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About

AVTECH proFLIGHT is a high-quality weather tool for professional flight crew. proFLIGHT uses the actual flight route and time combined with Met Office's Global 10KM Weather model to produce a tailored weather forecast based on the most up to date information. Hazardous weather such as high-resolution turbulence, alerts such as SIGMETS, among more weather-related data is presented to the pilot both in a horizontal map view and a vertical flight-profile view (SIGMA service).

proFLIGHT also uses a patented algorithm to optimize the wind selection (winds to be used by the FMS) for climb- and descent phases (AVENTUS service).

Purpose

This user guide describes the system requirements and operational guidance for proFLIGHT version 1.1 and any subversions. It is designed for flight-deck crew.

Technical Support

AVTECH provides technical support during office hours.

- E-mail: proflight_support@avtech.aero
- Phone: +46 (0) 8-544 104 80

(Normal office hours Monday to Friday, 08:00-17:00 GMT+1)

System Requirements

proFLIGHT requires an iPad running iOS 11.0 or later.

Limitations

The current version of proFLIGHT only stores weather for the active flight. Therefore, only the active flight plan will be visible in the Flight Plan view if no internet connection is available.

NOTE! Internet connection is required to:

- Update and select flights from flight plan list/s
- Synchronize and retrieve new weather data

Terms & Conditions

Terms and conditions can be found at www.avtech.aero. The user must approve the terms & conditions and the privacy policy when creating a user account.

Please note that proFLIGHT does not replace any legally required flight documentation nor does it replace any of the on-board aircraft weather systems.
Weather Types

proFLIGHT presents multiple types of weather provided by Met Office (UK).

<table>
<thead>
<tr>
<th>Type</th>
<th>Available</th>
<th>10K-Resolution</th>
<th>Tailored</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turbulence</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Winds</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>SIGWX</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIGMETs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>En-route SIGMET's</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>METAR</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>TAF</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Global Weather/WAFS (Low-resolution)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE!** Data derived from crown copyright material from Met Office (UK)

- Tailored weather is specific for the route in space and time (i.e. based on the data in the flight plan section).
- High-resolution (10 KM) weather is available from **FL240 and above**.

AVENTUS Optimisation

proFLIGHT has a built-in optimisation for selection of optimum winds during the climb- and descent phase. The optimisation uses the AVENTUS service which dynamically selects the winds that “best” represents (minimises the wind error) the atmosphere during these phases.

The calculation is based on a patented algorithm that uses data from both the flight plan route and the actual aircraft performance parameters. The calculation has a two-step fall back in case any of the required data is missing.

Implemented functionality in the current version (data used from the app).

<table>
<thead>
<tr>
<th>Phase</th>
<th>Available</th>
<th>Aircraft Performance</th>
<th>Route</th>
<th>Fall-back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climb</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Descent</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Landscape And Portrait Modes

proFLIGHT can be used either in landscape or portrait mode. Change mode by rotating the iPad.

In this user guide all examples are shown in landscape mode.

Aircraft Tracking

Aircraft tracking is always active when the app is being used. proFLIGHT uses the iPad’s internal GPS (if approved by the user). Sometimes the reception is limited in an aircraft and therefore an external GPS receiver is recommended for best position accuracy.
Quick Start

Login:

- Start proFLIGHT by tapping on the app icon
- Log in with username and password

To display **non-flight-route tailored** weather:

- Select SIGMA SYNC from the top menu
- Tap SYNC ALL DATA (at the bottom)

To display **flight-route tailored** weather:

- Select FLIGHT PLAN from the top menu
- Select a flight plan from
  - Assigned/Stored flight plans
  - Search by callsign
  - Create a new
- Tap ACTIVATE in the flight plan overview (top right corner)
- Select SIGMA SYNC from the top menu
- Tap SYNC ALL DATA (at the bottom)
# Login Screen

![Login Screen](image)

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Username</strong></td>
<td>Personal username. Please note that the number of devices one user can be logged into at a time is limited.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. <strong>Password</strong></td>
<td>Private password selected by the user.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. <strong>Forgot password</strong></td>
<td>Click to send a request to reset user password. A reset link will be sent to the user's registered e-mail address.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Once logged in the user remains logged in on the device until:

- User actively logs out.
- Maximum number of logged in devices is reached.
Main Screen

The main screen is divided into three sections/areas.

