Task3000

Backup...

Wordprocessing...

Financial Applications...

Reports...

Presentations...

Database...

Graphical Applications...

Spreadsheets...

Data Transfers...

Batch Processing For The New Millennium

Task3000 Family of Products

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Task3000 Design

Task3000 package is designed to give the users of the Microsoft Windows operating systems (Windows 98 or higher, Windows NT 4.0 or higher, x86 compatible hardware platform) the ability to create and run the job by the functionality of the batch processing. This is usually done on much more expensive host computers. Host computers usually use very complicated languages to perform the necessary functionality of automation, which is the primary goal of batch processing. This functionality is missing on the Microsoft operating system, which in contrast offers very good Graphical User Interface (GUI). The mission of the Task3000 package is to achieve automation by combining GUI with batch processing. Many other features are also added, which was not known until now and are the original developed from the scratch.

About Automation

What we mean by achieving automation? Automation mean, that the arbitrary task, which can run on the computer is executed automatically simply by clicking the button, entering and controlling few parameters and submitting the task to the server, which executes the task. Task must be constructed on such way, that all other user intervention in unnecessary and the task is executed automatically, giving the results on the media like files, printed documents, E-mail etc.

Task3000 Functionality

Functionality of the Task3000 package is:

1. User can create and modify the desired task, which is the basic work unit
2. Desired task can consist of one or more steps
3. Task can have various number of parameters
4. Parameters can be set by the graphical user interface (menu system)
5. Parameters are checked by some simple checking routines for correctness before execution
6. Run the tasks on the same machine or on the server
7. Job can have time schedule and can be automatically rescheduled according to rescheduling plan
8. Task3000 Server creates log files about the task executions, which can be cleaned according to queue cleaning plan

9. Task step execution controlled by the File RC (Return Code) according to the file contents
10. Time limitations according to the duration of the task, task CPU time consumption, maximum memory usage and so called System Units, which consist of the used CPU time, used memory and on Windows XP/2000/2003 used Input/Output operations.
11. Manage some security issues on the server queue automatically

All that serves as the background to fully automated tasks, which can be run on the same machine or on dedicated server for batch processing. Reason for the usage of the dedicated server can be:

1. Releasing the workstations for other tasks. Reason for that could be long task execution or desire to have logs about the tasks.
2. Faster network access to for instance database servers in case that communication between servers is 100MB or 1GB, and between workstations and servers 10MB or 100MB etc.
3. Saving the money for the licenses. For instance dedicated Task3000server can ran on the windows NT workstation and use workstation licenses, which are generally more cheaper than the server licenses.
4. Saving the money by having only one or more licenses for a given product, and enabling the users to submit the tasks for execution on the dedicated server. However, such approach is not possible if the users should get the answers interactively.
5. Maintenance of the networks by using smart task processing, manipulating the backup is possible etc.

