BENTLEY RASTER REFERENCES WITH PCMS

Handling Rasters with PCMS

A file prefix is required for **PCMS** use should you choose to keep a raster as part of your final plan set for printing and (or) to transfer the raster automatically to your PC upon a **PCMS** check-out.

Example: The designation **MTRD:** (similar to file references) is added after the raster file is attached.

Note: If you only need the raster for design and not for final plans, you may detach the file before final submittals. This will also streamline the plotting process.

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Naming Raster Files

Your raster file must be named according to the PCMS File Naming Standards. See PCMS Document Naming Standards.

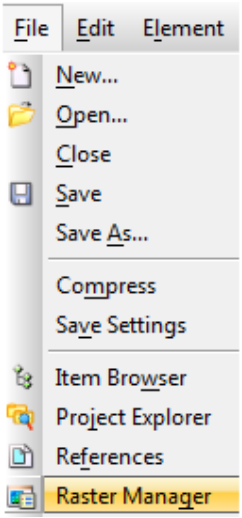
Remember you must use the **Upload new documents(s)** command in **PCMS** to add the raster(s) so they transfer with PCMS processes, i.e. **Check Out**, **View**, etc., and located in the PCMS environment by Docuplot when plotting.

Attaching Rasters

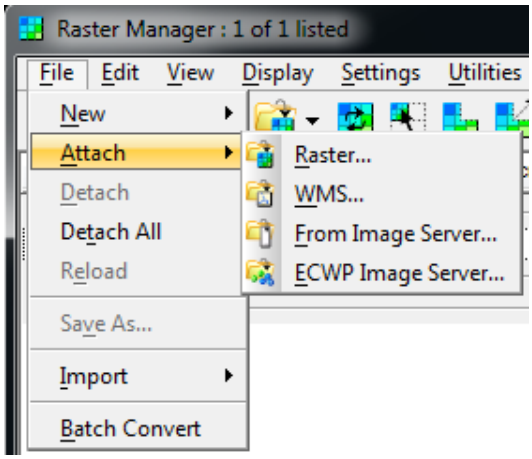
Use the following steps to add raster images to your MicroStation or PowerGEOPAK file.

1) Open the file in MicroStation or PowerGEOPAK.

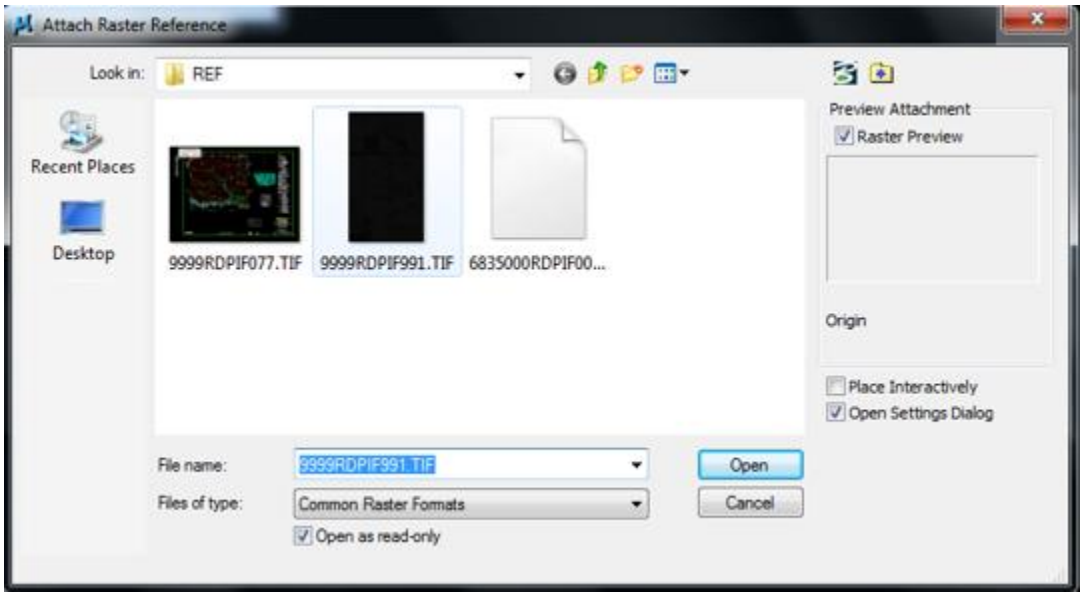
2) Select **File** > **Raster Manager**.



