

AFIS/Tower Basic Lesson



Minor Endorsement inkl. AFIS

Inhalt

- Vorstellungsrunde
- VATSIM Struktur
- ATC Training AFIS
- Einführung in Euroscope
- Basics of controlling
 - Clearance / Delivery
 - Ground / Apron
 - Tower
 - VFR
- AFIS
- Together on VATSIM



DPS Deutsche Flugsicherung

Vorstellungsrunde

Name?

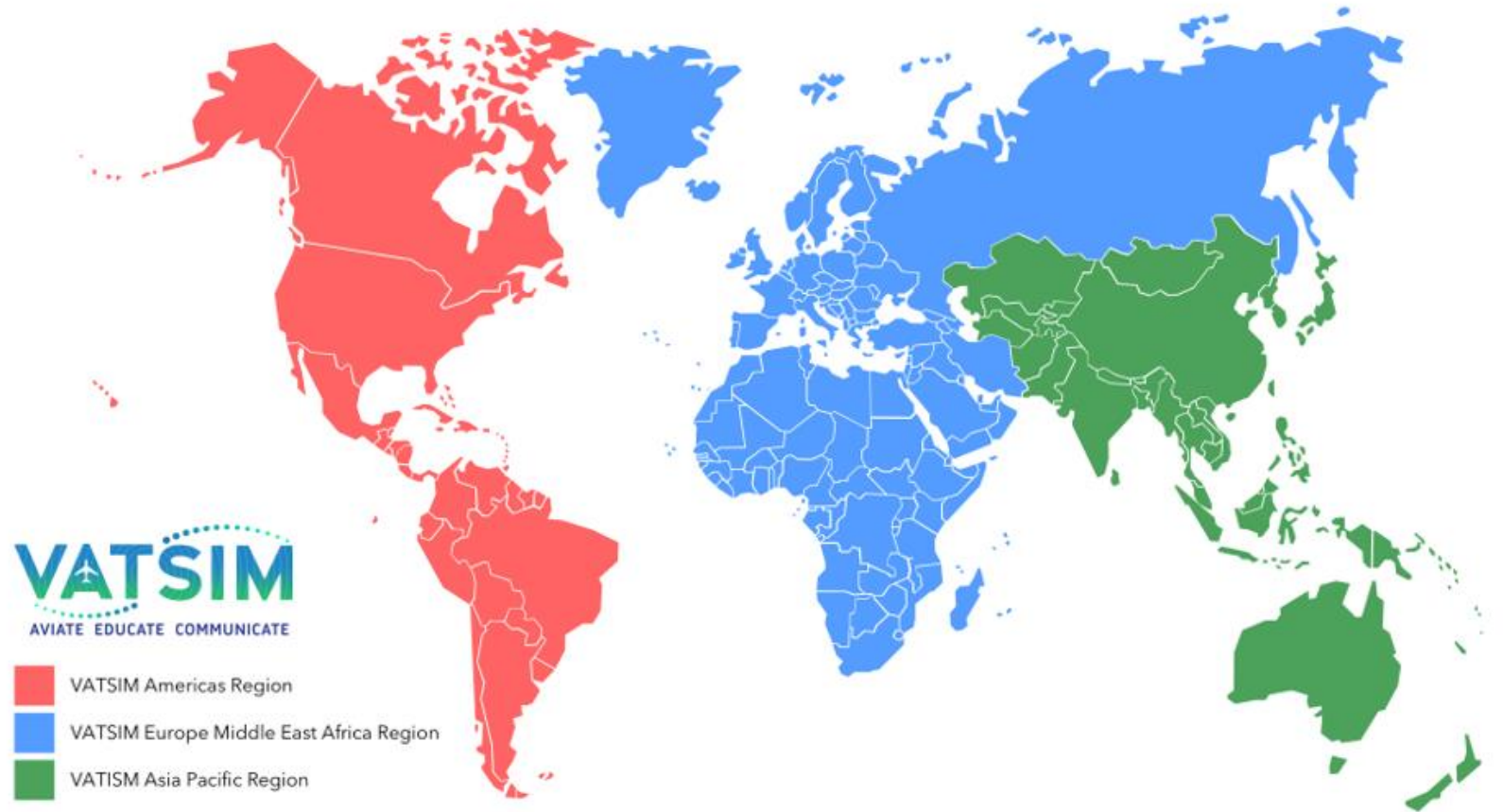
Alter?

Wie bist du zu VATSIM gekommen?

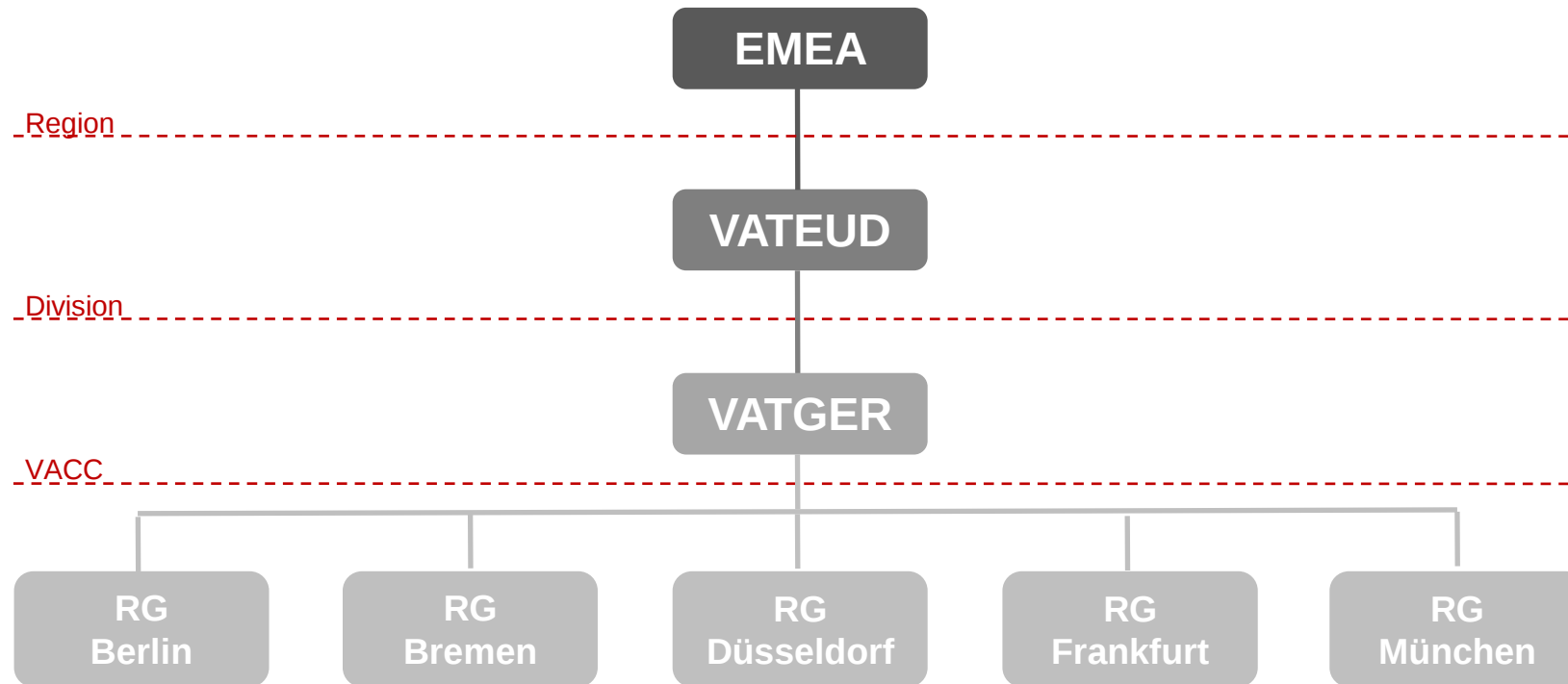
Welche Vorerfahrungen habt ihr?

