

From: [Turner, Ed](#)
To: [Linda Roberts](#); [Randy Nagel](#); [Tony McKinney](#); [Emilie Luciani](#)
Subject: Fwd: Another FAA Digital Obstacle File (DOF) question
Date: Tuesday, February 24, 2015 5:22:21 PM
Attachments: [Steps for processing FAA Obstacle File.zip](#)

Slick excel stuff for working with coordinate files in DMS

FYI All, I received this slick conversion process from Ric Riester in R2 today. I just ran it on the FAA DOF.DAT file for the entire US and it works great. I actually plan stripped out the non-GRSG states and windmills before converting to a Arc Feature Class, but thought I'd pass it on.

Don't know if you'll ever need this, but a good set of tools/tricks to keep around, maybe the excel DMS/DD formula for other files you may receive.

I'll capture the CA FAA digital obstacle data for CA, so we can pull that to R: if needed. Thing is they update it every month or so anyway.

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ObstacleNever_status	Country	State	City	latdeg	latmin	latsec	N_S
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latitude	londeg	lonmin	lonsec	E_W	longitude	Type	Qty	agl_ht
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amsl_ht	lighting	horz_acc	vert_acc	marking	FAA_no	Action	Julian_dt
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=IF(I2="N",SUM(F2+(G2/60)+(H2/3600)),SUM(F2+(G2/60)+(H2/3600))*-1)
=IF(N2="E",SUM(K2+(L2/60)+(M2/3600)),SUM(K2+(L2/60)+(M2/3600))*-1)

Steps for pre-processing FAA Obstacle File raw data into an ESRI Geodatabase

Requirement: Microsoft Excel 2007 (number of records exceed MS Office 2003 limits)

- 1) Download file from FAA NACO web site [https://nfdc.faa.gov/tod/public/TOD_DOF.html]
- 2) Unzip [for R2 RO only: to the \\ifw2o-gis\r2gisdata\transportation\FAA folder (accept file name and folder name)]
- 3) Open the resulting **DOF.DAT** file in Excel
 - a. On the Text Import Wizard make sure Fixed width file type is select
 - b. Start import at first data record (usually row 5)
 - c. In the Data preview window make the following adjustments:
 - i. Slide the break line at position 32 to 34¹
 - ii. Insert break lines at positions 46 and 60²
 - d. Click Finish
 - e. Delete Column Y
 - f. Insert a column to the left of column J, then to the left of what is now column O
- 4) Open from the FAA directory the **header.xlsx** file
 - a. Highlight and copy to the clipboard the first and only row with data
- 5) Go back to the **DOF.DAT** document, highlight the first row, right click and select "Insert Copied Cells"
- 6) Open from the FAA directory the **latloncalc.txt** file
- 7) copy the formula on the first line to the clipboard
- 8) Go back to the **DOF.DAT** document and paste the formula into the first empty cell under the latitude heading (J2) [You should now have a valid decimal degree latitude value]
- 9) Make sure that cell is still selected, then scroll to the bottom of that column, hold down the Shift key and click in the last cell (highlights the column), then do Ctrl+D (completes the calculation for the whole column)
- 10) Scroll back to the top of the document, then using the same procedure, copy the second line in the latloncalc.txt file into the first empty cell under the longitude heading and complete the calculation for the whole column.
- 11) Save the spreadsheet as both an Excel and comma delimited text file (.xlsx and .csv) in the appropriate **DDOF_20xxxx** folder using the same naming convention, e.g., **DDOF_200905.xlsx** and **DDOF_200905.csv**.
- 12) Use whatever conversion method you prefer for creating a feature class in ArcGIS from either the .csv or .xlsx file (Adding the table, creating an Event Theme, exporting to feature class; or using Toolbox tools)

¹ The reason for this move is that Excel only evaluates the beginning portion of the document for where to place break lines; it turns out well down the document the City description actually extends beyond the 32 break line and ends up in the Deg field by mistake; this move eliminates that problem.

² This separates the N-S and E-W designations from the decimal seconds fields and will be needed for reformatting the data in a later step.