

# CLS Naming and Numbering Convention

0.2.1.1 Rev. 4

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## 1.0 ABSTRACT

This note outlines the nomenclature for all components used at the Canadian Light Source (CLS). It is based on the following arrangement:

ABCDxxx.y-zz

where ABCD is an alphabetical string corresponding to the abbreviated element, xxx.y is the numeric geographical area, and -zz is the numeric equipment number. This system allows for expansion due to new areas and other elements unknown at this time.

## 2.0 INTRODUCTION

One critical aspect of the Canadian Light Source (CLS) is the naming and numbering convention used for the numerous components within the facility. This convention must be easily applied, expandable, and cover multiple disciplines. Information from some other synchrotron light sources around the world is included in Appendix A. For purposes of reviewing older documents and drawings, the naming convention used by the Saskatchewan Accelerator Laboratory (SAL) is included in Appendix B.

## 3.0 CLS NAMING CONVENTION

The objective of the nomenclature is to provide a common naming system for all components within the lab. This system is concise but also provides information about the component. To accomplish this, the name is based on the geographic location within the CLS. This geographic location naturally breaks down to room numbers. Exceptions would be shielded enclosures and the beamline hall. This can be overcome by assigning areas a pseudo room number based on the sector of the ring or other natural/logical separations, such as shielding walls.

The naming and numbering system is based on the following arrangement:

ABCDxxx.y-zz

Where ABCD corresponds to the element name, which can be 1 to 4 alpha characters long (a complete list of approved acronyms used at CLS is stored in the MS-SQL based cables/equipment database, <http://srv-apps-01.cls/cables/index.jsp>), followed by a geographical location such as room number, or area which can be subdivided into 9 areas using the optional decimal location, followed by a dash and at least a two digit equipment number. Table 1 provides a sample of the break down.

**Table 1 Component identification and naming scheme**

Desc (Max 3 digit)	Elevation/Area (1 digit)	Geo Loc (1 digit)	Sub-Location (2 digit)	Sub-division optional	EQ# (2 digit)
P – Panel	0 - Below Grade	0 - room numbers	Room Number	1-9	01-99
QFA – Quadrupole Focusing (Family A)	1 - Main Floor	1 - room numbers	01-12 SR1		
SF – Sextupole Focusing	2 - 2nd Floor	2 - room numbers	01-4 BRI		
R – Rack	3 - 3rd Floor	3 -Booster & BTS1	01-12 Main Floor		
IOP -Vac Ion Pump	4 - 4th Floor	4 – SR1			
TSP -Titanium Sublimation Pump	5 - undefined	5 - inside SR1 outside shielding			
	6 - Outside Area	6 – main floor outside SR1 shielding			
	7 – undefined	7 - undefined			
	8 – undefined	8 - undefined			
	9 - Special Area	9 - undefined			

Components that do not have a fixed location (e.g. mobile radiation monitors) use **0000** as their geographic location.

Exceptions to this identification scheme are EPICS variables, ICT data connections, cable and terminal blocks. The identification schemes for EPICS variables and ICT data connections are covered in sections 4.0 and 5.1 respectively. For cables and terminal blocks the system contains 9 characters, the first location contains an alpha character and the remaining characters are numeric and in sequential order. In these cases the arrangement is:

Cables - Cnnnnnnnn

Terminal Blocks - Tnnnnnnnn

The beamline hall is a large area that must be sub-divided into smaller areas, which can then be referenced by the numbering scheme. One method to divide the beamline hall is to use the sectors of the storage ring and the beamlines originating from these sectors as the divisor, as Table 1 indicates. Figure 1 illustrates the sectors of the SR1 ring. In this figure the shading represents the area outside of the shielding and any labs or rooms created in the beamline hall. The area on top of the booster ring and storage ring shielding is considered to be on the second floor of SR1, and is divided by storage ring sectors.

