

Annex 2 A (v1.0)

Data exchange in the Land Mobile Service

DATA EXCHANGE

1 Procedures

1.1 Overall list

According to point 1.4 and 4.9 of the Agreement, frequency registers (overall list) have to be exchanged twice a year using disc or CD-ROM or other mutually agreed media.

1.2 Co-ordination or notification

Co-ordination requests, answers to co-ordination requests or notifications may be exchanged on disc or CD-ROM or other mutually agreed media.

Data to be exchanged during the co-ordination procedure may be of the following type:

- new entries
- modifications
- deletions
- answers

1.3 Common to 1.1 and 1.2

Each list is to be included in a separate data file. A list can be divided into several files. Each file consists of the following data subgroups:

- a file header as described in Appendix 2
- the data records as described in Appendix 3.

It is possible to transmit several files on a single carrier.

Because the file structure for the Fixed Service and the Land Mobile Service differs, a unique code is required to determine the content of the file in case of electronic data exchange.

Therefore parts of the filename are fixed:

For the Land Mobile Service all filenames start with 'M_',

The corresponding structure is described in Appendix 1.

2 Transmission media

The following transmission media are preferred but others may be agreed bilaterally:

- E-mail
- Common Disc Media

Paper is limited to the coordination process but generally should be avoided.

2.1 E-Mail

The following specifications are recommended when e-Mail is used:

- Correspond via a separate e-mail address only e.g. coordination@administration.landcode.
- The most important part of the e-mail is a data file as defined in this Annex

- State reference number (s) in the e-mail subject field (field 13X)
- If the coordination file contains more reference numbers as fit in the subject field, the message body of the e-mail may be used
- For documentation reasons and error identification, the coordination request (s) may be annexed in txt, Word or PDF format additionally
- Agree the name(s) of the data file(s) on a bi- or multilateral basis and start it with 'M_'.
-
- Formulate additional text in English, other languages are subject to bilateral agreements
- Mark the requests with a person responsible for questions
- Confirm incoming electronic coordination requests by email
- Report errors or problems via the "reply function" to the original message
- Send answers to coordination requests by fax (legal aspects) or if it was adopted bi- or multilaterally, by e-mail.

Details of the file structure are given in Appendix 1.
The record format is defined in Appendix 3.

2.2 Common Disc Media

The following specifications have to be met when discs are used:

- MS-DOS format (extended by long file names), ISO9660 (with extensions) or UFS
- IBM-PC 8-bit ASCII character code

Details of the file structure are given in Appendix 1.
The record format is defined in Appendix 3.

3 Description of format character explanation of the appendices

X	alphanumeric
9	numeric, leading zeros and trailing zeros after the decimal point may be left blank
V	explicit decimal point
S	indicates a signed numeric value, missing sign means +, the sign is right justified to the number.
DD	day (numerical; range: 01-31)
MM	month (numerical; range: 01-12)
YYYY	year (numerical; range: >1900)
CCC	country code according to the Appendix 1 of Section 9 of the Radiocommunication Data Dictionary
ZZ	year of initial co-ordination (numerical; last two digits of the year only)
PPPPPP	process identification (alphanumeric)
FF	frequency order number or link order number (numeric)
R	number of associated records (numeric)
O	order number of record (numeric)

3.1 Alphanumeric fields

Alphanumeric fields are left justified.
The character set is ASCII.

3.1.1 General alphanumeric fields

The following characters are allowed:

(Space)
(-)
0...9
A...Z

3.1.2 Special alphanumeric fields

The following characters can be used in:

the fields of the file header,
the field 4A (name of station),
the field 13Z (Remarks)

