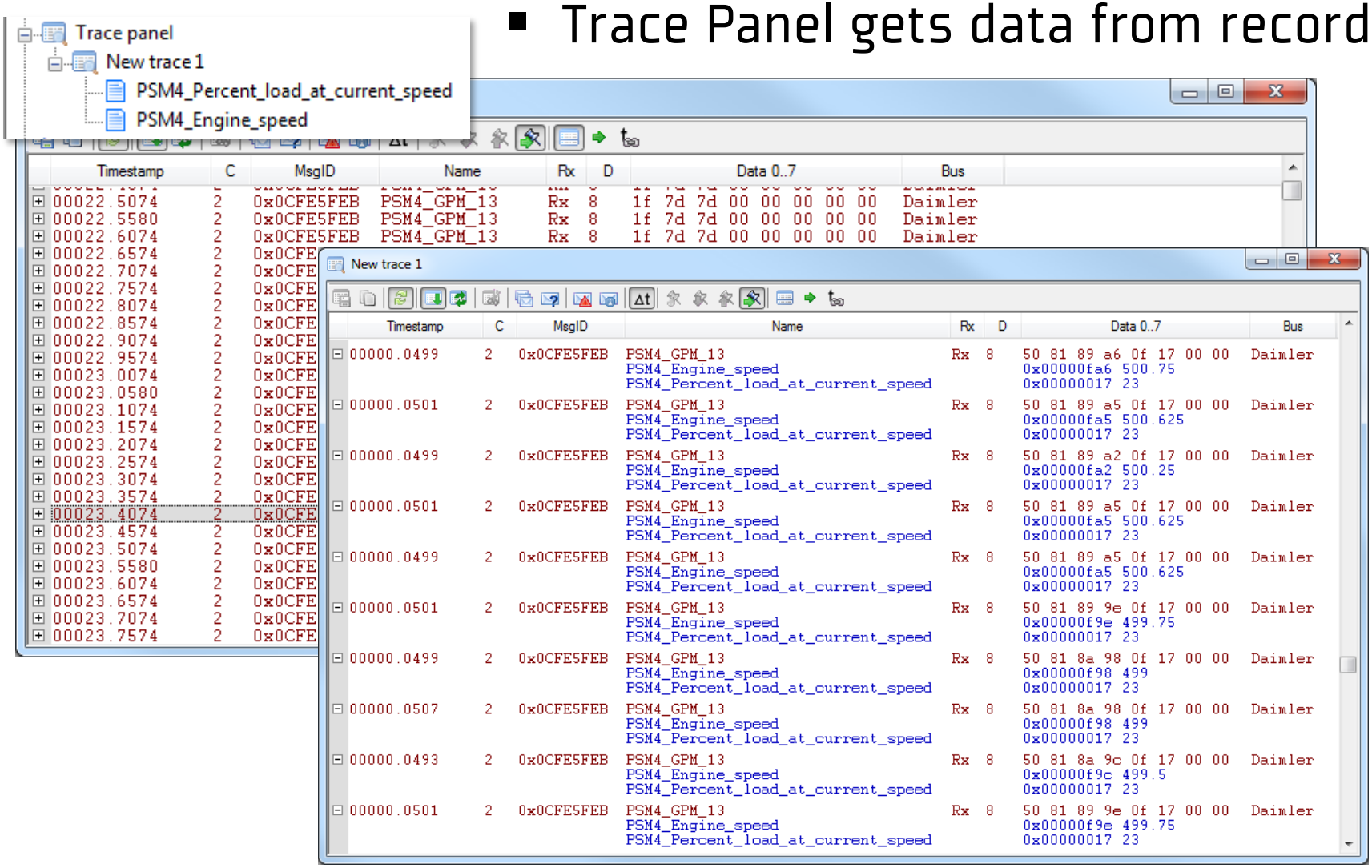
- Trace Panel gets data from record



Trace panel – Export and copy

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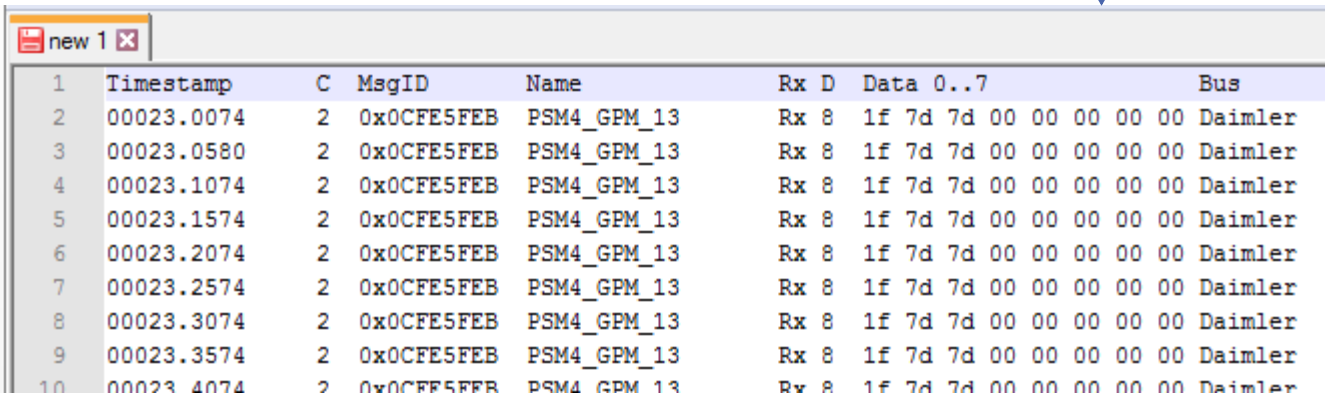
- Copy selected lines to clipboard as text
- Export complete trace as .txt, .csv, .asc or .celog



new 1

	Timestamp	C	MsgID	Name	Rx	D	Data 0..7	Bus
2	00023.0074	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
3	00023.0580	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
4	00023.1074	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
5	00023.1574	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
6	00023.2074	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
7	00023.2574	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
8	00023.3074	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
9	00023.3574	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
10	00023.4074	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler

Trace panel – Context menu

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New trace 1

Timestamp	C	MsgID	Name	Rx	D	Data 0..7	Bus
00000.0070	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 19 1a 07 00 00	Daimler
00000.1150	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 88 29 55 00 00	Daimler
00000.2150	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 66 31 0e 00 00	Daimler
00000.3150	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 f2 2f 55 00 00	Daimler
00000.4150	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 ba 25 0e 00 00	Daimler
00000.5150	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 a6 16 55 00 00	Daimler
00000.6150	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 78 08 0e 00 00	Daimler
00000.71			13	Tx	8	00 00 00 9a 00 55 00 00	Daimler
00000.81			13	Tx	8	00 00 00 0e 02 0e 00 00	Daimler
00000.91			13	Tx	8	00 00 00 46 0c 55 00 00	Daimler
00001.01			13	Tx	8	00 00 00 5a 1b 0e 00 00	Daimler
00001.11			13	Tx	8	00 00 00 88 29 55 00 00	Daimler
00001.21			13	Tx	8	00 00 00 66 31 0e 00 00	Daimler
00001.31			13	Tx	8	00 00 00 f2 2f 55 00 00	Daimler
00001.41			13	Tx	8	00 00 00 ba 25 0e 00 00	Daimler
00001.51			13	Tx	8	00 00 00 a6 16 55 00 00	Daimler
00001.61			13	Tx	8	00 00 00 78 08 0e 00 00	Daimler
00001.71			13	Tx	8	00 00 00 9a 00 55 00 00	Daimler
00001.81			13	Tx	8	00 00 00 0e 02 0e 00 00	Daimler
00001.91			13	Tx	8	00 00 00 46 0c 55 00 00	Daimler
00002.01			13	Tx	8	00 00 00 5a 1b 0f 00 00	Daimler
00002.11			13	Tx	8	00 00 00 88 29 54 00 00	Daimler
00002.21			13	Tx	8	00 00 00 66 31 0e 00 00	Daimler
00002.31			13	Tx	8	00 00 00 f2 2f 55 00 00	Daimler
00002.41			13	Tx	8	00 00 00 ba 25 0e 00 00	Daimler
00002.51						00 00 00 a6 16 55 00 00	Daimler
00002.61						00 00 00 78 08 0f 00 00	Daimler
00002.71						00 00 00 9a 00 55 00 00	Daimler

- Message editor...
- Signal editor...
- Transmission control editor...
- Hex editor...
- Send to
- Assign color...
- ✓ Send active
- Use alternative cycle time
- Edit
- Export selection as file...
- Copy selection to clipboard
  - Copy as text
  - Copy as table
  - Copy as ASC
- Select all

Trace panel – How do display

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- Show last received message only

Timestamp	C	MsgID	Name	Rx	D	Data 0..7	Bus
00023.5074	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler

- Display messages in chronological sequence

Timestamp	C	MsgID	Name	Rx	D	Data 0..7	Bus
00022.2574	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00022.3074	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00022.3574	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00022.4074	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00022.4574	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00022.5074	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00022.5580	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00022.6074	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00022.6574	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00022.7074	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00022.7574	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler

- Auto Scroll or Update View

Trace panel – Filter

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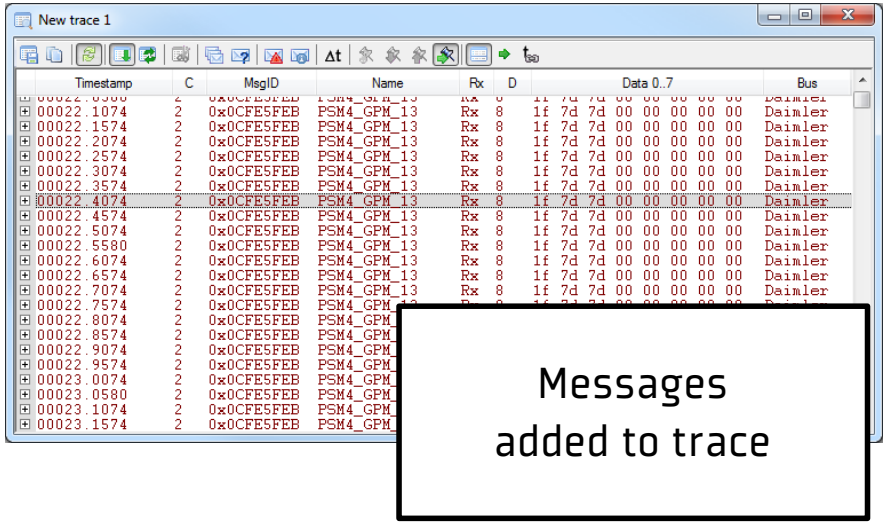
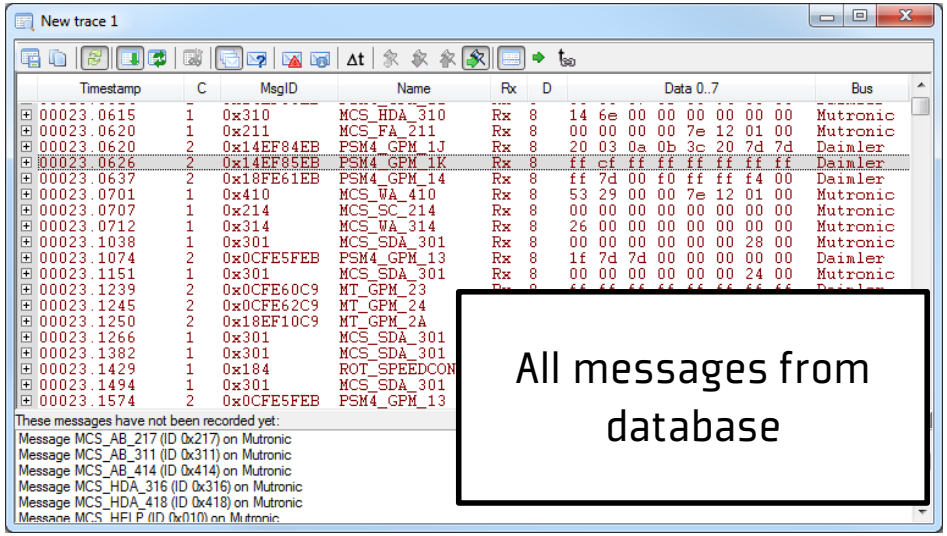
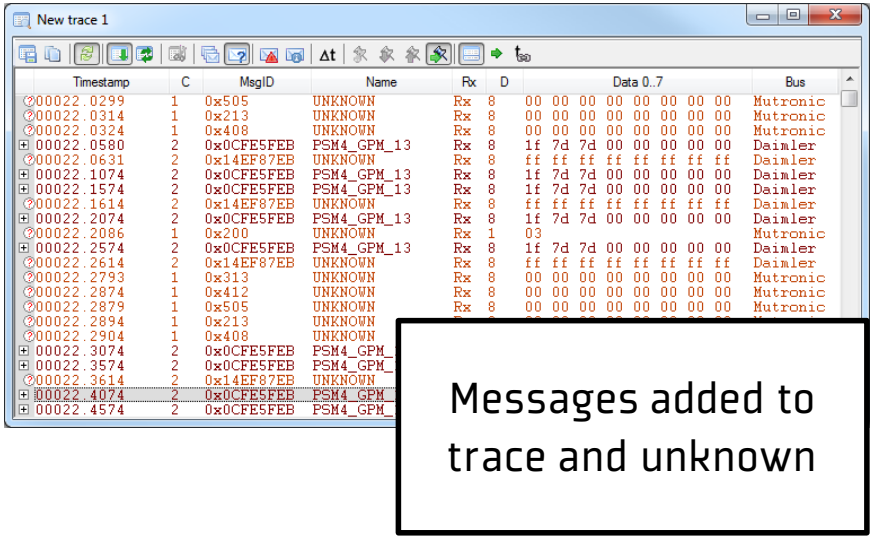
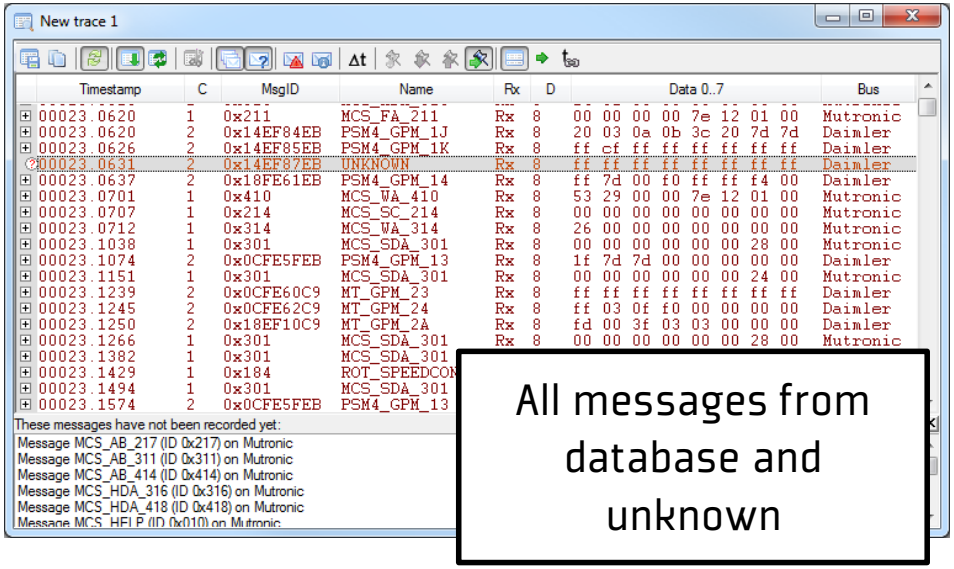
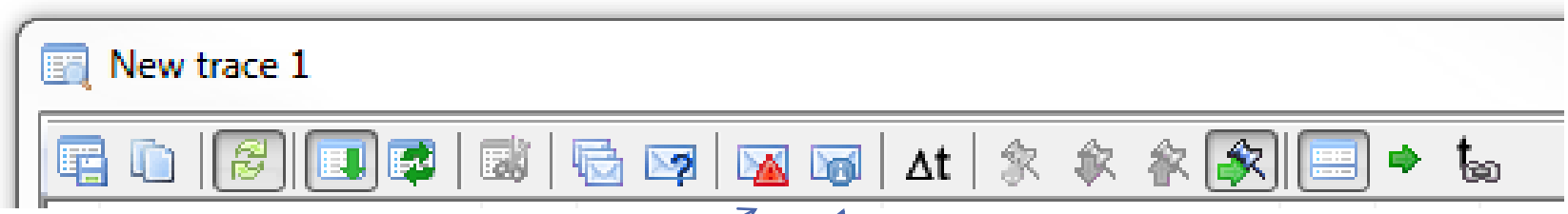








Trace panel – More Information



- CAN: Displays error frames
  LIN bus: No answer, Sync error, error message

- CAN: Chip State
  LIN: Sleep, Wake up

	Timestamp	C	MsgID	Name	Rx	D	Data 0..7	Bus
⊗	00089.6620	2		Error-Frame	Tx			CAN2
ⓘ	00089.6707	2		Chip state	ACTIVE[0x08]		TxErr=95 RxErr=0	CAN2

