

- 1) Tablets and phones
  - a. Models
    - i. Apple, Android, Windows
    - ii. GPS
    - iii. ADS-B
  - b. Handling
    - i. Knee handle, RAM mount, suction cup
    - ii. Overheating
    - iii. Battery life
    - iv. Cable management
    - v. Polarized glasses
    - vi. Shared usage
- 2) Legal
  - a. FAA
  - b. EASA
- 3) Applications
  - a. Weather
    - i. AeroWeather
    - ii. AeroPlus Weather
    - iii. Nav apps
  - b. Documentation/utils
    - i. CH VFR Manual
    - ii. Sporty's E6B
    - iii. Gyronimo E6B, performance
    - iv. iVAC – france
    - v. eIAIP
    - vi. Charts in .pdf
    - vii. Charts in AirnavPro, Jeppesen
  - c. Navigation
    - i. Airnav Pro
    - ii. Jeppesen VFR
    - iii. Jeppesen TC/FD
    - iv. ForeFlight Mobile, Garmin Pilot, WingX, myWingMap
    - v. SkyDaemon
  - d. Fun
    - i. FlightRadar24
    - ii. AirSupremacy
    - iii. FlightControl

Apple: all iOS. Android, Windows – never used, should be same-ish from what I’ve seen. Matter of personal preference and what’s available already in existing environment at home/at work



GPS. So far from my experience in Apple works fine. However, depending on setup inside ACFT, how old is the model of a tablet might be a good idea to purchase external GPS receiver wired, Bluetooth or plugged-in like “Bad Elf GPS”:



Plenty of them: <http://www.sportys.com/PilotShop/category/1153> (for Apple connector or via Bluetooth. Be careful, for example, Apple devices work only with Apple-approved external Bluetooth GPS receivers). ADS-B (Automatic

dependent surveillance-broadcast: traffic, weather, terrain, Traffic Information Service-Broadcasts (NOTAMs) not of big importance for Europe for small aircrafts at the moment), however for US may be useful to look into the technology and available receivers (starting from 600\$).

Handling of the device inside acft depends on your personal preferences. I use RAM mount <http://www.rammount.com/> . Example from their website:



(Same in cars, basically)

With a knee pad. I had not the best experience.



Additional glare from plastic, knee already used for other papers, blocks controls, harder to connect battery. And be careful (fell from AT01 wing, caused 300CHF shortage):



In HB-CEO



In HB-SFS:



Note the additional protective piece of plastic to prevent cockpit scratching. It looks as it blocks quite some view, but in real life it only blocks if the passenger at left is a short kid. It's more of a question of getting into acft and not breaking the handles or ripping of cables. Even though there are no cables on these pictures, there may be: a) external wired GPS, b) additional battery. Battery life is an "open question". GPS and "screen on" (full on due to bright environment) can significantly increase battery usage. I always keep additional external battery and had to use it at least once (in acft):



Battery life also depends on external temperature. Not only battery life. At least iPad 3 has temperature gauge and in case of overheating, it shuts down. In the setup as above it was possible to cool it down pointing vent onto the back of iPad and placing ICAO chart on top. Otherwise, the device was shutting down in next 5 minutes.

This subject brings to the next topic: legal issues. Even though tablets are extremely comfortable and even during the exam it was allowed as “best use of equipment” iPad’s, Android tablets, Windows tables are not real “aviation-grade” equipment.

US:

[http://www.faa.gov/other\\_visit/aviation\\_industry/airline\\_operators/airline\\_safety/info/all\\_infos/media/2011/InFO11011.pdf](http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info/all_infos/media/2011/InFO11011.pdf)

, <http://ipadpilotnews.com/2012/06/ipad-legal-briefing-for-pilots-updated-with-new-ac-120-76b/>

, [http://ipadpilotnews.com/2013/09/ipad-legal-briefing-for-pilots/?utm\\_source=feedly](http://ipadpilotnews.com/2013/09/ipad-legal-briefing-for-pilots/?utm_source=feedly)

EASA: [http://www.easa.europa.eu/certification/experts/docs/oeb-reports/efb/Jeppesen\\_FD\\_Pro\\_iOS&TC\\_Pro\\_iOS\\_EFB\\_Sw-Final.pdf](http://www.easa.europa.eu/certification/experts/docs/oeb-reports/efb/Jeppesen_FD_Pro_iOS&TC_Pro_iOS_EFB_Sw-Final.pdf) and [http://ww1.jeppesen.com/company/newsroom/articles.jsp?newsURL=news/newsroom/2012/EASA\\_iPadEFB\\_evaluation\\_NR.jsp](http://ww1.jeppesen.com/company/newsroom/articles.jsp?newsURL=news/newsroom/2012/EASA_iPadEFB_evaluation_NR.jsp)

Conclusion: tablets cannot yet be “the only” source of navigation data. My suggestion: event though it is possible to commence a flight using a tablet only for navigation, approach, etc (and people do that), be prepared for a table to die at any moment. This is over exaggeration, but leaves quite some safety margin.

The applications.

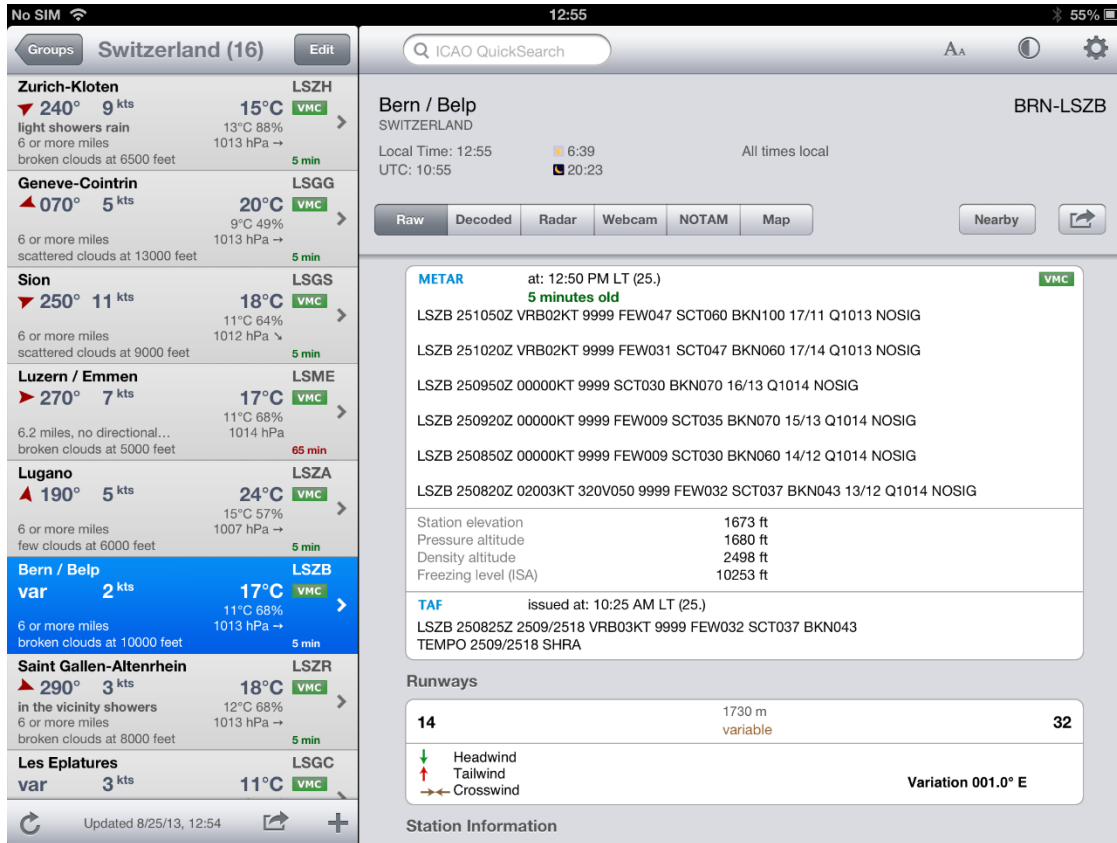
To prepare a flight one needs to check for METAR’s, TAF’s, NOTAM’s, (DAB, etc). First of all, this is possible to use just via internet, logging into usual AMIE system. I will not comment on this – this is usual Skyguide <https://www.homebriefing.com/> . As the result you get a .pdf which we’re usually printing using AMIE machines.

Checking weather. There are plenty of applications, I tried AeroWeather Pro (Swiss made) <http://www.aeroweather.ch/> . It exists for iOS (iPad and iPhone) and Android platforms. When you start application, first of all you setup the ADs you’re interested in. Search for AD either by ICAO, IATA or name.

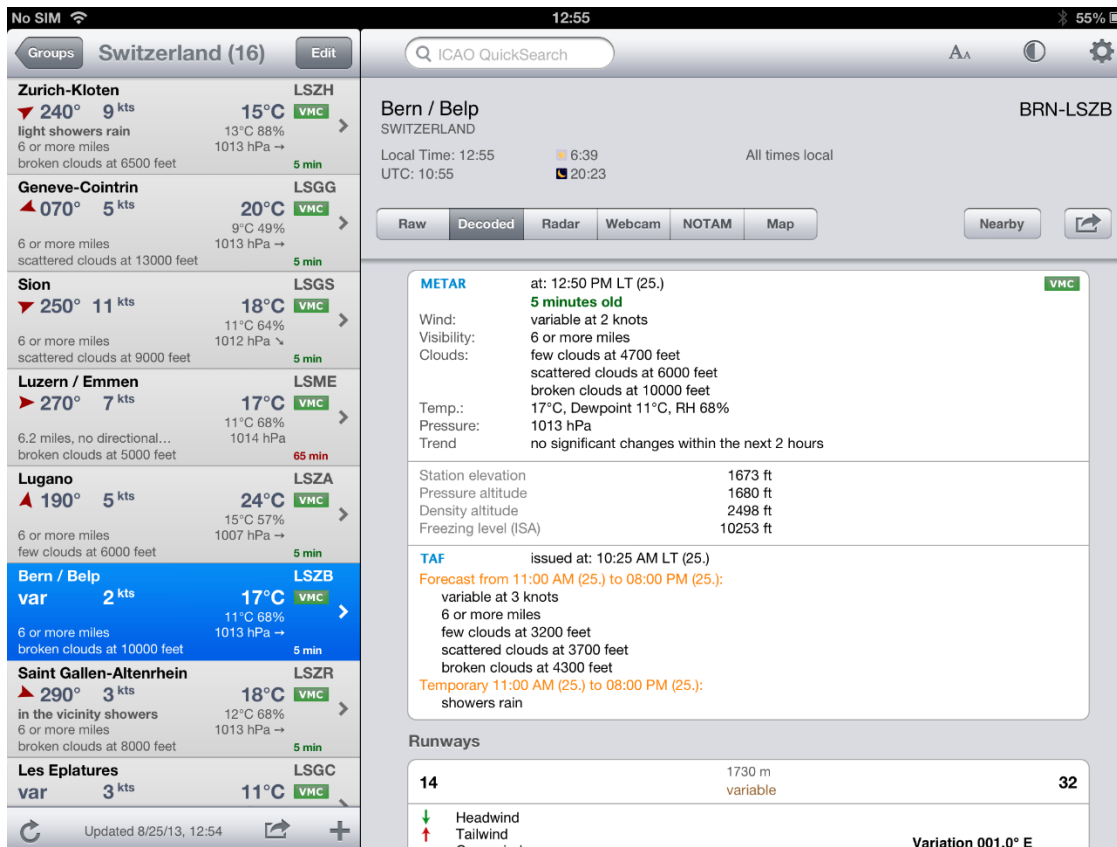


Example of iPad with AeroWeatherPro and viewing LSZB:

RAW METAR's and TAF's, Sunrise, Sunset, etc:



Decoded METAR's, TAF's:



Our favorite "Rarad bild" by Meteoschweiz (not for all countries):

**Switzerland (16)**

- Zurich-Kloten** (LSZH): 15°C, 13°C 88%, 1013 hPa → 5 min
- Geneve-Cointrin** (LSGG): 20°C, 9°C 49%, 1013 hPa → 5 min
- Sion** (LSGS): 18°C, 11°C 64%, 1012 hPa ↘ 5 min
- Luzern / Emmen** (LSME): 17°C, 11°C 68%, 1014 hPa → 65 min
- Lugano** (LSZA): 24°C, 15°C 57%, 1007 hPa → 5 min
- Bern / Belp** (LSZB): 17°C, 11°C 68%, 1013 hPa → 5 min
- Saint Gallen-Altenrhein** (LSZR): 18°C, 12°C 68%, 1013 hPa → 5 min
- Les Eplatures** (LSGC): 11°C

**Bern / Belp** (BRN-LSZB)  
SWITZERLAND  
Local Time: 12:55, UTC: 10:55, 6:39, 20:23

Loaded at: 8/25/13, 12:55 | Source: Meteoschweiz

25.08.2013 12:50

Webcams:

**Switzerland (16)**

- Zurich-Kloten** (LSZH): 15°C, 13°C 88%, 1013 hPa → 5 min
- Geneve-Cointrin** (LSGG): 20°C, 9°C 49%, 1013 hPa → 5 min
- Sion** (LSGS): 18°C, 11°C 64%, 1012 hPa ↘ 5 min
- Luzern / Emmen** (LSME): 17°C, 11°C 68%, 1014 hPa → 65 min
- Lugano** (LSZA): 24°C, 15°C 57%, 1007 hPa → 5 min
- Bern / Belp** (LSZB): 17°C, 11°C 68%, 1013 hPa → 5 min
- Saint Gallen-Altenrhein** (LSZR): 18°C, 12°C 68%, 1013 hPa → 5 min
- Les Eplatures** (LSGC): 11°C

**Bern / Belp** (BRN-LSZB)  
SWITZERLAND  
Local Time: 12:55, UTC: 10:55, 6:39, 20:23

Raw | Decoded | Radar | **Webcam** | NOTAM | Map

- Flughafen Bern-Belp / Berne Airport**  
Allmendingen b. Bern  
nearby | 7 min
- Miawara**  
Zimmerwald  
2 NM SSW | 16 min
- Rubigen, Sicht in Richtung Berner Oberland**  
Rubigen  
2 NM ESE | 3 min
- Eiger, Mönch & Jungfrau**  
Dentenbergl  
2 NM NE | 8 min
- Bern Dentenberg**  
Dentenbergl

Updated 8/25/13, 12:54

Webcams.travel



Also quite useful: NOTAM's right in application

The screenshot shows a mobile application interface for weather and NOTAMs. On the left, a list of airports in Switzerland is shown, including Zurich-Kloten, Geneva-Cointrin, Sion, Luzern / Emmen, Lugano, Bern / Belp (selected), Saint Gallen-Altenrhein, and Les Eplatures. The main panel displays detailed information for Bern / Belp (BRN-LSZB), including local and UTC times, and a list of NOTAMs. The NOTAMs are:

- LSZB - B1046/13 R B0702/13**  
 B1046/13 NOTAMR B0702/13  
 Q) LSAS/QMNLT/IV/NBO/A/000/999/4655N00730E005  
 A) LSZB B) 1307190701 C) PERM  
 E) NO SELF TAX BEYOND APN EAST OF TWY A AND NORTH OF AIRBASE HANGAR DUE TO FENCE. MARSHALLING OR TOWING ONLY.
- LSZB - B1111/13 R B1059/13**  
 B1111/13 NOTAMR B1059/13  
 Q) LSAS/QATLT/IV/NBO/AE/000/999/4655N00730E005  
 A) LSZB B) 1308071257 C) 1310132000  
 E) BERNE CTR AND TMA: VFR XNG ONLY VIA TRANSIT RTE NORTH AND SOUTH. OTHER ROUTINGS ONLY BY ATC. EXP DLA.
- LSZB - B1131/13 N**  
 B1131/13 NOTAMN  
 Q) LSAS/QFALT/IV/NBO/A/000/999/4655N00730E005  
 A) LSZB B) 1308311515 C) 1308311615  
 E) NO TRAINING FLT ALLOWED FOR IFR AND VFR TFC.  
 LTD ATC CAPACITY DUE TO AIRSPACE RESTRICTIONS PATROUILLE SUISSE. EXP DLA.

At the bottom, there are buttons for 'Raw', 'Report', and 'Cleared (0)', along with a '4 of 4' indicator.

