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SERIES E: OVERALL NETWORK OPERATION, TELEPHONE SERVICE, SERVICE OPERATION AND HUMAN FACTORS

Operation, numbering, routing and mobile service –
International operation –
Maritime mobile service and public land mobile service

Telephone/ISDN numbering plan for the mobile-satellite services of INMARSAT

Reedition of CCITT Recommendation E.215 published in the Blue Book, Fascicle II.2 (1988)

NOTES

1 CCITT Recommendation E.215 was published in Fascicle II.2 of the *Blue Book*. This file is an extract from the *Blue Book*. While the presentation and layout of the text might be slightly different from the *Blue Book* version, the contents of the file are identical to the *Blue Book* version and copyright conditions remain unchanged (see below).

2 In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Recommandation E.215

TELEPHONE/ISDN NUMBERING PLAN FOR THE MOBILE-SATELLITE SERVICES OF INMARSAT

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1 Introduction

1.1 *Purpose*

The purpose of this Recommendation is to specify a telephone/ISDN numbering plan for mobile earth stations in systems operated by the International Maritime Satellite Organization (INMARSAT). Such systems may include maritime and aeronautical satellite systems. In the future the range of mobile satellite systems may also include satellite systems for other applications.

1.2 *Terminology*

The telex numbering plan for INMARSAT is contained in Recommendation F.125. Recommendations E.215 and F.125 are designed to be as similar as possible.

The following terms are used in this Recommendation.

1.2.1 **ship station identity**

As defined in the Radio Regulations, Appendix 43. See also Recommendation E.210.

1.2.2 **INMARSAT mobile international number**

The number following the international prefix which identifies terminal equipment connected to an *INMARSAT* mobile earth station for access from a public network.

1.2.3 **INMARSAT mobile number**

The part of the *INMARSAT* mobile international number which follows a country code allocated to the INMARSAT system.

1.2.4 *Other definitions*

For definition of terms such as maritime mobile-satellite service, aeronautical mobile-satellite service, ship earth station, etc., see the Radio Regulations.

1.2.5 *On-board identification digits*

These digits are the part of the mobile earth station number used for identifying:

– a specific terminal equipment on board;

– a specific mobile earth station.

1.3 *Basic considerations*

The considerations which form the basis of the numbering plan are:

1.3.1 that it shall be possible to identify an *INMARSAT* mobile earth station uniquely from the *INMARSAT mobile number*;

1.3.2 that the *INMARSAT mobile number* should have a format where the same number could be used for access from all types of public networks;

1.3.3 that the number of three-digit country codes required for supporting future INMARSAT requirements should be as few as possible;

1.3.4 that different routings could be used for calls to mobile earth stations designed to different INMARSAT system standards;

1.3.5 that Administrations and INMARSAT could apply different charging and accounting rates to different INMARSAT system standards;

1.3.6 that the numbering plan should provide capacity for on-board identification or direct access to a specific terminal equipment connected to a mobile earth station, e.g. on board a ship;

1.3.7 that the numbering plan should support access to multi-channel mobile earth stations;

1.3.8 that the new mobile earth station numbering plan should incorporate numbering plan(s) already in use for the INMARSAT Standard-A system;

1.3.9 that the length of the *INMARSAT mobile international number* should comply with Recommendation E.164 (E.163) and will initially be limited to 12 digits (see also Recommendation E.165);

1.3.10 that, for maritime satellite applications, the ship earth station numbering plan should support access to several ship earth stations in the same ship within one *ship station identity*;

1.3.11 that the radio regulations make provision for the allocation of additional MIDs for a specific country when necessary.

2 Format of INMARSAT mobile international number

The general format of the *INMARSAT mobile international number* is:

$$CCC\ T\ X_1 \ldots X_k$$

where CCC is a three-digit country code allocated to INMARSAT and $T\ X_1 \ldots X_k$ is the *INMARSAT mobile number*. The format of the *mobile earth station number* is given in § 4.

3 Telephone/ISDN country codes for INMARSAT applications

Telephone/ISDN country codes for INMARSAT applications are given in Table 1/E.215.

TABLE 1/E.215

Telephone/ISDN country codes for INMARSAT applications

Country code	Application
871	Atlantic Ocean Region, INMARSAT
872	Pacific Ocean Region, INMARSAT
873	Indian Ocean Region, INMARSAT

4 Format of INMARSAT mobile number

4.1 *General format*

The general format of the *INMARSAT mobile number* is

$$T\ X_1X_2 \ldots X_k$$

where the digit T is used for discrimination between different INMARSAT systems.

