SnakeGrid User Guide

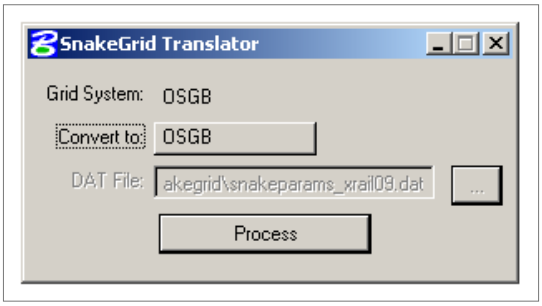
Contents

1. Starting Snakegrid

The Snakegrid application runs within *MicroStation* V8. This means that the *MicroStation* V8 application should already be installed and running on the machine that the Snakegrid application is going to be run on.

To start the Snakegrid application:

1. Start *MicroStation*.
2. Open up the dgn file that you want to use Snakegrid with.
3. When the dgn file has opened enter the following into the *MicroStation* Keyin window:
   mdl load sgrd
4. The Snakegrid application is loaded. The application will now do one of two things depending on whether the Snakegrid application has been used on the dgn file before:
   1. If this is the first time that the Snakegrid application has been used with the active dgn file then it will now prompt the user to set a grid system (see the section **Setting a dgn file to a particular grid system**)
   2. If the Snakegrid application has previously been used with the active dgn then the Snakegrid Translator dialog will now open. This dialog displays the Grid System of the active dgn, as shown below:



2. Setting a dgn file to a particular grid system

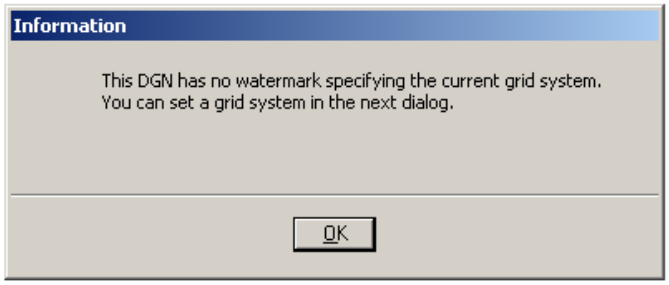
This section describes how to set a dgn file to a particular grid system. Before you set a grid system in the dgn it is important that you know which grid system the elements in the dgn have been drawn to. If you are in a blank dgn then you will most probably know which grid system you will be drawing your elements in. If you have been given an existing dgn then you will need to find out which grid system the elements were drawn to. In the majority of cases this will probably be the OSGB grid, but if you are unsure you will need to check with the person who created the drawing. The current grid system options are as follows:

- **OSGB** - The Ordnance Survey GB Grid
- **SNAKE** - The Snakegrid system, using a particular Snakegrid parameter file
- **LSG** - The London Survey Grid
- **READING** - The Reading Grid

For Example: if a user has a dgn file that they know has been created based on the coordinate system of Ordnance Survey's GB national grid then you would set the file to the **OSGB** option. The dgn file can then be translated into one of the other grid systems.

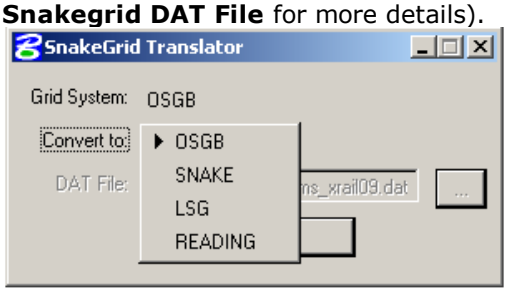
The method of setting a grid system to a dgn file is described below:

1. The first time that the Snakegrid application is used with a dgn file it will detect that no grid system has been set on the file and prompt the user with the following message:

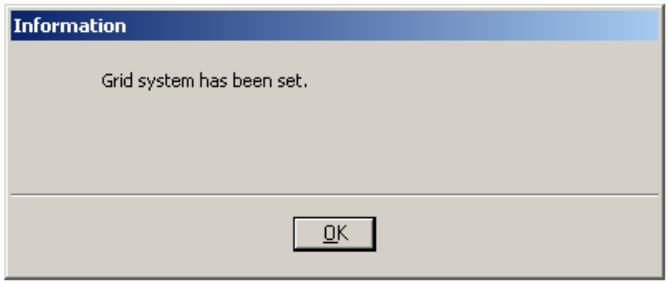


2. After pressing the OK button, the user can then set a Grid System to the active dgn using the **Set current grid system** dialog, shown below:

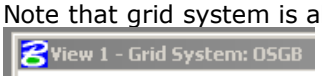
3. Change the **Set to** option button to the required grid system, in our example we set it to **OSGB**. (NOTE: if **SNAKE** has been selected as the grid system then the **DAT File** text item will now be enabled and the user can select an appropriate Snakegrid DAT file. See the section **Snakegrid DAT File** for more details).