Hex	Sign		Hex	Sign		Hex	Sign		Hex	Sign		Hex	Sign		Hex	Sign
20	(Space)		30	0		40	@		50	P		60	`		70	p
21	!		31	1		41	A		51	Q		61	a		71	q
22	"		32	2		42	B		52	R		62	b		72	r
23	#		33	3		43	C		53	S		63	c		73	s
24	\$		34	4		44	D		54	T		64	d		74	t
25	%		35	5		45	E		55	U		65	e		75	u
26	&		36	6		46	F		56	V		66	f		76	v
27	'		37	7		47	G		57	W		67	g		77	w
28	(		38	8		48	H		58	X		68	h		78	x
29	)		39	9		49	I		59	Y		69	i		79	y
2A	*		3A	:		4A	J		5A	Z		6A	j		7A	z
2B	+					4B	K		5B	[		6B	k		7B	{
2C	,		3C	<		4C	L		5C	\		6C	l			
2D	-		3D	=		4D	M		5D	]		6D	m		7D	}
2E	.		3E	>		4E	N		5E	^		6E	n		7E	~
2F	/		3F	?		4F	O		5F	_		6F	o		A7	§

Note: 3B (;) 7C (!) are not allowed

3.2 Numerical fields

Numerical fields are right justified.

Zeros may be omitted if they don't change the value.

The first Zero behind the decimal point may not be omitted.

The character set is ASCII.

Allowed are:

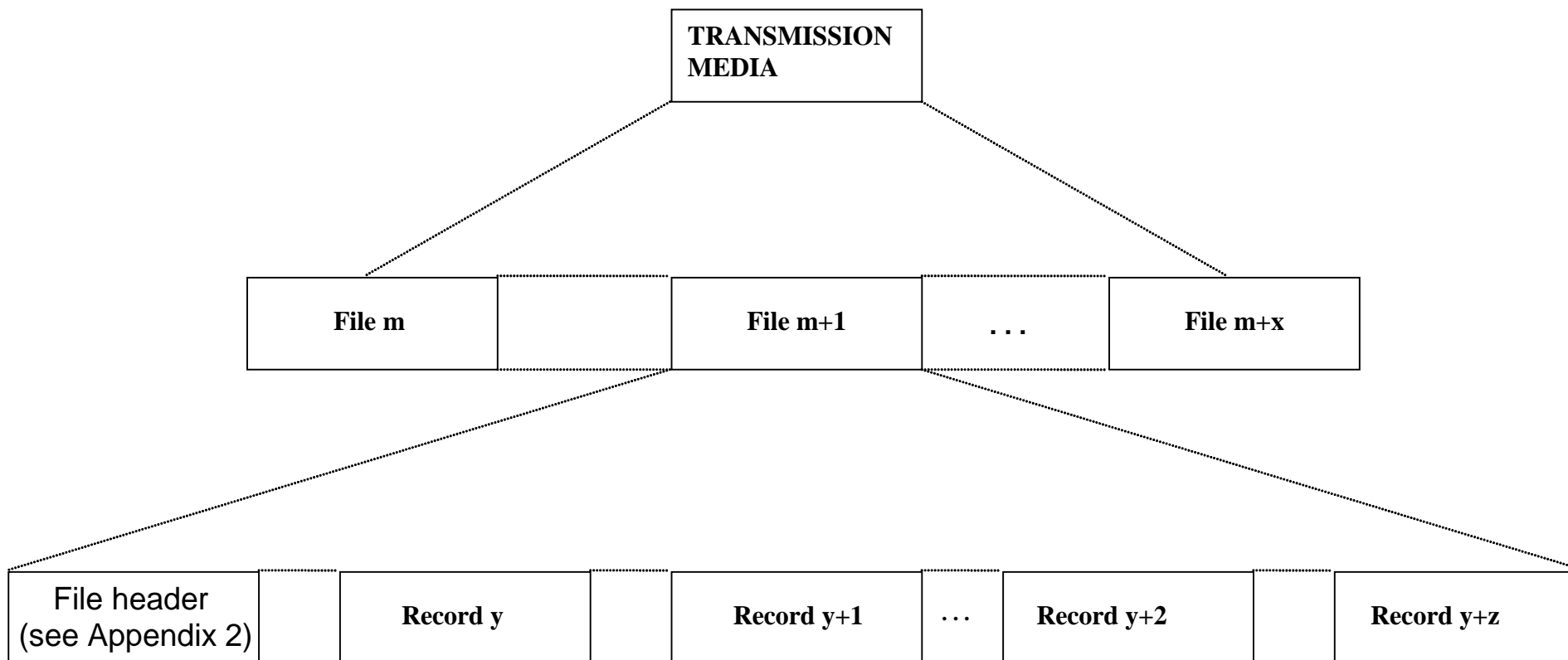
(Space)
(-) (+) (.)
0...9

List of Appendices to Annex 2 A

Appendix 1	File structure
Appendix 2	Record description file header for Land Mobile Service
Appendix 3	Data table description
Appendix 4	Frequency categories
Appendix 5	Class of station
Appendix 6	Nature of service
Appendix 7	Category of use
Appendix 8	Abbreviations and codes normally used when the name of the station exceeds 20 characters
Appendix 9	Status of co-ordination
Appendix 10	Polarization symbols used to indicate polarization

File structure

Appendix 1 to Annex 2 A



No record separator e.g. CR/LF is used.

Appendix 2 to Annex 2 A**RECORD DESCRIPTION FILE HEADER**

DATA ITEM	STORAGE FORMAT (fixed length)	RECORD POSITION	REMARKS
File number on media	99	001 - 002	
File contents	X(80)	003 - 082	
File contents code ¹⁾	X	083 - 083	
Originating Country	X(3)	084 - 086	As given in Appendix 1 of Section 1 of the Radiocommunication Data Dictionary
E-mail address	X(40)	087 - 126	
Phone	X(20)	127 - 146	
Telefax	X(20)	147 - 166	
Name of responsible person	X(20)	167 - 186	
Number of records	9(6)	187 - 192	
Writing date	DDMMYYYY	193 - 200	
Destination country	X(3)	201 - 203	
Unique file number	999999	204 - 209	
File version	9V9	210 - 212	1.0 (Version of Annex 2A)
Reserved for future use	X(7)	213 - 219	

- 1)
- O overall list (only statuses C, E, F, G, H, P)**
 - D deletions (only statuses W, R)**
 - N new entries (only statuses A, B, D, P)**
 - A answer (only statuses C, D, E, F, G, H, Z)**
 - M modifications (only status M)**

Fixed record length without separators.

Appendix 3 to Annex 2 A**DATA TABLE DESCRIPTION**

column-number	column-name
1	Field identification
2	Field name (characteristic)
3	Storage format
4	Definition (possible values)
5	Remarks
6	Record position
7	Length of the data element
8	Validation
9	Related information

General remark:

An administration with which co-ordination is sought is not allowed to change the content of any field except of field 13Y which must be changed and field 13Z which can be changed e.g. to notify the reason(s) for disagreement (indication of a co-ordination reference etc.). If comments need more characters than provided in 13Z, paper or another medium has to be used.

Data exchange fields and record format

1	2	3	4	5	6	7	8	9
1A	Transmitting frequency Frequency unit	9(5)V9(5) X	Frequency unit K: kHz, M: MHz, G: GHz		001 – 011 012 – 012	11 1	1A/1Y: at least one of the two fields has to be filled in In case of only Rx, 1A is Complete blank	If 1A is blank, 8B1 has to be blank
1Z	Frequency category	X	valid values: see appendix 4		013 – 013	1		1A filled in: 1Z is linked to 1A 1A blank: 1Z is linked to 1Y
6A	Class of station	X(2)	valid values: see appendix 5		014 - 015	2		1A filled in: 6A is linked to 1A 1A blank: 6A is linked to 1Y
6B	Nature of service	X(2)	valid values: see appendix 6		016 - 017	2		1A filled in: 6B is linked to 1A 1A blank: 6B is linked to 1Y
6Z	Category of use	X(2)	valid values: see appendix 7		018 - 019	2		1A filled in: 6Z is linked to 1A 1A blank: 6Z is linked to 1Y
10Z	Channel occupation	9	valid values: 0: not continuous 1: continuous see Annex 5		020 - 020	1		
2C	Date of bringing into use	DDMMYYYY			021 - 028	8	Blank or filled in in connection with 1Z, 2Z, 13Y	Linked to 1Z, 2Z, 13Y
4A	Name of station	X(20)	For abbreviations see Appendix 8		029 - 048	20	In computer programs 4A is not checked	1A filled in: 4A is linked to 1A 1A blank: 4A is linked to 1Y
4B	Country	X(3)	Country where the station is located		049 - 051	3	Blank is not allowed	

