

HV SLOw Control SYstem.

RD51 Collaboration

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K. S. Karakostas Yorgos Tsipolitis

SLOw Control SYstem

Intro

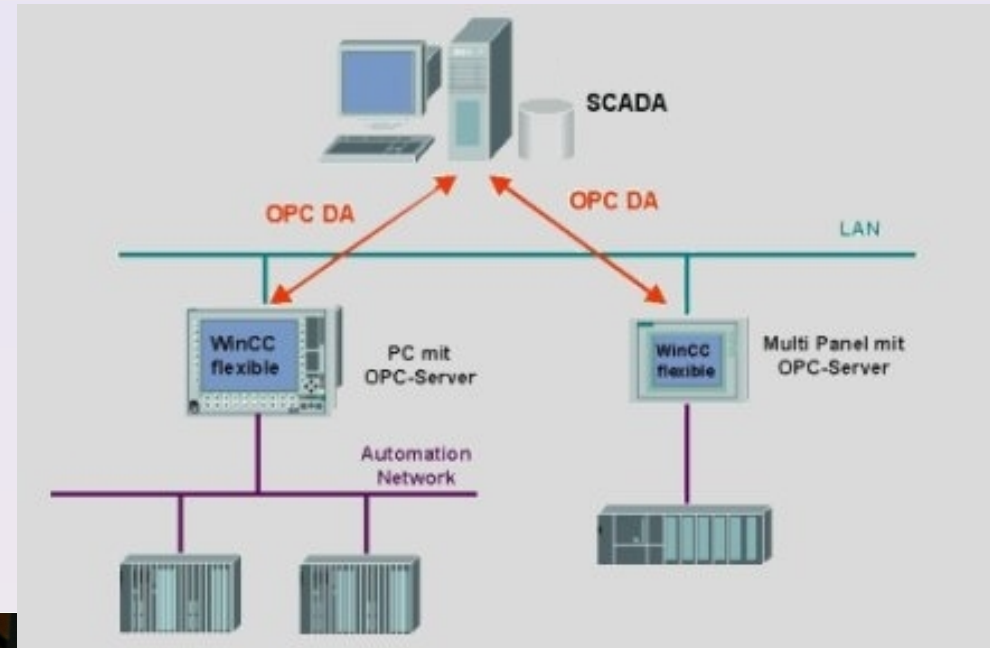
Main
ooo

Init
oo

Config
oo

Export
oo

Prospects



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RD51

Module Panel Scale Help

en_US.iso88591

View Settings Archive Export Close

03_00	vMon	0.00	V	iMon	0.000	uA	03_06	vMon	0.00	V	iMon	0.000	uA	04_00	vMon	3.00	V	iMon	0.000	uA
03_01	vMon	0.00	V	iMon	0.000	uA	03_07	vMon	0.00	V	iMon	0.000	uA	04_01	vMon	1.00	V	iMon	0.000	uA
03_02	vMon	0.00	V	iMon	0.000	uA	03_08	vMon	0.00	V	iMon	0.000	uA	04_02	vMon	1.00	V	iMon	0.000	uA
03_03	vMon	0.00	V	iMon	0.000	uA	Sac_6	vMon	393.25	V	iMon	0.150	uA	04_03	vMon	0.00	V	iMon	0.000	uA
Mesh	vMon	539.00	V	iMon	0.000	uA	Sac_5	vMon	389.25	V	iMon	0.418	uA	test 1	vMon	0.00	V	iMon	0.000	uA
Drift	vMon	999.50	V	iMon	0.000	uA	03_11	vMon	0.00	V	iMon	0.000	uA	test 2	vMon	1.00	V	iMon	0.000	uA

Main Window

- ✓ Status of all
- ✓ vMon
- ✓ iMon
- ✓ Settings
- ✓ Initialization
- ✓ Export data



