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Device Naming Convention for the

CLARA Facility

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#### *Introduction*

In order to ensure consistent naming of devices within the CLARA facility, the associated engineering infrastructure and possible future developments and facilities it is essential that a formal naming convention is defined and used from a very early stage of the project.

This document describes a device naming structure that builds on previous experience with SRS, Diamond, ALICE/EMMA and VELA.

It is expected that its use will include (but not be limited to):

* Engineering drawings
* Control System parameters
* Project documentation
* Permits to Work (PTW)
* Equipment labelling

#### *Constraints*

* Maximum length of 24 characters
* Shall consist only of UPPERCASE letters (**A-Z**), numerals (**0-9**) and the hyphen character (**‘-‘**)
* All device names shall be unique
* All sections of the name are compulsory. Whenever a particular part of the name is not appropriate it shall be filled with Xs.

#### *Device Name Syntax*

All device names will have the following format:

**FFF-DDD-TTT-CCCCC-NN**

Where,

FFF = Facility name

DDD = Domain (or major sub-section of the facility)

TTT = Technical area

CCC = Component name

NN = Numeric identifier

***EPICS Process Variable names***

Within an EPICS control system an optional property name can be appended to the end of a device name. This allows individual items of data to be uniquely identified and accessed.

**FFF-DDDDD-TTTTT-CCCCC-NN:PPPPPPP**

Where,

PPPPPPP = Property name

#### *Facility Name (FFF)*

#### The facility name identifies the major facility to which the device belongs. A generic Infrastructure facility has also been defined to include all devices and systems that are associated with more than one facility.

#### Maximum length of 3 characters.

Valid Facility Names are listed in Table 1.

|  |  |
| --- | --- |
| Facility (FFF) | Description |
| CLA | CLARA |
| EBT | EBTF/VELA |
| LTF | Linac Test Facility |
| INF | Common facilities infrastructure |

Table 1: Facility (FFF)

#### *Domain Name (DDDDD)*

#### The domain name identifies major physical or functional sub-divisions within a facility.

#### Maximum length of 5 characters.

Valid Domain Names are listed in Table 2.

|  |  |
| --- | --- |
| Domain (DDD) | Description |
| S01-S99 | Straight 1 to Straight 99 (!) |
| L01-L09 | Linac Modules 1 to 9 |
| B01-B99 | VELA Control Rack 1-99 |
| C01-C99 | Control Rack 1 to 99 |
| LLS | Load-Lock System |
| LAS | Laser Transport |
| SRV | Services |
| C2V | CLARA to VELA transfer line |
| GUN | Electron gun |
| SFT | Safety |
| CTR | Control system |
| XXX | Not used |

Table 2: Domain (DDD)

#### *Technical Area (TTTTT)*

#### The technical area indicates the general scientific or technical function of the device.

#### Maximum length of 5 characters.

Valid Technical Area codes are listed in Table 3.

|  |  |
| --- | --- |
| Technical (TTT) | Description |
| LSR | Lasers |
| LRF | Low-level RF |
| HRF | High power RF |
| VAC | Vacuum |
| MAG | Magnet |
| PSU | Power Supplies |
| TIM | Timing & Synchronisation |
| DIA | Diagnostics |
| AIR | Compressed air |
| H2O | Cooling water |
| AC | Air conditioning |
| ELC | Electrical systems |
| PSS | Personnel Safety |
| CSH | COSHH Systems |
| NET | Network |
| SVR | Servers |
| CON | Consoles |
| IOC | EPICS IOCs |

#### Table 3: Technical Area (TTT)

***Component Name (CCCCC)***

The component name describes the principal function of the device. Within each individual technical area it is expected that there will be a wide range of distinct device types, each of which will be allocated a unique and descriptive name. It is expected that as the project design is developed a list of approved component names is maintained for each individual technical area.

Maximum of 5 characters.

Typical examples are shown in table 4 below.

|  |  |
| --- | --- |
| Component (CCCCC) | Description |
| ATT | Attenuator |
| DLY | Pulse delay |
| PHS | Phase |
| DIP | Dipole magnet |
| QUAD | Quadrupole magnet |
| SOL | Solenoid magnet |
| BSOL | Bucking solenoid magnet |
| HCOR | Horizontal corrector |
| VCOR | Vertical corrector |
| GCTLR | Vacuum gauge controller |
| IONPC | Ion Pump controller |
| PIRG | Pirani vacuum gauge |
| IMG | Inverted Magnetron gauge |
| IONP | Ion Pump |
| RGA | Residual gas analyser |
| NEG | NEG pump |
| PFV | Power fail valve |
| TMP | Turbomolecular pump |
| SCRL | Scroll pump |
| MPRG | Micro Pirani Gauge |
| VALV | Vacuum gate valve |
| SHUT | Beam shutter |
| HBPM | Electron BPM |
| VBPM | Vertical BPM |
| FCUP | Faraday Cup |
| ICT | Integrating Current Transformer |
| BAM | Beam Arrival Monitor |
| WCM | Wall current monitor |
| SCR | Diagnostic screen |
| YAG | YAG Screen |
| COL | Collimating slit |
| LBX | Light box |

Table 4: Typical Component names (CCCCC)

#### *Numeric Identifier (NN)*

This is a two digit number between 01 and 99 that is used to indentify unique instances of a device. It is recommended that devices be numbered in strictly numeric order starting at 01 unless there is a good reason to adopt non-sequential numbering schemes.

Maximum length: 2 digits

***Property (PPPPPPP)***

The property field is only used within EPICS to identify specific data values and control system configuration information. It is separated from the main part of the device name by a colon (‘:’).

Maximum length 7 characters.

#### *Examples*

**CLA-GUN-LSR-SLIT-01**

**CLA-XXX-LRF-FREQ-01**

**CLA-L02-HRF-PHAS-01**

**CLA-S03-VAC-IONP-01**

**CLA-CTR-SVR-FILES-02**

**CLA-SRV-H20-TEMP-03**

The following are examples of the use of the optional property field.

**CLA-S01-VAC-IONP-01:VOLTS**

**CLA-S03-DIA-HBPM-01:POSN**

**CLA-GUN-LSR-SHUT-01:STATUS**

**CLA-S01-MAG-DIP-01:INTLK01**