1	2	3	4	5	6	7	8	9
4C	Geographical co-ordinates of the station or centre of the operating area	9(3)X9(2)9(2) 9(2)X9(2)9(2)	3 characters : degrees longitude 1 character : E(East) or W(West) 2 characters : minutes longitude 2 characters : seconds longitude 2 characters : degrees latitude 1 character : N(North) or S(South) 2 characters : minutes latitude 2 characters : seconds latitude	Co-ordinates are to be indicated with seconds and based on WGS 84	052 - 066	15	Mandatory for all coordination requests and notifications	1A filled in: 4C is linked to 1A 1A blank : 4C is linked to 1Y
4D	Radius of the operating area	9(5)	In kilometres, blank is not allowed		067 - 071	5	If 6A does not start with "M" 4D is always 0	linked to 4C
4Z	Height of the station site above sea level	9(4) or S9(3)	In meters		072 - 075	4	Only valid if 6A starts with "F"	linked to 6A and 4C
7A	Designation of emission	X(9)	First 4 characters: necessary bandwidth following 5 characters: class of emission (see Art.2 and Appendix 1 of the RR)		076 - 084	9	First 7 characters are mandatory, the following 2 characters are optional (or blank)	For UMTS or IMT 2000, all 9 character are mandatory For TETRA 7A is 25K0G7W
8B1	Maximal radiated power of the station	S9(3)V9	In dBW Omitted in case of only Rx		085 - 090	6	If 1A is missing, 8B1 has to be missing too	linked to 1A
8B2	Type of reference antenna	X	X=E for e.r.p., X=I for e.i.r.p. Mandatory		091 - 091	1		linked to 8B1 if present linked to 9G if present
9A	Azimuth of maximum radiation	9(3)V9	In degrees with one decimal from 000.0 to 359.9 or blank	For non directional horizontal antenna type 9A is blank	092 - 096	5	If 6A starts with "M", 9A is always blank	1A filled in: 9A is linked to 1A 1A blank: 9A is linked to 1Y 9A is linked to 6A and 9XH
9B	Mechanical elevation angle of the antenna in direction of maximum radiation	S99V9	In degrees with one decimal from -90.0 to 90.0 or blank	Negative elevation points towards the ground. For non directional vertical antenna type 9B is blank	097 - 101	5	For antennas with 9XV = TA this field contains the electrical tilt	1A filled in: 9B is linked to 1A 1A blank : 9B is linked to 1Y 9B is linked to 9XV
9D	Polarization	X(2)	Mandatory Codes as given in Appendix 10		102 - 103	2		1A filled in: 9D is linked to 1A 1A blank : 9D is linked to 1Y

1	2	3	4	5	6	7	8	9
9G	Gain of the antenna in the direction of 9A and 9B	99V9	In dB Mandatory in case of Rx		104 - 107	4		linked to 1Y, 8B2, 9A, 9B 9XH, 9XV
9Y	Height of antenna above ground	9(4)	In meters		108 - 111	4		1A filled in: 9Y is linked to 1A 1A blank : 9Y is linked to 1Y
9XH	Type of antenna horizontal	9(3)X(2)9(2)	see Annex 6		112 - 118	7	If 9A is blank, 9XH is 000ND00	linked to 9A
9XV	Type of antenna vertical	9(3)X(2)9(2)	see Annex 6		119 - 125	7	If 9B is blank, 9XV is 000ND00 000ND00 should be avoided for non mobile stations	linked to 9B
1Y	Transmitting frequency of the corresponding receiving station or receiving frequency Frequency unit	9(5)V9(5) X	Frequency unit: K: kHz, M: MHz, G: GHz Omitted in case of only Tx		126 - 136 137 - 137	11 1	Obligatory if 1A is not filled in	
13Z	Remarks	X(50)		Data necessary for calculations are not allowed	138 - 187	50		For UMTS/ IMT 2000 the code group is filled in 'CODE GROUP = xxx'
13Y	Status of co-ordination	X	see Appendix 9		188 - 188	1	Mandatory	
2W	Date of co-ordination request	DDMMYYYY		In overall list not needed	189 - 196	8		
2Z	Final date of achieving co-ordination	DDMMYYYY	May be omitted		197 - 204	8		