Trace panel – Timestamps

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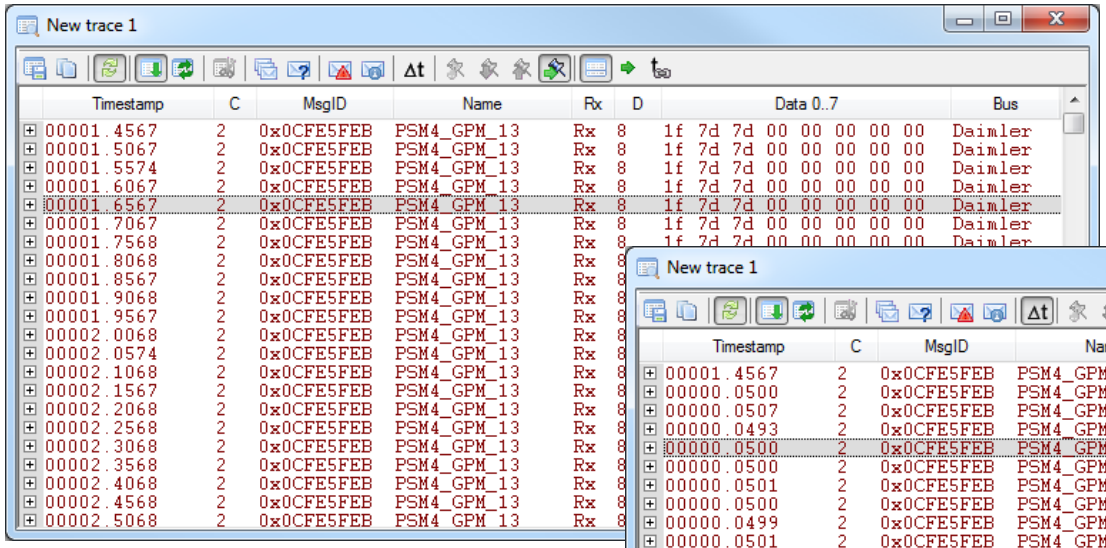
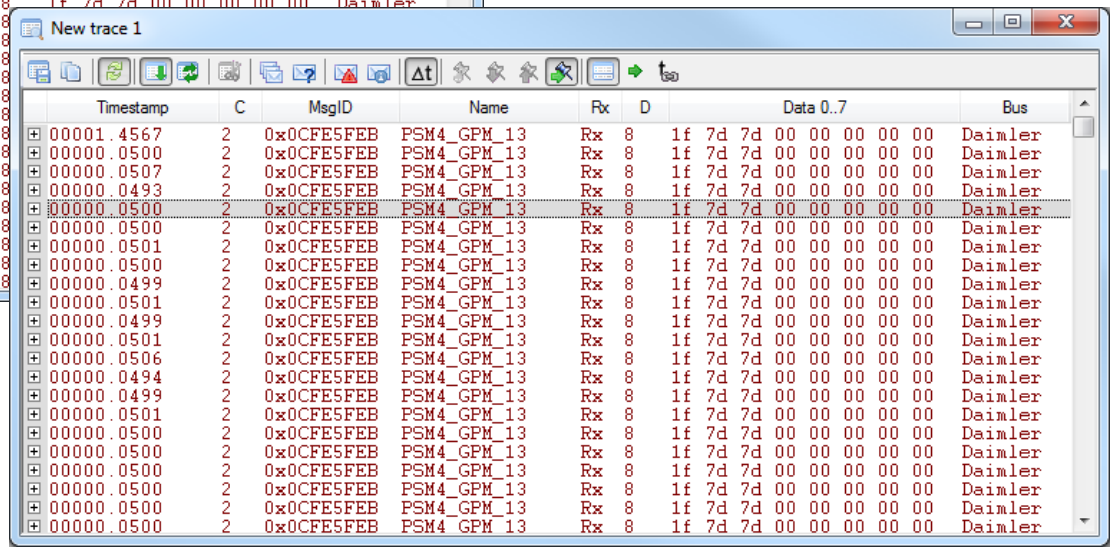
- Absolute



Timestamp	C	MsgID	Name	Rx	D	Data 0..7	Bus
00001.4567	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00001.5067	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00001.5574	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00001.6067	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00001.6567	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00001.7067	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00001.7568	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00001.8068	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00001.8567	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00001.9068	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00001.9567	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00002.0068	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00002.0574	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00002.1068	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00002.1567	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00002.2068	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00002.2568	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00002.3068	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00002.3568	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00002.4068	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00002.4568	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		
00002.5068	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8		

- Relative
  (to last message)



Timestamp	C	MsgID	Name	Rx	D	Data 0..7	Bus
00001.4567	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0500	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0507	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0493	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0500	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0500	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0501	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0500	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0499	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0501	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0499	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0501	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0506	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0494	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0499	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0501	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0500	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0500	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0500	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0500	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0500	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler
00000.0500	2	0x0CFE5FEB	PSM4_GPM_13	Rx	8	1f 7d 7d 00 00 00 00 00	Daimler

Trace panel – Marker

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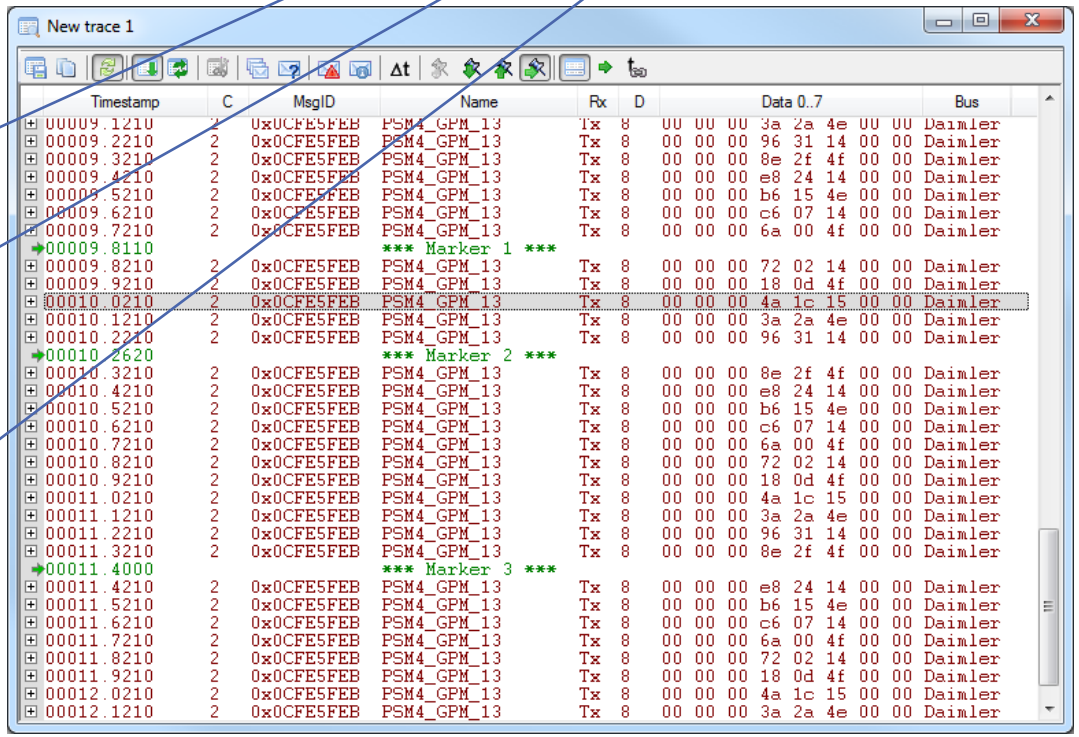
- Add Marker
- Jump to Next
- Jump to previous
- Display Markers