The formats used for the various INMARSAT systems are defined below. The values of the T digits are summarized in Table 2/E.215.

The T digits represent a limited resource and a new T digit should therefore only be allocated when necessary for technical or operational reasons.

The CCITT Secretariat would be responsible for co-ordinating the allocation of new T digits with the competent Study Groups.

TABLE 2/E.215

Value of T digit for various applications

T digit	Application
0	Group call in INMARSAT Standard-A, see § 4.2.2
1	Ordinary call in INMARSAT Standard-A, see § 4.2.1
2	Reserved for future use
3	Ordinary call in INMARSAT Standard-B, see § 4.3
4	Ordinary call in INMARSAT Standard-C, see § 4.4
5	Ordinary call in INMARSAT aeronautical system, see § 4.5
6	Reserved for future use
7	Reserved for future use
8	Expedient access to special service terminations in INMARSAT Standard-A, see § 4.2.3
9	Reserved for future expansion, see § 4.6

4.2 *Formats for INMARSAT Standard-A system*

4.2.1 *Ordinary calls*

The number format used for ordinary calls to ship earth stations in the INMARSAT Standard-A system is as follows:

$$1\ X_1X_2X_3X_4X_5X_6 \text{ (7 digits)}$$

where 1 corresponds to the T digit and the digits $X_1X_2X_3X_4X_5X_6$ are allocated to ships by INMARSAT.

The length of the *INMARSAT mobile number* will be 7 digits, making the length of the *INMARSAT mobile international number* equal to 10 digits.

4.2.2 *Group calls*

For group calls, the *INMARSAT mobile number* takes the following format:

$$0\ X_1X_2X_3X_4X_5X_6X_7X_8 \text{ (9 digits)}$$

where 0 corresponds to the T digit and X_1 through X_8 takes values as shown in Annex B.

The length of the *INMARSAT mobile number* will be 9 digits making the length of the *INMARSAT mobile international number* equal to 12 digits.

4.2.3 *Access to special service terminations on board the ship*

In order to handle automatic data and facsimile calls in the INMARSAT Standard-A system, the following format is proposed (see also Recommendation E.216):

$$8\ Y\ 1\ X_1X_2X_3X_4X_5X_6 \text{ (9 digits)}$$

where 8 corresponds to the T digit, the digits X_1 through X_6 take the same value as in § 4.2.1 and the digit Y determines the service termination. Table 3/E.215 lists the values of digit Y for various applications.

TABLE 3/E.215

Values of digit Y for various applications

Y digit	Application
0	Reserved for future use
1	Facsimile, group 3
2 (Note)	Virtual call packet mode data service, Recommendation X.25
3 through 9	Reserved for future use

Note – The number 8 2 1 $X_1X_2X_3X_4X_5X_6$ is not available for subscriber dialling in the PSTN or ISDN. The number will be used by interworking units between packet switched public data networks and the PSTN in order to forward data calls to mobile ship earth stations.

Note 1 – The *INMARSAT mobile international number* will then have the following format:

$$\text{CCC}\ 8\ Y\ 1\ X_1X_2X_3X_4X_5X_6 \text{ (12 digits)}$$

Note 2 – The digits Y 1, etc. need not be analyzed in the international network for routing or charging purposes.

4.3 *Formats for INMARSAT Standard-B system*

4.3.1 *Ordinary calls*

For ordinary calls to ship earth stations in the INMARSAT Standard-B system, the format shall be initially:

$$3\ M_1I_2D_3X_4X_5X_6Z_1Z_2 \text{ (9 digits)}$$

where 3 corresponds to the T digit and the digits $M_1I_2D_3X_4X_5X_6$ are the first 6 digits of the *ship station identity* MIDXXX000 (see Annex A). The digits Z_1Z_2 may be used for identifying terminal equipment connected to a ship earth station, for discriminating between channels of multi-channel ship earth stations and for discriminating between several ship earth stations on the same ship.

The length of the *INMARSAT mobile number* will be 9 digits, making the length of the *INMARSAT mobile international number* equal to 12 digits.

Special requirements on the allocation of the digits Z_1Z_2 are given in Annex C.