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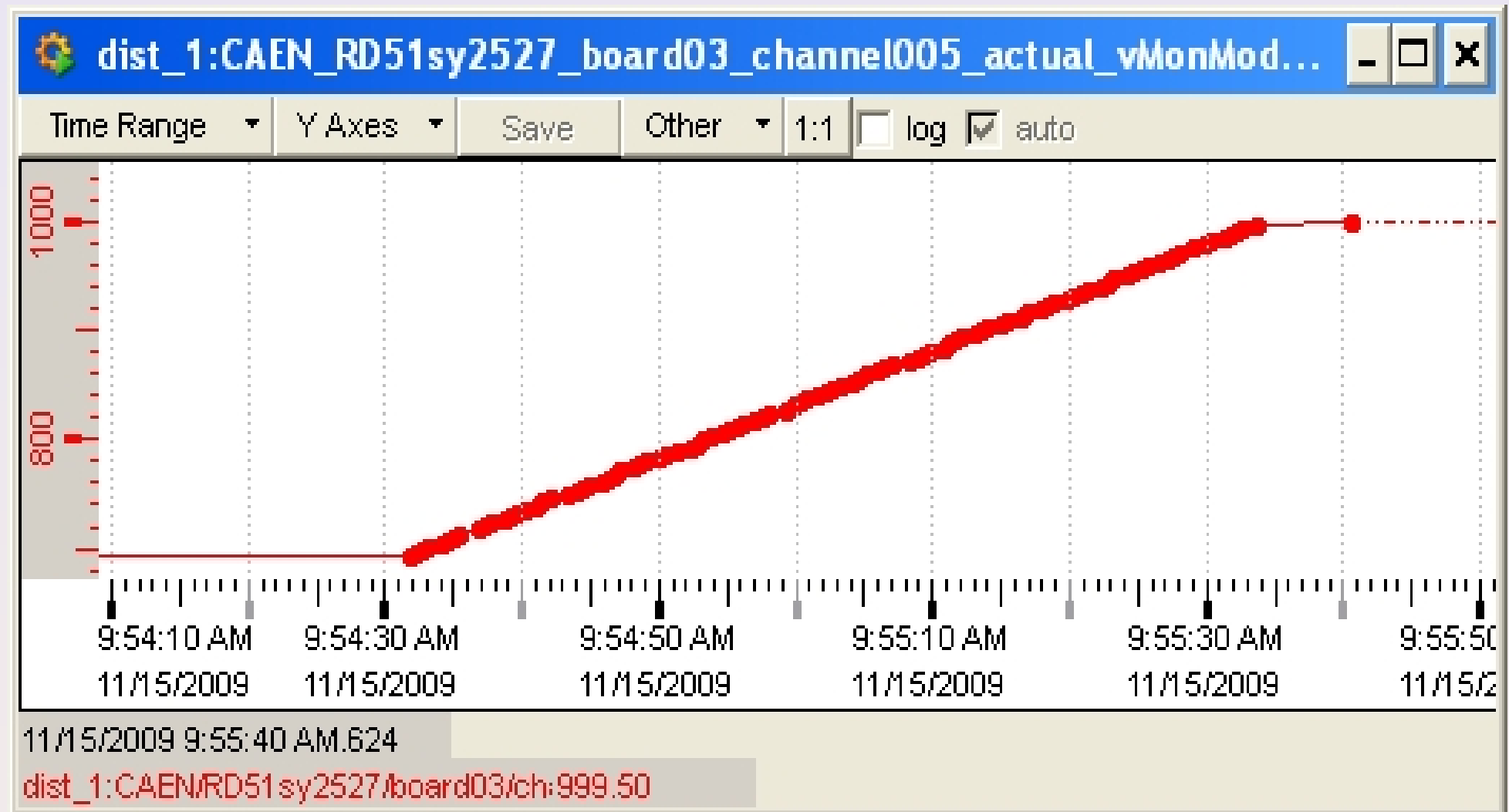
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Prospects

Direct single plot with right-click on iMon or vMon.



