

IRMIS SIG Summary

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EPICS Collaboration
DESY
April 23-27, 2007



IRMIS PV

- widely used tool to provide a 'global' view of the facility control software

PV Datamining

- basis for creating configuration files (archiever, alh, ...)
- examine inter-IOC EPICS logic
- CA-client crawlers

General community agreement on PV schema and crawler

How about for the hardware?

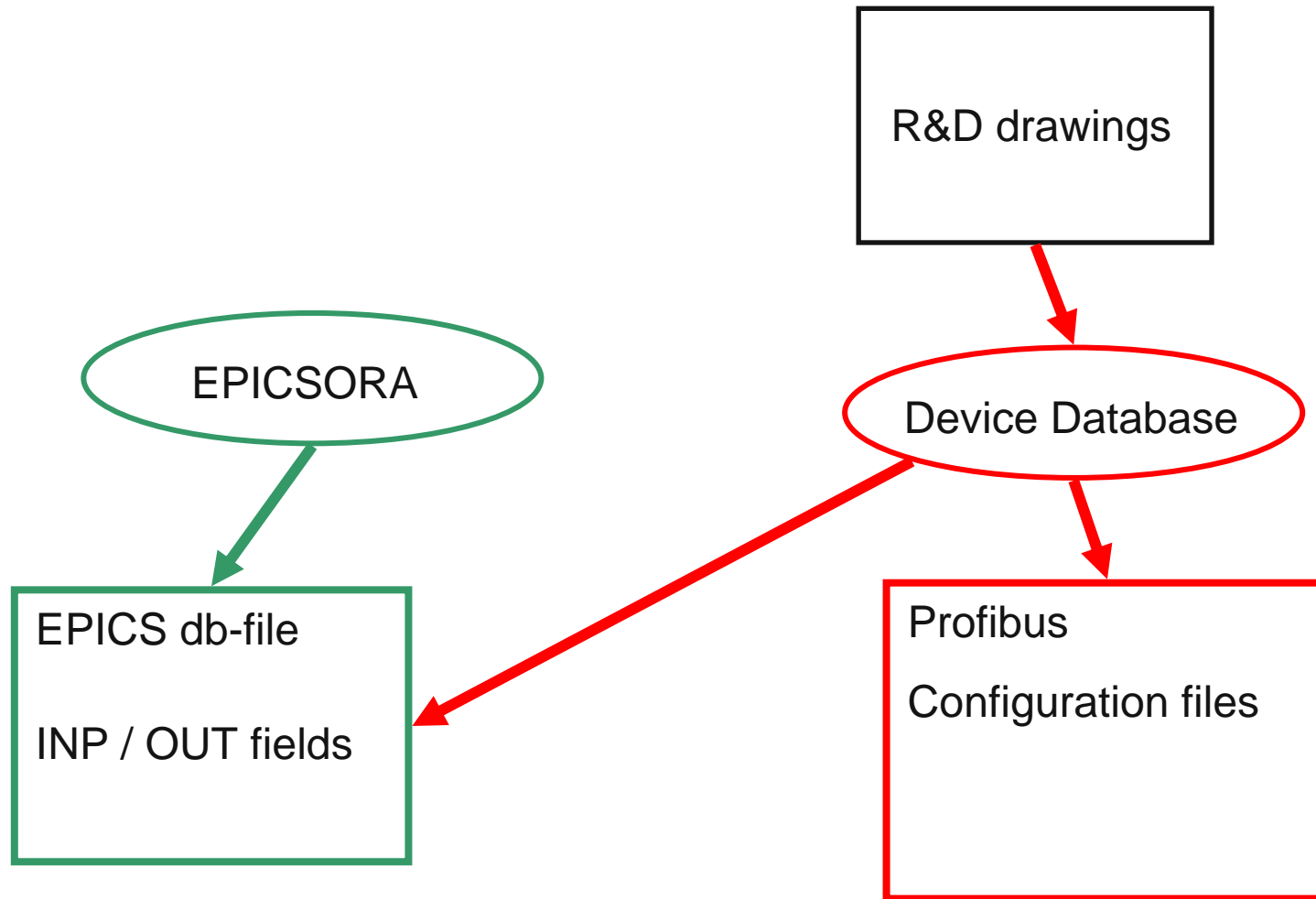
Configuration Control - capturing the control system hardware and connecting it with EPICS process variables