The number format:

$$3\ X_1X_2X_3X_4X_5X_6Z_1Z_2 \text{ (9 digits)}$$

where the digit X_1 may take the values 8 or 9 is reserved for future INMARSAT applications.

The length of the *INMARSAT mobile number* will be 9 digits making the length of the *INMARSAT mobile international number* equal to 12 digits.

4.3.2 *Group calls*

For group calls the *INMARSAT mobile number* takes the following format:

$$3\ 0X_1X_2X_3X_4X_5X_6X_7$$

where the digits $0X_1$ through X_7 take values as shown in § B.2.3.

The length of the *INMARSAT mobile number* will be 9 digits making the length of the *INMARSAT mobile international number* equal to 12 digits.

4.3.3 *Future extension of the number*

The *INMARSAT mobile number* may be extended to 12 digits when the number capacity of the international network is increased (see Recommendation E.165). This is for further study. Annex C proposes a method by which this expansion can be made in order to allow two number lengths to coexist on the same T digit.

4.4 *Format for INMARSAT Standard-C system*

4.4.1 *Ordinary calls*

For ordinary calls to ship earth stations in the INMARSAT Standard-C system, the format shall be initially:

$$4\ M_1I_2D_3X_4X_5X_6X_7X_8 \text{ (9 digits)}$$

where 4 corresponds to the T digit and where at least the digits $M_1I_2D_3X_4X_5X_6$ are part of the *ship station identity*. The digits X_7X_8 may also be part of the *ship station identity* or be used for discrimination between several ship earth stations on the same ship. In the latter case, X_7X_8 becomes Z_1 and Z_2 and the principle of Annex C should be followed.

The number format:

$$4\ X_1X_2X_3X_4X_5X_6X_7X_8 \text{ (9 digits)}$$

where the digit X_1 takes the values 8 or 9 is reserved for INMARSAT applications.

The length of the *INMARSAT mobile number* will be 9 digits, making the length of the *INMARSAT mobile international number* equal to 12 digits.

4.4.2 *Group calls*

For group calls, the *INMARSAT mobile number* takes the following format:

$$4\ 0X_1X_2X_3X_4X_5X_6X_7$$

where the digits $0X_1$ through X_7 take values as shown in § B.2.3.

The length of the *INMARSAT mobile number* will be 9 digits making the length of the *INMARSAT mobile international number* equal to 12 digits.

The group call facilities in the Standard-C system are described in Supplement No. 3 of Fascicle II.4.

4.4.3 *Future extension of the number*

For maritime satellite applications, the *INMARSAT mobile numbers* used in the INMARSAT Standard-C system may be extended to 12 digits when the numbering capacity of the international network is increased (see Recommendation E.165) in a way similar to those of the Standard-B system (see § 4.3.3). This is for further study.

4.5 *Format for INMARSAT aeronautical system*

The general format of numbers in the INMARASAT aeronautical system is as follows:

$$5\ X_1X_2X_3X_4X_5X_6X_7X_8 \text{ (9 digits)}$$

where 5 corresponds to the T digit.

The format of the digits X_1 through X_8 is still to be determined.

The length of the *INMARSAT mobile number* will be 9 digits, making the length of the *INMARSAT mobile international number* equal to 12 digits.

4.6 *Future INMARSAT standard systems*

T digits should be allocated for each new INMARSAT standard system in the future. If an earlier system is taken out of service, T digits allocated for that system may be reallocated to new systems.

If the capacity provided by the T digits of Table 2/E.215 is not sufficient, then further capacity may be made available by using T = 9 followed by an additional digit (U) as follows:

$$9\ U\ X_1X_2 \ldots X_k$$

where the digits $X_1 \ldots X_k$ identifies the mobile earth station and any extension connected to it. The digit U is used to identify new INMARSAT systems or for technical and operational reasons.

The CCITT Secretariat would be responsible for co-ordinating the allocation of new U digits with the competent Study Groups.

5 Digit analysis

If different routing and/or accounting applies to different INMARSAT standard systems, then the digits CCCT need to be analyzed at international exchanges.

If the routing capacity is increased by using T = 9 (see § 4.6), then the digits CCC9U need to be analyzed.

The above requirements on number analysis are in compliance with Recommendations E.164 (E.163). See also Recommendation E.165.