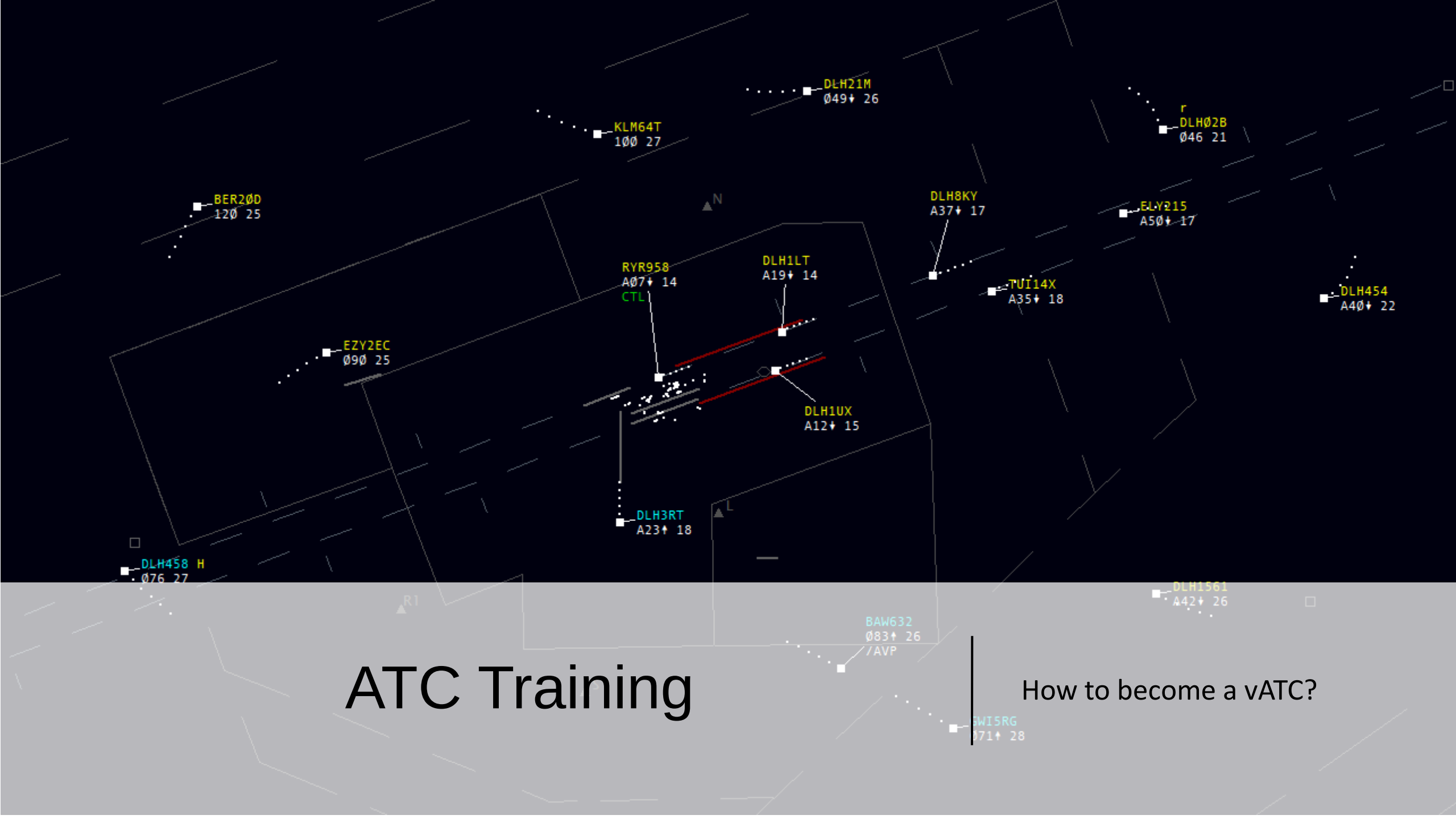
Warum möchtest du VATC werden?

VATSIM Struktur



VATSIM Struktur



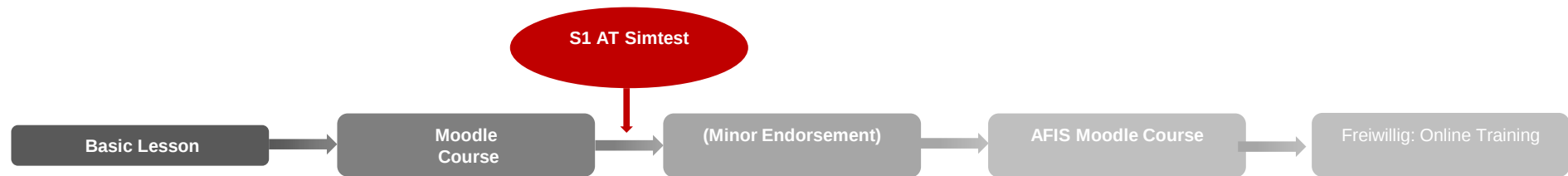


ATC Training

How to become a vATC?

ATC Training: AFIS mit S1

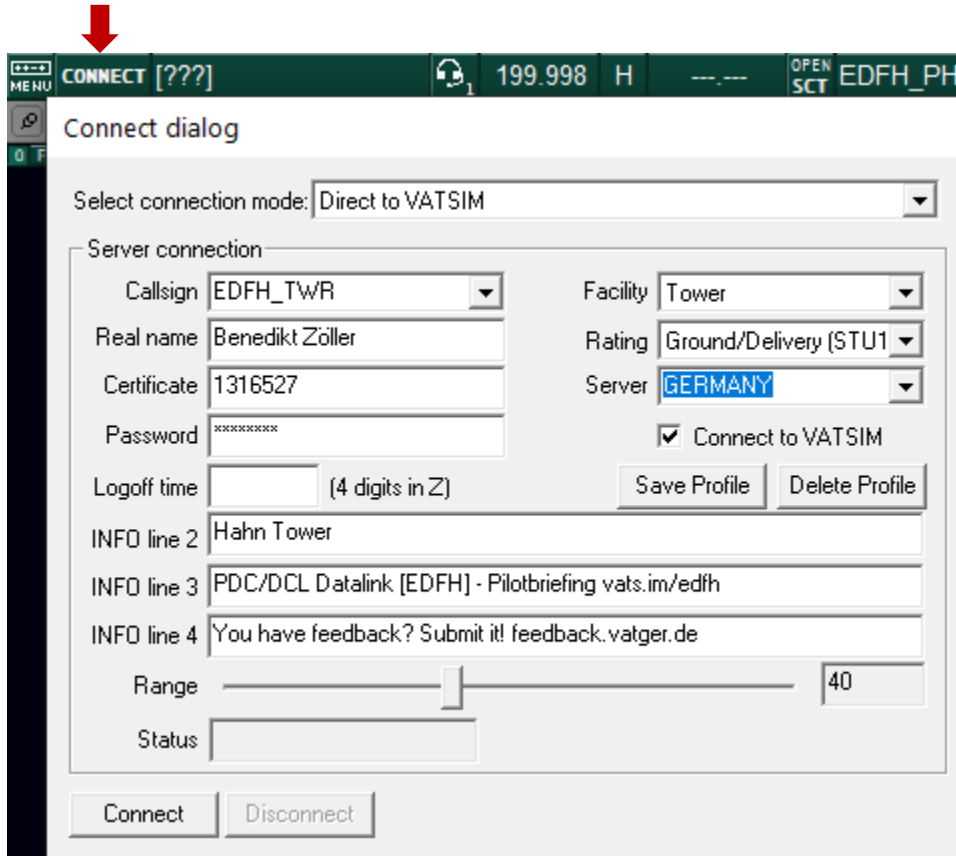
- Knowledgebase: <https://knowledgebase.vatsim-germany.org/>
- ATSIM Test: <https://www.atsimtest.com/>
- Moodle: <https://moodle.vatsim-germany.org/course/view.php?id=13>
- Q&A: <https://board.vatsim-germany.org/forums/q-a-fragen-und-antworten.547/>



Euroscope

Introduction

Connect Screen



The screenshot shows the 'Connect dialog' box in a flight simulator. A red arrow points to the 'CONNECT [???' button in the top menu bar. The dialog box is titled 'Connect dialog' and contains the following fields and controls:

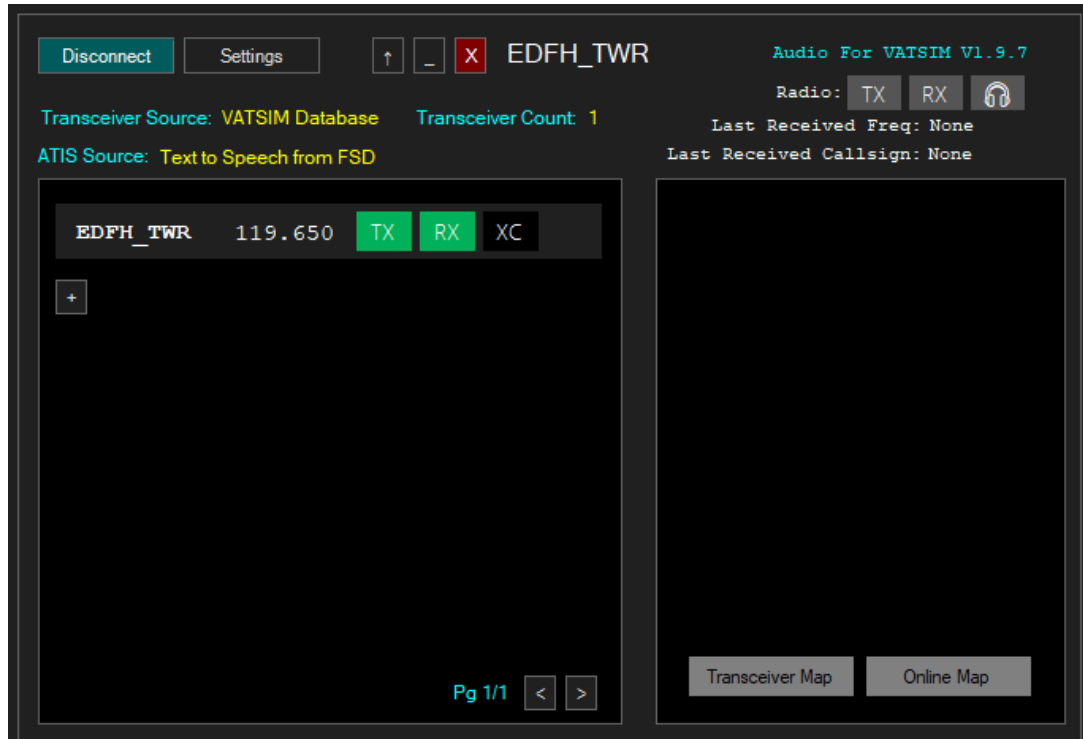
- Select connection mode:** A dropdown menu set to 'Direct to VATSIM'.
- Server connection:**
 - Callsign:** A dropdown menu set to 'EDFH_TWR'.
 - Facility:** A dropdown menu set to 'Tower'.
 - Real name:** A text field containing 'Benedikt Zöller'.
 - Rating:** A dropdown menu set to 'Ground/Delivery (STU1)'.
 - Certificate:** A text field containing '1316527'.
 - Server:** A dropdown menu set to 'GERMANY'.
 - Password:** A text field containing 'xxxxxxx'.
 - Logoff time:** A text field with '(4 digits in Z)' next to it.
 - Connect to VATSIM:** A checked checkbox.
 - Save Profile:** A button.
 - Delete Profile:** A button.
- INFO line 2:** A text field containing 'Hahn Tower'.
- INFO line 3:** A text field containing 'PDC/DCL Datalink [EDFH] - Pilotbriefing vats.im/edfh'.
- INFO line 4:** A text field containing 'You have feedback? Submit it! feedback.vatger.de'.
- Range:** A slider control with a value of 40.
- Status:** A text field.
- Connect:** A button.
- Disconnect:** A button.

