LETTER OF AGREEMENT

Between

vACC-Austria
Wien FIR

and

VATAdria
LDZO/ LJLA FIR

Effective: November 4th, 2021 (AIRAC2111)

1. General

1.1. **Purpose**.
The purpose of this Letter of Agreement is to define the coordination procedures to be applied between VATAdria and vACC Wien when providing ATS to air traffic (IFR/VFR) on the VATSIM network.

All information and procedures described in this Letter of Agreement shall not be used for real world purposes.

1.2. **Operational Status.**
All operational significant information and procedures contained in this Letter of Agreement shall be distributed to all concerned controllers by appropriate means. This Letter of Agreement itself constitutes public information.

1.3. **Validity.**
This Letter of Agreement becomes effective on November 4th, 2021 (AIRAC2111)

Filip Markoski
Zagreb & Ljubljana FIR
VAT Adria

Jakob Engelbrecht
Wien FIR
vACC Austria

2. Areas of Responsibility & Sectorization

2.1. **Areas of Responsibility.**

The lateral and vertical limits of the respective areas of responsibility are as follows:

2.1.1. Wien FIR.

Lateral limits: Wien FIR as described in AIP Austria
Vertical limits: GND – FL660
ATC sectors: https://charts.vacc-austria.org/LOVV/LOVV_Enroute_ATC%20Sectors_09092020.pdf

2.1.2. LDZO FIR

Lateral limits: LDZO FIR as described in the AIP Croatia
Vertical limits: GND – FL660

2.1.3. LJLA FIR

Lateral limits: LJLA FIR as described in the AIP Slovenia
Vertical limits: GND – FL660

2.2. **Sectorization**.

2.2.1. LOVV FIR.

2.2.1.1. Sector WK

Lateral limits: AoR WK – APP LOWK (see Appendix A1)
Vertical limits: GND – FL165
GND – FL 125 (Southwest of Klagenfurt Line)
9500ft – FL165 (LJLA FIR north of DIPSA Line)
Responsible ATS unit (in order of precedence):

1. LOWK_APP (Klagenfurt Radar) 123.325
2. LOVV_S_APP (Wien Radar) 119.300
3. LOVV_L_CTR (Wien Radar), 129.200
4. LOVV_W_CTR (Wien Radar), 129.125
5. LOVV_S_CTR (Wien Radar), 133.800
6. LOVV_B_CTR (Wien Radar), 126.275
7. LOVV_CTR (Wien Radar), 132.600
8. LOVV_C_CTR (Wien Radar), 118.725

2.2.1.2. Sector WG (LOWG APP).

Lateral limits: WG (see Appendix A1)
Vertical limits: GND – FL165
Responsible ATS unit (in order of precedence):

1. LOWG_APP (Graz Radar), 119.300
2. LOVV_S_APP (Wien Radar), 119.300
3. LOVV_L_CTR (Wien Radar), 129.200
4. LOVV_S_CTR (Wien Radar), 133.800
5. LOVV_B_CTR (Wien Radar), 135.500
6. LOVV_E_CTR (Wien Radar), 135.625
7. LOVV_CTR (Wien Radar), 132.600
8. LOVV_C_CTR (Wien Radar), 118.725

2.2.1.3. Sector W1

Lateral limits: Sector E (see Appendix A2)
Vertical limits: FL165 – FL305
Responsible ATS unit (in order of precedence):
1. LOVV_W_CTR (Wien Radar), 129.125
2. LOVV_S_CTR (Wien Radar), 133.800
3. LOVV_B_CTR (Wien Radar), 126.275
4. LOVV_CTR (Wien Radar), 132.600
5. LOVV_C_CTR (Wien Radar), 118.725
6. EURM_CTR (Maastricht Radar), 135.450

Remark: EURM_CTR is an ATS unit of EuroCenter vACC.