Trouble Ticket System

We can recommend you how to build efficient system to run automation through Trouble Ticket System (TTS), which is part of any licensed Task3000 program. Also other questions regarding the most efficient use of the Task3000 system can be sent thru TTS. Necessary instructions are part of the TTS. Information's are returned via E-mail only.
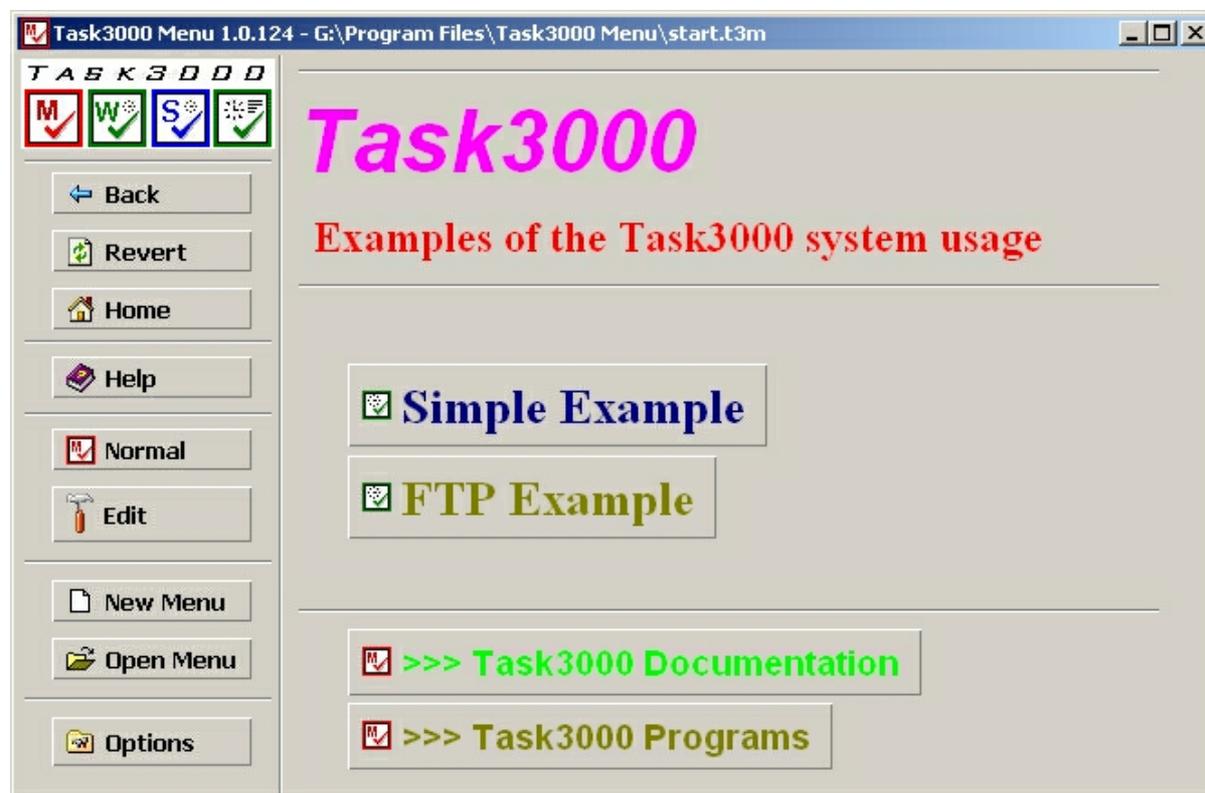
Products

Task3000 Menu

Figure 1: Task3000 Menu

Task3000 Menu is used to generate the tree level structures above tasks and other programs.

Main benefits of the Task3000 Menu:
1. For each item on the menu you can use different font, font style, font size, color, script and effects.
2. You can use elements Title, Label, Line, Space or Link to construct the item(s) on the menu.
3. Link is actual the button. Clicking on the button perform a programmable action, which can be:
   a. Execution of the arbitrary program
   b. Jumping to the another Taks3000 menu
   c. Submitting the task to the Task3000 server
4. Menu system is very flexible and enables the users to select the task from the menu, and user can therefore easily and intuitively performs the job. It is the

top level of the Task3000 system, which is developed to drive the fully automated system underneath.

5. Tree structure of the menus is kept in the sequential files, and the tree structure can be simply modified by changing the links.
6. Users can or cannot edit the menu system optionally by using integrated edit system.

