



PJM PMU Registry for Automated Metadata Administration

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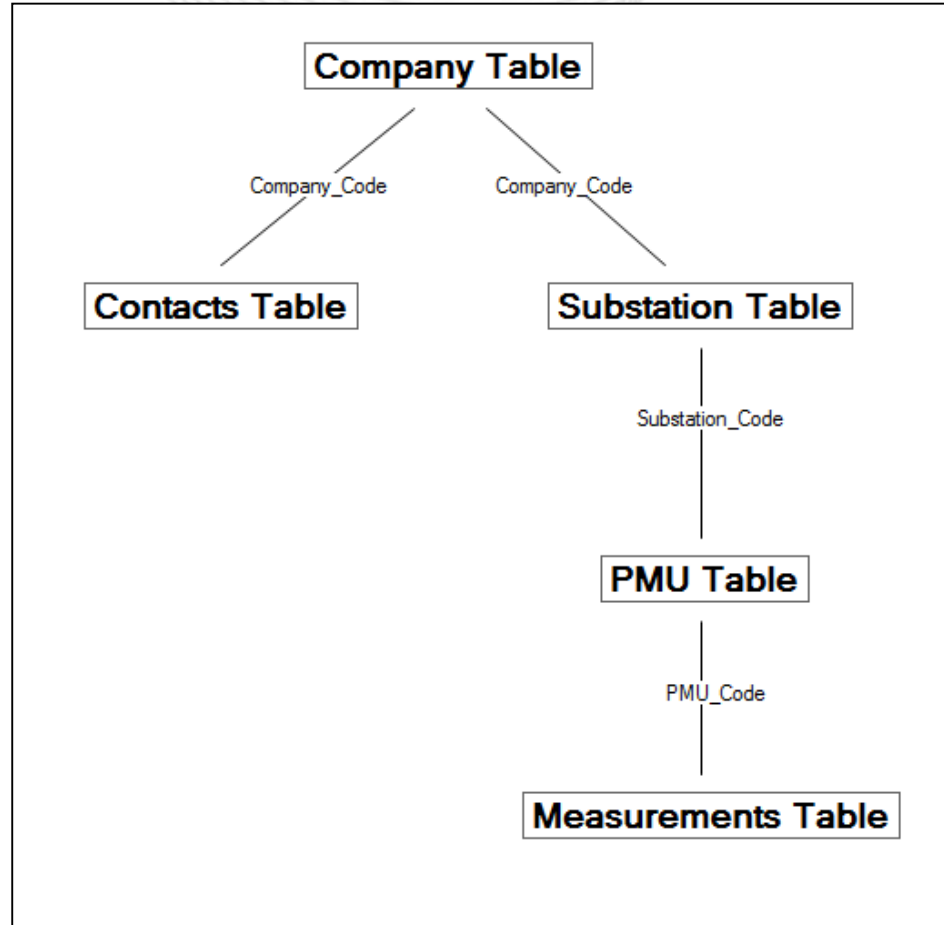
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- Houses metadata about PMUs and PDCs requisite for the full and best utilization of synchrophasor data.
- Like any other structured database, makes update/search/sort easy and safe.



PMU Registry v1.0.0.19042

PMU Registry

Issues Registry Create New

Registry

Companies > American Electric Power > AMOS > AA 05AMOS 01 > Signals (3)

- American Electric Power
- AMOS
- AA 05AMOS 01
 - Frequency
 - L76505CULLOD 111
 - L76505CULLOD 1V1

AA 05AMOS 01

American Electric Power

Associated Substation*
AMOS

Operational Status*
Active

PMU Code*
17601

PMU Name*
AA 05AMOS 01

Status Fields

PDC Code
18200

In-Service Date
[15]

Origin
DOE Project

PDC Type
Central (Main)

