

System

Direct Use of CAD Files (DWG, DXF, DGN, TAB)

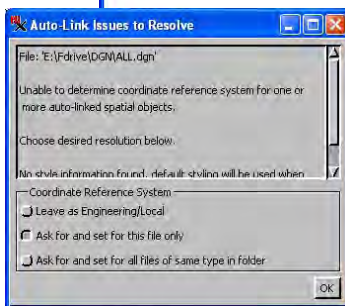
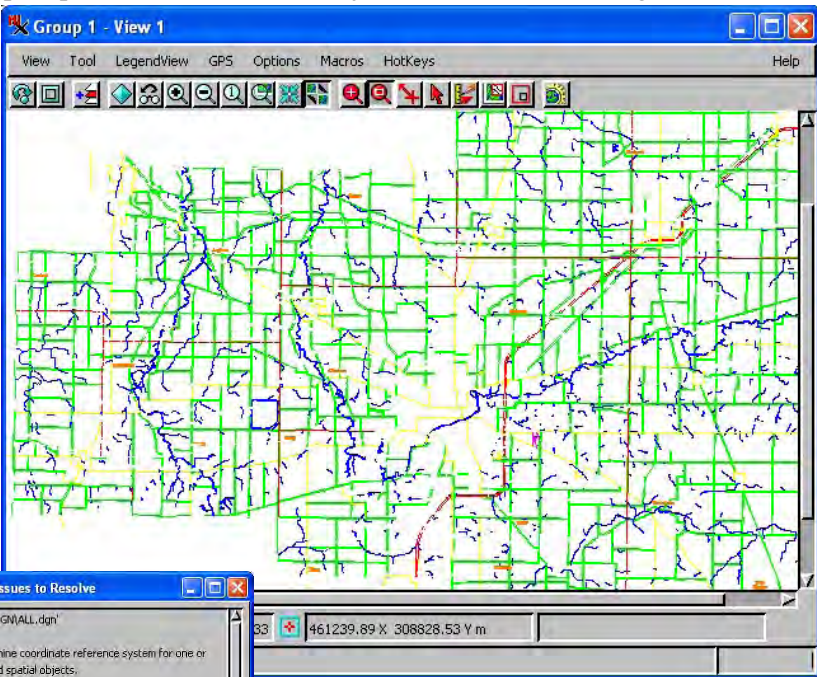
The TNT products support import and direct use of CAD files in Autodesk's drawing (DWG) and Drawing eXchange (DXF) formats, Intergraph/Microstation's DGN format, and MapInfo's TAB format. Linking by double-clicking on a file in any of these formats or browsing to and selecting them in Spatial Data Display or any other process creates a co-named file that contains the link information (*.rlk). Links created in the Import process are stored in Project Files (*.rvc) creating the functional equivalent of CAD objects. This Project File may also contain other objects of other types. You can also copy the elements into CAD objects during import, rather than just linking, then the CAD object in the TNT product is independent of the original file.

DWG and DXF files are the internal and interchange formats, respectively, created by AutoCAD. These also are used primarily for infrastructure design. Direct use and import of DWG and DXF files is supported by the DWGdirect libraries from Open Design Alliance. Direct use of DXF and DWG files is available for all operating systems supported by the TNT products: Windows, Macintosh, Linux, and Unix.

DWG and DXF files do not have a place to store a Coordinate Reference System (CRS). The first time you choose a particular DWG or DXF file for direct display, the *Auto-Link Issues to Resolve* window opens for you to indicate what to do about the lack of a CRS. You can identify the CRS for the file if the file's coordinates are in a known CRS that ties the file to the Earth's surface or leave the CRS as Engineering/Local. If you can define the CRS, this simple step is all that is necessary for the file to be displayed with any of your other geodata of the same geographic area. If the CRS is left as Engineering/Local, these files can only be sensibly displayed together with other layers that share a common coordinate system, or origin and scale. If you cannot establish the CRS when linking, use the Georeference process in TNTmips or TNTedit to establish Earth-oriented coordinates so your DWG and DXF files can be utilized with other geodata.

Files in DGN format are created by Bentley MicroStation and Intergraph MGE software, which are generally used for infrastructure design and are available only for Windows platforms. DGN files can be directly used for display or other processes as CAD objects. Direct display of DGN files makes use of the Open Design Alliance DGNdirect libraries, which are currently available for Windows platforms only. To use DGN files with other operating systems supported by TNTmips, use the Import process. The Import process does not use the DGNdirect libraries and, thus, is not limited to Windows platforms. Like DXF and DWG, DGN files do not store a CRS. You can define a CRS during linking so your DGN file can be used with any geodata if applicable or use it only with other files that have the same Engineering/Local coordinates. If you cannot establish the CRS when linking, use the Georeference process to establish Earth-oriented coordinates.

TAB files are in MapInfo's internal format, which is generally used for mapping and geospatial analysis. Direct use of TAB files is supported by the TAB/MIF library. TAB files may contain georeference information, which is used if available. If it is not available, you will get the same *Auto-Link Issues to Resolve* window you get with DXF, DWG, and DGN files. If your TAB files do not specify a CRS, use the georeference process in TNTmips or TNTedit to establish Earth-oriented coordinates. Direct use of TAB files is supported for Windows, Macintosh, Linux, and Unix.



Many external CAD files are likely to be engineering drawings that are not georeferenced. Choose the Leave as Engineering/Local option for such files in the *Auto-Link Issues to Resolve* window when selected for direct use. Use the Georeference process to establish Earth-oriented coordinates.