1. **Top Menu**
   This menu provides access to flight plans, weather table, station weather such as METAR and TAF, weather synchronization and profile settings.

2. **Map View**
   Provides a horizontal view of the planned route and associated weather.

3. **Vertical View**
   Provides a vertical view displaying the flight profile and tailored weather (vertical and horizontal extension in relation to the planned route).

Please note, if no flight plan has been activated:

- the bottom vertical view will **not** be displayed and
- only weather that is **not tailored** to a flight (route) is available to be synchronized and displayed (see section “SIGMA SYNC”)

**Top Menu**

The top menu has five different components:

1. **FLIGHT PLAN**  
   View/select or manage assigned and stored flight plans.

2. **WEATHER TABLE**  
   View different weather types by waypoint.

3. **METAR/TAF**  
   View airport weather data.

4. **SIGMA SYNC**  
   Synchronize the latest weather.

5. **USER PROFILE**  
   Manage user profile settings and preferences.

---

**FLIGHT PLAN**

Manage and activate flight plans. The flight plan section consists of two main views, the flight plan list and the flight plan overview.

**Flight Plan List**

1. **Flight Plan View**  
   Toggle between all available flight plans and the active flight plan.

2. **Assigned Flight Plans**  
   List containing user’s assigned flight plans, sorted by ETD.  
   (Assigned flight plans are retrieved from a flight planning provider and requires the user's airline to be a SIGMA customer)
3. **Stored Flight Plans** List containing user’s stored/saved flight plans. Flight plans can be stored/saved based on:
   - an assigned flight plan
   - a stored flight plan
   - an empty new flight plan

4. **Manage Stored Flight Plans** Tap the icon to manage the flight plan:
   - Rename or
   - Delete

5. **Sorting** The stored flight plans can be sorted either by:
   - A-Z or
   - Latest modified

6. **Search flight plan** Search flight plan by callsign.

7. **Create new flight plan** Create a new flight plan by tapping the icon. A new empty flight plan template will show.

### Search Flight Plan
Search for an active flight plan by tapping on the search icon (6).

1. **ATC callsign search** Type in the **ICAO callsign** of the flight and tap enter/search on the keyboard. If the flight plan exists in the system*, it will appear in the list below the search field. View/select a flight plan by tapping on the flight plan name in the list.
* The system (Flight Planning Provider, Airline Internal Database etc) in which the search takes place depends on the implementation for each specific user. Note that all users do not have access to search these sources. If the user doesn't have access “Flight plan not found!” will always be displayed.

**Flight Plan Overview**

Tapping a flight plan in the list or tapping the “create flight plan” icon will open the flight plan overview.

Depending on the state of the flight plan different options will be available.

1. **Back**  - go back to the flight plan list/search
   **Cancel**  - cancel any changes made to a flight plan

2. **Activate**  Activates the flight plan. When activating a flight plan the system validates the inserted data. If it does not validate it will not be activated and one or more warnings will be displayed. The section/s of the flight plan with invalid input will also be highlighted in red.

3. **Manage Flight Plan**  By tapping the icon, one or more of the listed options below will be available:
   - **Save**  – saves the changes to the same flight plan template in the stored flight plan list.
   - **Save Copy**  – saves the flight plan as a new flight plan template in the stored flight plan list.
   - **End Flight**  – ends the active flight plan and removes all related weather data.
4. **Flight Plan Sections**  
The flight plan is built from multiple sections. The sections can all be modified.  
- **FLIGHT** – flight data  
- **ROUTE** – route data  
- **AIRCRAFT PERFORMANCE** – aircraft performance data

**Modify Or Create A New Flight Plan**

Tapping on any of the sections in the flight plan overview will open the flight plan edit view.

1. **Cancel**  
   Cancel and disregard any changes.

2. **Done**  
   Leave and keep changes in the modified flight plan.