- How to connect:
 - Connection mode: Direct to VATSIM
 - Callsign: XXXX_TWR
 - Fill in ID and Password
 - Facility and Rating: Ground/Delivery (STU1)
 - Select any Server but Sweatbox
 - Press connect

Your ID and password are saved without encryption in your .prf file after filling them in here and closing ES.

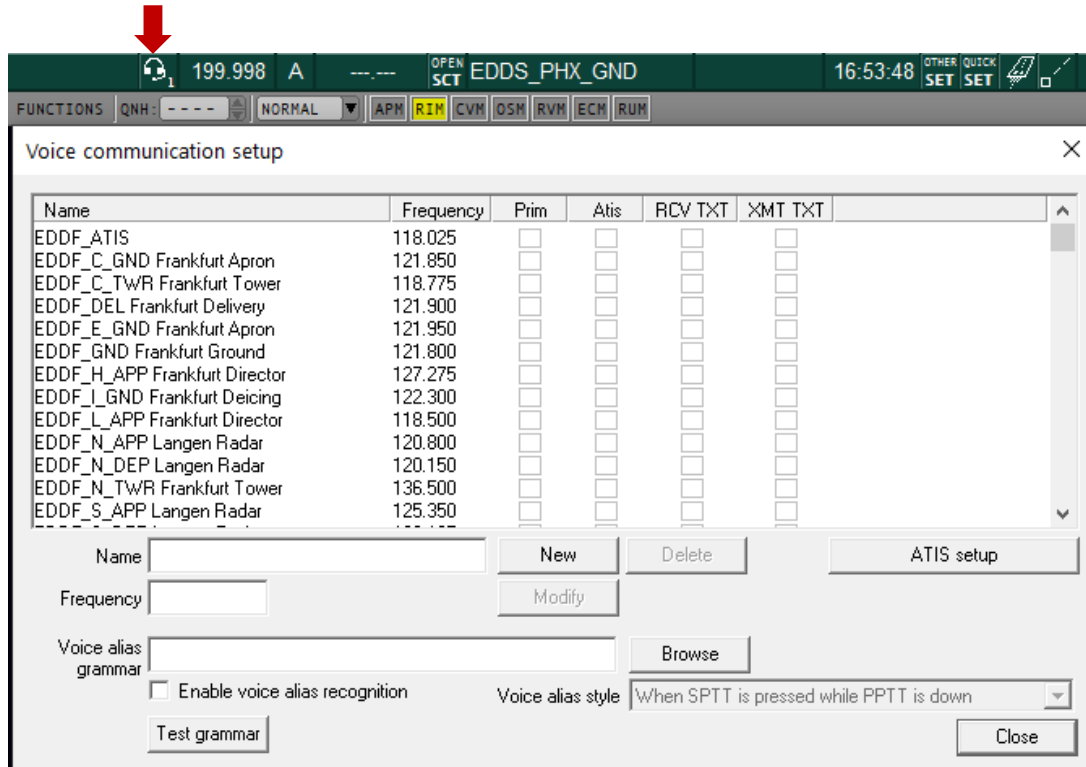
!!! YOU MUST NOT SHARE YOUR .prf FILE !!!

Audio For Vatsim



- How to connect:
 - Open AFV standalone
 - Check your settings
 - Press connect
 - Check that TX (transmit) and RX (receive) are selected
- How to listen to another station:
 - Click the little „+“
 - Type in the callsign of the station you want to observe (e.g. EDDT_TWR)
- XC: „cross couple“ – used when coupling multiple frequencies, used rarely

Voice Communication Setup



199.998 A --- OPEN SCT EDDF_PHX_GND 16:53:48 OTHER QUICK SET SET

FUNCTIONS QNH: --- NORMAL APM RIM CVM OSM RVM ECH RUM

Voice communication setup

Name	Frequency	Prim	Atis	RCV TXT	XMT TXT
EDDF_ATIS	118.025	☐	☐	☐	☐
EDDF_C_GND Frankfurt Apron	121.850	☐	☐	☐	☐
EDDF_C_TWR Frankfurt Tower	118.775	☐	☐	☐	☐
EDDF_DEL Frankfurt Delivery	121.900	☐	☐	☐	☐
EDDF_E_GND Frankfurt Apron	121.950	☐	☐	☐	☐
EDDF_GND Frankfurt Ground	121.800	☐	☐	☐	☐
EDDF_H_APP Frankfurt Director	127.275	☐	☐	☐	☐
EDDF_I_GND Frankfurt Deicing	122.300	☐	☐	☐	☐
EDDF_L_APP Frankfurt Director	118.500	☐	☐	☐	☐
EDDF_N_APP Langen Radar	120.800	☐	☐	☐	☐
EDDF_N_DEP Langen Radar	120.150	☐	☐	☐	☐
EDDF_N_TWR Frankfurt Tower	136.500	☐	☐	☐	☐
EDDF_S_APP Langen Radar	125.350	☐	☐	☐	☐

Name New Delete ATIS setup

Frequency Modify

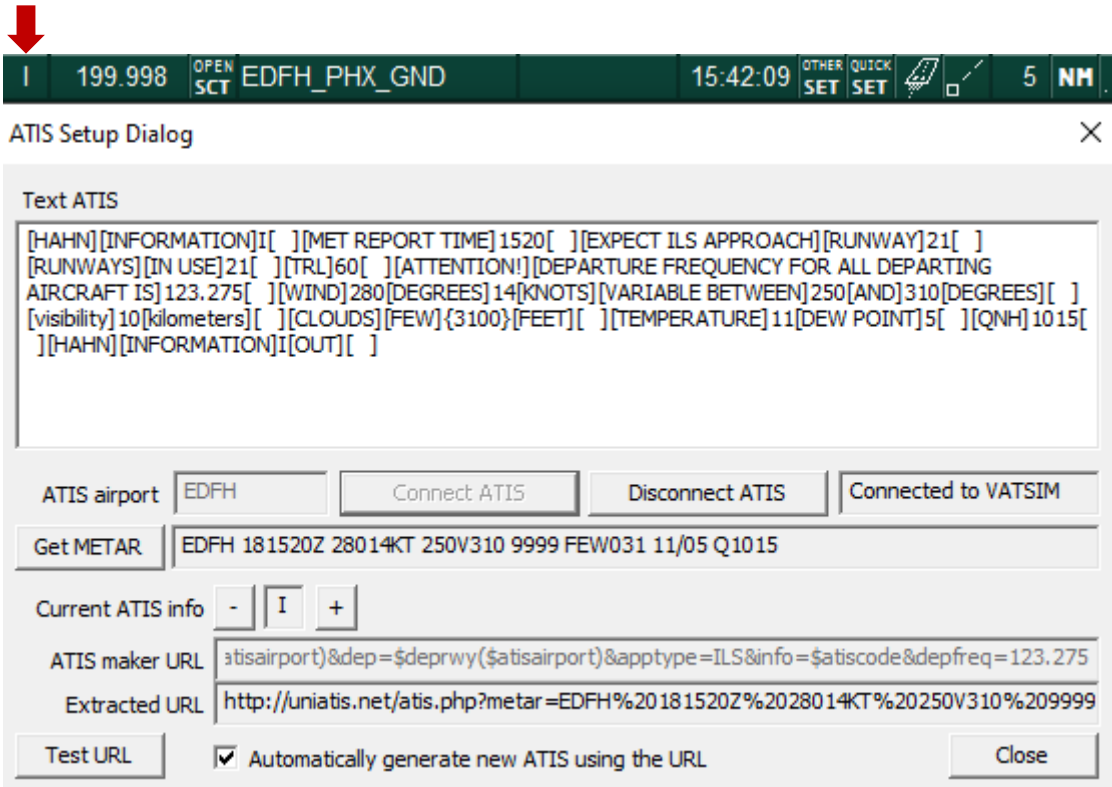
Voice alias Browse

grammar ☐ Enable voice alias recognition Voice alias style When SPTT is pressed while PPTT is down

Test grammar Close

- Somewhat outdated since AFV
- Usually, all the necessary inputs are set automatically
- Prim: „Primary“ – when controlling this indicates the station you are controlling
- Atis is only used when connecting your ATIS
- RCV TXT needs to be selected if you want to receive the text frequency

ATIS Setup Dialog



↓

199.998 OPEN SCT EDFH_PHX_GND 15:42:09 OTHER QUICK SET SET 5 NM

ATIS Setup Dialog

Text ATIS

[HAHN][INFORMATION]I[][MET REPORT TIME]1520[][EXPECT ILS APPROACH][RUNWAY]21[][RUNWAYS][IN USE]21[][TRL]60[][ATTENTION!][DEPARTURE FREQUENCY FOR ALL DEPARTING AIRCRAFT IS]123.275[][WIND]280[DEGREES]14[KNOTS][VARIABLE BETWEEN]250[AND]310[DEGREES][][visibility]10[kilometers][][CLOUDS][FEW]{3100}[FEET][][TEMPERATURE]11[DEW POINT]5[][QNH]1015[][HAHN][INFORMATION]I[OUT][]

