How to mess up a Naming Standard in 5 Easy Steps

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An *Excellent* (!!!??!!) Naming Standard was established early

- Mnemonic
- Hierarchical (to address “flat” EPICS names)

```
SystemPart:DevicePart:SignalPart
(A:B:C)
```

- Systems have many devices
- Devices have zero to many signals (“observable properties”)

- Name Instances should indicate device location
- Names represent function, not equipment
- Oriented to operations
Some Simple Examples (Lattice is Easiest)

- **System Name ("A") is:** (System) (_Subsystem)
  - Intention was to have a short, exhaustive list of possibilities
  - DTL_Vac; SCL_Cryo

- **Device Name ("A:B") is:** (DeviceType)(_DeviceInstance)
  - Instantiation schemes defined
  - DTL_Vac:GV62; CCL:PS_QH123; Ring:QV_A2

- **Signal Name ("A:B:C") is:** ("SignalName") (a string)
  - Allowed signal list defined for each device type
  - SCL:BPM301:Xavg_M2
Looked easy enough but…

- Everyone tried to apply this scheme in good faith…

  but

- … we followed these five easy steps to ruin:

  1. Keep it a secret
  2. Don’t control its use
  3. Impose an unrealistically universal syntax
  4. Ignore database requirements
  5. Get the database schema wrong
Step 1. Keep it a Secret

- Early document explained underlying ideas and philosophy. These were dropped from the official document.

- Document was prepared very early – those who later actually needed it were not around when it was formulated.

- Changes were made but not universally communicated. The document was not updated.
Step 2. Don’t Control it’s Use

- Document assumed a “Naming Committee” to oversee names, but this never really happened.

- Small deviations from the original intent were allowed, and these grew.

- Various heretical instantiation schemes were invented and allowed to continue.
  - Eg. Standard called for A_a:B123. We had all of:
    - A_a:B123 (The intent)
    - A1_a:B23
    - A_a1:B23
    - A_a1:B123 (Redundant)
Step 3. Impose a Universal Syntax

- One Syntax (or one set of name parts) probably cannot be applied sensibly to all devices.
  - An air conditioning unit is actually different from a BPM.

- Very creative people tried to force their cases into unsuitable formats.
Step 4. Ignore Database Requirements

DB Config Tools
(Capfast, GDCT, ExCeL, Access, Oracle, etc)

ORACLE

EPICS "db"

Editing, Entering

Scripts

Many methods and scripts

Kay’s Tool

Parser

Parsability needed here
Step 5. Get the Schema Wrong *(subtle but important)*

**“Accelerator Device”**

- **“Equipment ID”**
  - Bar Code, Serial Number

- EPICS Device Name
  - A1:B1
  - Eg. Quad
  - BPM
  - Klystron
  - Valve

**“Trackable Equipment”**

- **“Equipment ID”**
  - Bar Code, Serial Number

- “Tag Name”/PID Dwg
  - A2:B2
  - Eg. Gauge
  - Temp.

**“Signal Path”**

- **“Equipment ID”**
  - Bar Code, Serial Number

- A3:B3
  - Eg. ADC
  - PLC
  - IOC

“Signal/Channel” Name - A:B:C

“Observable Properties of Devices”
Summary

- Consider the database requirements in developing your naming scheme
- Do it early
- Document and Advertise
- Monitor closely
- Something is better than nothing…