The Method of Encipherment According to the Crossword Puzzles System Used by the Nazi Intelligence Service

The Nazi 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 office (Embassy or special consulate) which in turn forwards the report to central offices in Berlin.

To keep the content of these reports secret, they are enciphered and, indeed, by a special process. Practically the uninitiated cannot decipher such a key because the ordinary secret code is not employed. This encipherment is based upon the system of the crossword puzzle and was only introduced in 1936. The originator and the addressee have the same issue of a crossword puzzle magazine, 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.

How is a message enciphered?

(1) The sender chooses any crossword puzzle from his magazine.

(2) In order to be able to use this puzzle again, or in order
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 puzzle.

Now the real work begins.

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

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
</tr>
</thead>
</table>

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

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ENGLAND MUST CONCE
TRATE ALF FORCES
TO WIN THE WAR
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(5) Nulls 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
counted.

(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 puzzle book, (e) Page in the key.

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| 3105 | 2315 | 0049 | 0004 | 0012 |
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Encipherment

(1) On the page of the key as many consecutive words are selected as there are cells in the horizontal line of the plain text crossword puzzle, 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.

G R E C V V A N G H M I L R B N F I
6 1 5 4 3 1 7 1 8 1 1 3 7 8 1 2 9 1 1 1 6 2 4 5 1 0

(3) When that has been done, the letters are numbered serially according to their occurrence 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 O and V 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.

NE TO C LC WGR GC FEN TMLHU DETEA ES BOR SF WDA HN EN T OC RA A 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 puzzle as well as the letter count.

(3) First turn to the page of text and lay transparent paper over it and above the puzzle number the horizontal cells (See Page two Paragraph 3). Thus, one knows at once how many letters are required on the key page and then in what order the letters and the plain text are to be inscribed in the crossword puzzle 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:

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   1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18
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(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 puzzle.
pattern, beginning with the column whose number comes first on the key page.

(7) When all the letters 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 puzzle 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.