ATIS airport EDFH Connect ATIS Disconnect ATIS Connected to VATSIM

Get METAR EDFH 181520Z 28014KT 250V310 9999 FEW031 11/05 Q1015

Current ATIS info - I +

ATIS maker URL atisairport)&dep=\$deprwy(\$atisairport)&apptype=ILS&info=\$atiscode&depfreq=123.275

Extracted URL http://uniatis.net/atis.php?metar=EDFH%20181520Z%2028014KT%20250V310%209999

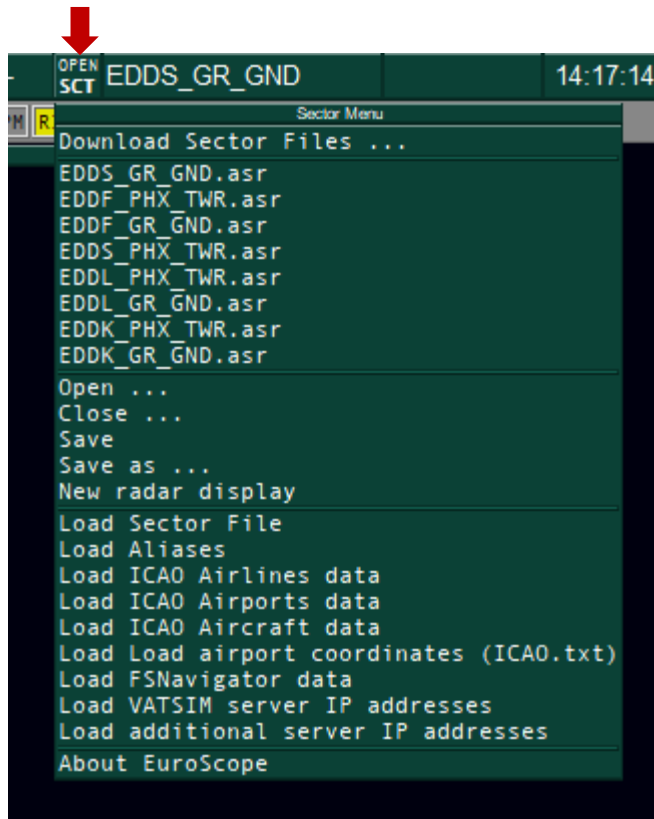
Test URL ☒ Automatically generate new ATIS using the URL Close

How to setup an ATIS:

- Click on the ATIS Letter in the Euroscope menu bar
- Enter the Airports ICAO code in capital letters
- Press “Get METAR”
- In the “ATIS maker URL” scroll towards the end and select the correct departure frequency
- Press “Test URL”
- Check “Automatically generate new ATIS using the URL”
- Press “Connect ATIS”

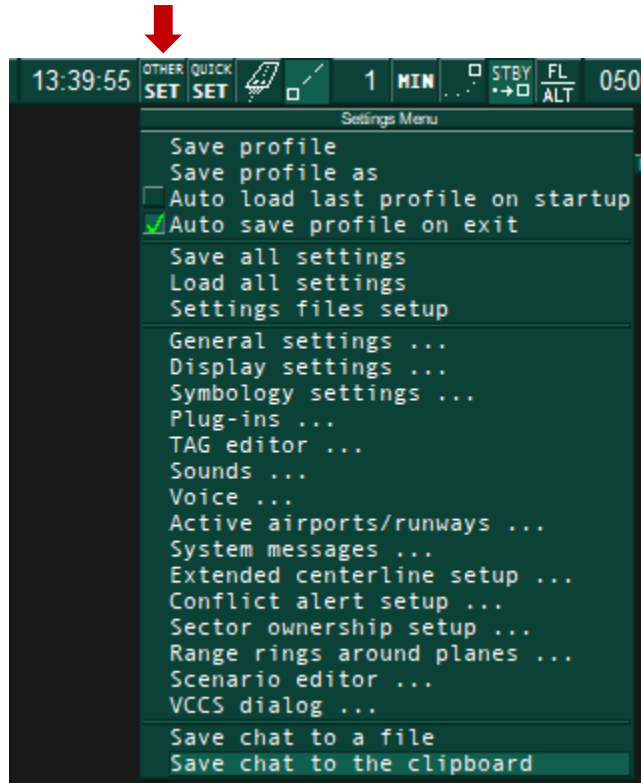
If you want to share your ATIS with newly connected controllers press “Test URL”

Open SCT

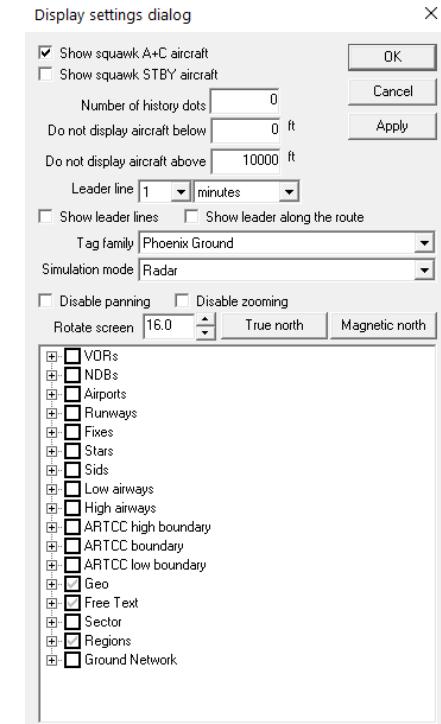


- Used to open ASR and SCT files
- SCT: Sectorfile includes all lines, drawings, Nav aids of a sector
- ASR: ES background that displays a selection of all lines defined in the SCT (e.g. EDDS_PHX_GND)
- Use Open, Close, Save in combination with any .ASR
 - selection of ASRs saved under „.../documents/Euroscope/EDGG/ASR“
- Load Sector File if you want to use a different SCT
- Alias: text file in which all text shortcuts are saved (further information during online Training)
- ICAO files translate ICAO codes for aircrafts, airlines and airports. Only load if these codes are not translated properly

Other Set/Display Settings



- Display settings are only active for the current ASR!
- Display settings are used to select which lines/names of the SCT are displayed in the ASR
- Display settings can also be used to change altitude filters and the selected TAG for the ASR
- TAG editor can edit or create TAGs for aircraft (not recommended for beginners, use the default EDFF-TWR Tag)



Departure List

REQ	CALLSIGN	STND	ATYP	FR ADES	DRWY	SID	CLMB	RFL	aSSR	C	STS	COM	RMK
-	AFL32FH	18	A321	UDD	25	OKIBA4B	A50	350	2003	■	PBG		RVD
-	AUA75SW	46	A319	LHAW	25	ABTAL4B	A50	310	1000	■			
-	BAW9251	12	B738	EWLL	25	VECLD4B	A50	380	2005	■	TXG	EXAMPLE	
-	DEDRI	GA3	P28A	V EDD	25		A35	A35	1000	□			
-	EWG82P	14	A320	EDDH	25	OKIBA4B	340	340	1000	□			
-	EZY47RJ	55	A320	EDDT	25	OKIBA4B	A50	280	1000	□			
-	FIN193H	42	A320	EDDH	25	OKIBA4B	A50	380	2014	□			
-	GEC29M	105	MD11	KJFK	25	OKIBA4B	300	300	2002	□			
-	LOT1495	43x	A321	EDDH	25	DKB9B	350	350	1000	□			
-	SWR45SZ	13	B733	LSZH	25	SUL3B	130	130	1000	□			
-	TRA45AM	50	A319	ENAM	25	OKIBA4B	340	340	1000	□			

- Contents from left to right
 - Request
 - Initial climb
 - Callsign
 - Requested Flight Level
 - Stand
 - Assigned Squawk
 - Aircraft Type
 - Clearance received yes/no (PDC)
 - VFR/IFR
 - Ground Status
 - Destination
 - Communication Type
text/receive/voice
 - RWY
 - Scratchpad
 - SID

Aircraft Tag/Flightplan

Flight plan setting dialog

Callsign: EZY47RJ ☒ IFR ☐ VFR AP data: A320 OK

Origin: EDDS Destination: EDDT Altitude: 28000 Squawk: 2011 Cancel

TAS: 420 Actual: 0 Z Temp alt: 50 Set squawk Set temp alt

Dep. EST: 0 H 0 M Fuel: 0 H 0 M RFL: Set RFL

Enroute: 0 H 0 M

Route: OKIBA N851 RIMKI Z99 LOHRE UN746 ROBEL T200 RUDAK

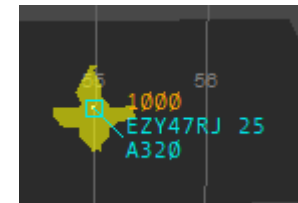
Waypoint	Airway	Comment	Waypoint	ETA
EDDS	OKIBA4B	ok	DS050	12:09
DS050	OKIBA4B	ok	DS040	12:10
DS040	OKIBA4B	ok	DS041	12:11
DS041	OKIBA4B	ok	LBU	12:14
LBU	OKIBA4B	ok	OKIBA	12:17
OKIBA	N851	ok	ROLSO	12:19
ROLSO	N851	ok	RIMKI	12:22
RIMKI	Z99	ok	LOHRE	12:25
LOHRE	direct		ROBEL	12:33
ROBEL	direct		RUDAK	12:48
RUDAK	direct		EDDT	12:58

