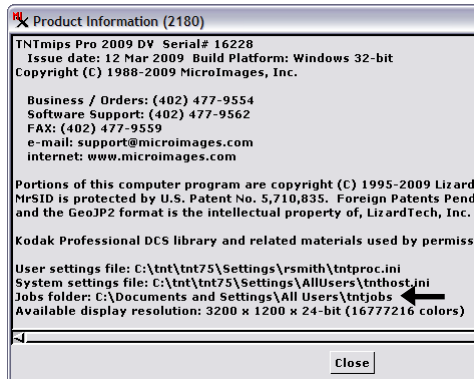
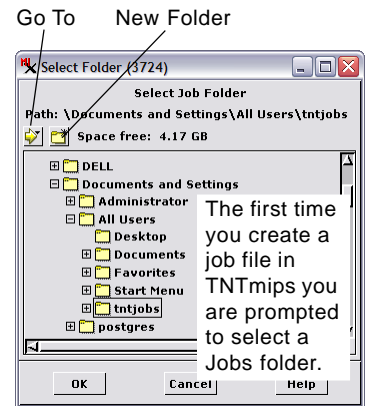


# Managing Job Processing

## Job Files and the Jobs Folder

The TNTmips Job Processing System (JPS) uses XML-formatted job files to store the information needed to execute each job (see the Technical Guides entitled *System: TNTmips Job Processing System* and *System: What Are Job Files?*). Each TNTmips process, SML Script, or any application that creates a job file must write it to a specific folder (directory)

that is monitored continuously by the JPS. This Jobs folder can have any name and be in any location in your computer's file system, including on a network drive. The first time you create a job file in any TNTmips process you are automatically prompted to select a folder for the JPS to use as the Jobs folder; you can select an existing folder or use the New Folder button on the Select Folder window to create a new one. MicroImages recommends that you put the Jobs folder somewhere other than in the TNTmips installation folder to facilitate use of the same Jobs folder by different TNTmips versions. The Jobs folder's directory path is shown in the Job Manager window, where you can also change which folder to use as the Jobs folder at any time (see reverse). The Product Information window, opened by choosing Help / About TNTmips from the TNTmips menu, also shows the Jobs folder's directory path.



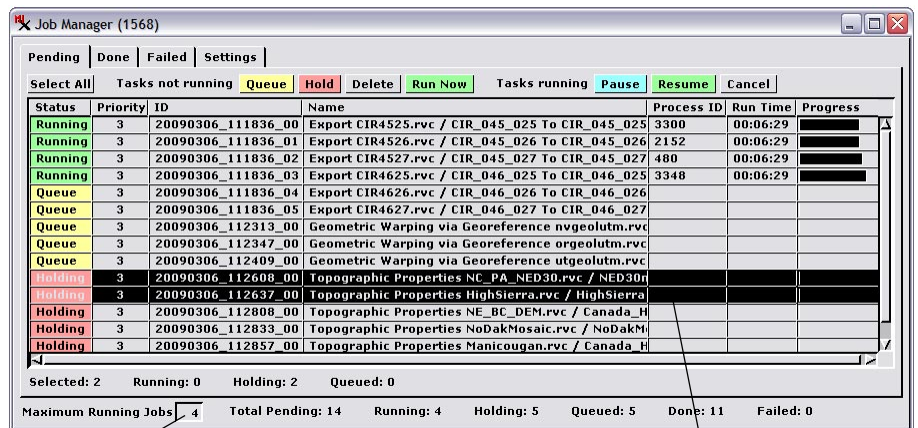
The location of the Jobs folder can be found in the Product Information window (on line shown by arrow above) opened from the Help / About TNTmips option on the TNTmips menu.

## Job Manager

The control center for managing your TNTmips jobs is the Job Manager window, which opens automatically (if not already open) whenever a new job file is created. You can also open the Job Manager manually by choosing Tools / Job Manager from the TNTmips menu.