SLS - CIDB

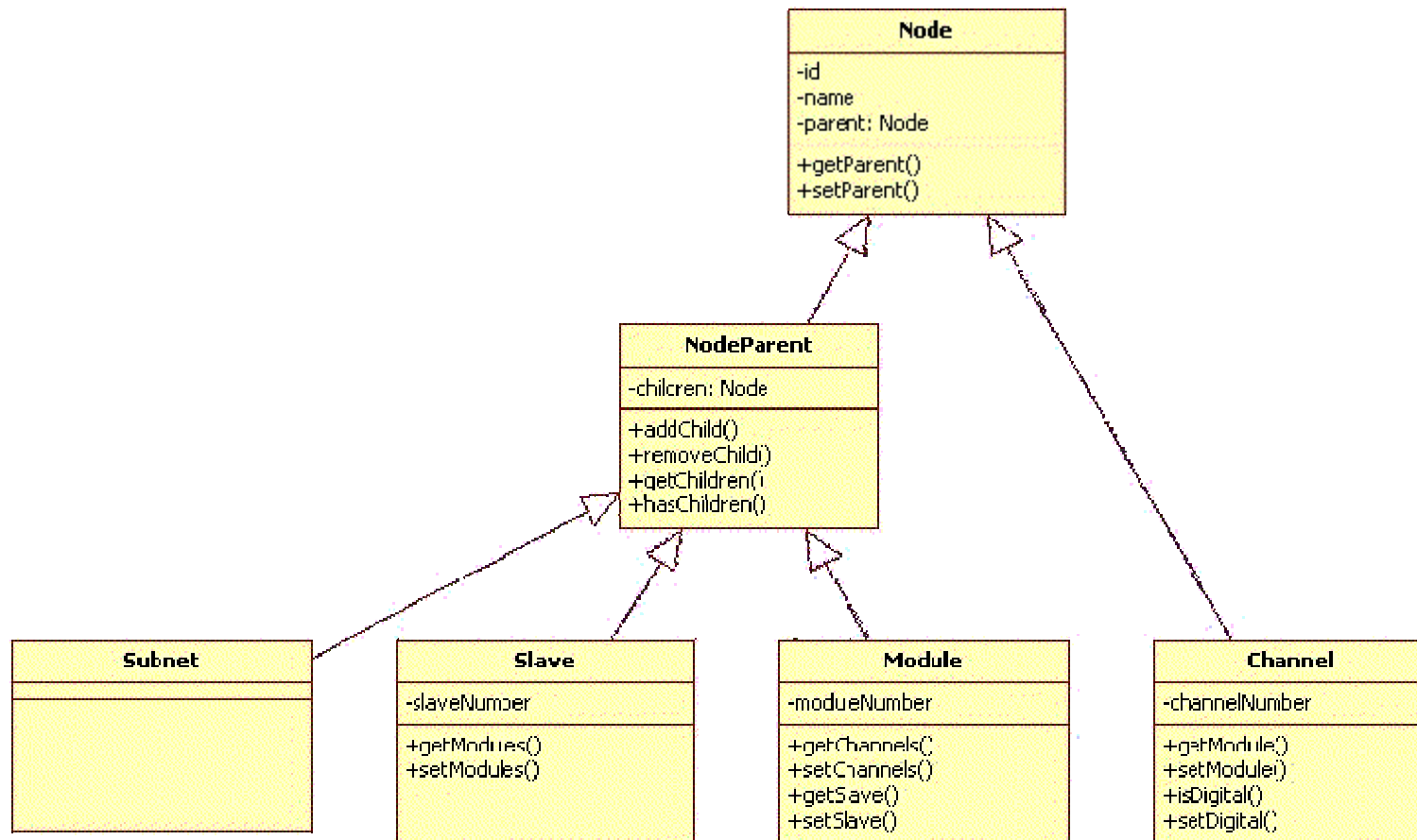
GANIL - carl_master

SLAC - captor





DESY - deviceDb Object Model



SNS Configuration Control

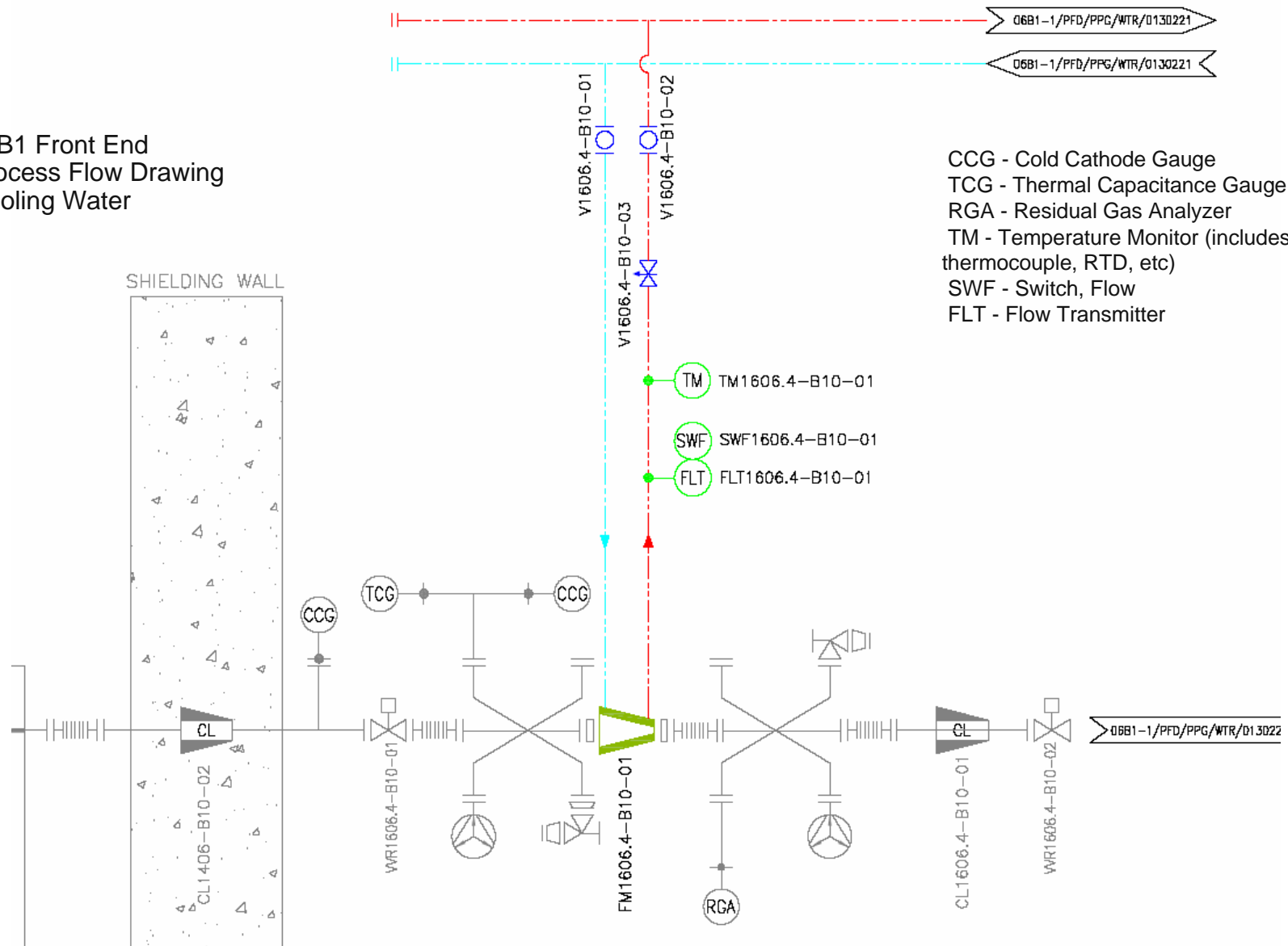
- Mature relational database schema
- Issues of management 'buy-in'
 - 'global' vs 'private' culture

SNS - Wish List

- Standard prescriptive schema
- VDCT reads/writes to either ascii file or RDB
- Interface between EDM and RDB; maybe in CSS?