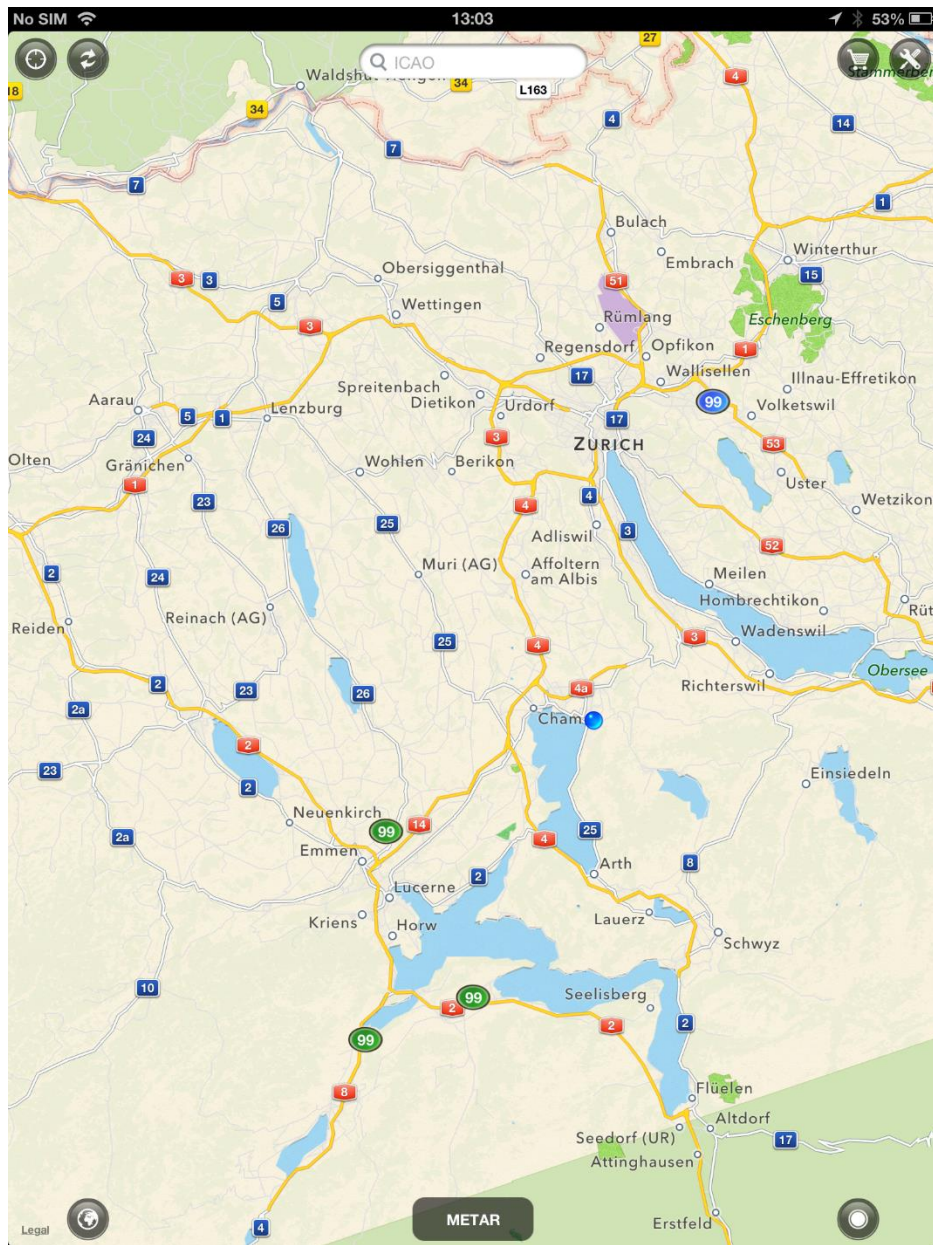
Show on map – useful to locate other near-by ADs

This screenshot shows the same application with the 'Map' view selected. The map displays the Bern region in Switzerland, with various airports and locations marked. The selected airport, Bern / Belp (BRN-LSZB), is highlighted with a purple pin. Other nearby airports shown include Zurich-Kloten (LSZH), Geneva-Cointrin (LSGG), Sion (LSGS), Luzern / Emmen (LSME), Lugano (LSZA), Saint Gallen-Altenrhein (LSZR), and Les Eplatures (LSGC). The map also shows major roads and geographical features like Lake Neuchâtel and Lake Thun.

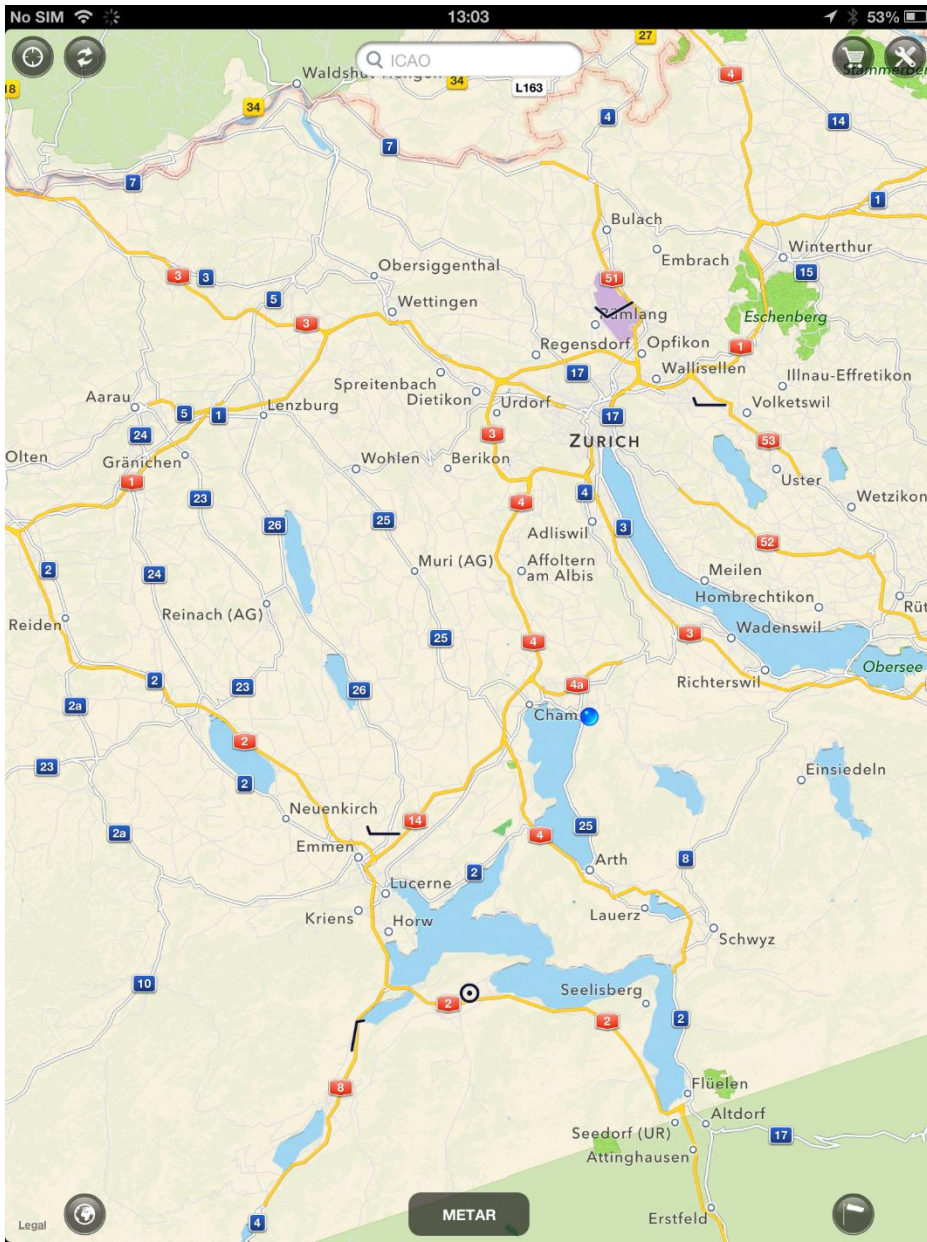
There are two versions of AeroWeather: Pro (3.99\$) and Lite(Free)

Some examples of additional features Pro version provides: displays webcams nearby airfields (provided by [www.webcams.travel](http://www.webcams.travel)), NOTAM (provided by FAA), incl. print and mail, runway data, moon data, e-mail & printing of TAFs and METARs. So far the best from WX apps I used. Another example is AeroPlus Weather. Displays information on map:

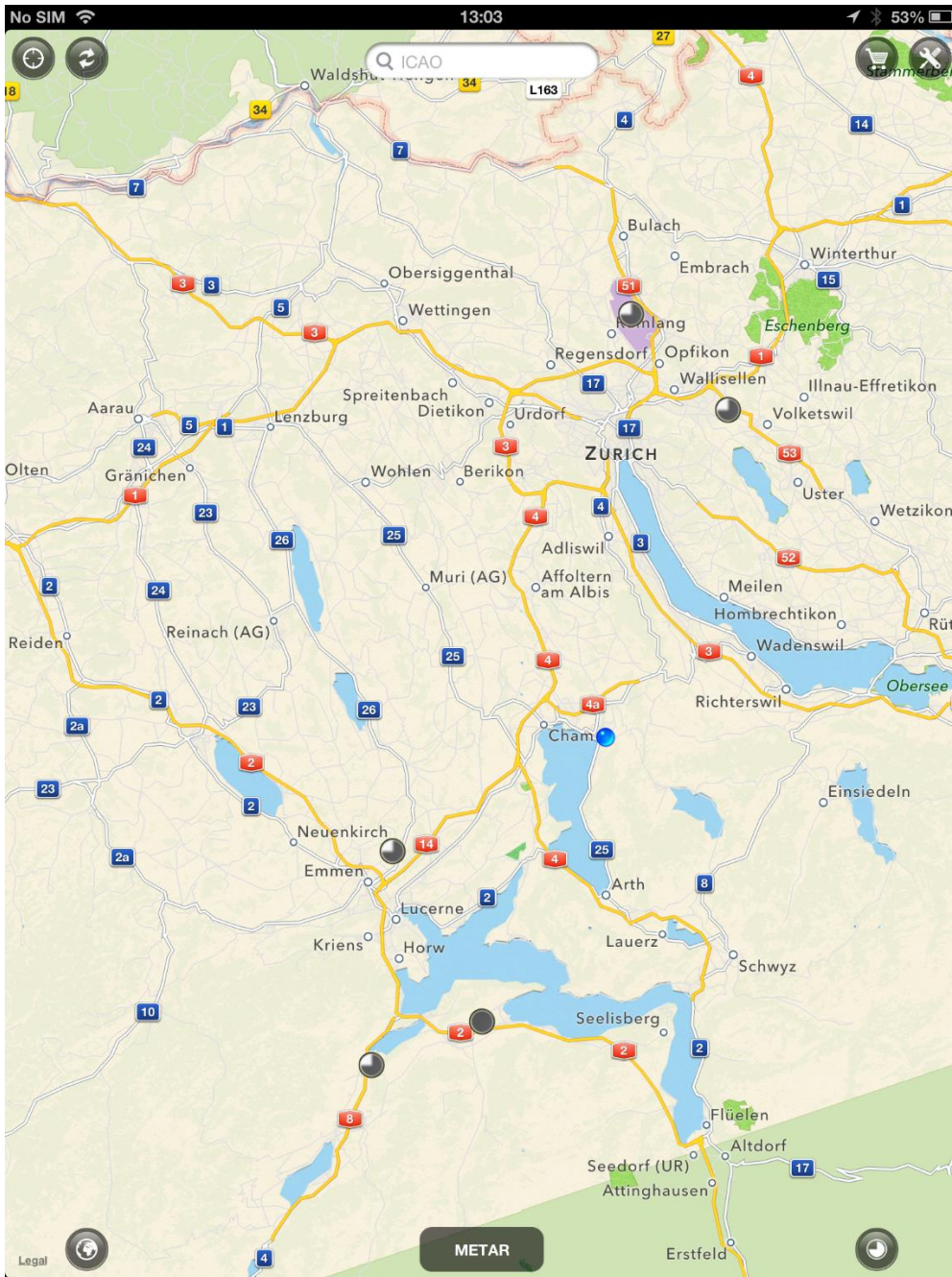
VMC/IMC, visibility:



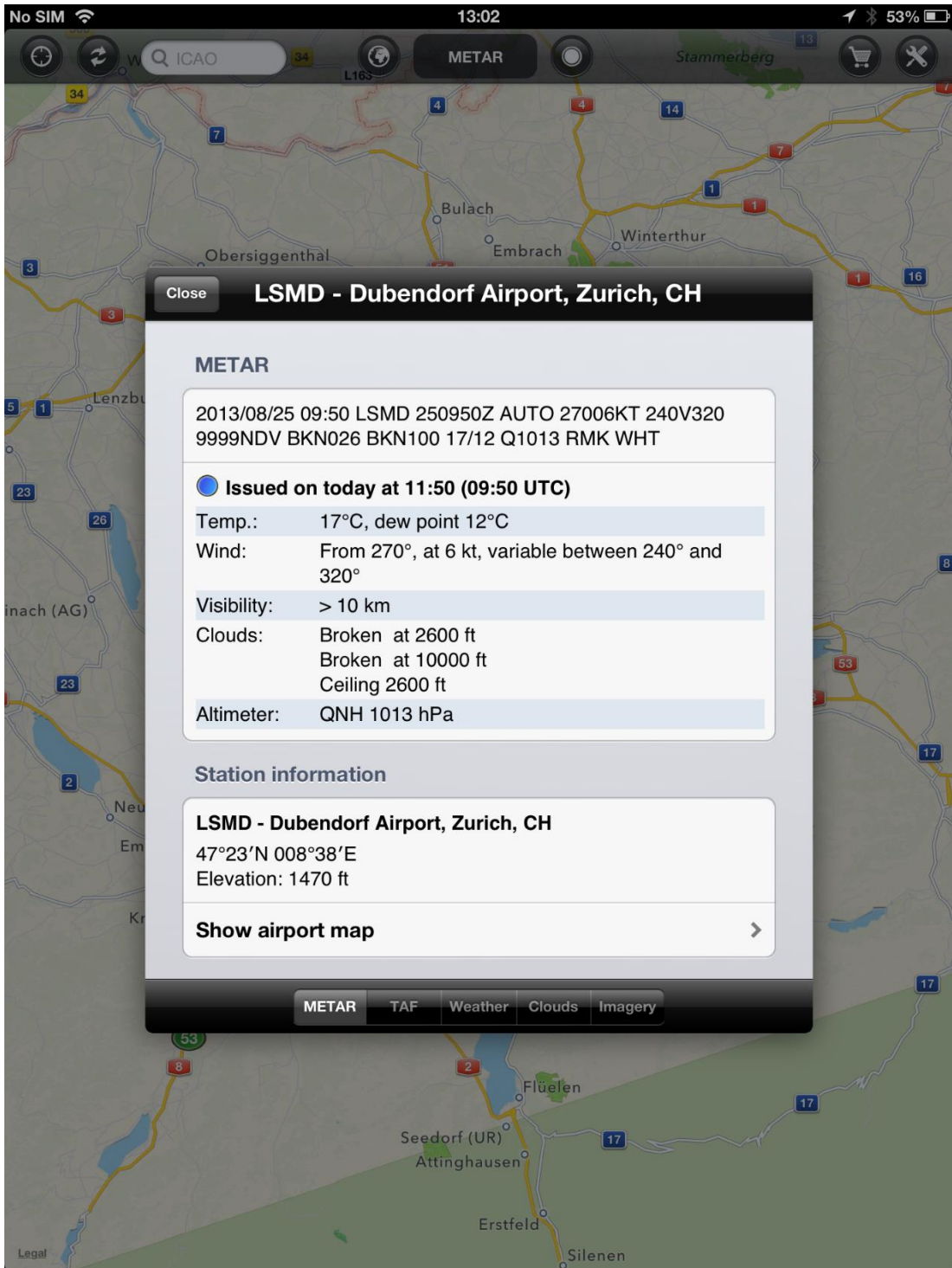
Surface wind direction:



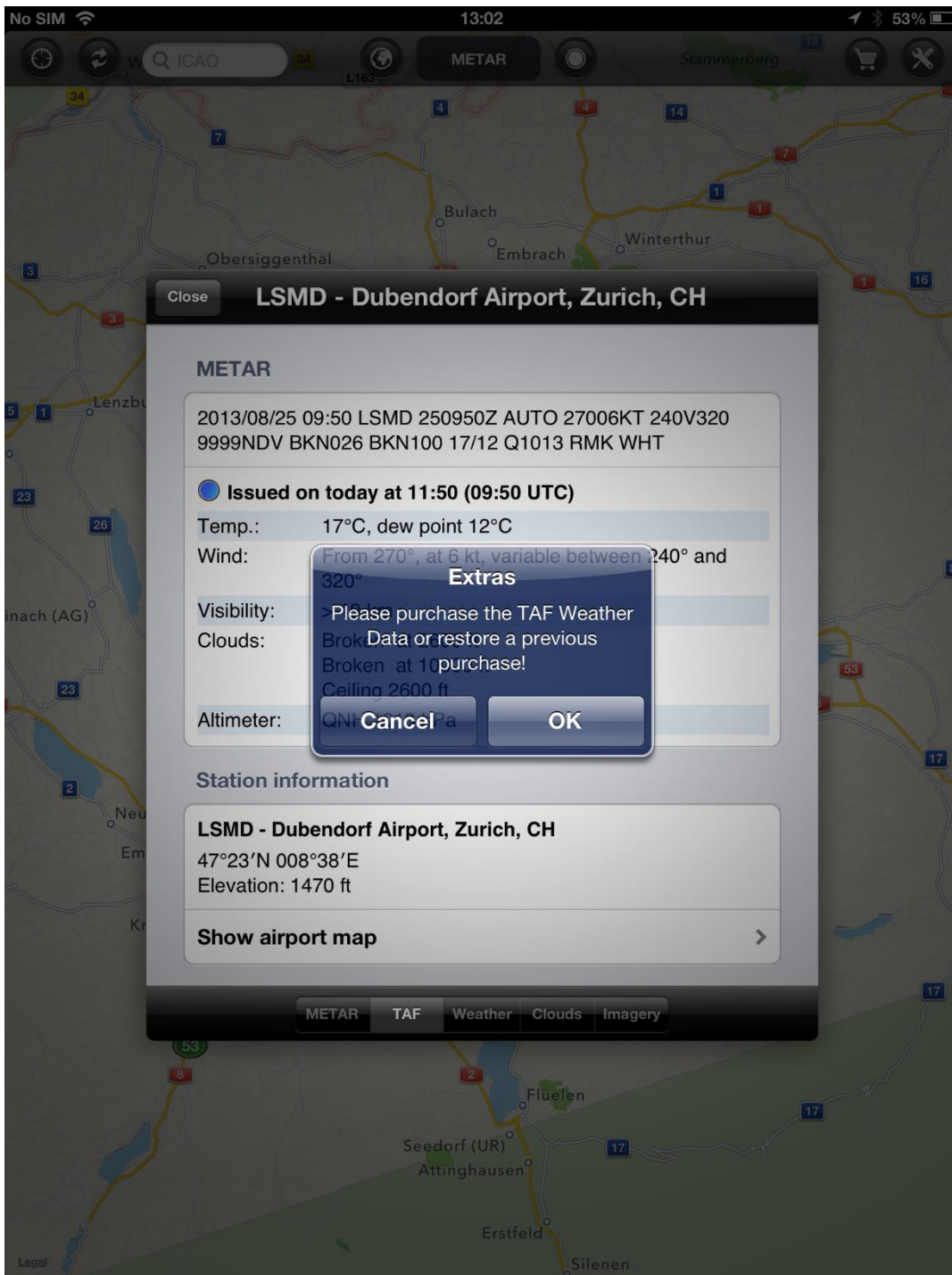
Clouds octals:



METAR's:



The rest is via subscription (TAF one time 6CHF, Weather 25CHF/year, there is 2w trial):



Other applications: All navigation applications are also capable of displaying METAR/TAF/NOTAM information.

