

Reminders on
PANDA DCS

Dan Protopopescu
Glasgow, UK

Juelich, September 2009

Status now

- We have a rough idea of what the DCS requirements will be <http://nuclear.gla.ac.uk/DCS> (still need some input from DAQ and Beam groups HESR/FAIR)
- We agreed to have EPICS at the base of our control system
- Some detector groups are ready and eager to design & implement control and monitoring
- We have a toy EPICS system for prototyping, testing integration and learning in general
- We have GSI support
- Actual work can start ! :)

Let's use our tools


You have ideas, work is being done, progress is being made, but the others don't know about it.

Everybody should really:

- review the DCS wiki
- subscribe to the mailing list and forum
- communicate with the other members of the DCS group and update their DCS requirements along the way
- add documentation about prototyped hardware to the DB and the Hardware Wiki
- post ideas on the forum and add a entries to the wiki
- find out what others are doing

Wiki and subwikis

This is the starting point: all other resources are linked in here

**panda**

DCS

DCS Web
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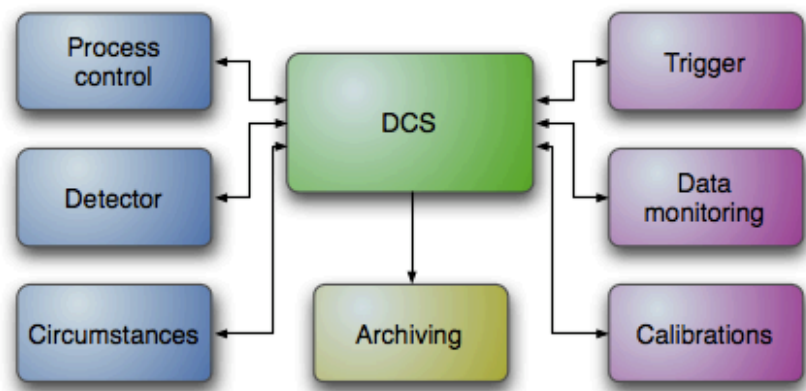
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DCS.WebHome r1.51 - 03 Sep 2009 - 11:42 - [DanProtopopescu](#) [topic end](#)

Detector Control System

This is the wiki page of the DCS Subgroup. This subgroup has been established during the September 2007 PANDA collaboration meeting at GSI. The aim is to decide (and have some preliminary trials of) the framework for the PANDA DCS by the end of 2008. The architecture of the PANDA DCS and the individual components will be then ready for implementation and deployment, respectively, by the end of 2009. Actual testing, benchmarking, component development and streamlining will happen along with the completion of the detector until commissioning date.



```
graph LR; PC[Process control] --> DCS[DCS]; D[Detector] --> DCS; C[Circumstances] --> DCS; DCS --> A[Archiving]; DCS --> T[Trigger]; DCS --> DM[Data monitoring]; DCS --> Cal[Calibrations];
```

[**Quick Shortcuts:** [SupportedHardware](#) | [Requirements Database](#) | [EPICS](#) | [IdeaBank](#) | [TalksArchive](#)]

Members of the DCS group should register to this wiki and be added to the [PandaControlsGroup](#)

[↓ Detector Control System](#)
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The Requirements Database

∴ DCS Requirements Collection



You are logged in as **protopop@physics.gla.ac.uk** | [Open sessions](#) | [History](#) | [Logout](#)

ProcessVariables

This is the main table. Some of the fields in this table are standardized, and you might have to edit other tables (Subgroups, Parameters, Types, Units etc.), before the desired options show up in the drop down menus. Update rates are in Hz (0.016=1/min). Range min and max should be outside Alarm min and max limits, respectively.

[+ Table Description](#) | [Hints](#) | [Show all columns](#) | [Stats](#)

[Tables:](#) [Contacts](#) | [Hardware](#) | [Institutes](#) | [Parameters](#) | [Subgroups](#) | [Types](#) | [Units](#)

Subgroup	Parameter +	Unit	Type	Channels	Update rate	Is monitored	Is controlled	Gen Interlock	Description	Contact	Hardware	Action
GEM	P _{GasMix}	mbar	Continuous	1	1	yes						Edit
GEM	P _{Gas,out}	mbar	Continuous	4	1							Edit
Target	P _{Gas,in}	kPa	Continuous									Edit
GEM	P _{Gas,in}	mbar	Continuous	4	1							Edit
GEM	P _{Env}	mbar	Continuous	1	0.1							Edit
GEM	P _{Cool,out}	kPa	Continuous	4	1							Edit
GEM	P _{Cool,in}	kPa	Continuous	4	1							Edit
Endcap DIRC	V _T	mV	Discrete	4096	0.0028							Edit
GEM	V _{Sense}	V	Continuous	8	1	yes						Edit
GEM	V _{LV,Sense}	V	Continuous	2	1	yes	yes	no	Low Voltage Voltage	Bernd Voss	Mpod 19" Mainframe / Power bin	Edit
GEM	V _{LV,FEB}	V	Continuous	2	1	yes	yes	yes	Low Voltage Voltage	Bernd Voss	Mpod 19" Mainframe / Power bin	Edit
GEM	V _{HV,GEM}	kV	Continuous	24	1	yes	yes	yes	High Voltage Voltage (GEMs)	Bernd Voss	Mpod 19" Mainframe / Power bin	Edit
GEM	V _{HV,Cathode}	kV	Continuous	4	1	yes	yes	yes	High Voltage Voltage (Cathode)	Bernd Voss	Mpod 19" Mainframe / Power bin	Edit
GEM	V _{GEM}	kV	Continuous	24	1	yes	yes	yes	GEM-Sector Voltage	Bernd Voss	custom	Edit
GEM	V _{FEB}	V	Continuous	440	0.1	yes	yes	yes	Front-End Board supply voltage	Bernd Voss	custom	Edit

