FE-BUDDY

A Virtual Air Traffic Control Facility Engineer's Emotional Support Program

Credits

Nikolas Boling - *Primary Developer/Programmer*

Kyle Sanders - *Concept Design; Original Author*

Kyle Rodgers - *Developer/Antimeridian Split Logic*

John Lewis - *Icon/Logo Design*

Chris James - *Program Name*

Cian Ormond - *dotNET 6 Conversion Assistance*

Caelan Sayler - *dotNET 6 Conversion Assistance / Clowd.Squirrel Development*

Ian Drake - *FAA FOIA RVM Conversion source code reference*

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SUMMARY

Assists Virtual ARTCC Facility Engineers with their daily tasks such as converts:

- The FAA National Airspace System Resource *(NASR)* Data to formats that may be used by Virtual RADAR Clients on the VATSIM network *for free up to 28 days prior to an AIRAC effective date*.
- FAA FOIA RADAR Video Map .DAT files into .SCT2 files
- .SCT2 files into .DXF files, and vice versa.

ADDITIONAL FEATURES

FE-BUDDY will also pull FAA:

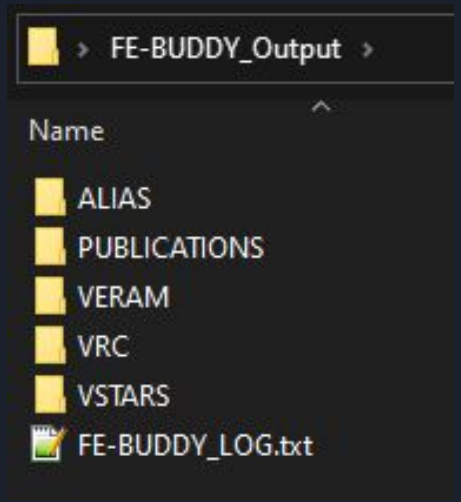
- 3-Letter ID/Telephony data from the FAA 7340.2 HTML page and convert it into an alias command.
- d-TPP Metafile data and create a list of changes in publications per ARTCC, along with creating a list of airports per ARTCC jurisdiction.

NASR DATA

In order to create the appropriate radar client facility files, the program will retrieve the following .txt files from the FAA NASR Page, parse, and export it:

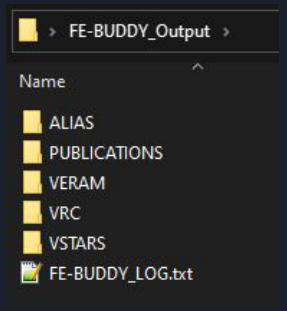
- Airports and Other Landing Facilities (APT)
- ARTCC Boundary Descriptions (ARB)
- ATS Non-Regulatory Airways (ATS)
- Navigation Aids (NAV)
- Regulatory Airways (AWY)
- Standard Terminal Arrival / Standard Instrument Departure (Complete Set) (STARDP)
- Weather Reporting Locations (WXL)
    - Now utilizes a different source than NASR that is more directly aligned with VATSIM needs.

OUTPUT FILES



OUTPUT FILES
FE-BUDDY_LOG.txt

This file may serve useful to the developers in the case of program issues. Please send this file with your bug report.



FE-BUDDY_LOG.txt

```
This file may serve useful to the developers in the case of program issues. Please send this file with your bug report.

00:07:28.300 - DEBUG - PROGRAM STARTED
00:07:28.323 - DEBUG - CHECKING TEMP DIRECTORY
00:07:28.324 - DEBUG - DELETED FILE: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_APT.zip
00:07:28.324 - DEBUG - DELETED FILE: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_ARB.zip
00:07:28.324 - DEBUG - DELETED FILE: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_ATS.zip
00:07:28.324 - DEBUG - DELETED FILE: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_AWY.zip
00:07:28.325 - DEBUG - DELETED FILE: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_FIX.zip
00:07:28.325 - DEBUG - DELETED FILE: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_NAV.zip
00:07:28.326 - DEBUG - DELETED FILE: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_NWS-WX-STATIONS.xml
00:07:28.326 - DEBUG - DELETED FILE: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_STARDP.zip
00:07:28.327 - DEBUG - DELETED FILE: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2112_FAA_Meta.xml
00:07:28.327 - DEBUG - DELETED FILE: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2112_TELEPHONY.html
00:07:28.327 - DEBUG - DELETED FILE: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\FAA_Meta.bat
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00:07:28.344 - DEBUG - DELETED DIRECTORY: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_APT
00:07:28.344 - DEBUG - DELETED DIRECTORY: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_ARB
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00:07:28.351 - DEBUG - DELETED DIRECTORY: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_FIX
00:07:28.353 - DEBUG - DELETED DIRECTORY: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_NAV
00:07:28.354 - DEBUG - DELETED DIRECTORY: C:\Users\Kyle Sanders\AppData\Local\Temp\FE-BUDDY\2021-12-02_STARDP
00:07:28.360 - DEBUG - PREFORMING UPDATE CHECK
00:07:28.628 - DEBUG - CHECKING PROGRAM VERSION AGAINST GITHUB VERSION
00:07:28.632 - DEBUG - INITIALIZING COMPONENT
00:07:28.675 - DEBUG - FACILITY COMBOBOX CLICKED
00:07:28.680 - DEBUG - LOADING MAIN FORM
00:07:28.728 - DEBUG - SHOWING MAIN FORM
00:07:28.728 - DEBUG - SETTING UP AIRAC DATE WORKER
00:07:28.729 - DEBUG - GETTING AIRAC DATE
00:07:28.730 - DEBUG - SEARCHING FAA WEBSITE FOR AIRAC DATES
00:07:28.730 - DEBUG - CREATING BATCH FILE getAiraccEff.bat
```
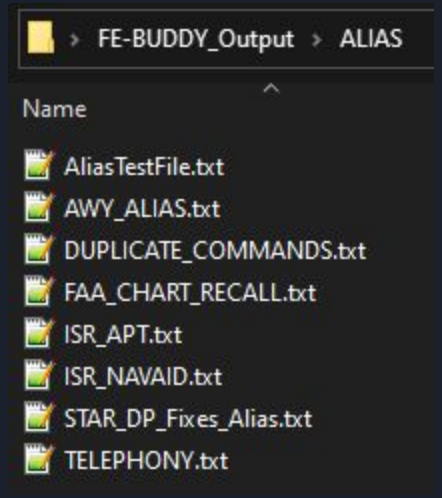
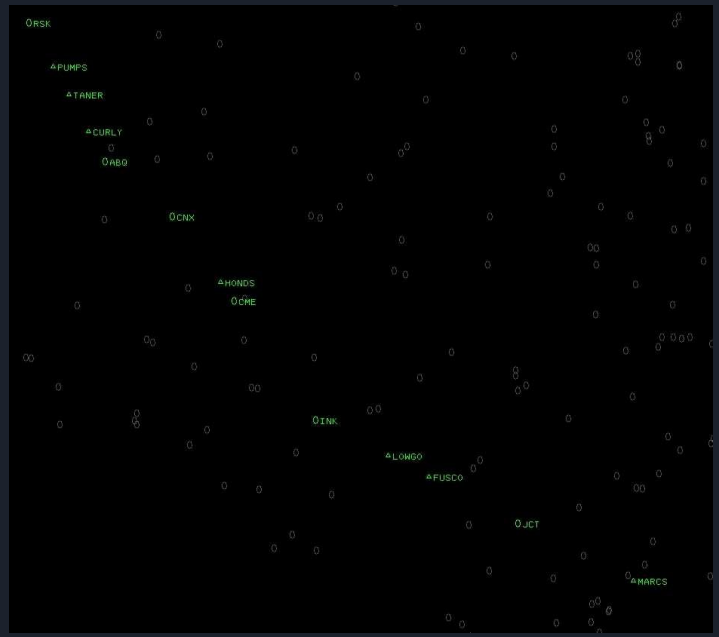

OUTPUT FILES
ALIAS



OUTPUT FILES
ALIAS - AWY_ALIAS.txt

- DESCRIPTION:
  - The user inputs an airway command and the alias draws all fixes on the scope for that airway.
- SYNTAX:
  - .*(AWY ID)*F
- EXAMPLE INPUT:
  - .J15F



OUTPUT FILES
ALIAS - STAR_DP_Fixes_Alias.txt

- DESCRIPTION:
  - The user inputs DP/STAR command and the alias draws all fixes on the scope for that procedure.
- SYNTAX:
  - .*(APT ID)(DP or STAR Computer Code)*F
- EXAMPLE INPUT:
  - .SLCLEEHYF

Note- Only procedures that are assigned a computer code are available.

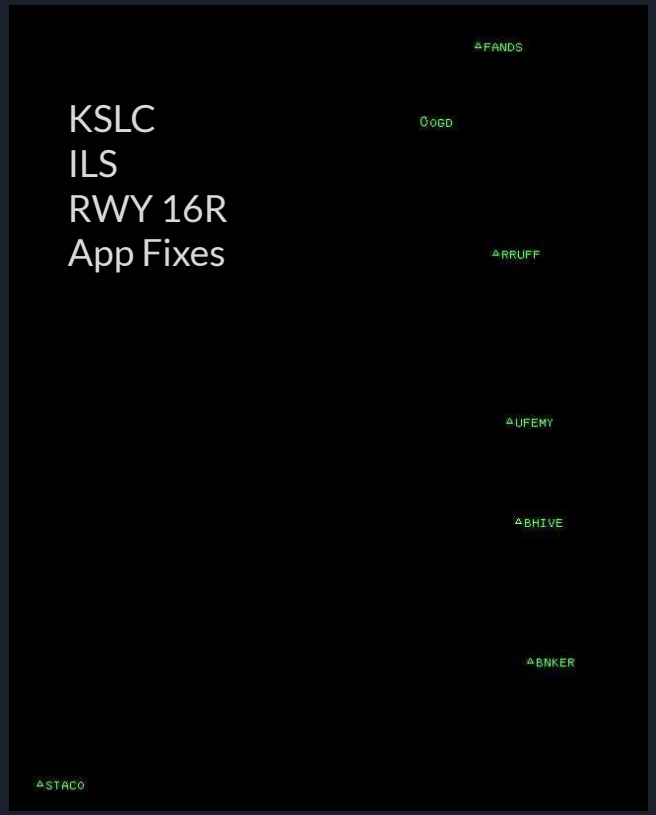
*** THIS IS NOT YET AVAILABLE ***

If you wish to help contribute to the development of this feature, please contact the developers.

