to	Distribution list	**LoA 22**

from	J.-H. Baerens, CC/FB-N	phone	0421 5372 144	date DRF until	

Amendment of the LoA between Bremen ACC and Lippe Radar wef 17 NOV 2011

1. Essentials

Frequencies Eider East and West

Contingency procedures: New telephone numbers of CRC Schönewalde

2. List of Changes

Date	Parts	Page(s)	add, replace, delete
17.11.2011	amendment LoA	all	replace

_____
Axel Brandt
Chief of Support

_____
Hans-Michael Jung
Chief of Section

Sector families affected:												
	North A*	North B*	East A*	East B*	South*	FDS	FIS	FMP	DA	SV CC	SV FDS	office
mandatory	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☐
information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑
*** only applicable to sector(s):**												

This LoA is valid for:												
	North A*	North B*	East A*	East B*	South*	FDS	FIS	FMP	DA	SV CC	SV FDS	office
	☑	☑	☑	☑	☑	☑	☐	☑	☑	☑	☑	☑
*** only applicable to sector(s):** EID, ALEH, HEI, FRI, DST, EMS, HRZ, BOR, MAR, MRZ												

Distribution list: LoA I

Mr Jan Janocha Ms Katharina Fröhlich Mr Tobias Teichert (2X)

Mr Christian Faby Mr Uwe Voigt

PAGE INTENTIONALLY LEFT BLANK.

LETTER OF AGREEMENT

Between

DFS Deutsche Flugsicherung GmbH
Branch North
CC/F-N

and

DFS Deutsche Flugsicherung GmbH
Branch Upper Maastricht
CC/F-UM

In the following referred to as "parties"

Effective: August 30, 2007

1 General

1.1 Purpose

The purpose of this Letter of Agreement is to define the co-ordination procedures to be applied between Bremen ACC and DFS Maastricht UAC in the following referred as Lippe Radar, when providing ATS to Operational Air Traffic.

These procedures are supplementary to those specified in ICAO, EUROCONTROL and/or National documents.

1.2 Operational Status

Both parties shall keep each other advised of any changes in the operational status of their facilities and navigational aids which may affect the procedures specified in this Letter of Agreement.

1.3 Definitions for General Air Traffic and Operational Air Traffic

1.3.1 General Air Traffic (GAT):

"All flights which are conducted in accordance with the rules and procedures of ICAO and/or the national civil aviation regulations and legislation."

1.3.2 Operational Air Traffic (OAT):

"All flights which do not comply with the provisions stated for GAT and for which rules and procedures have been specified by appropriate national authorities."

2 Areas of Responsibility and Delegation of the Responsibility for the Provision of ATS

2.1 Areas of Responsibility

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

Note: See paragraph 2.2 for the description of the areas where delegation of the responsibility for the provision of ATS is applicable**.**

2.1.1 Bremen ACC

Bremen FIR as published in the AIP Germany.

Airspace classification: C (FL100 – FL245/FL285)

2.1.2 Lippe Radar
Hannover UIR as published in the AIP Germany.

Airspace classification: C (FL245 – FL660)

2.2 Delegation of the Responsibility for the Provision of ATS

2.2.1 Delegation of ATS from Bremen ACC to Lippe Radar

Within the AoR of Bremen ACC the responsibility for the provision of ATS has been delegated from Bremen ACC to Lippe Radar for OAT in accordance with the airspace classification C within the following areas:

2.2.1.1 SCHWERIN SOUTH LOW Area (see Appendix 1)

Lateral Limits:	541500N 0115334E - 524350N 0110626E - 540800N 0111530E - 541744N 0113818E - 541500N 0115334E.
Vertical Limits:	FL245 – up to FL285
Airspace classification:	C

2.2.1.2 RISOK LOW Area (see Appendix 2)

Lateral Limits:	514823N 0110838E - 515028N 0111230E -515423N 0110748E - 514823N 0110838E.
Vertical Limits:	FL245 – up to 285
Airspace classification:	C

Note: The responsibility for the provision of ATS has been delegated in SCHWERIN SOUTH LOW Area and RISOK LOW Area from Bremen ACC to Maastricht UAC for GAT in accordance with the airspace classification C.

2.2.2 Delegated Services

The provision of ATS in respect of this LoA means the following services:
Air traffic control service (ATC), Flight information service (FIS) for controlled flights,
Alerting Service (ALRS)

2.2.3 Alerting Service within the Airspaces with delegated Responsibility

The ATS unit responsible for the provision of ATS, by virtue delegation, shall provide alerting service and shall notify immediately the supervisor of the delegating ATS unit. The supervisor of the delegating ATS unit shall notify the appropriate rescue coordination centre.

2.2.4 Other Areas

Delegations of ATS to/from other co-ordinating air traffic services units along the common boundary of the areas of responsibility of Bremen ACC and Lippe Radar are described in Annex B to this Letter of Agreement.

2.2.5 Special Provisions

Not applicable.

3 Procedures

3.1 The procedures to be applied by Bremen ACC and Lippe Radar are detailed in the Annexes to this Letter of Agreement:

Annex A: Definitions and Abbreviations
Annex B: Area of Common Interest
Annex C: Exchange of Flight Data
Annex D: Procedures for Co-ordination
Annex E: Transfer of Control and Transfer of Communications
Annex F: Radar Based Co-ordination Procedures
Annex G: Supplementary Procedures

3.2 These procedures shall be promulgated to the operational staff of the ATS-units concerned.

4 Revisions and Deviations

4.1 **Revision of the Letter of Agreement**

The revision of the present Letter of Agreement, excluding Annexes, requires the mutual written consent of the parties.

4.2 **Revision of the Annexes to the Letter of Agreement**

The revision of Annexes to the present Letter of Agreement requires the mutual consent of the parties and the written confirmation of the mutual consent of one of both parties at least.

4.3 **Temporary Deviations**

When necessary, the Supervisors of the ATS units concerned may introduce, by mutual agreement and for a specified time period, temporary modifications to the procedures laid down in the Annexes to the present Letter of Agreement.

4.4 **Incidental Deviations**

Instances may arise where incidental deviations from the procedures specified in the Annexes to this Letter of Agreement may become necessary. Under these circumstances air traffic controllers are expected to exercise their best judgement to ensure the safety and efficiency of air traffic.

5 Cancellation

5.1 Cancellation of the present Letter of Agreement by mutual written agreement of the respective parties may take place at any time.

5.2 Cancellation of this Letter of Agreement by either party is possible at any time, provided that the cancelling party declares its intention to cancel the Letter of Agreement with a minimum pre-notification time of 3 months before the date the cancellation is to take effect.

6 Validity

This Letter of Agreement becomes effective August 30, 2007 and supersedes the Letter of Agreement between Bremen ACC and Lippe Radar dated December 16, 2006.

Bremen,

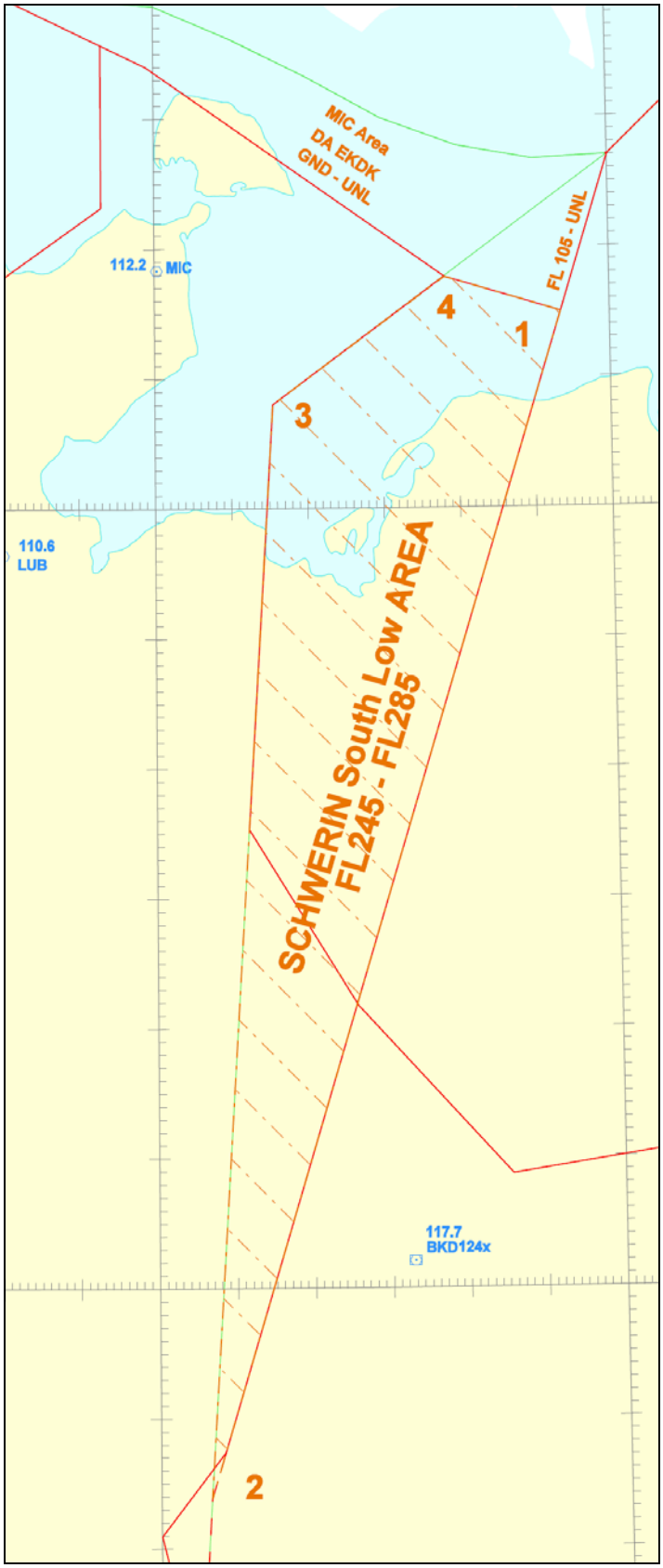
_____
Werner Spier
Control Center Bremen
Spokesman and Head of Operations