Remarks: /v/

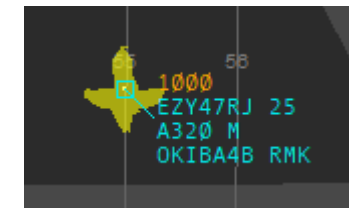
Tag contents from left to right

- Squawk
- Callsign
- RWY
- Aircraft type
- WTC *
- SID *
- Scratchpad *

* Only in detailed view

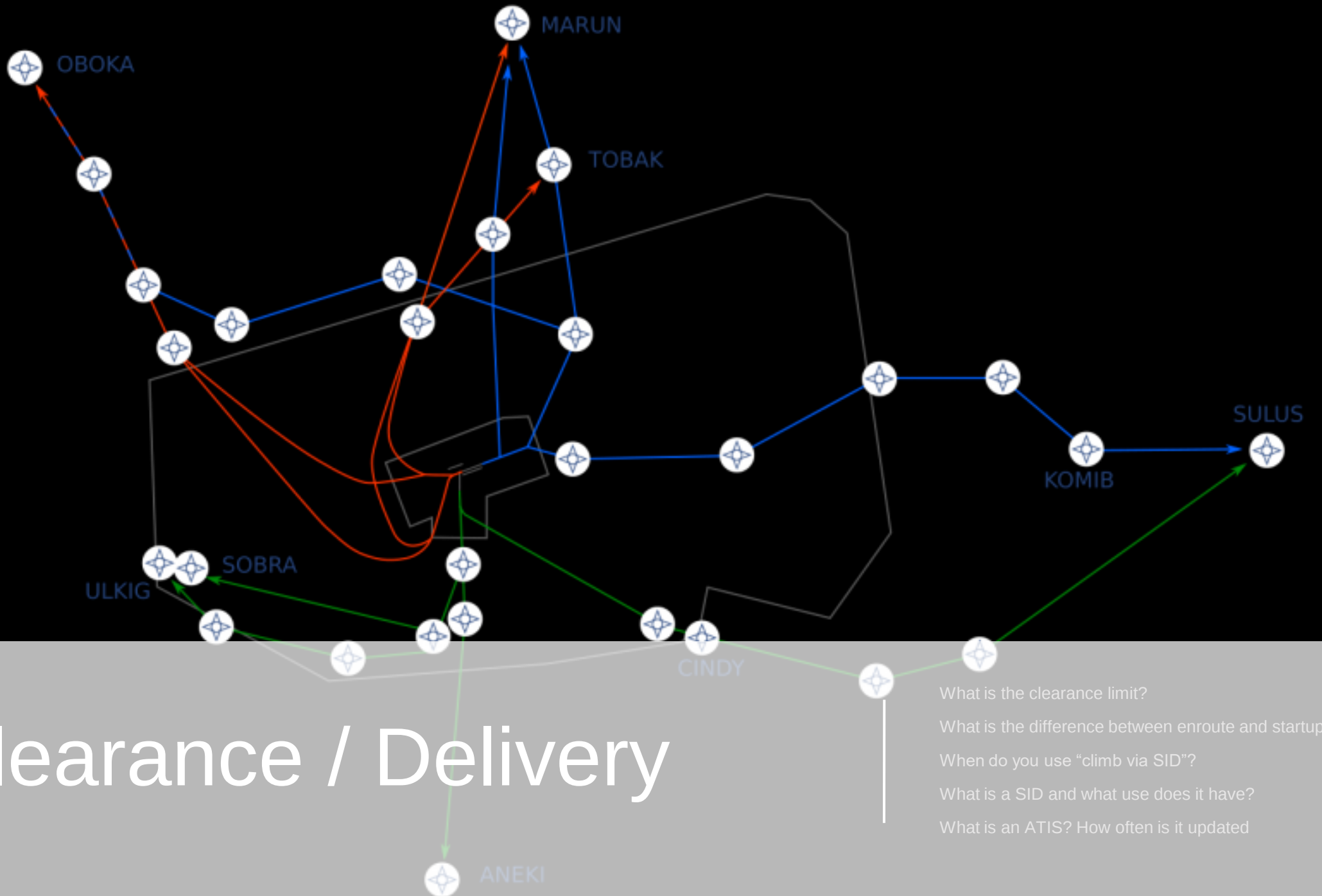


Aircraft Tag



Aircraft Tag Detailed

Ground Status can be set directly in the tag



Clearance / Delivery

- What is the clearance limit?
- What is the difference between enroute and startup clearance?
- When do you use "climb via SID"?
- What is a SID and what use does it have?
- What is an ATIS? How often is it updated

Enroute Clearance

- DLH211, LSZH, SUL3H, 2116, cv
- BER119, EDDF, ETASA2H, 1000, c
- GEC1756, EDDM, KRH2H, 2123, c
- DLH133, EDDL, ETASA2H, 2140, c
- DLH9JH, EDDN, DKB9B, 2144, cv
- EWG2MC, EDDH, OKIBA4B, 2146, cv
- DLH1255, EDDB, DKB9B, 1000, cv
- CFG13Z, EDXW, OKIBA4B, 2137, cv
- DLH9PZ, LOWI, ABTAL4B, 1000, cv
- DLH9PK, LOWW, ABTAL4H, 1000, c
- EWG19H, EDDB, RVD to DKB, 2146

„Stuttgart Tower, hallo, DLH123, information A, request startup to Berlin Brandenburg“

„DLH123, Stuttgart Tower, hallo, information B current, startup approved, cleared Berlin Brandenburg, OKIBA4B, flight planned route, climb via SID 5000ft, squawk 1000“

„DLH123, readback correct“

„DLH123, startup approved, cleared Hamburg via radar vectors to TAU out of rwy 25C, climb 5000ft on runway heading, flight planned route, squawk 1000“



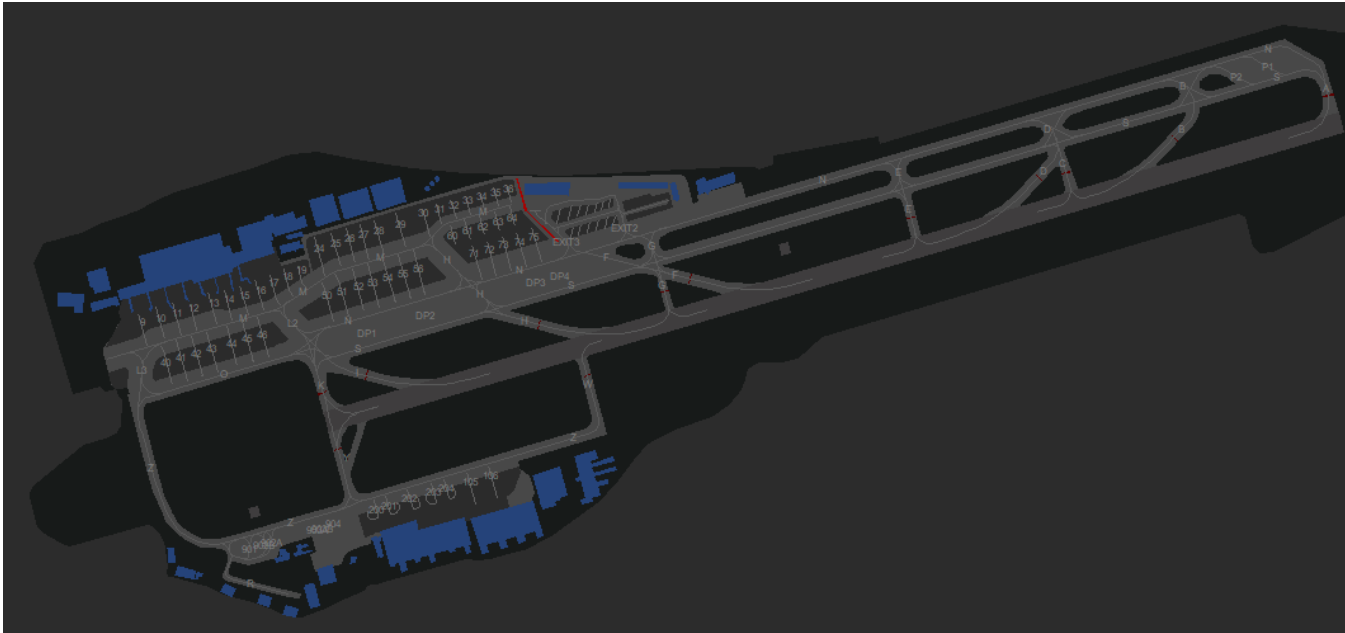
Ground

Area of responsibility

Phraseology

Ground Phraseology

- Handoff to TWR as early as possible



„DLH123, pushback approved, face east“

„DLH123 advise able to depart from rwy 25 intersection B?“

„DLH123, taxi to holding point rwy 25 via M L2 N B“

„DLH123, taxi to stand 52 via H M“

„DLH123, taxi via L2 N, hold short of Exit 2“

„DLH123, continue taxi“

„DLH123, taxi to holding point rwy 25 via M L2 N B, at H give way to Lufthansa Airbus A320 joining“