Timestamp	C	MsgID	Name	Rx	D	Data 0..7	Bus
00009.1210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 3a 2a 4e 00 00	Daimler
00009.2210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 96 31 14 00 00	Daimler
00009.3210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 8e 2f 4f 00 00	Daimler
00009.4210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 e8 24 14 00 00	Daimler
00009.5210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 b6 15 4e 00 00	Daimler
00009.6210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 c6 07 14 00 00	Daimler
00009.7210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 6a 00 4f 00 00	Daimler
00009.8110			*** Marker 1 ***				
00009.8210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 72 02 14 00 00	Daimler
00009.9210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 18 0d 4f 00 00	Daimler
00010.0210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 4a 1c 15 00 00	Daimler
00010.1210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 3a 2a 4e 00 00	Daimler
00010.2210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 96 31 14 00 00	Daimler
00010.2620			*** Marker 2 ***				
00010.3210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 8e 2f 4f 00 00	Daimler
00010.4210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 e8 24 14 00 00	Daimler
00010.5210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 b6 15 4e 00 00	Daimler
00010.6210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 c6 07 14 00 00	Daimler
00010.7210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 6a 00 4f 00 00	Daimler
00010.8210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 72 02 14 00 00	Daimler
00010.9210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 18 0d 4f 00 00	Daimler
00011.0210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 4a 1c 15 00 00	Daimler
00011.1210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 3a 2a 4e 00 00	Daimler
00011.2210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 96 31 14 00 00	Daimler
00011.3210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 8e 2f 4f 00 00	Daimler
00011.4000			*** Marker 3 ***				
00011.4210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 e8 24 14 00 00	Daimler
00011.5210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 b6 15 4e 00 00	Daimler
00011.6210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 c6 07 14 00 00	Daimler
00011.7210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 6a 00 4f 00 00	Daimler
00011.8210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 72 02 14 00 00	Daimler
00011.9210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 18 0d 4f 00 00	Daimler
00012.0210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 4a 1c 15 00 00	Daimler
00012.1210	2	0x0CFE5FEB	PSM4_GPM_13	Tx	8	00 00 00 3a 2a 4e 00 00	Daimler

Trace panel – Go to timestamp

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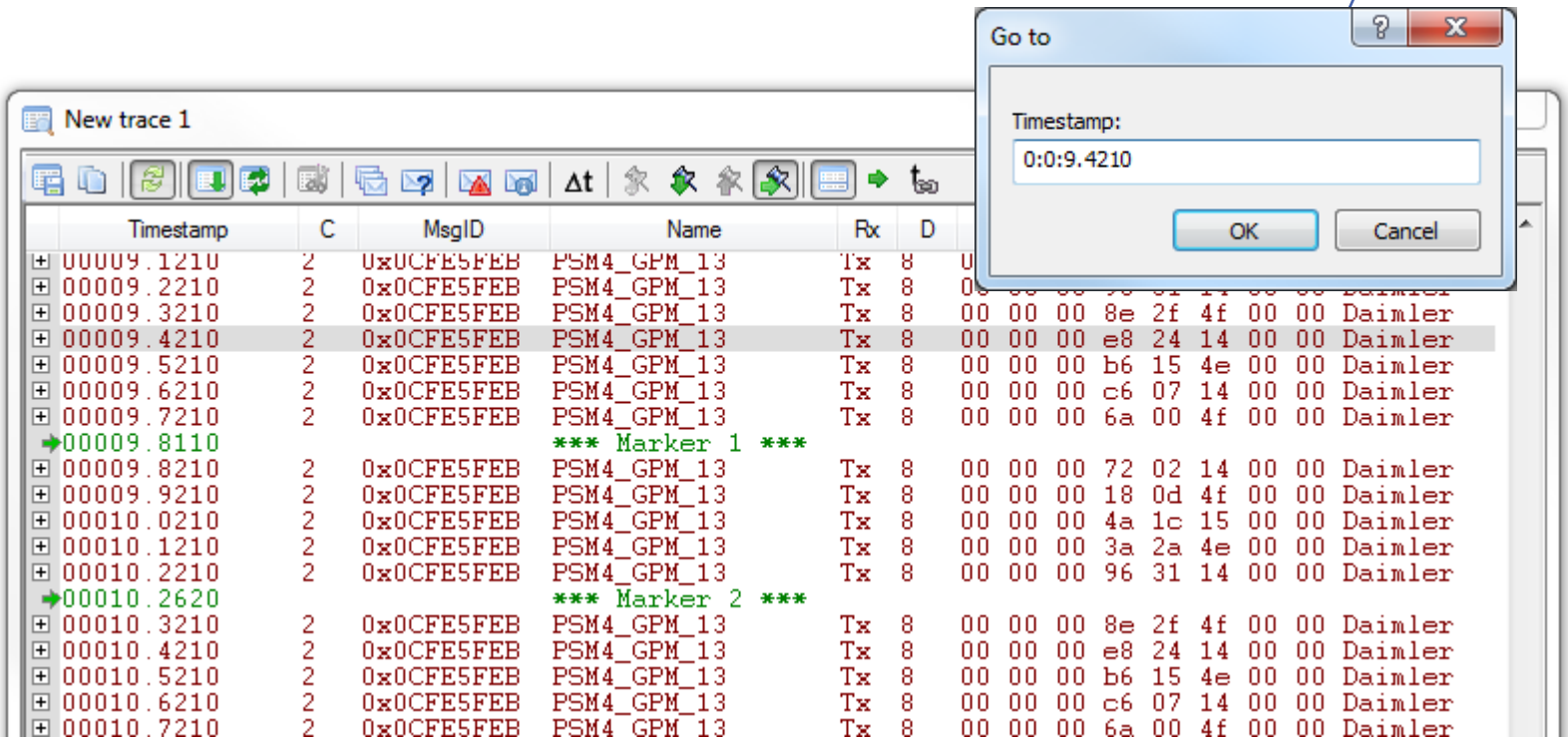

