Fguard for Windows

The Fguard for Windows is one of the anti-virus programs of the ALWIL Software company designed for real-time guarding of the system Windows 3.1 and of its more advanced versions.

The program is solving one of the most crucial problems of Windows, i.e. protection of the system against unexpected or unauthorized effects of the virus activities or the ones of the user himself. A unique progam is concerned here, able of solving even such problems like the protection of the system upon attempts to format the disk, attempts to read the hard disks partition table, and many other vital activities usually omitted by other anti-virus systems within the area of the Windows.

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Program installation

The installation of the program is done during the course the AVAST! system installation. Its independent installation is not possible due to the compression of individual files on distribution floppies.

The installation itself is done in two steps. The first of them is the program working itself under DOS, as well as installing the other programs that are to be run under DOS. After acknowledging the question, if also the programs to be run under Windows are to be installed, even the files necessary for completing the installation within the system of Windows will be installed.

The installation within the system of Windows rests itself in running the installation program called SETUP.EXE which forms a standard part of the package supplied, and is ready for installation of the AVAST! system for DOS.

Here, at this stage of installation, the Fguard for Windows will be integrated into the group of AVAST! which is created automatically, and into the Windows Startup group as well.

How does it work?

Seen from the user's point of view, the Fguard for Windows is working the same way as the Fguard for DOS. Its internal operation is, however, totally different from that of the program for DOS.

The Fguard for Windows is not actually only a single program. Its name, in fact, designates several files and parts of a code, communicating with each other, that are fully interdependent.

On the side of the DOS operating systems there are the programs Fguard and Rguard containing some parts of the code, necessary for proper initialization and mutual communication between both systems. The intermediate member is formed by the AVAST.386 file, 32-bit program, intermediating the communication between operating systems, and in some cases, printing out the reports about operation just being executed. The last part is the FGW.EXE, the 16-bit program for the Windows system, responsible for communication with the user through the standard interface of the system. Even the dynamic library FGWLIB.DDL is playing here its role, since it contains the administration of some interrupts, and the routines that must be permanently resident in the memory.

So that the Fguard for Windows might work, the resident programs must be loaded in memory still before the start-up of the Windows system. According to what is to be protected within the system, it must be either Fguard or Rguard or both of them.

All protection within the Windows 3.x system is entrusted to the programs working under DOS. This follows from the fact that Windows 3.x is actually fully dependent on the system of files in DOS. All the other programs serve for prompt and safe transfer of information into Windows, for displaying a message, and sending off the reply back to the program in DOS.

- Running the program
- Running the Windows
- Program termination
- Cooperation with DOS

Running the program

The Fguard program is the standard Windows' application. It can be started the same way as any other programs designed to be run in this environment. If we attempt to run it from DOS, the program will write out its heading and inform you of this fact.

Upon starting the program, you should already have installed in DOS the Fguard for DOS, Rguard for DOS, or both of them together, otherwise the Fguard for Windows will write out the error report and terminate its activity. All these programs must have the same number of version, otherwise the program will fail to start.

If you want to make use of this HELP facility, the corresponding help file (FGW.HLP) must be available there in the same directory as the program itself. As long as you use the installation program, you need not to take care of this condition, and all files will be installed into a single directory.

The program Fguard for Windows is recommended to be run simultaneously with starting the Windows system, this way the proper functions of the programs Fguard and Rguard together with the Windows system can be warranted, and a crash of the system and thus also the loss of data excluded.

Running the Windows

The files of the Fguard and Rguard programs do not affect the starting up of the Windows system in the standard and real modes of operation. They cannot be used in these modes at all. The AVAST.386 file is absolutely not recognized as a part of Windows, and the program of FGW.EXE, while being started, is testing the system configuration, and will refuse to operate in these modes.

Several conditions must be met for the enhanced mode. If having either of the programs of Fguard, Rguard, or both of them simultaneously installed in memory, they must be in the same directory along with the file AVAST.386 as well. If this condition is not kept, one of the programs will write out its warning, and the Windows will not be started in the enhanced mode. The Fguard for Windows can be placed into any directory. However, it can be run only under the condition that the Windows are operating in the enhanced mode, and on starting up the Windows, the program AVAST.386 must have been successfully installed.