3. **Toggle Between Sections**  
   Step/toggle between the sections by:  
   - tapping on the name of the section  
   - swipe (left or right)  
   - tapping previous/next on the keyboard

Each section has one or more fields to fill in. Minimum data required to enable saving of a flight plan is departure- and destination airports.

**FLIGHT**

1. **CALLSIGN**  
   Callsign of the flight

2. **DEPARTURE**  
   Departure airport name either by IATA or ICAO code.

3. **DESTINATION**  
   Destination airport name either by IATA or ICAO code.
4. **DEP ALTN/S**  
   Departure alternate airports by IATA or ICAO code. If multiple airports are used, they must be separated either by a comma or a blank space.

5. **DEST ALTN/S**  
   Destination alternate airports by IATA or ICAO code. If multiple airports are used, they must be separated either by a comma or a blank space.

6. **ETD**  
   Estimated time of departure in UTC time.

7. **TAXI**  
   Expected taxi time.

8. **EET**  
   Estimated elapsed time (also known as flight time).

9. **ETA**  
   Estimated arrival time.

Note that changing ETD, TAXI or EET automatically calculates ETA. This would be the normal procedure. If instead ETA is changed then EET is calculated from ETD, TAXI and ETA.

**ROUTE**

1. **CRUISE LEVEL**  
   Initial planned flight level. The format is F followed by 3 digits.

2. **EN-ROUTE ALTN/S**  
   En-route alternate airports by IATA or ICAO code. If multiple airports are used, they must be separated either by a comma or a blank space.

3. **ATC DATA**  
   ATC format or clean format without speed and/or level changes are both accepted. Note that the first and last point must be waypoints. Please note that it must not start with initial flight level and speed. See example in appendix 2.

4. **STEP CLIMBS**  
   **(Level/Speed change)**  
   Add multiple level changes and/or speed changes to the route. A level/speed change must be associated with a waypoint included in the route (either as a direct to waypoint, entry/exit waypoint, or a waypoint on an airway). Note that if a conflict is detected between a level/speed change in the route field (if ATC format is used) and the step climb table, the flight plan will not validate. Remove a level/speed change by swiping the row to the left.

**AIRCRAFT PERFORMANCE**

1. **AIRCRAFT REGISTRATION**  
   Aircraft registration mark.

2. **TYPE**  
   Aircraft type by ICAO code.

3. **TOW**  
   Take-off weight in KG.

4. **LAW**  
   Landing weight in KG.

5. **CLIMB SPEEDS**  
   - IAS > FL100 in the format 280*
   - MACH number in the format 0.80
6. **CRUISE SPEED**  
Initial cruise speed in either M or IAS:
- MACH number in the format 0.80
- IAS in the format 240

7. **DESCENT SPEEDS**  
- MACH number in the format 0.80
- IAS > FL100 in the format 280*

*Note that the default IAS below FL 100 is set to 250 knots.

**WEATHER TABLE**
The weather table view displays weather in a traditional way by waypoint.

**Winds & Temp**

<table>
<thead>
<tr>
<th>Weather Table</th>
<th>WINDS &amp; TEMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turbulence</td>
<td>SOXER</td>
</tr>
<tr>
<td>ISA Deviation</td>
<td>ONPOP</td>
</tr>
<tr>
<td>Head/Tail Wind</td>
<td>VAMPU</td>
</tr>
<tr>
<td></td>
<td>UTOLU</td>
</tr>
<tr>
<td></td>
<td>INDIG</td>
</tr>
<tr>
<td></td>
<td>MASIV</td>
</tr>
<tr>
<td></td>
<td>BADU</td>
</tr>
</tbody>
</table>

1. **Selection of weather type**  
Weather menu.

2. **Flight Level**  
Flight levels derived from flight plan.

3. **Waypoint**  
Name of the waypoint.

4. **Wind**  
Wind direction/speed in degrees/knots.

5. **Temperature**  
Temperature in degrees Celsius.

6. **Planned FL**  
Planned flight level at the waypoint highlighted in orange.
**Turbulence**

1. **Selection of weather type**  
   Weather menu.

2. **Flight Level**  
   Flight levels derived from flight plan.

