YART ¡ Yet Another Route Tool !©

Follow an up-to-date flight plan with MFS ATC ————————————•

8th of December 2013

Revision 3

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What is YART ¡ Yet Another Route Tool ! ?

YART ¡ Yet Another Route Tool ! is a tool able to produce a Microsoft Flight Simulator[1] flight plan from a RouteFinderFree output (or from a skyvector.com GPS track). It isn't a flight planner, it is a framework for a somewhat realistic flight preparation flow. From this starting point the user has the ability to switch to external websites to expand the preparation (CFMU interface, The Owl's Nest©, FSRealWXlite©, RouteFinder©, SkyVector.com® and so on).

You must have made the experience, **that the current AIRAC cycle is not recognized by MFS default ATC service**. Flying your own route with your FMS together with a route from the MFS internal flight planner is the perfect combination to get persistant and annoying calls from the default ATC.

> ➜ A new revision of the international waypoints database is published every 28 days in the real world, and each revision - or AIRAC cycle - has got a number like 1310.

A solution is to use YART to **fly along a realistic route under ATC surveillance**.

In contrast with a lot of flight simulation flight planners available on the market **YART ¡ Yet Another Route Tool ! is a freeware**. For the purpose of using it with the MFS ATC, it was conceived as an alternative to the great freeware *Navigation* from François Fouchet.

> ➜ *Navigation* permits to plot each waypoint along the route in its interface, export a MFS flight plan for FS9, and finally load it into FS, thus bypassing the MFS database. That's a quite long process and *Navigation* isn't a lightweight software in a flight simulation perspective.

In a nutshell, YART ¡ Yet Another Route Tool ! is a parser for RouteFinder output and offers the possiblity to access to various external ressources (**free or with limited free access at least**) from a single page. Over times it became an integrated flight preparation interface with new functions, like the possibility to draw a SID or a STAR

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1 Microsoft Flight Simualtor is a trademark registred in several countries.

and integrate it into the MFS flight plan or to produce a flight plan for Ivap, the pilot interface of the virtual network IVAO.

How it works

The engine convertRfinder is the parser. **It reads the RouteFinder details**, including the coordinates. It converts it to a flight plan with the coordinates format awaited by FS. It does not use a waypoints database. It only uses the RouteFinder output and transforms it. This way, the AIRAC you are using is the AIRAC you selected in the RouteFinder interface.

If you ask for **weather reports**, it will retrieve METARS directly from the National Oceanic and Atmospheric Administration in the USA, and display them as provided by the NOAA.

If you wish the **extra distance to the alternate destination airport**, ConvertRfinder makes an interrogation of the TransaTvia.com airport databank (modified from the freely available Robin A. Peel navigation database). Alternatively the user can open the Owl Nest website and retrieve the distance data from there. With the trip distance and the distance to alternate, you are able to begin a serious flight planning.

Every month **we retrieve automatically the current average worlwide fuel price** directly from the IATA fuel survey. From that value we propose you a standard cost index FMS parameter for both the Boeing**®** 737 and the Boeing**®** 757.

In the end, we format the coordinates in SkyVector**®** format, to **plot the route** on this website with a precision sufficient to see the track on the enroute chart.

Getting started

If you are planning a flight from München to Vienna, RouteFinder output (with SID, STAR, RNAV, FL150, cycle 1303) is :

```
Details:
===============================================================
ID        FREQ    TRK    DIST    Coords                        Name/Remarks
EDDM               0       0     N48°21'13.62" E011°47'09.90"  MUNCHEN
MEBEK            105      32     N48°13'54.86" E012°33'55.81"  MEBEK
KIRDI            100      10     N48°12'27.64" E012°49'17.94"  KIRDI
VELOM             90      27     N48°13'15.96" E013°29'57.86"  VELOM
MOPIP             91      13     N48°13'34.15" E013°49'37.22"  MOPIP
LNZ     116.6     91      11     N48°13'46.96" E014°06'11.35"  LINZ
LOWW              96      99     N48°06'37.25" E016°34'10.60"  WIEN-SCHWECHAT

Tracks are magnetic, distances are in nautical miles.
===============================================================
EDDM SID MEBEK Y105 KIRDI L174 LNZ STAR LOWW
===============================================================
```

Paste the details into YART :

ID	FREQ	TRK	DIST	Coords		Name/Remarks
EDDM		0	0	N48°21'13.62"	E011°47'09.90"	MUNCHEN
MEBEK		105	32	N48°13'54.86"	E012°33'55.81"	MEBEK
KIRDI		100	10	N48°12'27.64"	E012°49'17.94"	KIRDI
VELOM		90	27	N48°13'15.96"	E013°29'57.86"	VELOM
MOPIP		91	13	N48°13'34.15"	E013°49'37.22"	MOPIP
LNZ	116.6	91	11	N48°13'46.96"	E014°06'11.35"	LINZ
LOWW		96	99	N48°06'37.25"	E016°34'10.60"	WIEN-SCHWE

Tracks are magnetic, distances are in nautical miles.