OUTPUT FILES

ALIAS - IAP_Fixes_Alias.txt

- DESCRIPTION:
  - The user inputs IAP Generic Scratchpad command *(explained later)* and the alias draws all fixes on the scope for that procedure.
- SYNTAX:
  - *.(APT ID)(Generic SPad Code)*F
- EXAMPLE INPUT:
  - .SLCI6RF



In-Scope Reference (ISR)

The vZLC ARTCC In-Scope Reference (ISR) system was based off of a system that PilotEdge uses that was further expanded by Kyle Sanders in 2016.

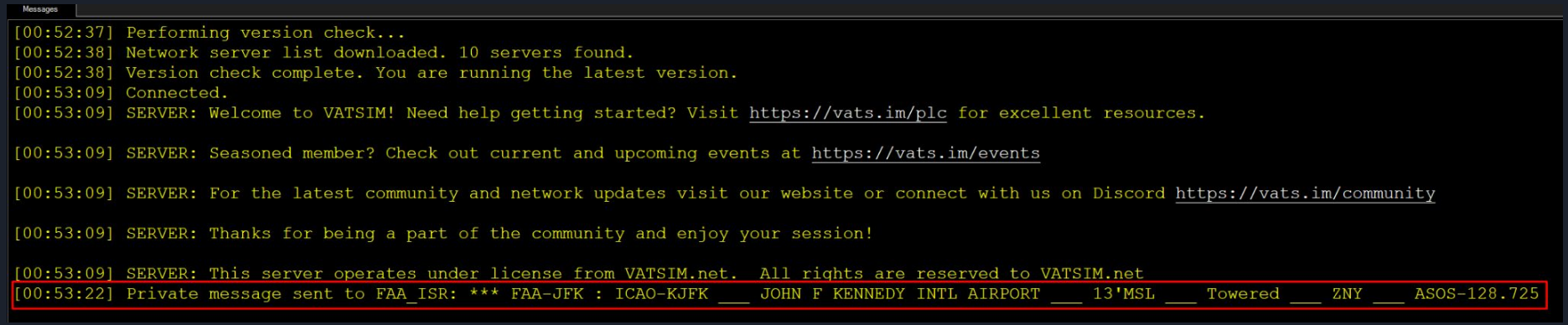
The goal behind ISR is allowing a controller to get as much data as possible about any particular aspect of the airspace without having to leave the “Scope” to get the data.

The ISR utilizes the common Virtual RADAR Client Alias technology to send a predefined “message” to position that doesn’t exist such as “FAA_ISR” and the message sent would be seen in the senders comms panel for reference.

OUTPUT FILES
ALIAS - ISR_APT.txt

- DESCRIPTION:
  - The user inputs an Airport command and the alias Returns an ISR for that APT.
- SYNTAX:
  - .APT*(IATA or ICAO APT Code)*
- EXAMPLE INPUT:
  - .APTJFK
- EXAMPLE RETURN:
  - FAA-JFK : ICAO-KJFK __ JOHN F KENNEDY INTL AIRPORT __ 13'MSL __ Towered __ ZNY __ ASOS-128.725

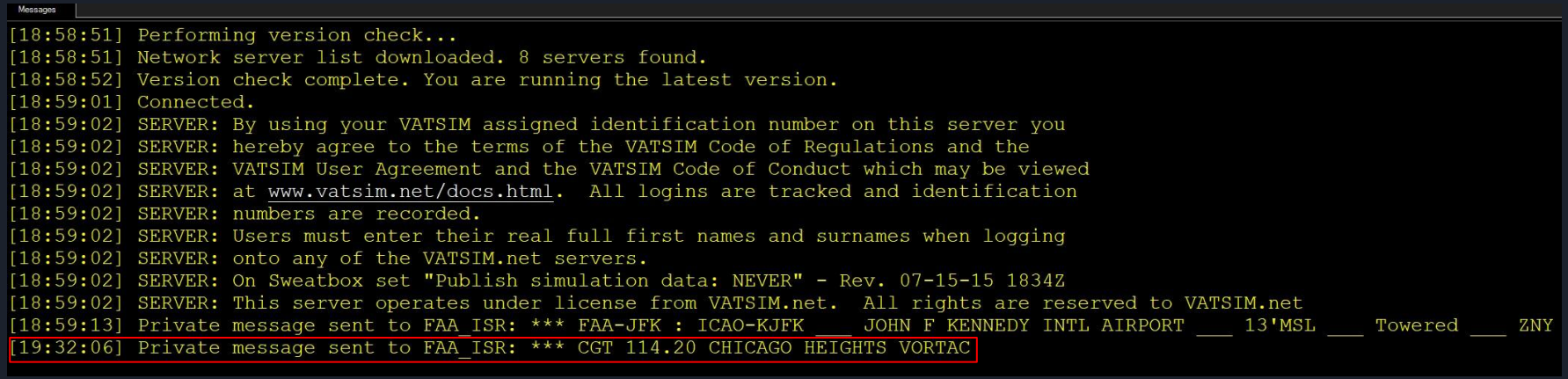
OUTPUT FILES
ALIAS - ISR_APT.txt



OUTPUT FILES
ALIAS - ISR_NAVAID.txt

- DESCRIPTION:
  - The user inputs a NAVAID command and the alias Returns an ISR for that NAVAID.
- SYNTAX:
  - .NAV*(NAVAID Code or Name without Spaces or Characters)*
- EXAMPLE INPUT:
  - .NAVCGT
  - .NAVCHICAGOHEIGHTS
- EXAMPLE RETURN:
  - CGT 114.20 CHICAGO HEIGHTS VORTAC

OUTPUT FILES
ALIAS - ISR_NAVAID.txt

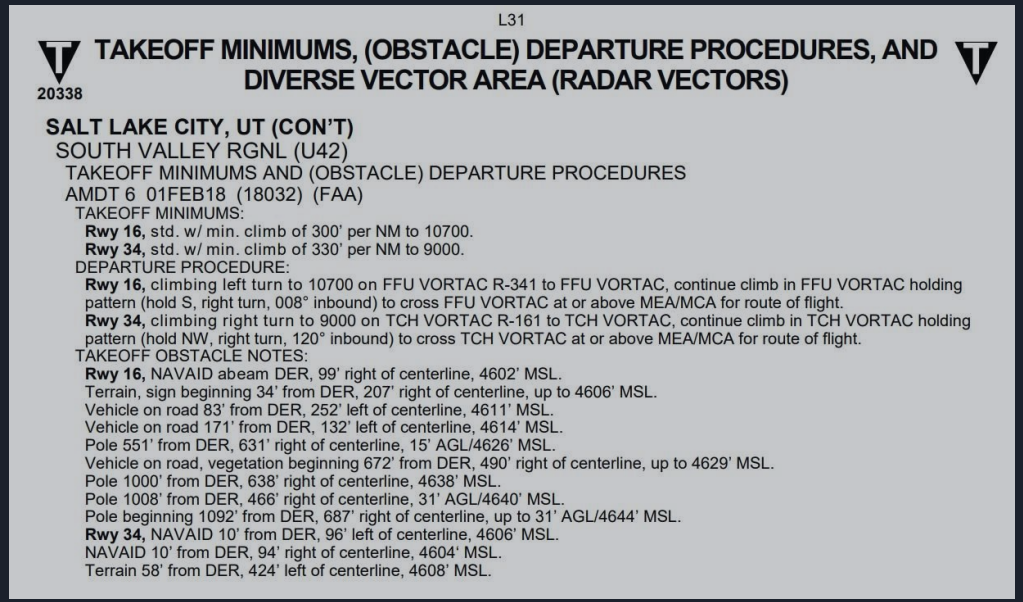


OUTPUT FILES
ALIAS - FAA_CHART_RECALL.txt

- DESCRIPTION:
  - The user inputs a FAA Chart command and the alias opens the users default browser to that chart.
- SYNTAX:
  - *Variable. Explained further on the next series of slides.*
- TYPE OF CHARTS/PLATES TO BE CALLED:
  - TAKEOFF MINIMUMS/OBSTACLE DEPARTURE PROCEDURE PAGE
  - DIVERSE VECTOR AREA PAGE *(usually the same as the Takeoff Min/ODP page)*
  - HOT SPOTS PAGE
  - LAND AND HOLD SHORT OPERATIONS PAGE
  - AIRPORT DIAGRAMS
  - DP/STAR PLATES
  - IAP PLATES
- For the following commands, all airport ID codes (APT) are the FAA/IATA codes, not ICAO.

OUTPUT FILES
ALIAS - FAA_CHART_RECALL.txt
TAKEOFF MINIMUMS/OBSTACLE DEPARTURE PROCEDURE PAGE

- SYNTAX:
  - .*(APT)*TMC
- EXAMPLE:
  - .SLCTMC



L31

TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

20338

SALT LAKE CITY, UT (CON'T)

SOUTH VALLEY RGNL (U42)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 6 01FEB18 (18032) (FAA)

TAKEOFF MINIMUMS:

Rwy 16, std. w/ min. climb of 300' per NM to 10700.

Rwy 34, std. w/ min. climb of 330' per NM to 9000.

DEPARTURE PROCEDURE:

Rwy 16, climbing left turn to 10700 on FFU VORTAC R-341 to FFU VORTAC, continue climb in FFU VORTAC holding pattern (hold S, right turn, 008° inbound) to cross FFU VORTAC at or above MEA/MCA for route of flight.

Rwy 34, climbing right turn to 9000 on TCH VORTAC R-161 to TCH VORTAC, continue climb in TCH VORTAC holding pattern (hold NW, right turn, 120° inbound) to cross TCH VORTAC at or above MEA/MCA for route of flight.

TAKEOFF OBSTACLE NOTES:

Rwy 16, NAVAID abeam DER, 99' right of centerline, 4602' MSL.

Terrain, sign beginning 34' from DER, 207' right of centerline, up to 4606' MSL.