Program termination

The Fguard for Windows can be terminated like any other program within the Windows system. As this program consists of two parts, and the one more important of them, the file AVAST.386, remains in memory for the whole period of the system operation, your computer is, even after program termination, always fully protected. If, however, the system has been installed incompletely, then you lose:

- The possibility to modify the configuration of the computer protection in an interactive mode.
- Graphic mode of warnings displays. All warnings will be displayed only in the text mode (the same mode is used for critical warnings of the Windows system, like for warning before computer reset from the keyboard).
- The possibility of testing the running programs for the presence of viruses.

All other parameters remain kept. To enjoy the correct function of the program we recommend you to let this program run over the entire period of Windows operation.

Cooperation with DOS

When in operation, the anti-virus protection provided by the Fguard for Windows is sharing the common data with the DOS system. This approach has its advantages and disadvantages, as well. The advantage is that the configuration data are unambiguously determined in any moment, and actually, there is no instant when the system would be in out of control state. The user is also aware of the fact that all parameters remain unchanged even when the operating system is altered in a way.

We can however look at these facts from quite opposite point of view. Sometimes, having one configuration for DOS and the other for Windows, can be advantageous. But such a concept tends to include a high level of inconsistency. Unless we envisage any DOS applications to be run, while working under Windows, the solution is very simple. On starting the Windows it is enough to replace the DOS configuration data with the ones for the Windows system, and the problem would be sorted out. But what to do, if we want to run only a single DOS application? We have to make sure that the two sets of configuration data would be simultaneously available to the single program that has been installed prior to the start of the Windows, and concurrently be finding out in real time which data ought to be used without any knowledge of the cause (Windows or DOS) having resulted in this reaction, and what is more, all of this still e.g. within the BIOS interrupt on attempting to format a disk. The solution is not trivial, and the situation is not yet so simple. There can be more DOS applications running, and each of them can randomly alter the configuration of the resident programs (more precisely expressed, according to the user' will).

For these reasons we have chosen the first approach, and all applications (Fguard, Rguard, FGW and AVAST.386) are working with the same data. Each modification of the configuration data is projected into two environments. The modification itself is done instantaneously, regardless of the environment it is done in. On the other hand, it can take some time until the data modification under DOS is "visually" projected into the Windows system. This delay has been caused by multi-task feature of the Windows system, and no instant of time can be determined when a message from DOS to Windows is exactly being processed (this generally applies to all messages). This modification will manifest itself "visually" in a short interval of time, though the modification of the data itself, and thus also the protection is done immediately, through a direct recording into memory. This system feature can be best illustrated on using of the "hot" key under DOS for the Fguard program. So if we start the DOS in a window of the Windows, and if the FGW.EXE program has been installed, then after depressing the CTRL-5 key (for the exact definition see the Program Fguard Description), a beep is heard, testifying the switching over of the program activity, and after a shorter or longer span of time (according to the usage of the system and the number of running programs) you will see either the icon of the FGW program, or the content of the unfolded window changing spontaneously. But for the above reasons, this change is not instantaneous at all.

Version 7.70

The program in its version 7.70 contains only minor changes against version 7.50.

Version 7.50

The program in its version 7.50 contains only minor changes against version 7.0.

Version 7.00

The program in its version 7.00 has already become a permanent part of the AVAST! anti-virus system. The version 7.00 is bringing about a slight extension of the user interface along with some external changes enhancing the stability of the program under extreme conditions.

🔲 History of updates.

What's new in version 7.00
A capability of hiding the icon of the program so that it would not be directly visible during the operation of the Windows has been incorporated in the version 7.00.

All other changes of the program affect only its internal parts, invisible to a user.

What's new in version 6.20.
The cooperation of the Fguard program for Windows with the Rguard pro DOS has been fully implemented into the version 6.20, i.e. implementation of launched program testing for the presence of viruses. Regarding this change the program is distinguishing between two parameters of the command line:

  /SB   On finding a BOOT virus on a floppy, the program will freeze up the computer.
  /SE   On finding a virus in a running program, the program will freeze up the computer.

The new version has been fitted with a slightly modified user interface, which, whilst displaying a warning, reminds of the fact that a reply must necessarily be entered from the keyboard.

What's new in version 6.00.
A shape of the warning window has been changed, now containing no buttons any more. This change has been done, because of the principal incapability of the program to use the mouse for responding to the messages in the warning window.