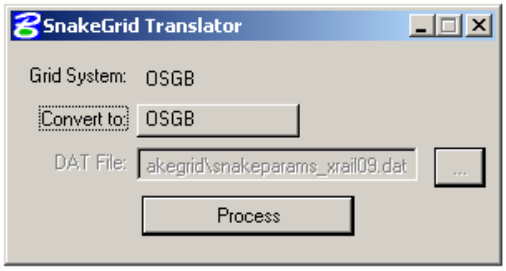
4. Click on the **Set Grid** button to confirm the setting.
5. A dialog confirming that the grid system has been set is displayed, as below:



6. The Snakegrid Translator dialog will now open displaying the grid system of the current dgn. Note that grid system is also shown in the title of the view windows, as in the example below:



7. Once the grid system has been set in the dgn file, the Snakegrid application will revert back to displaying it's main processing dialog, as below:



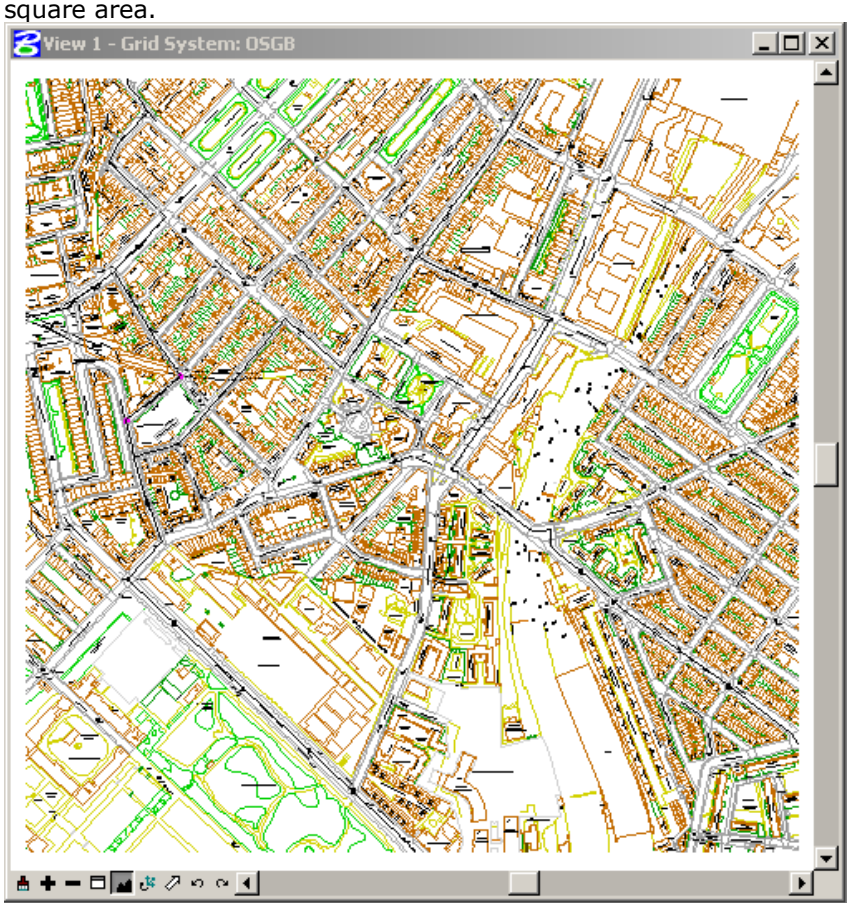
3. Converting a dgn file from one grid system to another

This section describes how to convert a dgn file from one grid system to another. This process moves each element in the drawing by creating a transformation based on the current grid setting of the file and the new grid system that the user wants the file translating to. In our example we are going to demonstrate the effect on an Ordnance Survey map tile, converting it from an OSGB grid system to a

