

BADA for Traffic Complexity

Traffic Complexity Score uses BADA coefficients for aircraft performance.

The scripts in this directory are used to extract the aircraft performance parameters in a CSV file that can then be imported in the relevant ORACLE schema.

Extract BADA dataset

Extract the BADA zip in a folder, i.e. `bada_3131`

This folder should now contains a set of files like:

```
$ ls -l bada_3131
total 6580
-rw-r--r-- 1 spi 1049089 2547 May 13 2013 A124__.APF
-rw-r--r-- 1 spi 1049089 4453 May 13 2013 A124__.OPF
-rw-r--r-- 1 spi 1049089 14376 May 22 2013 A124__.PTD
-rw-r--r-- 1 spi 1049089 5401 May 22 2013 A124__.PTF
-rw-r--r-- 1 spi 1049089 2547 May 15 2013 A140__.APF
-rw-r--r-- 1 spi 1049089 4453 May 15 2013 A140__.OPF
-rw-r--r-- 1 spi 1049089 10208 May 22 2013 A140__.PTD
-rw-r--r-- 1 spi 1049089 4087 May 22 2013 A140__.PTF
...
...
-rw-r--r-- 1 spi 1049089 2547 May 7 2013 YK40__.APF
-rw-r--r-- 1 spi 1049089 4453 Aug 22 2014 YK40__.OPF
-rw-r--r-- 1 spi 1049089 10729 Aug 25 2014 YK40__.PTD
-rw-r--r-- 1 spi 1049089 4251 Aug 25 2014 YK40__.PTF
-rw-r--r-- 1 spi 1049089 2547 May 7 2013 YK42__.APF
-rw-r--r-- 1 spi 1049089 4453 May 7 2013 YK42__.OPF
-rw-r--r-- 1 spi 1049089 12292 May 22 2013 YK42__.PTD
-rw-r--r-- 1 spi 1049089 4743 May 22 2013 YK42__.PTF
```

Sanity check

In order to make sure that there is no spurious data file or that the file format has not changed, you need to run the `sanity_check_PTF.awk` script

```
$ ./sanity_check_PTF.awk bada_3131/*.PTF
1 TBM8__ =====
1 YK40__ =====
1 YK42__ =====
```

1

0

0

AC_TYPE	FL	CRUISE_TAS	CRUISE_FUEL_LO	CRUISE_FUEL_NO	CRUISE_FUEL_HI	CLIMB_TAS	CLIMB_ROCD_LO	CLIMB_ROCD_HI
A124__	0	171	2204	1385	975	476.2	156	869
A124__	5	173	2202	1380	968	473.6	157	878
A124__	10	174	2201	1375	961	470.9	163	861
A124__	15	180	2304	1440	1012	467.2	175	829
A124__	20	182	2301	1434	1004	464.5	207	1261
A124__	30	230	143	3	197	3	246	7
A124__	40	233	143	0	197	0	246	4
A124__	60	272	160	7	201	9	239	6
A124__	80	280	159	8	200	9	238	6

The files `bada_ptf_3131.sh`, `bada_ptf_3131.bat` and `bada_ptf_3131.ctl` are an example.

If you want to reuse them, **Please change the relevant filepath in order to accomodate for the actual location of the CSV and log files and/or ORACLE table.**

In order to run the `bada_3131.csv` it then suffice to execute

```
$ ./bada_3131.sh
```