The following examples clarify the naming convention:

2<sup>nd</sup> Focusing family A quadrupole magnet in SR1's 11<sup>th</sup> sector: QFA1411-02

7<sup>th</sup> panel in the 2<sup>nd</sup> sub area of the control room: P1109.2-07

2<sup>nd</sup> power supply on shielding in the 12<sup>th</sup> sector: PS2412-02

Cable 1018: C00001018

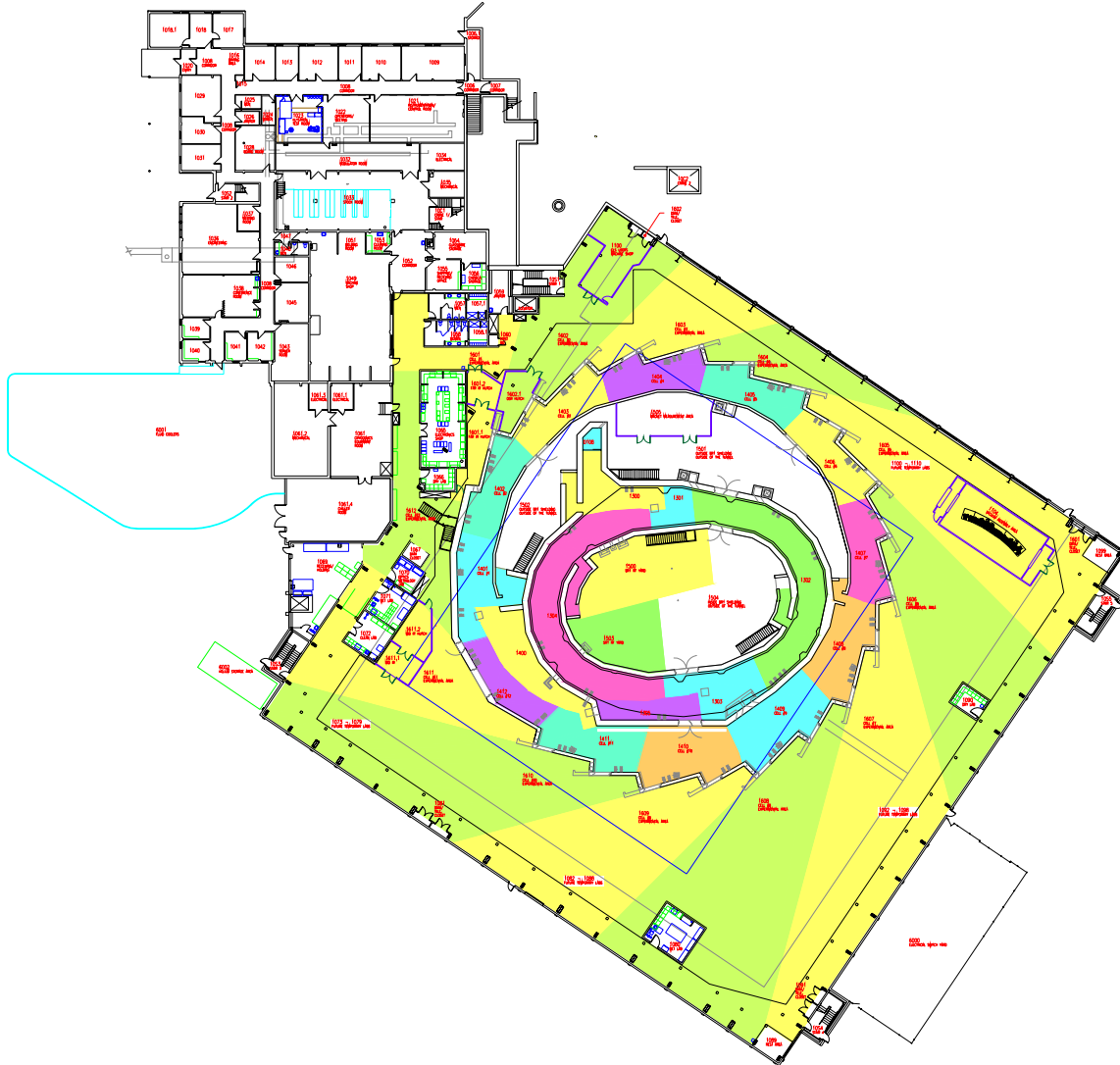


Figure 1 Division of beamline hall based on storage ring sectors.