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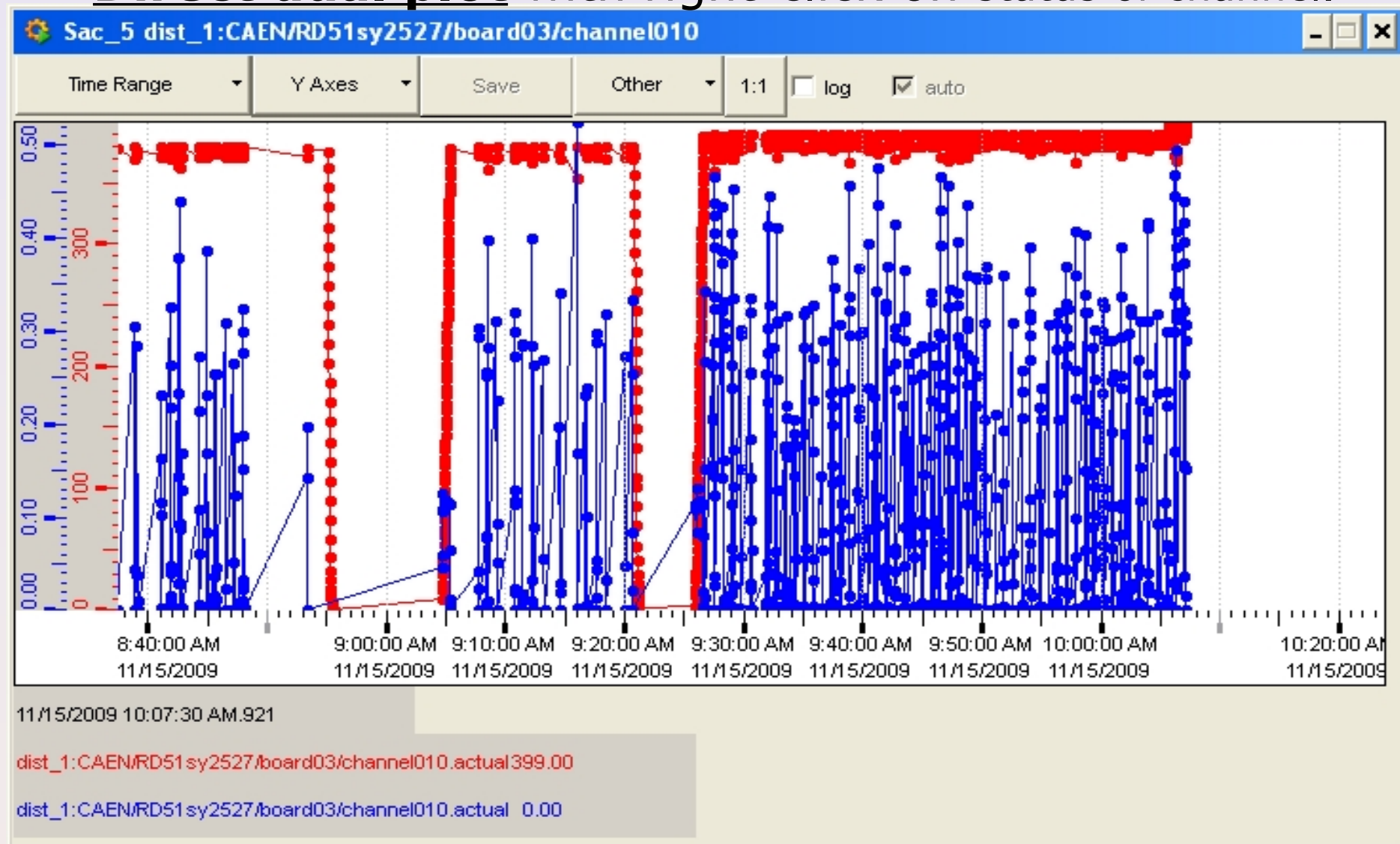
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Prospects

Direct dual plot with right-click on status of channel.



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Device Editor & Navigator.

The image shows two windows from the JCOP Framework. The left window, titled ".JCOP Framework Device Editor N...", contains a "Device Editor & Navigator" panel. It has a "Running on:" field set to "dist_1" and three tabs: "Hardware", "Logical", and "FSM". The "Hardware" tab is active, showing a tree view of the device structure: "dist_1:" contains "CAEN", which contains "RD51sy2527", which in turn contains "board03" and "board04". "board04" has a list of channels: "channel000", "channel001", "channel002", "channel003", "channel004", and "channel005". At the bottom of this window are buttons for "Editor mode", "Go to Navigator", and "Close".

The right window, titled "DEVICE_MODULE: (NoName) (dist_1 - RD51_SlowControl; #3)", displays the "CAEN Crate Hardware Configuration". It features a "Crate Name:" field with the value "dist_1:CAEN/RD51sy2527". Below this is a graphical representation of a crate with six slots (0-5). Slots 3 and 4 are highlighted in red and contain components labeled "A1821M" and "A1525M" respectively. Below the slot diagram is a label "CAEN SY2527". A "Comment:" field contains the text "dist_1:CAEN/RD51sy2527.". At the bottom are buttons for "Add boards", "Simple Settings", and "Close".