CLS: Process Flow Drawing

06B1 Front End
Process Flow Drawing
Cooling Water



Consolidation of the IRMIS 3-hierarchy model

> 30000 components have been installed in the APS IRMIS database including their control, housing and power relationships

- rigorous test of the component and component-type schema
- component-type definition refinements (esp interfaces)
- general acceptance by controls group

Primary (first line of defense) for controls group on-call

- operations usage - 'master source'
- pressure to relate PVs to components (MEDM->hardware)

Datamining the component database

- ~600 control systems applications - AOI
- CCMS control component monitoring system

APS Component database

The IRMIS component-type model includes component ports
- port-port connections form the basis of the cable database

Each port contains a set of pins
- each pin represents an input or output 'signal'

The 'signal' database ultimately relates an installed component to a set of software Process Variables

Integrated approach - the 'I' in IRMIS

Universal Component Types

- APS Control - now complete
- IPNS
- BCDA
- IT

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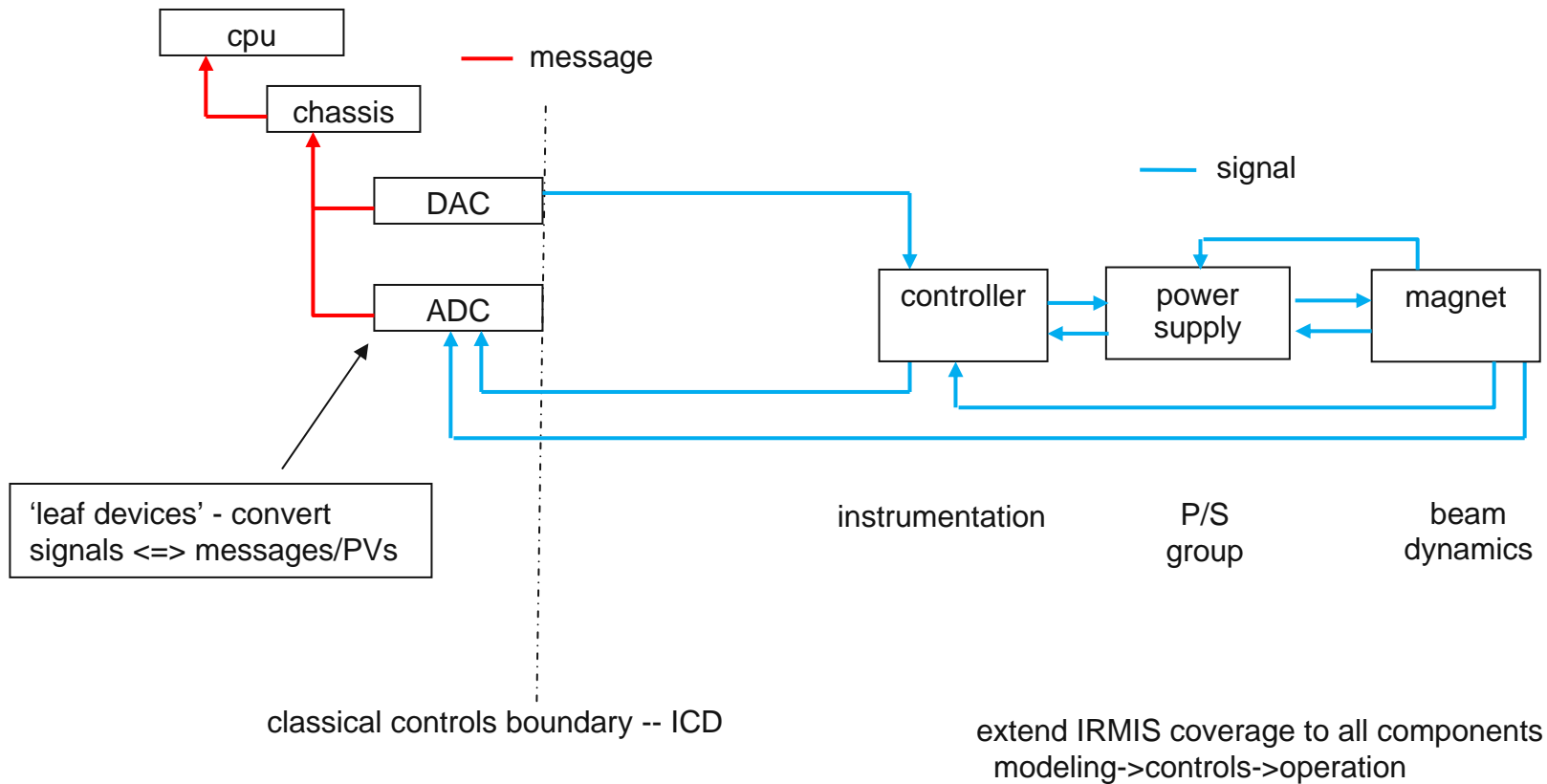
- universal component type definition
- associated device support