To enter the parameters for the execution of the Task3000 task you need to enter parameters and Task3000 Menu is shipped together with Task3000 Submitter, which is designed for that.
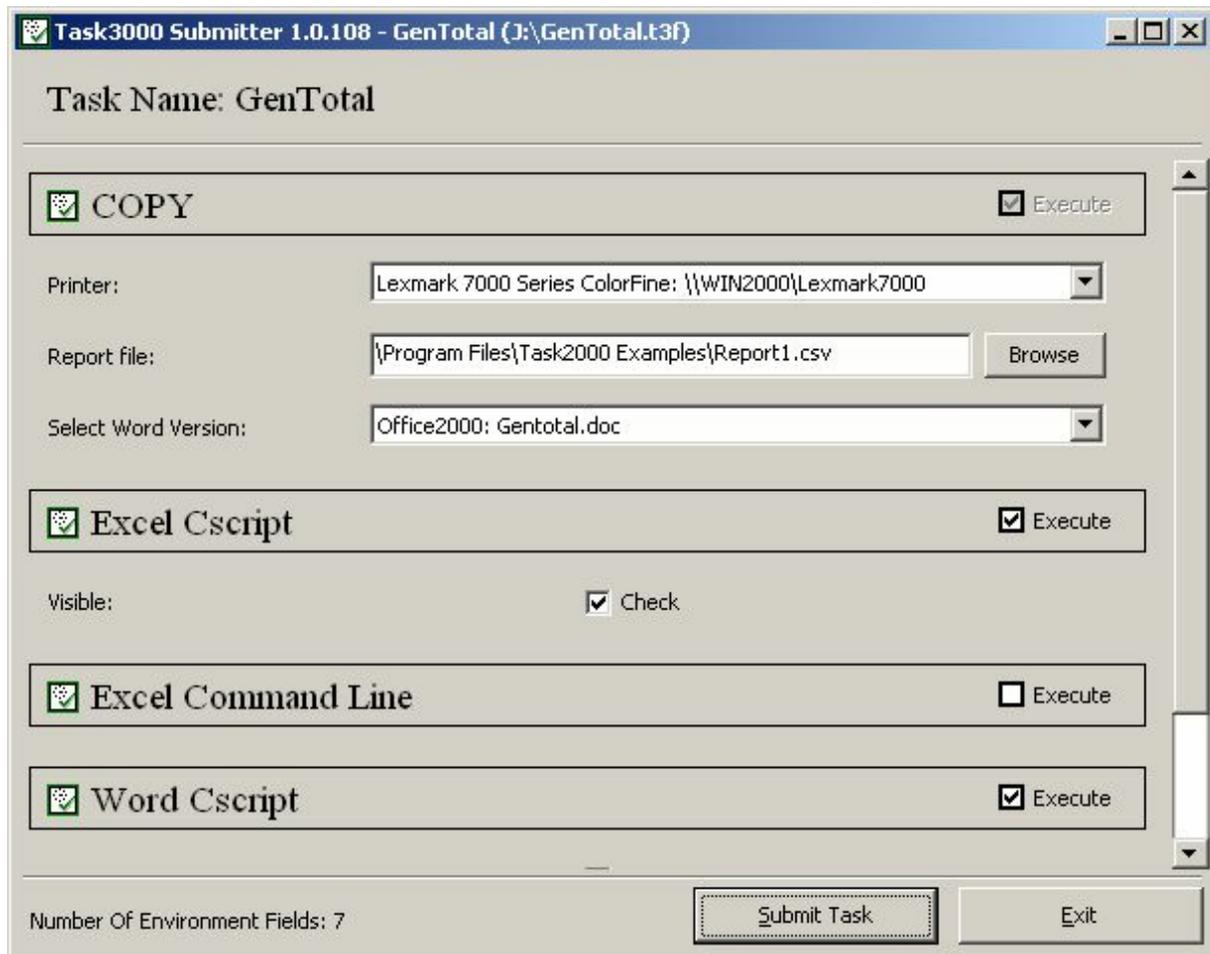
Task3000 Submitter

Figure 2: Task3000 Submitter

Task3000 Submitter is shipped with Task3000 Menu and is used to send the proper parameters to the task. Parameters for generation of the Task3000 menu are generated by Task3000 Workstation program.

Main benefits of the Task3000 Submitter:
1. Simple checking of parameters is performed, like test for numerical data, limiting the entered parameter by minimum and maximum, checking the date, selecting the files by menu and checking the existence of the file etc.
2. Users can correct only the necessary parameters, which are checked for correctness before execution. This avoids errors during execution and less educated personal can use the system to perform very complex tasks.