The REPORT message is not further listed out directly into the area of the main window, but to an independent window, which is not rewriting the contents of the screen any more. This window has been placed to the upper right corner, each time above all active applications.

The FGW program is recognizing one parameter of the command line, which can be typed in either combination of capitals and small letters. The parameter must be prexifed with a character "/" or "-". The parameter recognized is:

  /SB   On finding a BOOT virus on a floppy, the program will freeze up the computer.

What's new in version 5.10.
There is a program in the version 5.10 designed for the work in the so called enhanced mode of operation for Windows. This confinement, however, is not so restricting as it might look at the first approach. Although the Window system can be operated on computers with the 80286 processor and 1 megabyte memory, but the work itself rather resembles a slow demonstration than anything else. There is also the second reason - that the Windows system working in its standard mode is not capable of any communication with DOS, and vice versa. This mode resembles (and actually is) a mere switcher between the systems DOS and Windows. Off course, this statement does not apply for operation of the Window tasks, but is valid only for cooperation of the tasks under DOS and Windows. For the extended mode it is possible to ensure full-valued and reliable protection on the system from an attack or from negligence of the user himself, regardless of number and types of tasks, just being run.

The FGW program for the version 5.10 consists of the two main components, the files

AVAST.386 and FWG.EXE. The first of them - so called virtual driver is actually a 32-bit library, containing all vital parts of the program indispensable for cooperation of the DOS system with windows. It is a kind of interface between the resident programs Fguard and Rguard from DOS and the FGW program.

The second of the files is the FGW.EXE program, in other word the application for the Windows system, comprising the communication of the program with the user. Its task is to display the real setting of the protection, and to write out the warning reports in standard form for Windows.

Origin of the program

The Fguard program has been a part of the AVAST! system ever since the version 5.00. But it has also been subjected to a development, along with the development of the anti-virus system, and is now providing the stable protection of the system from viruses and from the user himself.

The program has been developed from the DOS oriented programs Fguard and Rguard i.e. the programs still now required for its operation.

Program parameters

The Fguard for Windows distinguishes between the two parameters of the command line, parameters given in AVAST! configuration file, and the ones that it will read from the programs resident in DOS.

Individual parameters:

- Command-line parameters
- Configuration file parameters
- Resident programs parameters

Command-line parameters

The Fguard for Windows distinguishes between the two parameters which can be given on the command-line. They can be the characters '**/**' or '**-**' either in upper- or lowercase.

The individual parameters are as follows:
 /SB   On finding a BOOT virus on a floppy, the program will freeze up the computer.
 /SE   On finding a virus in a running program, the program will freeze up the computer.

This freezing rests in disabling any further operations of the system, but with a screen unchanged, so that the system administrator can seek to identify the program or a diskette infected. The work can be continued only after RESETTING the computer.

Configuration file parameters

The Fguard for Windows for saving the parameters in the period between individual start-ups of the program is making use of the AVAST!.INI file placed in the same directory from where the program has been triggered.

All parameters of the Fguard for Windows can be found saved in [FGUARD] group. The AVAST!.INI file is shared among other programs of the AVAST system as well.

The TEMP variable
The TEMP variable supports the communication between individual installations of the Fguard for Windows. Its value changes from one run of the program to the other. It is however vital that the content of this variable would remain unaffected by any other program over the whole period of the Fguard for Windows operation, otherwise the computer might be frozen.

The HideIcon variable
The HideIcon variable contains either of the logical values, 1 or 0. If 1, the icon of the program will be hidden during its run, and the program will not be displayed even in the list of the tasks just being run (standard tasklist).

Resident programs parameters

The Fguard for Windows, on being started, is testing the system for the presence and setting of the programs Fguard for DOS and Rguard for DOS. It senses the setting directly form their internal data where it also writes all changes.

In the event that either of the programs is not resident in memory, the corresponding controls are inaccessible. For the description of individual parameters see the relevant chapters.

Program control

From the operating point of view, the program has the two quite independent parts. The configuration window of the program in which the configuration can be set, and the warning window about to be displayed according to the current operations and the configuration set.

The program can be operated from the keyboard or by means of the mouse the same way like any other programs of the Windows system. There is only one exception in the program - the warning window which cannot be operated by mouse.