2.2.1.4. Sector E25

Lateral limits: Sector E (see Appendix A2)
Vertical limits: FL305 – FL660
Responsible ATS unit (in order of precedence):
1. LOVV_U_CTR (Wien Radar), 131.350
2. LOVV_W_CTR (Wien Radar), 129.125
3. LOVV_S_CTR (Wien Radar), 133.800
4. LOVV_B_CTR (Wien Radar), 126.275
5. LOVV_CTR (Wien Radar), 132.600
6. LOVV_C_CTR (Wien Radar), 118.725
7. EURM_CTR (Maastricht Radar), 135.450
6. EURM_CTR (Maastricht Radar), 135.450

Remark: EURM_CTR is an ATS unit of EuroCenter vACC.

2.2.1.5. Sector S1 (lower limit MURA Sector FL125)

Lateral limits: Sector E (see Appendix A2)
Vertical limits: FL165 – FL305
FL125 – FL305
Responsible ATS unit (in order of precedence):
1. LOVV_S_CTR (Wien Radar), 133.800

2. LOVV_B_CTR (Wien Radar), 135.500
2. LOVV_E_CTR (Wien Radar), 135.625
3. LOVV_CTR (Wien Radar), 132.600
4. LOVV_C_CTR (Wien Radar), 118.725
5. EURM_CTR (Maastricht Radar), 135.450
Remark: EURM_CTR is an ATS unit of EuroCenter vACC.

2.2.1.6. Sector S25

Lateral limits: Sector E (see Appendix A2)
Vertical limits: FL305 – FL660
Responsible ATS unit (in order of precedence):
1. LOVV_U_CTR (Wien Radar), 131.350
2. LOVV_S_CTR (Wien Radar), 133.800
3. LOVV_B_CTR (Wien Radar), 135.500
4. LOVV_E_CTR (Wien Radar), 135.625
5. LOVV_CTR (Wien Radar), 132.600
6. LOVV_C_CTR (Wien Radar), 118.725
7. EURM_CTR (Maastricht Radar), 135.450
Remark: EURM_CTR is an ATS unit of EuroCenter vACC.

2.2.2. LDZO FIR.

2.2.2.1. LDZA TMA

Lateral limits: according to AIP Croatia (south-easter border of MURA)
Vertical limits: GND – FL205
Responsible ATS unit (in order of precedence):
1. LDZA_APP (Zagreb Radar), 120.700
2. LDZO_CTR (Zagreb Radar), 135.800
3. ADR_W_CTR (Adria Radar), 130.450
4. ADR_CTR (Adria Radar), 130.000

2.2.2.2. LDZO FIR

Lateral limits: according to AIP Croatia (south-easter border of MURA)
Vertical limits: GND – FL325
Responsible ATS unit (in order of precedence):
1. LDZO_CTR (Zagreb Radar), 135.800
2. ADR_W_CTR (Adria Radar), 130.450
3. ADR_CTR (Adria Radar), 130.000
4. EURE_CTR (Eurocontrol East), 135.300 (above FL245)
Remark: EURE_CTR is an ATS unit of EuroCenter vACC.

2.2.2.3. LDZO UIR

Lateral limits: according to AIP Croatia (south-easter border of MURA)
Vertical limits: FL325 – FL660
Responsible ATS unit (in order of precedence):
1. LDZO_CTR (Zagreb Radar), 135.800
2. ADR_U_CTR (Adria Radar), 130.750
3. ADR_W_CTR (Adria Radar), 130.450
4. ADR_CTR (Adria Radar), 130.000
5. EURE_CTR (Eurocontrol East), 135.300 (above FL245)

Remark: EURE_CTR is an ATS unit of EuroCenter vACC.