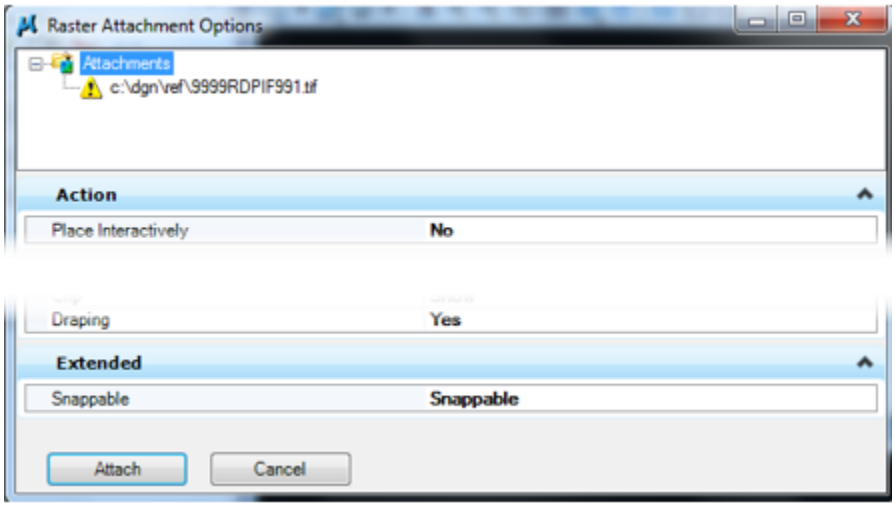
3) In Raster Manager, Select **File** > **Attach** > **Raster**



4) Select the desired file to attach. If your image file is Geo-referenced (to allow the image to attach at its real world coordinates), do not select **Place Interactively.**



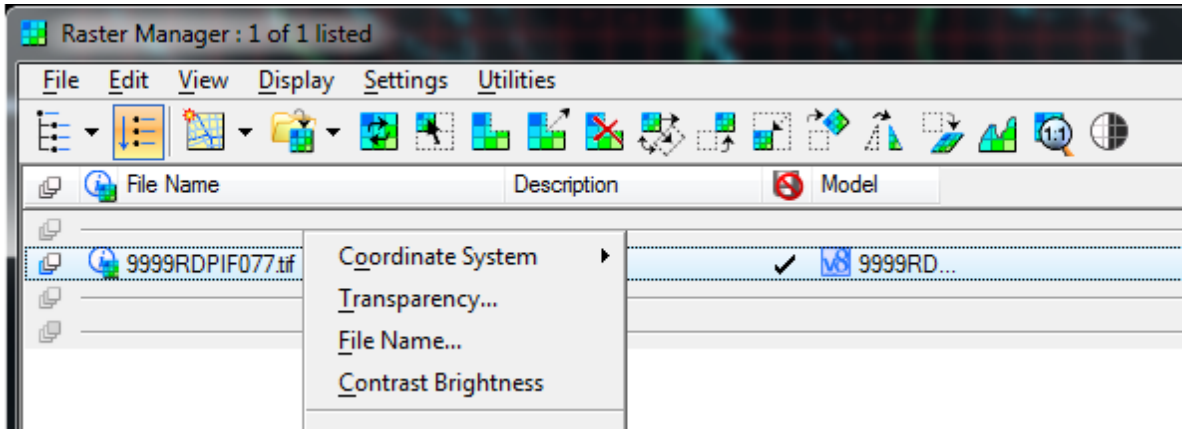
5) Select **attach**:



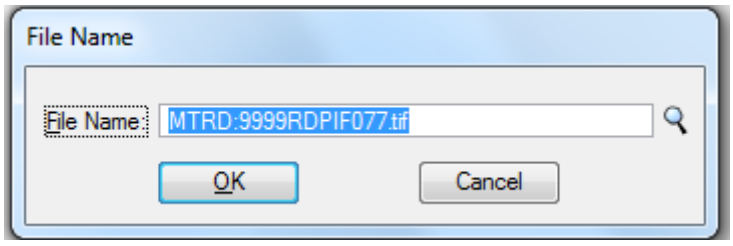
Preparing Raster Attachment for PCMS

A prefix needs to be added to the raster attachment. PCMS is programmed to read the prefix for locating the attached raster file during processes.