Vehicle on road 83' from DER, 252' left of centerline, 4611' MSL.

Vehicle on road 171' from DER, 132' left of centerline, 4614' MSL.

Pole 551' from DER, 631' right of centerline, 15' AGL/4626' MSL.

Vehicle on road, vegetation beginning 672' from DER, 490' right of centerline, up to 4629' MSL.

Pole 1000' from DER, 638' right of centerline, 4638' MSL.

Pole 1008' from DER, 466' right of centerline, 31' AGL/4640' MSL.

Pole beginning 1092' from DER, 687' right of centerline, up to 31' AGL/4644' MSL.

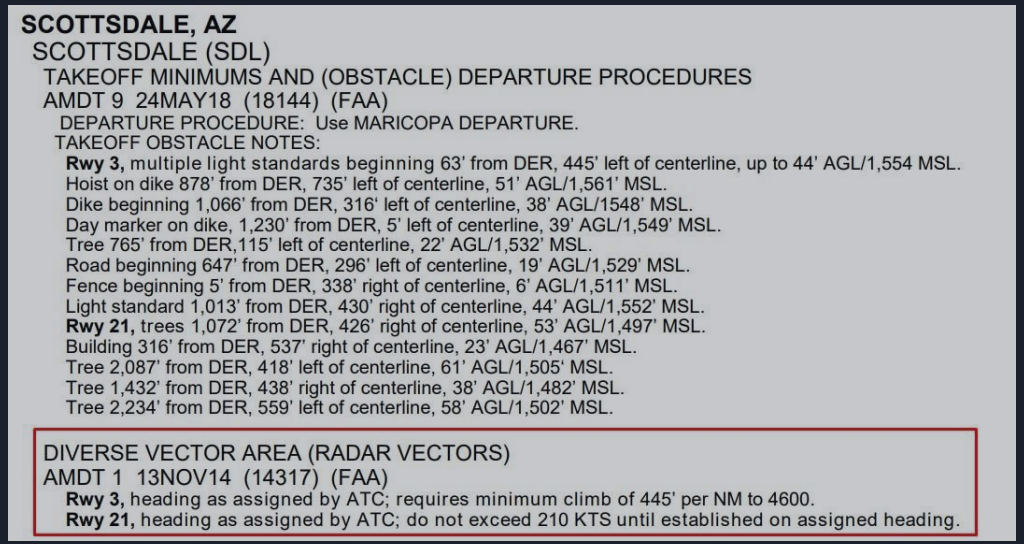
Rwy 34, NAVAID 10' from DER, 96' left of centerline, 4606' MSL.

NAVAID 10' from DER, 94' right of centerline, 4604' MSL.

Terrain 58' from DER, 424' left of centerline, 4608' MSL.

OUTPUT FILES
ALIAS - FAA_CHART_RECALL.txt
DIVERSE VECTOR AREA PAGE

- SYNTAX:
  - .*(APT)*DVAC
- EXAMPLE:
  - .SDLDVAC

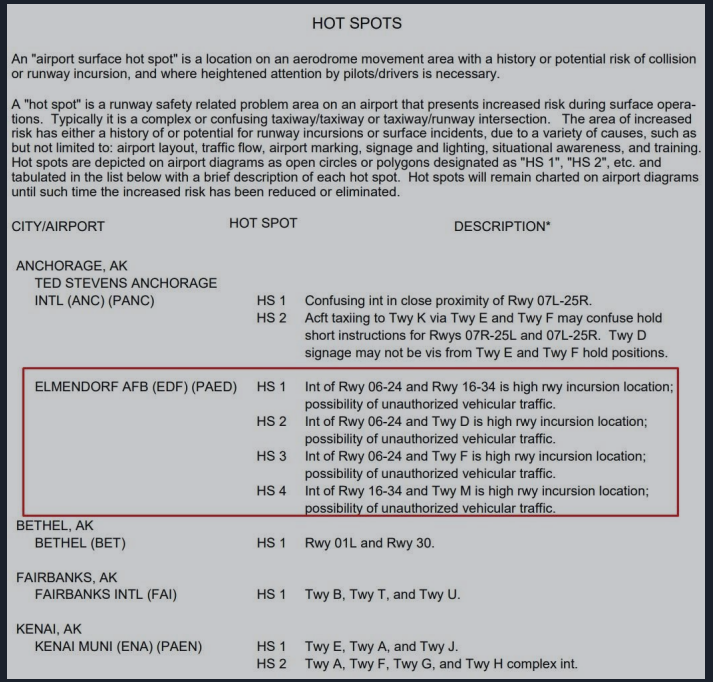


SCOTTSDALE, AZ
SCOTTSDALE (SDL)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 9 24MAY18 (18144) (FAA)
DEPARTURE PROCEDURE: Use MARICOPA DEPARTURE.
TAKEOFF OBSTACLE NOTES:
Rwy 3, multiple light standards beginning 63' from DER, 445' left of centerline, up to 44' AGL/1,554 MSL.
Hoist on dike 878' from DER, 735' left of centerline, 51' AGL/1,561' MSL.
Dike beginning 1,066' from DER, 316' left of centerline, 38' AGL/1548' MSL.
Day marker on dike, 1,230' from DER, 5' left of centerline, 39' AGL/1,549' MSL.
Tree 765' from DER,115' left of centerline, 22' AGL/1,532' MSL.
Road beginning 647' from DER, 296' left of centerline, 19' AGL/1,529' MSL.
Fence beginning 5' from DER, 338' right of centerline, 6' AGL/1,511' MSL.
Light standard 1,013' from DER, 430' right of centerline, 44' AGL/1,552' MSL.
Rwy 21, trees 1,072' from DER, 426' right of centerline, 53' AGL/1,497' MSL.
Building 316' from DER, 537' right of centerline, 23' AGL/1,467' MSL.
Tree 2,087' from DER, 418' left of centerline, 61' AGL/1,505' MSL.
Tree 1,432' from DER, 438' right of centerline, 38' AGL/1,482' MSL.
Tree 2,234' from DER, 559' left of centerline, 58' AGL/1,502' MSL.

DIVERSE VECTOR AREA (RADAR VECTORS)
AMDT 1 13NOV14 (14317) (FAA)
Rwy 3, heading as assigned by ATC; requires minimum climb of 445' per NM to 4600.
Rwy 21, heading as assigned by ATC; do not exceed 210 KTS until established on assigned heading.

OUTPUT FILES
ALIAS - FAA_CHART_RECALL.txt
HOT SPOTS PAGE

- SYNTAX:
  - .*(APT)*HSC
- EXAMPLE:
  - .EDFHSC



HOT SPOTS

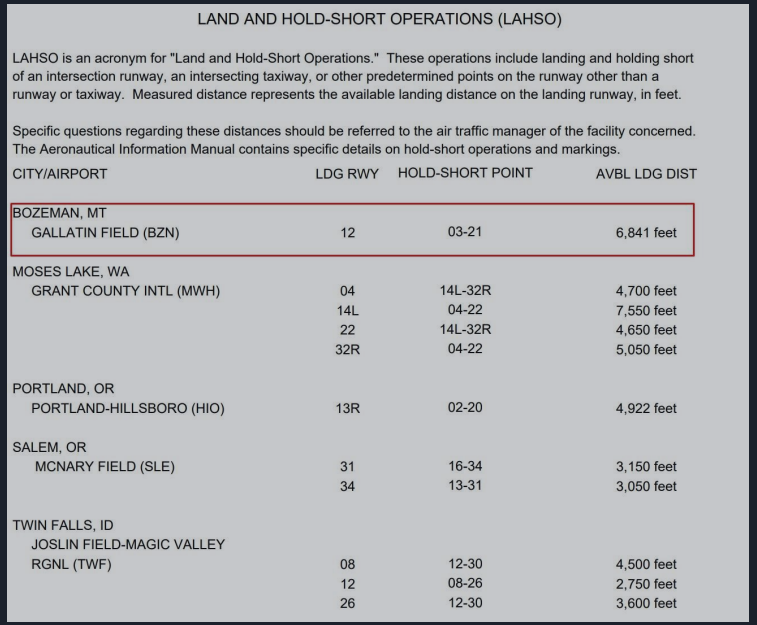
An "airport surface hot spot" is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A "hot spot" is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles or polygons designated as "HS 1", "HS 2", etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

CITY/AIRPORT	HOT SPOT	DESCRIPTION*
ANCHORAGE, AK		
TED STEVENS ANCHORAGE INTL (ANC) (PANC)	HS 1	Confusing int in close proximity of Rwy 07L-25R.
	HS 2	Acft taxiing to Twy K via Twy E and Twy F may confuse hold short instructions for Rwys 07R-25L and 07L-25R. Twy D signage may not be vis from Twy E and Twy F hold positions.
ELMENDORF AFB (EDF) (PAED)	HS 1	Int of Rwy 06-24 and Rwy 16-34 is high rwy incursion location; possibility of unauthorized vehicular traffic.
	HS 2	Int of Rwy 06-24 and Twy D is high rwy incursion location; possibility of unauthorized vehicular traffic.
	HS 3	Int of Rwy 06-24 and Twy F is high rwy incursion location; possibility of unauthorized vehicular traffic.
	HS 4	Int of Rwy 16-34 and Twy M is high rwy incursion location; possibility of unauthorized vehicular traffic.
BETHEL, AK		
BETHEL (BET)	HS 1	Rwy 01L and Rwy 30.
FAIRBANKS, AK		
FAIRBANKS INTL (FAI)	HS 1	Twy B, Twy T, and Twy U.
KENAI, AK		
KENAI MUNI (ENA) (PAEN)	HS 1	Twy E, Twy A, and Twy J.
	HS 2	Twy A, Twy F, Twy G, and Twy H complex int.