2.2.3. LJLA FIR.

2.2.3.1. Dolsko 1 TMA

Lateral limits: (see Appendix A3)
Vertical limits: 2500ft – FL245
Responsible ATS unit (in order of precedence):
1. LJLJ_APP (Ljubljana Radar) 135.270
2. LJLA_CTR (Ljubljana Radar) 131.270
3. ADR_W_CTR (Adria Radar), 130.450
4. ADR_CTR (Adria Radar), 130.000

2.2.3.2. Dolsko 2 TMA

Lateral limits: (see Appendix A3)
Vertical limits: 2500ft – FL245
Responsible ATS unit (in order of precedence):
1. LJLJ_APP (Ljubljana Radar) 135.270
2. LJLA_CTR (Ljubljana Radar) 131.270
3. ADR_W_CTR (Adria Radar), 130.450

2.2.3.3. Ljubljana 2 TMA

Lateral limits: (see Appendix A3)
Vertical limits: 2500ft – FL245
Responsible ATS unit (in order of precedence):
1. LJLJ_APP (Ljubljana Radar) 135.270
2. LJLA_CTR (Ljubljana Radar) 131.270
3. ADR_W_CTR (Adria Radar), 130.450
4. ADR_CTR (Adria Radar), 130.000

2.2.3.4. Maribor 2 TMA

Lateral limits:(see Appendix A3)
Vertical limits: 2500ft – FL125

Responsible ATS unit (in order of precedence):
1. LJMB_APP (Maribor Approach) 119.200
2. LJLJ_APP (Ljubljana Radar) 135.270
3. LJLA_CTR (Ljubljana Radar) 131.270
4. ADR_W_CTR (Adria Radar), 130.450
5. ADR_CTR (Adria Radar), 130.000

2.2.3.5. LJLA FIR

Lateral limits: (see Appendix A3)
Vertical limits: GND – FL325
Responsible ATS unit (in order of precedence):
1. LJLA_CTR (Ljubljana Radar) 131.270
2. ADR_W_CTR (Adria Radar), 130.450
3. ADR_CTR (Adria Radar), 130.000
4. EURE_CTR (Eurocontrol East), 135.300 (above FL245)
   Remark: EURE_CTR is an ATS unit of EuroCenter vACC

2.2.3.6. LJLA UIR

Lateral limits: (see Appendix A3)
Vertical limits: FL325 – FL660
Responsible ATS unit (in order of precedence):
1. LJLA_CTR (Ljubljana Radar) 131.270
2. ADR_U_CTR (Adria Radar), 130.750
3. ADR_W_CTR (Adria Radar), 130.450
4. ADR_CTR (Adria Radar), 130.000
5. EURE_CTR (Eurocontrol East), 135.300 (above FL245)

2.3. Delegation of the Responsibility for the Provision of ATS.

2.3.1. Delegation of ATS from LJLA/ LDZO FIR to LOVV FIR

2.3.1.1. MURA Sector

The FIR LJLA airspace east of RUSE line (Appendix B1) is permanently delegated from LJLA to S FL125 - FL660.
(Note: For detailed coordinates refer to GNG (http://www.gng.aero-nav.com/)).

2.3.1.2. DIPSA Sector

FIR LJLJ airspaces northwest of the DIPSA line are permanently delegated from LJLJ to WK 9500ft - FL165.
(Note: For detailed coordinates refer to GNG (http://www.gng.aero-nav.com/)).

2.3.2. Delegation of ATS from LOVV to LJLA/ LDZO FIR

2.3.2.1. Klagenfurt Area

FIR LOVV airspace southwest of Klagenfurt line (Appendix B1) is permanently delegated from WK to LJLA FL125 - FL165
(Note: For detailed coordinates refer to GNG (http://www.gng.aero-nav.com/)).

2.3.2.2. Drau South Sector

The FIR LOVV airspace south of SOBOTH line (Appendix B1) is permanently delegated from LOVV to LJLA FL165 - FL660.
(Note: For detailed coordinates refer to GNG (http://www.gng.aero-nav.com/)).

3. Procedures for Coordination.

3.1. Definitions

A release is an authorisation for the accepting ATS unit to climb, descend and/or turn (by no more than 45°) a specific aircraft before the transfer of control point. The transferring ATS unit remains responsible for separation within its Area of Responsibility unless otherwise agreed.