Beek,

_____
Dieter Möll
Head of Control Centre
Upper Maastricht

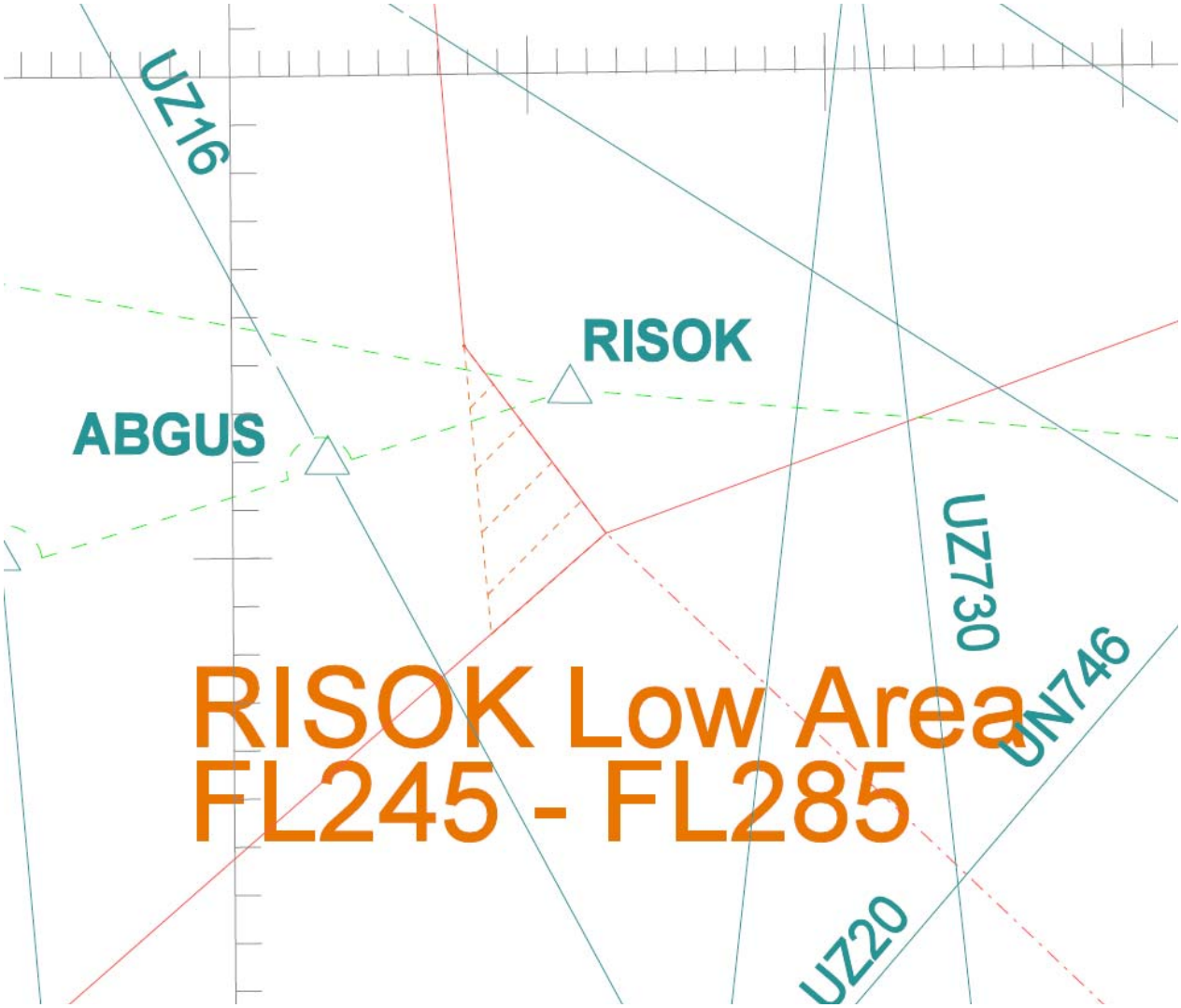
Appendix 1

SCHWERIN AREA (Para 2.2.1.1)



Appendix 2

RISOK LOW AREA (Para. 2.2.1.2)



Appendix 3

Record of amendments

AMD NO.	DATE	ANNEXES / APPENDICES	PAGE	ADD, DELETE, REPLACE
1	September 27, 2007	Appendix 3	1	replace
		Annex D	1, 2	replace
2	November 22, 2007	Appendix 3	1	replace
		Annex C	1	replace
		App 1 Annex C	1	replace
		Annex G	1 - 5	replace/add
3	July 03, 2008	Appendix 3	1	replace
		Annex E	1	replace
4	July 31, 2008	Appendix 3	1	replace
		Annex A	1, 3	replace
		Annex B App 2	1	replace
		Annex C	1, 3, 4	replace
		Annex D	1, 3	replace
		Annex E	1	replace
		Annex G	1, 3	replace
		Annex G	6	add
5	September 25, 2008	Appendix 3	1	replace
		Annex E	1	replace
6	March 12, 2009	Appendix 2	1	replace
		Appendix 3	1	replace
		Annex B	1 - 5	replace
		Appendix 1 to Annex B	1	replace
		Appendix 2 to Annex B	1	replace
		Annex C	1, 3	replace
		App 1 Annex C	1	replace
		Annex D	1, 4	replace
		Annex E	1	replace
		Annex G	1, 2	replace
7	May 07, 2009	Appendix 3	1	replace
		Annex C	1, 3	replace

8	June 04, 2009	Appendix 3	2	add
		Annex B	1, 4, 5	replace
		Annex B	6	add
		Appendix 2 to Annex B	1	replace
		Annex D	1, 4	replace
		Annex G	1, 5	replace
9	November 19, 2009	Appendix 3	2	replace
		Annex A	1 4	replace add
		Annex B	1 - 6 7,8	replace add
		Appendix 1 to Annex B	1	delete
		Appendix 2 to Annex B	1	delete
		Appendix 3 to Annex B	1	delete
		Annex C	1 6 - 10	replace add
		Appendix 1 to Annex C	1 - 3	delete
		Appendix 2 to Annex C	1	delete
		Annex E	1, 2	replace add
10	December 17, 2009	Appendix 3	2	replace
		Annex B	1, 7	replace
		Annex C	1, 4	replace
11	April 08, 2010	Appendix 1	1	replace
		Appendix 3	2	replace
		Annex B	1, 2, 8	replace
		Annex G	1, 3, 4, 5 8, 9, 10	replace add
12	June 03, 2010	Appendix 3	2	replace
		Annex C	1, 3	replace
		Annex D	1, 4	replace
		Annex G	1,3,4,7,8,9	replace
		Annex G	10	delete
13	August 26, 2010	Appendix 3	2	replace
		Annex B	1, 2, 5, 8	replace
14	December 01, 2010	Appendix 3	2	replace
		Annex G	1 - 8	replace
		Annex G	9	delete

15	December 16, 2010	Appendix 3	3, 4	add
		Annex C	1	replace
		Appendix 1 to Annex C	1 (p. 6 Ann C)	replace
16	March 10, 2011	Appendix 3	3, 4	replace
		Annex B	1, 2, 8	replace
		Annex E	1, 2	replace
		Annex F	1	replace
17	August 25, 2011	Appendix 3	3, 4	replace
		Annex A	1, 3	replace
		Annex B	1, 8	replace
		Annex C	1, 3, 6	replace
		Annex E	1	replace
		Annex G	1, 3	replace
18	November 17, 2011	Appendix 3	3, 4	replace
		Annex E	1	replace
		Annex G	1, 4	replace

PAGE INTENTIONALLY LEFT BLANK.

Annex A

Definitions and Abbreviations

Effective: 30.08.2007
Revised: 25.08.2011

A.1 Definitions

A.1.1 Approval Request

Request from an ATS-unit to the ATS-unit concerned for an approval of:

- an aircraft not yet airborne, whenever the flying time to the transfer of control point is less than the agreed minimum prenotification time, or
- an aircraft in flight intending to operate under conditions other than those described in mutually agreed procedures, or
- a change of the coordinated level within 5 minutes of the ETO for the transfer of control point.

A.1.2 Area of Responsibility

An airspace of defined dimensions where a sole ATS unit has responsibility for providing air traffic services.

A.1.3 Area of Common Interest

A volume of airspace as agreed between 2 ATS Units, extending into the adjacent/subjacent Areas of Responsibility, within which airspace structure and related activities may have an impact on air traffic co-ordination procedures.

A.1.4 Division Level

The level dividing two super-imposed areas of responsibility for the provision of ATS.

A.1.5 Expedite Clearance

An urgent clearance request from an ATS-unit to the ATS-unit concerned for an aircraft in flight whenever the flying time to the transfer of control point is less than the agreed minimum prenotification time.

A.1.6 Reduced Vertical Separation Minimum

A vertical separation minimum of 300 m (1 000 ft) which is applied between FL 290 and FL 410 inclusive, on the basis of regional air navigation agreements and in accordance with conditions specified therein.

A.1.7 Release

A.1.7.1 Release for Climb

An authorization for the accepting unit to climb (a) specific aircraft before the transfer of control.

Note: The transferring unit remains responsible for separation within its AoR unless otherwise agreed.

A.1.7.2 Release for Descent

An authorization for the accepting unit to descend (a) specific aircraft before the transfer of control.

Note: The transferring unit remains responsible for separation within its AoR unless otherwise agreed.

A.1.7.3 Release for Turn

An authorisation for the accepting unit to turn (a) specific aircraft away from the current flight path by not more than 45 ^{o} before the transfer of control.

Note: The transferring unit remains responsible for separation within its Area of Responsibility unless otherwise agreed.

A.1.8. **RVSM Approved Aircraft**

Aircraft that have received State approval for RVSM operations within the EUR RVSM airspace.

A.1.9. **State Aircraft**

For the purposes of EUR RVSM, only aircraft used in military, customs or police services shall qualify as State aircraft.

A.2 Abbreviations

ABI	Advance Boundary Information
ACC	Area Control Centre
ACI*	Area of Common Interest
ACT	Activation Message
AFTN	Aeronautical Fixed Telecom-munication
AIP	Aeronautical Information Publication
AMC*	Airspace Management Cell
AoR*	Area of Responsibility
ATC	Air Traffic Control
ATS	Air Traffic Services
BORE/P*	Boerde Executive/Planner
BTS*	Back-up Telephone System
CA*	Contingency Area
CCP*	Contingency Contact Point
CFMU	Central Flow Management Unit
CDR*	Conditional Route
COP*	Coordination Point
COS*	Chief Of Section
CRAM*	Conditional Route Availability Message
CRC*	Control and Reporting Center
DL*	Division Level
ETO	Estimated Time Over Significant Point
ED-R*	Restricted Area
EUR*	European
FDA*	Flight Data Assistant
FDPS*	Flight Data Processing System
FIR	Flight Information Region
FMP*	Flow Management Position
GAT*	General Air Traffic
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
IFPS*	Integrated Initial Flight Plan Processing System

KHz	Kilohertz
LAM	Logical Acknowledge Message
LoA*	Letter of Agreement
MARE/P*	Mark Executive/Planner
MFC*	Multi Frequency Coding (telephone system)
MHz	Megahertz
MRZE/P*	Mueritz Executive/Planner
NM	Nautical Mile
OAT*	Operational Air Traffic
OLDI*	On-line Data Interchange
ORCAM	Originating Region Code Assignment Method
RTF	Radio Telephony
RVSM	Reduced Vertical Separation Minimum
SAPL*	Sonderarbeitsplatz (TRA, Tanker, etc.)
SSR	Secondary Surveillance Radar
STAR*	Standard Instrument Arrival Route
TRA	Temporary Reserved Airspace
UAC	Upper Area Control Centre
UHF	Ultra High Frequ. (300-3000 MHz)
UIR	Upper Flight Information Region
UNL	Unlimited
VCS*	Voice Communication System
VFR	Visual Flight Rules
VHF	Very High Frequency (30-300 MHz)
WWCAM*	Bremen Supervisor Flight Data
WWC1M*	Bremen Supervisor ATC
WWC1A*	FDA for Börde
WWC2A*	FDA for Eider East and West, Friesland, SAPL
WWC3A*	FDA for Ems, Deister, Harz
WWC4A*	FDA for Mark, Mueritz
WWC5A*	FDA for Aller East High, Heide

Note: Abbreviations marked with an * are non-ICAO abbreviations.

For further abbreviations and definitions see
DFS Manual of Operations Air Traffic Services,
or AIP Germany

PAGE INTENTIONALLY LEFT BLANK.

Annex B

Area of Common Interest

Effective: 30.08.2007
Revised: 25.08.2011

B.1 Airspace Structure and Classification within the Area of Common Interest

B.1.1 **Bremen FIR**

Area	Vertical limits	Airspace Classification
Bremen FIR	FL100 – FL245	C

B.1.2 **München FIR**

Area	Vertical limits	Airspace Classification
München FIR	FL100 – FL 245	C

B.1.3 **Hannover UIR**

Area	Vertical limits	Airspace Classification
Hannover UIR	FL245 – FL 660	C

B.1.4 **Rhein UIR**

Area	Vertical limits	Airspace Classification
Rhein UIR	FL245 – FL 660	C

B.2 Sectorisation

B.2.1 **Sectorisation Lippe Radar and Bremen ACC**.