OUTPUT FILES
ALIAS - FAA_CHART_RECALL.txt
LAND AND HOLD SHORT OPERATIONS PAGE

- SYNTAX:
  - .*(APT)*LAHSOC
- EXAMPLE:
  - .BZNLAHSOC



LAND AND HOLD-SHORT OPERATIONS (LAHSO)

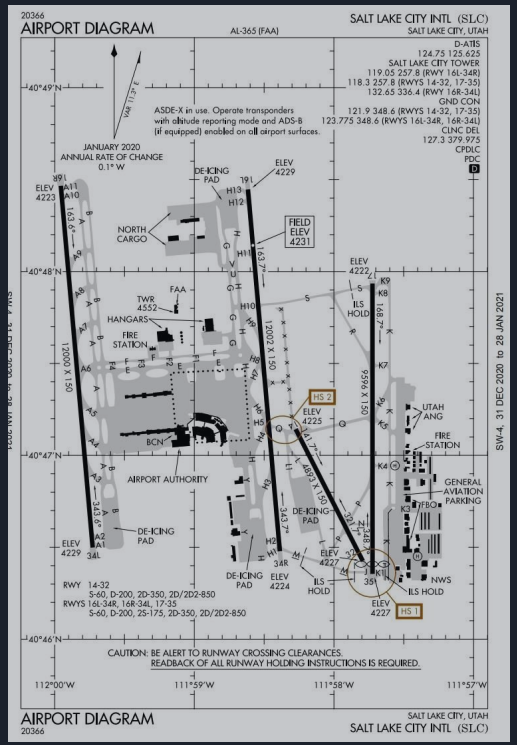
LAHSO is an acronym for "Land and Hold-Short Operations." These operations include landing and holding short of an intersection runway, an intersecting taxiway, or other predetermined points on the runway other than a runway or taxiway. Measured distance represents the available landing distance on the landing runway, in feet.

Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold-short operations and markings.

CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	AVBL LDG DIST
BOZEMAN, MT			
GALLATIN FIELD (BZN)	12	03-21	6,841 feet
MOSES LAKE, WA			
GRANT COUNTY INTL (MWH)	04	14L-32R	4,700 feet
	14L	04-22	7,550 feet
	22	14L-32R	4,650 feet
	32R	04-22	5,050 feet
PORTLAND, OR			
PORTLAND-HILLSBORO (HIO)	13R	02-20	4,922 feet
SALEM, OR			
MCNARY FIELD (SLE)	31	16-34	3,150 feet
	34	13-31	3,050 feet
TWIN FALLS, ID			
JOSLIN FIELD-MAGIC VALLEY RGNL (TWF)	08	12-30	4,500 feet
	12	08-26	2,750 feet
	26	12-30	3,600 feet

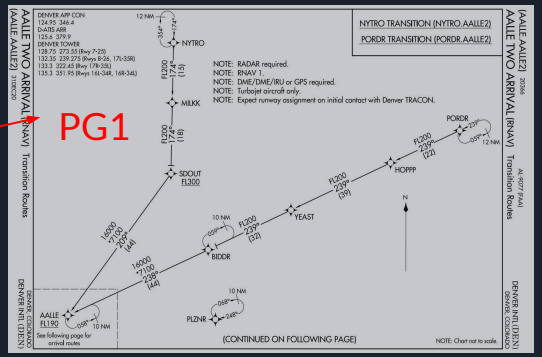
OUTPUT FILES
ALIAS - FAA_CHART_RECALL.txt
AIRPORT DIAGRAMS

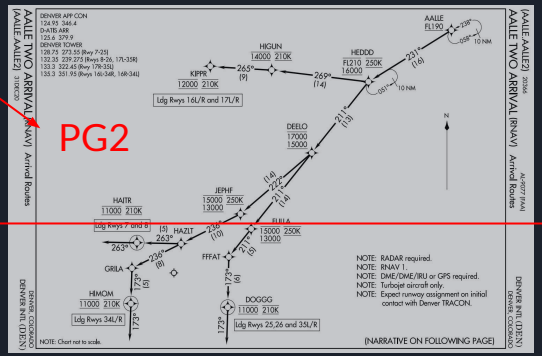
- SYNTAX:
  - *(APT)*APDC
- EXAMPLE:
  - .SLCAPDC

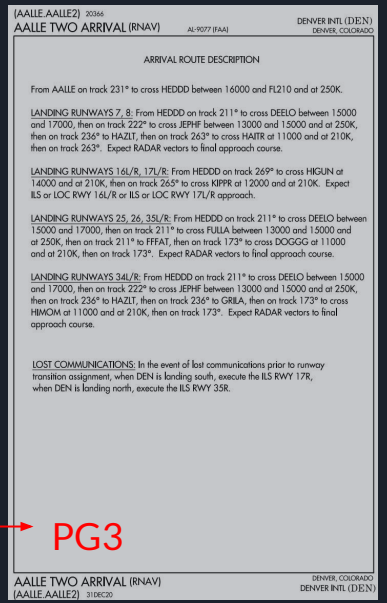


OUTPUT FILES
ALIAS - FAA_CHART_RECALL.txt
DP/STAR PLATES

- SYNTAX:
  - *.(APT ID)(DP/STAR Computer Code)*C
- EXAMPLE:
  - .DENAALLEC
  - .DENAALLE2C
  - .DENAALLE3C







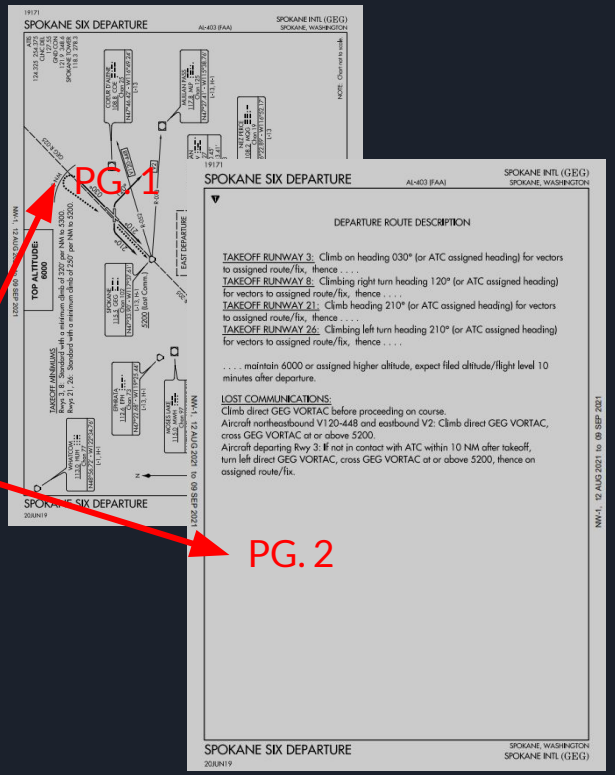
OUTPUT FILES
ALIAS - FAA_CHART_RECALL.txt

DP/STAR PLATES - COMPUTER CODE **NOT** ASSIGNED BY FAA

- SYNTAX:
  - *.(APT ID)(FIRST 5 CHARACTERS OF DP/STAR CHART NAME)*C

    Note: Do not include spaces from chartname.

- EXAMPLE:
  - TNX - DP - TUMBE ONE : .TNXTUMBEC
  - GTB - DP - WATERTOWN TWO : .GTBWATERC
  - TTD - DP - BLUE LAKE THREE: .TDDBLUELC
  - GEG - DP - SPOKANE SIX: .GEGSPOKAC
  - GEG - DP - SPOKANE SIX, CONT: .GEGSPOKA2C



The IAP Chart Recall is difficult to test on a FAA-Wide scale.
Please report issues to the developers/GitHub Bug Tracking section of this program.

OUTPUT FILES

ALIAS - FAA_CHART_RECALL.txt

IAP PLATES

- SYNTAX:
  - *.(DEN)(Generic Approach Scratchpad Code)*C
- GENERIC SCRATCHPAD *(SPad)* CODE:
  - This collection of codes is intended to be utilized FAA-wide and formatted in an intuitive manner.
  - The idea is to attempt to keep every code limited to 3 characters, while allowing an increase to 4 characters when the situation requires. Never will you see a 5 character SPad Code.
  - Due to the limitations with creating such a widely utilized set of codes along with some IAPs being phased out by the FAA, some approaches were not included in this collection such as PRM, SA CAT (i,ii,iii), HI-, BACK COURSE, LOC/NDB, COPTER, CONVERGING ILS, and GLS approaches.
  - When a Runway number must be shortened, the last digit in the runway number is used along with the parallel runway *(L/C/R/G/W)* designator if there is one.
  - The only time you will see a 4 character SPad code is when there is a Variant, Two digit runway number, and a L/C/R designator.

FAA CHART RECALL

SPad APP-TYPE ABBREVIATIONS

TYPE	ABBREVIATION
Visual	V
Contact	C
ILS	I
LOC	L
RNAV	R
GPS	G
VOR	O
NDB	N
SDF	S

TYPE	ABBREVIATION
LDA	D
TACAN	T
VOR/DME	F
LOC/DME	K
ILS/DME	J
NDB/DME	B
LDA/DME	A

FAA CHART RECALL

SPad EXAMPLES

TYPE	VARIANT	RWY	SPad Code
ILS		10	I10
ILS	Y	10	IY0
ILS		28R	I8R
ILS	Y	28R	IY8R
VOR		12	O12
VOR	B		OB
RNAV		04	R04
RNAV	X	04C	RX4C
LOC/DME	Z	18L	KZ8L

FAA CHART RECALL

COMPLETE IAP COMMAND EXAMPLES

AIRPORT	APPROACH	COMMAND *(SPad = RED)*
SLC	ILS RWY 16L	.SLCI6LC
SLC	LOC RWY 16L	.SLCL6LC
ENV	RNAV-A	.ENVRAC
XSA	RNAV (GPS) RWY 10	.XSAR10C
EKN	LDA-C	.EKNDCC
SFO	RNAV (RNP) Y RWY 28R	.SFORY8RC
SFO	RNAV (GPS) X RWY 28R	.SFORX8RC

FAA CHART RECALL

IAP - CHARTED VISUAL APPROACHES

CHARTED VISUAL APPROACHES are handled slightly different because of their nature.