3. Task3000 Submitter menu can be generated by using Task3000 Workstation program, which have very simple menu driven edit system to build the menu.
4. Users can use integrated checkboxes to determine, whether step of the task will be executed or not.
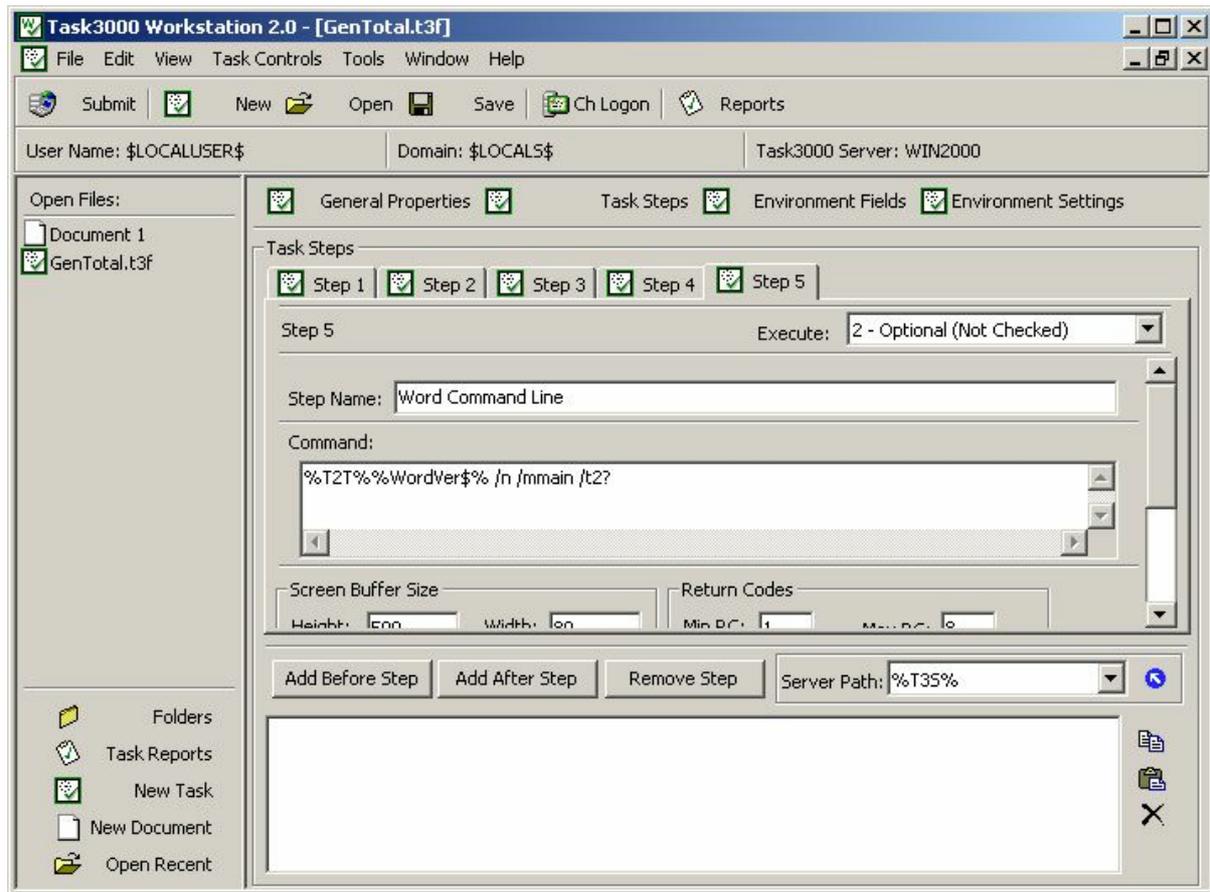
Task3000 Workstation

Figure 3: Task3000 Workstation

Task designer uses Task3000 Workstation as main developers tool and is used to generate the Task3000 Submitter menu and/or submit the task(s). Task3000 Submitter menu is used to enter and control the parameters of the user task. Task3000 Submitter menu is generated with Task3000 Workstation Environment Fields menu and Task3000 Environment Settings menu.

Task3000 Personal Server is used to execute the submitted task on the same machine or Task3000 Server is needed to execute the task on the same machine or different dedicated server.

Task is basic unit of the execution and is executed by the Task3000 Server/ Task3000 Personal server. It can contain one or more steps. Steps are executed sequentially.

Every task has:

1. General parameters, like task name, execution time, number and conditions for repetition of the task, task dependency etc.
2. Step parameters, like command to execute, working directory, step parameters, conditions to execute the step (FileRC) etc.

Main benefits of the Task3000 Workstation:
1. Task3000 Workstation is not only tool for developing the tasks but have also the functionality of the:
   a. Microsoft Explorer/Internet Explorer as by reusing Microsoft WebBrowser technology
   b. Built-in text Editor (supports rtf also)
   c. Tool for browsing the task execution and tool for browsing the results of the task execution
2. User can develop the tasks by using menus, which guides him to quickly build the tasks with several steps.
3. Task execution can be monitored and even task console window on the server is visible during execution.
4. Screenshots of the task console window are captured automatically and saved to the file. Task console window size can be defined for each step execution separately.
5. Reports are stored on the Task3000 Server queue and the results of the tasks execution can be viewed for several task executions, for different tasks and on different servers.
6. Open recent list improve your productivity by storing the path to the last used documents. You can edit the most recent list.
7. User can control the task execution on several Task3000 servers simultaneously.
8. Task3000 Workstation FileRC menu enables you to generate the conditions, under which task will be executed. FileRC is basically automatic search engine on the files. Result of the search can determine the next step or even task execution.
9. Normal Microsoft Windows Environment Variables (EV) are used to store user parameters and every program, which is able to read the EV can be controlled. Microsoft Visual Basic for Applications is highly recommended (built-in in all Microsoft Office products). User parameters can be easily written to the files and such file can be used to control the program execution (e. g. Command prompt: ECHO %variable% >file can be used). Global parameters valid for all task execution (every step) can be defined.
10. Very simple but powerful scheduler enables you to run tasks on appropriate date/time. Nonworking days are easily excluded; repetitions