The digits Y 1, etc., following CCC 8 (see § 4.2.3) need not be analyzed in the international network for routing or charging purposes.

6 Presentation of INMARSAT mobile numbers in directories

6.1 *General*

INMARSAT mobile numbers may be published in separate directories or in separate sections of general directories.

In directories, only the *INMARSAT mobile numbers*, as specified in § 4.1, shall be listed. The country code to be used and instruction for the subscribers should be contained in general parts of the directories.

The use of digits 8 Y in the format for the INMARSAT Standard-A system in § 4.2.3 should also be explained in the general parts of the directories. This information should also include indications as to whether or not these numbers are accepted for calls to one or more ocean areas.

The subject on directories for mobile satellite services requires further studies.

ANNEX A

(to Recommendation E.215)

Use of ship station identification for maritime applications of systems operated by INMARSAT

A.1 *General*

Appendix 43 of the Radio Regulations defines an international identification plan for ships participating in the maritime mobile services. The ship station identity consists of nine digits and is composed as follows:

$$M_1I_2D_3X_4X_5X_6X_7X_8X_9$$

where the digits $M_1I_2D_3$ determine the ship's nationality.

For ships participating in systems operated by INMARSAT, the main part of this Recommendation specifies a format of the *INMARSAT mobile number* as follows:

$$T\ X_1X_2 \ldots X_k$$

The purpose of the digit T is explained in § 4.

For maritime applications, the number can be regarded as being composed of three blocks as follows:

T	$X_1X_2 \ldots X_n$	$X_{n+1} \ldots X_k$
Block 1	Block 2	Block 3

where the digit in block 1 is the digit T, the digits in block 2 are related to the ship station identity as explained below and block 3 contains digits which are used for other purposes (e.g. on-board identification). In some INMARSAT systems, block 3 may be empty.

Note 1 – For the INMARSAT Standard-A system, INMARSAT applies a ship numbering plan which is not related to the ship station identification plan of the Radio Regulations. In this numbering plan the digit T takes the fixed value T = 1.

Note 2 – For INMARSAT Standard-B and C systems, the digit X_1 may take either of the values 8 or 9 for future applications. In this case, the digits in block 2 are not related to the ship station identification plan.

A.2 *Constraints on ship station identification and numbering*

A.2.1 The present number capacity of the PSTN requires that the *INMARSAT mobile number* consist of 9 or fewer digits. When the number capacity of the PSTN/ISDN is increased to 15 digits, then the *INMARSAT mobile number* can consist of up to 12 digits.

Since the same *INMARSAT mobile number* should be used for telex and data transmission services, further constraints may be put on the number length.

A.2.2 The new numbering plan must cater for capabilities as follows:

– provision of a reasonable on-board identification capacity for calls to ship board terminal equipment connected to the ship earth station;

– possibility of several ship earth stations on the same ship where all ship earth stations have a number associated with the unique ship station identity of the ship;

– capability of supporting multi-channel ship earth stations.

These capabilities may require digits in block 3 of the *INMARSAT mobile number*, thus reducing the available space for block 2.

A.3 *Application of ship station identity*

A.3.1 *Digit capacity in block 2*

The INMARSAT Standard-A system can only support 6 digits in block 2 because of the addressing capacity on the radio path.

The addressing capacity of INMARSAT Standard-B and C systems on the radio path can cater for up to 9 digits in block 2. However, the limited digit capacity of the terrestrial networks puts the following initial constraints on the number of digits in block 2:

– for the INMARSAT Standard-B system, the initial digit capacity in block 2 is 6 digits to allow sufficient capacity in block 3 for supporting the capabilities listed in § A.2.2 above. In the future (see Recommendation E.165) the capacity of block 2 may be extended to 8 or 9 digits;

– for the INMARSAT Standard-C system, the initial digital capacity in block 2 is 6 digits to allow sufficient capacity in block 3 for supporting the possibility of identifying several terminal equipments connected to a ship earth station and of several ship earth stations on the same ship. In the future, the capacity of block 2 may be extended to 7 or more digits.

A.3.2 *Mapping between the ship station identity and the digits in block 2*

The mapping between the ship station identity and the digits in block 2 is shown in Table A-1/E.215.