- SYNTAX:
  - .(APT)V*(1st Character of Each Word in the Approach Name Prior to "Visual")*

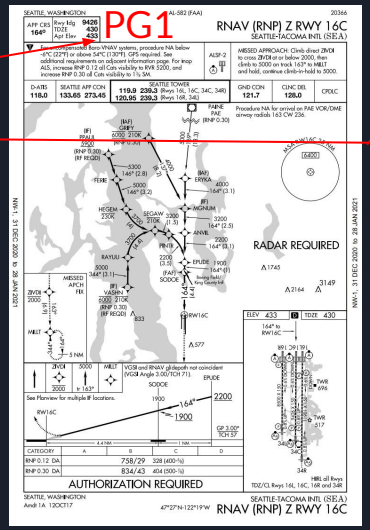
AIRPORT	APPROACH NAME	SPad
SFO	QUIET BRIDGE VISUAL RWY 28L/R	.SFOVQBC
SFO	TIPP TOE VISUAL RWY 28L/R	.SFOVTTC
SJC	FAIRGROUNDS VISUAL RWY 30L/R	.SJCVFC
ASE	ROARING FORK VISUAL RWY 15	.ASEVRFC

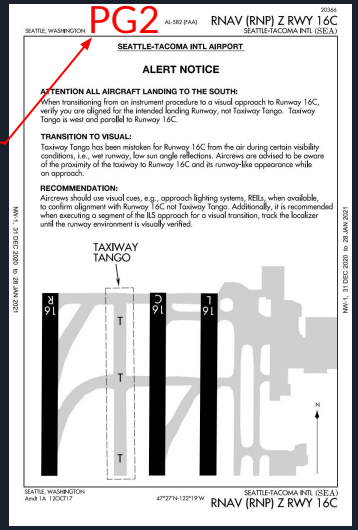
FAA CHART RECALL

Multi-Page IAPs

Similar to the DP/STAR Chart Recall, if an IAP has multiple pages, follow the syntax below.

- SYNTAX:
  - *.(APT ID)(IAP Generic SPad Code)(Page number if after 1)*C
- EXAMPLE:
  - .SEARZ6CC
  - .SEARZ6C2C





OUTPUT FILES
ALIAS - TELEPHONY.txt

- DESCRIPTION:
  - The user inputs a 3LD command and the alias Returns an ISR describing the 3-Letting ID and the telephony of the respective Air Carrier per the FAA JO 7340.2
- SYNTAX:
  - .ID*(Carrier 3LD or Telephony without spaces or special characters)*
- EXAMPLE INPUT:
  - .IDNKP
    Or
  - .IDABAKANAIR
- EXAMPLE RETURN:
  - *** 3LD: NKP ___ TELEPHONY: ABAKAN AIR

OUTPUT FILES
ALIAS - DUPLICATE_COMMANDS.txt

The alias syntax is unable to account for every situation that would create a duplicate command for two different charts and therefore, the local Facility Engineer will need to create a custom command for these situations that is placed prior to these commands in the alias file.

To make this easier, FE-BUDDY will output this file showing which commands are duplicated in the output files. These will be organized by the responsible ARTCC ID for easier navigation.

Feel free to contact the developers if unable to resolve these duplications at a local level.

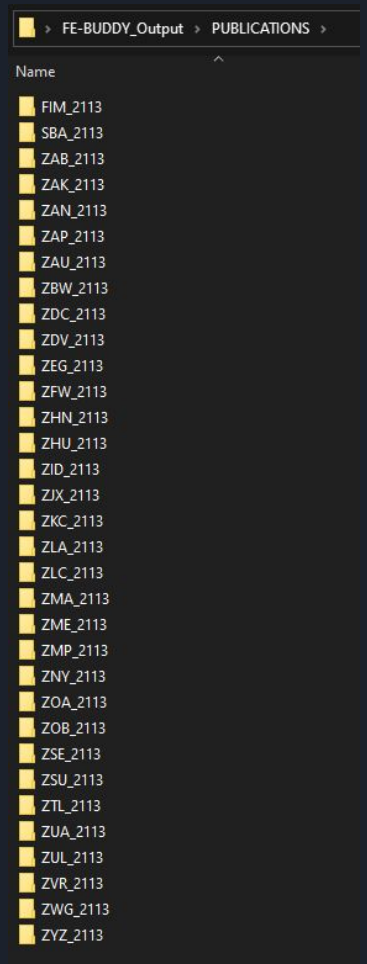
OUTPUT FILES
ALIAS - AliasTestFile.txt

All alias output files combined into a single file for quick testing/loading by FE’s.

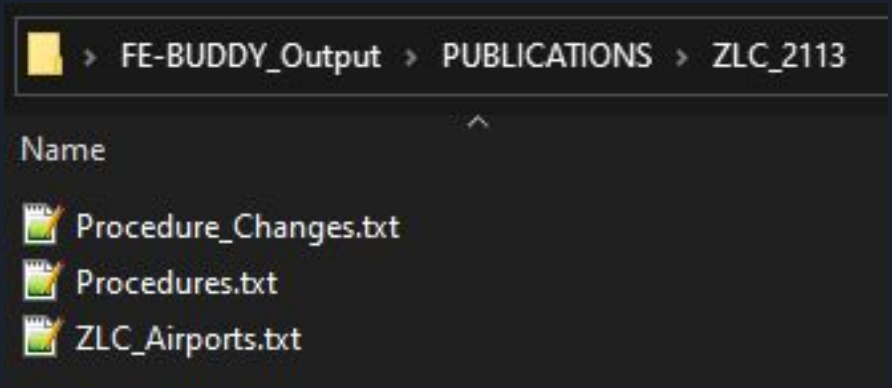
OUTPUT FILES *PUBLICATIONS*

Selecting “FAA” on the start screen will parse all ARTCCs in the FAA data.

If you don’t wish for this to happen, select the desired ARTCC code from the drop menu.



OUTPUT FILES
PUBLICATIONS - ARTCC FOLDER



OUTPUT FILES
PUBLICATIONS - Procedure_Changes.txt

This file lists all changes that are happening to an airport under the jurisdiction of the ARTCC.

A link to the “PDF Compare” page will also be provided if the FAA provides one.

C = Has changed since last cycle.

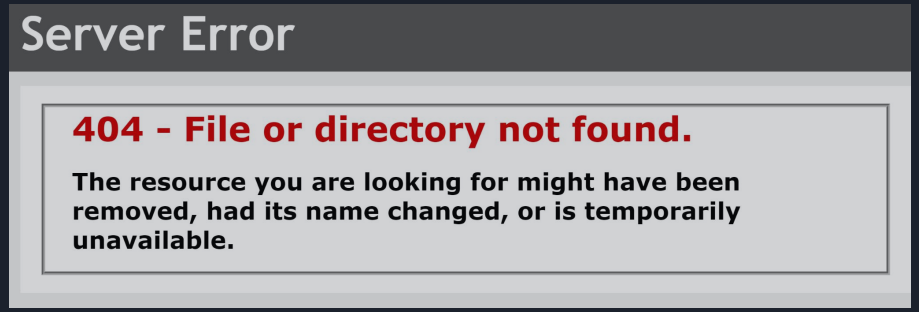
A = Procedure has been added.

D = Procedure has been deleted.

```
[ASE]
    (C) RNAV-F | https://aeronav.faa.gov/d-tpp/2113/compare_pdf/05889RF_cmp.pdf
[APA]
    (C) RNAV RWY 17L | https://aeronav.faa.gov/d-tpp/2113/compare_pdf/05715R17L_cmp.pdf
[LMO]
    (C) ALTERNATE MINIMUMS | https://aeronav.faa.gov/d-tpp/2113/compare_pdf/SW1ALT_cmp.pdf
    (C) RNAV RWY 29 | https://aeronav.faa.gov/d-tpp/2113/compare_pdf/09041R29_cmp.pdf
    (C) RNAV-B | https://aeronav.faa.gov/d-tpp/2113/compare_pdf/09041RB_cmp.pdf
    (C) VOR/DME-A | https://aeronav.faa.gov/d-tpp/2113/compare_pdf/09041VDA_cmp.pdf
[FMN]
    (C) RNAV RWY 25 | https://aeronav.faa.gov/d-tpp/2113/compare_pdf/00493R25_cmp.pdf
[SAA]
    (C) ALTERNATE MINIMUMS | https://aeronav.faa.gov/d-tpp/2113/compare_pdf/NW1ALT_cmp.pdf
    (C) RNAV RWY 05 | https://aeronav.faa.gov/d-tpp/2113/compare_pdf/09074R5_cmp.pdf
    (C) RNAV-B | https://aeronav.faa.gov/d-tpp/2113/compare_pdf/09074RB_cmp.pdf
    (C) NDB-A | https://aeronav.faa.gov/d-tpp/2113/compare_pdf/09074NA_cmp.pdf
```

OUTPUT FILES
PUBLICATIONS - Procedure_Changes.txt

In some cases, the link will return a 404 Error. This is because the FAA does not have a comparative document. This is common with DOD facilities.



OUTPUT FILES
PUBLICATIONS - Procedures.txt

A list of all airports and their procedures for the ARTCC.

A link to the procedure is also provided.

```
[AOC]
    TAKEOFF MINIMUMS | https://aeronav.faa.gov/d-tpp/2104/NW1TO.PDF
    RNAV-A | https://aeronav.faa.gov/d-tpp/2104/09198RA.PDF
    JATTS ONE (OBSTACLE) (RNAV) | https://aeronav.faa.gov/d-tpp/2104/09198JATTS.PDF
[U02]
    TAKEOFF MINIMUMS | https://aeronav.faa.gov/d-tpp/2104/NW1TO.PDF
    RNAV-A | https://aeronav.faa.gov/d-tpp/2104/09351RA.PDF
    RNAV-B | https://aeronav.faa.gov/d-tpp/2104/09351RB.PDF
    VOR/DME-C | https://aeronav.faa.gov/d-tpp/2104/09351VDC.PDF
    IDAHO FALLS THREE (RNAV) | https://aeronav.faa.gov/d-tpp/2104/09351IDAHOFALLS.PDF
    POCATELLO FOUR (RNAV) | https://aeronav.faa.gov/d-tpp/2104/09351POCATELLO.PDF
```

OUTPUT FILES
PUBLICATIONS - (ARTCC)_Airports.txt

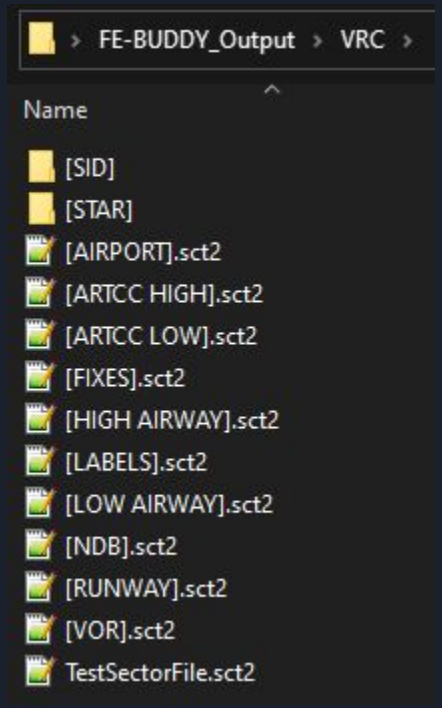
This file is a list of all airports under the jurisdiction of the respective ARTCC.