FL [150]   ALTN [   ]   [CREATE]

Make sure you pasted only the details in the main field. Write the cruize flight level : FL150 in this case. Use the button « Create ! ». Scroll down to see the results.

Save the .PLN file and load it into Microsoft Flight Simulator®.

→ We recommand you to make **a right click** → save as....

You're done ! Congratulations !

You do not need to complete the ALTN input (alternate destination if intended destination is unreachable), because it is only required if you demand the supplementary distance to alternate from the intended destination.

If you tick the supplementary distance option without completing the ALTN input, don't panic, ConvertRfinder will complete the FS file compilation. However it won't display any extra ground distance. YART will still display the nearest available airports per the TransaTvia.com airport databank.

Advanced mode

You may extend the results to **flight plan validation** and **flight plan drawing**. In order to do so, tick the advanced mode option. It will also offer the integrated support interface.

Validation of a european flight plan

ConvertRfinder will convert your data into the 2012 ICAO flight plan format and display it on screen. For european flights, click on the validation button to open a validation interface. This interface is hosted on a external (and commercial !) website, eurofpl.eu, which makes the interrogation of the Eurocontrol engine from a nice interface. However, you may elect to use the official eurocontrol interface instead. If the flight plan is wrong in regard to real route restrictions, Eurocontrol will inform you.

> ➜ From this validation information you may modify the convertRfinder flight plan by iteration until obtaining a route that would be validated in the real world. Try to request different routes at RouteFinderFree, changing the altitude, or changing a segment. It is possible to request a segment of route between two waypoints, thus composing your route segment by segment at RouteFinderFree with the visual help of the enroute chart at SkyVector.com.

The engine reads the route entered within YART and produces the following flight plan :

```
-(FPL-IMMAT-IS -1B737/M -SDRWGIY/S -EDDM 0000 -M078F150 MEBEK DCT KIRDI DCT
VELOM DCT MOPIP DCT LNZ  -LOWW 0100 ZZZZ -ALTN/UNNAMED -PBN/A1B4C4D4)
```
  Send to validation

DCT (a direct track between two waypoints) is used by default. However direct routing in the route description are often rejected and ATS routes are preferable

(UN156, R10, Y105...). You can edit the FP directly before clicking on the send button or use a YART shortcut to make it directly from the main interface.

You will find the ATS information at the bottom of the Routefinder(c) output :

```
LOWW            96     99   N48°06'37.25" E016°34'10.60" WIEN-SCHWECHAT

Tracks are magnetic, distances are in nautical miles.
==================================================================
EDDM SID MEBEK Y105 KIRDI L174 LNZ STAR LOWW
==================================================================
```

Copy this information and replace

```
MEBEK DCT KIRDI DCT VELOM DCT MOPIP DCT LNZ
```

by :

```
MEBEK Y105 KIRDI L174 LNZ
```

Alternatively you may copy the route directly in the main field (before flight plan creation), preceded by a « + » sign :

```
ID        FREQ   TRK   DIST   Coords                       Name/Remarks
EDDM             0      0     N48°21'13.62" E011°47'09.90" MUNCHEN
MEBEK            105    32    N48°13'54.86" E012°33'55.81" MEBEK
KIRDI            100    10    N48°12'27.64" E012°49'17.94" KIRDI
VELOM            90     27    N48°13'15.96" E013°29'57.86" VELOM
MOPIP            91     13    N48°13'34.15" E013°49'37.22" MOPIP
LNZ     116.6    91     11    N48°13'46.96" E014°06'11.35" LINZ
LOWW             96     99    N48°06'37.25" E016°34'10.60" WIEN-SCHWE
+ MEBEK Y105 KIRDI L174 LNZ
Tracks are magnetic, distances are in nautical miles.
```
FL 150   ALTN   CREATE

The sign + at the beginning of the line is **a shortcut to instruct ConvertRfinder to consider the associated information** (*ie* on the same line) **for the validation** instead of DCT between two waypoints.

The resulting flight plan is :

```
-(FPL-IMMAT-IS  -1B737/M  -SDRWGIY/S  -EDDM 0000  -M078F150 MEBEK Y105 KIRDI
L174 LNZ  -LOWW 0100 ZZZZ -ALTN/UNNAMED -PBN/A1B4C4D4)
```
Send to validation

Export the route to SkyVector.com

You may also open in a new tab the plot of the route.