See Appendix 1 and 2 to Annex B.

B.2.2 **Coordinates of the Sector Boundaries of Bremen ACC.**

1	550400N 082000E	2	550000N 080000E	3	545600N 081300E
4	534000N 063000E	5	550000N 063000E	6	544400N 081100E
7	545100N 093100E	8	544924N 094420E	9	545028N 095336E
10	544554N 100313E	11	544435N 101000E	12	543900N 081200E
13	543930N 103000E	14	543920N 104000E	15	543542N 105300E
16	542311N 105300E	17	541130N 102500E	18	540200N 095400E
19	540440N 092650E	20	532415N 082800E	21	533450N 085620E
22	540800N 083400E	23	531800N 071130E	24	540532N 083545E
25	531900N 070130E	26	531220N 081910E	27	524415N 083415E
28	521700N 080000E	29	521420N 070340E	30	523925N 070330E
31	524830N 070430E	32	530000N 071234E	33	531253N 071304E
34	533759N 095937E	35	533331N 095034E	36	532600N 095445E
37	524100N 090510E	38	Not applicable	39	543400N 105900E
40	542700N 120000E	41	541744N 113818E	42	540800N 111530E
43	533516N 111158E	44	532144N 112549E	45	530843N 114531E
46	524723N 110813E	47	524620N 110652E	48	524350N 110626E
49	524056N 110002E	50	523710N 110133E	51	522225N 110413E
52	515430N 110739E	53	515028N 111230E	54	514317N 112426E
55	523639N 121129E	56	513400N 104200E	57	512002N 102315E
58	512000N 093500E	59	512000N 091000E	60	510955N 090728E
61	510959N 084431E	62	511754N 083631E	63	513543N 085200E
64	515400N 085200E	65	520800N 084429E	66	520700N 080000E
67	521137N 093926E	68	515600N 094125E	69	541500N 115334E
70	Not applicable	71	Not applicable	72	520818N 090000E
73	523000N 094215E	74	523000N 092800E	75	522846N 110452E
76	522959N 103128E	77	524631N 074929E	78	524235N 094423E
79	522157N 093721E	80	532011N 065937E	81	532356N 065658E
82	532828N 065149E	83	532945N 064859E	84	533015N 064430E
85	533122N 064020E	86	533338N 063624E	87	545015N 091700E
88	545220N 091320E	89	545400N 090110E	90	545500N 084000E
91	550417N 082655E				

B.2.3 **Coordinates of Sector Boundary of Lippe Radar.**

B.2.3.1 North Sector

	Latitude	Longitude		Latitude	Longitude
1	522000 N	0065500 E	2	531200 N	0070000 E
3	533500 N	0062200 E	4	550500 N	0062200 E
5	550500 N	0075000 E	6	545600 N	0091800 E
7	545400 N	0100000 E	8	544400 N	0110000 E
9	543900 N	0111700 E	10	543300 N	0114300 E
11	543200 N	0121300 E	12	524200 N	0111700 E
13	522800 N	0111600 E	14	522700 N	0104800 E
15	522000 N	0100000 E	16	521730 N	0085600 E
17	521300 N	0064000 E			

B.2.3.2 South Sector

	Latitude	Longitude		Latitude	Longitude
1	521300 N	0064000 E	2	521730 N	0085600 E
3	522000 N	0100000 E	4	522700 N	0104800 E
5	522800 N	0111600 E	6	521800 N	0111600 E
7	514300 N	0111800 E	8	513100 N	0104800 E
9	505700 N	0100800 E	10	510000 N	0095000 E
11	510000 N	0082900 E	12	510800 N	0082000 E
13	505300 N	0074700 E	14	504000 N	0080400 E
15	503000 N	0070400 E	16	501200 N	0062000 E
17	504500 N	0055000 E	18	510000 N	0055000 E
19	511200 N	0055900 E	20	513500 N	0060000 E
21	515300 N	0055000 E	22	515600 N	0062000 E

B.3 Special Areas within the Area of Common Interest

B.3.1 **Delegations of the Responsibility for the Provision of ATS to/from other ATS Units within the ACI**

MAP see Appendix 1 and 2 to Annex B.

B.3.1.1 Delegation of ATS from Karlsruhe UAC to Lippe Radar/Maastricht UAC

Within the following areas the responsibility for the provision of ATS shall be delegated from Karlsruhe UAC to Lippe Radar (for **OAT**)/Maastricht UAC (for **GAT**):

WARBURG Area

Lateral Limits: 51°11'47"N 008°29'29"E - 51°05'00"N 008°36'51"E - 51°05‘08“N 009°14‘43“E - 51°05‘08“N 009°26‘00“E - 51°19‘55“N 008°31‘00“E - 51°20'00"N 008°46'00"E - 51°11‘47“N 008°29‘29“E.

Vertical Limits. FL 245 – FL 660

KEMAD LOW Area

Lateral Limits 51°19’55”N 009°31’00”E - 51°20’01”N 010°03’34”E

51°06’15”N 010°03’22”E - 51°05’42’’N 010°03’21’’E
51°05’00’’N 010°02’27’’E - 51°05’08”N 009°26’00”E
51°19’55”N 009°31’00”E

Vertical Limits FL 245 - FL 255

KEMAD HIGH Area

Lateral Limits 51°19’55”N 009°31’00”E - 51°20’02”N 010°23’15”E
51°05’00”N 010°02’27”E - 51°05’08”N 009°26’00”E
51°19’55”N 009°31’00”E

Vertical Limits FL 255 – FL 295

NOMKA Area

Lateral Limits: 51°20'00"N 009°56’10”E - 51°20'02"N 010°23'15"E - 51°34'00"N 010°42'00"E - 51°20'00"N 009°56'10"E.

Vertical Limits: FL 245 – FL 660

B.3.1.2 Delegation of ATS from Lippe Radar/Maastricht UAC to Karlsruhe UAC

Within the following area the responsibility for the provision of ATS shall be delegated from Lippe Radar (for **OAT**)/Maastricht UAC (for **GAT**) to Karlsruhe UAC.

ARPE Area

Lateral Limits: 51°11'47"N 008°29'29"E - 51°16'12"N 008°24'40"E - 51°12'15"N 008°10'26"E - 51°06'00"N 007°57'00"E - 50°55'57"N 007°40'56"E - 50°43'15"N 007°49'00"E - along the Hannover/Rhein UIR boundary - 51°11'47"N 008°29'29"E.

Vertical Limits . FL 245 – FL 660

B.3.1.3 Delegation of ATS from Lippe Radar/Maastricht UAC to Munich ACC/Karlsruhe UAC

Within the following areas the responsibility for the provision of ATS has been delegated from Lippe Radar (for **OAT**)/Maastricht UAC (for **GAT**) to Munich ACC/Karlsruhe UAC:

ABGUS Area

Lateral Limits: 51°34'30"N 010°42'00"E - 51°45'30"N 011°08'45"E - 51°48'23"N 011°08'38"E - 51°34'30"N 010°42'00"E.

Vertical Limits: FL 245 - FL 315 to Munich ACC (ABGUS LOW Area)

FL 315 - FL 660 to Karlsruhe UAC (ABGUS HIGH Area)

B.3.1.4 Delegation of ATS from Lippe Radar/Maastricht UAC and Bremen ACC to Copenhagen ACC

Within the following area the responsibility for the provision of ATS shall be delegated from Lippe Radar (for **OAT**)/Maastricht UAC (for **GAT**) and Bremen ACC to Copenhagen ACC:

MICHAELSDORF Area

Lateral Limits: 54°27'00"N 12°00'00"E - 54°17'44"N 11°38'18"E - 54°34'00"N 10°59'00"E - 54°39'20"N 10°40'00"E - along FIR/UIR boundary - 54°27'00"N 12°00'00"E.

Vertical Limits: 2500 ft GND – FL660

B.3.1.5 Delegation of ATS from Lippe Radar/Maastricht UAC to Copenhagen ACC

Within the following area the responsibility for the provision of ATS shall be delegated from Lippe Radar (for **OAT**)/Maastricht UAC (for **GAT**) to Copenhagen ACC:

ALSIE Area

Lateral Limits: 54°55'00"N 08°40'00"E - 54°42'00"N 08°40'00"E - 54°38'00"N 08°45'00"E - 54°38'37"N 10°35'00"E - 54°40'30"N 10°41'12"E - 54°45'00"N 10°05'00"E - 54°49'30"N 09°45'00"E - 54°50'15"N 09°17'00"E - 54°52'20"N 09°13'20"E - 54°54'00"N 09°01'10"E - 54°55'00"N 08°40'00"E.

Vertical Limits: FL245 - FL660

B.3.1.6 Delegation of ATS from Lippe Radar/Maastricht UAC and Bremen ACC to Nieuw Milligen MilATCC

Within the following area the responsibility for the provision of ATS shall be delegated from Lippe Radar (for **OAT**)/Maastricht UAC (for **GAT**) and Bremen ACC to Nieuw Milligen MilATCC:

TWENTHE Area

Lateral Limits:	That portion of the Bremen FIR / Hannover UIR between the Amsterdam FIR and Bremen FIR / Hannover UIR boundary and west of a line 52°39'25"N 07°03'30"E to 52°23'50"N 07°03'40"E.
Vertical Limits:	2500 ft GND - FL 660

B.3.1.7 Delegation of ATS from Langen ACC to Bremen ACC

Within the following areas the responsibility for the provision of ATS shall be delegated from Langen ACC to Bremen ACC:

Hannover Area

Lateral limits:	N 52 08 00 E 008 44 29 – N 52 08 18 E 009 00 00 – N 51 52 55 E 009 00 00 – N 51 45 16 E 009 00 00 – N 51 45 00 E 008 52 00 – N 51 52 55 E 008 52 00 – N 51 54 00 E 008 52 00 – N 52 08 00 E 008 44 29.
Vertical limits:	GND - FL245

Paderborn Area

Lateral limits:	N 51 45 00 E 008 52 00 – N 51 45 16 E 009 00 00 – N 51 40 00 E 009 00 00 – N 51 28 37 E 008 52 00 – N 51 40 00 E 008 52 00 – N 51 35 43 E 008 52 00 – N 51 40 00 E 008 52 00 – N 51 45 00 E 008 52 00.
Vertical limits:	FL075 – FL245

ESADU Area

Lateral Limits:	N 51 35 43 E 008 52 00 – N 51 28 37 E 008 52 00 – N 51 20 00 E 008 46 00 – N 51 20 00 E 008 54 28 – N 51 20 00 E 009 10 00 – N 51 09 55 E 009 07 28 – N 51 09 59 E 008 44 31 – N 51 17 54 E 008 36 31 – N 51 35 43 E 008 52 00.
Vertical Limits:	FL205 – FL245

B.3.1.8 Delegation of ATS from Bremen ACC to Langen ACC

Within the following area the responsibility for the provision of ATS shall be delegated from Bremen ACC to Langen ACC:

RIMET Area

Lateral Limits
51° 28' 42'' N 10° 03' 42'' E
51° 29' 13'' N 10° 35' 33'' E
51° 20' 02'' N 10° 23' 15'' E
51° 20' 01'' N 10° 03' 34'' E
51° 28' 42'' N 10° 03' 42'' E

Vertical Limits
FL 235 - FL245

B.3.1.9 Delegation of ATS from Bremen ACC to Copenhagen ACC

Within the following area the responsibility for the provision of ATS has been delegated from Bremen ACC to Copenhagen ACC:

SCHWERIN NORTH Area

Lateral limits:	54 27 00N 012 00 00E - 54 15 00N 011 53 34E - 54 17 44N 011 38 18E - 54 27 00N 012 00 00E.
Vertical limits:	FL105 - up to 285

B.3.1.10 Delegation of ATS from Karlsruhe UAC to Lippe Radar/Maastricht UAC

Within the following areas the responsibility for the provision of ATS has been delegated from Karlsruhe UAC to Lippe Radar (for **OAT**)/Maastricht UAC (for **GAT**):

SCHWERIN SOUTH HIGH Area

Lateral Limits:	54 15 00 N 011 53 34 E - 52 43 50 N 011 06 26 E - 54 08 00 N 011 15 30 E - 54 17 44 N 011 38 18 E - 54 15 00 N 011 53 34 E.
Vertical Limits:	FL285 - FL660

RISOK HIGH Area

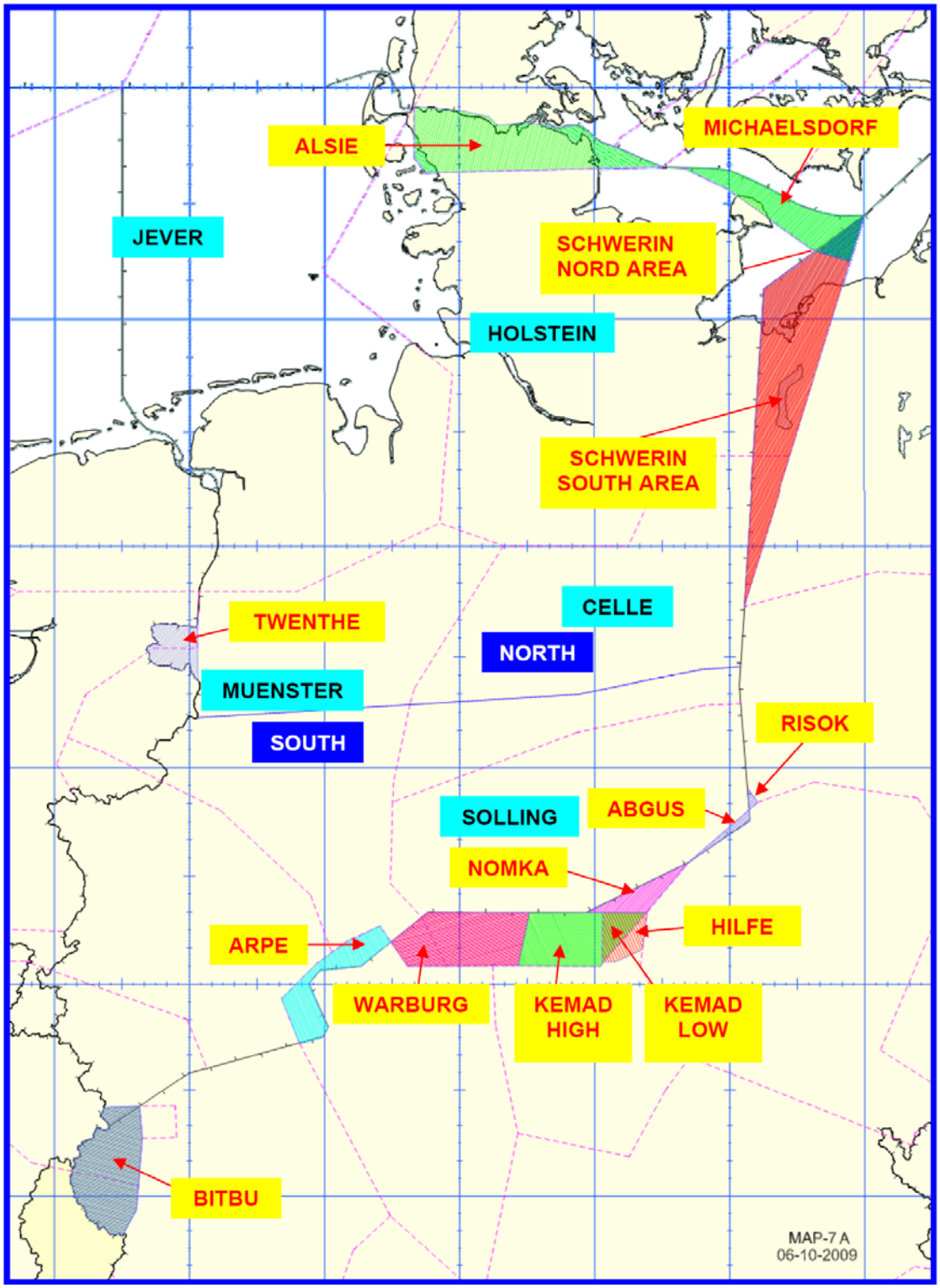
Lateral limits:	51 48 23 N 011 08 38 E - 51 50 28 N 011 12 30 E - 51 54 23 N 011 07 48 E - 51 48 23 N 011 08 38 E.
Vertical extension:	FL285 - FL660

B.3.2 **Other Areas**

TRA 206/306 as published in AIP Germany.

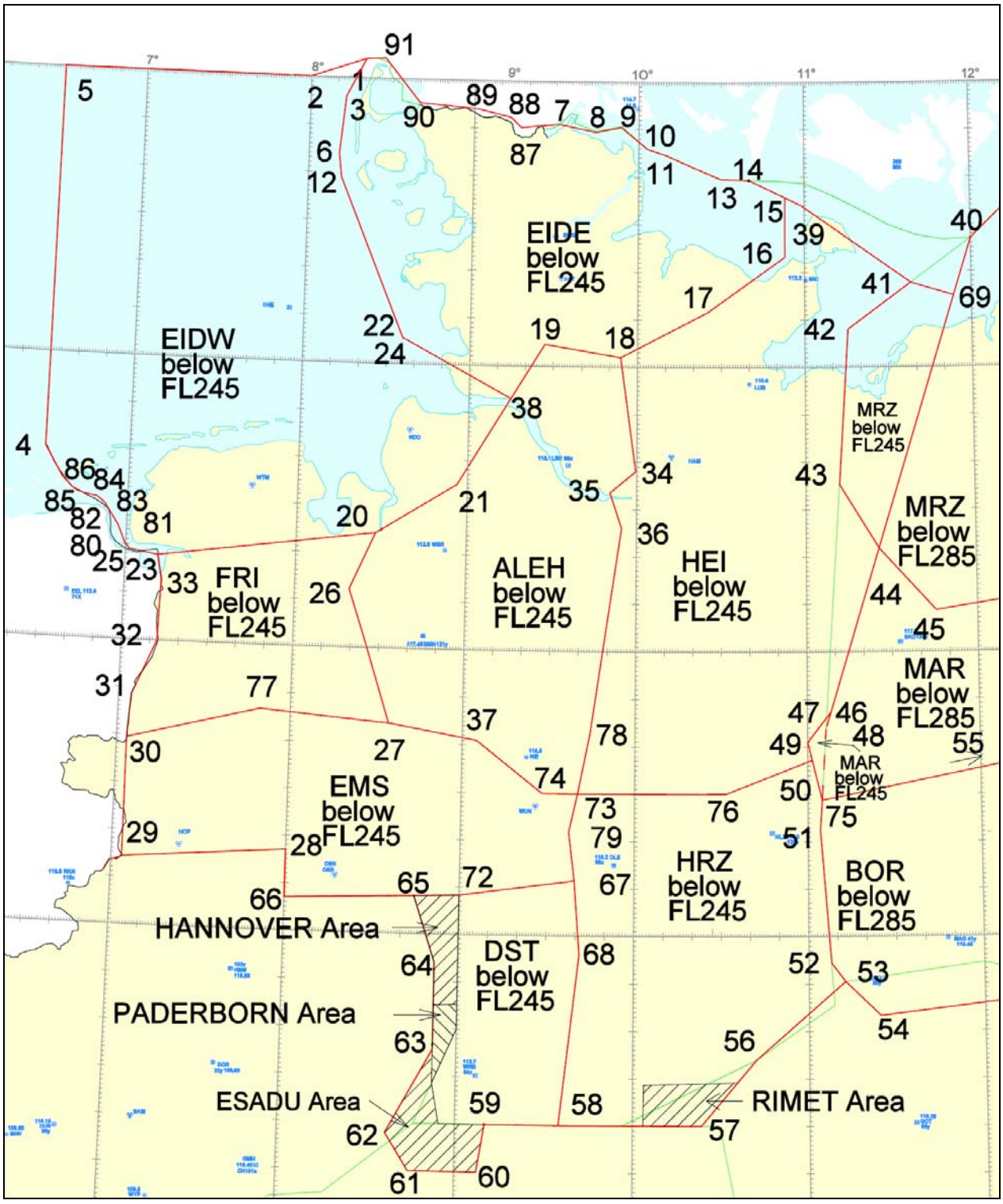
Appendix 1 to Annex B

Sectorisation Lippe Radar
Delegation of responsibility for the provision of ATS within Area of Common Interest



Appendix 2 to Annex B

Sectorisation Bremen ACC
Delegation of responsibility for the provision of ATS
within Area of Common Interest



Annex C

Exchange of Flight Data

Effective: 30.08.2007
Revised: 25.08.2011

C.1 General

C.1.1 Basic Flight Plans

Basic flight plan data should normally be available at both ATS-units.

C.1.2 Current Flight Plan Data

Messages, including current flight plan data, shall be forwarded by the transferring ATS-unit to the accepting ATS-unit either by automatic data exchange or by telephone to the appropriate sector/position.

C.1.2.1 Automatic Data Exchange

PAC/ABI/ACT/LAM messages are exchanged between the two ATS-units in accordance with Appendix 1 to Annex C.

C.1.2.2 Verbal Estimates

For conditions that are not supported by the automatic data exchange, verbal estimates will be exchanged.

A verbal estimate shall be passed to the appropriate sector at the accepting ATS-unit at least 10 minutes prior, but not earlier than 30 minutes before the aircraft is estimated to pass the transfer of control point.

A verbal estimate shall contain:

a) Callsign

Note: To indicate that the flight plan is available, the accepting ATS-unit should state aircraft type and destination after having received the callsign.

b) SSR code

c) ETO for the appropriate COP as laid down in Annex D to this LoA

d) Cleared level, specifying climb or descent conditions if applicable, at the transfer of control point

Requested level if different from cleared level

e) Other information, if applicable

Normally, verbal estimates will not be passed in parallel with ACT messages.
In any cases, verbally passed data shall take precedence over data exchanged automatically.

C.1.2.3 Failure of Automatic Data Exchange

In the event of a failure which prevents the automatic transfer of data, the Supervisors shall immediately decide to revert to the verbal exchange of estimates.

After recovery from a system failure, the Supervisors shall agree as to when they will revert to automatic data exchange.

C.1.3 **Non-availability of Basic Flight Plan Data**

If the accepting ATS-unit does not have basic flight plan data available, additional information may be requested from the transferring ATS-unit to supplement the ACT message or a verbal estimate.

C.1.4 **Revisions**

Any significant revisions to the flight data shall be transmitted to the accepting ATS-unit.

Time differences of **5** minutes or more shall be exchanged.

Note: Changes of the coordinated levels within **5** minutes of the ETO for the transfer of control point are subject to an Approval Request.

Within the context of RVSM any changes in aircraft's ability to continue to meet the vertical navigation accuracy or any in-flight contingency which has an impact on RVSM operations are considered as significant revisions.