Intro Main Init Config Export Prospects

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Init Window

- ✓ Group creating & parameterizing.
- ✓ User creating.
- ✓ E-mail.



Prospects

- ✓ Multiple selecting.
- ✓ User name password required.
- ✓ v0, i0, rUp, rDwn, trip time, alias.
- ✓ On/Off.

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```
logger_1.txt - Notepad
File Edit Format View Help
***** Start *****
23/10/09 19:22      kostas
***** channels *****
board03/channel000
board03/channel002
board03/channel003
board03/channel005
board03/channel006
board03/channel008
***** values *****
v0 :      480
***** Start *****
23/10/09 19:22      kostas
***** channels *****
board03/channel001
board03/channel004
board03/channel007
***** values *****
v0 :      630
~~~~~ End ~~~~~
~~~~~ End ~~~~~
~~~~~ End ~~~~~
~~~~~ End ~~~~~
~~~~~ End ~~~~~
***** Start *****
23/10/09 19:46      kostas
***** channels *****
board03/channel009
***** values *****
i0 :      0.100
~~~~~ End ~~~~~
~~~~~ End ~~~~~
~~~~~ End ~~~~~
~~~~~ End ~~~~~
~~~~~ End ~~~~~
***** Start *****
23/10/09 20:18      eleni
***** channels *****
board03/channel003
board03/channel008
***** values *****
channels on
~~~~~ End ~~~~~
***** Start *****
23/10/09 20:23      Theios
***** channels *****
board02/channel002
***** values *****
v0 :      350
~~~~~ End ~~~~~
***** Start *****
23/10/09 20:33      eleni
***** channels *****
board01/channel000
```

Logbook

- ✓ User
- ✓ Date-time stamp
- ✓ Channel(s)
- ✓ Configuration.



Intro Main Init Config Export Prospects

Exporting Data

- ✓ Multiple channel selection.
- ✓ Start/End time stamps.
- ✓ Custom folder name (also structure is available)
- ✓ Export iMon, vMon, vSet or all together.

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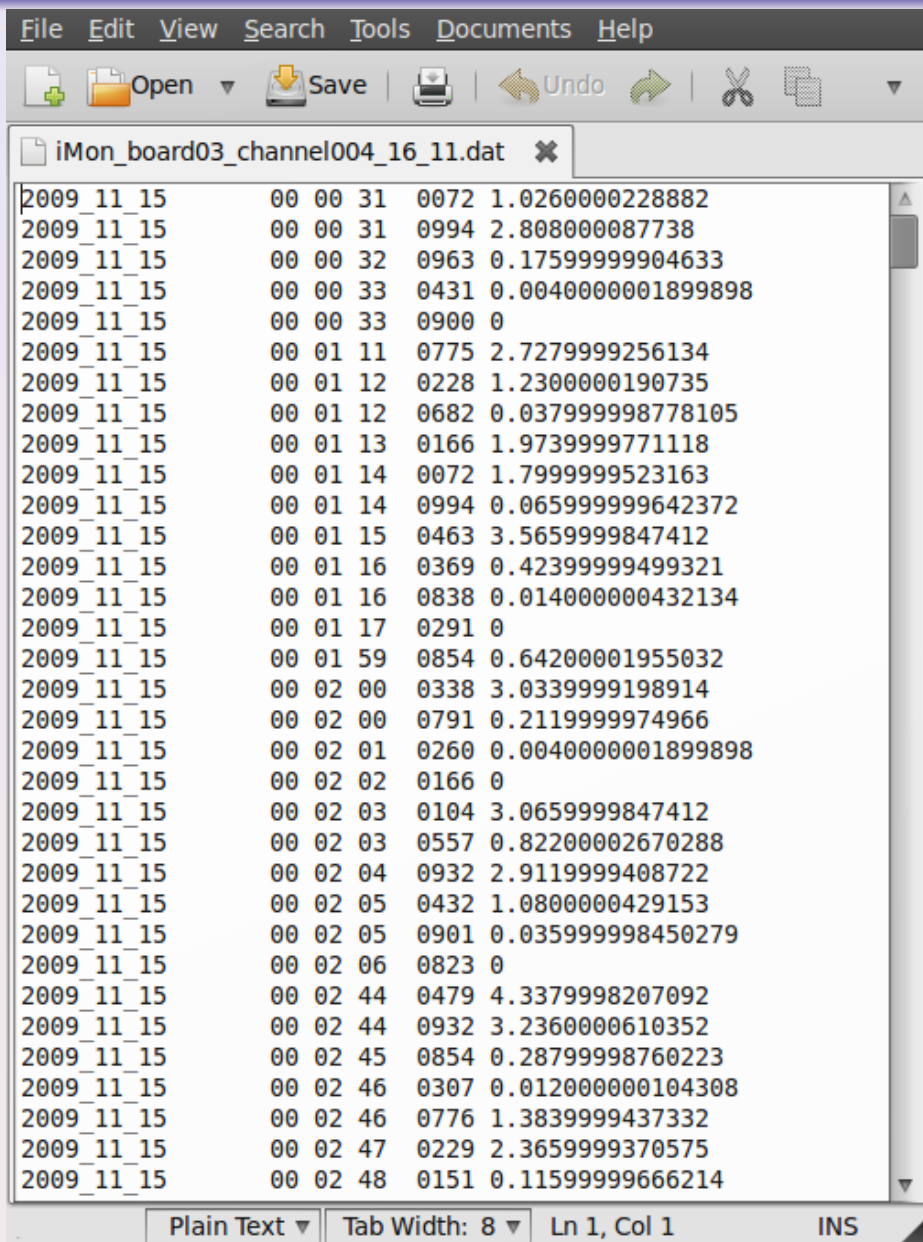
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```
File Edit View Search Tools Documents Help
Open Save Undo
iMon_board03_channel004_16_11.dat
2009_11_15 00 00 31 0072 1.0260000228882
2009_11_15 00 00 31 0994 2.8080000087738
2009_11_15 00 00 32 0963 0.17599999904633