Accelerator objects and signals

cmpnts - hierarchical topology

“accelerator cmpnts” - network topology
‘master table’ -- naming convention



Work in Progress

PV Info

Record Name	Type	IOC
L3:DG3:aOutputPolSetB0	bo	ioclic2

DB File(s)
/net/helios/iocapps/R3.13.10/ioc/linac/2/linacApp/timingDb/dg1234567.dat

PV Fields

Field	Value
DOL	0
DTP	DG535 Delay Generator (GP1B)
EVNT	0
FLNK	L3:DG3:aOutputPolBI.VAL
HIGH	0
IWOA	Continue normally
IWOV	0
LALM	
LCNT	
MASK	0
MLST	
NAME	
NSEV	
NSTA	
OMSL	supervisory
ONAM	
ORAW	0
ORBV	0
OSV	NO_ALARM
OUT	#L0 A17 @15
PACT	

Control

- MVME 5100-013x ioclibpm5
- MVME 167-xxx DBL ioclic1
- MVME 167-xxx DBL ioclic2
 - VME Chassis - System 22 Type 1-A
 - CTM100 (CTC100) _
 - 1014D 0,1
 - GP1B_Link 0
 - HP8648D 7
 - DG535 15
 - DG535 16
 - DG535 17
 - DG535 18
 - DG535 19
 - DG535 20
 - DG535 21
 - DG535 22
 - DG535 23
 - GP1B_Link 1
 - P1
 - P2
 - 6008-SV 0
 - 6008-SV 1
 - VMOD-2 0,1
 - VMOD-2 2,3
 - HPE1368A 41
 - FOM112 _
 - TIM100 _
 - DDPG02 0
 - DDPG02 1
 - DDPG02 2
 - DDPG02 3
 - FOM102 _
 - CTS100 0
 - LTG100 1
 - PPV100 _
 - VME Power Supply - Type 1 _
 - z_Ancillary Devices _
 - z_Parallel status _

Housing

- Room LINAC_Gallery_Area#1
- Room LINAC_Gallery_Area#2
- Room LINAC_Gallery_Area#3
 - AC Panel ERP-J2
 - AC Panel ERP-J5
 - Rack L3:BC:RA:1
 - Rack L3:BC:RA:2
 - Rack L3:BC:RA:3
 - Rack L3:CO:RA:1
 - Rack L3:DU:RA:1
 - Rack L3:DU:RA:2
 - AC Panel L3:EL:SO1
 - Rack L3:HV:RA:1
 - Enclosure L3:IC1
 - Rack L3:IO:RA:1
 - Rack L3:IO:RA:2
 - Rack L3:IO:RA:3
 - BUG300 2
 - BUG300 4
 - BUG300 4
 - HP8648D 7
 - DG535 16
 - DG535 17
 - T0
 - A
 - B
 - AB+
 - AB-
 - C
 - D
 - CD+
 - CD-
 - Ext Trig
 - Trig Inhibit
 - T0 (Back)
 - A (Back)
 - B (Back)
 - C (Back)