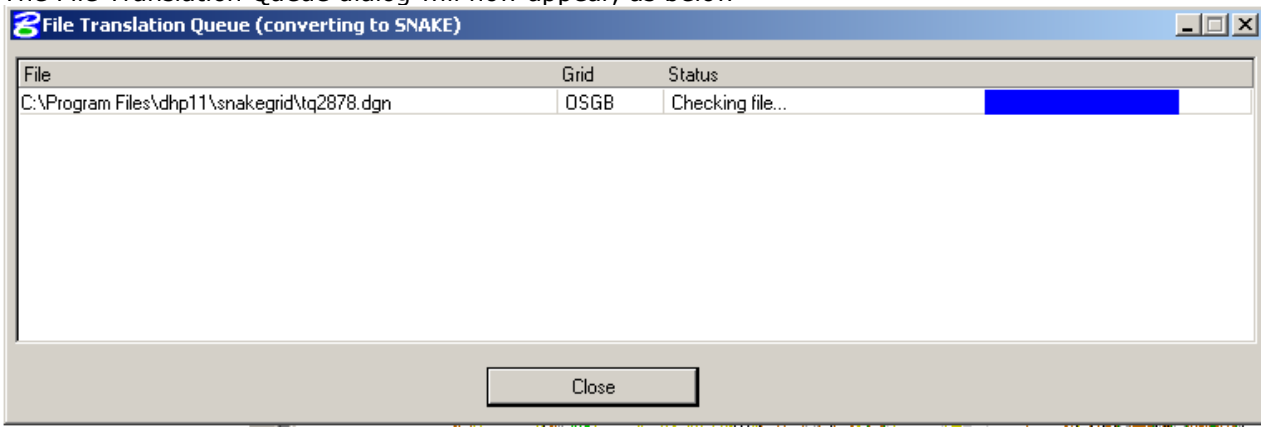
Snakegrid grid system, and then back again.

1. The main Snakegrid dialog displays what the current grid system is alongside the **Grid System** text item.
2. The **Convert to:** option displays a list of possible grid systems that the file can be transformed to.
3. Select the required grid system from the **Convert to:** option, in our example shown below we will select **SNAKE** as we want to convert it to a SnakeGrid grid system.

4. NOTE: if you have selected **SNAKE** as the required grid system then make sure that the correct DAT file has been selected in the **DAT File:** text item.
5. Before doing the translation, have a look at the file that you are converting by doing a **fit view**. In our example below we can see that the elements in the Ordnance Survey file make up a square area.

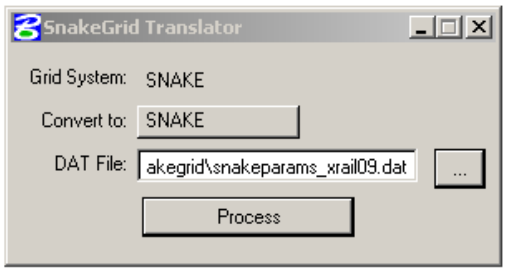


6. To start the conversion process click on the **Process** button.
7. The File Translation Queue dialog will now appear, as below

