Home > Knowledge > MicroStation (Knowledge Base) > p - Administration Wiki - MicroStation V8i Variables

Helpful? Yes No

Rate this article ☆☆☆☆☆

KB0111487

MicroStation V8i Variables

Authored by Andrew Bell

Product:MicroStation Version:V8i Environment:N\A

Area:Administration

Subarea:N\A

Overview

This technical document provides a description of published configuration variables in MicroStation V8i. MicroStation contains various configuration variables that are not identified in this document. Undocumented configuration variables should only be used in very specific situations (i.e. they are not intended for "general use").

Archive

MS_ARCHIVE - Search path for archive files.

MS_ARCHIVECLASS - Search path for archive class files.

MS_KEYPAIRLIST - Digital signature KeyPair file list.

Cells

MS_DETAILINGSYMBOLS_CELLLIST - List of cell libraries to be searched for cells used as callout heads in detailing symbols. By default, cells in ustation.dgnlib are used.

MS_CELL - Search path(s) for cell libraries.

MS_CELLLIST - List of cell libraries to be searched for cells not found in the current library.

MS_CELLSELECTORDIR - Directory for Cell Selector button configuration (.csf) files.

 ${\tt MS_CELLSELECTOR-Default\ Cell\ Selector\ button\ configuration\ file.}$

MS_CELLOUT - Default directory for newly created cell libraries.

MS_MENU - Cell library file containing menu cells.

MS_RESOLVESCNAMECONFLICTS - Controls how shared cell name conflicts are handled for operations like reference merge. If set to 0, there is no resolution. If set to 1, the default, MicroStation resolves the name conflicts on DWG shared cell instances; if set to 2, MicroStation resolves name conflicts for all non-anonymous shared cells.

Colors

MS_DEFCTBL - Default color table if DGN file has none.

MS_RMENCTBL - Default menu colors (dialogs, borders, etc.) for right screen - specifies a color table (.tbl) file.

MS_LMENCTBL - Default menu colors (dialogs, borders, etc.) for left screen - specifies a color table (.tbl) file.

MS_COLORBOOK_LIBRARIES - Displays the list of DGN files that are used as a source for color books.

MS_SYSTEM_COLORBOOKS - Sets the directory name containing the system color books delivered with MicroStation.

Database

MS_UDLDIR - Points to the directory that contains the Universal Data Link (UDL) files. The UDL files contain the connection strings to a particular data source. The default directory is ..Bentley\WorkSpace\System\Database\Oledb\udl.

MS_ORACLE_HOME - Used to set the path to the Oracle client files required for connecting to the database server. If this variable is not set, MicroStation looks system registry and path to determine the Oracle Home directory.

)BASE - Search path(s) for database files.

MS_SERVER - MDL application to load the database interface software.

MS_DBEXT -The database interface "server" application.MS_LINKTYPE "Database Linkages" User data linkage types recognized by the database interface software.

Data Files

MS_CUSTOMSHEETSIZEDEF - Defines the location of the sheetsizes definition file that can be used when creating sheet models.

MS_CUSTOMSCALEDEF - Defines the location of the scales definition file that can be used when creating models.

MS_CUSTOMUNITDEF - Defines the location of the unit definition file that can be used when upgrading pre-V8 files to V8 DGN files.

MS_HTMLDGNDIR - Directory containing template DGN files used to generate cell images for HTML documents.

MS_WMS_SERVERS - Lists the servers for the Web Map Service dialogs.

MS_DATETIMEFORMATS - Provides the list of formats available from the Fields Editor for Date/Time fields.

MS_SETTINGS - Open settings file.

MS_SETTINGSOUTDIR - Directory for newly created settings files.

MS_SETTINGSDIR - Directory containing settings files.

MS_REMAP_CSVFILE - If this variable points to a remapping comma separated value (CSV) file, the remap filter defaults to that file for the remapping during the Save As operation.

MS_BSILOG_CONFIG_FILE - Location of the file that controls and configures diagnostic logging. The default is \$(MS_DATA)BSILOG.CONFIG.XML.

MS_BSILOG_ENABLE - Allows the logging of diagnostic messages.

DWG/DXF

MS_ACADDIR - Defines the directory containing AutoCAD. It is used to find the DWG support files, such as fonts.