Wherever VATSIM callsigns are used to describe the terms of a certain procedure, this procedure is also applicable for all higher stations that take over the responsibilities of said station. E.g., procedures for an APP-stations are also applicable for the respective CTR station fulfilling the duties of said APP station.

The use of VATSIM callsigns in this document includes any variation of said callsign. E.g. any procedure applicable for LOVV_CTR may also be used by LOVV_x_CTR.

3.2. General Conditions

Coordination of flights shall take place via the agreed coordination points (COP).

Coordinated flights shall be handed off via a valid COP. Any deviation shall be coordinated verbally, by text or by Euroscope inter-sector coordination.

Traffic shall be handed off at the levels, defined in the regulations below. If a specified level restriction cannot be met due to a lower RFL, traffic shall be handed off at RFL, if this does not cause a conflict with any other traffic. Otherwise, traffic shall be coordinated.

If a traffic situation is not covered herein or closely matching a covered one, individual coordination between the concerned sectors shall be made.

After Transfer of communications, traffic is NOT released for climb, descent or turns until Transfer of control or otherwise specified in this Letter of Agreement.

↓ FLxxx /↑ FLxxx means „descending / climbing to a specified FL“, without any further restriction. Any required crossing/speed restriction shall be added separately.

3.3. **IFR flights from LOVV FIR to LJLA/ LDZO FIR**

Concerned Airport	COP	Level Allocation	Special Conditions
↑LOWK	BERTA/ KLAGY/ DIPSA	↑ FL150/130A	Climbing, FL130A
↑LOWG	PETOV	↑ FL190	Climbing
	RADLY	↑ FL160	Climbing
↓LJLJ	RADLY/ VALLU/ LUMUS/ BERTA	↓ FL130/FL200B	Descending, FL200B
	VEKEN/ DEGUM	↓ FL170/FL240B	Descending, FL240B
↓LJMB	MUREG/ GOLVA	↓ 9000ft/FL120B	Descending, FL120B
	LJLA	↓ FL290	Descending
↓LDZA	PETOV	↓ FL130/FL200B	Descending, FL200B, released for turns with MURA area
	LULUD	↓ FL290	Descending
LDRI/ LDLO		↓ FL250	Descending
LDPL		↓ FL290	Descending

3.4. **IFR flights from LJLA/ LDZO FIR to LOVV FIR.**

Concerned Airport	COP	Level Allocation	Special Conditions
↑LJLJ	LUPIX/ MODRO	↑ FL290/FL170A	Climbing, FL170A
	GIMIX	↑ FL280/FL170A	Climbing, FL170A
↑LJMB	GOLVA	6000ft QNH LJMB	At level
	LJLA FIR	↑ FL280	Climbing
↑LDZA	OBUTI/ PETOV	↑ FL200/FL130A	Climbing, FL130A
	PODET	↑ FL300/FL170A	Climbing, FL170A
↓LOWW	OBUTI	FL300	At level
	LAPNA	FL310	At level
↓LOWG	RADLY	↓ 9000ft/ FL120B	Descending, FL120B
	MUREG/ GOLVA	↓ FL130/ FL160B	Descending, FL160B, handover to LOWG APP (WG)
↓LOWK	BERTA/ KLAGY/ DIPSA	FL120	At level
↓LOXZ		FL300	At level
↓LZIB/ LKTB		FL330	At level
↓LHBP		FL370	At level

3.5. **VFR flights from LJLA/ LDZO FIR to LOVV FIR**

For controlled VFR flights and VFR at night flights coordination, transfer of control and transfer of communication shall take place as for IFR flights. Uncontrolled VFR flights shall be transferred to the appropriate sector if in radio contact. If online, LOVV_I_CTR (Wien Information), 124.400, shall be the primary sector for uncontrolled VFR flights.

3.6. **VFR flights from LOVV FIR to LJLA/ LDZO FIR**

For controlled VFR flights and VFR at night flights coordination, transfer of control and transfer of communication shall take place as for IFR flights. Uncontrolled VFR flights shall be transferred to the appropriate sector if in radio contact.