### 3.1 BEAMLINE NAMING

Each beamline is given a number of the format ##AA.#. The initial two digit number refers to the sector containing the photon source point for the beamline. The next two alphanumeric characters (referred to as AA above) describe the physical device that generates the synchrotron radiation. These characters can be one of the following: ID for insertion devices, B1 for the first bending magnet in the sector or B2 for the second bending magnet. The final number is an ordinal number (beginning at 1) which orders the beamlines coming from a specific type of physical device. For example, if sector 11 in the ring has two insertion devices, those beamlines would be referred to as 11ID.1 and 11ID.2 respectively. If the first bending magnet in that sector has an IR beamline and an x-ray beamline, those lines would be referred to as 11B1.1 and 11B1.2 respectively.

## 3.2 BEAMLINE EQUIPMENT NAMING

Beamline components will follow a naming convention similar to other CLS equipment , with the following addition:

ABCxxx.y-PNB-nn

Where ABC is the equipment acronym

xxx.y gives the location i.e. the room number and sub-room number (as discussed above)

P denotes the beamline type or beamline equipment not associated with an individual beamline and is given as either:

- I for Insertion device beamline,
- B for Bending magnet beamline,
- R for Infrared beamline, or
- E for Mobile Endstation.

When **P** denotes a beamline, N denotes a beamline number where:

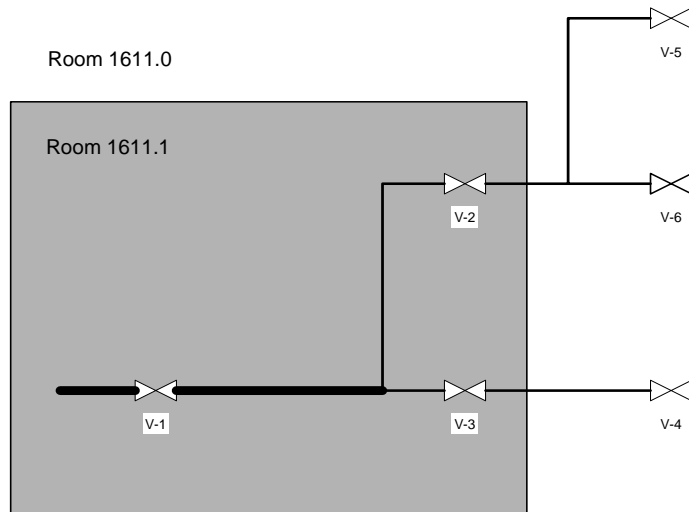
- for Insertion Device beamlines
  - 0 would indicate that it is common to both ID beamlines
  - 1 would indicate insertion device 1
  - 2 would indicate insertion device 2
- for Bending magnet beamlines
  - 0 not used
  - 1 would indicate bending magnet 1
  - 2 would indicate bending magnet 2
- for Infra-Red beamlines
  - 0 is not used
  - 1 would indicate IR port 1

When **P** denotes a beamline, B denotes a sequential branch number. Each time a beam is split, the resulting beams will be renumbered with the next available branch number. If possible, assigned from the upstream to downstream order, or chronologically.

- 0 would indicate the portion of the beamline or branch which is in common with all end stations on that beamline.
- 1-9 would represent the subsequent branches of the beamline.

When **P** denotes an Endstation, NB denotes the mobile endstation number.

nn denotes a sequential component order number. If possible, assigned from the upstream to downstream order, or chronologically.

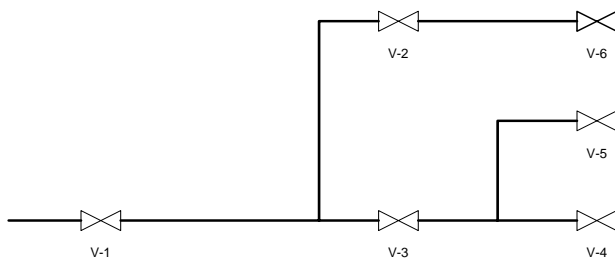


**Figure 2 Valve numbering example for ID Beamline**

Figure 2 shows a number of valves on a beamline. Assume that the beamline is connected to an insertion device in section 11 and that both ID11-1 and ID11-2 pass through V-1 and then are split. Also V-1, V-2, and V-3 are inside the first optical enclosure 1611.1. Then the designation for each valve would be as follows:

V-1 = VVR1611.1-I00-01  
 V-2 = VVR1611.1-I10-01  
 V-3 = VVR1611.1-I20-01  
 V-4 = VVR1611.0-I20-01  
 V-5 = VVR1611.0-I11-01  
 V-6 = VVR1611.0-I12-01

Room 1611.3



**Figure 3 Valve numbering example for Bending Magnet Beamline**

Figure 3 shows a number of valves on a beamline. Assume that the beamline is connected to bending magnet 1 in section 11 and all valves are in 1611.3. Then the designation for each valve would be as follows:

V-1 = VVR1611.3-B10-01  
 V-2 = VVR1611.3-B11-01  
 V-3 = VVR1611.3-B12-01  
 V-4 = VVR1611.3-B14-01  
 V-5 = VVR1611.3-B13-01  
 V-6 = VVR1611.3-B11-02

As an example of mobile endstation numbering, a detector system would have a common name component of 0000-E01- in the name of each device permanently part of the endstation. The motors would start numbering at SMTR0000-E01-01; the ion pumps would start numbering at IOP0000-E01-01, etc. The components that are part of the beamline would have their regular numbering.

### 3.3 AREAS OUTSIDE THE MAIN BUILDING

Areas outside the building envelope are assigned room numbers in the 6000 series using the following scheme:

- 60xx series - Ground Level Fenced in Areas
- 61xx series - Areas above a single story part of the building
- 62xx series – Areas above a two story part of the building
- 63xx series – Areas above a three story part of the building

### 4.0 OPERATOR SCREENS AND EPICS DATABASE

The representation of the naming scheme on operator screens, control system documentation and in the EPICS database is slightly different. This is due to restrictions in the EPICS environment. The period (".") is replaced with a dash ("-") and the second dash is dropped. All punctuation (dots and dashes) will be dropped from beamline component names in older applications – those originally coded using release 3.14.Beta1 of EPICS. Later releases of EPICS allow for longer names, and newer applications should replace periods with dashes, retaining all dashes for readability.

Therefore the following component names would become:

- VVR2400-01 becomes VVR2400-001
- VVR2400.1-01 becomes VVR2400-101
- VVR1611.1-B10-01 becomes VVR16111B1001 (R3.14.B1 versions of EPICS)
- VVR1611.1-B10-01 becomes VVRR1611-1-B10-01 (R3.14.6 and later versions of EPICS)

### 5.0 GENERAL COMPUTER NAMING CONVENTIONS

This general computer naming convention applies to office and general IT servers. This naming convention does not apply to control computers. Control computers follow the general equipment naming convention, modified as in the first 2 examples in section 4.0 (computer host names cannot contain a '.' character, which is the host and domain name separator). Control computer names do not contain the beamline portion of the designation.

## 5.1 NETWORK CONNECTIONS

Older installations use DCP (Data Comm. Panel, from the CLS Acronym Database) labeling for the RJ-45 connector-based analogue telephony and Ethernet cabling going into CLS data closets (from the rooms). Example:

- one end of DCP-1045-02A is in room 1045. It is the second panel or wall plate in the room, and "A" is the first outlet in or on the panel.

Only capital letters are used except I and O to avoid confusion with 1 and 0. The label appears on both ends (in the room and on the rack of equipment).

Newer installations are labeled with DPP (Data Patch Panel) numbering, which goes out from the "data closet" to the rooms. The template for the jack label is DPPrrrr.r-rr.uu.jj, where:

- rrrr.r-rr is the rack designation,
- uu is the rack unit position number (zero-padded, values 01 to 40 or 42),
- jj is the jack position number within the patch panel (zero-padded, values 01 to 24).
- Example: DPP1043.2-02.03.01

This label will be applied to the jack at the "user" end of a network drop. It tells the user (and more importantly, the IT staff) where the other end of the drop is located. This example denotes a network drop that originates in rack 1043.2-02 (i.e., Room 1043, sub-area 2, rack 02), rack unit 03 (i.e., third U from the bottom of the rack), patch panel location 01 (i.e., first from the left). The only labeling that is required in the data closet is the rack number; the uu and jj values can be quickly located manually, although the rack unit locations containing patch panels are often labeled for quick identification in a fully-populated rack and the patch panels jacks are numbered by the manufacturer.