My suggestion is: AeroWeatherPro. For one-time payment of around 4CHF you get life time WX, NOTAM information.

Another preflight activity is "documents": AD info, AIP, approach charts, etc.

First of all for example, CH Skyguide started to send VFR Manual in electronic form. It is possible just to upload .pdf's into tablet and use them the same way as on paper. It is possible to upload your AIP's to tables for various other purposes. Unfortunately, I have not yet seen "trip kits" analogs for iPad. There are applications that are dedicated to show this information:

iVAC – for France (Free),

eIAIP -- <http://eiaip.com/> : app is free, requires subscription (1month 1 country = 1CHF; all countries 1y = 40CHF)

Navigational apps usually have this feature.

Example of iVAC:

RWY	QFU	Dimensions Dimension	Nature Surface	Résistance Strength	TODA	ASDA	LDA
04	038	1615 x 30	Revêtu Paved	24 F/C/W/T	1615	1615	1365
22	218				1615	1615	1400

Aides lumineuses : RWY 04/22 : HI/BI      Lighting aids : RWY 04/22 : LIH/LIL

Service de l'Information Aéronautique      AMDT 08/13 CHG : NIL.      © SIA

**ANNECY MEYTHET**  
AD2 LFLP TXT 01  
08 APR 10

**Consignes particulières / Special instructions**

**Conditions générales d'utilisation de l'AD**  
AD réservé aux ACFT munis de radio.  
Activité IFR possible.  
Utilisation simultanée des deux pistes interdite.  
ULM autorisés uniquement avec accord du service de contrôle en respectant les circuits publiés.

**Procédures et consignes particulières**  
Roulage interdit hors piste et TWY.  
QFU 038° préférentiel cause procédure IFR.  
AFIN DE DIMINUER LES NUISANCES SONORES :  
- respecter strictement les circuits publiés ;  
- les TDP et exercices d'entraînement sont réservés aux ACFT basés et soumis au respect des consignes locales ;  
- Circuits basse hauteur : vols d'instruction réservés aux usagers basés avec instructeur à bord

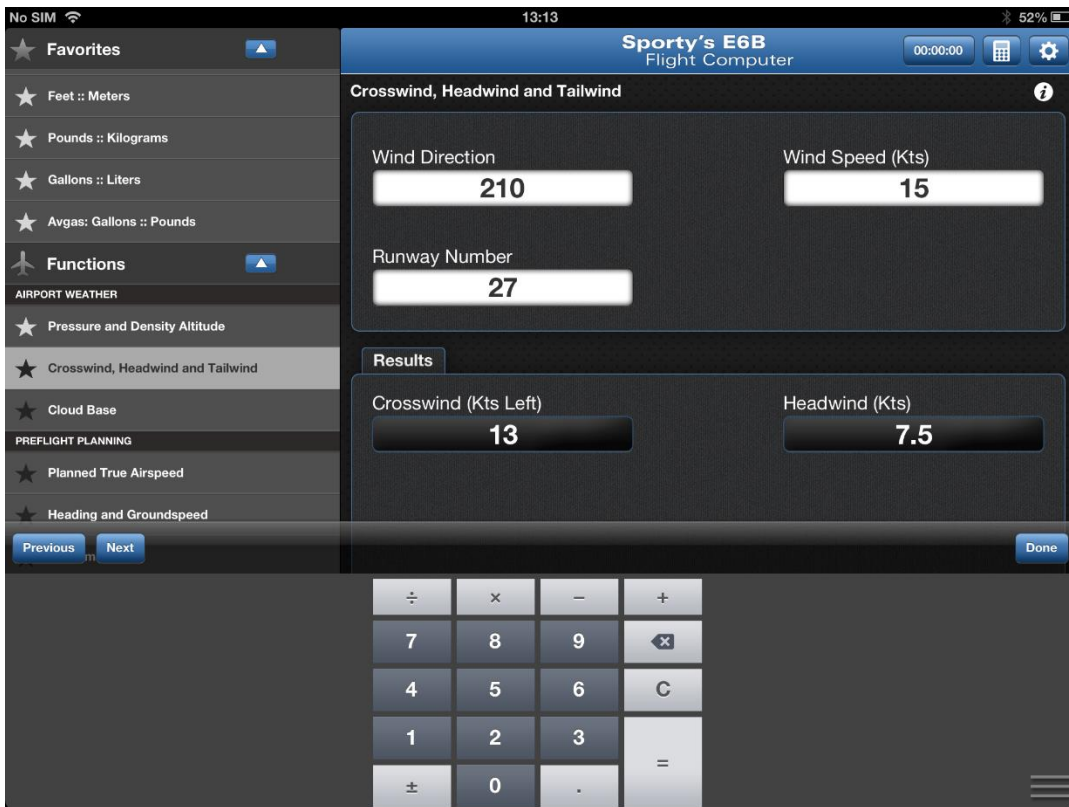
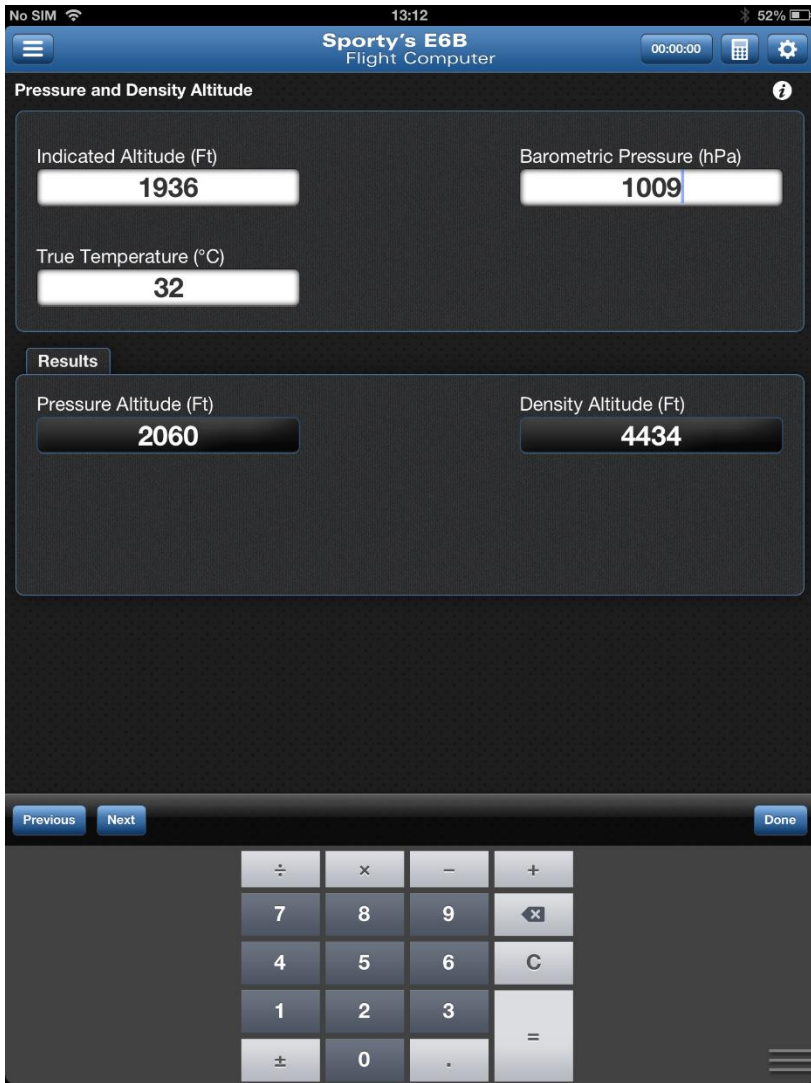
**General AD operating conditions**  
AD reserved for radio-equipped ACFT.  
Possible IFR operations.  
Simultaneous use of both RWY prohibited.  
PUL allowed with ATC clearance, they have to comply with published circuit.

**Procedures and special instructions**  
Taxiing prohibited except on RWY and TWY.  
Preferred QFU 038° due to IFR procedure.  
FOR NOISE REDUCTION PURPOSE:  
- adhere strictly to circuits as shown on charts;  
- training flights and exercises are reserved for home based ACFT and must comply with local instructions ;  
- Low altitude patterns: reserved to based pilots with instructor on board

Anyway, these apps more or less “just display .pdf” in a structured way.

Not to mention Jeppesen Mobile Terminal Charts – for professional usage: TC’s by Jeppesen but only for controlled AD.

Another part of preflight – weight, balance, performance calculations. And various others. For that there is Sporty’s E6B calculator



(and weight-balance there as well(

Weight/balance/performance – Gyronimo <http://www.gyronimosystems.com/>:



(for a predefined set of ACFT's – basically 1 app for 1 type)

**GYRONIMO** CESSNA 172S Performance Pad™

**Short Field Takeoff Distance**  
Flaps 10°, Full Throttle Prior to Brake Release

**N-GYRON**

Liftoff: 1081ft / 329m  
50/15m Over Runway: 1848ft / 563m

**Aircraft Mass:** 2402 lbs / 1092 kg (min 2200lbs / 1000kg)

**Takeoff Elevation MSL:** 2400 feet / 732 m  
Pressure Alt: 2400' Density Alt: 2938'

**OAT:** 15 °C / 59 °F = 5 °C above ISA

**Altimeter:** 29.92 InHg / 1013.25 mb (set ISA conditions)

**Runway conditions:** + 5% paved, dry grass wet grass long grass / snow  
**Runway Slope:** + 4% 0° uphill + 2°

**Wind conditions:** 4.4% = 4 kts Wind Components  
15kts Tailwind Headwind 35kts

**Performance Summary:**  
Ground Roll: 1034' / 1250  
Runway condition: 52' / 16m  
Runway Slope: 41' / 13m  
Wind condition: -46' / -14m  
**TO Ground Roll: 1081' / 329m**  
Total to clear 50/15m obstacle: 1767' / 1250  
Runway condition: 88' / 27m  
Runway Slope: 71' / 22m  
Wind condition: -79' / -24m  
**Takeoff Distance: 1848' / 563m**  
**Lift Off Speed: 48.0 KIAS**

© 2012 Claus Richter, www.gyronimosystems.com

Or E6B:

**GYRONIMO E6B** Professional Flight Computer

Nautical Miles: 1.00 Statute Miles: 1.15

Wind Direction: 320.0 ° TRUE  
Wind Speed: 25.0 Knots  
True Course: 60.0 ° TRUE  
True Airspeed: 80.0 Knots  
Groundspeed: 80.5 Knots  
Heading: 42 ° TRUE  
WCA: -17.9 ° Left

Function Windows: Set new wind dot (move pencil, double tap to draw dot)

15:10 Not Charging

GYRONIMO



The most interesting part – navigation.

There are several applications and a “holy war” which one is better. VFR is of interest for us, thus professional (VFR+IFR) are out of the scope (Jeppesen Mobile FlightDeck)

Xample (Swiss made) Air Navigation Pro: <http://www.xample.ch/air-navigation/>

Jeppesen Mobile VFR (iOS only): <http://ww1.jeppesen.com/aviation/products/mobile-flitedeck-vfr/index.jsp>

WingX, ForeFlight, Garmin Pilot, a few others – even though popular, never used. The “problem” here is that me personally, I don’t have time enough to test each and every. For example, I tried shortly ForeFlight but after already bought ANP, so was no real interest. This does not mean that it’s bad. All of them provide same-ish functionality. I would keep concerns about

- 1) Map coverage
- 2) NOTAM’s/METAR’s/Restrictions/... coverage

Xample AirNavigation Pro. Develop in CH, in LSGY.

(screenshot from iPhone)



Three versions – Free, Standard (10CHF) and Pro (50CHF)

Air Navigation Free	Air Navigation Standard	AirNavigation Pro
<ul style="list-style-type: none"> <li>Internal database with more than 100.000 waypoints, airports and related information;</li> </ul>	<ul style="list-style-type: none"> <li>Moving map with direct to waypoint capability;</li> <li>Access to free of charge, open source maps, downloadable from</li> </ul>	<ul style="list-style-type: none"> <li><b>Moving map with multi leg flight planning or direct to waypoint capability;</b></li> <li><b>Access to commercial aviation charts</b></li> </ul>

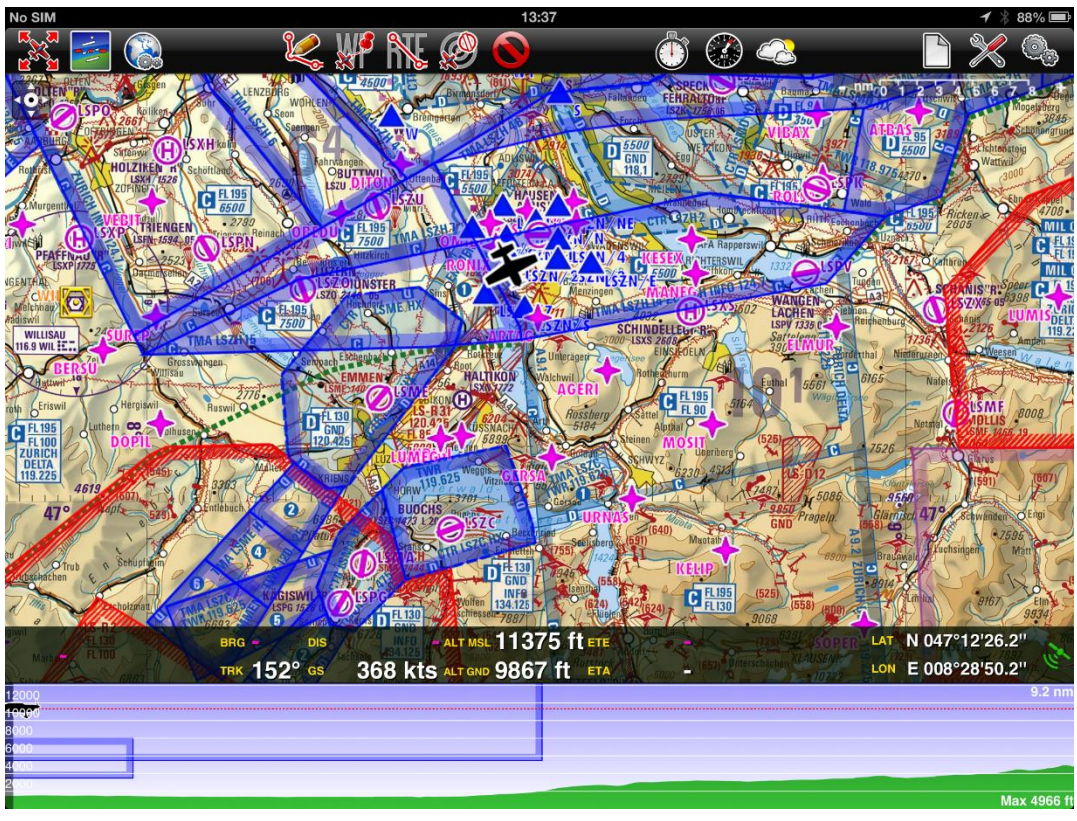
<ul style="list-style-type: none"> <li>• Navigation instruments (HSI, CDI, ADF).</li> </ul>	<p>within the application;</p> <ul style="list-style-type: none"> <li>• Internal database with more than 100.000 waypoints, airports and related information;</li> <li>• Internal database with airspace information (not all countries available);</li> <li>• Logbook (manual);</li> <li>• Navigation instruments (HSI, VOR, ADF).</li> </ul>	<p><b>(as in-app purchases)</b> for Europe, USA, Australia, New-Zealand (check our website for available countries);</p> <ul style="list-style-type: none"> <li>• <b>Support for geo referenced approach charts</b> (not all countries available, check our website for more information);</li> <li>• Access to free of charge, open source maps, downloadable from within the application;</li> <li>• <b>Internal database with more than 100 000 waypoints, airports and related information;</b></li> <li>• <b>Internal database with airspace information</b> (not all countries available);</li> <li>• <b>Logbook</b> (automatic);</li> <li>• <b>Support for elevation data, see terrain in front of airplane or while planning legs;</b></li> <li>• <b>Support for 3D data of Synthetic Vision;</b></li> <li>• <b>Navigation instruments (HSI, CDI, ADF);</b></li> <li>• Online flight tracking service.</li> <li>• Support for the use of external gadgets (AHRS g mini, other manufacturers)</li> </ul>
---	--	---

I will describe and give screenshots from iPad. The same applies for Android, iPhone with some difference in UI.