When you first load MicroStation V8, MicroStation reads the registry, determines whether AutoCAD or AutoCAD LT is installed on your computer, and if present, sets this configuration variable.

MS_BLOCKLIST - Defines the list of DWG and DXF files available for insertion as MicroStation cells.

You can use this configuration variable when you turn on Display All Cells in Path in the Cell Library dialog.

MS_DWG_BACKUP - Defines the directory for the DWG backup (.bak) files. If not set, the backup files are placed in the same directory as the DWG file.

MS_DWG_COMMANDPREFIX - Defines a character or string of characters that can be used as a shortcut to the AutoCAD key-in commands.

 ${\tt MS_DWG_CREATE_SPACE_FROM_EDF-If} \ \ {\tt set} \ \ {\tt to} \ \ {\tt l,} \ \ {\tt any} \ \ {\tt empty} \ \ {\tt data} \ \ {\tt field} \ \ {\tt remains} \ \ {\tt as} \ \ {\tt aspace}.$

MS_DWG_FEETUNIT_AS_ARCHENG - If set, when a DGN file with Working Units set to Feet-Inches, Format set to Master Units, and Units on the Save As DWG/DXF Options dialog set to Master Units, the resulting DWG file has Engineering or Architectural units in AutoCAD. (If not set, the units are Decimal or Fractional.) For details, see Setting units in files that will be saved to DWG files.

MS_DWG_FIELD_2005FORMATTING - If defined and set to 1, MicroStation only generates field information that AutoCAD 2005 supports.

MS_DWG_LSTYLE_FONTPATH - Determines the location of the font file.

MS_DWG_LSTYLE_FONTNAME - Determines the name of the font file, and therefore, the name of the font.

MS_DWG_MAX_ORPHANTAGS_PERSET - Set the maximum number of tags per tagset for "orphan tags." An orphan tag is an attribute definition that is never instantiated in a block as it should in a DWG file. When opening a DWG file, all such "dangling" attribute definitions are collected into a tagset. For better performance, a tagset should be limited to a manageable size. Therefore, in the case of a large number of dangling attribute definitions, multiple tagsets are preferred rather than one large tagset. The default size is 100 per tagset.

MS_DWG_OBJECT_APP - Lists Object Enabler MDL applications to be loaded. It is currently set to use applications that enable Architectural Desktop and AutoPlant objects (AdtDirectApp and RebisDirectapp). You should not change this setting.

MS_DWG_PGPFILE - Points to a PGP file that contains shortcuts, or aliases, for AutoCAD commands.

MS_DWG_PRE2004_COLOR_TABLE - Sets the color table for DWG files in MicroStation. In version 2004, AutoCAD began displaying indexed colors with a slightly different (generally lighter) colors. MicroStation also uses these new colors unless this variable is set.

MS_DWGAUTOSAVE - Determines the frequency, in seconds, of the auto save timer for DWG and DXF files. For example, if set to 300 (the default), an auto-save occurs approximately 5 minutes after the first change to the design. If set to zero, no auto save is done while the file is open. The file is automatically saved on exit or when switching to a different file.

MS_DWGAUTOSAVE_NODIALOG - If set, auto-save occurs automatically, without displaying the default auto-save dialog.

DWG and DXF format files take longer than DGN files to save. Therefore, by default MicroStation displays a dialog that allows you to defer the auto-save operation. When the variable is set, the dialog is not displayed.

MS_DWGDATA - Points to the directory where the following files are stored:

- "DwgSettings.rsc" resource file containing all of the DWG settings
- \bullet Files (*.dws) containing saved settings for opening and saving DWG/DXF files.
- "DwgDisplayColors.tbl" (Optional) A MicroStation color table that contains the fixed AutoCAD colors used for display to the screen.
- "DwgPlotColors.tbl" (Optional) A MicroStation color table that contains the fixed AutoCAD colors used for plotting.
- NAC DWGFONTPATH Defines the path to AutoCAD *.SHX fonts if AutoCAD is not installed on the system.

fault, MicroStation first uses the value of the MS_ACADDIR configuration variable to find AutoCAD support files. If this is unavailable, MicroStation uses dual variables, such as MS_DWGFONTPATH.