EMS

B1
AMOS

B2
765 KV

B3
PMU01

Equipment Information

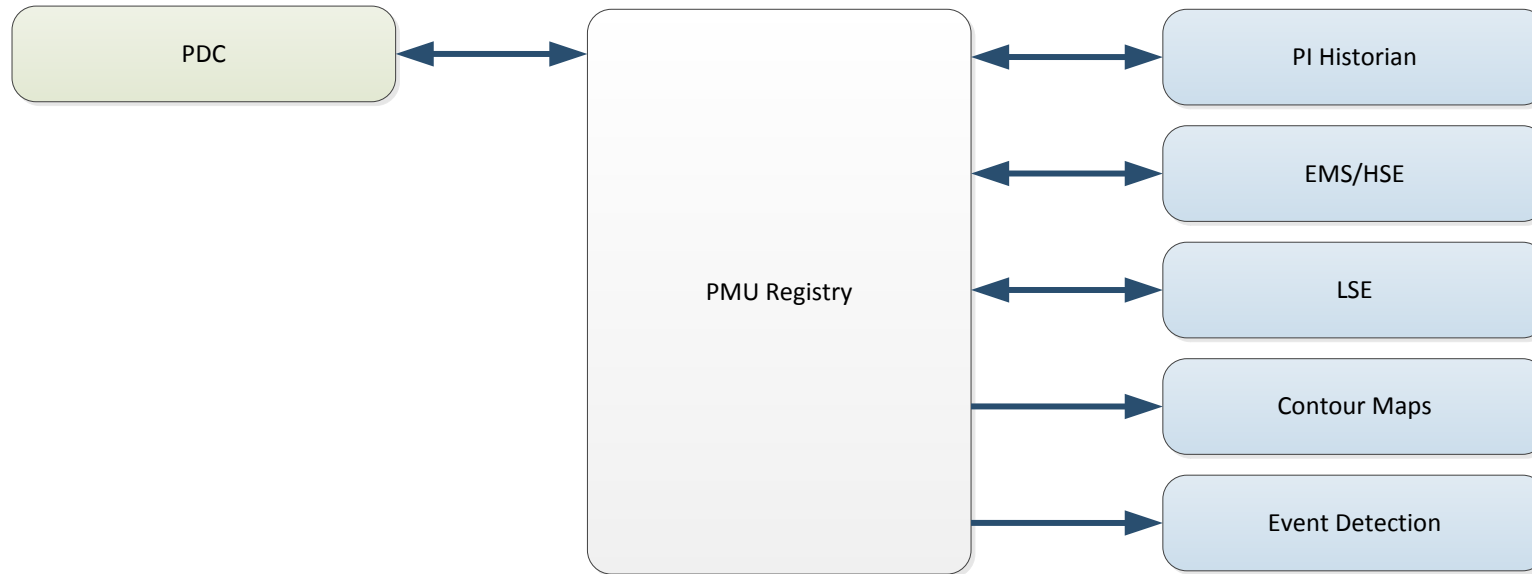
Manufacturer
SEL

Model
SEL-421

Delete Entry Cancel Save

- Makes possible auto-administration of metadata across:
 - many platforms and mapping methodologies
 - constantly changing field (PDC) status and configuration.

PMU Registry as the meta-data nanny.



- Check/alert human of:
 - New or missing PDC PMUs or Signals
 - Renamed PDC PMUs or Signals
 - IDCODE rule violations

The PMU Registry monitors the PDC (last CONFIG frames) and makes sure it has the best station/PMU/signal structure with all its other non-C37 metadata lined up.

PMU Registry
v1.0.0.19042

Create New

Issues Registry
Compare

New (208)

Issue	Last Updated	Issue Status	Actions
AP 01BELMNT 01 Name mismatch found	12/15/2016 13:38	New	
AP 01PRNTY 01 Code mismatch found	12/15/2016 13:38	New	
B1383BusPTA 1V1 New Signal found in PDC	12/28/2016 11:36	New	
B1383BusPTB 1V1 New Signal found in PDC	12/28/2016 11:36	New	
B1383BusPTC 1V1 New Signal found in PDC	12/28/2016 11:36	New	

Show "Mismatch Accepted"