After installation – purchase maps

- 1) ICAO charts – 40(?)
- 2) Glider charts – 20CHF
- 3) Approach charts – 30(?)
- 4) Topographic maps – CH = 120 CHF
- 5) Helicopter topo – 150CHF
- 6) 3D for EFIS – 48CHF
- 7) Free maps (OSM)

“Main” feature – moving map. “As is”. You see where you are. Depending on the coverage bought, you see obstacles, dangers, airspace, terrain profile:



A bit more in detail the view of upcoming terrain and airspaces:



Viewing details of a "point" on map (VOR/DME/AD/...):

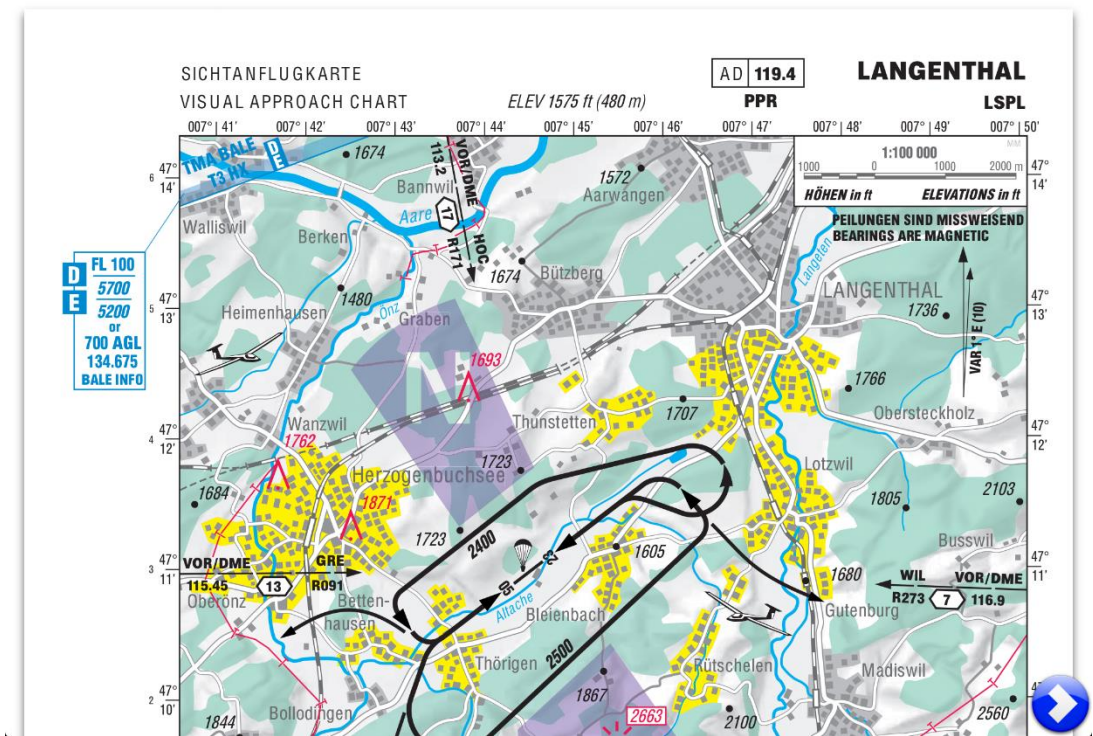


(For VOR stations it “beeps” with Morse code).

Viewing AD docs:



What you would usually see in AD INFO from Skyguide:



Either automatic or “enforced” displaying of approach charts (referenced) on moving map:



From moving map to creating routes (enter via clicking map, or importing a route from goVFR.com):



Start from entering edit mode clicking



(BTW on this screenshot there are dangers displayed with blue lines – that’s because my settings are “show dangers that are 1000ft or less from my alt)

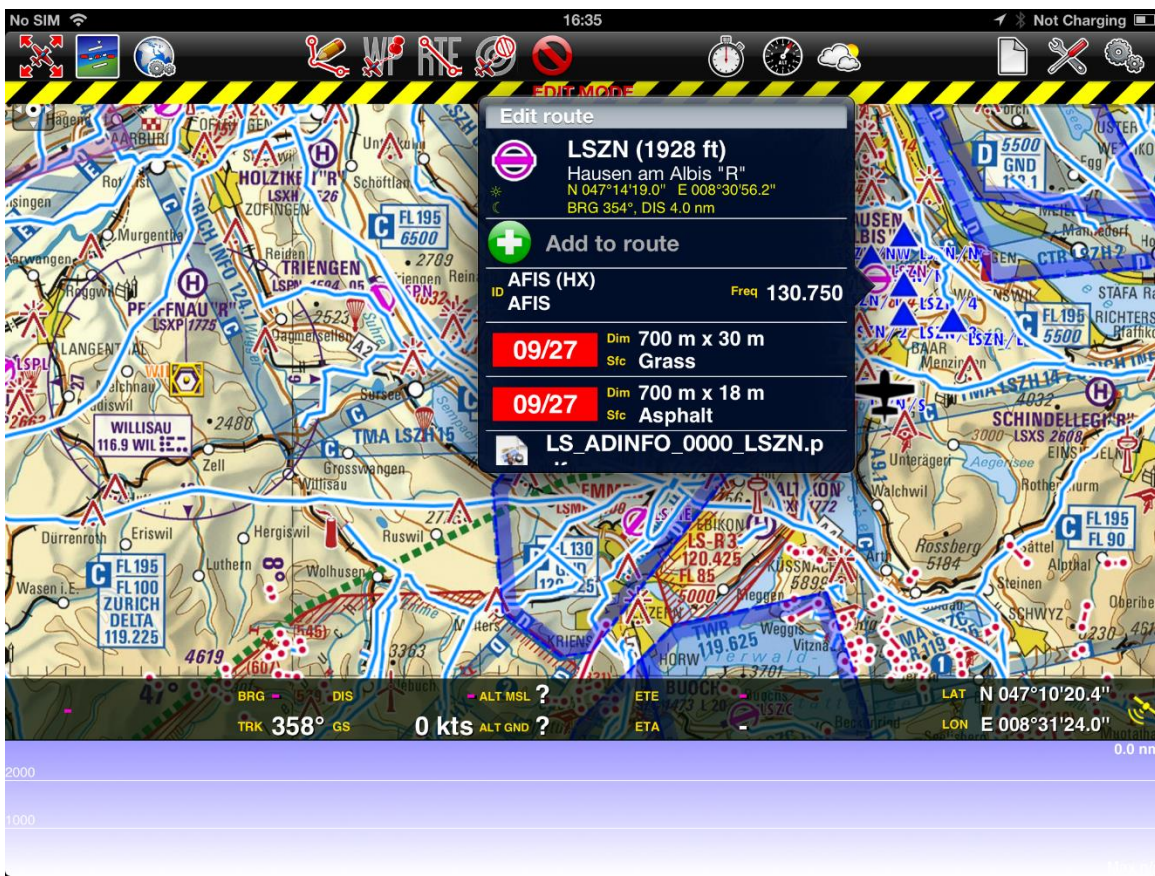
In Route edit mode, press on a waypoint (in this case first point is departure from LZSN)





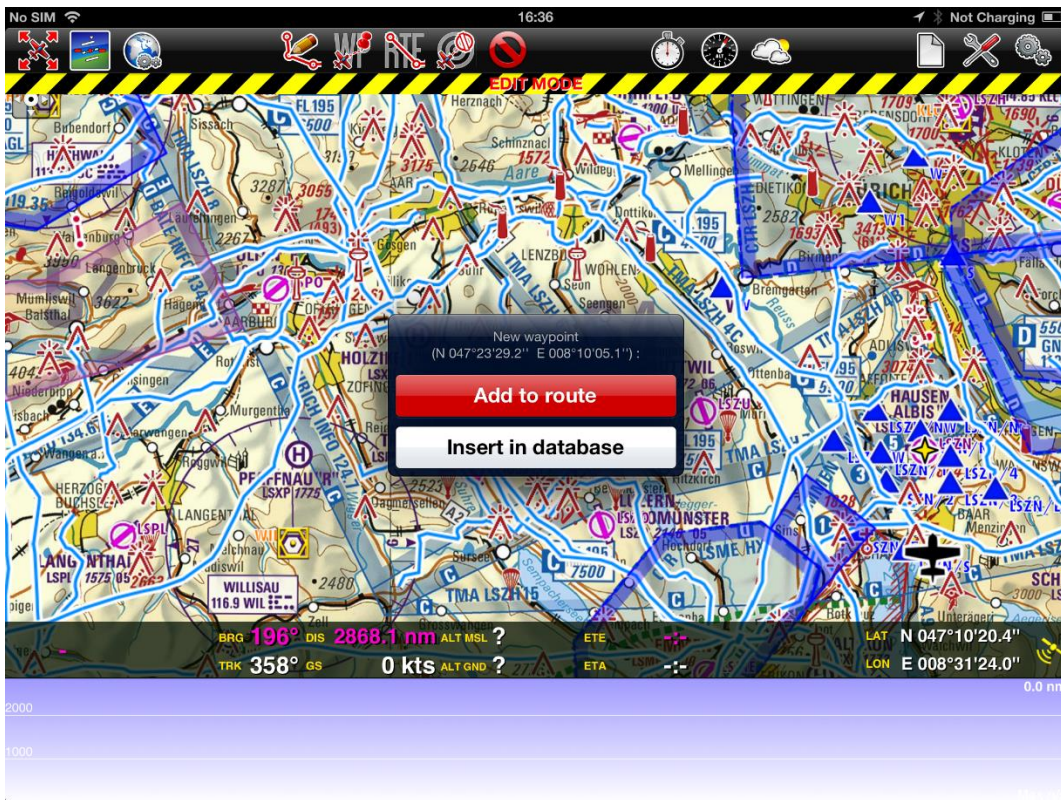
Finger tips are larger than points on map, so I have a selection of points. Choosing LSZN

Available actions:



Press "add to route"

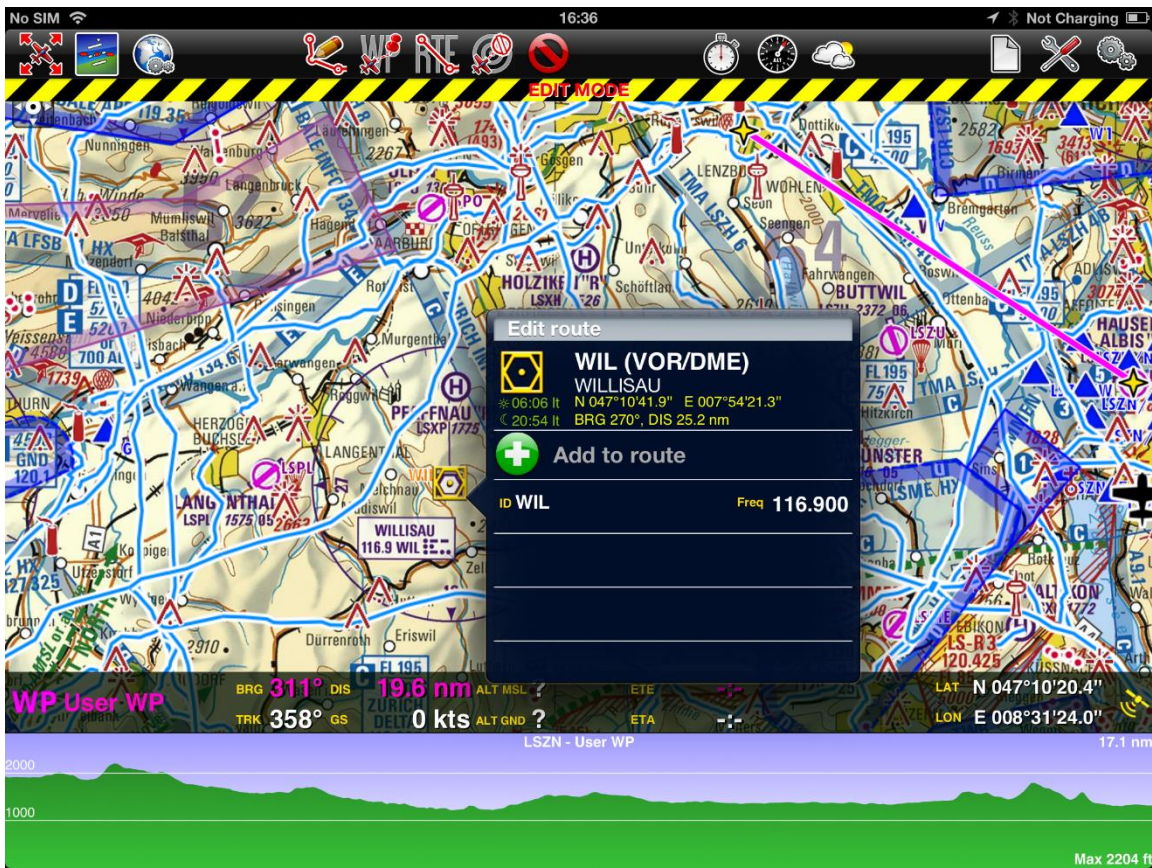
Next WP – press on Lenzburg (no aviation related WPs):



And "add to route"



First leg done. Now to VOR WIL:



“Add to route”



... so on.

The route will be saved on iPad. If you create an account on goVFR, also possible to upload routes there.

Once route is created (say, at home a day before), before flight routes can be selected by pressing button "RTE"



Helpful features to work with routes:

Waypoint selector. Either next in route creation process, or just to show on map or "direct to". Nice feature is when doing "direct to WP", a user can specify in settings "automatically setup VOR", to see radial to that WP (see a few images later).



"Direct to the nearest AD"



Clear current route



Along with moving map, the following instruments can be displayed:

HIS

VOR

ADF

Variometer

Altimeter

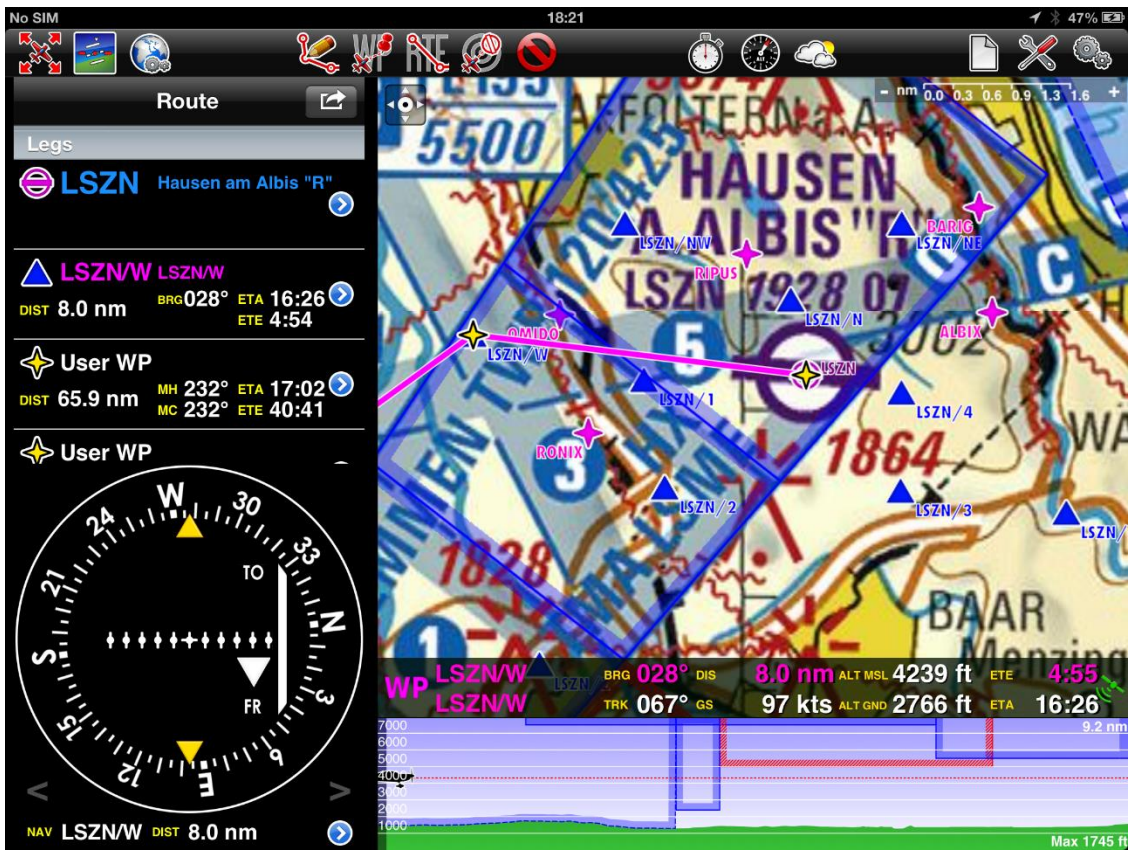
Speed

Compass

(not an instrument) Flight information

Two selected instruments are displayed on the left side of the screen:

Example of Flight information and VOR:



Variometer (with audio signaling) and GS:



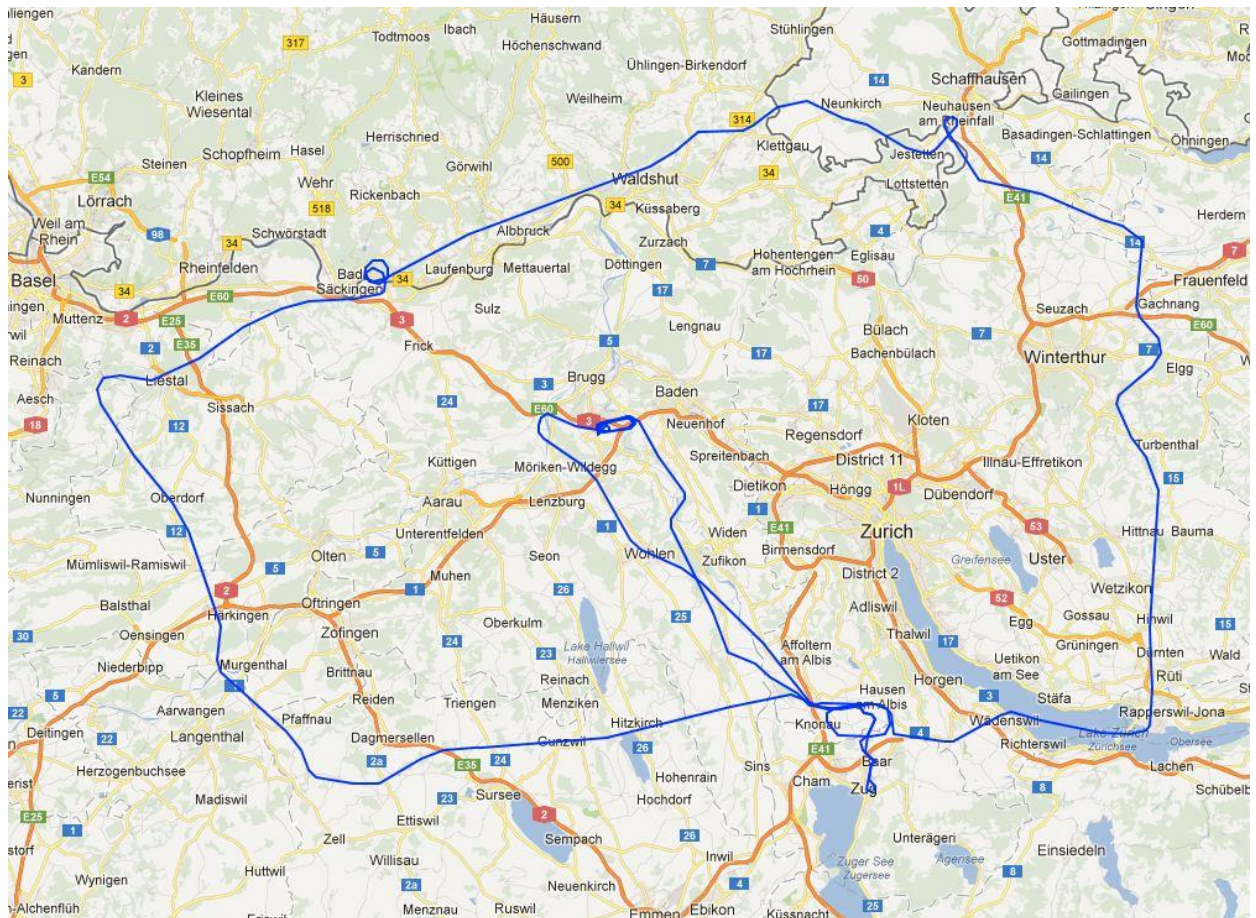
Flights are recorded by ANP by two ways:

- 1) **.kml** , so it is possible later on to look at flight profile:

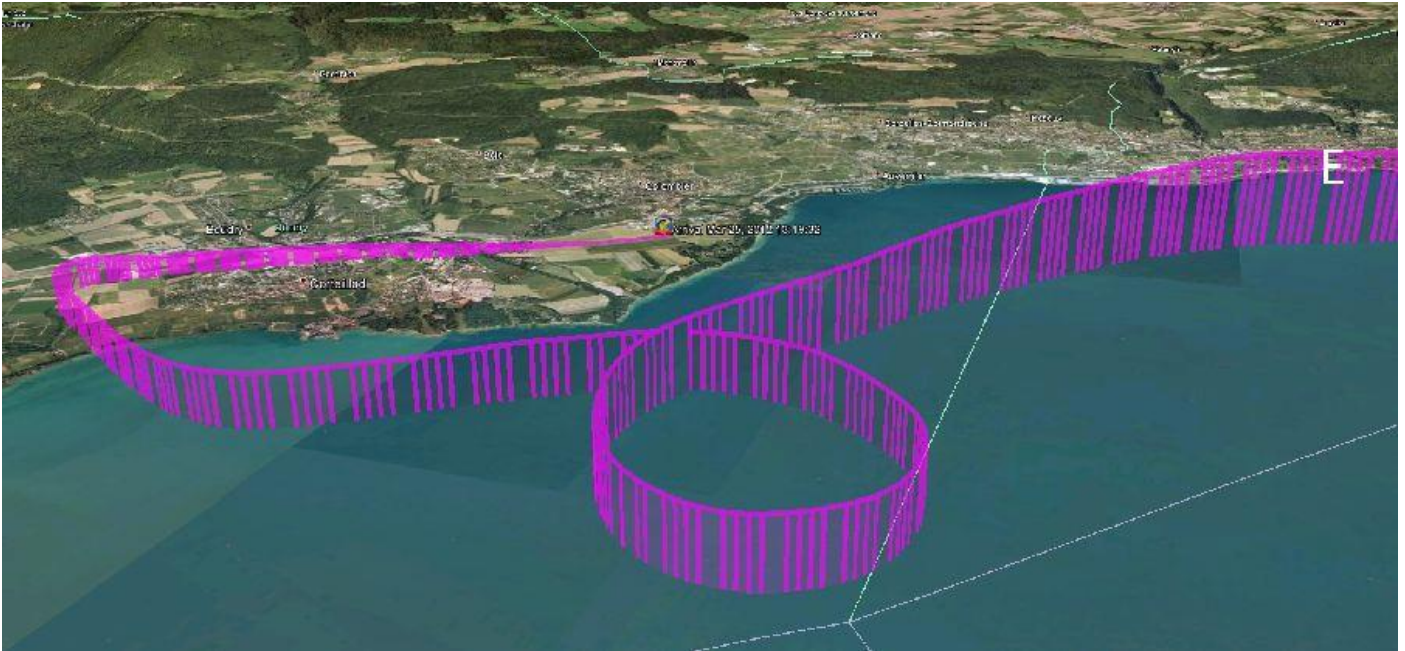
In Google Earth:



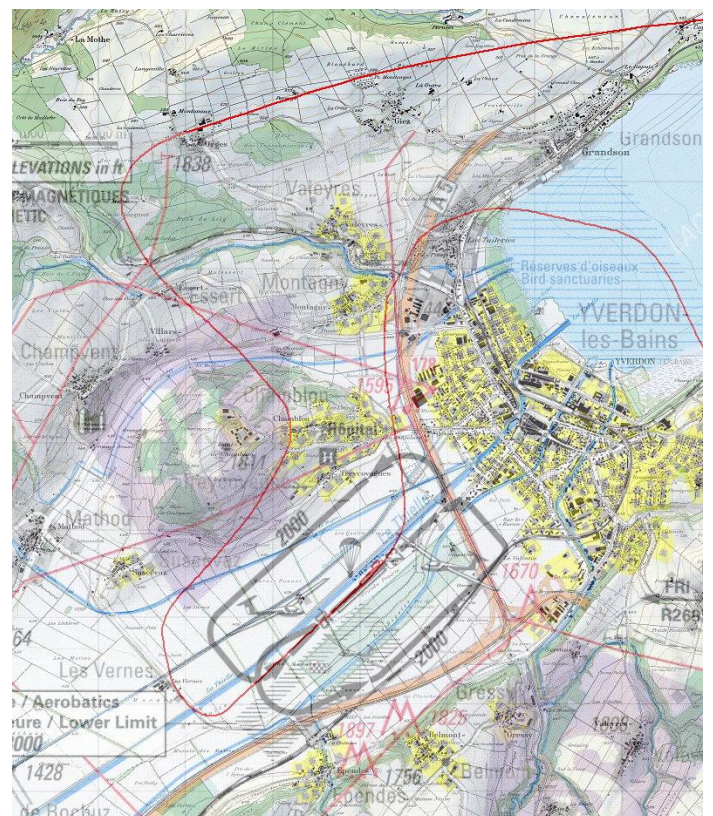
In any other software that can overlay .kml data on a map:



Look at 3d profile of flight/approaches:



I used it also to analyze how precise were my approaches:



(This was before geo referenced charts were implemented in ANP and even before I started to use iPad for air navigation)

The flights are also recorded into automatic log book:



Unfortunately, the timings are not exactly the same as they are needed for our RESI system.

One more feature to use in flight is EFIS. I have not got a chance to use it, but it is worth of mentioning.

EFIS Module(3D Synthetic Vision).

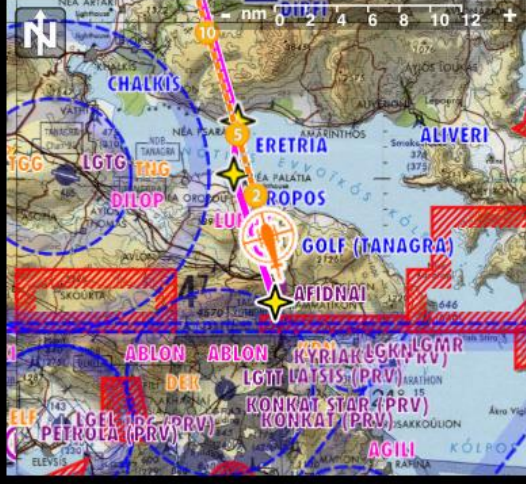
First of all, it requires special map coverage, which I don't really need, so I fully rely on user manual for this topic and images from Internet (as if I try to use, the map I see is just "flat surface and blue sky").





**WP ERETRIA** BRG **342°** DIS **7.7 nm** ALT MSL **2642 ft** ETE **5:38**  
 TRK **340°** GS **82 kts** ALT GND **1623 ft** ETA **09:35**

Route	
Legs	
<b>ERETRIA</b>	DIST 7.7 nm BRG 342° ETA 09:35 ETE 5:38
<b>OMIRO</b>	MH 340° ETA 09:51 MC 340° ETE 22:04
<b>User WP</b>	DIST 55.2 nm MH 334° ETA 10:09 MC 334° ETE 40:32





Looks a “cool feature”, however I have not yet found real application in my flights so far. I, personally, found more of importance this feature:



Coming back to preflight preparation. WX:

If user selects “show METAR on map”:



METAR's, TAF's.

NOTAM's require additional subscription. 1y 21EUR. Includes

1 year subscription, (Notams, Smart Notams, source Skyguide AIM services) subscription

Smart NOTAM's are decoded NOTAM's for CH, DE, FR



One more nice en-route feature is “writing on screen”.

- 1) Lock screen:



6 “screens” become available and can start writing:

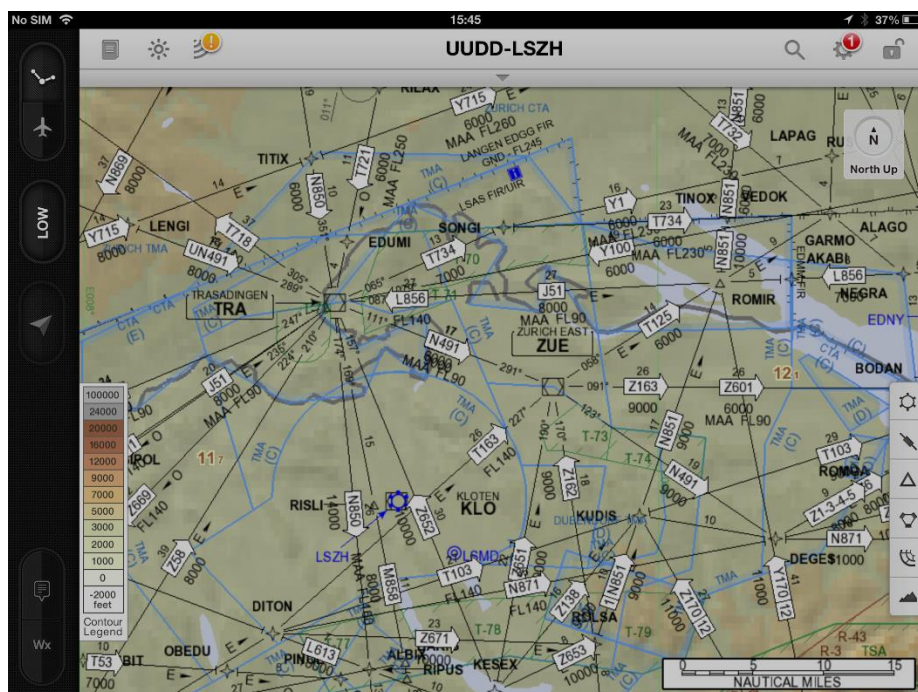


(clean – 3 finger triple-click or TLC “clean” button)

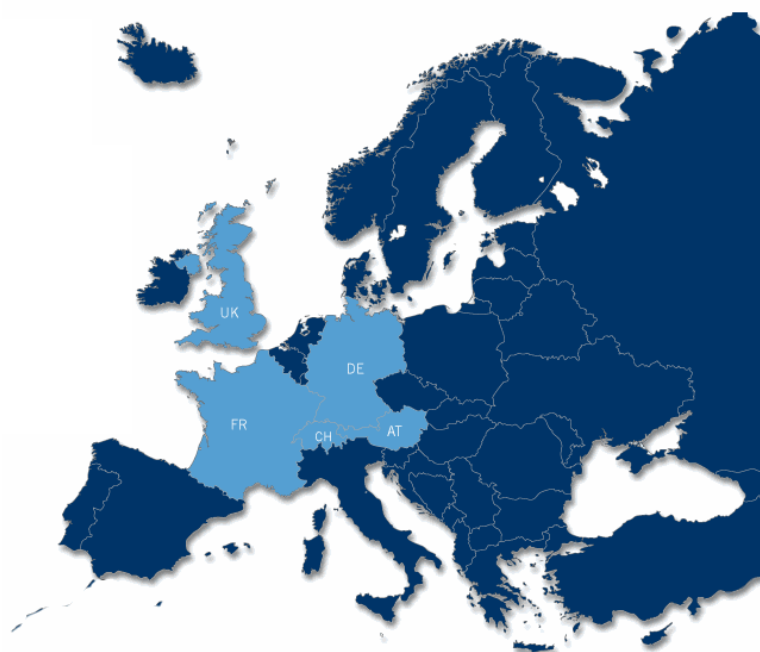
These are main features. There are quite some more things to describe:

- 1) Using with flight simulator
- 2) Downloading and uploading data from/to ANP
- 3) goVFR in detail
- 4) Xample online services
- 5) ...

The next Nav software – newly released Jeppesen Mobile VFR. Before Jeppesen had only professional Mobile FlightDeck



Jeppesen Mobile VFR – created by Jeppesen Europe, from scratch, mainly in Gdansk, after some investigation “what private pilots need”. (ANP was created by aviation enthusiasts with a lot of passion to “bring features” (from my, s/w developer point of view)), whereas JMV is more bringing Jeppesen’s experience. Current coverage:



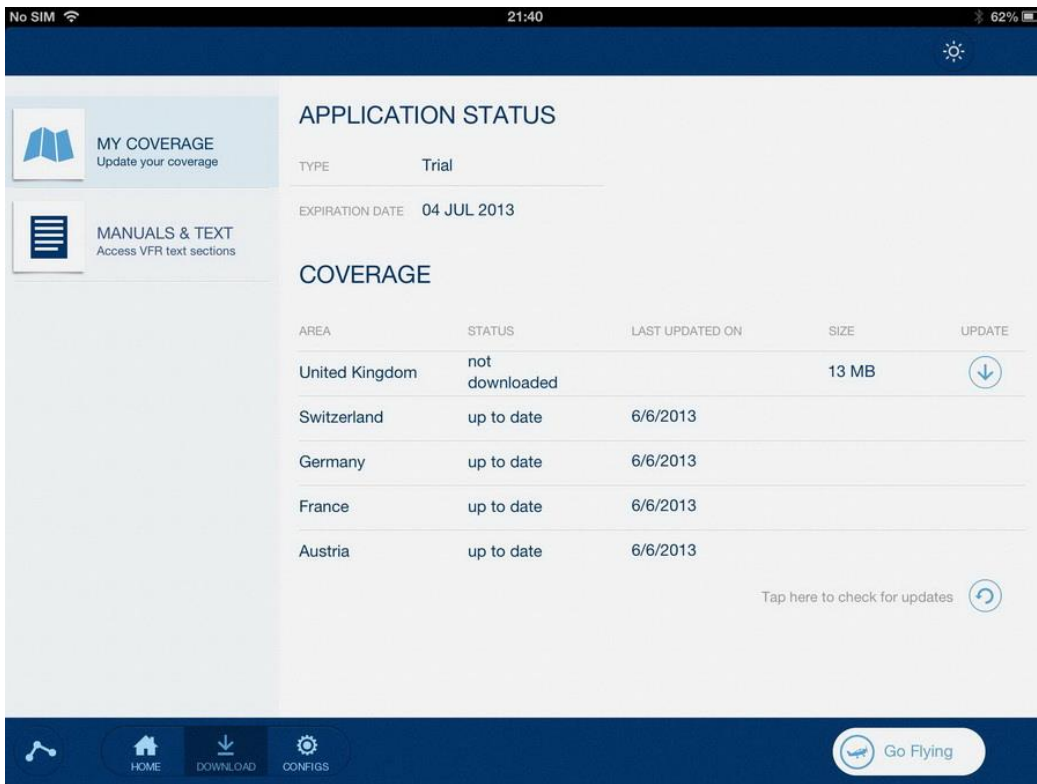
Obviously, Jeppesen has charts for the rest of Europe (and world). However, it is not yet available. I do not know the reason. Talking to ANP, there were problems obtaining permissions/making deal with Skyguide. This is an example of what can be a problem.