C.1.5 **Expedite Clearance and Approval Requests**

Whenever the minimum flying time of 10 minutes to the transfer of control point cannot be met, either an expedite clearance request, or an approval request, as appropriate (see para. A1 of Annex A), shall be initiated.

An approval request shall also be obtained

- when intending to clear aircraft to proceed on direct tracks
- for aircraft with malfunctioning transponder or 2-digit only

C.2 Means of Communication and their Use

C.2.1 **Equipment**

- Data and Telephone Communication between Bremen ACC and Lippe Radar takes place via :

  MONIQUE

  Multiplexer **O**perated **N**etwork **I**nfrastructure for High **Qu**ality **E**xchange

C.2.2 **Telephone Co-ordination**

All telephone communications shall be terminated with the initials of both parties concerned.

Exchange of flight plan data, estimates and control messages by telephone shall be carried out in accordance with the following tables:

C.2.2.1 Messages from Bremen ACC to Lippe Radar

Receiving Sector/COPs	Message	Position	Extension
Lippe South OSB, OSN, ROBEG WRB RISOK	Flight Plan Data	LISA	4946
	Estimates, Control Messages, Expedite Clearances, Approval Requests and Revisions	LISP	4940
	Radar Co-ordination	LISP	4940
FDA	Flight Plan Data and other Co-ordination	LICA	4995

Receiving SectorCOPs	Message	Position	Extension
Lippe North BASUM, NDO, HN, HAM, LBE, SWG, WTM, DHE, GOLEN, GOLVI, GOTEL, WELGO, WSR, IBAGU, XIBEL WISMA, LUWIL, BKD	Flight Plan Data	LINA	4956
	Estimates, Control Messages, Expedite Clearances, Approval Requests and Revisions	LINP	4950
	Radar Co-ordination	LINP	4950

Receiving Sector	Message	Position	Extension
FDA	Flight Plan Data and other Co-ordination	LICA	4995
Special working position AIRBUS	Flight Plan Data and other Co-ordination	LIC1S	4981
Supervisor		LIC1M	4901

Supervisor CC (LIC1M): 0031/43 3661 330
Supervisor FDA (LICA): 0031/43 3661 231

Switchboard: 0031/43 3661 234
Telefax: 0031/43 3661 298

C.2.2.2 Messages from Lippe Radar to Bremen ACC

Receiving Sector/COPs	Message	Position	Extension
Eider West DHE, GOLVI, NDO, WTM	Flight Plan Data and Estimates	WWC2A	2123
	Control Messages, Expedite Clearances, Approval Requests and Revisions	EIDWP	2031
	Radar Co-ordination	EIDWE	2021

Receiving Sector/COPs	Message	Position	Extension
Eider East HNT, HN, SLT, SWG	Flight Plan Data and Estimates	WWC2A	2123
	Control Messages, Expedite Clearances, Approval Requests and Revisions	EIDEP	2032
	Radar Co-ordination	EIDEE	2022

Receiving Sector/COPs	Message	Position	Extension
Friesland XIBEL	Flight Plan Data and Estimates	WWC2A	2123
	Control Messages, Expedite Clearances, Approval Requests and Revisions	FRIP	2033
	Radar Co-ordination	FRIE	2023

Receiving Sector/COPs	Message	Position	Extension
Aller East High RIBSO, LBE, NIE, WSR	Flight Plan Data and Estimates	WWC5A	2142
	Control Messages, Expedite Clearances, Approval Requests and Revisions	ALEHP	2051
	Radar Co-ordination	ALEHE	2041

Receiving Sector/COPs	Message	Position	Extension
Heide FSB, HAM, LUB	Flight Plan Data and Estimates	WWC5A	2142
	Control Messages, Expedite Clearances, Approval Requests and Revisions	HEIP	2053
	Radar Co-ordination	HEIE	2043

Receiving Sector/COPs	Message	Position	Extension
Ems BASUM, IBAGU, OSB ROBEG (if further routing direction NIE or OSN)	Flight Plan Data and Estimates	WWC3A	2164
	Control Messages, Expedite Clearances, Approval Requests and Revisions	EMSP	2071
	Radar Co-ordination	EMSE	2061

Receiving Sector/COPs	Message	Position	Extension
Deister ROBEG (if further routing direction WRB) WRB	Flight Plan Data and Estimates	WWC3A	2164
	Control Messages, Expedite Clearances, Approval Requests and Revisions	DSTP	2075
	Radar Co-ordination	DSTE	2065

Receiving Sector/COPs	Message	Position	Extension
Harz DLE ROBEG (if further routing direction DLE)	Flight Plan Data and Estimates	WWC3A	2164
	Control Messages, Expedite Clearances, Approval Requests and Revisions	HRZP	2074
	Radar Co-ordination	HRZE	2064

Receiving Sector/COPs	Message	Position	Extension
Müritz WISMA LUWIL	Flight Plan Data and Estimates	WWC4A	2127
	Control Messages, Expedite Clearances, Approval Requests and Revisions	MRZP	2037
	Radar Co-ordination	MRZE	2027

Receiving Sector/COPs	Message	Position	Extension
Mark	Flight Plan Data and Estimates	WWC4A	2127
BKD BATEL	Control Messages, Expedite Clearances, Approval Requests and Revisions	MARP	2036
	Radar Co-ordination	MARE	2026

Receiving Sector/COPs	Message	Position	Extension
Börde	Flight Plan Data and Estimates	WWC1A	2109
RISOK	Control Messages, Expedite Clearances, Approval Requests and Revisions	BORP	2072
	Radar Co-ordination	BORE	2062

Receiving Working Position	Message	Position	Extension
WWCAS (Serial Trial Flights Airbus Industry)	Flight Plan Data and Estimates	WWC2A	2123
	Control Messages, Expedite Clearances, Approval Requests and Revisions Radar Co-ordination	WWCAS	2087

Supervisors CC (WWC1M): 0049 421 5372 120
0049 421 5963 489

Supervisors FDA (WWCAM): 0049 421 5372 127
0049 421 5149 902

Telefax: 0049 421 53 55 33

C.3 Failure of Ground/Ground Voice Communications

C.3.1 **Fall-Back Procedures for Co-ordination**

In the event of failure of the direct lines between the co-ordinating partners, co-ordination may be effected via:

a) other common co-ordination partner, or
b) public telephone: see C.2.2.1 and C.2.2.2

C.3.2 **Alternate Fall-Back Procedures for Co-ordination**

In case of communications failure where the alternatives described in paragraph C.3.1 above are not available or practicable, pilots shall be instructed, at least 5 minutes prior to the transfer of control point, to pass flight data on the appropriate frequency of the accepting ATS-unit for the purpose of obtaining an ATC entry clearance from the accepting ATS-unit.

If the accepting ATS-unit cannot issue an entry clearance to the pilot upon his initial contact, the pilot shall be instructed to inform the transferring ATS-unit accordingly via RTF.

The transferring ATS-unit shall hold the aircraft within its AoR and after a minimum of 10 minutes instruct the pilot to re-establish RTF contact with the accepting ATS-unit.

This procedure shall be repeated until an onward clearance has been obtained from the accepting ATS-unit.

Appendix 1 to Annex C

Automatic Data Exchange

PAC/ABI/ACT/LAM messages are exchanged between the two parties in accordance with the table below:

From Bremen ACC to Lippe Radar
for flights with vertical entry through DL245 into AoR Lippe Radar:

Messages	COPs	Time and Distance Parameters
PAC	ETMN: **NDO** / XIBEL[3] / WSR[6] / LBE[6] ETNH: HN **/** GOTEL, GOLVI, LEGPI, DHE, NDO, HAM[6], LBE[6] , LUB[6] ETNS[4]: SWG, GOTEL, GOLVI, LEGPI, DHE, NDO, HAM[6], LBE[6] , LUB[6] ETNJ: WTM, DHE, GOLVI, GOTEL, WELGO, XIBEL[3], NDO, TISOS, ULGUS ETNT: WTM, DHE, GOLVI, GOTEL, WELGO; XIBEL[3], NDO, TISOS, ULGUS, JUIST[5], ETNL: HAM[1] COPs in bold letters: Main COP The main COP is substituted by one of the COPs mentioned afterwards if one of these COPs is part of the departure phase of flight plan routing.	ACC Bremen will transmit PAC upon activation of the flight in the ACC Bremen system. ACC Bremen will transmit ACT asap after ATD.
ABI (Enroute Flights) ACT (Enroute Flights)	GOLVI, GOTEL, IBAGU, NDO, SWG, WTM, XIBEL	ACC Bremen will transmit ABI upon activation of the flight in the ACC Bremen system until 3 minutes before ACT. ACC Bremen will transmit ACT 20 minutes prior to ETO COP or 30 NM prior to COP, whichever comes first.
	WRB[2]	
LAM		A LAM should be received at the transferring ATS-unit within 45 seconds after the ACT transmission.

[1] PAC/ACT only if succeeding route element is not an ATS-route
[2] Only for DEP EDDK with DEST EDDT/B and Routing …WRB – DCT – TOLTA – DCT - BATEL
The level contained in the ACT message is FL245.
[3] ACT for aircraft departing ETNT, ETNJ and ETMN with planned routing via the airspace west of BASUM and east of the Dutch-German border will be send at XIBEL regardless of the really planned and cleared routing.
[4] ACT for aircraft departing ETNS with routing direct into Copenhagen FIR will be sent only to Copenhagen ACC also if RFL is FL245+.
[5] ACT for aircraft departing ETNT with planned routing via OID/SID DCT MC4 will be sent at JUIST. Nevertheless the aircraft will proceed direct MC4.
[6] ACT will be forwarded by Lippe Radar to Maastricht UAC in case of GAT departures.

From Lippe Radar to Bremen ACC:
for flights with vertical entry through DL245 into AoR Bremen ACC:

Messages	COPs	Time Parameters
ACT	BASUM, DHE, DLE, FSB, RIBSO, GOLVI, HAM, HN, HNT, IBAGU, LBE, LUB, NIE, NDO, OSB, OSN, ROBEG, SWG, WRB, WSR, WTM, XIBEL[1)]	12 min or more
LAM		within 45 sec after ACT

Note: In order to prevent the doubled entry of flight data into Bremen's Flight Data Processing System, Lippe Radar will inform Bremen ACC during executing an Expedite Clearance co-ordination if an ACT will be sent .

[1)] ACT for ARR ETNT, ETNJ and ETMN with planned routing via the airspace west of BASUM and east of the Dutch-German border will be sent at XIBEL regardless of the really planned and cleared routing.

For flights entering AoR Lippe Radar / AoR Bremen ACC via Rhein UIR:

<table>
<tr><td>Messages</td><td>COPs</td><td colspan="2">Time and/or Distance Parameters</td></tr>
<tr><td></td><td></td><td>Messages from Lippe Radar to Bremen ACC</td><td>Messages from Bremen ACC to Lippe Radar</td></tr>
<tr><td>ABI
3a+b
7a+b+c
13a
14a+b+c
16a
22(9a+b+c,
15a+b+c,
80 and 81)</td><td rowspan="4">WISMA

LUWIL

BUMIL*

BKD

BATEL

RISOK</td><td>30 minutes prior to ACT.

No ABI shall be transmitted after ACT-transmission</td><td>ACC Bremen will transmit ABI upon activation of the flight in the ACC Bremen system until 3 minutes before ACT</td></tr>
<tr><td rowspan="2">ACT
3a+b
7a+b+c
13a
14a+b+c
d+e
16a
22(9a+b+c,
15a+b+c,
80 and 81)</td><td>15 minutes prior COP.</td><td>12 minutes prior COP.</td></tr>
<tr><td>If less than 15 minutes, ACT shall be transmitted as soon as possible but not later than ETO COP.</td><td>If less than 12 minutes, ACT shall be transmitted as soon as possible, but not later than ETO COP.</td></tr>
<tr><td>LAM
3a+b+c</td><td colspan="2">Immediately after having received an ACT.