One of the prime benefits of TNTmips Job Processing is that it allows you to easily run multiple processes simultaneously (parallel processing) to maximize the use of your computer's multiple processor cores. Thus one of the critical settings on the Job Manager is the Maximum Running Jobs field at the bottom of the window, which sets how many jobs can be run simultaneously. When setting this value keep in mind the number of processor cores available on your computer. If you plan to use the computer for other purposes while jobs are running in the background, consider setting the maximum number of running jobs to be less than the number of cores available on the computer to allow adequate CPU access for your ongoing interactive activities. You may need to experiment to find the correct setting to use for your system and for different processes, as some processes may be limited by the speed of reading and writing data rather than by CPU access.

The Job Manager allows you to monitor and control the processing of jobs you have created in various TNTmips processes, SML scripts, or other applications.



The Maximum Running Jobs parameter sets how many jobs can run simultaneously.

You can select one or more jobs in any of the job lists to perform actions on the selected set using buttons at the top of the panel or with right mouse button menu options.

## Selecting Jobs

The Job Manager provides tabbed panels that list jobs that are pending, done, and failed, as well as a panel for job processing settings. On each of the panels that list jobs you can select one or more jobs with the mouse and perform actions on the selected set using buttons at the top of the panel or choices from the right mouse button menu. A left-click on a job listing

(over)

selects that single job and deselects any already selected jobs; holding down the shift key while left-clicking more than once selects a range of jobs in the list; and control-left-click toggles selection of a job on or off. A Select All button is also provided on each panel to select all listed jobs. You can hover the cursor over the Name field for any job to see a DataTip with the names of the input and output files for that job.

## Pending Jobs

All current jobs that have not yet completed are listed on the Pending tabbed panel, which shows the current status, priority, process name, running time, and other information for each job. Pending jobs can have the status Running, Queue (waiting to run), or Holding. The Save Job button in a TNTmips process creates jobs with Holding status; these jobs remain in the pending list unprocessed until you manually release them to the queue. The Pending tabbed panel allows you to change the status and priority of jobs to manage the order in which they are processed. For a full description of how you can actively manage pending jobs, see the TechGuide entitled *System: Managing the Job Queue*.

## Done Jobs

Successfully completed jobs are listed on the Job Manager's Done tabbed panel. Job files for all completed jobs are retained in the Job Processing System until you delete the jobs from the list in the Done tabbed panel using the Delete button at the top of the panel (or its equivalent on the right mouse button menu). Completed jobs run in the current TNTmips session show start, end, and run times for each job. Left-click on a column heading to sort the list according to the entries in that column. Left-clicking on the same heading toggles the sort order between ascending and descending. You can select a set of jobs in the list and see timing statistics at the bottom of the panel (see illustration above right).

## Failed Jobs

Running jobs that you cancel or that fail because of an error are listed on the Failed tabbed panel. Selecting a job and pressing the Open Log button on this panel shows the process log for the underlying process or SML script as well as any error messages that were generated. You can also use the Retry button to rerun selected jobs. The job files of all failed jobs are retained in the Job Processing System until you delete them from the list in the Failed tabbed panel.