4. Special Procedures

4.1. Releases from LOVV to LJLA/ LDZO

4.1.1. ADR may clear flights Direct to the next waypoint after the LoR within the SECSI FRA without coordination

4.1.1.1. Not applicable when the remaining time until crossing LoR is less than 5 minutes or ADES is LOxx, EDDM or LZIB

4.1.2. ADR_CTR may turn flights

4.1.2.1. Planned via OBUTI for ARR LDZA within limits of MURA Sector

4.1.2.2. Planned via RADLY within the limits of release area RADLY (Release Area RADLY (Appendix B)).

4.2. Releases from LJLA/ LDZO to LOVV

4.2.1. LOVV may clear flights Direct to the next waypoint after the LoR within the SECSI FRA without coordination

4.2.1.1. Not applicable when the remaining time until crossing LoR is less than 5 minutes

4.2.2. LOWG_APP may turn flights planned via RADLY for ARR LOWG within 10nm of RADLY

4.2.3. LOWG_APP may descend flights planned via RADLY AADES LOWG 10nm from RADLY TO 8000ft

5. Transfer of Control and Transfer of Communications

5.1. Transfer of Control

Transfer of Control shall take place at the AoR boundary. If the downstream sector in EuroScope is set to >.break<, the procedure 5.4 is suspended and transfer of communication can only take place after the downstream sector has assumed the flight via the appropriate function of the radar client. If it becomes necessary to reduce or suspend transfers, a 5-minute prior notification is required. When transfers are suspended, the hand-off procedure (5.4) is suspended.
LJLA/ LDZO and LOVV units are encouraged to use the release in tag function, as well as other forms of nonverbal communication Topsky offers to increase efficiency.

5.2. Silent transfer of control

Transfer of radar control from one elementary sector to another without the systematic use of bidirectional speech facilities may be affected provided the horizontal distance between the aircraft involved is not less than 10 NM within 5 minutes flying time after passing the transfer of control point unless vertical separation exists.

5.3. Transfer of Communications

Transfer of Communications shall take place no later than Transfer of Control.