1	2	3	4	5	6	7	8	9
13X	Co-ordination reference	CCC ZZ PPPPPP FF R O	C: country code as given in App.1 Section 9 of the RDD Z: year of initial co-ordination P: process identification F: frequency order number R: number of associated records O: order number of record	C: country requesting co-ordination F: several co-ordinations for one site	205 - 219	15	The co-ordination reference is unique F, O and R are numerical values greater than 0, O less/equal R	

The record length is fixed to 219 bytes, no record separator is used.

“Empty” in this table means that all character positions in this field are filled with space characters.

Additional explanation of field 13X for the Land Mobile Service

CCC	Country requesting co-ordination
ZZ	Last two digits of the year of initial co-ordination request
PPPPPP	Process identification The only constraint for PPPPPP is to obtain a unique co-ordination reference.
FF	Frequency order number Used with "01" in the case the process number differs for each channel/frequency. If the process number is always the same it numbers the different channels or frequencies of the same network.
R	Number of associated records If the leading character of 13X up to the position "R" are the same in several records, "R" represents the count of these records. This is the only way to combine records belonging to one network.
O	Order number of record is the numbering of records mentioned in "R". O starts with 1 and ends with the value given in "R".

In case of R is not sufficient for record count within one process identification, FF, R and O together may be used to keep the record unique.

Appendix 4 to Annex 2 A

FIELD 1Z : FREQUENCY CATEGORIES

- 1 Preferential frequencies
- 2 Frequencies requiring co-ordination
- 3 Frequencies used on the basis of geographical network plans
- 4 Frequencies for a planned radiocommunications network
- 5 Shared frequencies
- 6 Reserved for bi- or multilateral use
- 7 Frequencies using preferential codes
- 8 Frequencies used on the basis of arrangements between operators

Appendix 5 to Annex 2 A

FIELD 6A : CLASS OF STATION

- FB Base station
- FC Coast station
- FL Land station
- FP Port station
- FS Land station established solely for safety of life
- FW Mobile station with a radius of service area of 0 km and an effective antenna height of the co-ordinates of the particular place as specified in Annex 5, point 2.5
- FX Fixed station
- ML Land mobile station i.e. mobile station in the land mobile service
- MO Mobile station i.e. station in the mobile service intended to be used while in motion or during halts at unspecified points (maximum operating height determined in field 9Y)
- MR Radiolocation mobile station
- MS Ship station

If other codes are required, use the codes listed in Appendix 5 (Section 9.5) of the Radiocommunication Data Dictionary

Appendix 6 to Annex 2 A

FIELD 6B : NATURE OF THE SERVICE

- CO Station open to official correspondence exclusively
- CP Station open to public correspondence
- CR Station open to limited public correspondence
- CV Station open exclusively to correspondence of a private agent
- OT Station open exclusively to operational traffic of the service concerned

If other codes are required, use the codes listed in Appendix 13 (Section 9.13) of the Radiocommunication Data Dictionary

Appendix 7 to Annex 2 A**FIELD 6Z : CATEGORY OF USE**

A	Airport services
B	Railways (excluding mountain railways)
C	Diplomatic corps
D	Mountain railways
E	Production, transport and distribution of energy (electricity, gas, water)
F	Fire services
G	Military
H	Radio relay networks
HH	Local call
I	Demonstration
K	Public transport
L	Subscriber installations, public mobile services, stand-by links
M	Navigation (in ports, on the Rhine, etc.)
N	Tests and research
O	Not allocated
P	Public security services (Police, customs, etc.)
Q	Entries not falling within other categories on this list (cordless microphones, etc.)
R	Ancillary broadcasting services (studio, news reporting)
S	Rescue services (ambulances, doctors, water and mountain rescue)
T	Other services provided by telecommunications administrations
U	Industrial operators
V	Road traffic service
W	Taxi and car hire firms
X	Other private services
Y	Reserved specific applications, not allocated
Z	Other private multiple-use networks