Trace panel – Message Color

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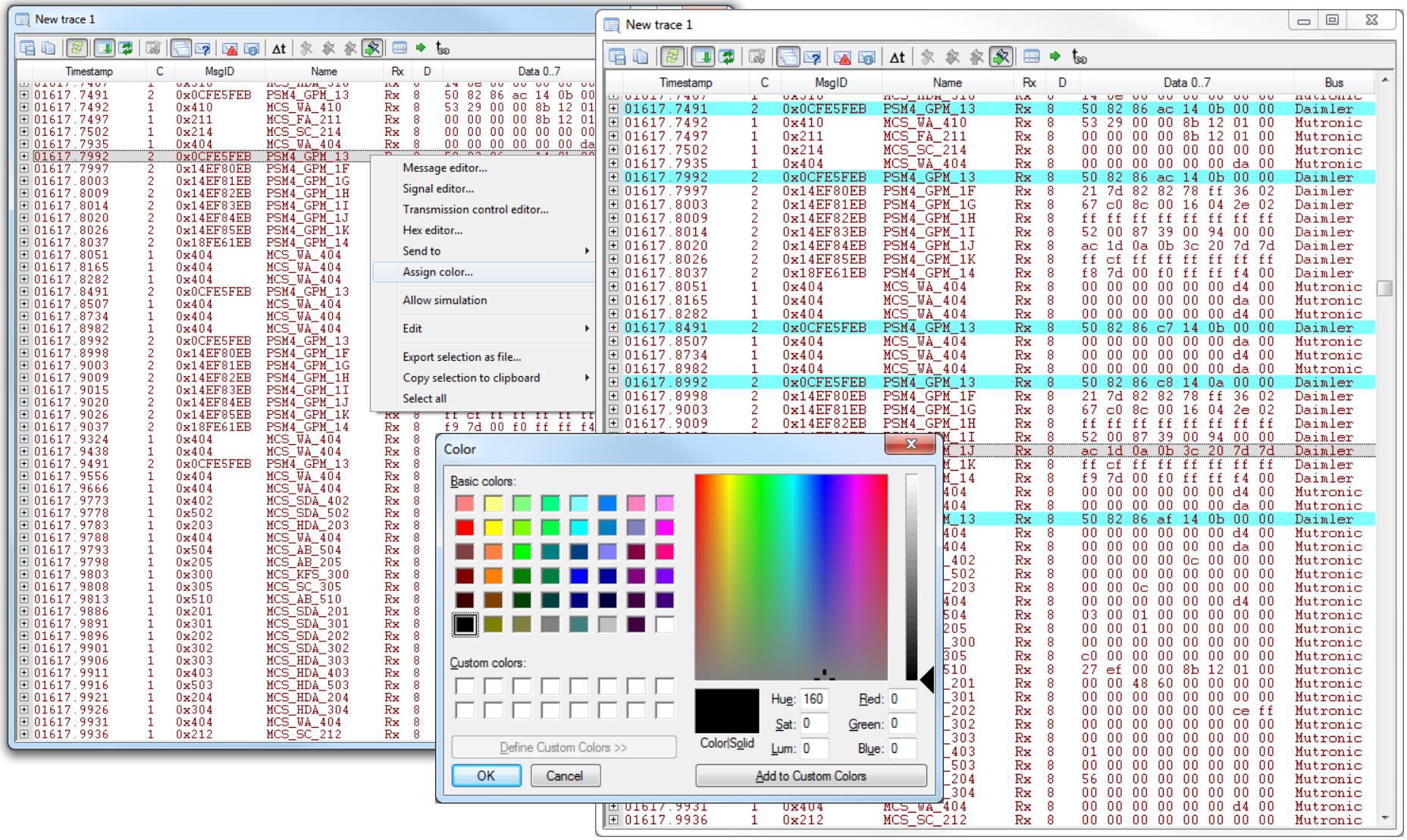
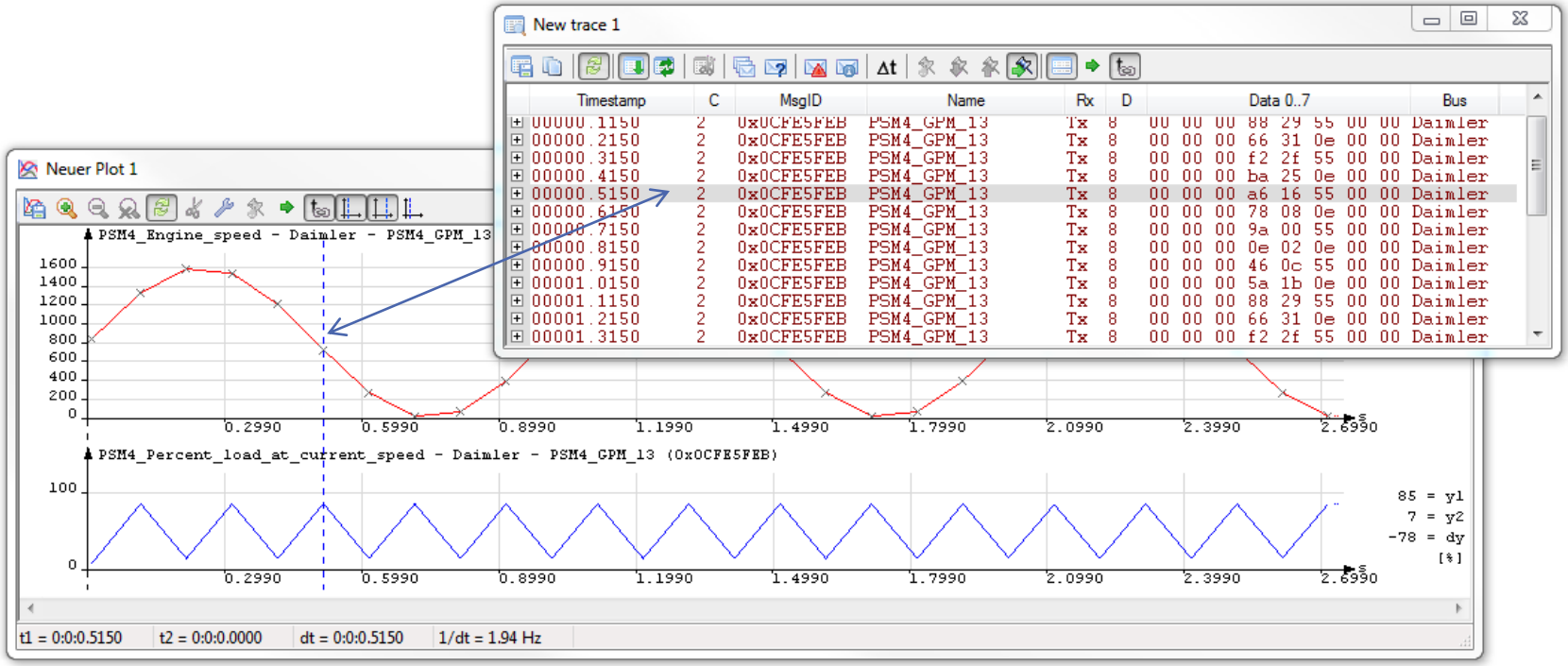