## 5.2 SERVER NAMING

Server naming can follow one of two conventions, based on needs.

- Srv-function-NN where the function name is not operating-system or application specific and NN is optional if NN == 00. The first web server would then be srv-web and the 4<sup>th</sup> would be srv-web-03, regardless of the OS and application or system serving the files. -BK may be used in place of -01 where there are only two servers in a "main" and "backup" configuration.
- TLI-1021-102 where TLI is the appropriate Three Letter Initialization from the CLS Acronym Database, 1021 is the room, and 102 is the rack position.

## 5.3 CLIENT COMPUTER NAMING

Workstations (desktops) computers are named using the format WKS-Aein# where "A" is the letter code for the OS (W for Windows and L for linux) and "ein#" is EIN from the U of S asset tag.

Notebook computers are named as above except using "NBK" instead of "WKS" as above.

## 5.4 PRINTER NAMING

PRD-model-NN where model is the model designation, and NN is the number for that printer. PRD-hplj5000N-01 is the first HP LaserJet 5000N.

## 6.0 REFERENCES

1. Beamline Nomenclature Rules, 11/97. ALS website <http://alsintra.lbl.gov/nomenclature/rules.html> received in paper form from Mr. William Thur, Mechanical Engineer, ALS, 4 Feb 1999. See Appendix B.
2. Naming Convention for the BESSY II Components, 9 Jan 98, T. Birke. BESSY II website [http://www-csr.bessy.de/control/Docs/API/nam\\_conv.html](http://www-csr.bessy.de/control/Docs/API/nam_conv.html). See Appendix C.

## 7.0 APPENDIX A: NAMING CONVENTIONS AT OTHER SYNCHROTRON LABS

### 7.1 ADVANCED LIGHT SOURCE (ALS)

The ALS storage ring uses a naming convention based on the sector name followed by an element name and number. For example sector 8 is referred to as SR8, and can be broken down into SRS8, and SRC8 which correspond to the straight portion and curved portion of sector 8 respectively. This prefix is then followed by an underscore and the element name and number. These element names correspond to diagnostic, vacuum, and miscellaneous elements such as beam position monitors (BPM), vacuum valve remote (VVR), etc. Thus the second remote vacuum valve in the curved portion of sector 8 of the storage ring would be SRC8\_VVR2. Appendix A lists the current abbreviations used for elements at the ALS.

A unique designator identifies each beamline component, at the ALS. This is based on a 14 character string of the form BLXX.Y\_xxxxMNP<sup>1</sup>, where XX is the ring sector, Y is the beamline port, xxxx is the element name, and MNP is a unique component order number (restarted for each beamline). The unique component order number is determined by the following:

- M = 0 : Indicates beamline frontend components shared by all branchlines
- = m : Indicates branchline 'm' components
- N = 0 : Indicates per branchline components shared by all branchline endstations
- = n : Indicates endstation 'n' components
- P = p : Sequential component order number. If possible, assigned from upstream to downstream order, else chronologically.

The following list shows the existing component names and abbreviations used in the ALS nomenclature. It was obtained from Mr. William Thur (Mechanical Engineer, ALS), in paper form date Thursday, February 4, 1999.

