Part Breakdown Structure proposal

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Outline

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Description

◈ PBS is a proposal by LBNF/DUNE Integration group of a unique ID to be assigned to each part/component of detector.

◈ It is a 24-symbol alphanumeric identifier that consists of different data.

◈ It can be easily integrated to any existing database

◈ It is proposed that PBS plays a role of interconnection between different DBs, allowing each consortia/department to have their own DB structure, as well as their own ID.

◈ PBS also entails a barcode and a QR code

◈ PBS ID as well as barcode and QR code should be printed in the form of a sticker and glued on to the part.

Format

◈ PBS is not a random uuid, but, rather, a combination of alphanumeric characters, generated from existing data.

D/I/L/P	01-99	01-99	01-99	01-99	001-FFF	001-FFF	AA-ZZ	001-999	01-99	01-99
Project	System ID	Subsystem ID	Item type ID	Detector ID	Total number of items	Number of current item	Country of origin (from participating countries)	ID of participating Institute	Destination 1	Destination 2

According to feedback provided by Marco Verzocchi, 4096 is not enough for his consortia

According to feedback provided by Marco Verzocchi, destinations may not be known when ID is assigned

Compatibility

◈ PBS can be easily integrated into any existing database and software by adding additional column/field

◈ There is a central database that contains all IDs generated

◈ The website is developed in order to generate/decode IDs

Generator/Decoder

◈ The generator/decoder should have the following functionality:

    ◈ Generate PBS ID from human readable data

    ◈ Generate barcode and QR code from PBS ID

    ◈ Decode PBS ID to human readable data

    ◈ Decode PBS ID and human readable data from scanned barcode or QR code

    ◈ Export generated IDs to Excel file

◈ The website has already been developed and is available at https://cern.ch/dune-pbs-id-gen

◈ The mobile application is scheduled for development for both iOS and Android

Generator/Decoder

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This page allows you to generate DUNE PBS ID with barcode and QR code, as well scan and decode barcode and QR code.
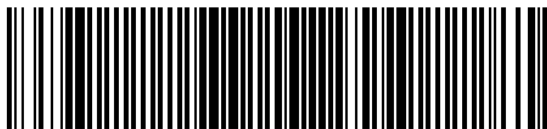
Generator

In order to generate ID, please choose from the following fields and click 'Generate':

Project	System	Subsystem	Item type	Detector	Total number	Item number
DUNE	CF-FS	Cryogenics North	warm structure vertical side wall beam type A	1-FS	999	001

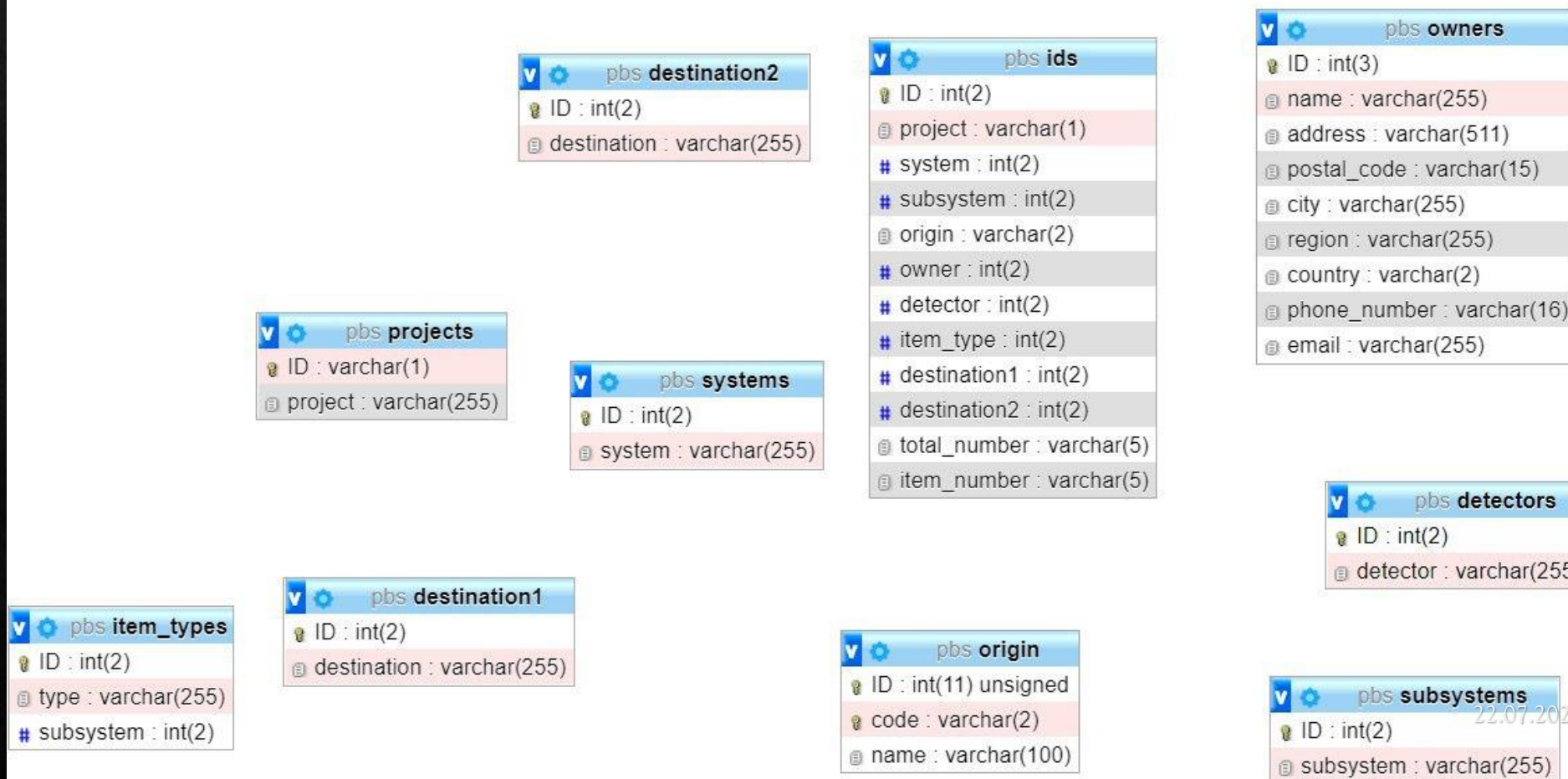| Origin	Owner	Destination 1	Destination 2
United States	Fermi National Accelerator Laboratory	FS-surface storage	FS-N-Cavern

Generate The ID will be here

D01010101999001US0010101

List of generated IDs:
D01010101999001AM0010101
D01010101999001US0010101
Export

Decoder

D01010101999001US00101 Decode

Project: DUNE
System: CF-FS
Subsystem: Cryogenics North
Item type: warm structure vertical side wall beam type A
Detector: 1-FS
Total number: 999
Item number: 001
Origin: United States
Owner: Fermi National Accelerator Laboratory
Destination 1: FS-surface storage
Destination 2: FS-surface storage

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DB snapshot

Feedback

◈ As seen on slide 4, some feedback has already been provided.

◈ If PBS is to be interconnectivity tool, then it should satisfy needs of every consortia

◈ Consequently, any feedback is appreciated and will be implemented in the following revisions of the format.