The YART Composer : draw a trajectory, a SID or a STAR

It is possible to draw a so-called GPS track on the SkyVector.com website. Export the track from there and open the YART Composer.

It will transform it into the ConvertRfinder format. Then you may integrate this segment among the waypoint of your navigation.

1. Begin by drawing your route on Skyvector.com®. Each waypoint must be added per its GPS coordinates (and not by its intersection name, if any).
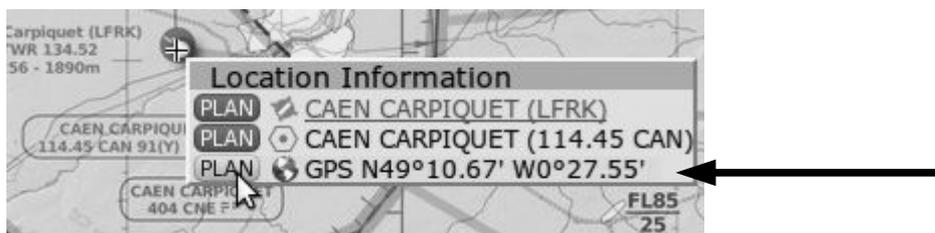
2. Copy the export link as shown below :

3. Produce the segment. Additionnaly, you may choose the SID/STAR format.

☐ Is a Standard Instrument Departure (SID).
☐ Is a Standard Terminal Arrival Route (STAR).

(Produce) ⬅

By doing so, beware of keeping the destination airport as well as the departure airport in the RouteFinder format. If you give a SkyVector.com coordinates to MFS as a departure airport, MFS may not be able to properly recognise the departure and destination of the flight.

In the example below the waypoints SKY05 to SKY25 have been retrieved by the YART Composer from SkyVector.com and integrated *by the user* in the YART main interface.

```
ID        FREQ    TRK    DIST   Coords                          Name/Remarks
LLBG         0      0    N31°50'22.10" E034°49'18.64" TEL AVIV
TIBBI      302     26    N32°02'29.00" E034°22'13.00" TIBBI
SOLIN      342     28    N32°28'00.00" E034°10'00.00" SOLIN
SKY05        0     39    N35°41'42.28" E034°36'30.23" [35.695,34.608]
SKY24        0     40    N35°24'21.30" E033°51'46.71" [35.406,33.863]
SKY56        0     21    N35°18'53.37" E033°27'03.56" [35.315,33.451]
SKY95        0     17    N35°20'46.31" E033°06'50.67" [35.346,33.114]
SKY69        0      3    N34°51'55.13" E032°54'02.72" [34.865,32.901]
SKY92        0     15    N34°52'47.86" E033°12'15.31" [34.880,33.204]
SKY14        0     17    N34°49'16.89" E033°33'06.11" [34.821,33.552]
SKY25        0      8    N34°54'31.80" E033°40'21.17" [34.909,33.673]
RIMON      192     32    N32°13'55.00" E034°27'27.00" RIMON
SIRON      126      9    N32°09'12.00" E034°36'29.00" SIRON
LLBG       154     22    N31°50'22.10" E034°49'18.64" TEL AVIV
```
Tracks are magnetic, distances are in nautical miles.
FL [150] ALTN [   ]   [CREATE]

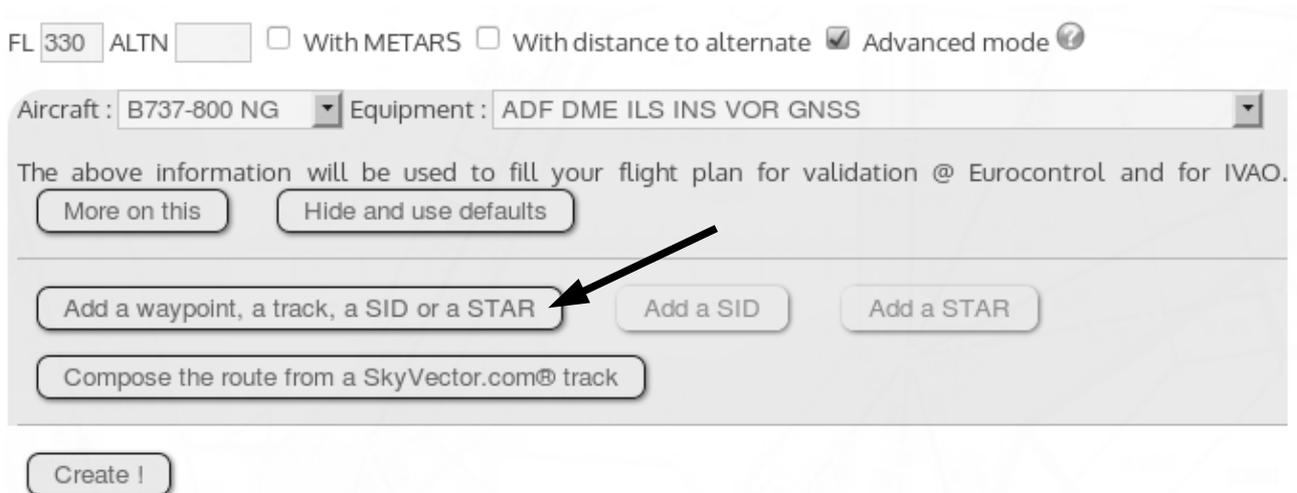With a SID integrated into the route, the default ATC won't give you anymore inaccurate vectors upon departure.