3. **Waypoint**  
   Name of the waypoint.

4. **Turbulence level**  
   Level of the turbulence expressed as LGT/MOD/SEV.

5. **Turbulence value**  
   Maximum turbulence value expressed as a number.
ISA Deviation

1. **Selection of weather type**
   Weather menu.

2. **Flight Level**
   Flight levels derived from flight plan.

3. **Waypoint**
   Name of the waypoint.

4. **Temperature deviation**
   Temperature ISA deviation expressed in degrees Celsius.
## Head/Tail Wind

<table>
<thead>
<tr>
<th>Weather Table</th>
<th>Winds &amp; Temp</th>
<th>Turbulence</th>
<th>ISA Deviation</th>
<th>Head/Tail Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>KOVIN</td>
<td>PON</td>
<td>DITAL</td>
<td>GODIX</td>
<td>DIDAK</td>
</tr>
<tr>
<td>FL430</td>
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<td>FL420</td>
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<td>FL310</td>
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<td></td>
</tr>
<tr>
<td>FL300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. **Selection of weather type**  
   Select type of weather from the menu.

2. **Flight Level**  
   Flight levels derived from flight plan.

3. **Waypoint**  
   Name of the waypoint.

4. **Head/Tail wind component**  
   Head/Tail wind component at the waypoint expressed in knots.
**METAR/TAF**
This menu item displays all METAR and TAF data for the airports included in the flight plan or added as “OTHER” by the user.

1. **DEPARTURE**  
   Weather data for departure airport and any departure alternate airport/s.

2. **EN ROUTE**  
   Weather data for en-route alternate airport/s.

3. **ARRIVAL**  
   Weather data for arrival/destination airport and any destination alternate airport/s.

4. **OTHER**  
   Search option for any airport not included in the flight plan.

5. **ADD AIRPORT**  
   Tap to add the airport to the list. This list is not connected to the active flight plan and remains intact when switching flight plan or ending a flight.

6. **DELETE AIRPORT**  
   Swipe an airport row to delete (remove an airport from the list).

7. **SYNC METAR/TAF**  
   Tap to sync METAR and TAF data (only). Tapping the button in any of the subsections will update weather for all airports at once (not only selected subsection).
**SIGMA SYNC**
This menu item consists of all synchronization options. Note that the weather data must actively be synchronized. (No automatic synchronization of any weather data or optimisation)

Note that if no flight plan is active only non-flight-route specific weather can be synchronized.

1. **INDIVIDUAL SYNC** Select any number of weather/optimisation data to be synchronized individually.

2. **SYNC ALL DATA** Synchronize all available weather/optimisation data at once.

(METAR and TAF data can also be synchronized from the METAR/TAF menu and within the climb- and descent views)

**USER PROFILE**
Manage user profile and other settings.

1. **DAY/NIGHT MODE** Toggle to switch between DAY- (light) and NIGHT- (dark) theme.

2. **CHANGE PASSWORD** Change user's password.

3. **LOG OUT** Log out from proFLIGHT.
Map View

The map view displays the flight route (if an active flight plan exists) and associated weather from a horizontal perspective.

1. **Weather Layers**
   Tap the icon to expand/contract the weather layer menu. (The available weather layers and associated weather data are described under the “Weather Layer” section)

2. **Clickable Areas**
   Depending on the weather layer being displayed different areas in the map view will be selectable by tapping on the area. Tapping on a “clickable” area brings up more information.

3. **Finger Gestures**
   Finger gestures can be used to zoom in/out, move around and rotate the map.

Note that the flight route tailored weather in the map view always reflects the selected level in the vertical view (or a combination of levels if in “planned” route mode and step climb/s exist).
1. **Aircraft position**  
Active aircraft tracking. The nose of the aircraft is pointing in the direction of the aircraft's true track calculated from the GPS signal.
Vertical View

The vertical flight view consists of three different areas:

1. **Departure Data**  
   Tap the area to enter the departure view.

2. **Flight Route Vertical Profile**  
   Tap the arrow to expand/contract the vertical flight profile view.