Trace panel – Global timestamp



- Active to synchronize view of trace and plot
- Works also for multiple windows

Access via COM-API

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```
// Load a workspace.
pApp->LoadWorkspace(sCurrentPath + "\\FLASH.csm");
// Load a record
pApp->Record->Load(sCurrentPath + "\\Download.celog");

// Go through the record and print some message data.
CComPtr<CanEasy::IRecordIterator> pIt = pApp->Record->CreateIterator(pApp
while (pIt->Next())
{
   // Only if the record entry is a CAN message.
   if (pIt->RecordEntry->type == CanEasy::RecordEntryType::MsgRecordEntry
   {
      CComPtr<CanEasy::IMsgRecordEntry> pEntry;
      pIt->RecordEntry.QueryInterface(CanEasy::IMsgRecordEntryPtr::GetIID
      BYTE HUGEP *pdData;
      SafeArrayAccessData(pEntry->data.parray, (void HUGEP* FAR*)&pdData)
      unsigned short u16Id = *(unsigned short *)(pdData + 1);
      // Print only messages with the value 0x1025 at the second two byte
      if (u16Id == 0x1025)
      {
         LONG i32ArrayUBound = 0, i32ArrayLBound = 0;
```

```
while (it.Next())
{
    // Only if the record entry is a CAN message.
    if (it.RecordEntry.type == RecordEntryType.MsgRecordEntry)
    {
        MsgRecordEntry entry = (MsgRecordEntry)it.RecordEntry;
        dynamic id = entry.data[1] | entry.data[2] << 8;
        // Print only messages with the value 0x1025 at the second two b
        if (id == 0x1025)
        {
            StringBuilder s = new StringBuilder();
            foreach (byte b in entry.data)
                s.Append(b.ToString("X2"));
            app.MakeReport(s.ToString(), ReportType.ReportTypeInformatio
        }
        Marshal.ReleaseComObject(entry);
    }
}
Marshal.ReleaseComObject(it);
```

```
my $CanEasyProcess = Win32::OLE->new('CanEasyATL.CanEasyProces
$CanEasyProcess->KeepAlive();

print ": GetApplication\n";
my $CanEasyAppl = $CanEasyProcess->GetApplication() or die ("E

print ": LoadWorkspace\n";
$CanEasyAppl->LoadWorkspace($longpath . "\\FLASH.csm");

print ": Record Load\n";
$CanEasyAppl->Record->Load($longpath . "\\Download.celog");

print ": Set Iterator\n";
my $pIt = $CanEasyAppl->Record->CreateIterator($CanEasyAppl->Record->CreateItemFilter($CanEasyAppl->Database->GetObjectByStringRef("Msg:IFM_SDO_Resp")));

while ( $pIt->next() )
{
  if ($pIt->RecordEntry->type eq CanMsgRecordEntry)
  {
     print "IFM_SDO_Resp:" . (unpack "H*",$pIt->RecordEntry->Data()) . "\n";
   }
}