1) Within the Raster Manager, right-click the file after the attachment is made, then select **File Name…**.



2) Add the proper prefix as displayed in the example below:



Note: Refer to the MDT Reference File Logical Prefixes guide for a full list of prefixes.

Descartes

You can use editing tools such as ***Descartes** to first resize and adjust rasters. Cutting out unneeded areas of the raster can speed up plotting and file transfers. ***Raster Manager*** provides lower-level editing capabilities only.

When **Descartes** is loaded it adds many additional tools to ***Raster Manager***.

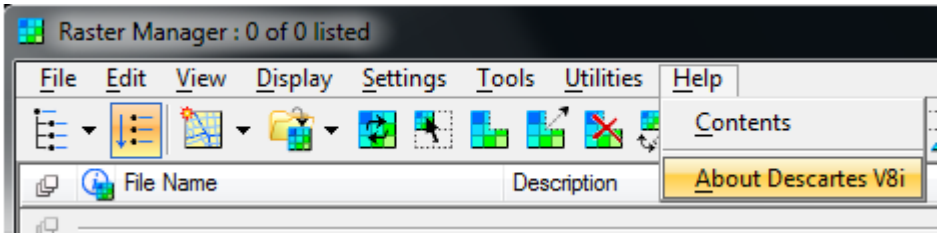
Loading Descartes

1) In **MicroStation**, select the pull-down menu **MDT APPS** > **Descartes.**

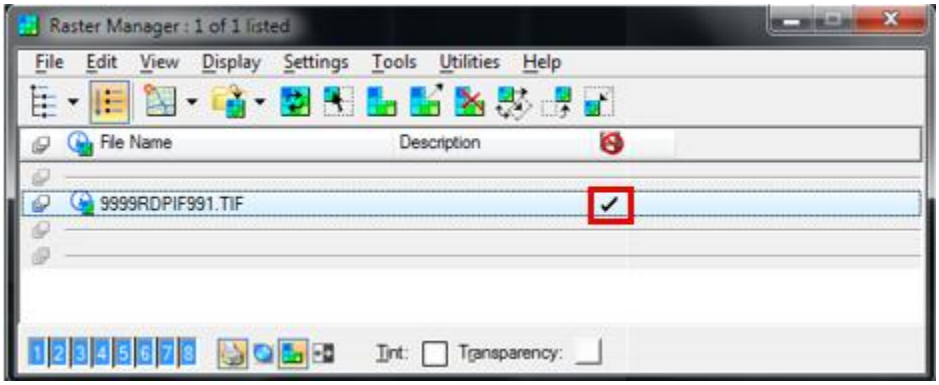
   Note: For manually loading, select **Utilities > MDL applications** > **Browse** then path to directory: C:\Program Files (x86)\Bentley MicroStation V8i (SELECTseries)\Descartes\mdlapps\, then select file **dcartes.ma.**

2) Open the **Raster Manager** and select **Help**. **About Descartes V8i** will be shown as an option if Descartes was successfully loaded.

3) Select **Help** > **Contents** to locate addition information.



4) To manipulate an image file; first remove the “read-only” control within the Raster Manager.