3. **Destination Data**  
   Tap the area to enter the destination view.
Departure/Destination View
These sections are identical the only difference is the weather data which is associated with the corresponding phase.

1. **Descent/Climb Menu**
   Select type of information to view.

2. **AVETNUS Optimised Winds**
   Optimised and dynamically selected climb/descent winds based on aircraft performance parameters and flight plan route.

3. **Toggle View**
   Toggle to see either the climb/descent path or selected AVENTUS winds only in a table format.

4. **Head/Tail Wind Component**
   Head/tail wind component during climb/descent based on flight plan route. Wind arrows to the left of the path (pointing left) represents head wind, wind arrows to the right of the path (pointing right) represents tail wind. The stronger the wind the longer the arrow.

5. **Wind Data**
   Wind direction (true) and speed (kt) during climb/descent.

6. **ISA Deviation**
   Temperature deviation from ISA atmosphere during climb/descent.
1. **Descent/Climb Menu**  
Select type of information to view.

2. **Departure/Destination Weather**  
METAR and TAF for the departure/destination airport.

3. **Alternate Airports Weather**  
METAR and TAF for any alternate airports included in the flight plan.

4. **Update Weather Data**  
Swipe the list down to update METAR and TAF information. This updates METAR and TAF for all airports (departure, en-route, destination and other).
**Vertical Flight Profile View**

The vertical flight profile view displays weather data for multiple levels along the flight plan route.

Step up and down to display weather at different flight levels. Tailored weather data in the map view always reflects the selected level in the vertical view.

If in “planned” mode the horizontal view reflects a combination of multiple levels if climb/descent steps exists in the route.

---

1. **Expand Or Contract**
   Tap the arrow to expand or contract the vertical flight profile view.

2. **Toggle Active/Planned mode**
   - PLND – planned vertical profile including step climbs/descents
   - ACT – user can step between levels to display

3. **Step Up And Down**
   Step up or down to select flight level to display.

4. **Selected flight level**
   Selected flight level if in ACT mode.

5. **Finger Gestures**
   Use finger gestures to zoom in/out and swipe to the left/right and up/down.

6. **Reset Zoom**
   Resets the zoom and displays the entire flight route from departure to destination.
Weather Layers

By tapping any of the weather layer icons, the associated weather will be displayed in the map- and/or the vertical view.

Available weather layers are:

- **SIGWX**
  Significant weather charts. Mid- and high level.

- **SIGMETS**
  Significant global meteorological information.

- **SIGMETS En-route**
  Displays only tailored SIGMETS applicable to the flight plan route.

- **High res CAT En-route**
  High-resolution turbulence tailored for the flight route. FL240 and above.

- **Winds**
  High-resolution winds tailored for the route. FL240 and above.
SIGWX

The significant weather layer displays digitalized and interactive SIGWX charts. Associated information for different weather areas such as clouds, CAT areas, cyclones among more can be viewed by tapping on the:

- Associated number for cloud- and CAT areas
- On the symbol for cyclones, volcanoes, sandstorms, radiation etc.

1. **SIGWX Chart Time Period**
   Select the time-period to display. The order is always the latest four issued charts in chronological order. The format is **day of month-validity time Z** (UTC). (12-18Z means the chart is valid day 12 of the moth at 18:00 UTC)

2. **Chart Level**
   Toggle to change between mid- and high level.

3. **Additional Information**
   Tap the number or symbol for the weather area to show additional information (if any available).

4. **Chart Legend**
   Tap to display chart legend information.
SIGMETS

The SIGMET layer displays SIGMETS (and AIRMETS for some areas) globally. It only shows valid SIGMETS at the time of SIGMA SYNC.

1. SIGMETS
   Interactive SIGMET. Colour coded based on the type of SIGMET.

2. Selected SIGMET
   By tapping on the SIGMET additional information (raw format as issued) is displayed. The selected SIGMET also gets highlighted. If multiple SIGMET areas are on top of each other they will all appear in the list. Selecting a SIGMET from the list highlights the corresponding SIGMET in the map view.
**SIGMETS En-route**

This layer only displays SIGMETS tailored for the flight plan route. It means that only SIGMETS with which the route “collides” in time and space (horizontally) are displayed and all other are filtered out.