TABLE A-1/E.215

Mapping between ship station identity and digits in block 2 of the mobile station number

Ship station identity			XXX XXX 000	XXX XXX 0X0	XXX XXX 0XX
Block 2 mapping	Size of block 2	6 digits	XXX XXX	Mapping not possible	Mapping not possible
		9 digits	XXX XXX 000	XXX XXX 0X0	XXX XXX 0XX

X = any digit between zero (0) and nine (9).
0 = zero (0).

For ship earth stations, the ship station identity is thus derived from the digits in block 2 by adding 0s at the end until the identity consists of 9 digits.

In order to distinguish between *INMARSAT mobile numbers* consisting of 9 and 12 digits (if they coexist), the digit x_7 of the ship station identify (see Recommendation E.210) must take the fixed value 0. This constraint is *not valid* when only 12 digit numbers exist in the future (see also Annex C).

The digit T in block 1 determines the type of ship earth station and, implicitly, the number of digits in block 2. The relationship is shown in Table A-2/E.215. Further details of the number structure is given in the main part of the Recommendation.

A.3.3 Ships equipped with several INMARSAT standard systems

The ship station identity for such ships is the one derived from the ship earth station standard having the smallest size of block 2. This applies only if the numbering systems for the ship earth station standards are related to the ship station identification plan.

TABLE A-2/E.215

Relationship between the digit T and the format of the ship station identity in 12 digit INMARSAT mobile international number

Value of digit T	INMARSAT standard system	Number of digits in block 2	Format of ship station identity
0	A	(Note 1)	(Note 1)
1	A	6	(Note 2)
2	Reserved	–	–
3	B	6	XXX XXX 000
4	C	6	XXX XXX 000
5	Aeronautical	(Note 3)	(Note 3)
6	Reserved	–	–
7	Reserved	–	–
8	A	(Note 4)	(Note 4)
9	Future expansion	Further study	Further study

Note 1 – Group call address. See Annex B for format of group call addresses.

Note 2 – The *INMARSAT mobile number* is not related to the ship station identification plan of Appendix 43, Radio Regulations.

Note 3 – The numbering plan for the Aeronautical Satellite Service is not related to the ship station identification plan of Appendix 43, Radio Regulations.

Note 4 – See § 4.2.3 for the use of this T digit.

ANNEX B

(to Recommendation E.215)

Group call numbering scheme for the INMARSAT system

B.1 *Categories for group call services*

At present, four different categories of group call service have been envisaged within the maritime mobile-satellite service.

B.1.1 *National group calls*

The category is defined to address all ships of the same nationality.

B.1.2 *Fleet group calls*

This category is defined to address all ships within one fleet.

B.1.3 *Selected group calls*

This category is defined to address a number of ships having a community of interest irrespective of nationalities or fleets, and forming a predefined group.

B.1.4 *Area group calls*

This category is defined to address all ships of any nationality located within a predetermined geographical area.

B.2 *Group call formats*

B.2.1 The general group call format is $TX_1X_2X_3X_4X_5X_6X_7X_8$ where the digits $TX_1X_2X_3X_4X_5X_6X_7X_8$ take the values in § B.2.2 for INMARSAT Standard-A and the values in § B.2.3 for other INMARSAT standards.

B.2.2 The group call numbering schemes for the INMARSAT Standard-A system will use eight decimal digits $X_1 \ldots X_8$ following the T digit, with T = 0, allocated as follows:

$M_2I_3D_40_50_60_70_80_9$ National group call

$M_2I_3D_4F_5F_6F_7F_8F_9$ Fleet group call

$0_20_3S_4S_5S_6S_7S_8S_9$ Selected group call

$0_20_30_4A_5A_6A_7A_8A_9$ Area group call

where $M_2 \neq 0$ $M_2 \neq 1$ $F_5 \neq 0$ $S_4 \neq 0$.

For T = 1 or 8, the group call number is not valid.

B.2.3 For INMARSAT standards other than Standard-A, the format of the digits $X_1 \ldots X_8$ is as follows:

0MID $0_50_60_70_8$ National group calls

0MID $F_5F_6F_7F_8$ Fleet group calls

000 $S_4S_5S_6S_7S_8$ Selected group calls

0000 $A_5A_6A_7A_8$ Area group calls

The T digit takes the value allocated for the particular standard in accordance with Table 2/E.215.