5.4. Hand-Off procedure

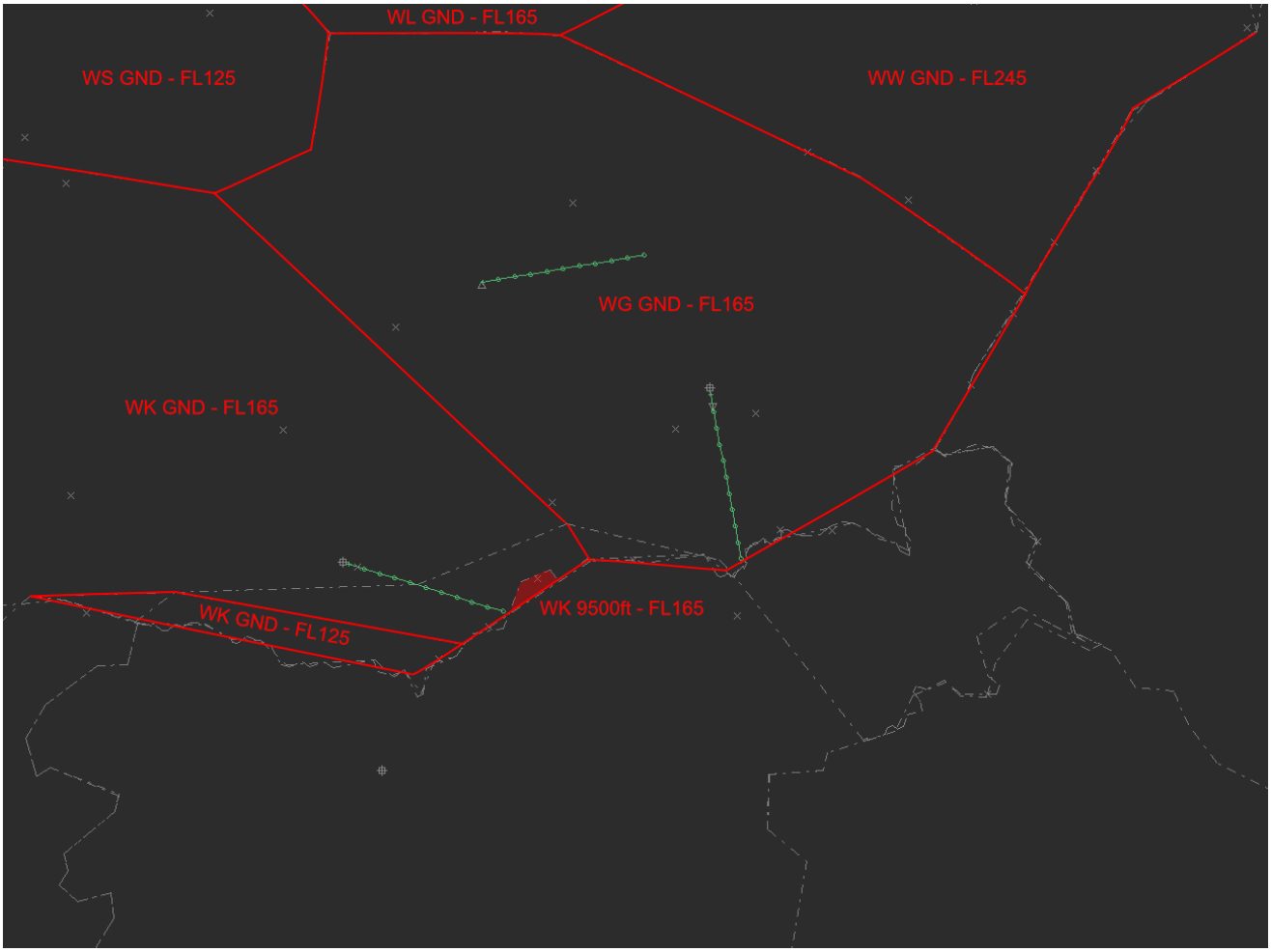
Unless otherwise agreed between stations online, the following hand-off procedure shall apply:
1. The upstream sector sends the aircraft to the frequency of the downstream sector by voice or text.
2. The upstream sector initiates a transfer via the appropriate function of the radar client.
3. Upon initial call the downstream sector assumes the flight via the appropriate function of the radar client.