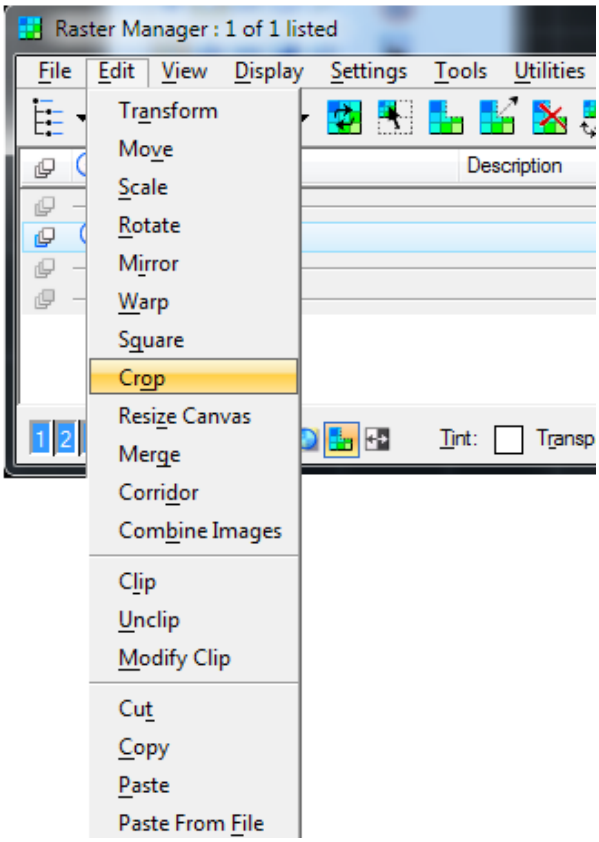


Cropping a Raster

The Descartes Crop tool allows you to remove pixels outside a specified area. A crop operation is visually identical to a clip operation. The difference is that the crop command modifies the source file while clipping will not.

WARNING: This will physically alter the image file; you may wish to make a copy of the file before you run this process.

1) From the Raster Manager, choose **Edit** and select **Crop**.



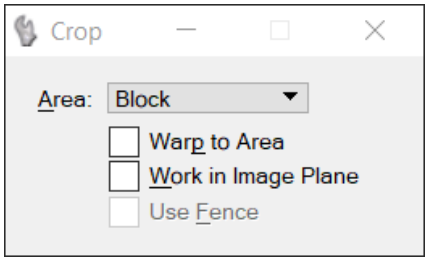
2) Choose the desired crop options from the **Crop** dialog box.

   Area: Method to specify the crop area, it can be Block, Oriented Block, Element, and Shape.

   Warp to area: Results: Crop image will be warped to the smallest rectangular area enclosing the crop area.

   Work in Image Plane

   Use Fence: Use a fence for cropping an image.



3) Enter 2 points to select the desired area you wish to retain.

You're finished.

Raster File Formats

The following is a list of raster file formats that MicroStation and PowerGEOPAK supports.

Common Raster Formats
Common Geo Ref Raster Formats
Adobe PDF [*.pdf]
Anatech LRD [*.lrd]
Apple PICT [*.pct, *.pict]
ArcInfo ACSII Grid [*.asc, *.grd]
ArcInfo Binary Grid [*.adf]
BSB Navigation Chart [*.kap]
Bentley HMR [*.hmr]
C29 [*.c29, *.t29]
C30 [*.c30]
C31 [*.c31]
CIT [*.cit]
COT [*.cot]
CRL [*.crl, *.tpe, *.lsr]
Cals Type 1 CCIT T4 [*.cal, *.cals, *.ct1]
Compuserve GIF [*.gif]
Digital Terrain Elevation Data [*.dt0, *.dt1, *.dt2]
ERMapper Compressed Wavelets [*.ecw]
ESRI BIL [*.bil]
Erdas IMG [*img]
FLI Animation format [*.fli, *.flc]
GEOTIFF [*.tif, *.tiff]
Image RGB [*.a]
Img [*.p]
Ingr. TIFF [*.tif, *.tiff]
Internet TIFF [*.iTIFF]
Internet TIFF64 [*.iTIFF64]
JPEG 2000 [*.jp2, *.j2k, *.jpm, *.j2c, *.jpx, *.jpx , *.jpf]
JPEG [*.jpg, *.jpeg, *.jpe, *.jfif]
Landsat TM FAST-L7A [*.dat, *.fst, *.usgs]
MPF [*.mpf]

MrSID [*.sid]
MultiChannel [*.xch]
National Imagery Transmission Format [*.ntf, *.nsf]
PCX [*.pcx]
Portable Network Graphics [*.png]
RGB Compressed [*.rgb]
RGB [*.rgb]
RLC [*.rlc]
RLE [*.rle]
SPOT CAP [*.fil]
Sun Raster [*.rs, *.ras]
TG4 [*.tg4]
Tag Image File Format [*.tif, *.tiff]
Targa [*.tga]
USGS DEM ASCII [*.dem]
USGS Digital Ortho Quad [*.doq]
USGS NDF File Format [*.h1, *.h2, *.h3, *.usgs]
USGS SDTS DEM [*.catd.ddf]
Web Map Server [*.xwms]
Windows BMP [*.bmp, *.dib]
Wireless BitMap [*.wbmp]