**‡**Fermilab





## Hardware database with PID requirements and workflows

Paul Laycock, Vladimir Podstavkov, Jim Stewart, Steve White

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## PID information from the consortia

Project	System Name	System ID	Subsystem Name	Subsystem ID	Item Name	Item Type ID
D	FD1-HD Anode Plan Assemblies (base wire planes)	3	Completed APA	1	Тор АРА	1
D	FD1-HD Anode Plan Assemblies (base wire planes)	3	Completed APA	1	Bottom APA	2
D	FD1-HD Anode Plan Assemblies (base wire planes)	3	APA Frame	2	Head bar	1
D	FD1-HD Anode Plan Assemblies (base wire planes)	3	APA Frame	2	Foot bar	2
D	FD1-HD Anode Plan Assemblies (base wire planes)	3	APA Frame	2	High slot side bar	3
D	FD1-HD Anode Plan Assemblies (base wire planes)	3	APA Frame	2	Low slot side bar	4
D	FD1-HD Anode Plan Assemblies (base wire planes)	3	APA Frame	2	Ribs	5
D	FD1-HD Anode Plan Assemblies (base wire planes)	3	APA Frame	2	Conduits top	6
D	FD1-HD Anode Plan Assemblies (base wire planes)	3	APA Frame	2	Conduits bottom	7
D	FD1-HD Anode Plan Assemblies (base wire planes)	3	APA Frame	2	Mesh panels	8

- Managed by Jim, the *ItemType* corresponds to a *ComponentType* in the HWDB\*, the name of a *ComponentType* is a rationalized version of *Project.System.Subsystem.Item* names (must be unique)
- The first step in making any component is for Jim to define the *ComponentTypes* via these consortia spreadsheets
- This relies on the definitions of *Projects*, *Systems* and *Subsystems* which are similarly under Jim's control



\*A *ComponentType* is used across the whole HWDB so is a flattened version of the PID type hierarchy

## **PID and ComponentTypes**

Γ	D/I/L/P	001-999	001-999	00001-	-	00001-	-	AA-ZZ	001-999	-	00-99	00-99	001-999
				99999		99999							
	Project	System	Subsystem	Item	Dash	ltem	Dash	Country	Responsible	Dash	Detector	Final	Intermediate
		ID	ID	Type ID		Number		of Origin	Institution ID		ID	Destination	Destination
	F	F	F	F		F		F	F		М	М	М

- Once ComponentTypes have been created they (the types) will be managed by the consortia (limited to a select few)
- This is needed to define e.g. which sub-*ComponentTypes* are allowed in composite *ComponentTypes*, which tests are to be defined, etc.
- The initial managers should be defined at the time of ComponentType creation, could add to the spreadsheet
  - Managers can add more managers



## PID, ComponentTypes, Components

	ID	ID	Type ID		Number		of Origin	Institution ID		ID M	Destination M	Destination M
-	ID	, ID	Type ID		Number		, of Origin			ID		Destination
		1					,				-	
Project S	System	Subsystem	Item	Dash	Item	Dash	Country	Responsible	Dash	Detector	Final	Intermediate
			99999		99999							
D/I/L/P 00	01-999	001-999	00001-	-	00001-	-	AA-ZZ	001-999	-	00-99	00-99	001-999

- Once *ComponentTypes* have been defined it will be possible for users to create new *Components* (up to 99999 per type)
- The *ItemNumber* is automatically assigned, *Country of Origin* and *Responsible Institution ID* need to be defined by the user when they ask for new components
- At this point we have all of the immutable data which is appropriate to print off and label a component
  - Further data entry, mutable fields, QC tests, etc. made by users