5.5. SSR Code Assignment

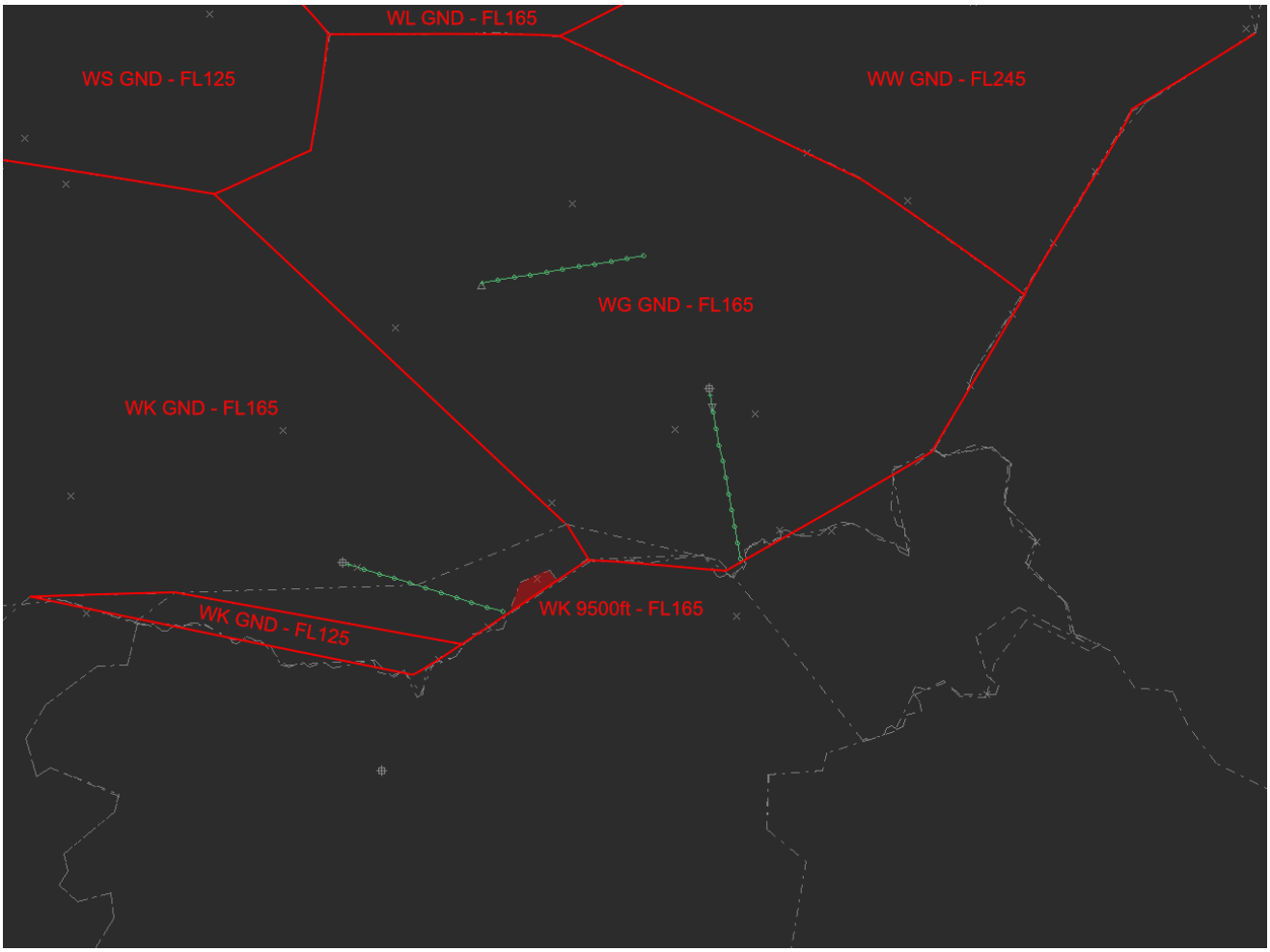
Both ATS units shall transfer flights on verified discrete SSR codes. Any change of SSR code by the accepting ATS unit may only take place after the transfer of control point.

APPENDIX A

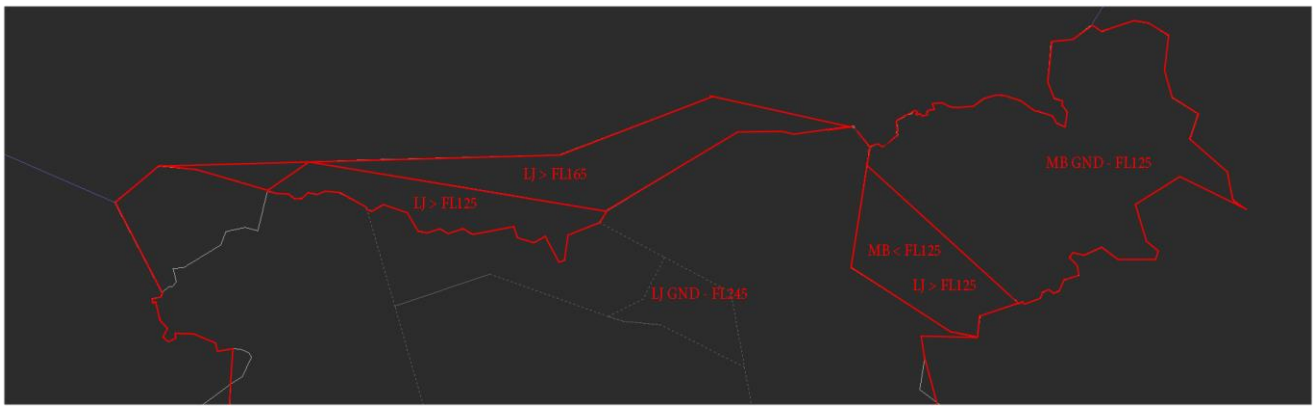
A1: LOVV APP Sectors (LAU = Local Approach Unit)