ID	Name	Start Time	End Time	Run Time
20090304_14241	Export CIR4526.rvc / CIR_045_026 To CIR_045_026.jp2	2009-03-04 14:30:42	2009-03-04 14:37:46	00:07:04
20090304_14241	Export CIR4527.rvc / CIR_045_027 To CIR_045_027.jp2	2009-03-04 14:30:42	2009-03-04 14:37:50	00:07:08
20090304_14241	Export CIR4525.rvc / CIR_045_025 To CIR_045_025.jp2	2009-03-04 14:30:42	2009-03-04 14:37:56	00:07:14
20090304_14241	Export CIR4626.rvc / CIR_046_026 To CIR_046_026.jp2	2009-03-04 14:30:42	2009-03-04 14:38:07	00:07:25
20090304_14255	Geometric Warping via Georeference nvgeolutm.rvc / N	2009-03-04 14:37:56	2009-03-04 14:39:50	00:01:54
20090304_14261	Geometric Warping via Georeference orgeolutm.rvc / u	2009-03-04 14:38:07	2009-03-04 14:39:50	00:01:43
20090304_14265	Geometric Warping via Georeference utgeolutm.rvc / u	2009-03-04 14:39:51	2009-03-04 14:42:25	00:02:34
20090304_14241	Export CIR4625.rvc / CIR_046_025 To CIR_046_025.jp2	2009-03-04 14:37:50	2009-03-04 14:43:49	00:05:59
20090304_14241	Export CIR4627.rvc / CIR_046_027 To CIR_046_027.jp2	2009-03-04 14:37:46	2009-03-04 14:43:56	00:06:10
20090304_14280	Topographic Properties NC_PA_NED30.rvc / NED30ncPa	2009-03-04 14:39:51	2009-03-04 14:44:27	00:04:36
20090304_14294	Topographic Properties NoDakMosaic.rvc / NoDakMosa	2009-03-04 14:43:56	2009-03-04 14:46:00	00:02:04
20090304_14282	Topographic Properties HighSierra.rvc / HighSierra	2009-03-04 14:42:25	2009-03-04 14:49:09	00:06:44
20090304_14291	Topographic Properties NE_BC_DEM.rvc / Canada_Hires	2009-03-04 14:43:49	2009-03-04 14:53:25	00:09:36
20090304_14301	Topographic Properties Manicougan.rvc / Canada_Hires	2009-03-04 14:44:27	2009-03-04 14:55:30	00:11:03

Selected: 4   Average Time: 00:07:12   Cumulative Time: 00:28:51   Clock Time: 00:07:25

Maximum Running Jobs: 4   Total Pending: 0   Running: 0   Holding: 0   Queued: 0   Done: 14   Failed: 0

The Done tabbed panel shows job time statistics for the currently selected jobs, including average, cumulative, and clock time. Cumulative Time is the simple sum of the run times of individual jobs, ignoring the fact that some of these jobs may have run concurrently. Clock time is the actual elapsed time from the start of the first selected job to the end of the last selected job.

ID	Name	Start Time	End Time	Run Time
20090306_111836_05	Export CIR4627.rvc / CIR_046_027 To CIR_046_027.jp2	2009-03-06 11:38:09	2009-03-06 11:4	00:02:22
20090306_111836_04	Export CIR4626.rvc / CIR_046_026 To CIR_046_026.jp2	2009-03-06 11:38:08	2009-03-06 11:4	00:03:14

Failed and canceled jobs are shown on the Failed tabbed panel. The Retry button adds the selected failed or canceled jobs back to the job queue.

Job Folder: C:\Documents and Settings\All Users\tntjobs  
 Port used for job communication: 3000  
 Send email when jobs fail:  
 Mail to: tech@mycompany.com   Mail from: jobprocessing@mycompany.com  
 Don't mail    On each failed job    Once per hour    Once per day  
 Only run jobs from 7:00 PM To 7:00 AM  
 Repeat Ever: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday  
 The Settings tabbed panel provides controls that allow you to set up e-mail notification for failed jobs, with a separate notification for each failed job or an hourly or daily e-mail listing failed jobs. You can also set time of day and day of week constraints on job processing.

Maximum Running Jobs: 4   Total Pending: 0   Running: 0   Holding: 0   Queued: 0

## Job Folder, E-mail Notification, and Scheduling

The Settings tabbed panel shows the current location of the jobs folder and allows you to change folders with the Job Folder button. You can also set up e-mail notification of failed jobs (see illustration to the left) and set up global scheduling of jobs. You can specify that jobs can run only between certain hours of the day (such as overnight) and/or only on certain days of the week. Scheduling turns off job processing by temporarily setting the Maximum Running Jobs value to 0 (regardless of the setting shown on the Job Manager). Thus if you use the Run Now button for a selected set of pending jobs during a time when scheduling disallows running jobs, scheduling is overridden and the selected jobs are run immediately.