If a LAM is not received at Lippe Radar/Bremen ACC within 45 seconds after the ACT-transmission, a warning shall be displayed at the appropriate sector.</td></tr>
</table>

* only from Lippe Radar to Bremen ACC

Note: The exchange of ABI/ACT/LAM messages shall follow the OLDI standard and include the following optional elements:

ABI/ACT field 22 shall include field types 9 and 15 data with following route information as a minimum:

- last point prior COP + COP + one route element after COP.

Appendix 2 to Annex C

Verbal Data Exchange

Verbal Co-ordination Points

From Lippe Radar to Bremen ACC
for flights with vertical entry through DL245 into AoR Bremen ACC:

For any fix in the AoR for which an ACT cannot be sent.

From Bremen ACC to Lippe Radar
for flights with vertical entry through DL245 into AoR Lippe Radar:

For any fix referring to known position of the co-ordination partner.

As an exclusion from C.1.5.1 an Expedite Clearance shall only be obtained, if the estimate cannot be passed at least **5** minutes before the AoR boundary.

As an exclusion from C.1.5.1 no Expedite Clearance co-ordination is necessary for departures if Bremen ACC has passed the SSR code to Lippe Radar by PAC prior departure.

PAGE INTENTIONALLY LEFT BLANK

Annex D

Procedures for Co-ordination

Effective: 30.08.2007
Revised: 03.06.2010

D.1 General Conditions for Acceptance of Flights

D.1.1 Co-ordination of flights shall take place by reference to the COP for the relevant route and in accordance with the appropriate levels specified for the relevant route (see paragraphs D.2 and D.3).

D.1.2 Lateral entries shall be considered to be maintaining the co-ordinated level, at least 2.5 NM prior to the transfer of control point, unless climb or descent conditions have been clearly stated by use of crossing conditions in the ACT or by verbal co-ordination, except if otherwise described in paragraphs D.2 or D.3.

D.1.3 Except UHF-equipped State aircraft and serial trial flights of Airbus Deutschland GmbH and Elbe Flugzeugwerke GmbH, it has to be ensured that all **non-8.33**-equipped aircraft stay **outside the area of responsibility of Lippe Radar.**

D.1.4 If the accepting ATS-unit cannot accept a flight offered in accordance with the conditions specified above, it shall clearly indicate its inability and specify the conditions under which the flight will be accepted.

D.1.5 For any proposed deviation from the conditions specified in this Annex (e.g. COP, route or level) the transferring unit shall initiate an Approval Request.

D.1.6 The accepting ATS-unit shall not notify the transferring ATS-unit that it has established ground-air communications with the transferred aircraft unless specifically requested to do so.

D.1.7 For flights entering the respective AoR via Rhein UIR the following additional regulations are valid:

D.1.7.1 Flights shall be considered to be maintaining minimum radar observed distance of **15** NM, constant or increasing, at the transfer of control point, unless other transfer conditions have been verbally coordinated.

D.1.7.2 Non-RVSM approved state aircraft have been exempted from mandatory RVSM approval. When an RVSM approved aircraft is unable to continue to meet the required vertical navigation accuracy, the aircraft shall obtain a revised ATC clearance to continue along the cleared route at FL280 or below. Such aircraft shall be considered non-RVSM approved.

D.2 ATS-Routes, Co-ordination Points and Level Allocation

Available ATS-routes, COPs to be used and level allocation to be applied, unless otherwise described in paragraph D.3, are described in the tables below.

D.2.1 **Flights from Bremen ACC to Lippe Radar**
for flights with vertical entry through DL245 into AoR Lippe Radar:

Route	COP	Level Allocation	Special Conditions
Departures	as listed within table Appendix 1 to Annex C		see para D.3
Climb for higher level than FL 245	as listed within table Appendix 1 to Annex C		see para D.3

D.2.2 **Flights from Lippe Radar to Bremen ACC for flights with vertical entry through DL245 into AoR Bremen ACC:**

Route	COP	Level Allocation	Special Conditions
ARR ETNS ARR ETNH	SWG HN HNT	250	see para D.3
ARR ETNT ARR ETNJ ARR ETMN	WTM XIBEL[1)] WTM XIBEL[1)] NDO BASUM XIBEL[1)]	250	see para D.3
ARR EDHL	WSR ULSEN	250	
TRA 201 N TRA 201 S TRA 202	SWG NDO IBAGU		
Descent for Low Level	Anywhere		verbal co-ordination

[1)] COP for ARR ETNT, ETNJ and ETMN with planned routing via the airspace west of BASUM and east of the Dutch-German border is XIBEL regardless of the really planned and cleared routing.

D.2.3 **Flights from Bremen ACC to Lippe Radar entering AoR Lippe Radar via Rhein UIR:**

ATS-Route	COP	Level Allocation	Special Conditions
TB2	WISMA	even	see para. D.3.1
TL3, TR1	LUWIL		
TL2, TL3S, MAG DCT RISOK DCT PODER	RISOK		
--	BKD		special use for flights Off-Route

D.2.4 **Flights from Lippe Radar to Bremen ACC entering AoR Bremen ACC via Rhein UIR:**

ATS-Route	COP	Level Allocation	Special Conditions
TB2	WISMA	odd	see para. D.3.2
TL3, TR1	LUWIL		
BATEL - STAR	BATEL	FL250	
TL2, TL3S	RISOK	odd	
--	BKD		special use for flights Off-Route
UL619	BUMIL	FL250	See D.3.2.3

D.3 Special Procedures

D.3.1 **Flights from Bremen ACC to Lippe Radar**

D.3.1.1 Departures and enroute climbs for higher level than FL245
(with vertical entry through DL245 into AoR Lippe UAC)

The level contained in the ACT message is FL245. Bremen ACC will call the appropriate position of Lippe Radar for requesting level above FL240. In case of departure of the Flugbereitschaft from EDDK to the Berlin airports via PODIP -WRB, Lippe Radar will call the DST-sector for level above FL240.

D.3.1.2 Departures from Laage

Prior departure MRZP shall pass the SSR-Code to LINP. After departure MRZP shall execute a radar transfer and then LINP shall state the conditions for entering its AoR.

D.3.1.3 Departures (OAT Flight plan) from Berlin airports

Berlin departures of the Flugbereitschaft BMVg conducted OAT with destination EDDK shall be handled via RISOK / PODER.

D.3.1.4 Departures from Holzdorf

- via RISOK shall be handed over to LISP at FL280 or below.

D.3.2 **Flights from Lippe Radar to Bremen ACC**

D.3.2.1 Arrivals
(with vertical entry through DL245 into AoR Bremen ACC)

All flights into the Bremen FIR shall be co-ordinated by ACT at FL 250.
These flights will be sent at FL 250 to the appropriate sector of Bremen ACC.
On request of Lippe Radar, Bremen will ensure a lower level.

D.3.2.1.1 For ETNT, ETNJ and ETMN ARR with ACT exchange at XIBEL the verbal coordination shall be done with Bremen Sector FRI.

D.3.2.2 Arrivals to Laage and Neubrandenburg

Arrivals via WISMA and LUWIL shall be co-ordinated on principle with the Müritz sector at FL 270 or below.

D.3.2.3 Arrivals (OAT) to Berlin airports

MARP will notify the change of the runway direction on the Berlin airports to the Lippe Supervisor in due time.

Arrivals to Berlin airports shall be routed either via BUMIL– UL619 – VIBIS STAR or BATEL – BATEL STAR respectively.

Arrivals to Berlin airports shall be handed over to MARE FL280 or below, descending FL250. In case of east landings in Berlin, Lippe Radar will endeavour to hand over traffic as low as possible in the circumstances.

D.3.2.4 Arrivals to Holzdorf

Arrivals to Holzdorf via RISOK shall be co-ordinated on principle at FL 270 or below and handed over to BORE.

D.3.3 **Serial test flights of manufacturer Airbus Hamburg**

These flights shall be handled on the basis of the operational directive concluded between the concerned ATS-units of Bremen, Maastricht and Karlsruhe for EADS Airbus and this Letter of Agreement. On principle all co-ordination for EADS Series test flights shall be executed individually between the Special Controller Working Positions. The SV CC or the special working positions of the ATC units involved may deviate from the agreed procedures in individual cases, if necessary.

EADS Serial Test Flights from EDHI entering the AoR Lippe Radar vertically via DL245 shall be announced to Lippe Radar prior departure with the allocated code.

D.4 Co-ordination of Status of Special Areas in the Area of Common Interest

D.4.1 The ATC supervisors of both units shall notify each other of all changes of the sector arrangements affecting the procedures laid down in this LoA.

The times of usage for the Danger- and Restricted Areas

ED-D 19A, ED-D 28, ED-D 41A/B, ED-D 44, ED-D 46,
ED-R 10A/B, ED-R 11A/B and ED-R 34A/B

will be announced via the Airspace Use Plan (AUP) the day before. This plan will be amended with an Updated Airspace Use Plan (UUP), if necessary.

Changes of utilization for the areas ED-D 19A, ED-D 28, ED-D 41A/B, ED-D 44, ED-D 46, ED-R 10A/B, ED-R 11A/B and ED-R 34A/B, announced after publication of AUP/UUP, shall be relayed by Airspace Management Position (WW C1D) to Lippe Central Flight Data Assistant (LICA).

D.4.2 Utilization of ED-R 33A/B, time(s) and height(s), shall be forwarded a day in advance (for Monday on the Friday before) to Lippe Central Flight Data Assistant (LICA).

D.4.3 The increase in height of ED-R 13A and the effectiveness of ED-R 13B shall be published by NOTAM. Changes thereto will not be conveyed by WW C1D Bremen.

D.4.4 Supervisor Lippe Radar is obliged, to forward data in respect of all Danger- and Restricted Areas, noted under para D.4.1 – 4.3, to the relevant Maastricht Supervisor(s).

D.4.5 Air Operations in ED-R 10 A/B / D 19 A

Air operations in ED-R 10 A/B or ED-D 19 A will hold a lateral distance of at least 2.5 NM to the lateral borders of the ED-R 10 A/B or ED-D 19 A. After prior coordination diversions from this rule are possible.

Annex E

Transfer of Control and Transfer of Communications

Effective: 30.08.2007
Revised: 17.11.2011

E.1 Transfer of Control

E.1.1 The transfer of control takes place at the AoR-boundary.

E.1.2 After frequency change departures/climb outs entering AoR Lippe vertically via DL245 are released for turn up to 20°.

E.2 Transfer of Communications

The transfer of communications shall take place not later than the transfer of control unless otherwise co-ordinated.