2009_11_15 00 00 33 0431 0.0040000001899898
2009_11_15 00 00 33 0900 0
2009_11_15 00 01 11 0775 2.7279999256134
2009_11_15 00 01 12 0228 1.2300000190735
2009_11_15 00 01 12 0682 0.037999998778105
2009_11_15 00 01 13 0166 1.9739999771118
2009_11_15 00 01 14 0072 1.7999999523163
2009_11_15 00 01 14 0994 0.065999999642372
2009_11_15 00 01 15 0463 3.5659999847412
2009_11_15 00 01 16 0369 0.42399999499321
2009_11_15 00 01 16 0838 0.014000000432134
2009_11_15 00 01 17 0291 0
2009_11_15 00 01 59 0854 0.64200001955032
2009_11_15 00 02 00 0338 3.0339999198914
2009_11_15 00 02 00 0791 0.2119999974966
2009_11_15 00 02 01 0260 0.0040000001899898
2009_11_15 00 02 02 0166 0
2009_11_15 00 02 03 0104 3.0659999847412
2009_11_15 00 02 03 0557 0.82200002670288
2009_11_15 00 02 04 0932 2.9119999408722
2009_11_15 00 02 05 0432 1.0800000429153
2009_11_15 00 02 05 0901 0.035999998450279
2009_11_15 00 02 06 0823 0
2009_11_15 00 02 44 0479 4.3379998207092
2009_11_15 00 02 44 0932 3.2360000610352
2009_11_15 00 02 45 0854 0.28799998760223
2009_11_15 00 02 46 0307 0.012000000104308
2009_11_15 00 02 46 0776 1.3839999437332
2009_11_15 00 02 47 0229 2.3659999370575
2009_11_15 00 02 48 0151 0.11599999666214
Plain Text Tab Width: 8 Ln 1, Col 1 INS
```

Exported Data

- ✓ Date separated with “_”.
- ✓ Time (with spaces) and milliseconds.
- ✓ Value.
- ✓ Information on the file name.



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Prospects

- ✓ The first version had already been used and tested during RD51 TB (Oct.) and MAMMA TB (Nov.) and now is improved according to the experience acquired from Tbs.
- ✓ A script is already in use for offline display (per channel, Imon & Vmon at a given period of time) at ROOT.
- ✓ The program can be easily migrate (List of fwTools, script for the init).
- ✓ Recipes of configuration.
- ✓ Custom trip handling (after n-trips in given time the channel should be considered tripped).
- ✓ Sound alarm for different states of the channel.
- ✓ Future plans are also to expand this tool for slow control system (i.e. temperature, external and internal pressure, gas monitor and control etc).

