



Naming

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What's a Name?

- NAME † : The particular combination of sounds employed as the *individual designation* of a single person, animal, place, or *thing*.
- We must *identify things* in an *area of interest*, for *referenceability* enforcing a common understanding between different *actors* that *interfere* with these things and find *information* about them.

Parts - Assemblies
Functional Equipment
I/O Channels

Equipment Specialist
Accelerator Operator
Application Software

Assign identifier
Make unique
Show importance

Cryogenics
Controls
CERN-wide

Design
Produce
Install
Check
Control

Properties
Navigation
Documents
Drawings
Procedures

† Oxford English Dictionary



Importance of a Name

- "What's in a name? That which we call a *rose* By any other word would smell as sweet."

gremlin

--From *Romeo and Juliet* - 1595 - William Shakespeare

- Giving a name is a *convention*.
 - It must be *known* by the interested *actors*
 - These actors are part of the *same environment*
 - No agreement on the chosen name between all actors is necessary
- Once something has a name, it has it for life...



Naming versus Coding


- CODE† : a *list of letters* or other expressions in a code, arranged as a key for *encoding* and *decoding*.
- With a code, we can name and thus *identify things* while putting some *logic* inside the denomination, which can be understood or interpreted.
- Similar limitations as for a name apply
 - The *scope* must be defined
 - The *convention* must be defined
 - All *actors* must *know* the scope and the associated convention
 - A code is often *hard coded* on paper, in our mind,...
 - Workarounds* through lookup needed: alias, synonym

† Oxford English Dictionary



Coding Example



- What does this code mean to you? **346.MBD.75**
- And now, what does it mean? 
- The scope is clear: *French car license plate*
- The coding convention is clear... *for a Frenchie*
 - 75 : *the owner lives in Paris*
 - MBD : *quite recent license plate*
 - Difficulties when owner moves to another department
- This coding schema will be *abolished* in 2006/2007 and replaced by a *France-wide sequential coding format*:
AA 123 AA



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Naming for LHC-CP



- What is the **scope**?
 - LHC Controls environment
 - Hooked up to *installed, functional* LHC equipment
 - Managed by AB, related to CERN-wide facilities
- Who are the **actors**?
 - CERN people: Equipment Specialists, Operators, Managers
 - Software: Front Ends – Middleware - Applications
- What are the **existing conventions**?
 - LHC Quality Assurance documents on naming
 - Equipment group internal definitions

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Existing Documents



Document	Title	Naming Example
LHC-PM-QA-206	LHC Part Identification	HCMCSME001-AA000001
LHC-PM-QA-204	Equipment Naming Conventions	MCSBA.13L1.B1
LHC-QI-QA-0002	Naming Conventions for Cryogenic Instrumentation	MB.C32L1/TE821 (In cryo-assembly LBBLA.32L1)
LHC-QRL-QA-0004	Naming Convention for the QRL	QRLAC.E31R3/CV911
LHC-DQ-ES-0003	Description of QPS Signals in LHC	UExt, QD0,... from DQQDL

This is the type of signal we want to get to in order to obtain information after a quench



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QPS Signals



- The QPS guarantees the integrity of the superconducting elements in case of a quench.
 - Total number of signals: **76000**
 - Signals generating alarms: **37000**
 - Signals to be logged: **58000**
- Acquisition & monitoring system is being defined
- Display information in Control Room:
 - **Alarm! Quench detected on MB.A12R1**
 - Additional, related information:
 - ↳ Signals **QD0, UExt, Uint, PwrPerm,...** , their trends
 - ↳ Module **DQQDL.A12R1** (under cryo-assembly)
 - ↳ Controller **DQAMC.D.RR13** (in RR area)
 - ↳ Gateway **DQGTW.UJ16** (in Uj junction area)
 - ↳ **Oops... DQGTW.SR1** (in surface building)

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My point is that...



- ☑ The **amount of information** in LHC is huge
- ☑ The relations between the information is multiple and depending on the user's point of view
- ☑ **Identification** is needed
- ☑ A naming/coding schema is a **convention**
- ☑ We can argue for hours... years and still not agree
- ☑ The "name" cannot be a **mnemonic** any more
- ☑ Existing names must be published and used as **reference**
- ☑ Related information for different usage must be **centralized, published** and **accessible**
- ☑ Names could be assembled from the info, **on the fly...**

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Equipment Codes

Reset Set as Top Search Login GUEST

Equipment Codes

Cryogenic Instrumentation

- QI Cryogenics Instrumentation
 - QIF Cryogenic Instrumentation - Flow
 - QIFEC Cold Flowmeter
 - QIFEW Warm Flowmeter
 - QIH Cryogenic Instrumentation - Electrical Heaters
 - QIHC QIHC
 - QIHEF Foil Heater
 - QIL Cryogenic Instrumentation - Level
 - QILEH LHe-Levelmeter
 - QILEN LN2-Levelmeter
 - QIP Cryogenic Instrumentation - Pressure
 - QIPEA Absolute Pressure Sensor

Tree Navigator - Microsoft Internet Explorer provided by CERN

Address: http://edmsoraweb.cern.ch:8001/LHCLayout/main.tree?cookie=18587348p_top_id=16474008p_top_type=START&open_id=16593348p_open_type=CRYOASSY

Top Assembly : Main Info

Name of the Assembly: LBBLA
Description: Arc Dipole type B Cryo-Assembly, Anode on the Left, Cryo-Magnet Extremity Type A **Half Cell:** 32L1

Physical Parameters Beam Related Components Interconnects Electrical Circuit Interfaces Sen

Cumulated Distances in Metres from IP1 in s-coordinate along the Collider "Source Layout Database"

Magnets

MB.C32L1 - Main Dipole Coldmass (MB.C32L1.B1 and MB.C32L1.B2)

Double Aperture on Two Beams	
LHC Version	6.401
Magnetic Centre (m)	25110.4525
Magnetic Length (m)	14.3

MCS.C32L1.B1 - MBB, (Spool Piece Corrector)

Beam 1	
LHC Version	6.401
Magnetic Centre (m)	25117.8765
Magnetic Length (m)	.11

MCS.C32L1.B2 - MBB, (Spool Piece Corrector)

Beam 2	
LHC Version	6.401
Magnetic Centre (m)	25117.8765
Magnetic Length (m)	.11