1NM	45 Degree Mirror	IP	Ion Pump
AC	Analog Control	IR	Infrared Port
AM	Analog Monitor	KE	Kicker, Extraction Magnet
AP	Aperture plate	KI	Kicker, Injection Magnet
APA	Adjustable Photon Aperture	KL	Kicker, Longitudinal
AS	S-Band Accelerator	KT	Kicker, Transverse
B	Bending Magnet ( Gradient or Dipole)	LCW	Low Conductivity Water
BC	Boolean Control	LD	Lep Detector
BEL	Bellows Assembly	LL	Laser Light
BIM	Wall Current Monitor	LLE	Laser Light Enclosure
BL	Photon Beamline	LLME	Laser Light Mirror Enclosure
BLBR	Beamline Branch (EPS)	LLS	Laser Light Shutter
BLES	Beamline endstation (EPS)	LN	Linac
BLEE	Beamline Front End (EPS)	LTB	Linac To Booster
BM	Boolean Monitor	LW	Leaded Window
BPM	Electron Beam Position Monitor	M	Mirror
BR	Booster Ring	MASK	Photon Mask (Water Cooled)
BRFE	Branchline Front End (EPS)	MONO	Monochromator
BS	Bremsstrahlung shielding	MT	Mirror Tank
BSM	Beam splitting Magnet	NEG	Non Evaporative Getter
BTP	Back Tangent Port	OEM	Off-Plane Eagle Monochromator
BTS	Booster To Storage Ring	PBPM	Photon Beam Position Monitor (Beamlines)
BUMP	Bump Magnet	PLC	Programmable Logic Controller
BW	Beryllium Window	PP	Pepper Pot Collimator
CCG	Cold Cathode Gauge	PRSW	Pressure Switch
CE	Clearing Electrode	PS	Photon Shutter
CG	Convectron Gauge	P55	Personnel Safety Shutter
CHIL	Recirculating Chiller	PST	Photon Stop
COLL	Bremsstrahlung Collimating Spool	PSTWC	Photon Stop Water Control
CP	Cryo Pump or Cryogenic Pump	PZT	Piezoelectric Transducer
CPTS	Cryo Pump Temperature Sensor	QD	Quadrupole Defocusing
CV	Cryo Valve or Cryogenic Valve	QF	Quadrupole Focusing
DCCT	Direct Coupling Current Transformer	QFA	Quadrupole Focusing - Type A

DIAG	Photon Beam Diagnostic Device	RFC	Radio Frequency Cavity or RF Cavity
DSC	Diagnostic screen	RGA	Residual Gas Analyzer
DTVVM	Diagnostic Tree Vacuum Valve Manual	RP	Roughing Port
DTVVR	Diagnostic Tree Vacuum Valve Remote	RSS	Radiation Safety System
EG	Electron Gun	RVM	Roughing Valve Manual - (Does Not Intercept Beam)
ENTRSJ	Entrance Slit	RVR	Roughing Valve Remote - (Does Not Intercept Beam)
EPBI	Errant Photon Beam Interlock	SEUN	S-Band Buncher
EPS	Equipment Protection System	SCR	Scraper
EPU	Elliptical Polarization Undulator	SD	Sextupole Defocusing
ES	End Station	SEK	Septum Magnet Thick (Booster)
EW	Elliptical Wiggler	SEN	Septum Magnet Thin (Booster)
EXITSI	Exit Slit	SF	Sextupole Focusing Magnet
EZ	Exclusion Zone	SGM	Spherical Grating Monochromator
FAP	Fixed Aperture Plate	SHB	Subharmonic Buncher
FC	Faraday Cup	SHIELD	Uncooled Beam Stop
FE	Front End	SIK	Septum Magnet Thick (Storage Ring)
FTR	Filter	SIN	Septum Magnet Thin (Storage Ring)
FV	Fast Valve	SOL	Focusing Solenoid
FVS	Fast Valve Sensor	SP	Spool Piece
GR	Grating	SPH	Sabersky Probe Horizontal
G	Girder	SPV	Sabersky Probe Vertical
GDS	Gap Drive System	SQSD	Skew Quadrupole - Sextupole Defocusing
GF	Gas Filter	SQSF	Skew Quadrupole - Sextupole Focusing
GTL	Gun to Linac Transport	SR	Storage Ring
HAC	Horizontal Collimator	SR08	Storage Ring Sector 8
HBDA	Horizontal Beam-Defining Aperture	SR08C	Storage Ring Sector 8, Curved Portion
HCM	Horizontal Corrector Magnet	SR085	Storage Ring Sector 8, Straight Portion
HCS D	Horizontal Corrector - Sextupole Defocusing	SR08U	Storage Ring Sector 8, Insertion Device - Undulator
HCS F	Horizontal Corrector - Sextupole Focusing	SRD8W	Storage Ring Sector 8, Insertion Device - Wiggler
IG	Ion Gauge	SS	Supplemental Shielding
ILC	Intelligent Logic Controller	SWT	Shield Wall Transition
TC	Thermocouple Gauge (Vacuum Measuring)	VBDA	Vertical Beam-Defining Aperture
TCAS	Thermocouple Aisle Side	VCM	Vertical Corrector Magnet
TCBBD	Thermocouple Backing Beam Downstream	VCSD	Vertical Corrector - Sextupole Defocusing
TCBBU	Thermocouple Backing Beam Upstream	VCSF	Vertical Corrector - Sextupole Focusing
TCBS	Thermocouple Beamline Side	VP	View Port
TGS	Toroidal Grating Spectrometer	VVM	Vacuum Valve Manual - (Intercepts Photon Beam)
TM	Thermal Monitor	VVR	Vacuum Valve Remote - (Intercepts Photon Beam)
TMB	Thermal Monitoring Bottom	W	Wiggler
TMP	Turbomolecular Pump	WCL	Water Cooled Load
TMS	Temperature Monitor System	WCM	Wall Current Monitor
TMT	Thermal Monitoring Top, 0 thru 8	WFS	Water Flow Switch
TSP	Titanium Sublimation Pump	XW	Window of "X" material
TV	Television Camera (Scintillator)		
TWE	Travelling Wave Electrode		
U	Undulator		
VAC	Vertical Collimator		