E.3 Frequencies of different sectors

E.3.1 **Bremen ACC**

Wesentliches

Sector	VHF	UHF
Eider West	120.225 MHz	313.225 MHz
Eider East	124.075 MHz	371.750 MHz
Friesland	124.800 MHz	336.450 MHz
Aller East High	123.925 MHz	337.950 MHz
Heide	125.850 MHz	377.475 MHz
Ems	125.025 MHz	372.550 MHz
Deister	128.750 MHz	283.950 MHz
Harz	126.650 MHz	372.300 MHz
Müritz	124.175 MHz	259.825 MHz
Mark	136.050 MHz	396.975 MHz
Boerde	123.225 MHz	397.475 MHz
TRAMON 201N		369.000 MHz
TRAMON 201S		375.025 MHz
TRAMON 202		281.350 MHz
TRAMON 206		311.675 MHz
Serial Test Flight	132.925 MHz 135.825 MHz	

E.3.2 **Lippe Radar**

Sector	VHF	UHF	
North			
LIN1E	138.575 MHz	337.700 MHz	west of UM170/UP615
LIN2E	138.575 MHz	313.200 MHz	east of UM170/UP615
South			
LIS1E	131.080 MHz	314.600 MHz	west of TB1
LIS2E	131.080 MHz	373.450 MHz	east of TB1
Serial Test Flight	135.825 MHz		

E.3.3 **Common usage of Bremen ACC frequency 133.725 MHz**

133.725 MHz is a backup frequency of Bremen ACC located at transmitter/receiver station Deister. On request of the SV/CC of Lippe Radar and after the SV/CC of Bremen ACC has agreed, 133.725 MHz may be used by Lippe Radar. After termination of usage of 133.725 MHz the SV/CC of Lippe Radar shall inform the SV/CC of Bremen ACC about the termination.

The usage of 133.725 MHz by Bremen ACC shall have priority over the usage by Lippe Radar.

Annex F

Radar Based Co-ordination Procedures

Effective: 30.08.2007
Revised: 10.03.2011

F.1 SSR Code Assignment

F.1.1 Both ATS-units shall transfer aircraft on verified discrete SSR codes, or on verified code 1000, assigned in accordance with ORCAM.

F.1.2 Any change of SSR code by the accepting ATS-unit may only take place after the transfer of control point.

F.1.3 The accepting ATS-unit shall be notified of any observed irregularity in the operation of SSR transponders.

F.2 Radar Co-ordination Procedures

F.2.1 **General**

F.2.1.1 Transfer of radar identification and transfer of radar control between Bremen ACC and Lippe Radar will be subject to the serviceability of the respective radar systems and two-way direct speech facilities between the radar positions.

F.2.1.2 If it becomes necessary to reduce or suspend radar transfers, a 5 minutes prior notification will be observed, except in emergency situations, such as loss of radar etc.

F.2.1.3 Radar separation minimum shall be **5** NM.

F.2.1.4 A minimum distance of **2.5** NM to the boundary line of responsibility shall be observed when vectoring aircraft, except when a transfer of radar control has previously been coordinated.

F.2.2 **Transfer of Radar Control**

F.2.2.1 <u>For flights with vertical entry through DL245 into the respective AoR</u>

Transfer of radar control may be effected after prior co-ordination provided the minimum distance between the aircraft does not fall below 6 NM.

F.2.2.2 <u>For flights entering the respective AoR via Rhein UIR</u>

If the minimum distance between successive aircraft falls below **15** NM, approval by the receiving ATS unit prior to transfer of radar control is required.

F.2.3 **Silent Transfer of Radar Control**

F.2.3.1 For flights with vertical entry through DL245 into the respective AoR

Transfer of radar control may be effected without prior co-ordination provided the minimum distance between successive aircraft about to be transferred is 10 NM, constant or increasing.

Note: When applying mach-number speed control or descent/climb rates , pilots concerned shall be instructed to report their assigned mach-number or descent/climb rate to the accepting ATS-unit upon initial contact.

F.2.3.2 For flights entering the respective AoR via Rhein UIR

Transfer of radar control may be effected without prior verbal coordination provided the minimum distance between successive aircraft about to be transferred is 15 NM and remains constant or is increasing.

Note: When applying mach-number speed control or descent/climb rates, pilots concerned shall be instructed to report their assigned mach-number or descent/climb rate to the accepting ATS-unit upon initial contact.

Annex G

Supplementary Procedures

Effective: 30.08.2007
Revised: 17.11.2011

G.1 Contingency - Emergency Recovery Plan for DFS Maastricht UAC

G.1.1 Purpose

This annex defines procedures to be applied in a state of emergency when (DFS) Maastricht UAC has to be shut down the main Ops room and operations shall be resumed in the Maastricht UAC Test and Training Room (TTR) or from a contingency location to be decided by the Maastricht Crisis Team.

In case of contingency the regulations of this chapter take precedence over the respective provisions of Annexes A to F of the LoA.

G.1.2 Contingency Phase 0 – Immediate Actions

When the operational status of (DFS) Maastricht UAC becomes impaired to such an extent, that ATS can no longer be provided, the Duty Supervisor Maastricht UAC shall initiate the immediate actions to be taken in Phase 0 of the Maastricht UAC Contingency Plan.

G.1.2.1 Contingency Contact Point (CCP)

Contingency Contact Point during Phase 0 is the Maastricht UAC Duty Supervisor **(CCP1)**. In case the Maastricht UAC Duty Supervisor has no means of communication, the CCP in Phase 1 shall be the Supervisor Amsterdam ACC **(CCP1A)**.

G.1.2.2 The immediate actions comprise:

1. **CCP1 / CCP1A** activate the trigger **NOTAM [(DFS) MUAC in Contingency]**
2. **NOTIFICATION ACTIONS**: declare the state of emergency by notifying CFMU, aiding units and neighbouring centres;
    - the AoR of Maastricht UAC shall be called the Contingency Area (CA)
    - entry into the CA is prohibited
    - Phraseology to be used: **(DFS)** ***MAASTRICHT UAC is out of service; stop ALL entries into the Contingency Area (CA), start evacuation of the CA.***

Note: In case of a total failure (data, surveillance and/or **communications**) of (DFS) Maastricht UAC, Amsterdam ACC is given the authority to initiate and monitor the immediate Notification actions as described for Phase 0 until the evacuation of the Contingency Area (CA) has been completed.

- **CCP1/CCP1A** shall inform:
- Amsterdam ACC, Bremen ACC and CFMU.
- The message shall consequently be passed on as follows:
    - AMSTERDAM ACC informs: Brussels ACC and Copenhagen ACC
    - BRUSSELS ACC informs: London ACC, Paris ACC and Reims ACC/UAC
    - COPENHAGEN ACC informs: Scottish ACC

- BREMEN ACC informs: Langen ACC, Munich ACC and NAPC (National Policing Centre)

- LANGEN ACC informs: Karlsruhe UAC

Note: Each notified unit shall inform the military authorities within their area (For Germany this will be done centrally by notification of NAPC).

G.1.3 Contingency Phase 1 and 2

Not applicable.

G.2 Contingency Procedures Bremen ACC.

G.2.1 General.

G.2.1.1 In case of technical or catastrophic outage resulting in the disruption of the provision of ATS at at Bremen ACC, the adjacent coordinating partners are expected to assist Bremen ACC as far as possible in order to ensure the safe evacuation of air traffic from the AoR of Bremen ACC.

G.2.1.2 The Contingency Contact Point (CCP) of Bremen ACC will decide about the required contingency measures and coordinate the subsequent execution of the contingency plan.

G.2.2 Disruption of the provision of ATS at Bremen ACC.

This chapter defines procedures to be applied in a state of emergency when Bremen ACC has to be shut down and operations shall be resumed at aiding units with control staff relocated from Bremen ACC.

In case of contingency, the regulations of this chapter take precedence over the respective provisions of Annexes A to F to this LoA.

G.2.2.1 **Contingency Phase 0.**

G.2.2.1.1 In case of an incident which requires to cease the operations or causes a sudden loss of Bremen ACC, the Bremen ACC Supervisor shall notify the coordinating partners on that as far as possible.

If necessary and possible, measures shall be agreed in order to ensure the safe evacuation of all controlled air traffic from the Bremen ACC AoR.

When the operations of Bremen ACC are ceased and the Bremen ACC AoR is vacated from any controlled traffic, the Supervisor in charge of operations shall declare contingency phase 0 for Bremen ACC. From this time on:

- the Bremen ACC AoR shall be called the Bremen ACC Contingency Area until full serviceability of Bremen ACC is recovered,
- the Bremen ACC Contingency Area is a No-Fly-Zone, entry is prohibited until contingency phase 1 or 2 are activated.

G.2.2.1.2 Communications - Emergency Operations Staff Bremen ACC:

- ATC Supervisor: +49 421 596 3489 or +49 173 3401129

G.2.2.2 **Contingency Phase 1.**

Not applicable.

G.2.2.3 **Contingency Phase 2.**

G.2.2.3.1 General.

In contingency phase 2 Bremen ACC re-establishes the provision of ATS within its AoR by opening contingency sectors at aiding units.

The contingency sectors will correspond to existing sectors at Bremen ACC:

- **Müritz and Mark sector:**
  Contingency sector East 1 at CRC Schönewalde
- **Boerde and Flaeming sector:**
  Contingency sector East 2 at CRC Schönewalde
- **Heide and Aller East High sector:**
  Contingency sector North High at UAC Maastricht
- **Eider East and West, Friesland and Aller East Low sector:**
  Contingency sector North/West at UAC Maastricht
- **Ems, Deister und Harz sector:**
  Contingency sector South High at UAC Maastricht

G.2.2.3.2 Activation/Deactivation.

Bremen ACC Supervisor shall inform the coordinating partners about the activation of the contingency sectors.

G.2.2.3.3 ATFM-Procedures.

Necessary Air Traffic Flow Management Measures to be applied during contingency phase 2 will be initiated by the Bremen ACC Supervisor.

G.2.2.3.4 Contingency sectors and Communications.

Sector CB NORTH HIGH (Maastricht)	**Message**	**Position**	**MFC-No / Public Phone, Frequency**
CBNHP	Control Messages Expedite Clearances Approval Requests Revisions	Planner (Coordinator)	**34-4926** Public Phone **0031-433662518**
CBNHE	Radar Coordination	Executive (Radar)	**34 4925** Public Phone **0031-433662519** Frequencies **127.675 MHz**
Sector CB SOUTH HIGH (Maastricht)	Message	**Position**	**MFC-No / Frequency Public Phone**
CBSHP	Control Messages Expedite Clearances Approval Requests Revisions	Planner (Coordinator)	**34-4931** Public Phone **0031-433662520**
CBSHE	Radar Coordination	Executive (Radar)	**34 4930** Public Phone **0031-433662521** Frequencies **133.725 MHz**

Sector NORTH/WEST (Maastricht)	Message	**Position**	**MFC-No / Frequency Public Phone**
CBNWP	Control Messages Expedite Clearances Approval Requests Revisions	Planner (Coordinator)	**34-4921** Public Phone **0031-433662516**
CBNWE	Radar Coordination	Executive (Radar)	**34 4920** Public Phone **0031-433662517** Frequencies **120.225 MHz**
Sector CB-EAST (CRC Schönewalde)	Message	**Position**	**MFC-No / Frequency Public Phone**
CBE1P	Control Messages, Expedite Clearances, Approval Requests, Revisions, Estimates,	Planner (Coordinator)	**34 7693** Public network: **+49-353898633798**
CBE1E	Radar Coordination	Executive (Radar)	**34-7694** Public network: **+49 35389 8633 799** **Freq. MRZ, MAR:** **134.650 MHz** **373.975 MHz**
CBE2P	Control Messages, Expedite Clearances, Approval Requests, Revisions, Estimates,	Planner (Coordinator)	**34 7691** Public network: **+49-353898633796**
CBE2E	Radar Coordination	Executive (Radar)	**34-7692** Public network: **0049-353898633795** **Fregu. BOR, FLG:** **126.075 MHz** **376.100 MHz**
CBEBA	Flight Plan Data, Estimates	Assistant	**34-7695** Public network: **+49-353898633797**
Zusätzliche Arbeitsplätze Maastricht	Message	**Position**	**MFC-No / Public Phone**
Supervisor CBNSM	Procedures Capacity, Emergency	Supervisor Bremen for all contingency working positions	**34-4923** Public Phone **0031-433662522**
Flight Data Assistant Maastricht (FDA) CBNSA	Flightplan Data Estimates	Assistant North High, South High and North/West	**34-4924** Public Phone **0031-433662523**

Wesentliches

The Bremen ACC contingency working positions will call the respective working position of coordinating partners on the extensions agreed in Annex C of the respective Letter of Agreement.