MS_DWGNODIRECTPROXIES - Controls how direct proxies (Autodesk Architectural Desktop multi-view block references) are displayed. If set to 1, only the proxy entity's graphics or bounding box display. If set to 0, these proxy entities display as 2D or 3D representations, and they can be modified.

MS_DWGOMITUNIQUEEXTENSION - If more than one file with the same name is present in the same directory, appends the extension to the output filename when saving the file.

For example, if the directory contains both sample.s01 and sample.s02, then the extension is included in the output filenames (sample_s01.dgn and sample_s02.dgn). If the directory does not include any files with duplicate names, then the extensions are be included in the output names. For example, if the directory contains only file sample.s02, this file is saved to sample.dwg.

MS_DWGPATFILE - Defines the full path file name that contains AutoCAD pattern definitions.

MS_DWGREF_ALLOWMASTERCOLORS - Defines how MicroStation uses color tables for DWG or DXF files attached as references.

• If MS_DWGREF_ALLOWMASTERCOLORS is set to 1, the color tables for DWG or DXF references are handled as they are for DGN references: they are controlled by the Use Color Table setting (Workspace > Preferences > Reference category). When Use Color Table is on, the elements in each reference are displayed using the reference's color table. When Use Color Table is off, the elements in each reference are displayed using the active design file's color table.

• If MS_DWGREF_ALLOWMASTERCOLORS is not set to any value, DWG or DXF references are always displayed using the active design file's color table. In this case, the Use Color Table setting has no effect.

MS_DWGSEED - Defines the DWG seed file used when opening DWG files.

MS_DWGSEED_OVERRIDE - Determines whether a user can modify the DWG Seed File setting on the Save As DWG/DXF Options dialog.

When the variable is not set or set to 0, the first time that the dialog opens, the default DWG seed file is set by the MS_DWGSEED configuration variable. The user can choose a different seed file

When the variable is set to 1, the user can only use the DWG seed file identified by MS_DWGSEED. The user cannot choose a different seed file.

When the variable is set to 2, the default DWG seed file is set by MS_DWGSEED at the beginning of each MicroStation session. The user can choose a different seed file during the session.

MS_DWGSETTINGSFILE - Points to the file that contains the settings for opening and saving DWG files.

MS_DWGSHEETMODELSEED - Identifies the file containing the seed model for new sheet models in DWG files.

MS_DWGSHEETMODELSEEDNAME - Identifies the seed model for new sheet models in DWG files.

MS_DWGSYSTEMDATA - Identifies the directory containing the DWG settings file Dwgsettings.rsc. Overrides the directory specified by MS_DWGDATA. The display and plotting color tables (DwgDisplayColor.tbl and DwgPlotColors.tbl) can also be controlled by placing them in this directory.

MS_MERGE_DISPLAYEDLEVELSONLY - Modifies Copy Levels During Merge setting on the References tab of the Save As DWG/DXF Options dialog. When set (to 1), only those reference levels that are displayed in the selected view are merged into the output file.

If not set, and the Merge Displayed Levels Only setting is off (in the References tab), then all reference levels are merged into the output file.

MS_NO_DWG_BACKUP - If set to 1, backup files (.bak) are not created when you edit a DWG or DXF file.

MS_TRANSEED_OVERRIDE - Determines whether a user can modify the DGN Seed File setting on the DWG Open Options dialog.

When the variable is not set or set to 0, the first time that the dialog opens, the default DGN Seed File is set by the MS_TRANSEED configuration variable. The user can choose a different seed file.

When the variable is set to 1, the user can only use the DGN seed file identified by MS_TRANSEED. The user cannot choose a different seed file.

When the variable is set to 2, the default DGN seed fie is set by MS_TRANSEED at the beginning of each MicroStation session. The user can choose a different seed file during the session.

MS_WORKMODE - Defines the workmode as either DGN or DWG.

MS_DWG_ALERT_DEC_FRC_SCI_UNITS - When a DWG file is opened, an alert dialog opens to warn that Decimal/Fractional/Scientific units are not set to Design Center units. Valid values are ON (or no value) or OFF.

MS_DWG_ALERT_DESIGNCENTER_UNITS - When a DWG file is opened, an alert dialog opens to warn that Design Center units are not set to a specific unit. Valid values are ON (or no value) or OFF.

