RECOMMENDATION 491-1

TRANSLATION BETWEEN AN IDENTITY NUMBER AND IDENTITIES FOR DIRECT-PRINTING TELEGRAPHY IN THE MARITIME MOBILE SERVICE

(Question 5/8)

(1974-1986)

The CCIR,

CONSIDERING

(a) that, according to Article 25 of the Radio Regulations, a station shall be identified either by a call sign or by other recognized means of identification, such as a ship station selective call number or signal, or coast station selective call number or signal;

(b) that the call signals described in Recommendations 476 and 625 effectively provide for selective-calling numbers for use with direct-printing telegraph equipment;

(c) that this signal is unique for each station and may therefore be used as its identification;

(d) that the use of this signal makes unattended operation of direct-printing equipment possible;

(e) that it would be convenient if the numbers assigned in accordance with Article 25, Sections V and VI of the Radio Regulations were used in the phasing procedure;

(f) that there is a need for a conversion scheme from numerical identification to the identification signals used in the call signal,

UNANIMOUSLY RECOMMENDS

1. that, in direct-printing telegraphy systems, the call signals described in Recommendations 476 and 625 may be used as identification of a radio station;

2. that the conversion from the numerical identification to the identification signals used in the call signal should be performed according to the Tables in Annexes I and II.

ANNEX I

TRANSLATION BETWEEN A 5- OR 4-DIGIT IDENTITY NUMBER AND A 4-SIGNAL IDENTITY

To translate a number, proceed as follows:

For a 5-digit number let the first digit determine which vertical column in Table I to use. Translate the last four digits to four alphabetic characters as indicated for each digit in the column selected in accordance with the table of conversion as given in Table I.

For a 4-digit number Table II should be used.

Examples:

The 5-digit number 32610 is transmitted as:	Q (RQ) C	X T (RQ)
The 4-digit number 1234 is transmitted as:	X (RQ) Q	K M (RQ)

TABLE I

5-digit numbers										
1st digit		0	1	2	3	4	5	6	7	8	9
2nd digit	0	T	V	V	V	T	T	T	V	V	V
	1	B	X	X	X	B	B	B	X	X	X
	2	U	Q	Q	Q	U	U	U	Q	Q	Q
	3	E	K	K	K	E	E	E	K	K	K
	4	O	M	M	M	O	O	O	M	M	M
	5	I	P	P	P	I	I	I	P	P	P
	6	R	C	C	C	R	R	R	C	C	C
	7	Z	Y	Y	Y	Z	Z	Z	Y	Y	Y
	8	D	F	F	F	D	D	D	F	F	F
	9	A	S	S	S	A	A	A	S	S	S
3rd digit	0	V	T	V	V	T	V	V	T	T	V
	1	X	B	X	X	B	X	X	B	B	X
	2	Q	U	Q	Q	U	Q	Q	U	U	Q
	3	K	E	K	K	E	K	K	E	E	K
	4	M	O	M	M	O	M	M	O	O	M
	5	P	I	P	P	I	P	P	I	I	P
	6	C	R	C	C	R	C	C	R	R	C
	7	Y	Z	Y	Y	Z	Y	Y	Z	Z	Y
	8	F	D	F	F	D	F	F	D	D	F
	9	S	A	S	S	A	S	S	A	A	S
4th digit	0	V	V	T	V	V	T	V	T	V	T
	1	X	X	B	X	X	B	X	B	X	B
	2	Q	Q	U	Q	Q	U	Q	U	Q	U
	3	K	K	E	K	K	E	K	E	K	E
	4	M	M	O	M	M	O	M	O	M	O
	5	P	P	I	P	P	I	P	I	P	I
	6	C	C	R	C	C	R	C	R	C	R
	7	Y	Y	Z	Y	Y	Z	Y	Z	Y	Z
	8	F	F	D	F	F	D	F	D	F	D
	9	S	S	A	S	S	A	S	A	S	A
5th digit	0	V	V	V	T	V	V	T	V	T	T
	1	X	X	X	B	X	X	B	X	B	B
	2	Q	Q	Q	U	Q	Q	U	Q	U	U
	3	K	K	K	E	K	K	E	K	E	E
	4	M	M	M	O	M	M	O	M	O	O
	5	P	P	P	I	P	P	I	P	I	I
	6	C	C	C	R	C	C	R	C	R	R
	7	Y	Y	Y	Z	Y	Y	Z	Y	Z	Z
	8	F	F	F	D	F	F	D	F	D	D
	9	S	S	S	A	S	S	A	S	A	A

TABLE II

4-digit numbers		
1st digit	0	V
	1	X
	2	Q
	3	K
	4	M
	5	P
	6	C
	7	Y
	8	F
	9	S
2nd digit	0	V
	1	X
	2	Q
	3	K
	4	M
	5	P
	6	C
	7	Y
	8	F
	9	S
3rd digit	0	V
	1	X
	2	Q
	3	K
	4	M
	5	P
	6	C
	7	Y
	8	F
	9	S
4th digit	0	V
	1	X
	2	Q
	3	K
	4	M
	5	P
	6	C
	7	Y
	8	F
	9	S

ANNEX II

TRANSLATION BETWEEN A 9-DIGIT IDENTITY NUMBER
AND A 7-SIGNAL IDENTITY

A 9-digit identity number is translated into a 7-signal identity by following the procedure described below:

Step 1 : Divide the 9-digit number by 20 resulting in an integer I 1 and a remainder R1;

Step 2 : If the resulting integer is unequal to zero, divide the integer again by 20 resulting in a new integer (I 2) and a new remainder (R2);

Step 3 : Repeat Step 2 until the resulting integer becomes zero; this will require up to seven divisions;

Step 4 : If the integer becomes zero before seven divisions have been carried out, the remainders yet to be obtained shall be set to zero (e.g. if I 4 is the first integer which is zero, then R5, R6 and R7 will all be zero);

Step 5 : Translate the remainders R1, R2, R3, R4, R5, R6 and R7, into the identification signals IS7, IS6, IS5, IS4, IS3, IS2 and IS1, respectively, in accordance with Table III.

A 7-signal identity is converted into a 9-digit identity number by following the procedure described below:

Step 1 : Convert IS1-IS7 to the numerical values R7-R1 respectively using Table III.

Step 2 : The 9-digit identity number is then given by the following formula:

$$\text{9-digit No.} = 20^0R1 + 20R2 + 20^2R3 + 20^3R4 + 20^4R5 + 20^5R6 + 20^6R7.$$

TABLE III

Remainder (R)	Identification signal (IS)
0	V
1	X
2	Q
3	K
4	M
5	P
6	C
7	Y
8	F
9	S
10	T
11	B
12	U
13	E
14	O
15	I
16	R
17	Z
18	D
19	A

Example:

The 9-digit number 364775427 is transmitted as:

Call block 1:	P (RQ) E
Call block 2:	(RQ) A R
Call block 3:	D B Y

364775427 divided by 20 results in I 1 = 18238771 and R1 = 7 → IS7 = Y
18238771 divided by 20 results in I 2 = 911938 and R2 = 11 → IS6 = B
911938 divided by 20 results in I 3 = 45596 and R3 = 18 → IS5 = D
45596 divided by 20 results in I 4 = 2279 and R4 = 16 → IS4 = R
2279 divided by 20 results in I 5 = 113 and R5 = 19 → IS3 = A
113 divided by 20 results in I 6 = 5 and R6 = 13 → IS2 = E
5 divided by 20 results in I 7 = 0 and R7 = 5 → IS1 = P