### Examples:

BL05.0 VVRO01 = First isolation valve on BL05.0 beamline front-end.

BL05.0 VVR002 = Second isolation valve on BL05.0 beamline front-end (outside shield wall after branchline beams have been split but still shared by all branchlines).

BL05.0\_PSS001 = First personnel safety shutter on BL05.0 (shared by all branchlines).

BL05.0-PSS201 = First personnel safety shutter on BL05.0.2 (shared by all 5.0.2 endstations).  
Optional designator for same component is 'BL05.0.2PSS201'.

BL05.0\_PSS211 = First personnel safety shutter on end-station BL05.0.2.1. Optional designator for same component is 'BL05.0.2.PSS211'.

BL05.0\_IG2045 = (fictitious) forty-fifth ion gauge on BL05.0.2. Example shows what happens when  $P > 9$ .

## 7.2 BESSY II

Information on BESSY II's nomenclature can be found at their website "[http://www-csr.bessy.de/control/Docs/API/nam\\_conv.html](http://www-csr.bessy.de/control/Docs/API/nam_conv.html)" following information is quoted directly from this site<sup>2</sup>. Their nomenclature is based on a symbolic name consisting of the following elements:

**Member:** A name of up to six letters ([A-Z] {1, 6})

**Index:** An index consisting of at most three digits and an optional two-digit sub-index, introduced by a dash ( [0-9] {0, 3} (-[0-9] {1,2} ) {0,1}, index)

**Family:** One character ([CGHIKLMNOPRVWYZ]) denoting the equipment family.

- C:** control system
- G:** geodesy
- H:** high (radio) frequency
- I:** insertion devices
- K:** kicker / septa
- L:** length (drift)
- M:** magnets
- N:** panels (wiring)
- O:** monochrometers
- P:** power supplies
- R:** radiation safety
- V:** vacuum
- W:** trigger-delays etc.
- Y:** technical
- Z:** diagnostics

**Counter (*optional*):** Up to two digits ( [0-9] {0,2} ) used as a counter.

**Subdomain (*optional*):** One optional character (D (doublet), T (triplet), S (sector) or X (rooms)) followed by at most three digits ([0-9]{0,3}) identifying the structural subdomain. If the subdomain is a room, the first digit denotes the level (1 = ground level, 2 = upper level) and the other two digits the room - number.