Operation of individual program components

- Configuration window
- Warning window
- Report window

⬛ Configuration window

The configuration window of the Fguard for Windows is the main and the sole window working in a standard way within the windows of the Windows system. It is a dialogue window, containing several groups of various type controls for various purposes. The controls are subdivided into three groups according to their identity within the 3-dimensional effect. The upper part has been designed for driving the Rguard program, whereas the lower part for the Fguard program. There on the margin a group of shared buttons can be found. Depending on particular configuration of your system, all controls need not be in their active states.

Individual controls:

- Rguard controls
- Fguard controls
- Shared controls

Warning window

The warning window has its own individual contents for each warning, clearly enough expressing the cause of its being displayed along with the way of reply or of any other response. Its operation is very simple. Only the keys can be applied, presented in the window, or just the Enter (Return) key, having the same effect as the first of the options displayed.

Report window

The report window is very simple, and is displayed there in the upper right corner of the screen for about ten seconds. The windows displays a short text, expressing the cause of its being displayed. The window is fully independent and does not affect other windows of the Windows system at all. It is displayed above all other windows and cannot be moved.

Rguard controls

The work of the Rguard is influenced by the two parameters in the upper part of the configuration window.

Test BOOT sectors of diskettes
The parameter determines if the BOOT sector of each floppy should be tested for viruses each time it is accessed. If there is any virus in the BOOT sector of the floppy, the warning will be displayed, and the work can be either continued or the access to the floppy inhibited.

Test launched programs
The parameter determines if all of the running programs are to be tested for the presence of viruses. Should a sample of a virus be found in a program about to be run, its launch can be denied. The run candidate programs are tested as the whole entity exactly as they are stored on the disk. It is therefore evident that the test can take some time in particular for the programs over 1 MB in length (QPro 5.0, MS Word, etc.) run in computers with a small cache of the processor and with low frequency. According to the size of the program the delay of up to 30 second has to be anticipated.

✏️ Fguard controls

The parameters given in the lower part of the configuration window can influence the work of the Fguard program.

Should the same of these parameters be marked with a grey square, the program will follow the attempts to start the given activity but inform the user about its course only by means of the REPORT window.

Program is Active
The parameter determines whether all activities of the Fguard program will or will not be traced. If unmarked, the Fguard program is off.

Checking track initialization
The parameter determines whether the program is or is not to trace the attempts to format any of the accessible disks or diskettes.

Checking file manipulation
The parameter determines whether the program is or is not to trace the attempts to open the files, to delete them, and to do any similar activities affecting the entire files.

Checking direct writing via DOS
The parameter determines whether the program is or is not to trace the attempts of direct write operations on hard disks or diskettes via DOS (25h interrupt), neglecting the standard data saving techniques.

Checking direct writing via BIOS
The parameter determines whether the program is or is not to trace the attempts of direct write operations on hard disks or diskettes via BIOS (13h interrupt), neglecting the standard data saving techniques. As even the legal write operations are, in their final form, transformed to the write operations through the BIOS, the use of this switch can result in a real flood of warning reports. This switch is therefore recommended to be used only in the case of a real suspicion of a virus infection.

Checking CMOS changes
The parameter determines whether the program is or is not to do regular tracing of the changes in the contents of the CMOS configuration memory. There are some programs or systems periodically modifying its contents. In such case, any follow-up is actually impossible. There is however only a minimum of such programs or systems.

Checking interrupt vectors changes
The parameter determines whether the program is or is not to do regular tracing of the changes in chosen interrupt vectors, in fact one of the nearly standard activities of not only numerous viruses, but of many programs as well. This report is worthy of more profound attention.

Checking interrupts stepping
The parameter determines whether the program is or is not to follow the attempts of stepping (tunnelling) the interrupts, actually one of the common activities of up-to-date viruses. The probability that a normal program might do this activity is very low, and therefore a maximum of your attention should be paid to reports dealing with these stepping attempts.

Editing Windows
The editing windows contain up to 10 various files that can be followed by the Fguard for Windows. If you need to process more files of different types, a standard set of DOS characters can be applied for defining more types by a single string (i.e. the wildchars). The type of the file is sufficiently specified by a string of maximally three characters.

Shared controls

The shared controls serve for the work with the Fguard for Windows itself. These elements are not enclosed in any graphic element.

Hide program icon
The parameter specifies whether the program icon is to be visible or invisible.

OK button
The OK button serves for saving of the information, after being modified, into the memory for resident programs, and for its subsequent immediate activation. After depressing this button, the window will contract itself to the form of an icon.