of the tasks can be easily controlled during long period of time and all that with just one menu with several parameters.

Therefore Task3000 Workstation can be treated as fully working environment for very different tasks.

Task3000 Server and Task3000 Personal Server

(Full functionality on Windows NT 4.0 or higher only, limited functionality for Windows 98/ME)
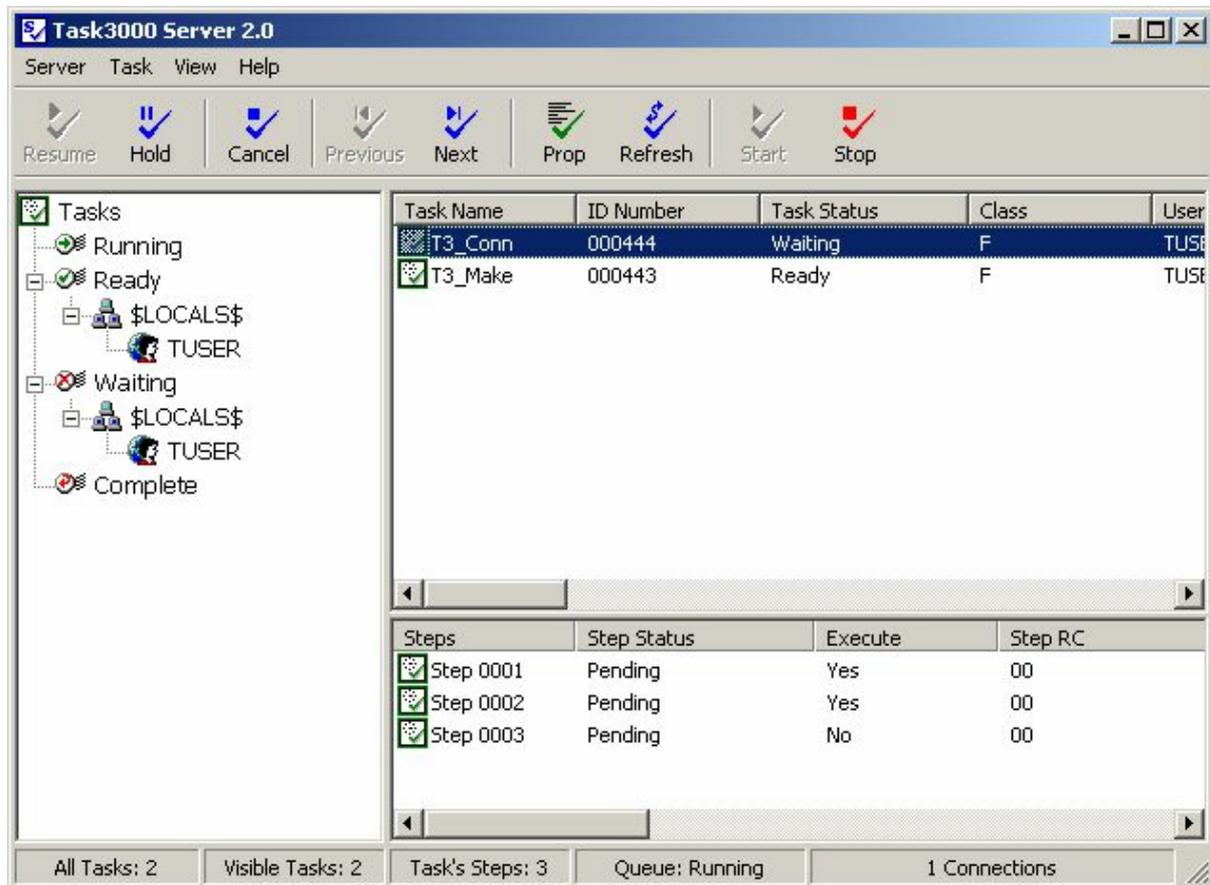

Figure 4: Task3000 Server

Basic job of the Task3000 Server is to execute the prepared tasks according to the parameters given and maintaining the Task Queue. It can run also on Windows NT Workstation, Windows 2000 Professional or Windows XP, if the number of simultaneous users is less then or equal 10 (recommended by Microsoft).