This database is now the most comprehensive and up-to-date repository of all DCS-related information (PVs, liaison names, responsible persons etc.)

Our mailing list

Logged in as: [protopop@physics.gla.ac.uk](#) (Owner)


 **LISTSERV 15.5**

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Subject: DCS group meetings in Juelich
From: Dan Protopopescu <protopop@PHYSICS.GLA.AC.UK>
Reply-To: Dan Protopopescu <protopop@PHYSICS.GLA.AC.UK>
Date: Wed, 26 Aug 2009 15:09:38 +0200
Content-Type: text/plain
Parts/Attachments:  [text/plain](#) (17 lines)

Dear colleagues,

Good news! We will have a very active DCS schedule during the PANDA collaboration meeting in Juelich. Tuesday from 11:00 we will have three talks, and Thursday afternoon a full EPICS tutorial. It would be great if you could all attend.

Schedules are available here:

<https://indico.gsi.de/conferenceOtherViews.py?showSession=all&showDate=all&view=nicecompact&fr=no&confId=292>
<https://indico.gsi.de/materialDisplay.py?sessionId=17&materialId=0&confId=292>



PANDA-DCS List

PANDA-DCS@WWW-LISTSERV.GSI.DE

PANDA DCS

Detector Control System for PANDA Experiment

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Forum

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	Topic
	DCS group meetings in Juelich
	DCS Requirements Collection deadline is December 2008
	Short term goals + Two new wikis
	DCS Requirements Collection
	Talks in Krakow
	PANDA DCS Requirements Collection DB UI
	ML(ApMon) module for LabView device classes (equivalent to DIM's function)
	Collection of Detector Requirements
	DCS Wiki
	Please refer also to the general controls forum

Goto Forum:

Detector Control System

Detector Control System

0&S=1ea9298c6d...

DCS

PANDA

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Meetings

PANDA DCS Requirements DBUI

Mailing list

Open Mailing list
http://www-listserv.gsi.de/cgi-bin/wa?A0=PANDA-DCS

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NEW TOPIC

09 15:20
By: [Dan Protopopescu](#)

2008 16:34
By: [Dan Protopopescu](#)

2008 11:33
By: [Dan Protopopescu](#)

By: [Dan Protopopescu](#) on Wed, 26 August 2009

By: [Dan Protopopescu](#) on Tue, 06 May 2008

By: [Dan Protopopescu](#) on Thu, 08 May 2008

By: [Dan Protopopescu](#) on Mon, 14 April 2008

By: [Holger Brand](#) on Mon, 07 April 2008

By: [Dan Protopopescu](#) on Thu, 03 April 2008

By: [Dan Protopopescu](#) on Tue, 25 September 2007

By: [Holger Brand](#) on Tue, 18 September 2007

0 1986 Thu, 08 May 2008 16:46
By: [Dan Protopopescu](#)

0 2542 Mon, 14 April 2008 09:47
By: [Dan Protopopescu](#)

0 2195 Mon, 07 April 2008 13:13
By: [Holger Brand](#)

0 2259 Thu, 03 April 2008 14:29
By: [Dan Protopopescu](#)

0 3662 Tue, 25 September 2007 16:10
By: [Dan Protopopescu](#)

0 3009 Tue, 18 September 2007 12:29
By: [Holger Brand](#)

TREE VIEW

NEW TOPIC

Hardware table/documentation

Contributions mentioned at the last two meetings did not materialize yet. And this is an important component of our documentation. We need this!

- Our list of 'supported' hardware components ([linked here: REQ DB Hardware table](#)) with explanations in the associated wiki, needs more attention

We aim to adopt, as early as possible, a consistent set of hardware components (coupled with software solutions).

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We aim to adopt, as early as possible, a consistent set of hardware components (coupled with software solutions).

Idea Bank

This [wiki](#) has only one contribution up to now :(



Jump:

DCS

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DCS.IdeaBank r1.4 - 18 Jun 2009 - 14:17 - [DanProtopopescu](#) [topic end](#)

Idea Bank

To collect general and specific ideas in a place where it's easy for everyone to review and contribute, we set up this wiki where you are invited to post your ideas in a free format. Now and then I will post digests on our forum, with links connecting to this wiki. Please sign your posts herein.