Cancel button
The cancel button is used when all changes in parameters, that have been modified since the last OK button depressing, are to be cancelled. After depressing this button, the window will contract itself to the form of an icon.

Help button
By means of the help button, the help screen of the configuration window can be evoked.

Report button
By means of the report button, all parameters can be switched over to the REPORT mode, and vice versa. All three-state buttons are switched over in both directions.

Removal of viruses

According to many explorations, there are millions of computer users around the whole world who have already faced themselves with viruses, and so, unfortunately the likelihood is rather high that it can happen even to you, in spite of all preventive measures.

In this very moment it is vital not to surrender to a panic, and to keep calm. Since you are certainly a user with a dislike in risks, you have surely backed up all important data and programs, so neither a complete destruction of your disk would mean any serious shock to you. Furthermore, you seem to be an attentive and careful user, and so you have already disclosed the virus pretty timely, thus earlier than such a virus could have caused any significant damages. A virus can be revealed e.g. from unusual behaviour of the system (graphic or sound effects, unusual error reports, unknown activity of the disk, errors of programs having faultlessly operated until now, etc.), or through regular and careful application of the AVAST! anti-virus system.

Therefore, if you find any particularities that cannot be explained in any rational way (spontaneous changes in length and contents of a file, illegal manipulation with a file, peculiar disk operations, changes in the main memory, etc.), the Lguard and Vguard programs have to be applied with the goal to find out the possible presence of a known virus within the system, the one these programs can cope with. The Lguard program ought to cope with prevailing majority of existing viruses. If any of these programs fails to find a virus, then try the Aguard program capable of catching all modifications on the disk since its last start-up. The program Aguard incorporates in itself even the capability of polling the updated file for viruses, and of removing them from the files. On removing them, no information about the type of the virus is required, and therefore it is very effective even against the new or yet unknown viruses.

On removing the consequences of such an intrusion, insert a working floppy to the disk drive of the computer, the one which has been created simultaneously with the AVAST! system installation, and which ought to be write protected. Then start the Lguard program, e.g.:

A:
LGUARD C:

The Fguard program is, at first, searching through the main memory for the presence of an active virus. If a virus is found, it has to be eliminated from the memory and prevented from any further functioning. After the virus has been removed from the memory, there is no threat of its additional activity. The program will further check a system section of the disk, and thereafter the files as well. Eventually the program will generate and display an easy-to-view table with the outcomes of its activities.

After a virus of an unknown type has been removed, the system has to be loaded from a **clean** system diskette (if possible from the one that had been created during the installation of the AVAST! software). Through the Aguard program, all files having been illegally modified by a virus can be easily detected. The list of them can be printed out by the Print Screen command, or down-loaded to the disk by means of the "**/O**" parameter.

The programs of the AVAST! anti-virus file contain an intrinsic mechanism, allowing to find out their potential modification by a virus. On being started they are primarily testing if they themselves have not been modified, and if so, they will announce this fact to the user, like for example:

VGUARD.EXE
WARNING: This program was modified (maybe by some virus ??) !!

Press any key to continue...

This message serves as a notification that the program was modified. Its main significance rests in the timely warning of a user. Upon depressing any key, the program will continue its normal activity, but it is however likely that the virus has already been activated in this moment.

On contracting the system areas of the hard disks in the case of MS DOS from the version 5.0 on, the FDISK system program with the parameter "**/MBR**", can be used because it will regenerate the state of system areas without impact on data that might be stored on the disk. But to do this, the computer has to be necessarily started up from the clean system disk, as otherwise the cure would be ineffective.

For protection of the BOOT sector, the program Bguard can be preferably used, by which the state of the BOOT sectors on the hard disks can be renewed.

We wish you to be widely avoided by computer viruses. But if they really do occur, then let our software help you overcome all problems associated with them.

> **If not absolutely sure how to cope, entrust the removal of viruses to professionals!!!**

System requirements

The operation of the Fguard for Windows will require:

- The 3.1 or a higher version of the system (Windows 3.11 for WorkGroups 3.1, 3.11) capable of working in an enhanced mode.
- The VGA or more advanced video interface.
- The disk drive for the system installation.
- The hard disk for saving the programs.