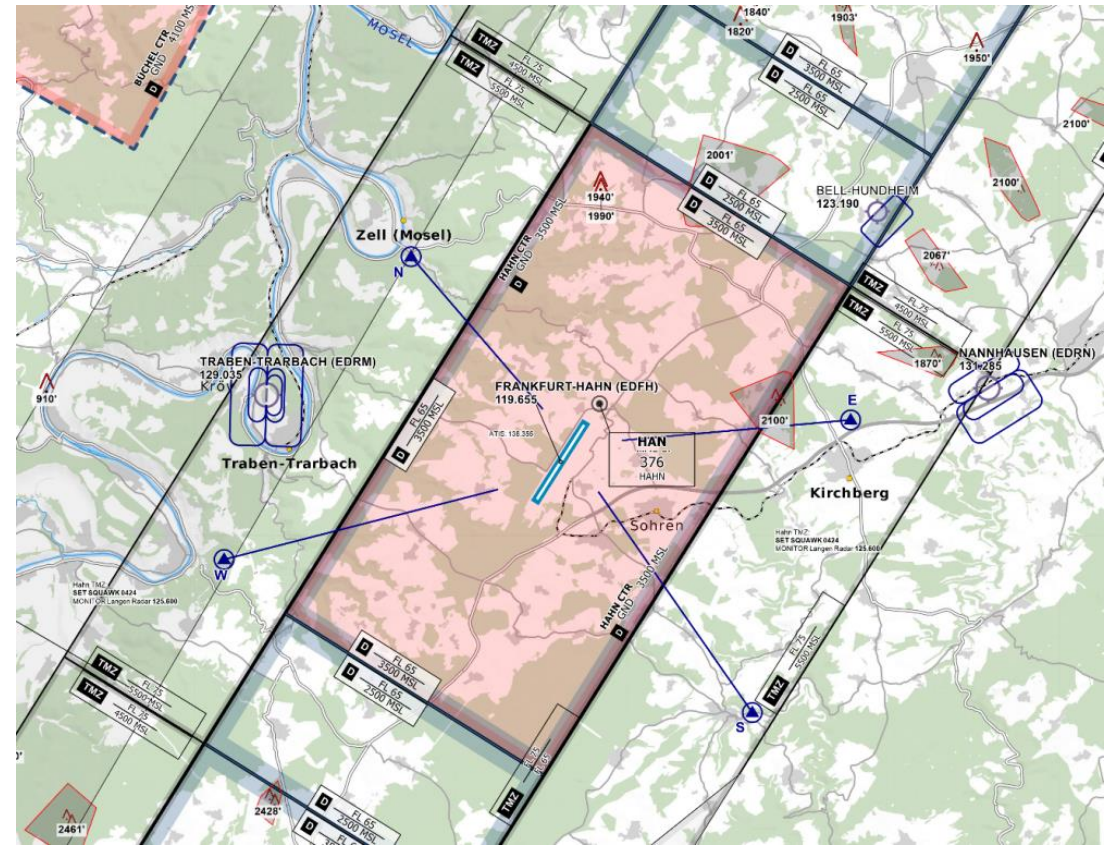


Tower

Area of responsibility
Phraseology

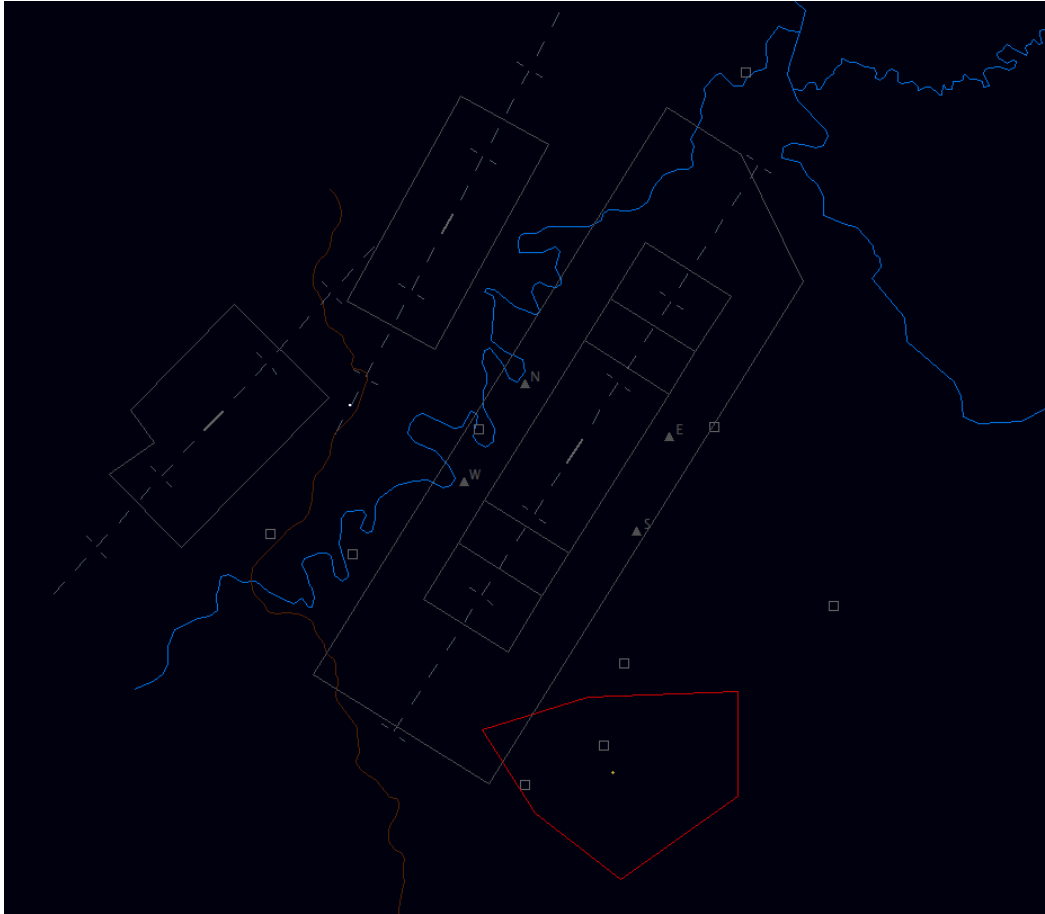
EDFH Tower

- Area of Responsibility?
- How to choose the active runway
- What is the difference between a long landing and a long rollout?
- Usage of “Warten” in phraseology
- Usage of “Take-off” in phraseology
- Runway separation



Bildquelle: © opentlightmaps.org

Tower Phraseology



„DLH123, wind 270 deg, 5kts rwy 21 cleared to land“

„DLH123, wind 270 deg, 5kts rwy 21 cleared for touch and go“

„DLH123 wind 270 deg, 5kts rwy 21 cleared for low approach“

„DLH123, wind 270 deg, 5kts rwy 21 cleared for stop and go“

„DLH123, wind 270 deg, 5kts rwy 21 cleared for immediate take
off, bye bye!“

„DLH123, behind next landing Lufthansa Airbus A321, line up rwy
21, behind, expect immediate departure“



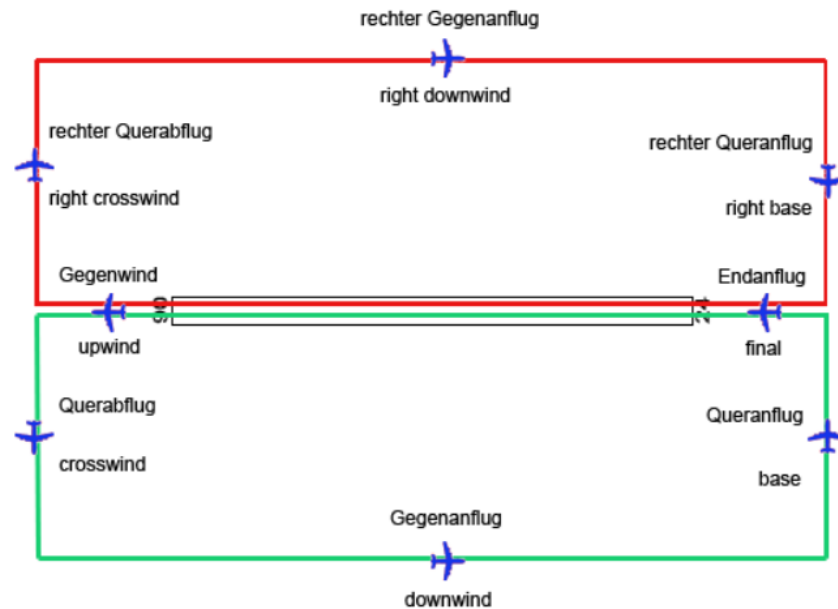
VFR

- Traffic Circuit
- VFR Entry/Exit
- VFR Phraseology

Platzrunde

VFR kann zu jedem Punkt fliegen, der durch den TWR vorgegeben wird:

- Platzrundenteil
- Pflichtmeldepunkte
- Autobahn, Flüsse, etc.