Detector ageing

It would be favourable to include sensors close to the detector which can monitor the degradation of the electronics installed nearby. This may also be specially designed sensitive chips read out frequently. By monitoring the amount of e.g. single event upsets or other key events one may be able to determine the time the other electronics (or other detector components) might fail with high probability and take the appropriate measures in time. This may e.g. be the scheduling of a maintenance period or the shut-down of the respective electronic in order to prevent further/successive damage. Obviously this approach requires the knowledge of the MTBF values of both, the sensors as well as the electronics/components to be monitored indirectly that way. If feasible, one might as well directly include this functionality on the respective ASICs as well. This way the 'tracing' elements should be designed more sensitive than the rest of the electronic to be monitored.

-- [BerndVoss](#) - 18 Jun 2009

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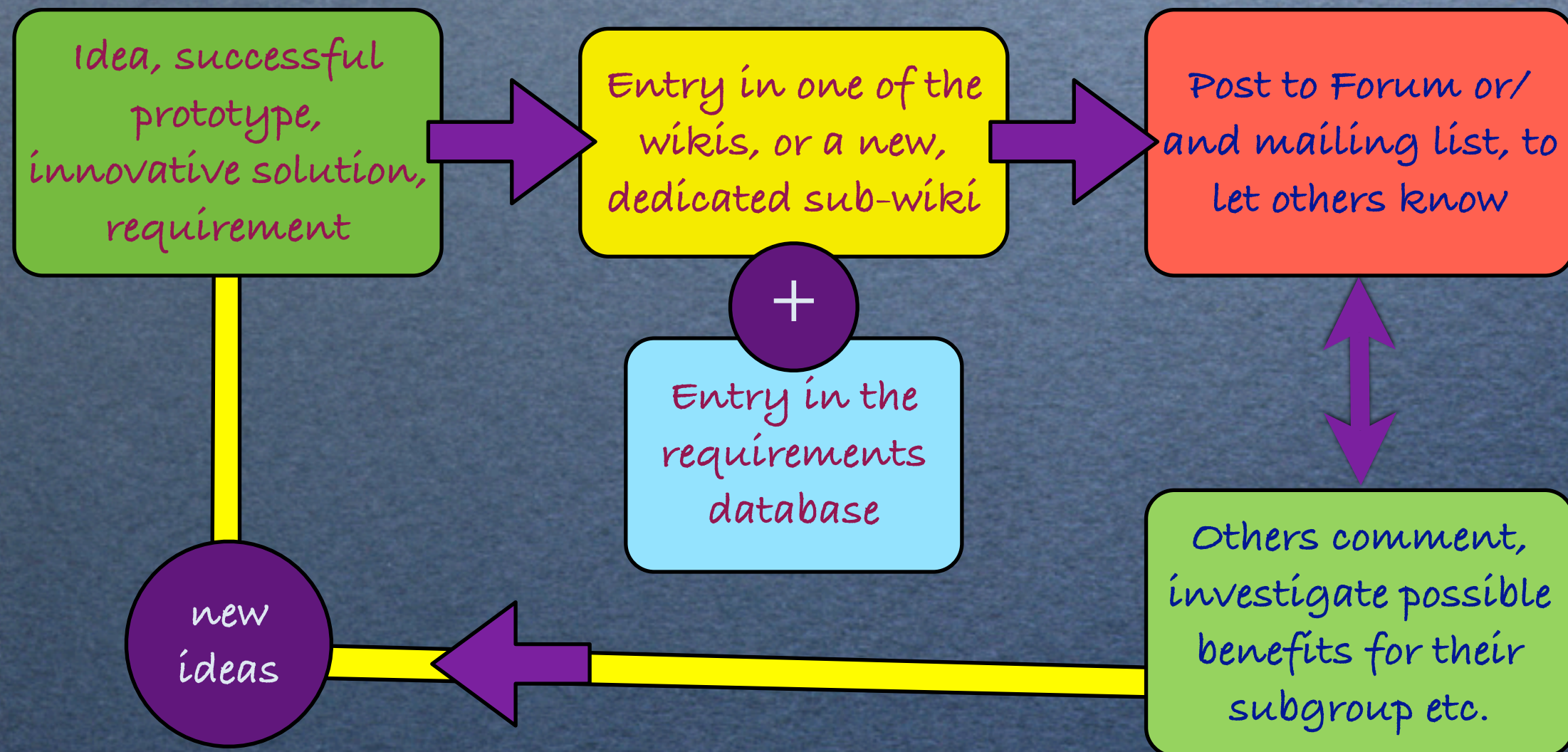
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Revisions: | [r1.4](#) | [>](#) | [r1.3](#) | [>](#) | [r1.2](#) | [Total page history](#) | [Backlinks](#) | [Graph](#)

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Knowledge flow

This is what I would like to see happening:



Today's programme

Three talks, followed by an open discussion (please attach your presentations to our TalksArchive):

- Florian Feldbauer: “Temperature and Humidity Monitoring for Proto192 (EMC)”
- Werner Erni: “A low noise/low power charge preamplifier for LAAPD and VPT detectors”
- Peter Zumbruch: “Introduction to EPICS”

There will be a four hours long EPICS tutorial on Thursday at 14:00 in the IKP Seminar Room

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PANDA Experiment Control system