print ": Finished\n";
```

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1. Record
2. Analyze
3. **Replay**

Replay – Load and Configure

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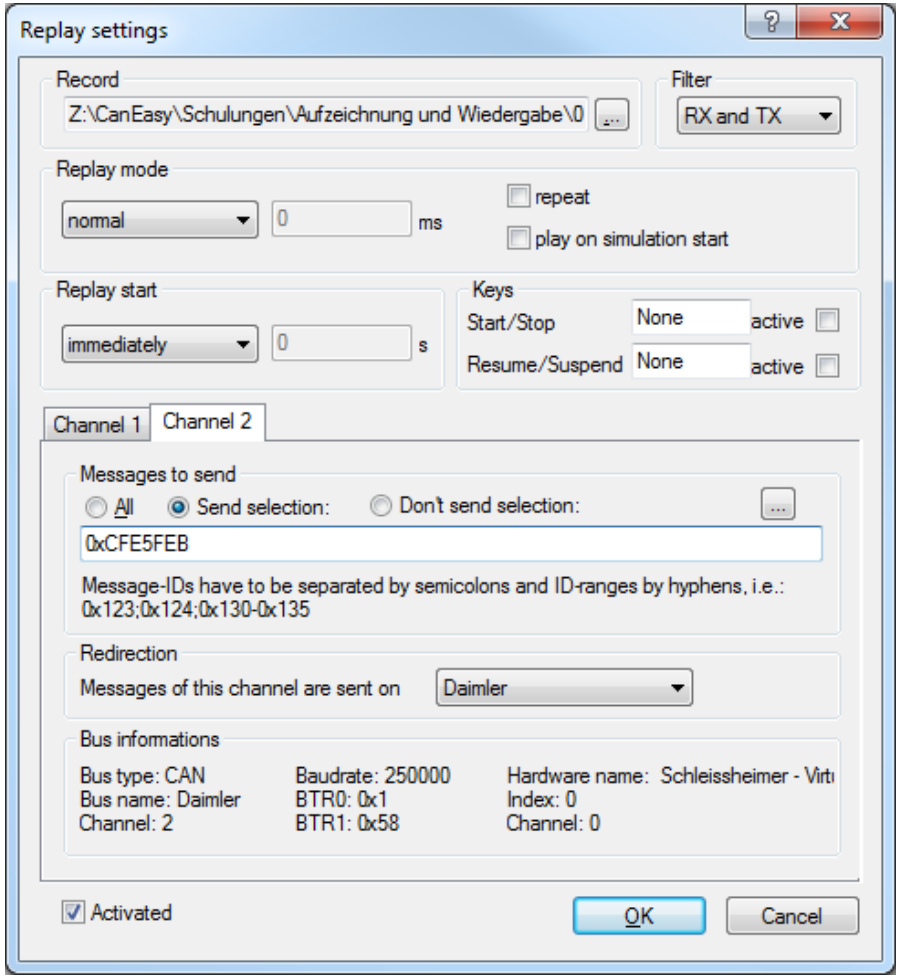
- Settings
- User plug-in
- CAPL Loader
- Record
- Replay
  - Load...
- Alarm
- Canoe-Panel
- VBA
- VSTA2012
- Trace panel
- Signal plot
- Signal monitor
- User panel
- Rich panels
- Scheduler
- Snapshots
- BSK diagnosis 7
- Hardware
- XCP
- Database
  - Mutronic (CAN [VC1] Schleissheimer - Virtual CAI
  - Daimler (CAN [VC2] Schleissheimer - Virtual CAN
    - MT
    - PSM4
      - PSM4_GPM_12 [0x18FE5DEB]
      - PSM4_GPM_13 [0x0CFE5FEB]
        - PSM4_Engine_torque_mode
        - PSM4_Engine_control_allowed
        - PSM4_Engine_running
        - PSM4_Drivers_demand_engine_percent
        - PSM4_Actual_engine_percent_torque
        - PSM4_Engine_speed
        - PSM4_Percent_load_at_current_speed
        - PSM4_Vehicle_speed
      - PSM4_GPM_14 [0x18FE61EB]
      - PSM4_GPM_15 [0x18FE63EB]

- We want to replay PSM4_GPM_13



Replay – Start

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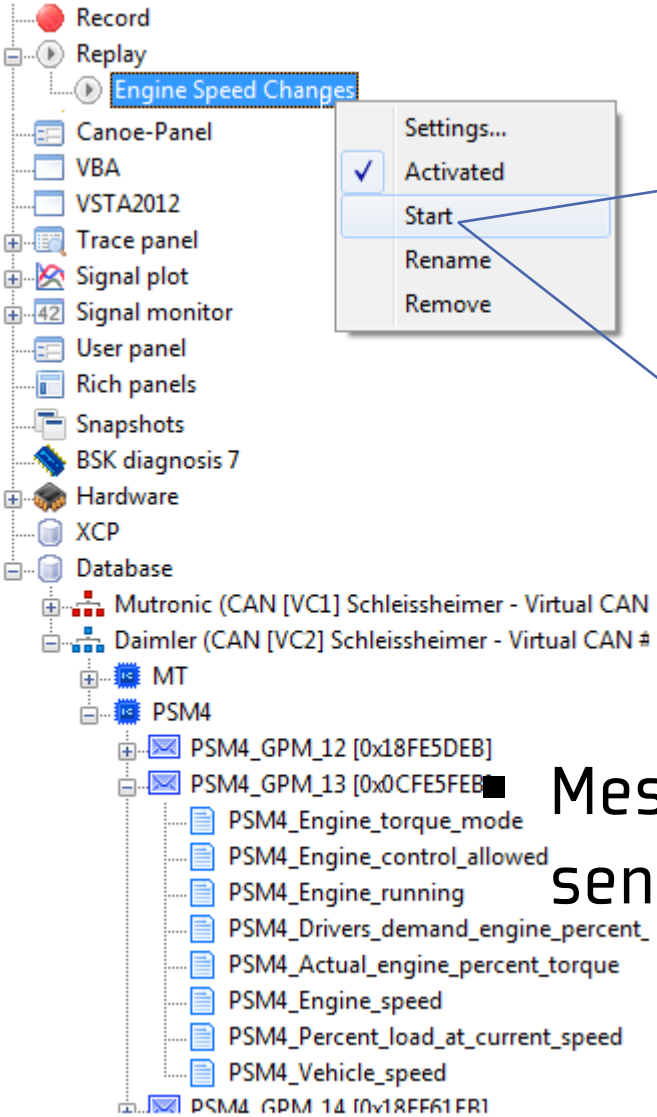
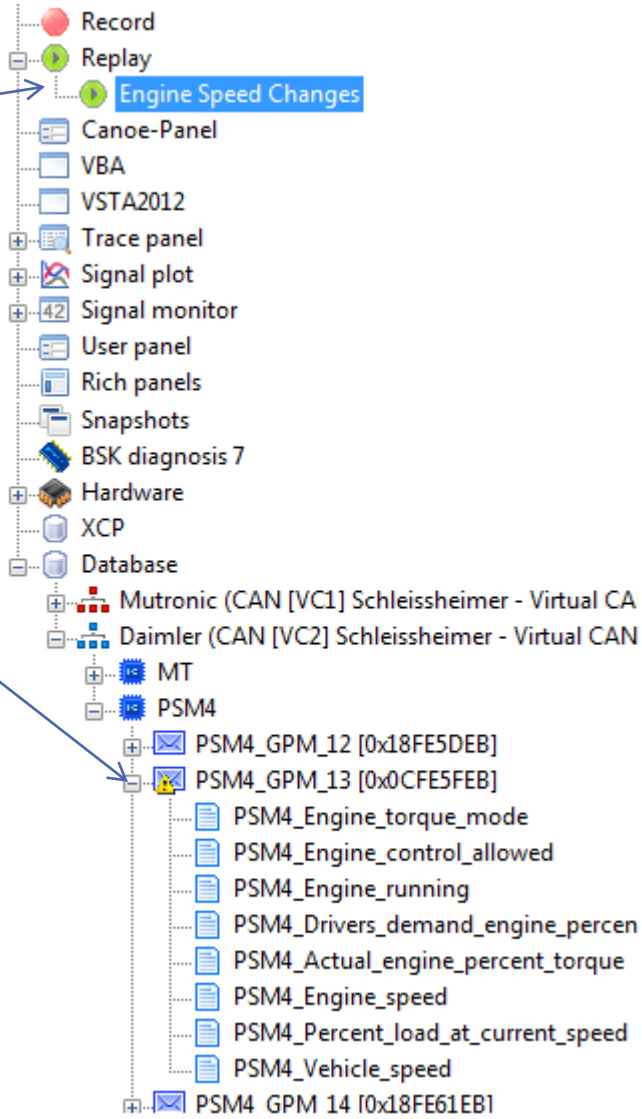


Message is now sent from replay.



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Thank you for your attention!