Hence, for a fleet group call to a Standard B ship earth station, the format would be:

3 0 MID $F_5F_6F_7F_8$

and for a fleet group call to a Standard-C ship earth station, the format would be:

4 0 MID $F_5F_6F_7F_8$

B.2.4 The MIDs in national and fleet group numbers are those allocated in Table 1 of Appendix 43, Radio Regulations [1].

B.2.5 In accordance with § 4 of the above-mentioned Appendix, the particular MID reflects only the country allocating the group call identity and therefore does not prevent group calls to fleets containing more than one ship nationality. Allocation of selected group numbers should be avoided when the same group could equally well be assigned a fleet group number.

B.2.6 National group numbers and fleet group numbers should be allocated by countries. Selected group numbers and area group numbers as applicable to the INMARSAT system should be allocated by INMARSAT; allocation of such numbers may require cooperation with other organizations.

B.2.7 A country having assigned a national group or fleet group number should notify the Director-General of INMARSAT if those numbers are going to be used within the INMARSAT system.

ANNEX C

(to Recommendation E.215)

Structure of the on-board identification digits in the INMARSAT numbering plan

C.1 *Introduction*

Within the numbering scheme, two digits Z_1Z_2 have been allocated (see §§ 4.3.1 and 4.4.1) to on-board identification. The purpose of these digits is to provide means for identifying different ship earth stations on the same ship, and different instruments, e.g. telephone instrument and a facsimile machine, connected to the same ship earth station.

Also, the present length of the *INMARSAT mobile international number* is limited to 12 digits. After 1996 it will be possible to increase the number length to 15 digits (see Recommendation E.165).

It is considered that the above aspects can be met by careful selection of the significance and values of Z_1Z_2.

C.2 *Proposed structure*

As outlined earlier, it is necessary for Z_1Z_2 to achieve two identification roles, i.e. station and instrument. It is considered that this can be accomplished by allocating Z_1 to multi-ship earth station identification and Z_2 to multi-instrument identification.

This structure would permit the uniform allocation of numbers to be achieved and would allow the growth of ship earth stations to be independent of the growth of instruments on any one ship earth station.

Further, in order to allow the future expansion of the numbering length, it is proposed that Z_1 should *never* be equal to 0 (zero) and the eighth digit of a 12-digit ship earth station number should always be equal to 0 (zero) as long as these two number lengths coexist for the same value of T digit.

i.e.: T MID $XXXZ_1Z_2$ (9 digits with $Z_1 \neq 0$)

T MID $XXX0XXZ_1Z_2$ (12 digits)

The above approach would then allow the unambiguous identification of 9-digit and 12-digit ship earth station numbers on the same T digit.

Note – The above constraint on the eighth digit is not required in the future when only 12 digit numbers exist in the INMARSAT system.

C.3 *Allocation*

Therefore, from the above, a ship with one ship earth station and one instrument Z_1Z_2 would equal 10. If another instrument were added, then Z_1Z_2 would equal 11 for this instrument.

If a ship had two earth stations of the same standard and one instrument attached to each, then the values of Z_1Z_2 would be 10 for one station, and 20 for the second station. If a second instrument were added to the second station, then the value of Z_1Z_2 would be 21 for this instrument.

Should it be necessary to allocate more than ten instruments per ship earth station, then another value of Z_1 would be allocated to the earth station, e.g. for the tenth instrument Z_1Z_2 would be equal to 19 and for the eleventh instrument 20 would be allocated or the next free value Z_1.

Table C-1/E.215 gives some illustrations of the above allocations.

TABLE C-1/E.215

Examples of Z_1 Z_2 allocation for ship earth stations with the same T digit

Ship earth station	Instrument	Z_1	Z_2
Multi-ship earth stations			
X	Telephone	1	0
Y	Telephone	2	0
Multi-ship earth stations and multi-instruments			
X	Telephone	1	0
	Facsimile	1	1
Y	Telephone	2	0
Z	Telephone	3	0
	Facsimile	3	1
	Telephone	3	2
	Facsimile	3	3
X	Telephone	1	0
	Telephone	1	1
	Facsimile	1	2
	Telephone	1	9
	Telephone	3	0
Y	Telephone	2	0
	Facsimile	2	1
Z	Telephone	4	0

Reference

[1] *Radio Regulations*, Appendix 43, ITU, Geneva, 1982, revised in 1985, 1986 and 1988.

ITU-T E-SERIES RECOMMENDATIONS

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