Left of the dash is the FAA code.

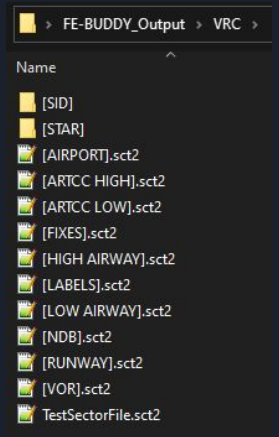
To the right of the dash is the ICAO code, if there is one.

```
WY31 -
WY43 -
EMM - KEMM
WY67 -
LND - KLND
WY34 -
WY42 -
2WY3 -
PNA - KPNA
WY28 -
POY - KPOY
WY15 -
WY36 -
WY04 -
RIW - KRIW
```

OUTPUT FILES
VRC



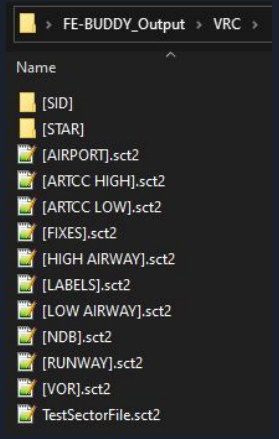
OUTPUT FILES
VRC - NAVDATA



The following files provide VRC the basic NAVDATA associated with the title of the file.

- AIRPORTS
- FIXES
- NDBS
- VORS - *(DME-ONLY stations are located here)*
- RUNWAYS

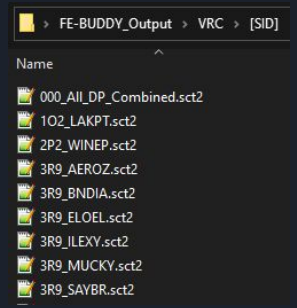
OUTPUT FILES
VRC - LINE DRAW



- ARTCC HIGH
  - All HIGH boundaries for ARTCCs High stratums, FIR, and UTAs.
- ARTCC LOW
  - All LOW boundaries for ARTCCs Low stratums, CTAs, and general boundaries.
- HIGH AIRWAY
  - All Regulatory J and Q airways along with all ATS Non-Regulatory airways.
- LOW AIRWAY
  - All Regulatory V and T airways

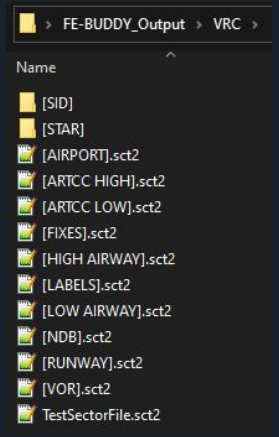
OUTPUT FILES
VRC - NAVDATA - DP/STAR

Within the two sub-folders, you will find procedure diagrams (line-draw) saved in individual files labeled with the Airport ID and Procedure Computer Code.



- SID
  - Includes every SID and Graphical ODP that is not considered solely *"RADAR Vectored"* or has no Computer Code assigned to it like the *"DENVER #"* departure out of KDEN.
  - The file - *000_All_DP_Combined.sct2* - contains ALL DPs in a single diagram.
- STAR
  - Includes every STAR that has a Computer Code assigned to it.
  - The file - *000_All_STAR_Combined.sct2* - contains ALL STARs in a single diagram.

OUTPUT FILES
VRC - LABELS



In VRC: VIEW>STATIC TEXT

Displays all Weather Stations that a VATSIM ATC will be able to use to retrieve data from.

This data is presented in “Text” format justified to the left, reference the weather station location.

The first value is the ICAO code for the station.

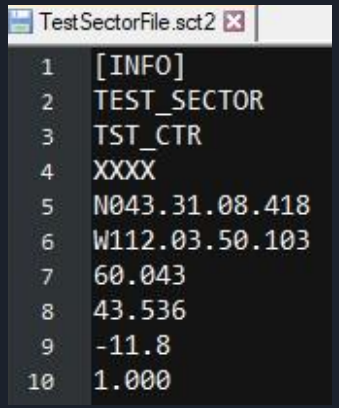
The rest of the string is the name of the associated airport.

The goal of this map is to allow the user to issue local altimeter settings for low flying aircraft without having to leave the RADAR client to find the nearest weather station.

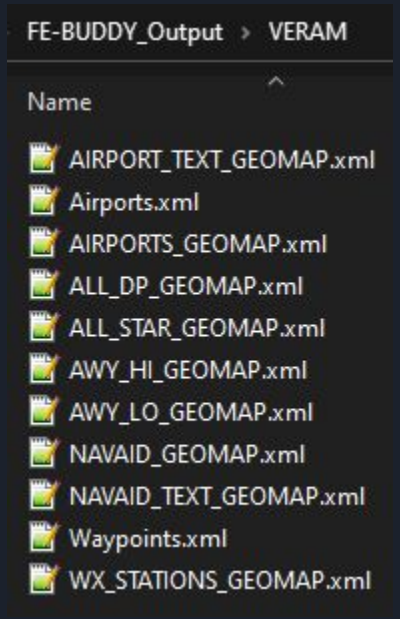
OUTPUT FILES
VRC - TestSectorFile.sct2

This is an “ALL COMBINED” sector file that take all of the VRC data and makes a quick sector file from it.

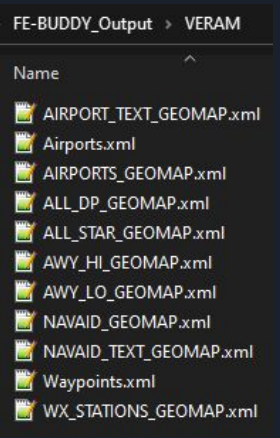
The SID/STAR diagram areas have the “All Combined” files.



OUTPUT FILES
vERAM



OUTPUT FILES
vERAM - NAVDATA



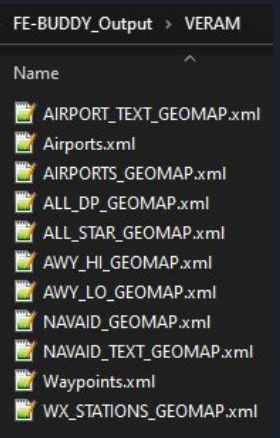
Most users utilize a paid subscription to get their basic NAVDATA but this data is free to US users via the NASR database. The database also provides data up to 28 days early when most paid subscription services can be up to 48 hrs late releasing the data.

With FE-BUDDY, you get this data for free and early. The downside is that it does not contain global NAVDATA, but as long as you don't control outside of US facilities (including territories), this should be all the data you need.

- AIRPORTS.xml
  - All Airport IDs, Names, Elevations, Magnetic Variations, and locations.
  - This data also has each runway's ID, heading (magnetic), length in feet, width, and locations.

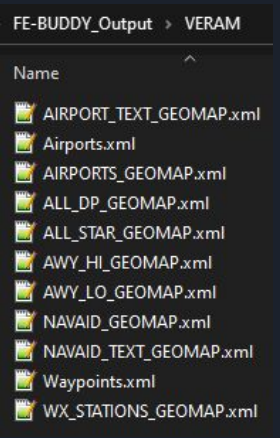
- WAYPOINTS.xml
  - All Airport, Intersection, and NAVAIDs ID and locations.

OUTPUT FILES
vERAM - AIRPORTS_GEOMAP.xml



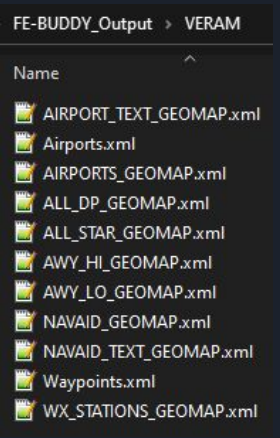
Displays all airport locations via a square “Airport” symbol.

OUTPUT FILES
AIRPORT_TEXT_GEOMAP.xml



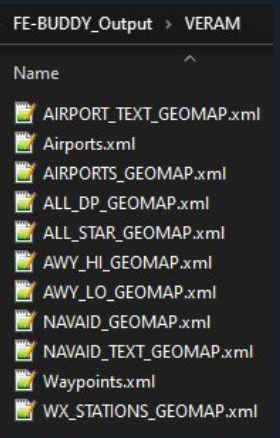
Displays airport ICAO/FAA ID and Airport Name next to the airport symbol when entering Top-Down-Mode.

OUTPUT FILES
vERAM - NAVAID_GEOMAP.xml



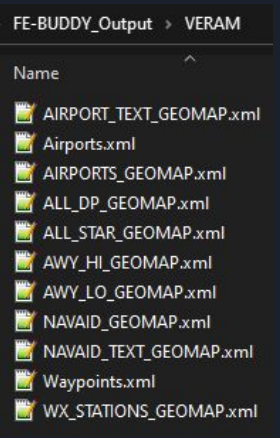
Displays all NAVAID locations via an oval “NAVAID” symbol.

OUTPUT FILES
NAVAID_TEXT_GEOMAP.xml



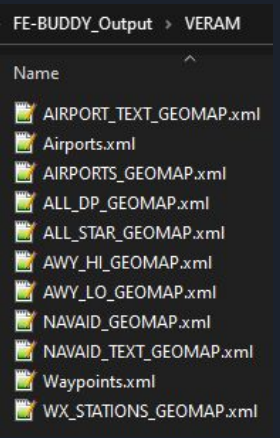
Displays airport NAVAID IDs, Names, and Types next to the NAVAID symbol when entering Top-Down-Mode.