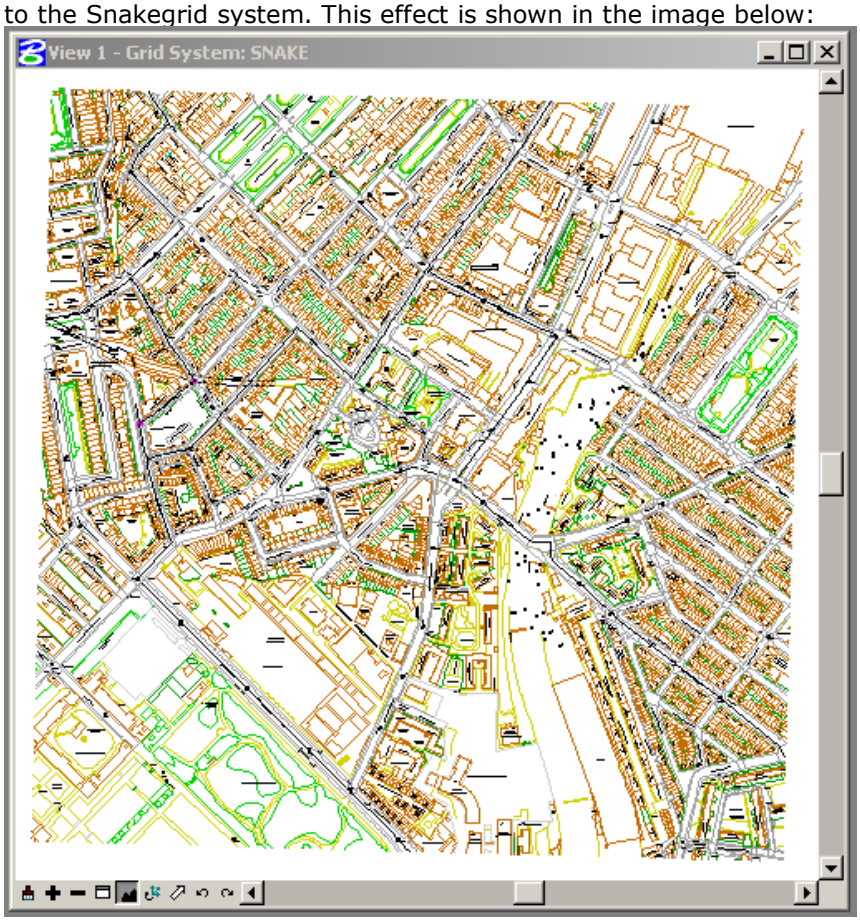


This dialog shows the name of each file being converted and the current status as it attempts to process it.There are a number of processes, checks and transformations that must be done for each file, the progress of these are shown in the **Status** column. When a file has been successfully translated then the **Status** column will be set to **Success** and the **Grid** column will display the name of the grid that the file has been set to. When the application has processed all of the files the title of the File Translation Queue dialog will display Completed and the dialog can be closed.

8. The **Grid System** text item in the main Snakegrid dialog will now have changed to display the name of the grid system that the active file has just been converted to. In our example, this will now be **SNAKE**, as below:



9. If we now do a **fit view** with our example then we can see that the previously square Ordnance Survey map has been transformed to a new area and now appears to have almost been rotated, this effect has been achieved by translating each element in the file from the OSGB grid system to the Snakegrid system. This effect is shown in the image below:



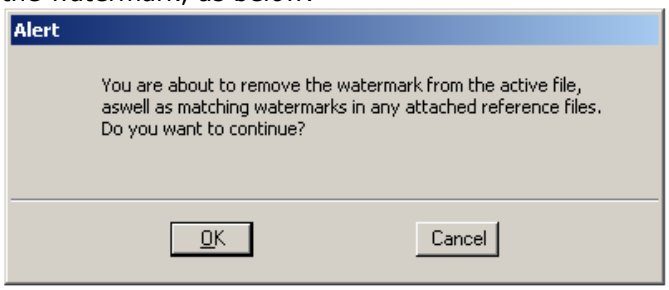
10. The file can be converted to another grid system using the same workflow. In our example we will go back to the OSGB grid system so we set the **Convert to:** option to OSGB and then select the **Process** button.
11. The file is converted back to the OSGB grid system and the elements are in exactly the same positions as they were before the file was converted to the Snakegrid grid system.

4. Deleting a Snakegrid Watermark

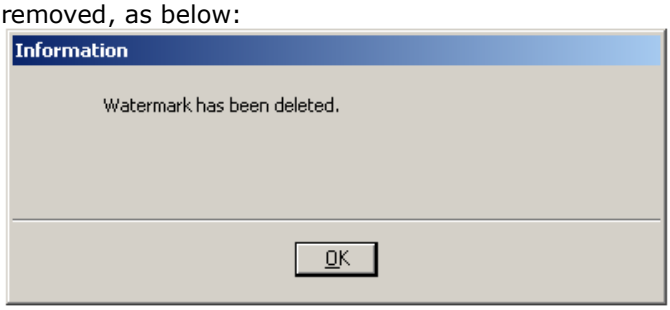
When a grid system is set in the dgn, either initially or after translating the file to another grid system, the application places a watermark in the dgn file so that it can track the active grid system. If the user wants to remove this watermark from the dgn then they should use the following method:

1. In the *MicroStation* keyin window, enter the following keyin:
   snakegrid deletewatermark
2. After entering the keyin the application will ask you to confirm that you really want to remove

the watermark, as below:



3. Clicking Cancel will stop the operation and no watermark will be deleted. Clicking OK will delete the watermark from the active file and a dialog will be displayed to confirm that it has been removed, as below:

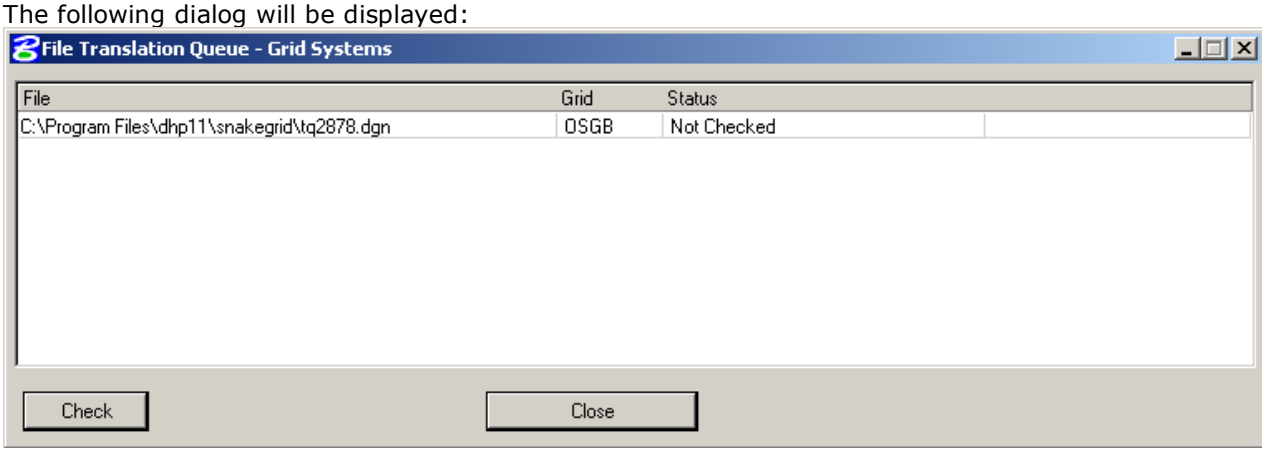


4. Once a watermark has been deleted the Snakegrid application cannot be used on the file until another grid system has been set in the file (see the section **Setting a dgn file to a particular grid system** for details on how to do this).

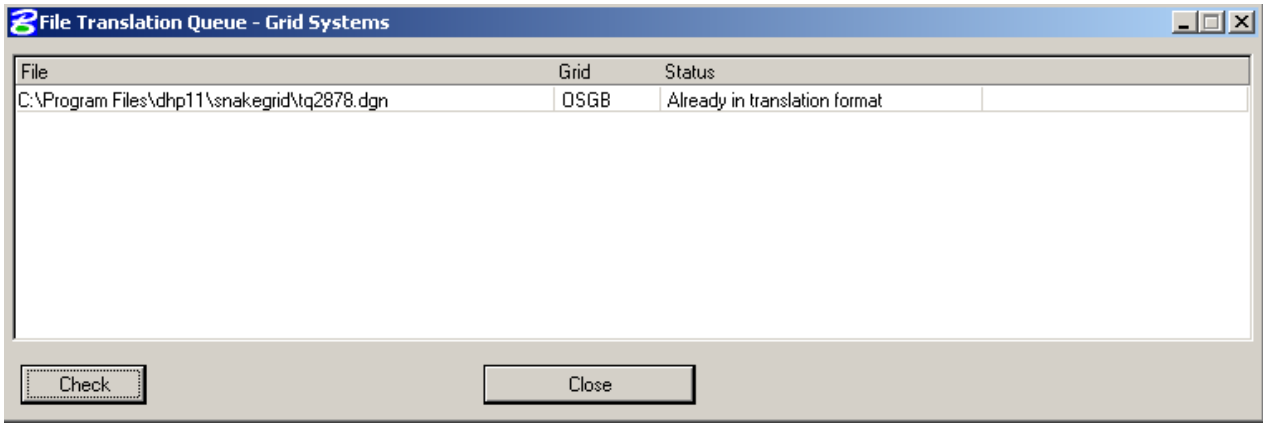
5. Checking Files

The application can perform a check on the active dgn file, listing its current grid system (if it has one) and allowing a check to be done to make sure that the application can process all of the elements within the dgn. Checking a dgn file is done by the following method:

1. In the *MicroStation* keyin window, enter the following keyin:
   conversion gridcheck
2. The following dialog will be displayed:



3. When the dialog is first loaded it displays the dgn file's current grid system in the **Grid** column. The **Status** column will show **Not Checked** to indicate that a check hasn't yet been done on the file.
4. Click on the **Check** button to perform the check on the file.
5. The result of the check is shown in the **Status** column, in our example below it shows that the file is **Already in translation format**, meaning that the file has already successfully been through the conversion process:



6. Snakegrid DAT File

The Snakegrid DAT file is a parameter file that is used by the application when a dgn file is converted into a Snakegrid system. You need a correct Snakegrid DAT file for the area of dgn file that you are going to use it with.