**Domain:** One character ([BCGILMRTV]) denoting the domain.

- B:** booster
- C:** control-room
- G:** gallery (storage-ring)
- I:** injector line
- L:** beamlines
- M:** microtron
- R:** storage ring
- T:** transfer line
- V:** virtual (e.g. non-existent)

These elements are concatenated in the following way:

**Member family [ counter ] [ subdomain ] domain**

[A-Z]{1, 6}[0-9]{0,2}(-[0-9]{1,2}){0, 1}[BCHIKLMNOPRVWYZ][0-9]{0, 2}([DTSX][0-9]{0,3}){0, 1}[BCGILMRTV]

So the minimum length of a symbolic name is 3 and the maximum length is 18 characters.

Exceptions: If both fields 'counter' and 'subdomain' are not empty, the 'subdomain' must start with the no longer optional character (D, T or S).

One or two digits between 'family' and 'domain' are treated the following way:

*If the domain is 'R' or 'B' (sectorized), the digits represent the 'subdomain' of the device. In any other case, the digits represent the 'counter'.*

Examples:

Q3MIT5R

resolves to: Q3 M1 T5 R

Quadrupole - Idx. 3 - Magnet - Cnt.: 1 - Triplet 5 - Storage Ring

VS2P2D3R

resolves to: VS2 P 2 D3 R

Y-Steerer - Idx. 2 - Power Supply - Cnt.: 2 - Doublet 3 - Storage Ring

U180ID4R

resolves to: U180 I D4 R

Undulator U180 - Insertion Device - Doublet 4 - Storage Ring

FOMZM

resolves to: FOM Z M

Foil Monitor - Diagnostics - Microtron

BM1D1R

resolves to: B M 1 D1 R

Dipole - Magnet - Index 1 - Doublet 1 - Storage Ring

CUMZI

resolves to: CUM Z I

Current monitor - Diagnostics - Injection line

HMI-2V1S2R

resolves to HM1-2 V 1 D2 R

Heating jacket - Idx. 1 - Subidx. 2 - Vacuum - Cnt.: 1 - Sector 2 - Storage Ring

HP3B

resolves to H P 3 B

Horiz. steerer - Power Supply - Sector 3 - Booster

**Note:** If the domain is e.g. 'I' (whether it makes sense or not), the digit '3' would not represent 'Sector 3', but 'Cnt.: 3' (see exceptions)!

## 8.0 APPENDIX B: EXISTING SAL NAMING AND NUMBERING SCHEME

This naming convention is no longer used at CLS. It is provided here for use when reviewing older documents and drawings. Not to be used on new designs.

The EROS labeling scheme at SAL is based on the following arrangement:

AXXX-AX

which is composed of one digit alpha element, one digit numeric system, two digit numeric location, and an optional one digit alpha function, one digit numeric family. Table 2 lists the existing assignments used for EROS at SAL. This existing name convention is too cryptic and too difficult to expand for additional components. Thus a new convention for the CLS must be determined, using the past experience of EROS and other synchrotron laboratories.

**Table 2. Existing EROS labeling scheme used at the Saskatchewan Accelerator Laboratory**

Element	System	Location	- Function	Family
A - Accessories (cameras etc.)	0 - Low energy	00-99	A-Z	0-9
B - Bending magnets (dipoles, magnetic septa)	1 - Linac			
C - Collimators	2 - E.C.S.			
D - Dodecapoles (quad/sex)	3 - Injection			
E - Electrostatic septum	4 - Ring			
F - Ferrite Monitor (toroid)	5 - Extraction			
G - Gate shutter valve	6 - Tagger line			
H - Heat sensor (thermocouple)	7 - Switchyard			
I - Ionization monitor (spill monitor)	8 - Dispersion chicane			
J - Slits jaws	9 - unassigned			
K - Kicker (ring fast kicker)				
L - Light monitor (synch. light)				
M - Multipole steering magnet				
N - Non-intercepting monitor (e.g. stripline)				
O - Orbit corrector				
P - Pump				
Q - Quadrupole				
R - R.R.				
S - Sextupole				
T - Tight seal valve				
U - Upset beam stopper				
V - Viewer				
W - Flying wire monitor				
X - Heat exchanger				
Y - unassigned				
Z - unassigned				

This existing name convention is too cryptic and too difficult to expand for additional components. Thus a new convention for the CLS must be determined, using the past experience of EROS and other synchrotron laboratories.