Pricing:

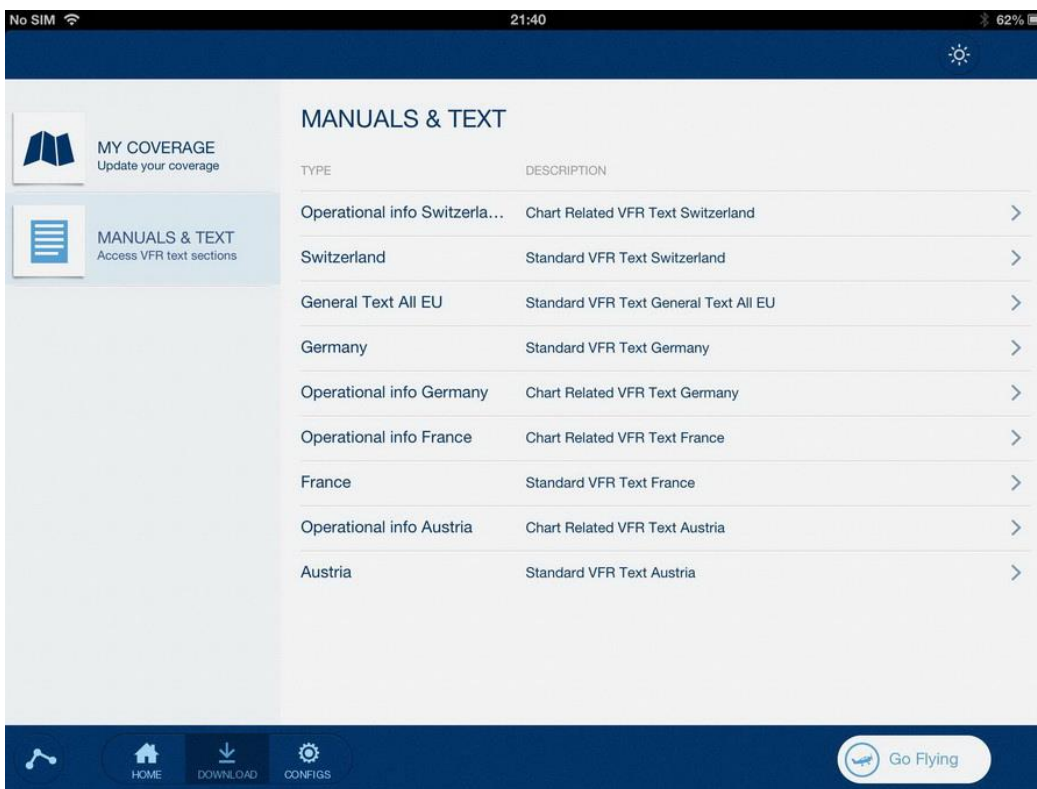
		Free Trial	One Time	Annual
<b>Subscription Details</b>				
Validity		30 days	28 days	1 year
Start Date		Today	Today	Today
Automatic Renewal				
Device Activations Allowed		2	2	2
<b>Coverage Details</b>				
Country Coverage				
Europe Coverage				
Free Trial Coverage				
<b>Prices</b>				
Jeppesen Mobile FliteDeck VFR - USA		<input type="checkbox"/> 45,01 € *		
Jeppesen Mobile FliteDeck VFR - All Available Countries (Europe)		<input type="checkbox"/> 139,00 € *		<input type="checkbox"/> 349,00 € *
Jeppesen Mobile FliteDeck VFR - Germany/Austria/Switzerland		<input type="checkbox"/> 119,00 € *		<input type="checkbox"/> 299,00 € *
Jeppesen Mobile FliteDeck VFR - United Kingdom		<input type="checkbox"/> 89,00 € *		<input type="checkbox"/> 199,00 € *
Jeppesen Mobile FliteDeck VFR - France		<input type="checkbox"/> 89,00 € *		<input type="checkbox"/> 229,00 € *
Jeppesen Mobile FliteDeck VFR - Germany		<input type="checkbox"/> 89,00 € *		<input type="checkbox"/> 229,00 € *
Jeppesen Mobile FliteDeck VFR - Austria		<input type="checkbox"/> 69,00 € *		<input type="checkbox"/> 199,00 € *
Jeppesen Mobile FliteDeck VFR - Switzerland		<input type="checkbox"/> 69,00 € *		<input type="checkbox"/> 199,00 € *

(this is a text I already sent to some SFS members <http://rezdm.livejournal.com/199137.html> )

Work with this application starts with registering and downloading maps of required regions. At the moment UK, FR, CH, AT, DE are available. (As far as I know, the application was developed by European Jeppesen office, thus there is Europe-bias ). Obviously, Jeppesen, has maps of (almost) all the countries, and I would imagine that increasing the coverage is just a matter of time.

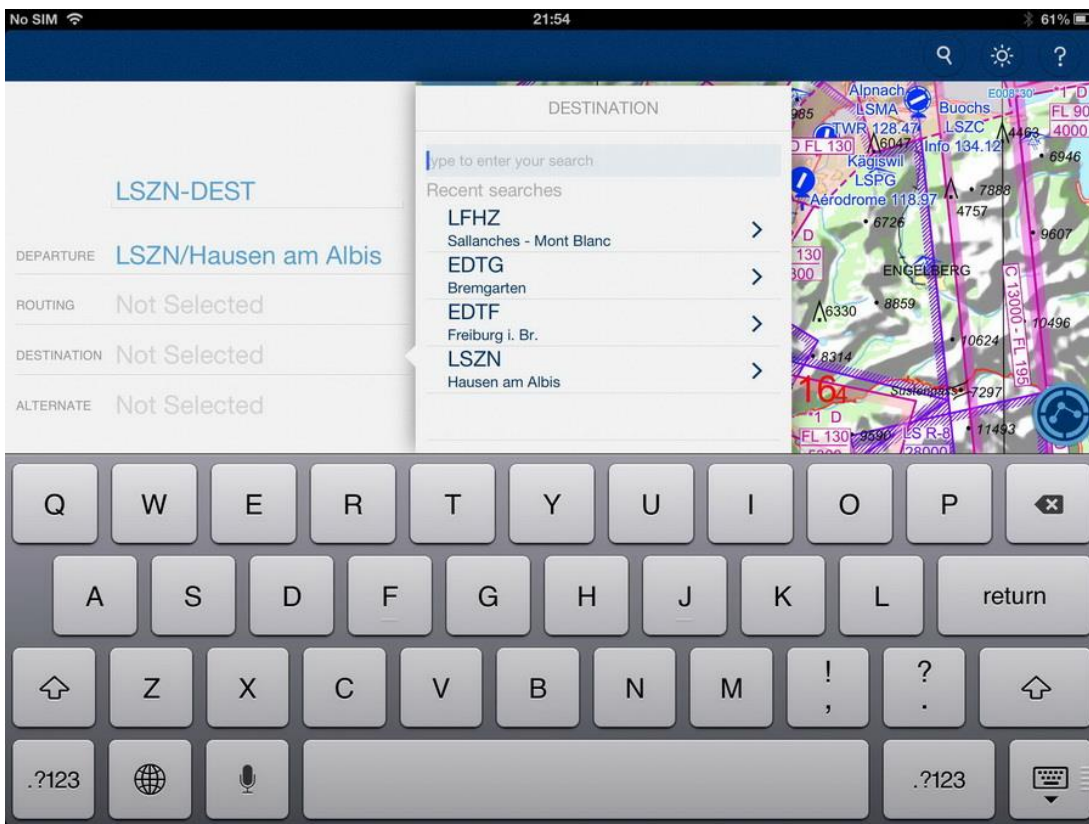
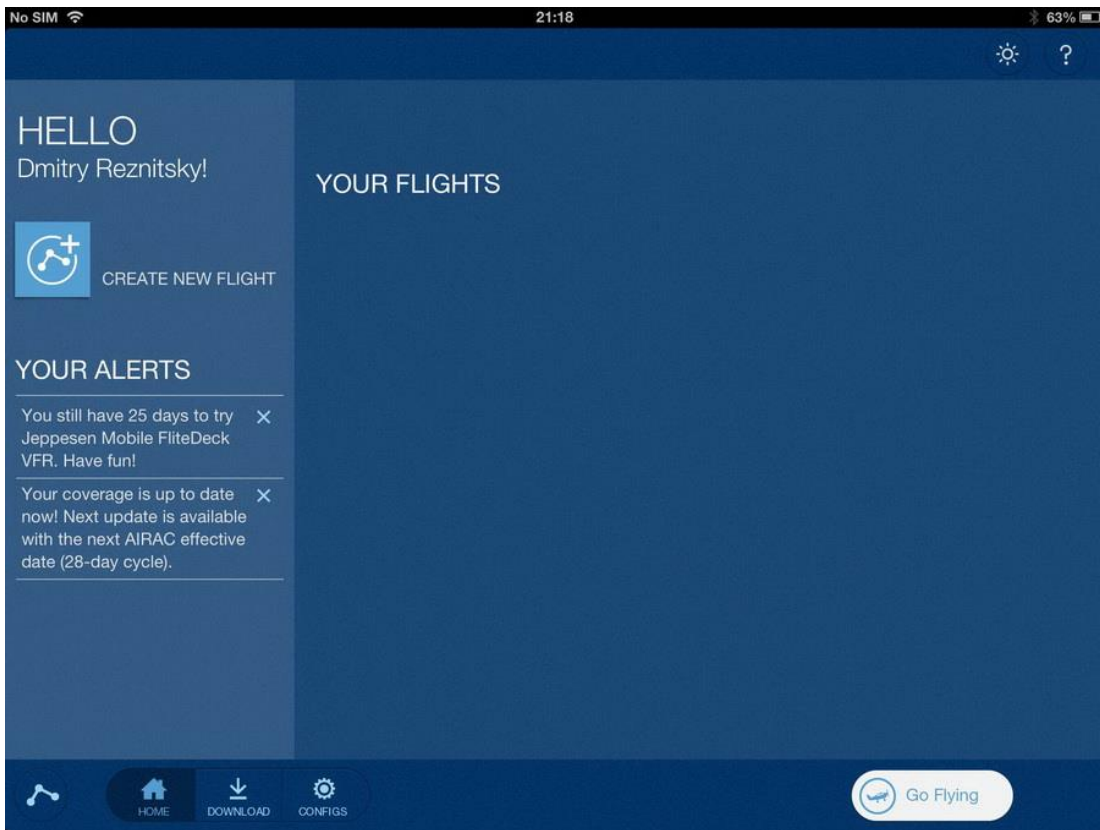


There are not just maps and charts, there are AIP for corresponding regions: General, enroute, список аэродромов, operational info

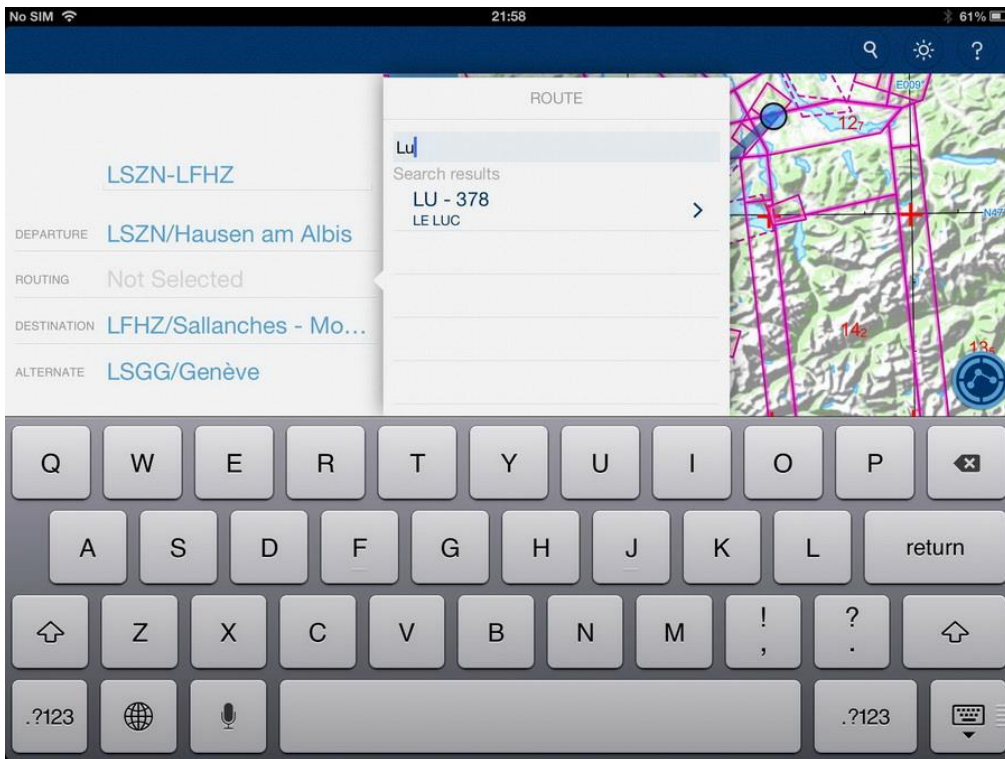


As soon as there are maps on iPad, it is possible to get started with navigation. It is possible either to fly just looking at the moving map or prepare a flight. To prepare a flight a user should enter departure, destination and way points.

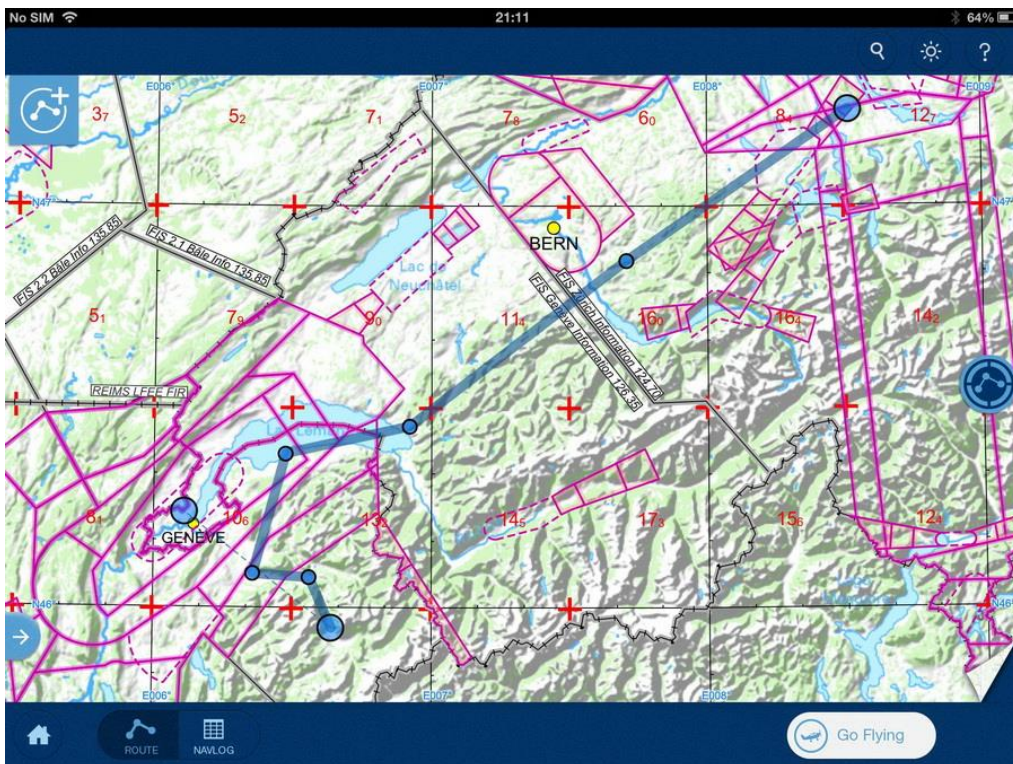




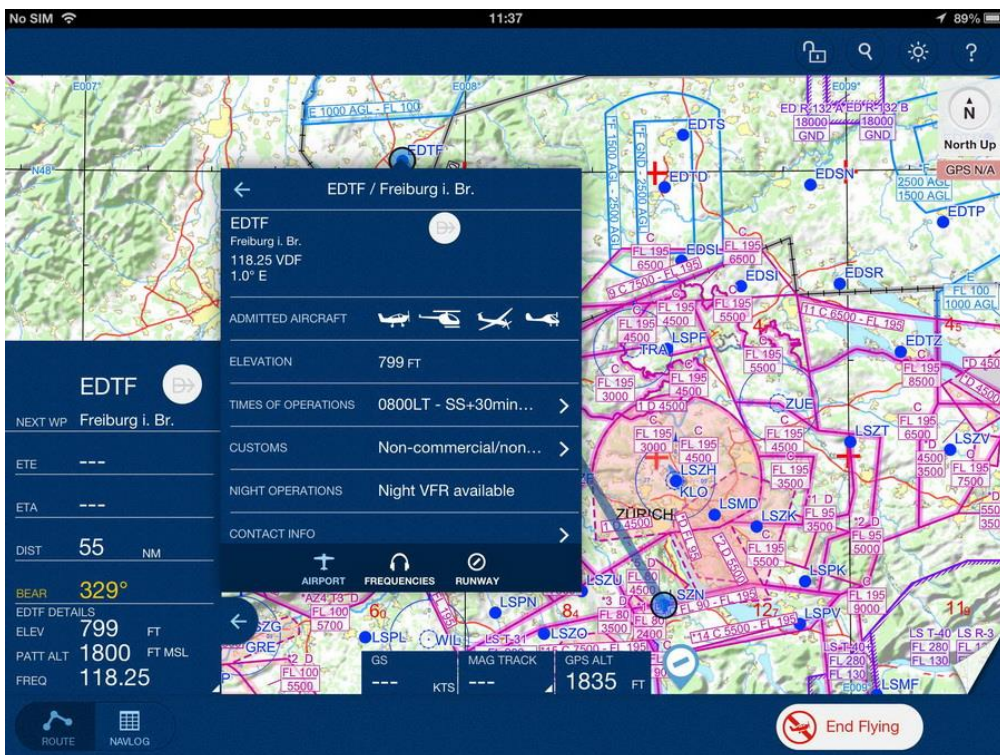
As the way points only aviation-related are available. I did not find how to upload custom WP (as it is done in Airnav Pro or in Garmin). Here is an example of my trying to enter Luzern (city) as a WP:



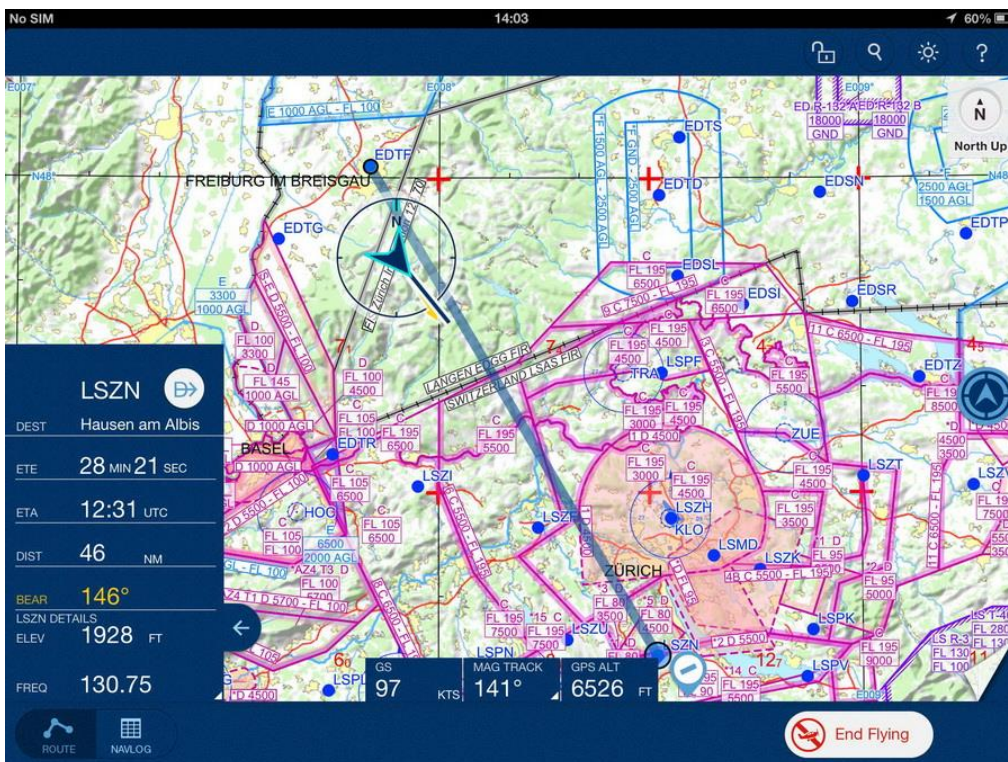
The easiest way to define the route is just "with fingers". Tap on aerodrome, then point to it as "destination". Double click on the direct line and a numbered, easy-to-move, WP appears. Quite convenient. Not to mention that a user does not to enter a "route editing mode" as in Airnav Pro — good for when this is to do while being in flight already. Here is an example of LSZN-LFHZ route:



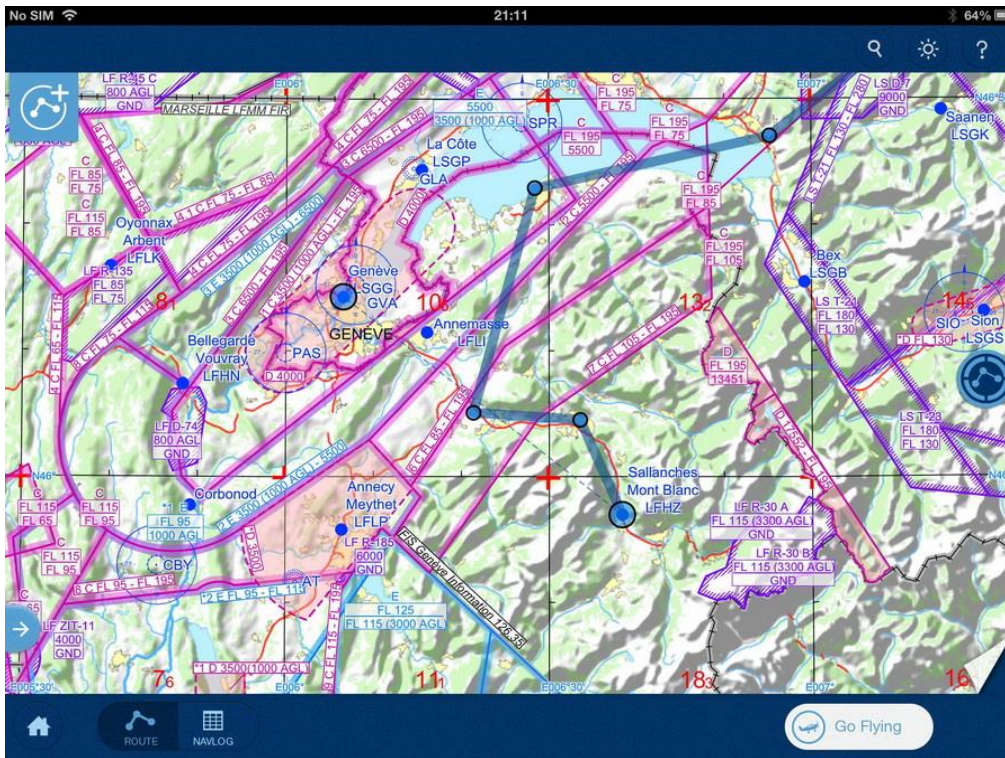
Here it is possible to quickly access what's usually needed about an aerodrome: frequencies, RWY info, AD INFO.

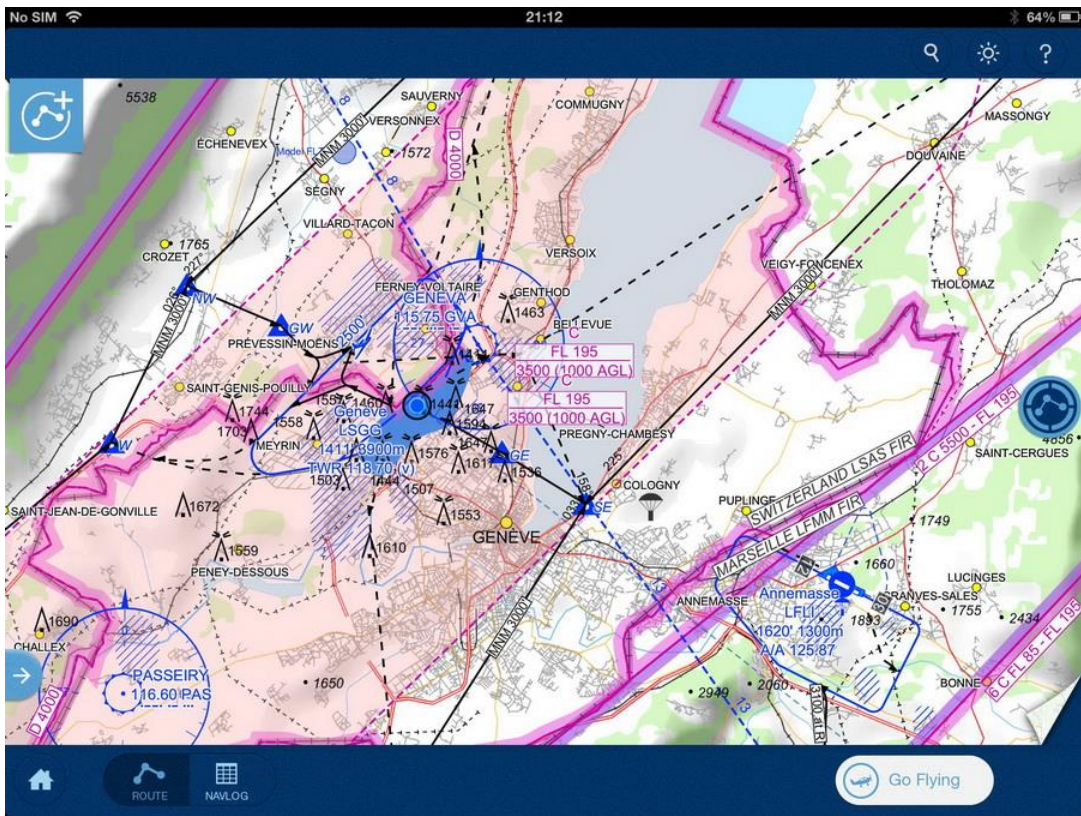
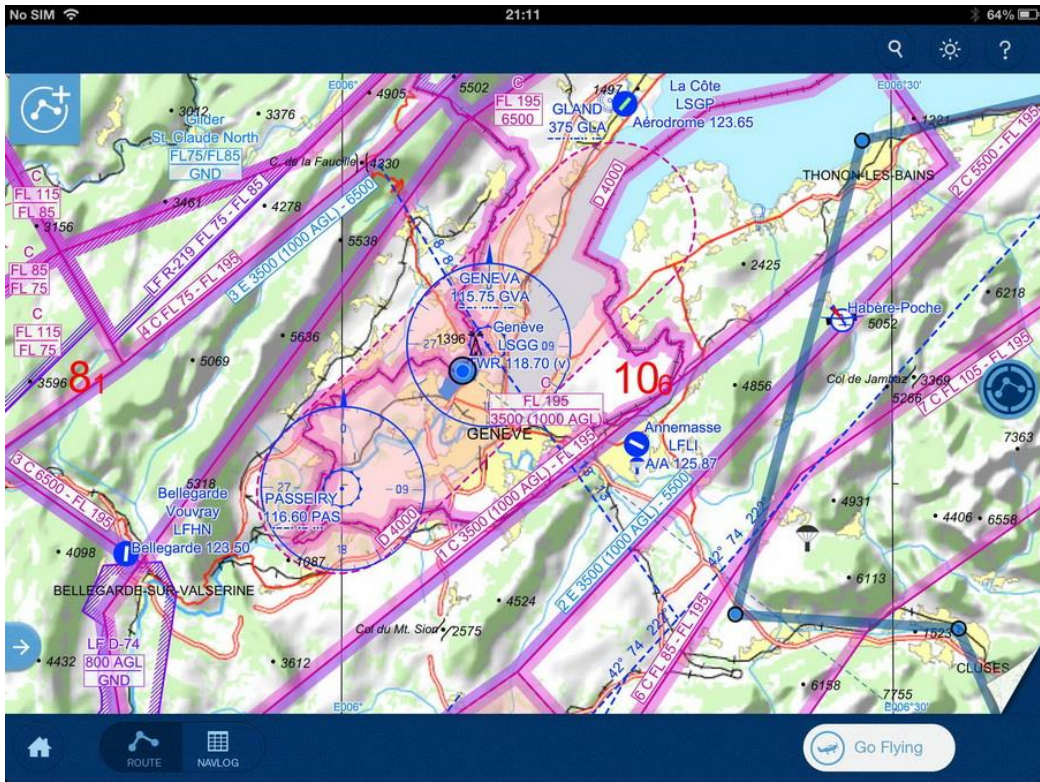


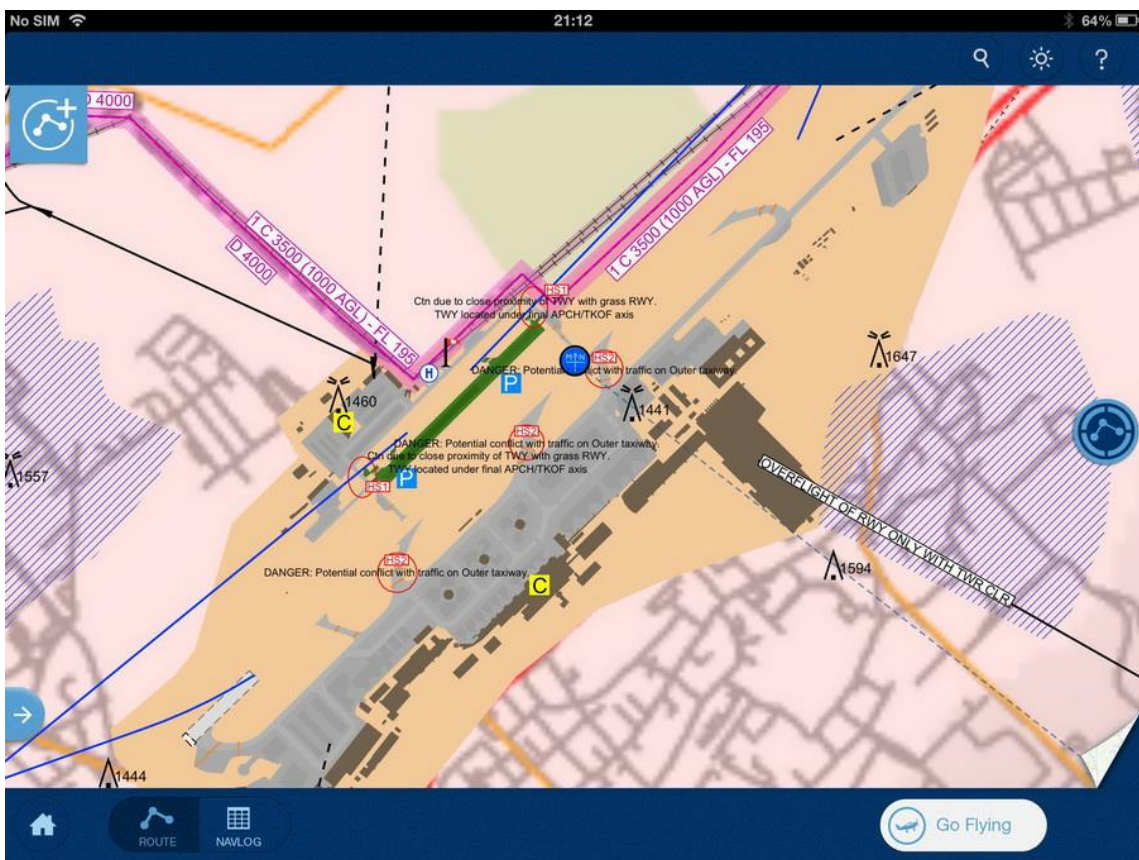
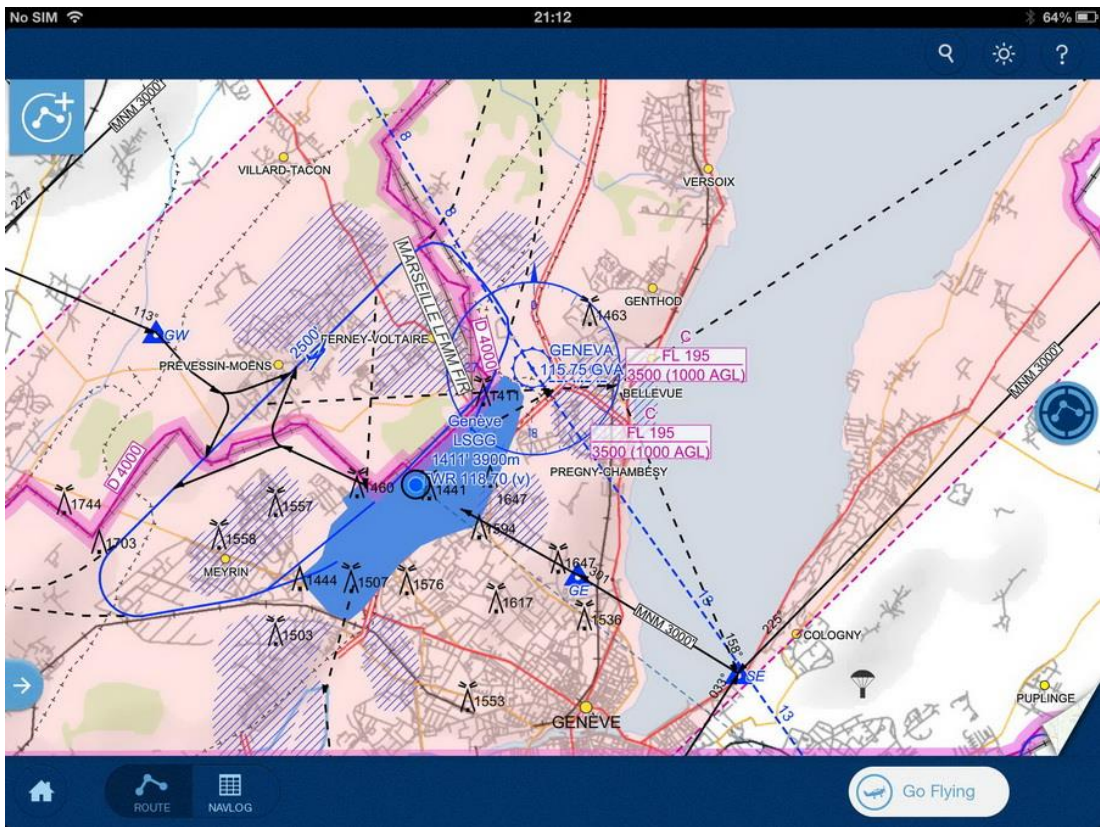
In flight more the "usual" information is displayed: altitude (GPS), next WP, GS, ETA, etc. The application depicts "assumed track for the next two minutes" (I might be mistaken with "2 minutes", apologies). And, what is important and very convenient — (check out the yellow pointer) direction to the next WP and how it differs from "assumed track" (check out magnetic track and bearing on the screenshot):



Map zoom level stays the same all the flight. As for me, it would be better if moving map would be smarter. Obviously, zooming in reveals more details (from just high-level overview of airspaces down to approach charts and then to taxi charts) and this is not convenient to do in a heavy traffic, short and fast approaches in a busy aerodrome.