This weather layer both displays the SIGMETS in the map view and in the vertical view.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. SIGMETS</strong></td>
<td>SIGMET areas visualized in both map view and in the vertical view.</td>
</tr>
<tr>
<td><strong>2. Selected SIGMET</strong></td>
<td>Tap the SIGMET either in the map view or in the vertical view to display the SIGMET information.</td>
</tr>
<tr>
<td><strong>3. SIGMET Info</strong></td>
<td>SIGMET information for the selected SIGMET.</td>
</tr>
</tbody>
</table>
High-res CAT En-route
High resolution CAT (clear air turbulence) tailored for the route based on the flight plan. It is categorised into three different categories:

- **Green** – light turbulence
- **Yellow** – moderate turbulence
- **Red** – severe turbulence

1. **Step Up And Down**
   Tap arrows to change flight level to display.

2. **CAT In Vertical View**
   The vertical view displays the forecasted CAT at multiple levels (FL240 and above) along the flight plan route. This gives a good view of the intensity and the spread of the turbulence at different flight levels.

3. **CAT In Map View**
   The map view displays the horizontal spread and intensity of the turbulence at the selected flight level/s.
Winds
The high-resolution winds are visualized both in the vertical- and map view. They are displayed not only at the waypoints but along the entire flight route. The wind barbs are coloured based on the wind speed. Two types of wind data are displayed:

- Head/tail wind component along the track – presented as a wind barb. The more intense the colour the stronger the component.
- True wind direction in degrees / Wind speed in knots – presented as numbers below the wind barb.

1. **Head/Tail Wind**
   Wind barb shows the head/tail wind component based on the route track.

2. **Wind Direction And Speed**
   Wind direction given in degrees true and wind speed given in knots in the format deg/kt.
# Annex 1

Weather products and sources.

MO – Met Office (UK)

<table>
<thead>
<tr>
<th>Source</th>
<th>Type</th>
<th>Coverage area/s</th>
<th>Horizontal resolution</th>
<th>Vertical resolution</th>
<th>Time resolution</th>
<th>Update cycle</th>
<th>Tailored</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO</td>
<td>CAT</td>
<td>Global</td>
<td>10 km</td>
<td>2000 ft</td>
<td>3 hr</td>
<td>6 hrs</td>
<td>Yes</td>
</tr>
<tr>
<td>MO</td>
<td>Winds</td>
<td>Global</td>
<td>10 km</td>
<td>2000 ft</td>
<td>3 hr</td>
<td>6 hrs</td>
<td>Yes</td>
</tr>
<tr>
<td>MO</td>
<td>Temperatures</td>
<td>Global</td>
<td>10 km</td>
<td>2000 ft</td>
<td>3 hr</td>
<td>6 hrs</td>
<td>Yes</td>
</tr>
<tr>
<td>MO</td>
<td>SIGWX High</td>
<td>Global</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>6 hrs</td>
<td>No</td>
</tr>
<tr>
<td>MO</td>
<td>SIGWX Medium</td>
<td>Europe, North Atlantic, Africa, Asia</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>6 hrs</td>
<td>No</td>
</tr>
<tr>
<td>MO</td>
<td>SIGMETS</td>
<td>Global</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>Continuous</td>
<td>No</td>
</tr>
<tr>
<td>MO</td>
<td>EN-ROUTE SIGMETS</td>
<td>Global</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>Continuous</td>
<td>Yes</td>
</tr>
<tr>
<td>MO</td>
<td>METAR</td>
<td>Global</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>Continuous</td>
<td>Yes</td>
</tr>
<tr>
<td>MO</td>
<td>TAF</td>
<td>Global</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>Continuous</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The table shows the native resolution of the meteorological data. Applying interpolation in 4 dimensions to this data results in a weather forecast tailored (valid exactly) for the calculated aircraft position in space and time along the entire route.

