The Method of Encipherment According to the Crossword Pusale System Used by the Hasi Intelligence Service

The Masi Information Service abroad employs short wave transmitters for quick transmission of reports. These transmitters are installed everywhere, are operated by special, trusted men who have a large circle of agents cooperating with them. These short wave stations, whose range in Europe normally does not exceed 800 kilometers, maintain contact with a central effice (Embassy or special consulate) which in its turn forwards the report to central effices in Berlin.

To keep the content of these reports secret, they are enciphered and, indeed, by a special process. Practically the uniniated cannot decipher such a key because the ordinary secret code is not employed. This encipherment is based upon the system of the crossword pussle and was only introduced in 1936. The originator and the addresses have the same issue of a crossword pussle magasine, which is very rarely changed because this is hardly necessary. Each correspondent has his call or identification sign.

The periods for transmitting are usually the night hours, because of more favorable conditions. Only in times of stress are several hours during the day kept free for each individual station. Each originator has two wave lengths at his disposal which, however, are only changed at definite predetermined times.

Now is a message enciphered?

- (1) The sender chooses any crossword pushe from his magazine.
- (2) In order to be able to use this pussle again, or in order

Declassified and approved for release by NSA on 12-19-2013 pursuant to E.O. 13526

to avoid arousing suspicion in case his dwelling should be searched and the magazine found, he works with transparent paper, which is laid over the pusals.

Now the real work begins.

(3) Above the pusse the individual cells including the black cells are numbered consecutively from left to right.

- t:	2	3	4	5	6	7	8	_1_	10	- 11	ાર	13	14	15	16	17	18.
	Т																
1 1	- 1		1 1	,													

(4) The plain text is inscribed, one letter in each cell. (Ch is replaced by Q, J or Y by I).

Ī	E	N	G	L	A		7	Œ	M	I	S	7	B	J	0	7	C	E
Ī	N	Τ	R		Α	T	E	Α	٦		F		0	R	J	E		S
I	T	O	G	W	1	2	+	Н		E	W	Α	R					

- (5) Mulls are written in the black cells, partly to simplify enciphering and partly to make decipherment difficult for the enemy.
- (6) Now the letters, including those in the black cells, are nounted.
- (7) The heading of the message is determined and this is done in five groups of figures. Each group consists of a four-place number to avoid errors.

To make the heading easy to read, a long parallelogram is divided into

five boxes and the individual figure groups are entered in these successively:

(a) Date, (b) Time of sending, (c) Number of letters in the message, (d) Page
in the crossword pussle book, (e) Page in the key.

1					
ı	3105	2315	0049	0004	0012
1		- • -		•	

Encipherment

(1) On the page of the key as many consecutive words are selected as there are calls in the horisontal line of the plain text crossword pussle, beginning at the top of the page and including any caption which may be present. Only complete words, no abbreviations, no single letters and no figures are used.

If the page is divided, as a matter of principle the left side is taken unless some special arrangement has been made.

(2) The initial letters of the words selected are written out in order, beginning at the top.

GRECVVANGHMILRBNF1
615 43 17 18 1 13 78 129 11 16 2 14 5 10

(3) When that has been done, the letters are numbered serially according to their accurrence in the alphabet in such fashion that the first letter of the alphabet is called number one. If the first letter is missing, the next following one gets this number. If any letter occurs more than once, on its second occurrence it gets the next consecutive number,

etc. The highest number must coincide with the number of cells. (Example of case 2, the letters 0 and W above.)

(4) When this has been completed, the plain text letters in the rectangle are transcribed according to the numerical key. For convenience of control and accuracy, the text is then transcribed in groups of five letters, five groups to the line.

The total number of letters must check with that given in the heading.

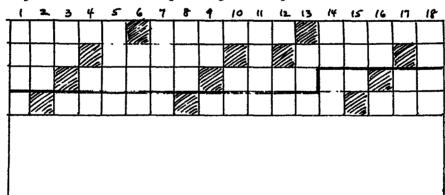
NETOC LCWGR GCFEN TMLHU DETEA ESBOR SFWDA HNENT OCRAA IATN

(5) The text thus enciphered is transmitted by short wave as follows: The sender at the appointed time first sends his international call sign, then his recognition signal in plain, repeating several times. After that comes the heading, then the message, then finally the signing off signal (international). After one minute, the whole is repeated.

Deciphering

This is simply the reverse of the above.