OUTPUT FILES
vERAM - WX_STATIONS_GEOMAP.xml



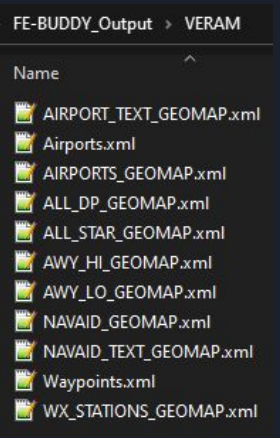
Same as the VRC Labels data but in GEOMAP format.

OUTPUT FILES
vERAM - AWY_HI_GEOMAP.xml



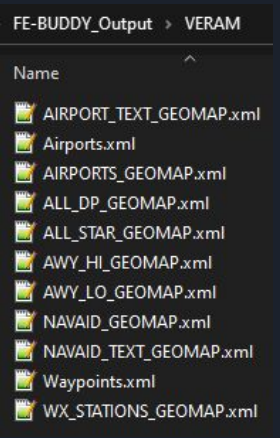
Displays all Regulatory J & Q airways along with all Non-Regulatory Airways.

OUTPUT FILES
vERAM - AWY_LO_GEOMAP.xml



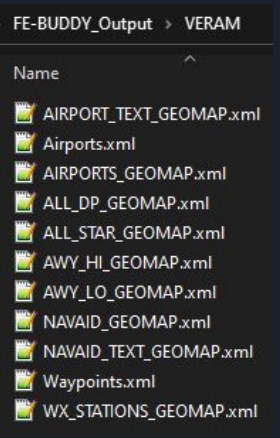
Displays all Regulatory V & T airways.

OUTPUT FILES
vERAM - ALL_DP_GEOMAP.xml



Displays every SID and Graphical ODP that is not considered solely “RADAR Vectored” or has no Computer Code assigned to it like the “DENVER #” departure out of KDEN.

OUTPUT FILES
vERAM - ALL_STAR_GEOMAP.xml

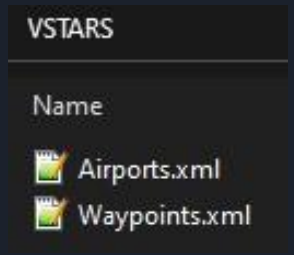


Displays every STAR that has a Computer Code assigned to it.

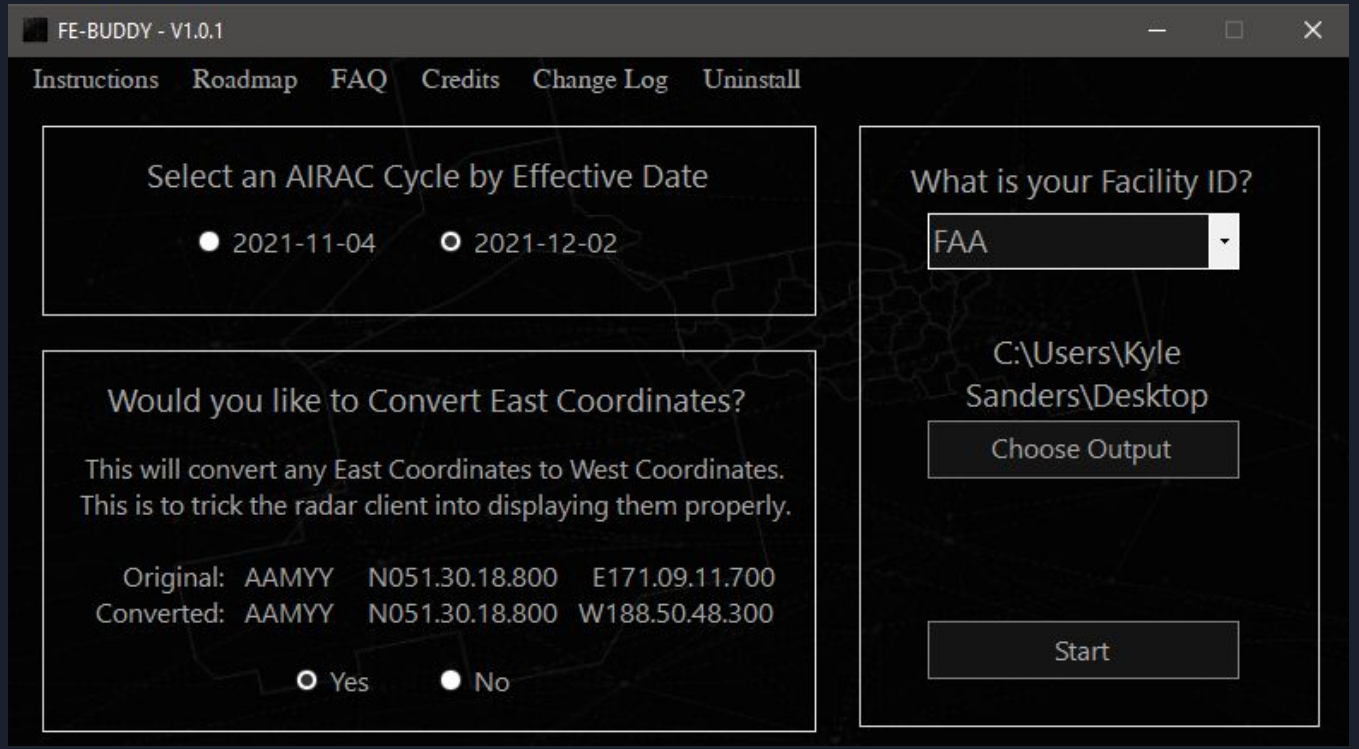
OUTPUT FILES
vSTARS

- AIRPORTS.xml
  - All Airport IDs, Names, Elevations, Magnetic Variations, and locations.
  - This data also has each runway's ID, heading (magnetic), length in feet, width, and locations.
- WAYPOINTS.xml
  - All Airport, Intersection, and NAVAIDs ID and locations.

Use these files to replace the files usually found here: AppData\Roaming\vSTARS

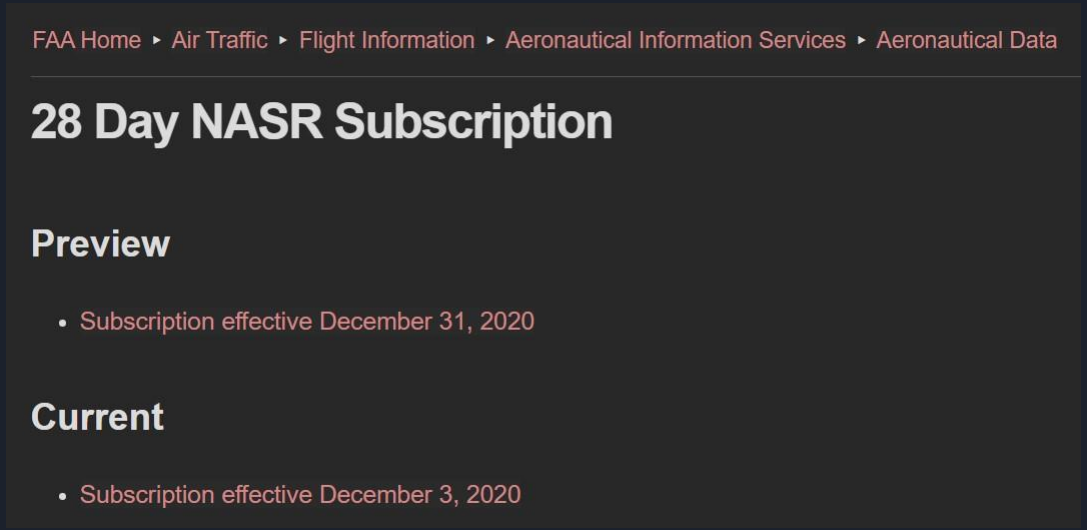


USER INTERFACE



USER INTERFACE
AIRAC Cycle

Upon startup, the program will query the FAA NASR Page to find the current and preview data effective dates then provide the user with a choice of which data they wish to parse.
LINK TO FAA NASR PAGE



USER INTERFACE
AIRAC Cycle - d-TPP Metafile Updates

The parser utilizes the FAA d-TPP Metafile to build the FAA Chart Recall alias commands. The d-TPP Metafile is only made available by the FAA 15-18 days prior to an AIRAC Effective Date.

If you run the program earlier than 15-18 days prior to the next AIRAC Effective Date and you select “Next AIRAC” as the data you wish to parse, FAA Chart Recall alias commands will not be included with the output.

EAST/WEST CONVERSION

The RADAR Clients currently in use on the VATSIM network tend to have a “Canvas” to plot geographical points on that ranges from

~W746° (left side of screen) to ~E300° (right side of screen)

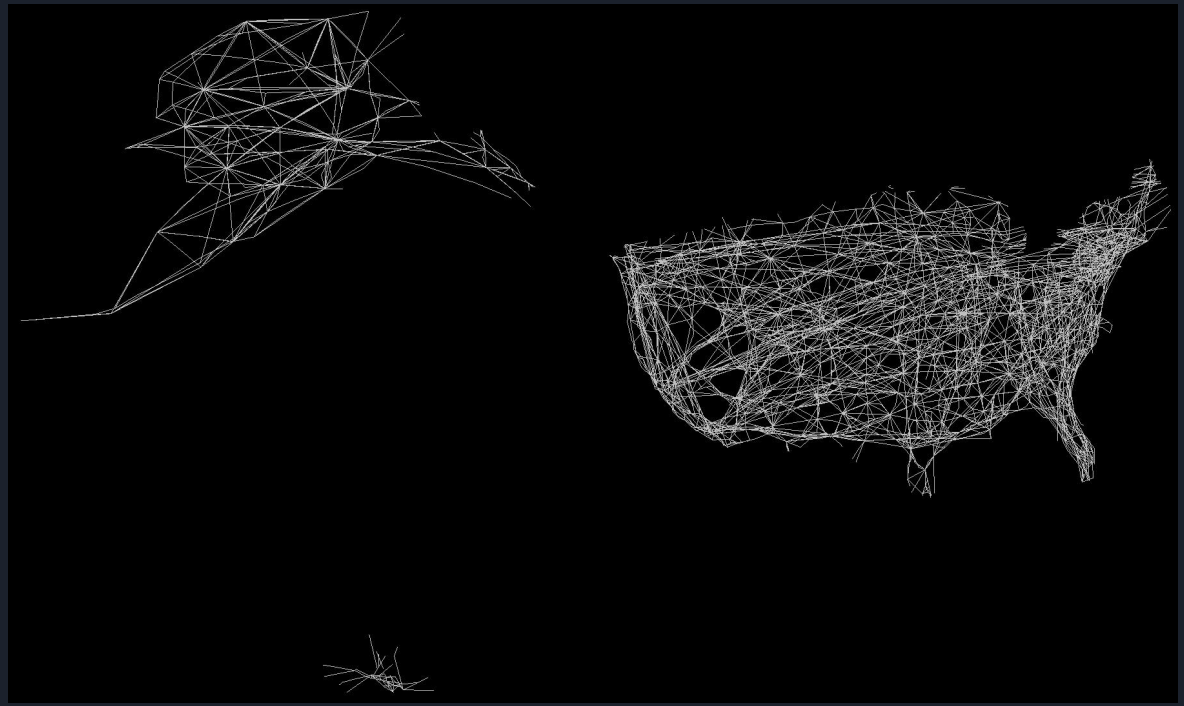
Therefore, when there are points to be drawn for a facility like PCF that have an East Designation, that point will be drawn on far right of the screen (out of view).