In Airnav Pro VAC appears on top of the map. (Sky-map — the same and as well switches to taxi chart after landing).  
 What I see as a possible improvement: automatically zoom in when an aircraft flies close to approach pattern (circuit or entry routes)



In Switzerland non-controlled aerodromes have preferential approach and departure sectors. They are depicted on VAC. Check out LSGY [Verdon-les-Bains](#), 'N' and 'S' are these approach sectors:

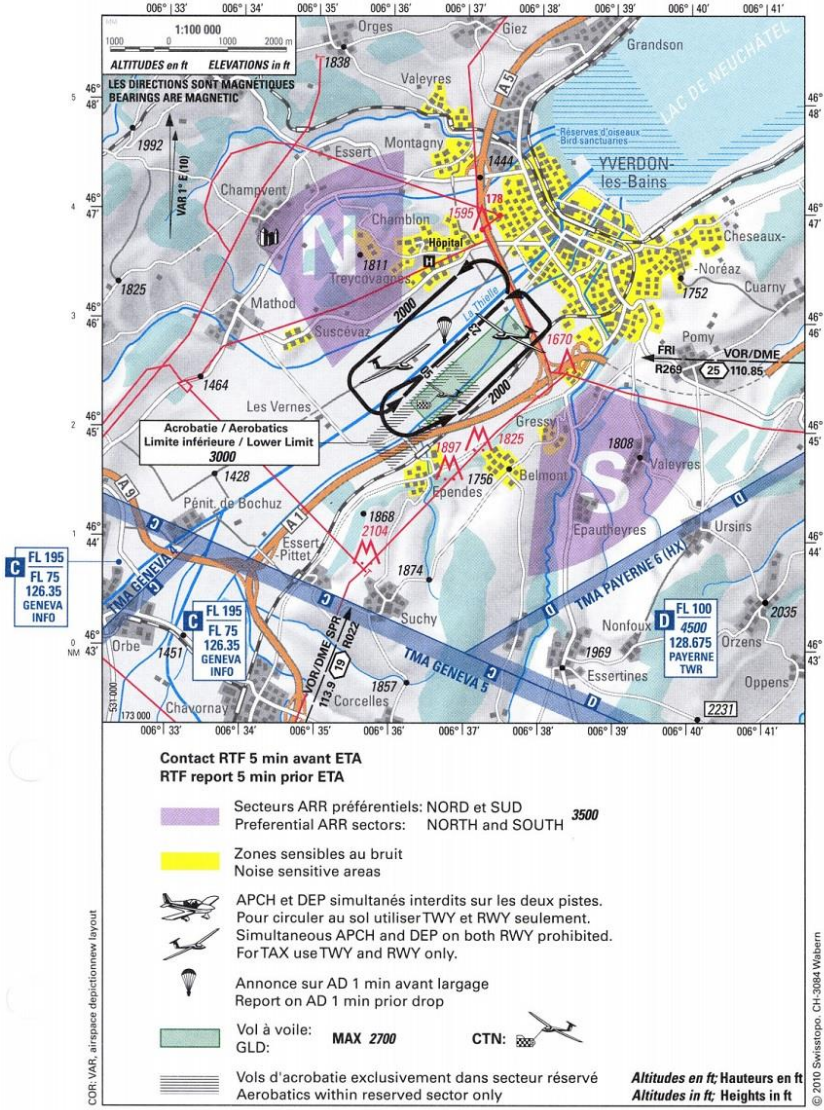
CARTE D'APPROCHE A VUE  
VISUAL APPROACH CHART

AD 131.125

YVERDON-LES-BAINS

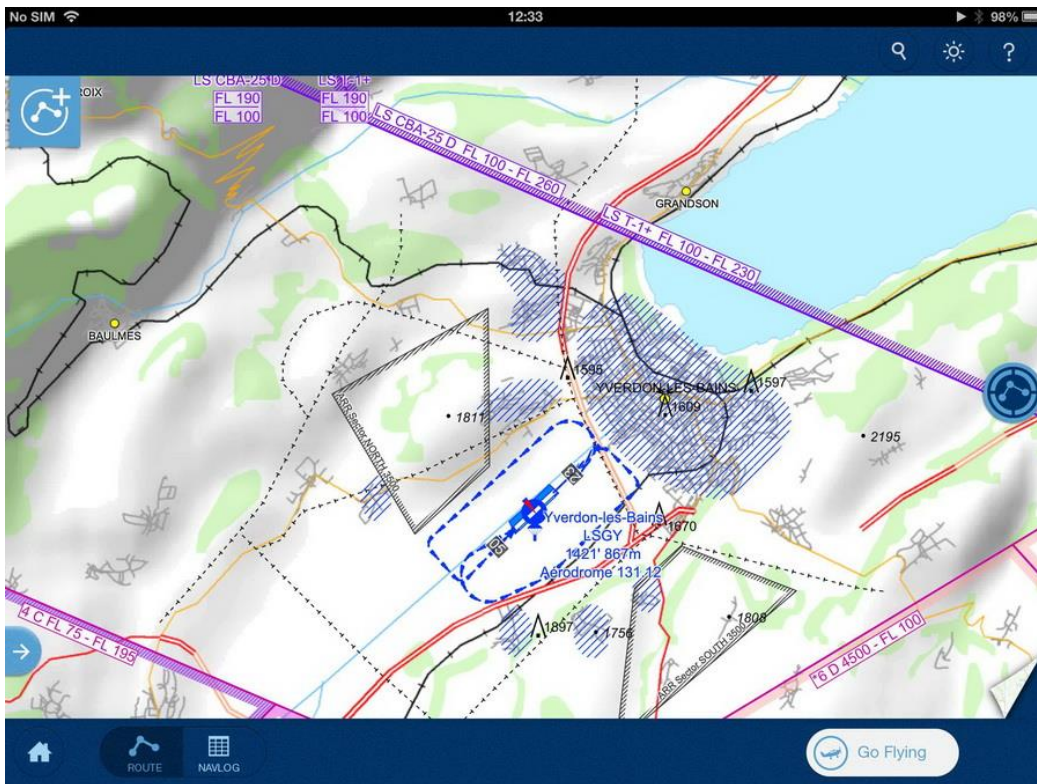
ELEV 1421 ft (433 m)

LSGY

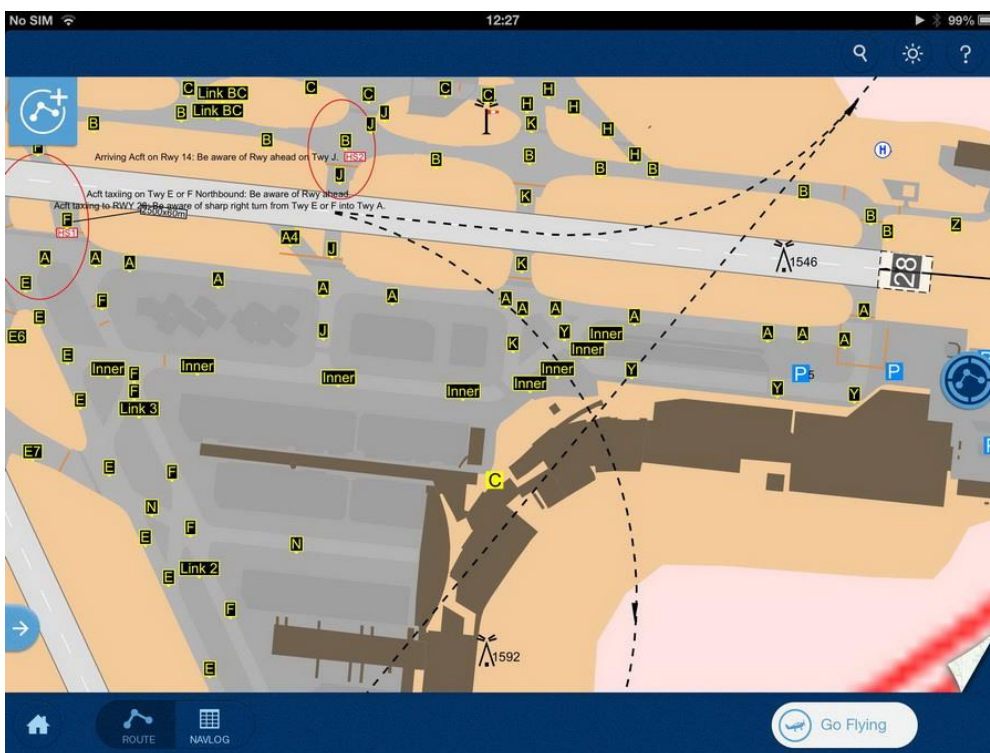


The same approach chart in Jeppesen FD VFR. As for me, printed VAC from Skyguide easier to check, observe during flight. There are no issues in picture accuracy, it is a matter (for me) of readability of approach sectors, probably altitude or some other limits, etc. during flight. For sure, this should be checked on the ground during pre-flight preparations, and later during briefing during descent (for approach) check, but "something might happen":





I did not use taxi chart. The aerodrome I had a flight to (EDTF) just "too simple" and I did not need to use taxi chart. It seems that the charts are relatively good. Here are the examples of Zurich (LSZH) and Grenchen (LSZG). I also give a scan of Grenchen Sygguide taxi chart. What is absent in Jeppesen charts is detailed parking schema (see the last image in this section). Anyway, from my experience in smaller aerodromes (even as small as Grenchen or Bern), tower helps to find the parking spot (turn left, turn right, etc), and in the bigger airports (Zurich) 'follow me car' helps.





To sum up. I do understand that this is the first version and a lot of features to be added in the future.

- 1) Like: overall experience; "thought of" UI; UI itself (especially compared to [FlightDeck Pro — "for big guys"](#))
- 2) Like: Maps
- 3) Wanted: Support to obtain NOTAM, METAR, TAF. This can be additional subscription. There is a corresponding project within Airnav Pro: pre-flight briefing
- 4) Wanted: Why not to have? Submitting ATC flight plan right from this application, based on entered route
- 5) Wanted greatly: Export of flights as tracks and as flight log
- 6) Wanted: Terrain awareness (it is expected in VFR flight that a pilot can see mountains, but for "planning a step ahead" would be nice)
- 7) Wanted: The same for controlled airspaces
- 8) Wanted: Feature to upload custom waypoints from computer (just a small example: my homebase LSZN has no official VAC, I have my own WPs for it)
- 9) Wanted greatly: Feature to prepare a flight using computer and the upload (import, send, whenever) it into Jeppesen FD VFR. This is a big additional task for the developers, but wanted greatly.
- 10) Wanted: (could not find quickly): Reverse the route. For example, if I landed LSZN-LSGY, just press one button "reverse" and fly back.
- 11) Wanted: Short term subscription and/or trip kit subscription. This is needed, if I want to make a "weekend flight to Amsterdam from Zug" and in existing subscription there is no Germany and the Netherlands. In paper this is available from Jeppesen. Would be great to have it in this application (not to mention possible legal obligations to have paper map, may be there should be an option to export for printing)

There are a lot more to suggest, I mentioned only what I've used myself or want to use in the nearest future.

Overall — I liked very much it. On daily basis I use Airnav Pro and I'm planning to continue using it. I'll have a look later on of some important features for me are implemented.

SkyDaemon.

Never used, quite promising. Good videos describing usage: <http://www.skydemon.aero/start/videos.aspx>

Works on iOS, PC and Android (under one account).

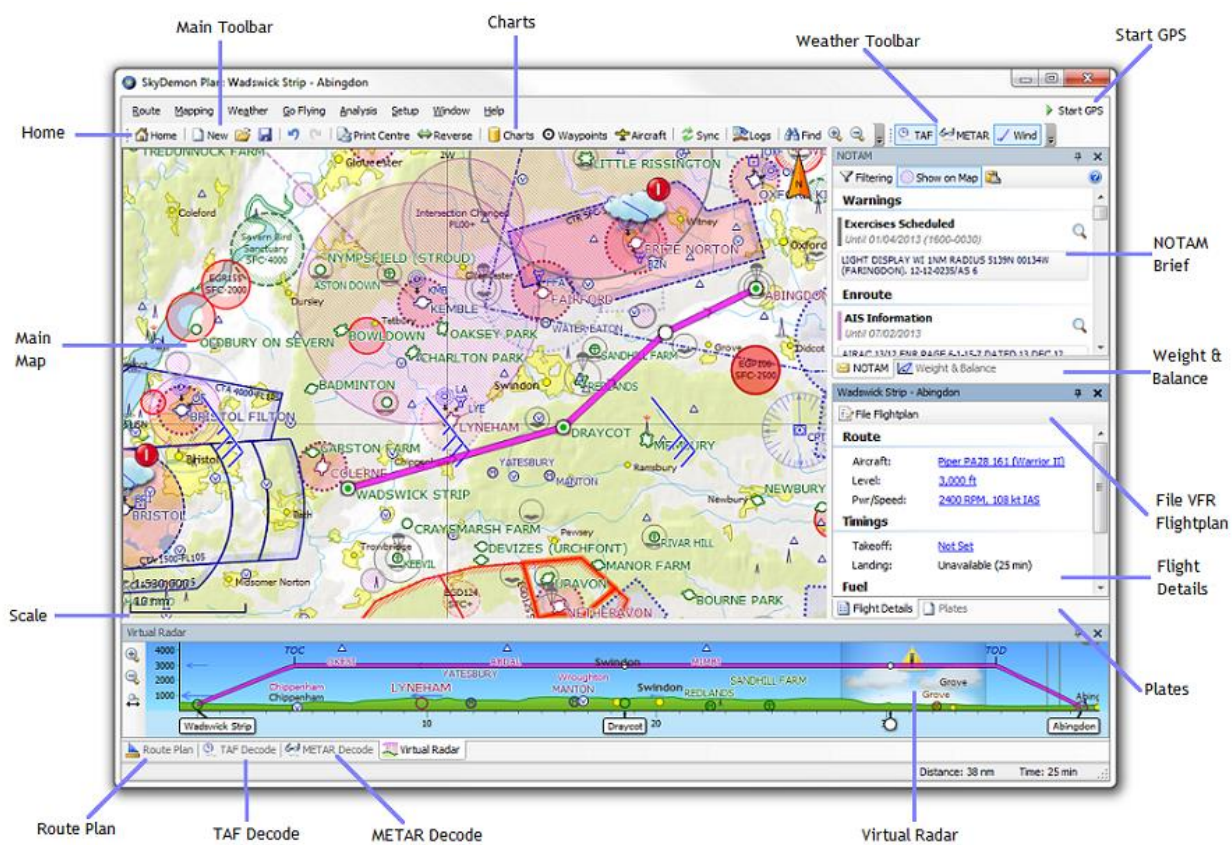
Pricing – 200+CHF first time + ca 100 annually



Shows nicely weather on the map and flight profile, possible to define personal "limits"



Possible to prepare on PC:



That's about navigation.

A bit of fun with iPad

Flight Radar 24





**Virtual cockpit view**



**Augmented Reality**

Air Supremacy (game)



Flight Control – ATC “work”

<https://itunes.apple.com/en/app/flight-control/id306220440>

AIRCRAFT WND: 00031

HI SCORE: 00042