A2: LOVV CTR Sectors

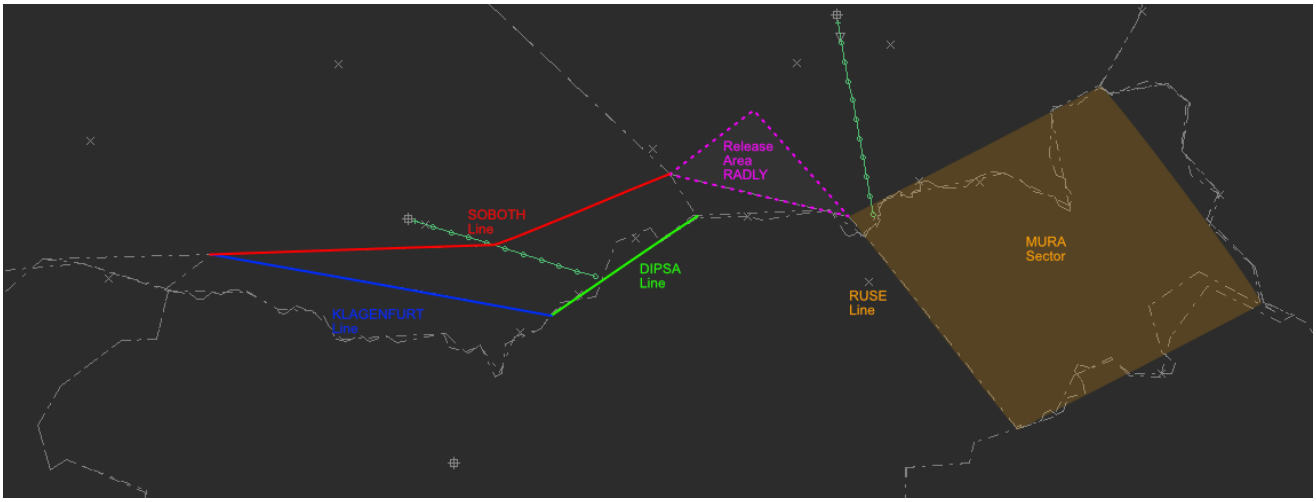


A3: LJLA Sectors



APPENDIX B

B1: Lines definition



APPENDIX B

Explanation of vertical limits:

Not every airport can or should be covered in this document, not every airport has a level or a level that would work sensibly for all aircraft.

Yet many aircraft will descend or climb across our border, and we need a rule of thumb to easily determine the limits of such clearances.

We need these limits because clearing without though about airspace borders would mean that you would an aircraft potentially to another sector who is not on contact with the aircraft.

An example of this could be a LOWW departure via RADLY that passes the border at FL290 but is cleared to FL360 and ADR is vertically split at FL325. This is undesirable.

As a result, the aircraft shall either be cleared to cross the border at or above FL325, potentially cleared to a higher RFL, or below FL325 with a maximum level of FL320 to avoid entering the airspace of ADR U and still being on the ADR frequency.

Considering that the vertical limits on Vatsim are few and far apart, the levels to consider are 165/305 in LOVV and 205/245/325 in LJLA/LDZO.

If any aircraft crosses the border and between its current level and cleared level is one of those separating levels, then you would likely infringe in one of the downstream sectors and this is not desirable.