FOCUS Support System for End Users, "FRIEND"*

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1 Background and Aims of FRIEND Development

The aims of recent computer-aided systematization efforts have shifted from the operational-level jobs to planning and management-level, and since the latter are frequently non-repetitive, it is difficult to provide appropriate programs beforehand. Particularly important as a means of solving this problem is end user language (EUL). Since this language has been developed for non-specialist end-users, any one can easily use it, and the end-user can take out necessary information when necessary from the computer. Kawasaki Steel Corp. has introduced an EUL called "FOCUS" from Assist Co. in all its steelworks and made EUL available to its user divisions.

However, EUL itself still has problems, though its use has been made easy, and it cannot be used without being familiar with the specialized knowledge and restrictions specific to computers. This has hindered its wider acceptance.

FRIEND (Focus report information support system for END-users) was developed to solve this problem. FRIEND offers improved service to users by making FOCUS easier to use and solves the problem of data base security and system resource utilization. **Figure 1** summarizes the background and aims of the development of FRIEND.

2 Outline of FRIEND

FRIEND's direct user-support functions include the following:

(1) Compilation and registration of FOCUS requests.
(2) Grammar check of FOCUS requests.
(3) Instruction of executing tabulation processing and reference to execution condition.
(4) Outputting of tabulation results.

Figure 2 shows user's procedures for FRIEND. The user make a rough design of a desired list (items and their layout) and prepares a "request (a sort of program)". Then the user registers the request on the computer using an on-line terminal. If necessary, the user checks the grammar, and if there is any error, corrects it. The registered request is controlled by FRIEND, and can be used repeatedly. Further, portions of the request can be revised and appropriately used in other tabulation.

Next, the user designates the method of execution for the tabulation processing. Depending upon the urgency, the user can select "instant," "reserved (time and date designated)," and "normal." Depending upon this instruction, FRIEND automatically executes tabulation processing and outputs the results. Various methods are available for outputting tabulation results, and include outputting to the terminal CRT screen or the printer, or transfer in the form of a file to a personal computer.

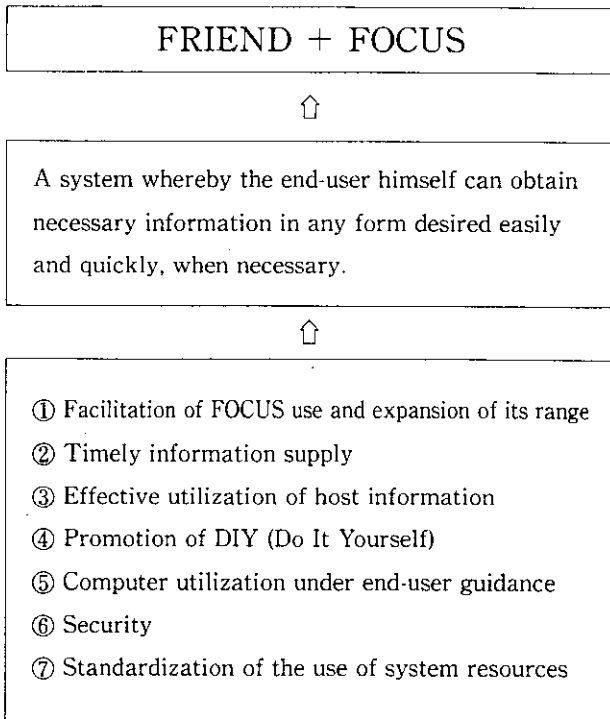Part of the on-line screen during a typical operation is shown in **Fig. 3**.

FRIEND + FOCUS

⇧

A system whereby the end-user himself can obtain necessary information in any form desired easily and quickly, when necessary.

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① Facilitation of FOCUS use and expansion of its range

② Timely information supply

③ Effective utilization of host information

④ Promotion of DIY (Do It Yourself)