B1383BusPTA 1V1

Duquesne > CRESCENT

Associated PMU*
DQ_15CRESCN_51

Operational Status*
Active

Signal Name*
B1383BusPTA_1V1

Status Fields

Measurement Type* Data Format

Data Representation

EMS

B1 B2 B3 Equipment Type End

Equipment Information

Line Side Identifier

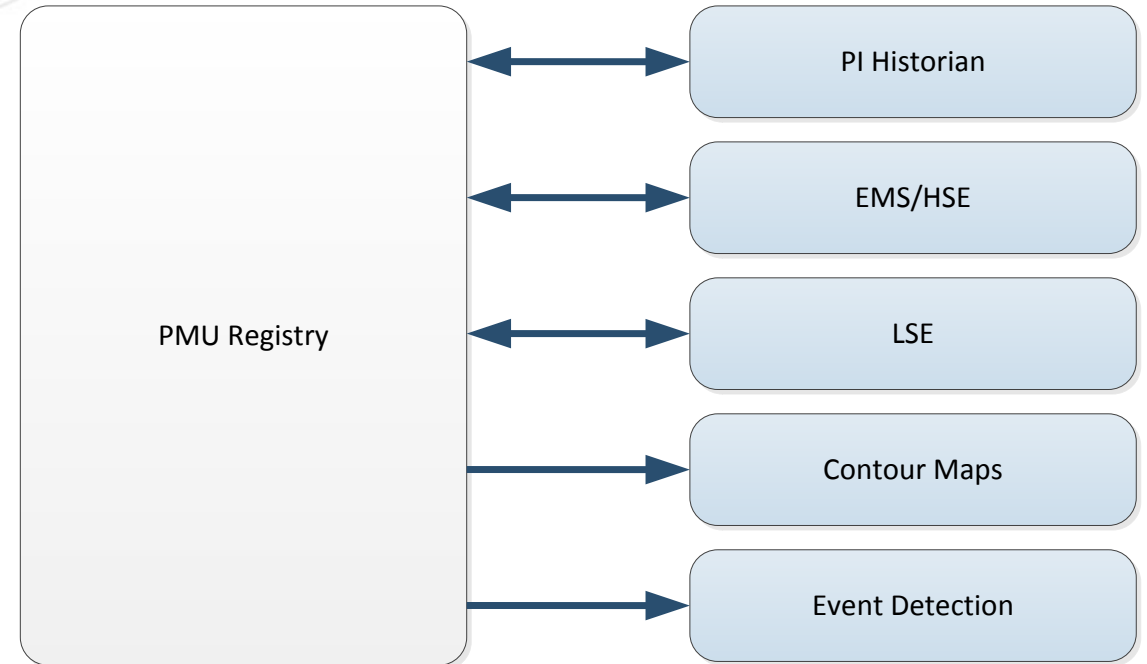
Bus Identifier Breaker 1 Identifier

Create and Run

Existing (0)

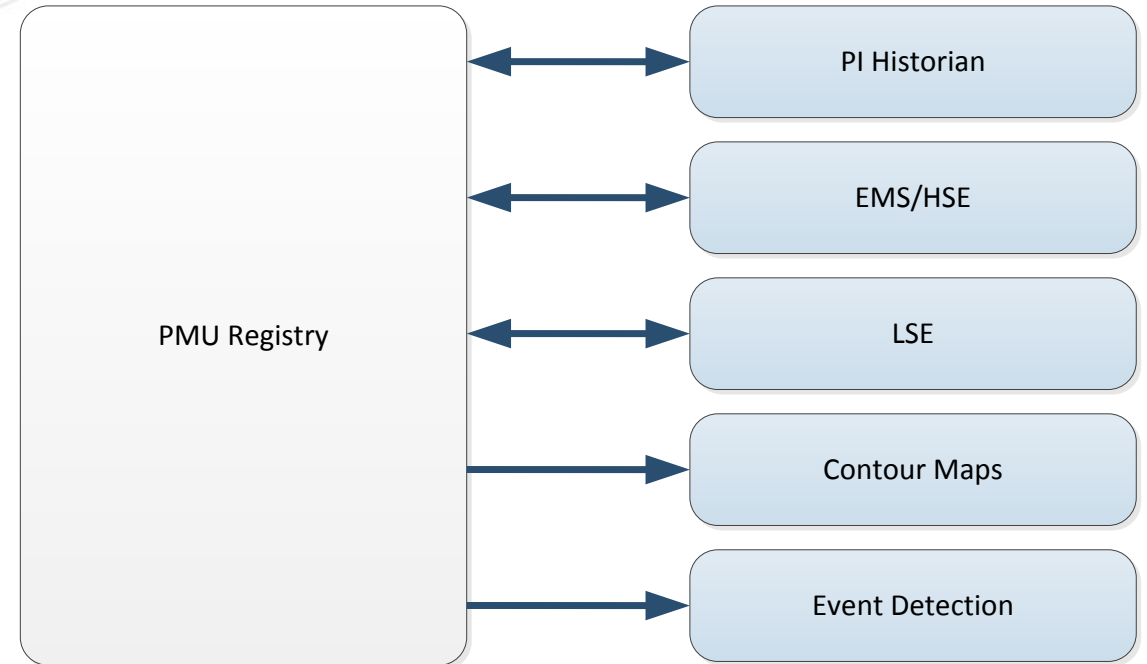
No issues to display

With the registry established as the best dataset, enforce it as the source for all applications and aggregate any possible quality checks in one place.



Example services/rules:

- One source of GPS coordinates, operational status, etc.
- Consistent core mapping across diverse systems (EMS mapped location, PI tag name, LSE location, etc.)



Because of the highly stratified PMU/PDC super-structure, the system is expected to continue to grow and change in manner where comprehensive controls will be difficult.

However metadata outside of the C37 data and measurements are completely critical to optimal (or even basic) use of the data.

Therefore the PMU registry needs these two features:

1. It needs to do automated quality control.
2. All downstream applications need to reference it for “admin once fix everywhere” time effectiveness.

- Do we need to register external PMUs? Yes. They are equally or more useful sources of data. How then do we initially exchange and then maintain with other PMU/PDC owners? (ex. the NASPI PMU XML exchange)
- Should we all be building the PMU Registry application on our own, or should we be sharing?
- Should there be a super-registry hosted by EIDSN? How would that relate to local applications?