Main Task3000 Server/Task3000 Personal Server benefits:
1. Managing the task queue, task(s) can be controlled easily with insinuative menu system. Tasks can be monitored in their execution queues (Ready, Running, Waiting and Complete), with all general parameters and step parameters.
2. Very complex but easy to use scheduler enables you to run tasks on appropriate date/time. Nonworking days are easily excluded; repetitions of the tasks can be easily controlled during long period of time and all

that is controlled with just one menu on Task3000 Workstation with several parameters. Task3000 server administrator can change parameters during and before task execution.

3. Task3000 server administrator can control dispatching priority and can thus influence on the total server throughput.

4. Classes can be used to set the initial execution limits automatically. Tasks can be grouped depending on the importance and desired execution by classes automatically. With classes we can also defined limits, under which task execution will be terminated, because task uses too much computer resources (memory, CPU time and on Windows XP/2000/2003 or higher also input-output). After task consumes defined resources, it is automatically cancelled. However, after task is cancelled, server gives the task some time to enable the necessary cleaning after abnormally ended task.

5. Each task gets it own Task Number and automatically generated directory for storing the data (%T3S% directory, actual structure is domain, user, project, task number). Number of created directory for each task can be controlled on server level. This enables easy handling of the multiple task execution.

Main Task3000 Server only benefits:

1. Task3000 Server is designed to run on the dedicated server. It can be installed instead of Task3000 Personal Server, but both servers cannot run on the same machine. It is assumed, that it runs in the administrators context as logged in administrator and have full rights on the system. Task3000 Server assigns each task only the rights as defined by user defined by the task Logon parameters.

2. Task3000 Server Autologon feature enables the functionality of automatic logon after power failure.

3. Because Task3000 Server runs as normal process created by user with administrative rights (controls the active desktop), there is no limited functionality and every program designed for Windows runs without limited functionality. Current test with running the Task3000 Server as service shows that a lot of problems arise from such approach and make the task execution very limited. We are still researching this option.

4. Task3000 Server can on the NTFS partitions control the default security and prevent the users to easily watch the data from other user on the queue. Because of that NTFS partitions are recommended for storing the task queue data, and that location is the only parameter before Task3000 Server is firstly started.

We recommend to run only previously tested tasks. Please use Task3000 Workstation and Task3000 Personal Server to eliminate the interactive behavior

errors and other strange behavior. Remote control of the Task3000 Server is possible with some program which handle screen snapshot and keyboard remotely. We can recommend VNC (GNU license, VNC was developed and copyrighted by AT&T Laboratories Cambridge).

Task3000 Personal Server only:
1. Task3000 Personal Server run as application program in the context of current user. It is started automatically when the user submits the task.
2. Only one task can be executed simultaneously.
3. Task3000 Personal Server does not maintain security on the file system.
4. Task3000 Personal Server best usage is to design and test the tasks, which will be executed on the dedicated Task3000 Server. Errors and strange behavior can be monitored without the risk of the danger, that this will influence the normal Task3000 Server functioning.
5. Other usage is complex execution of several programs; each program is executed in one step.
6. During task execution user can control programs normally via GUI, but this interactive behavior must be eliminated to run the task automatically on the dedicated Task3000 Server.

Warning: On the Windows 98/ME execution of Task3000 Personal Server is limited:
1. Task step commands like Cancel, Stop, Start are valid from next step only and do not influence the current step execution. Stopping the current program execution is very unstable on the Windows 98/ME by design.
2. Execution is subject to very serial processing; every message box stops the execution of the all tasks etc.
3. Capturing of the console window automatically works well only for the console window with number of lines 25 and 43. Use output redirection to files instead.
4. During executing blinking of the console window is normal.
5. Command prompt must be used like Command.com /c. Using of Command /c only produce strange results.

In spite of all that, experienced developer can use Windows 98/ME to develop the task, which will be executed on the Task3000 server with only minor or no modifications.

More information on **www.task3000.com** or **www.shareit.com**.

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