⑤ Computer utilization under end-user guidance

⑥ Security

⑦ Standardization of the use of system resources
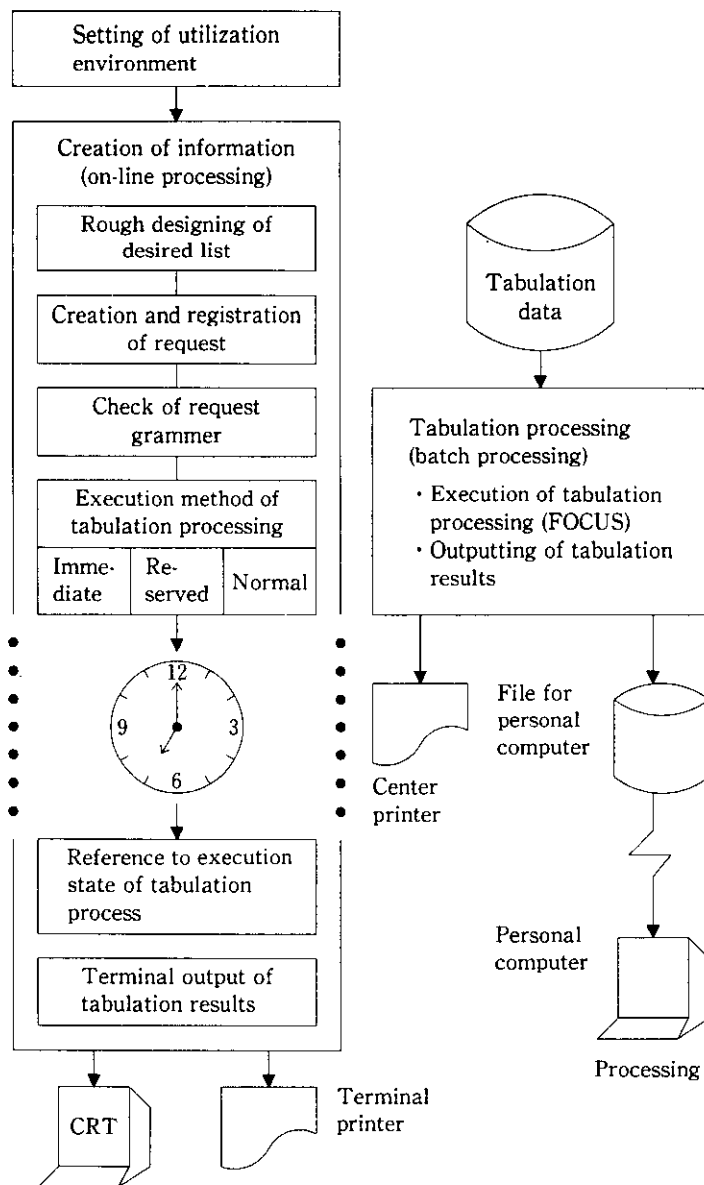
Fig. 1 Background and aims of FRIEND development

Fig. 2 Conceptual diagram of FRIEND

3 Features of FRIEND

The major aims of FRIEND are as follows:

(1) Improvement in service for FOCUS utilization to the user.

(2) Solution of problems in computer center operation (security, effective use of computer resources, etc.)

Thus FRIEND has skillfully harmonized the needs of users and those of information system divisions.

Features of FRIEND, which are based on the above-mentioned aims, are as follows:

(1) Facilitation of Tabulation Processing Request

Although tabulation processing is carried out by batch processing, users can request tabulation processing as part of ordinary on-line system, without the necessity of registration of computer utilization environment, etc.

(2) Facilitation of Creation of FOCUS Request

By quoting an existing analogous request and by revising the necessary portions, it is possible to create a new request. It is also possible to carry out a verification test of such newly registered requests.

(3) Elasticity of Execution of Tabulation Processing

Three execution modes are available for tabulation processing: instant, reserved (time and date are designated), and normal. When the user selects one

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        * * *   FRIEND Menu  * * *

Request Registration     01 New
                         02 Renewal (Revision or deletion)
                         03 Request copying
                         04 FOCUS grammar check

Execution Instruction    11 Immediate execution
                         12 Reserved execution
                         13 Normal execution
                         14 Terminal output

Reference                21 Reference to execution state
                         22 List of registered requests
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        * * *  FOCUS Request Registration  * * *

         Material No.15    Staff List of XX Dept.

        Line designation
  N O                  << Contents of Requests >>
  0 0 1                 TABLE  FILE  JEAAK01
  0 0 2                 HEADING  CENTER
  0 0 3                 * * * Staff List of XX Dept. * *
  0 0 4                 PRINT   KA001
  0 0 5                            JSIMEI
  0 0 6                            KA002
  0 0 7                            KA003
  0 0 8                            KA004
  0 0 9                            KA005
  0 1 0                            KA006
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        * * *   Reserved Execution Instruction   * * *

  << Material No.15  Staff List of XX Dept. >>

  I : Execution Conditions

  Designated time    |8 7|1 2|0 8|       |1 9|0 0|
  and date

  Output media      |LP|              (HP, LP, PC)

  II : Data Input Columns at Execution

     ITEM1  |1 0|           ITEM2  |2 0|

     ITEM3  |1 2 0|
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Fig. 3 Sample of FRIEND terminal CRT screen

of these modes according to user's needs, tabulation processing will be executed without the intervention of the computer center operator. If normal execution is designated, the request program can be run during the idle computer time (at night or on holidays, for instance), permitting more effective use of computer resources.

(4) Flexibility of Outputting Methods of Tabulation Results

Three output modes are available for tabulation results: output to terminal unit (CRT screen or remote printer), to the center printer, and file transfer to a personal computer. At the time of output to the center printer, distribution destinations are printed at the head of slips to facilitate and ensure correctness of list distribution.

(5) Security

Consideration is also given to security measures. Functions of the FRIEND system require permission to use FRIEND itself, protection of data and FOCUS requests, eliminating certain kinds of error and preventing unauthorized data access.

4 Working Environment of FRIEND

FRIEND is available in two packages, an IBM edition and FUJITSU edition. The respective concrete hardware/software conditions are as listed below.

(1) IBM Edition
    Hardware: IBM 3090, 308X, and 4381
    Software: MVS/SP-JES2, IMS/VS, and COBOL
(2) FUJITSU Edition
    Hardware: M-780, 760, 380, and 360
    Software: OS IV/F4-MSP, TSS, PFD, IPF, COBOL,
             DSPRINT or APS