G.2.2.3.5 Voice Communication Systems

All coordination partners of Bremen ACC shall make sure that they are able to reach the Bremen ACC contingency working positions via MFC numbers, taking into consideration that Bremen ACC is completely off, including the technical systems. Public Phone shall be used as back up system. During exercises all systems at Bremen keep on running, beside OLDI-data exchange.

G.2.2.3.6 Guard/Emergency frequencies

121,500 MHz and 243.000 MHz are available at all aiding units.

G.2.2.3.7 Exchange of Flight Data/Coordination

G.2.2.3.7.1 Basic flight plan data are available at the contingency working positions only to some extent.

G.2.2.3.7.2 OLDI-data exchange with the contingency working positions is not possible.

G.2.2.3.7.3 All coordination shall be done verbally.

G.2.2.3.7.4 The pre-notification time of estimates shall be 30 - 15 minutes before the aircraft is estimated to pass the AoR-boundary.

G.2.2.3.7.5 An expedite clearance / approval request shall be obtained by the transferring ATS-unit when:

- the estimate cannot be passed at least 15 minutes before the aircraft is estimated to pass the AoR-boundary,
- a change of coordinated flight level has to be executed within 5 minutes prior to crossing the AoR-boundary.

G.2.2.3.8 Control Procedures.

G.2.2.3.8.1 For flights planned on ATS Routes deviations from the ATS Routes shall be coordinated only to prevent dangerous situations or in case of emergencies.

G.2.2.3.8.2 The separation minima between aircraft on transfer shall be 15 NM constant or increasing.

G.2.2.3.9 Callsign

G.2.2.3.9.1 Radio telephony callsign for Bremen ACC in case of contingency: Bremen Radar

G.2.3.9.2 Telephone callsign for Bremen ACC in case of contingency: Bremen Contingency + name of working position (e.g. North High)

G.2.2.3.10 SSR Code Assignment.

During contingency operations, Bremen ACC may not be able to transfer aircraft on discrete SSR-codes assigned in accordance with ORCAM.

Test flights of Fighter Wing 71 "R" (ETNT) and

Luftwaffeninstandhaltungsgruppe (LwInsthGrp) 21 (ETNJ)

G 4 General

Separation of test flights should not be done by intermediate vertical limitation because this can result in abort of the test program.

Deviations from the described test profiles may become necessary and will be requested by the pilot. Deviations on pilots request should be cleared if the traffic situation and/or the airspace structure allows.

G 4.1 Test Profiles/Routings

G 4.1.1 Basically test profile/routing "counterclockwise" (see G 4.3) should be used

G 4.1.2 In exceptional cases test profile/routing "clockwise" (see G 4.4) can be requested together with the enroute clearance. The usability depends on the traffic situation FL245+ and the approval of Lippe Radar.

The necessary coordination with Lippe Radar will be initiated by Bremen ACC.

G 4.1.3 If in exceptional cases both test profiles/routings "counterclockwise" and "clockwise" can not be used, e.g. due to sea status, the test profile/routing „Land" (see G 4.5) will be used and requested.

G 4.1.4 Climb with maximum rate in accordance with the ATC clearance

- to FL 150 (system checks)
- to FL 400 (mach run)
- to FL 450 (speed reduction to below mach 1 / altitude zoom)

G 4.1.4.1 If an uninterrupted climb to FL 400 without system checks is necessary this will be stated with the enroute clearance request.

G.4.1.5 After speed reduction to below mach 1 descend into ED-R 201 (TRA Friesland) for further system checks.

G 4.2 Control- and coordination procedures

G 4.2.1 For test flights standardized flight plans will be filed.
The callsign additionally contains "TST"

Flight plan route "counterclockwise": OID WTM NDO GOLEN DHE GOLVI TR201 VFR STAY1/xxxx WTM/NOxxxFxxx IFR DCT
Attention: The really flown routing is described in map G 4.3.

Flight plan route "clockwise": OID WTM GOLVI DHE GOLEN NDO TR201 VFR STAY1/xxxx WTM/NOxxxFxxx IFR DCT
Attention: The really flown routing is described in map G 4.4.

Flight plan route "Land": OID WTM IBAGU NDO TR201 VFR STAY1/xxxx WTM/NOxxxFxxx IFR DCT
Attention: The really flown routing is described in G 4.5.

G 4.2.1.1 Entry -/ crossing clearances for Danger Areas will be requested by Fighter Wing 71 “R” or LwInsthGrp 21 at the appropriate unit prior filing the flight plan.

G 4.2.1.2 To ensure the test flight Bremen ACC / Lippe Radar are allowed to assign an ETD diverting from the flight plan.

G 4.2.2 Together with the enroute clearance, the following shall be assigned:

- the transponder code for the whole routing
- the frequency for the route segment above FL245

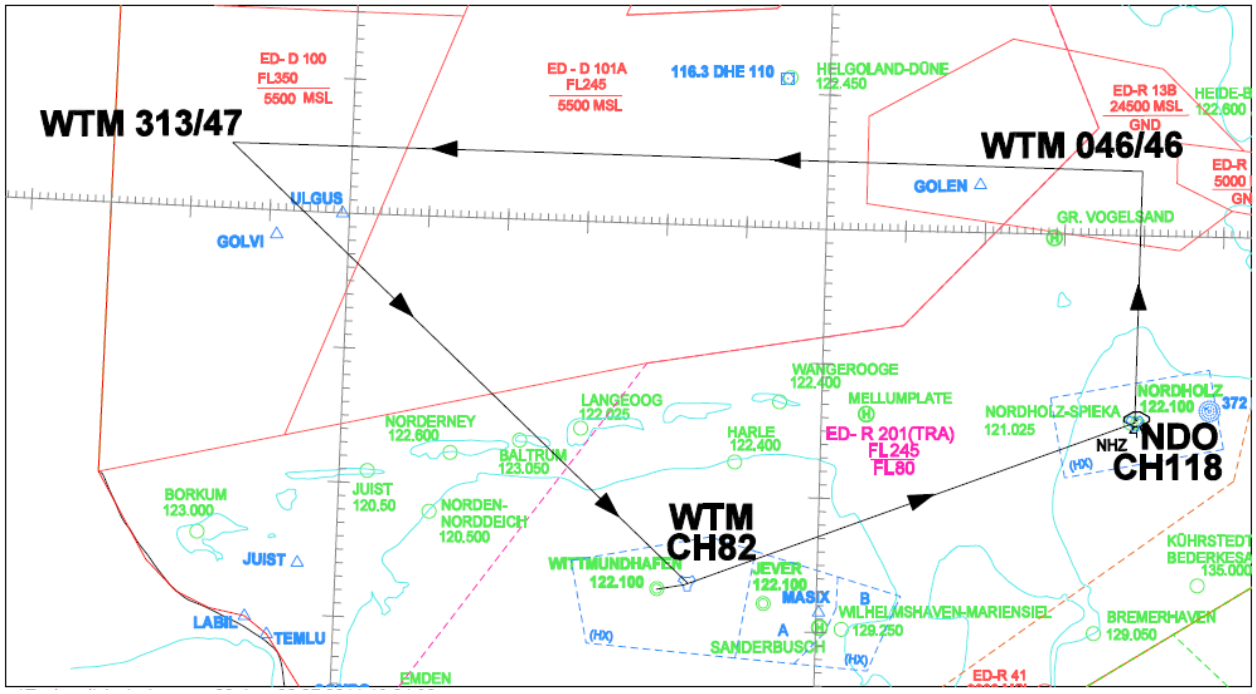
G 4.2.3 Bremen ACC will instruct frequency change to Lippe Radar as early as possible, latest time with leaving FL150 for further climb.

G 4.2.4 Lippe Radar will instruct frequency change to Bremen ACC as early as possible after having given clearance to descend to below FL245.

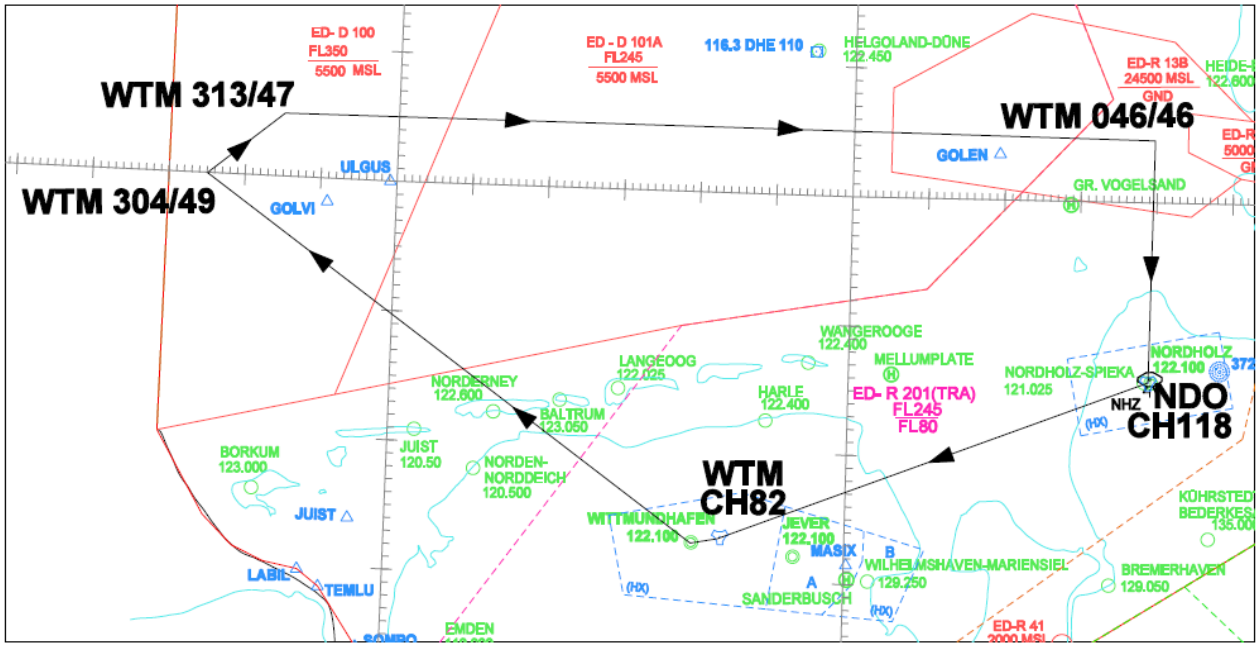
G 4.2.5 Pilots will indicate successful frequency changes by "IDENT".

G 4.2.6 Regardless of the description of test profiles/routings the really flown altitude/FL and route will be in accordance with the actually given clearance of Bremen ACC/DFS Maastricht UAC.

G 4.3 Test profile/routing ”counterclockwise“



G 4.4 Test profile/routing ”clockwise“



G 4.5 Test profile/routing ”Land“

G 4.5.1 Route description

- OID, LT/RT to intercept WTM R180 outbound until WTM DME 40
- Continue inbound IBAGU
- At IBAGU LT inbound NDO
- After speed reduction to below mach 1 descend into ED-R 201 (TRA Friesland) for further system checks.

G 4.6 For LwInsthGrp 21 there are additional test profiles fixed which stay completely below FL245. To identify clearly the intention LwInsthGrp) 21 will enter 1DC to indicate FL245+ and 4DC to indicate FL245- in the remark field of the flight plan.