Bildquelle: https://nav.vatsim-germany.org/files/edgg/ATC_training/public/Tower_Study_Guide.pdf

„DEABC, join right traffic circuit rwy 25, wind 270deg, 5kts, rwy 25 cleared for take off“

„ DEABC, fliegen Sie in die Rechtsplatzrunde Piste 25, Wind 270 Grad, 5 Knoten, Piste 25 start frei“

„ DEABC join right downwind runway 07“

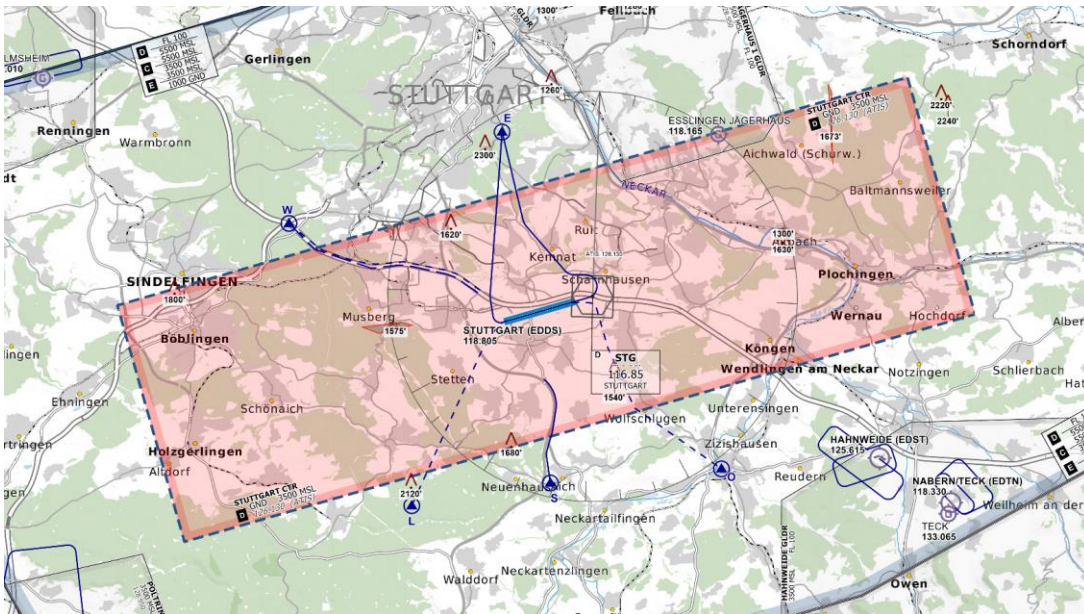
„DEABC, fliegen Sie in den rechten Gegenanflug Piste 07“

„DEABC, join final runway 25“

„DEABC, fliegen Sie in den Endanflug Piste 25“

VFR An- und Abflug

- QHN und active Piste muss dem Piloten mitgeteilt werden
- Alternativ Bestätigung der ATIS
- VFR kann direkt in die CTR einfliegen oder über die Pflichtmeldepunkte



Bildquelle: © openflightmaps.org

- „DEABC, enter control zone via S, orbit south of field“
- „DEABC, fliegen Sie in die Kontrollzone über S, kreisen Sie südlich des Platzes“
- „DEABC, leave control zone via W, right turn approved, wind 270deg, 5kts, rwy 25 cleared for take off“
- „DEABC, verlassen Sie die Kontrollzone über W, Rechtskurve genehmigt, Wind 270 Grad, 5 Knoten, Piste 25 start frei“
- „DEABC, leave control zone to the north“
- „DEABC, verlassen Sie die Kontrollzone Richtung Norden“

VFR Phraseology

German	English
EDDS Turm, hallo, DEABC	EDDS Tower, hallo, DEABC
DEABC, EDDS Turm, hallo	DEABC, EDDS Tower, hallo
DEABC, eine Piper PA28, eine Person, am Parkplatz der allgemeinen Luftfahrt, VFR nach Mannheim, erbitten Rollen	DEABC, Piper PA28, one Person onboard at the GAT, VFR to Mannheim, request taxi
DBC, aktive Piste 25, QNH1013, rollen Sie zum Rollhalt Piste 25 über Exit2, N, E	DBC, active runway 25, QNH 1013, taxi to holding point runway 25 via Exit 2, N, E
DBC, rollen Sie zum Abflugpunkt Piste 25, dort Halten	DBC, line up runway 25 and wait
DBC, Verlassen Sie die Kontrollzone über S, wind 27003kts, Piste 25, start frei	DBC, leave CTR via S, wind 27003kts, runway 25, cleared for take off
DBC über S, 2500ft	DBC, reached S, 2500ft
DBC, verlassen genehmigt, guten Flug	DBC, approved to leave, bye
DBC, verlassen genehmigt, tschüss	DBC, approved to leave, bye



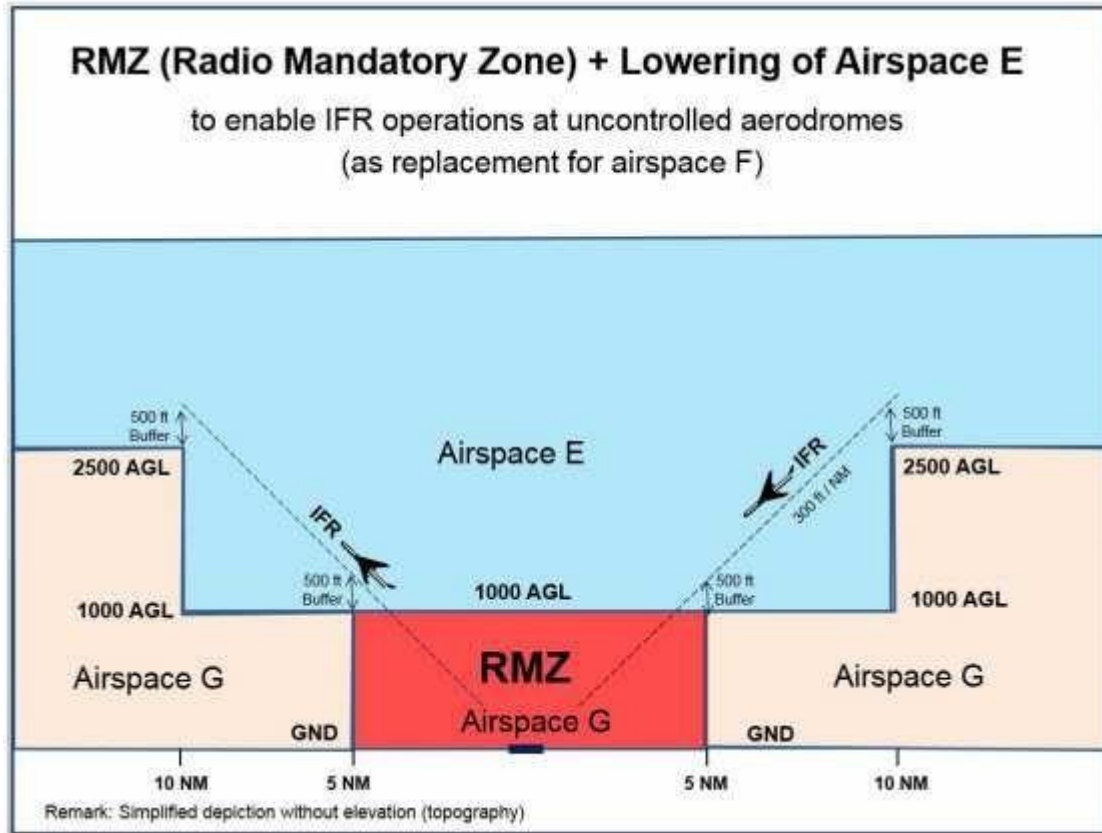
AFIS

Allgemeines
Luftraumstruktur
Phraseo

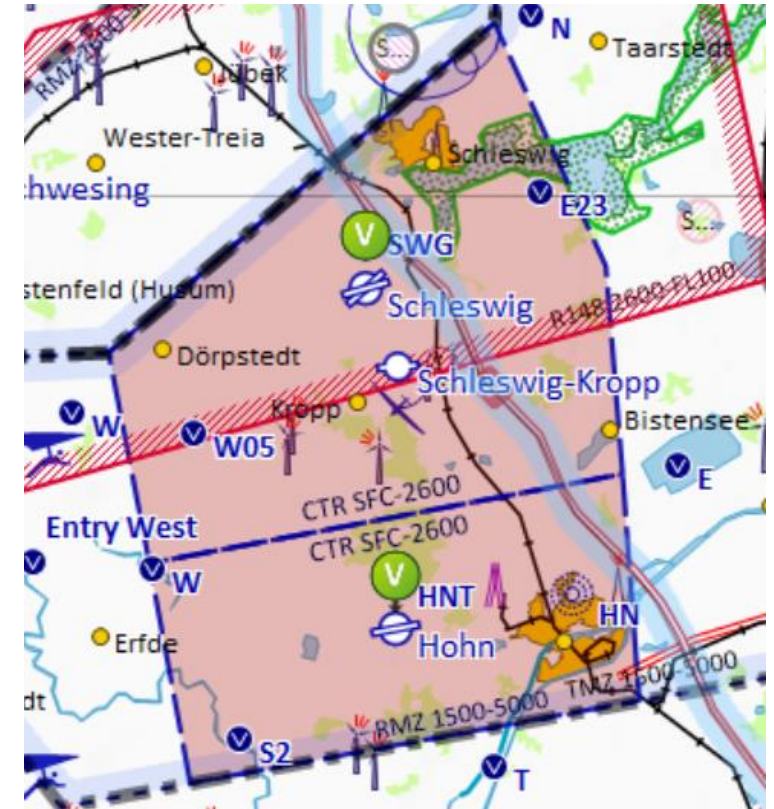
Allgemeine Grundsätze

- Lotse darf - anders als auf dem TWR - in der Luft keine Anweisungen geben
 - Bei Gefahr eines Zusammenstoßes dürfen Anweisungen gegeben werden
- Am Boden kann das Hausrecht ausgeübt werden
 - Rollanweisungen zulässig