*Note that due to the high resolution of the weather forecast, changing the ETD with only a few minutes will have an impact on the forecasted weather along the entire flight route.
Annex 2

ATC route example:

**Filed:**

N0480F360 SOB2R SOBOS R78 RUDEUR UR78 ALSUS UL620 VESAR UL619 MUT UA28
BAG/N0462F370 UW71 BUK/N0465F380 UL621 LETBU/N469F400 UL621 ODERO L621 BUKOV
N616 TUMKI/N0465F380 DCT MIRMA DCT NEKET N616 XILAN XIL4M

**Correct input in proFLIGHT:**

Remove and split “N0480F360”, initial speed N0480 and cruise level F360. Remove departure- and arrival- route “SOB2R” and “XIL4M” (departure- and arrival- routes only exists sometimes depending on the source for the ATC flight plan).

Put in the following parameters to the proFLIGHT flight plan sections:

**“CRUISE LEVEL” (ROUTE)**

F360

**“ATC DATA” (ROUTE)**

SOBOS R78 RUDEUR UR78 ALSUS UL620 VESAR UL619 MUT UA28 BAG/N0462F370 UW71
BUK/N0465F380 UL621 LETBU/N469F400 UL621 ODERO L621 BUKOV N616 TUMKI/N0465F380
DCT MIRMA DCT NEKET N616 XILAN

**“CRUISE SPEED” (AIRCRAFT PERFORMANCE)**

N0480 (ATC speed) most probably not used as IAS. Instead use the cruise Mach number found in the OFP.
Annex 3

Colours and symbols used in proFLIGHT.

### Turbulence colour coding

<table>
<thead>
<tr>
<th>Colour</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light green</td>
<td>Light turbulence</td>
</tr>
<tr>
<td>Yellow</td>
<td>Moderate turbulence</td>
</tr>
<tr>
<td>Red</td>
<td>Severe turbulence</td>
</tr>
</tbody>
</table>

### SIGMET colour coding

<table>
<thead>
<tr>
<th>Colour</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>WS – ICE (Icing)</td>
</tr>
<tr>
<td>Green</td>
<td>WS – TURB (Turbulence)</td>
</tr>
<tr>
<td>Purple</td>
<td>WS – TS (Thunderstorm)</td>
</tr>
<tr>
<td>Green</td>
<td>WS – MTW (Mountain wave)</td>
</tr>
<tr>
<td>Orange</td>
<td>WS – SS/DS (Sandstorm/Duststorm)</td>
</tr>
<tr>
<td>Yellow</td>
<td>WS – RDOACT CLD (Radioactive cloud)</td>
</tr>
<tr>
<td>Red</td>
<td>TC (Tropical cyclone)</td>
</tr>
<tr>
<td>Grey</td>
<td>VA/WV (Volcanic ash)</td>
</tr>
</tbody>
</table>
### SIGWX chart symbols

<table>
<thead>
<tr>
<th>Image</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>🌋️</td>
<td>Volcanic eruption</td>
</tr>
<tr>
<td>🚦</td>
<td>Radioactive atmosphere</td>
</tr>
<tr>
<td>🌊</td>
<td>Tropical cyclone</td>
</tr>
<tr>
<td>🌪️</td>
<td>Sandstorm</td>
</tr>
<tr>
<td>🌪️</td>
<td>Moderate turbulence</td>
</tr>
<tr>
<td>🌪️</td>
<td>Severe turbulence</td>
</tr>
<tr>
<td>🌪️</td>
<td>Moderate icing</td>
</tr>
<tr>
<td>🌪️</td>
<td>Severe icing</td>
</tr>
<tr>
<td>🌐</td>
<td>Cumulonimbus cloud area (OCNL CB, FRQ CB, ISOL EMBD CB, OCNL EMBD CB)</td>
</tr>
<tr>
<td>🌐</td>
<td>CAT area (MOD, SEV)</td>
</tr>
<tr>
<td>🌐</td>
<td>Jetstream</td>
</tr>
<tr>
<td>🌐</td>
<td>Tropopause high (FL)</td>
</tr>
<tr>
<td>🌐</td>
<td>Tropopause low (FL)</td>
</tr>
<tr>
<td>🌐</td>
<td>Tropopause spot height (FL)</td>
</tr>
</tbody>
</table>