Errors and fatal errors

The Fguard for Windows is capable of displaying a variety of warnings and error messages in different forms. Please find below their list along with details on possible options.

- [Incompatibility of versions.](#)
- [Program not installed.](#)
- [DPMI internal error.](#)
- [Internal data input error.](#)
- [Timer cannot be allocated.](#)
- [Error creating REPORT window.](#)
- [Memory allocation error.](#)
- [Library AWANTI.386 not installed.](#)
- [Enhanced mode detection error.](#)

Incompatibility of versions. The program cannot operate due to its incompatibility with library AVAST.386

The files FGW.EXE and AVAST.386 must have the same version number. These two files are cooperating very closely, and therefore mutually different combinations of them cannot be used.

Program not installed. Programs FGUARD or RGUARD for Windows do not reside in memory, or either of them is not mutually compatible with the FGW.

The programs Fguard or Rguard do not execute any follow-up of the activity of the program or of the user in their own competence. In a current version, it only displays information transferred by resident programs from DOS. If these programs have not been installed, or if they differ in their version number, the Fguard for Windows cannot operate.

DPMI internal error. Program can not allocate necessary selectors to access DOS data. The work with Windows should be terminated.

The program Fguard for Windows makes use of some DPMI means to be able to execute some of its operations. In case of an error in working with this interface, it is with the highest probability the fatal error.

Internal data input error. The data on display do not match with the data considered at the stage of system protecting.

The program has revealed an error while writing the configuration data to the data sections of the resident programs. At this error, there is a danger that a part of the memory can be rewritten, and the activity of the system might show instability.

Timer cannot be allocated. Stop one of running programs and try again.

To be able to work, the Fguard for Windows needs one timer for collection of information on changes of time. As the a resource, strictly confined in the 16-bit Windows is spoken about here, it does not need to be available any time.

Error creating REPORT window. The report will not be displayed.

There was an error when the REPORT window was being created. As the REPORT window has only an informative meaning for the user, such an error is not all too serious.

Memory allocation error. DOS memory cannot be allocated. Checking the launched programs is off.

That the running programs could be traced, the availability of memory below 1 MB (so called DOS memory) must be ensured. In the 16-bit Windows, this memory is used very intensively, and its amount limited. Therefore it need not be ever available.

Library AWANTI.386 not installed. Launched programs will not be tested.

The AWANTI.386 library is implementing the intrinsic programs for testing the data. Its installation is done, whilst the Windows system is being loaded, and need not be always successful. For example, when there is not enough memory available, this library will not be installed.

Enhanced mode detection error. Program can not work in standard or real mode. Stop Windows and use DOS command 'WIN /3' to run Windows in enhanced mode.

The Fguard for Windows operates only in the enhanced mode of the Windows system.

The **configuration file** is the file in which the parameters of the program are kept while the computer is off or when the program does not run. The configuration file for the programs of the AVAST! system is called AVAST!.INI, and can be found in the directory from where the progam has been run. It is a standard type of the configuration files for the Windows oriented programs. Before changing the contents of this file manually, it is recommended to make a backup of it, since the incorrectly done changes might result in loss of operating ability of the AVAST! anti-virus system or in system crash.

The **FGUARD** is a resident anti-virus program for DOS, which is in real time guarding all attempts to modify the files protected (delete, write open, write, and rename operations, removals of the "read only" attributes). Apart from this, the program can follow even a possible destructive activity of a virus. It can watch for the attempts to format a disk, for direct write accesses to the disk by means of DOS or BIOS, for attempts to modify the CMOS configuration files, to step the interrupts, or to modify chosen interrupt vectors.

The **ALWIL Software**   company and its software products are no beginners in the market. The company itself was established not sooner than in April 1992, actually by separation from the ALWIL cooperative, but its staff members have been working closely together since 1988 when the first version of the AVAST! anti-virus package came to being together with User Software Administrator SUP. In the same year the implementation of the national environment not only for IBM compatible PCs and their widely used peripheral units was created, but for the laser printers as well.

We still remain faithful to our original trend in the field of system software, data protection, and implementation of the national environment for laser printers. The last novelties of our production are, for example, the systems for real-time encoding of the hard disk contents, or the Lguard program for Windows.

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The **RGUARD** is one of the resident anti-virus DOS-oriented programs providing the anti-virus testing of the launched programs, and testing for the presence of BOOT viruses on diskettes in the DOS environment.