Luftraumstruktur

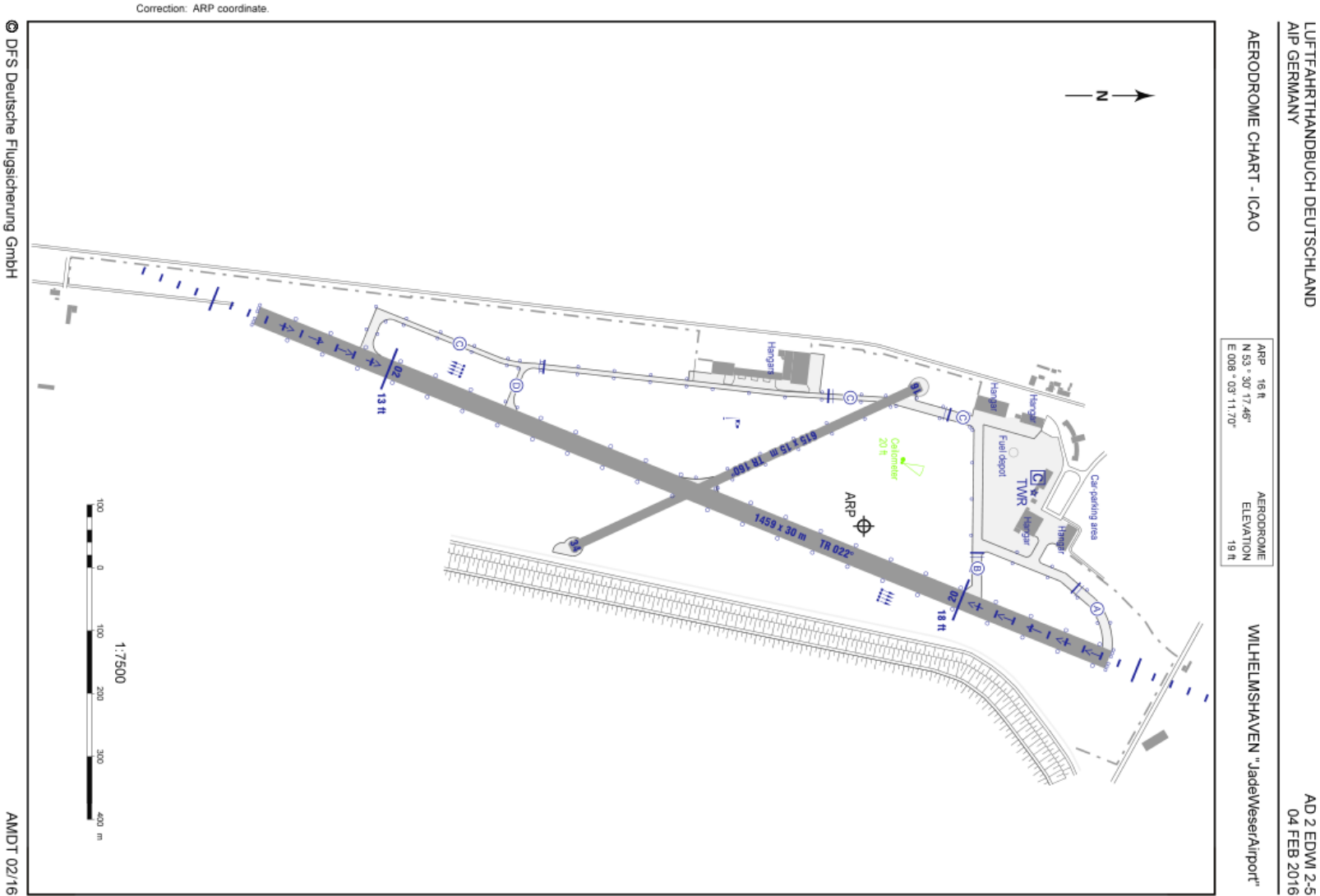


ABER:



Am Boden

- Es können mehrere RWY vorhanden sein
- Bei Grasplätzen müssen die TWY nicht benannt sein
 - Bsp. EDOI



Abflug EDWI

➤ Erstanruf

	Deutsch	Englisch
Pilot	Wilhelmshaven Info, DEABC, Moin	Wilhelmshaven Info, DEABC Moin
ATC	DEABC, Wilhelmshaven Info, Moin	DEABC, Wilhelmshaven Info, Moin

➤ Taxi

	Deutsch	Englisch
Pilot	DEABC, C172, *3 Personen an Board*, VFR nach EDWG, an der Tankstelle, erbitte Rollinformationen	DEABC, C172, *3 Person on Board*, VFR to EDWG, at the Fuel Station, request taxi information
ATC	DEABC, Piste 20 aktiv, QNH 1011 ODER DEABC, rollen Sie zum Rollhalt Piste 20 über B, QNH 1011	DEABC, active Runway 20, QNH 1011 ODER DEABC, taxi to holding point RWY 20 via B, QNH 1011

➤ Departure

	Deutsch	Englisch
Pilot	DEABC, Abflugbereit	DEABC, ready for depature
ATC	DEABC, Wind 220 Grad 5KT, Platzrundenverkehr	DEABC, Wind 220 degrees 5KT, 2 a/c in traffic pattern

Anflug EDWG

Einleitungsanruf

	Deutsch	Englisch
Pilot	Wooge Info, DEABC, Moin	Wooge Info, DEABC Moin
ATC	DEABC, Wooge Info, Moin	DEABC, Wooge Info, Moin

Informationen zum Anflug

	Deutsch	Englisch
Pilot	DEABC, C172, *3 Personen an Board, VFR aus EDWI, 5min südlich des Platzes, zur Landung	DEABC, C172, *3 Person on board*, VFR from EDWI, 5min south of the field, for landing
ATC	DEABC, Aktive Piste 27, QNH 1012, eine Maschine im Gegenanflug	DEABC, active RWY 27, QNH 1012, one a/c in the downwind

Windinformationen

	Deutsch	Englisch
Pilot	DEABC, Queranflug Piste 27	DEABC, Base RWY 27
ATC	DEABC, Wind 280 Grad, 11kt	DEABC, Wind 280 degrees, 11kt

Besonderheiten

- QDM, QDR
 - QDM: HDG von A/C zum Platz
 - QDR: HDG vom Platz zum A/C
- Verkehrsinformationen
 - Immer wenn angebracht und ohne Radar umsetzbar
- Notverfahren
 - Wie am kontrollierten Platz
- VFR Nacht
 - Pilot muss selbstständig den Radarlotsen rufen, ATC soll Frequenz trotzdem bereithalten

IFR via Relay

- Auch wenn ihr wisst, wie man eine Streckenfreigabe gibt muss formal die Freigabe vom Radar kommen
- Vor der Session fragen, welcher Radarlotse ggf. zuständig ist.
- Da IFR immer auf Englisch

PILOT - ATC

P: Wilhelmshaven Info(Information), DEABC, information A, request IFR to Bremen

A: DEABC, Wilhelmshaven Info, information A correct, stand by for clearance

AFIS - RADAR

A: Friesland, Wilhelmshaven

R: Friesland, Go Ahead

A: DEABC at EDWI requests IFR clearance to Bremen

R: DEABC is cleared Bremen via DOTOB 1S dep. Flight planned route, SQ 2122,
depart not later than 10

A: DEABC is cleared Bremen via DOTOB 1S dep. Flight planned route, SQ 2122,
depart not later than 10

R: Readback correct

IFR via Relay

ATC - PILOT

A: DEABC, clearance now available, advice ready to copy

P: DEABC, go ahead

A: DEABC Bremen Radar clears you to Bremen via DOTOB 1S dep. Flight planned route, SQ 2122, *depart not later than 10*

P: DEABC cleared Bremen via DOTOB 1S dep. Flight planned route, SQ 2122, *departing not later than 10*

A: DEABC readback correct

- Sagt Radar bei der clearance keine Zeit und gibt keine generelle Freigabe muss am Holdingpoint nach einem Departure release gefragt werden!



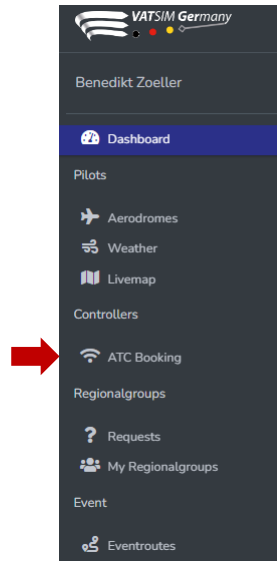
Together on VATSIM

Während der ATC Session bitte auf dem TS aufhalten
Geht net und Freundlich miteinander um
Helft euch gegenseitig – andere Controller beißen nicht ☺

ATC Buchung

Wie buche ich eine ATC Station?

- Homepage: www.vatsim-germany.org
- “LOGIN” => “DASHBOARD”
- “ATC Booking”



Make ATC Booking

To book or modify a booking you can either choose an airport and select a related station or you can just search that station. Searching a station will disable the airport selection option and automatically set the station to the searched one.

Search ATC station

EDFH_TWR (Hahn Tower)

Choose station

EDFH_TWR (Hahn Tower)

Begin (Times in UTC):

29.10.2022 18:00

End (Times in UTC):

29.10.2022 20:00

☐ Is this session an training?

☐ Is this booking related to an event?

☒ Is voice used?

Save

All times are in UTC

Wie geht es weiter?

→ Bitte in den S1-Moodle Kurs einschreiben:

→ <https://moodle.vatsim-germany.org/course/view.php?id=13>

→ Schlüssel: s943gl28ufg

→ Nach erfolgreichem ATSimTest bitte in den AFIS Moodle-Kurs einschreiben

→ <https://moodle.vatsim-germany.org/course/view.php?id=25>

→ Schlüssel: nicht erforderlich