This results in lines being drawn over the CONUS and atlantic.

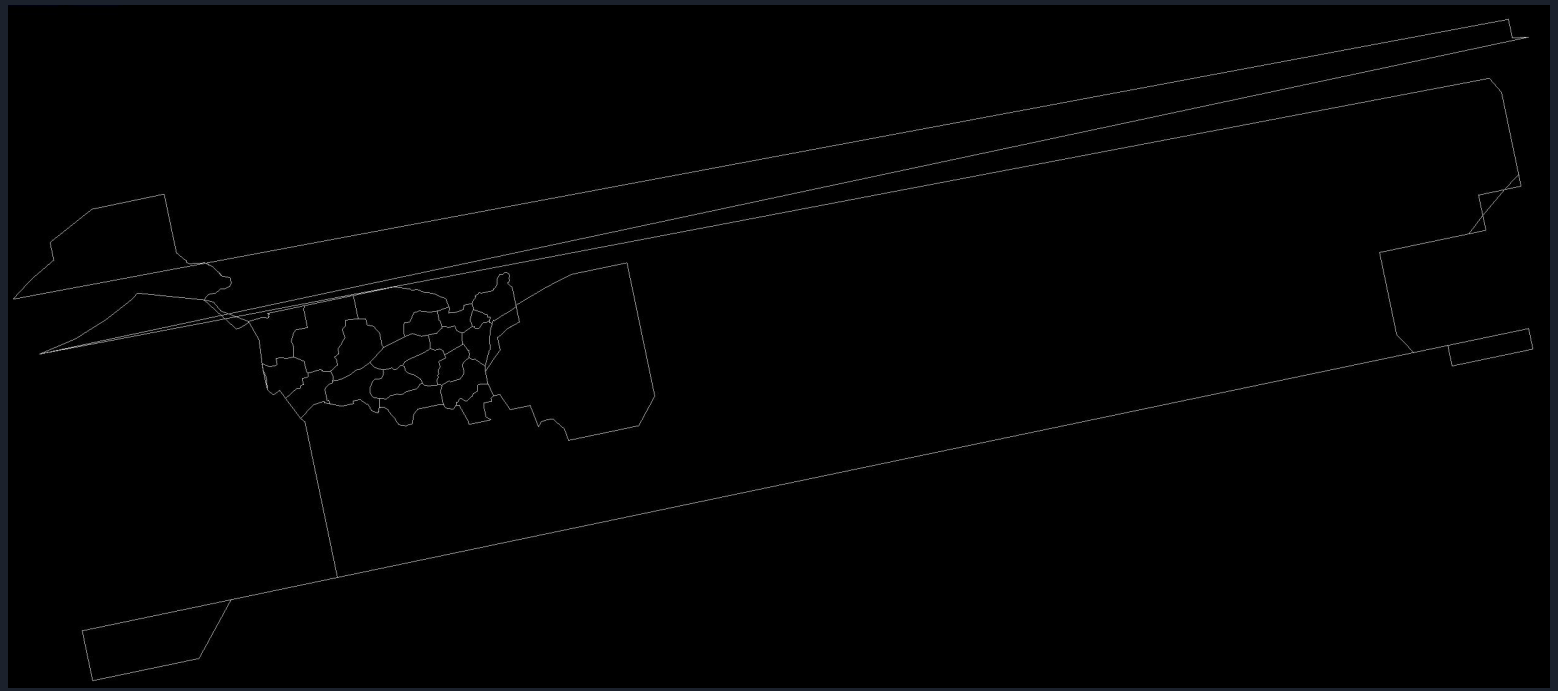
The converter will do the math to have the point drawn to the left of the screen in the appropriate relative spot, resolving this issue.

AIRWAYS
-NOT- Converted

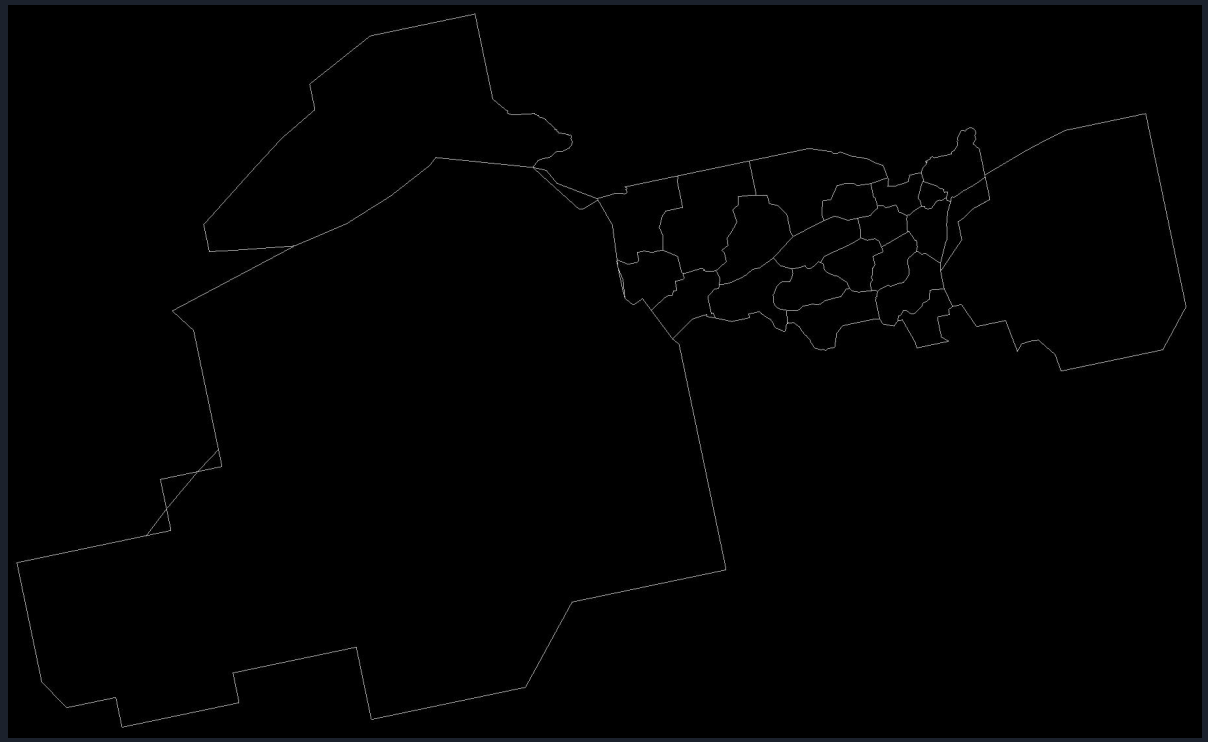
AIRWAYS
Converted



ARTCC BOUNDARIES
-NOT- Converted



ARTCC BOUNDARIES
Converted



FACILITY ID

This drop menu allows the user to select their ARTCC ID. This will be used to limit the amount of ARTCC PUBLICATIONS (as previously described) returned to only their ARTCC.

Leaving the FACILITY ID as “FAA” will result in all ARTCC publications being parsed and exported.

OUTPUT LOCATION

The user may select any directory they wish and the output files will be then saved in a subdirectory “FE-BUDDY_Output” folder.

The default output location is the user’s Desktop.

DUPLICATE DIRECTORIES

If the user selects an “Output Location” that already has a “FE-BUDDY_Output” folder, the program will create another output folder ending in the date and time.

FORMAT:

FE-BUDDY_Output-*(DAY)(Year Last Two Digits)(24hr Time + seconds).*

Example:

FE-BUDDY_*Output-1220160458*

PROGRAM REQUIREMENTS

- Windows 8.1 or Newer
- 64Bit Operating System

Though not REQUIRED, it is recommend that the user have CUrl installed for faster startup times.

- LINK TO CURL

WHERE TO GET THE PROGRAM

LINK TO GITHUB

Navigate to the “Releases” page and follow the setup instructions for the latest release listed.

MANUAL UNINSTALL

There may be times when the FE-BUDDY program will not show up in the Windows “Add/Remove” programs list. In that even, the following steps will remove the program from your computer:

1) Open a file browser and type the following into the address bar:
   %temp%

2) Find the FE-BUDDY folder and delete it.

3) Now place this in your address bar:
   %userprofile%\AppData\Local

4) Find the FE-BUDDY folder and delete it.

5) If there is a FE-BUDDY shortcut on your desktop, delete it.

FE-BUDDY is now uninstalled.

UNINSTALL BUTTON

Utilize this button to have FE-BUDDY uninstall itself in the same manner as the “Manual Uninstall” process described before.

REPORT ISSUES

Please utilize the GitHub issue-tracking page:

LINK

CONTACT DEVELOPERS

Contact the following individuals for any questions, concerns, or general feedback.

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