

# HWDB Python Command Line Interface

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# Upload Docket Tool

## Changes:

- Name of docket file no longer requires “--docket” parameter
- Some docket file keys have changed, e.g. “Encoder” is now “Encoder Name”

## Now supported:

- Scanning for existing serial numbers
- Encoders may now be stored in separate files for ease of reuse
- Merging test records w/ duplication detection & locking
- “Sparse” sheets
- JSON5, to allow for useful comments in docket files



# Serial Number Scan

The utility now downloads all HW Items for a given Component Type to check if a serial number has already been used.

- My tests peak at about 100 items per second, so if there were 50,000 items, it would take about 8 minutes
  - If you supply a list of serial numbers, it will bail out after it finds everything on that list, but most of the time, you would be supplying a new serial number :-)
- Changes to the REST API would obviously speed this up dramatically
  - If “serial number” were returned in the list of items, instead of having to fetch each item individually to get it
  - If one could search specifically by serial number



# File Separation

“Encoders” may now be in a separate file from “Sources.”

```
{
  "Type ID": "Z00100100003",
  "Sources":
  [
    {
      "File": "SiPM-item-manifest.xlsx",
      "Sheet": "SiPM-item-manifest",
      "Encoder Source": "encoders/Z00100100003/item-encoder.json",
      "Encoder Name": "item"
    },
    {
      "File": "MeasIV_test*.xlsx",
      "Sheet": "Sheet1",
      "Encoder Source": "encoders/Z00100100003/test-encoder.json",
      "Encoder Name": "results iv"
    },
    {
      "File": "MeasDCR_V-addendum.xlsx",
      "Sheet": "Sheet1",
      "Encoder Source": "encoders/Z00100100003/test-encoder.json",
      "Encoder Name": "results DCR"
    }
  ]
}
```

```
{
  "Type ID": "Z00100100003",
  "Encoders":
  [
    {
      "Encoder Name": "item",
      "Item Identifier": "SiPM Strip ID",
      "Grouping":
      [
        {
          "Members":
          {
            "SiPM Strip ID": "string",
            "Vendor": "string"
          }
        }
      ]
    }
  ]
}
```

```
{
  "Type ID": "Z00100100003",
  "Meta":
  {
    "encoder-version": "1.0"
  },
  "Encoders":
  [
    {
      "Encoder Name": "results iv",
      "Item Identifier": "SiPM Strip ID",
      "Test Name": "Results IV",
      "Grouping":
      [
        {
          "Name": "<Main>",
          "Key": "SiPM Strip ID",
          "Members":
          {
            "SiPM Strip ID": "string",
            "Content Manager":
            {
              "type": "string",
              "value": "hwdb-upload-docket version {hwdb-version}"
            }
          }
        }
      ]
    }
  ]
}
```



# Merging Test Data

When uploading test data for an existing HW Item that already has test data, the utility will merge the new data with the old. Potential duplication can be avoided via “locking.”

```
{
  "Name": "Test Results",
  "Key": ["Measurement_ID"],
  "Lock Keys": true,
  "Members":
  {
    "SiPM Strip ID": "string",
    "Measurement_ID": "string",
    "Date": "string",
    "Location": "string",
    "Operator": "string",
    "Setup": "string",
    "Thermal Cycle": "integer",
    "Aquisition Time": "float",
    "Weighted Threshold Charge": "integer"
  }
},
```

Any node created with a given key (“Measurement\_ID” in this case) will be locked after the current sheet is finished. New nodes with a different key can be added, but no more data can be added to the old key.



# Sparse Sheets

When uploading test data for an existing HW Item that already has test data, the utility will merge the new data with the old. Potential duplication can be avoided via “locking.”

External ID	Country	Institution	Manufacturer	Serial Number	Batch ID	SiPM Strip ID	Vendor	Documentation	SiPM_Location	Gromifier Color
	(IT) Italy	(63) Istituto		SMB00005-S13360_75H-01/22		SMB00005-S13360_75H-01/22	FBK	https://	1	red
									2	green
									3	blue
									4	yellow
									5	brown
									6	magenta
									7	cyan
									8	hazel
									9	black
									10	bronze
									11	purple
									12	indigo
	(IT) Italy	(63) Istituto		SMB00006-S13360_75H-01/22		SMB00006-S13360_75H-01/22	FBK	https://	1	grey
									2	mustard
									3	maroon
									4	gold
									5	blue

When a blank cell is encountered for a key, the remaining cells in that group will automatically be assumed to be the same.



# Thank you for your time!

Questions? Comments?





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