The YART Composer : write a segment, a SID or a STAR

It is possible to write a track directly within the YART Composer.

In the opening windows, write your waypoints. Clicking on "Produce" will transform them in the ConvertRfinder format. Then you may integrate manually this segment among the waypoints of your navigation. For that purpose YART uses a TransaTvia.com navigation databank based on the lastest AIRAC cycle of the free Robin A. Peel databank. This databank is not updated on every AIRAC : some waypoints may be missing.

Choosing an aircraft and an equipment
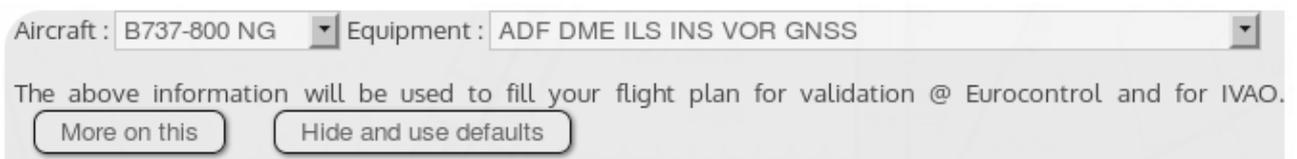
Choosing an aircraft and an equipment is important to the user who is going to use the Ivap Flight plan or the validation at Eurocontrol. Choosing the equipment allows ConvertRfinder to format the *perfomance of navigation* as required in the 2012 ICAO flight plan. The correspondance between the equipment and the performance of navigation is given in the table below, per ICAO rules.

Navigation specification		Sensor certified fo use with the nav spec (Sensor)					
		All sensors	GNSS	DME/DME	DME/DME/IRU (VOR/DME for B4)	INS/IRS	LORAN
		1	2	3	4	5	6
RNAV 10	A	A1					
RNAV 5	B	B1	B2	B3	B4	B5	B6
RNAV 2	C	C1	C2	C3	C4		
RNAV 1	D	D1	D2	D3	D4		
RNP 4	L	L1					
RNP 1	O	O1	O2	O3	O4		
RNP APCH	S	S1 or S2 (with Baro)					
RNP AR APCH	T	T1 or T2 (with RF)					

Retrieving the lvap flight plan

In advanced mode, scroll down through the results. In the same section as the FS9 and FSX flight plan you will find the link to the lvap flight plan.

> → As with every links in YART, we recommand you to make **a right click →** save as....

In lvap, execute the following sequence :

ACARS → Flight plan → Load → *browse to your file* → Send flight plan.

The Library

The Library is a collection of validated flights. It is not that easy to compose a route validated by Eurocontrol. There are A LOT of restrictions to air men. So when we success in composing one, we add it in the Library for the other users. The normal user cannot add a flight plan automatically to the Library. However, it may *request* his flight plan to be added into. A flight plan must be reviewed by TransaTvia.com before integration in the Library.

Links to YART ¡ Yet Another Route Tool !

Main interface

```
https://www.ssl-url.net/gf3.myriapyle.net/aero/transatvia_convertrfinder.php
```

Home

```
https://www.ssl-url.net/gf3.myriapyle.net/aero/
```

Other links

CFMU @ Eurocontrol

```
https://www.public.cfmu.eurocontrol.int/PUBPORTAL/gateway/spec/index.html
```

Robin A. Peel navigation databank

TransaTvia.com NavData is modified from the Robin A. Peel navigation databank published under General Public Licence available at :

```
http://data.x-plane.com
```

TransaTvia.com NavData is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 3 of the License, or (at your option) any later version.

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```
THIS SOFTWARE IS ONLY INTENDED FOR FLIGHT SIMULATION.
```