- (1) When such an enciphered message has been received the letters are arranged in groups of five to have a good check and to facilitate work.
- (2) The heading gives the page of the key and the page of the crossword pusale as well as the letter count.
- (3) First turn to the page of text and lay transparent paper over it and above the pussle number the horisontal cells (See Fage two Paragraph 3). Thus, one knows at once how many latters are required on the key page and then in what order the latters and the plain text are to be inscribed in the crossword pussle pattern, beginning at the top.
- (4) The number of squares is counted, corresponding to the check number in the heading and immediately blocked off in pencil to prevent making any mistakes in deciphering. **Example:



- (5) On the key page the letters are written out vertically, beginning at the top and numbered in alphabetical order. (See page 2, Encipherment, Section 2.)
- (6) Now the letters of the enciphered message are entered corresponding to the numerical key in the cells of the crossword pussle

Ī

REF ID: A69065

pattern, beginning with the column whose number comes first on the key page.

(7) When all the latters have been entered, those falling in the black cells are crossed off so as not to interfere with the reading of the plain text.

Enclosed is a crossword pussle magazine, according to which the explanations have been made.

As a matter of principle, only 110 letters are to be used for any one message. If the message contains more letters than this, it is broken up into two parts, each with its own heading.

* We do not have the enclosure referred to.

REF ID: A69065

SECRET

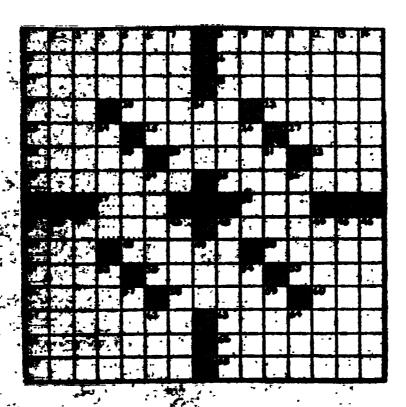
	2	3	4	5	6	7		8	9	10	11	Ú2	13	14		15	16	17	18	17	50	21
22	-	┝┷	-	-	 	╌		23	┼─	╁	_		 	├─		24	 		 	├	 	├
			L			<u> </u>	200008		<u> </u>	<u> </u>	<u></u>		<u> </u>	<u> </u>			<u> </u>	<u> </u>	<u> </u>	<u> </u>		L
15		ì		i				26	1		'	}	1			127		ł				
18	├	├─	53353	29	 	├	<u>190020</u> [30	├──	-	03333	31	-		 	32	 	-	├	12.11	33	 ``	╀─
	J	Ĺ	35		<u> </u>	<u>L_</u>			<u>L</u>			<u> </u>		L		<u> </u>		<u> </u>			1	<u>!</u>
A			35			36				37				38				39	40			
ļī —	┤	├			42	├			43 43		28888	44	45 45		-		46	5086	47	<u> </u>	├	-
	<u> </u>	4				L				_					L]	1			1	
18				49			50				31		52 .				53	54	5		П	П
	3000	8880	55			56 56	95000		57	-		1000000 58	 	-4-	28888	39		-	-	1886	23355	288
							BOOK OF	1372.5		<u> </u>	L		<u> </u>						<u> </u>			
.0	181	62					b3	64			65					46				67	68,	M
70	 			1000	5	 	-		2200	72 172		├		73	174 174		-	-		75		-
	İ							1:			١					l		l		<u>.</u> ا	Ĺ.,	
16				77	-		78	•	79				80		81				82		1	1
33	 	 			CANA	13332 64			 	ļ	100000	85		36 56		150.50	87	35 55	<u> </u>	ببد	; _	↓_
	,					-			1			0.5		-			"	90	1	•	•	
/9				90	91				92		93					94		75				1
)6					98			99	000	100			00000	101			102	<u> </u>		278	 	_
76			"	105	70	i '		"		~		Ì	108	' ' '	Ì	ļ		l		~3	l	
04				105				106	77				108				1		107			
COCO	VICE 1	٧٠,,- ١٧,,-	IK)						 	<u> </u>		112		120000		113			-	3222	00000	
			~					***	١.	•					1530	113	ļ					
14	115	116					117		_		118			119	130		121			122	123	124
				e de la							DOMES -	13.0				130					<u>-</u>	
25					126	127			1	128		127				150			131			
32	-			133	*****	134		 	****	135	136		2333	137	_	_		138		-	_	_
									⋘	<u> </u>		ł					0.00					_
39				140	141				142	1			43				144			145	İ	
46	-		147				****	148	_			149			*****	150			151	-	<u> </u>	-
																		i				
52								153								154						
55								156				 				157	<u> </u>					-
	}						₩₩]	}		j			****							}

SECRET

Wash. Post Jan 12, 1941

REF ID:A69065

SECRET



SECRET

Wash. Post Jan 18, 1941