These codes can be combined (maximum two characters):
e.g. XP- private police service

Appendix 8 to Annex 2 A**FIELD 4A : ABBREVIATIONS NORMALLY USED WHEN THE NAME OF THE STATION EXCEEDS 20 CHARACTERS AND CODES**

<u>Abbreviations</u>	<u>Explanation</u>
B	Bay
BRDG	Bridge
C	Cape
CL	Central
CP	Camp
CY	City
DPT	Department
E	East
ET	State
FT	Fort
FIR	Fire Tower
GF	Gulf
GR	Grand
GT	Great
HLL	Hill
HR	Harbour
I	Island(s)
INTR	Usage in the whole country
JN	Junction
L	Lake
LSTN	Light station
MT	Mount
MTN	Mountain(s)
N	New
NO	North
NTL	National
PK	Peak
PMPSTN	Pump station
PT	Port (see HR)
RV	River
S	Saint
STN	Station
SO	South
TR	Tower
V	Vila, Villa, Ville
VLV	Valley
W	West

If additional abbreviations are required, use those listed in Appendix 7 (Section 9.7) of the Radiocommunication Data Dictionary

Appendix 9 to Annex 2 A**FIELD 13Y : STATUS OF CO-ORDINATION**

- A For information : the assignment described is not submitted to a co-ordination procedure and to any protection requirement.
- B Request for agreement.
- C Agreed without reservation.
- D Temporary status: Coordination subject to operational tests to show that coexistence is possible.
- E Agreement on a non-interference basis (NIB); revocation of the agreement and any request to cease the emissions in question requires proof that harmful interference has been caused to assignments whose status has already been established, which should normally be described in an associated notice.
- F Agreed, subject to a requirement identical or analogous to the requirement of RR 4.4. (Protection of primary allocated services)
- G Agreed, without any reservation as to interference which may be caused by the assignment described; the applicant is, however, informed that there is a risk of interference from assignments whose status has already been established, and that the responsibility for any such risk is his; one or more associated notices may be sent.
- H E+G
- M Request for agreement following a modified co-ordination after an answer coded E, G, H or Z.
- P Assignment according to preferential frequency agreements (1.3.2 of the Agreement) or geographical network plans (1.3.5 of the Agreement) or shared frequency agreements (1.3.3 of the Agreement) or frequencies using preferential codes (1.3.6 of the Agreement) or frequencies used on the basis of arrangements between operators (1.3.7 of the Agreement).
- R Deletion of co-ordinated assignment.
- W Withdrawal of the co-ordination request.
- Z Request for agreement refused.

Appendix 10 to Annex 2 A**FIELD 9D : POLARIZATION****SYMBOLS USED TO INDICATE POLARIZATION**

Polarization	Symbol	Definition
Horizontal linear	H	The electric field intensity vector is in the horizontal plane.
Vertical linear	V	The magnetic field intensity vector is in the horizontal plane.
Right - hand slant	SR	The electric field intensity vector is in the plane rotated 45 degrees clockwise from the vertical position, as seen from the transmitting point.
Left – hand slant	SL	The electric field intensity vector is in the plane rotated 45 degrees anti-clockwise from the vertical position, as seen from the transmitting point.
Right - hand circular or direct	CR	The electric field intensity vector, observed in any fixed plane, normal to the direction of propagation, whilst looking in the direction of propagation, rotates with time in a right-hand or clockwise direction
Left – hand circular or indirect	CL	The electric field intensity vector, observed in any fixed plane, normal to the direction of propagation, whilst looking in the direction of propagation, rotates with time in a left-hand or anti-clockwise direction
Dual	D	When substantially equal-amplitude vertically- and horizontally-polarized components are radiated without particular control of the phase relation between them. Typically, the vertically-and horizontally polarized sources may be displaced one from the other so that the resultant polarization varies between circular and slant, according to the azimuth angle.
Mixed	M	The collective term applies when both vertical and horizontal components are radiated, embracing slant circular and dual polarization.