MS_DWG_ALERT_ENG_ARCH_UNITS - When a DWG file is opened, an alert dialog opens to warn that Architectural/Engineering units are not set to Inches. Valid values are ON (or no value) or OFF.

 $MS_DWG_ARCH_ENG_UNITS - Sets \ units \ to \ open \ DWG \ files \ that \ use \ Architectural \ or \ Engineering \ units. \ Valid \ values \ are:$

Master Units

Sub Units

Design Center Units

a unit defined in file units.def

MS_DWG_AXISLOCK_FROM_ORTHOMODE If DWG ORTHOMODE=1, sets the Axis Lock. Valid values are ON (or no value) or OFF.

MS_DWG_DEC_FRC_SCI_UNITS- Sets units to open DWG files that use Decimal, Fraction or Scientific units. Valid values are:

Master Units

Sub Units

Design Center Units

a unit defined in file units.def

MS_DWG_DESIGNBACKGROUND_COLOR - Sets the background color for the default design model. Valid values are Red, Green, or Blue, where each of the three color indices is an integer between 0 and 255.

 ${\tt MS_DWG_DESIGNCENTER_UNITS-Sets\ units\ to\ open\ DWG\ files\ that\ use\ Design\ Center\ Units.\ Valid\ values\ are:}$

Master Units

Sub Units

a unit defined in file units.def

MS_DWG_FOREGROUNDCOLOR255RGB - Sets the RGB value to display DWG color index 255 as the foreground color, with red, green, and blue values separated by commas. For example, setting MS_DWG_FOREGROUNDCOLOR255RGB=255,255,255 will display DWG index color 255 as white. If this configuration variable is not set, a grayish color is displayed. This is a workaround for DWG's ambiguous index color 255, which serves both as a background color for wipeout fill and as a foreground color for other entities. The foreground definition is remapped by this configuration variable and the RGB value is saved as a named color "DWG Color 255" in a color book called "DWG Special Colors."

MS_DWG_GRAPHIC_GROUP_ATTRIBUTES - Sets blocks to Graphic Groups, that is, puts shared cell and attached tags into a graphic group. Valid values are ON (or no value) or OFF.

MS_DWG_HLINK_AS_ELINK Converts hyperlinks to Engineering Links instead of Design Links. Valid values are ON (or no value) or OFF.

MS_DWG_LINEWEIGHT_MAPPING - Maps DWG line weights to DGN line weights. Valid values are 0=DWG weight1; 1=DWG weight2; 2=DWG weight3; and so forth to 31=DWG weight31, where DWG weights are the DWG line weight values in millimeters, for examples, 0.0, 0.13, 2.11.

MS_DWG_LWDEFAULT - Controls the width of the default line weight and is analogous to the AutoCAD registry variable LWDEFAULT. The default value is 0 for unweighted default lines. Valid LWDEFAULT values are From AutoCAD Registry, 0.00 mm, 0.05 mm, 0.09 mm, 0.13 mm, 0.15 mm, 0.18 mm, 0.20 mm, 0.25 mm, 0.30 mm, 0.35 mm, 0.40 mm, 0.50 mm, 0.53 mm, 0.60 mm, 0.70 mm, 0.80 mm, 0.90 mm, 1.00 mm, 1.06 mm, 1.20 mm, 1.40 mm, 1.58 mm, 2.00 mm, 2.11 mm. The Line weight index is also a valid alternative, that is, any integer from 0 through 211. A line weight index is an enumeration of line weight defined by DXF Group Code 370.

MS_DWG_MAX_DICTIONARYITEMS - (Affects DWG files with many dictionary items.) A dictionary item is non-graphical data stored in the DWG file that often does not impact the visible elements. When opening a file, if the DWG file has a large number of these items, performance can be slow. To speed up the file opening process, you can ignore this items. If you need these dictionary items, you can opt to keep them in spite of poor performance. This variable sets the number of dictionary items you want to keep. The default is set to 2000.

MS_DWG_MODELSPACE - Sets the model space to 2D or 3D. Valid values are 2D or 3D.

MS_DWG_PAPERSPACE - Sets the paper space to 2D or 3D. Valid values are 2D or 3D.

MS_DWG_PROXYSHOW - Controls the display of proxy objects within a DWG drawing. It is analogous to the AutoCAD registry setting PROXYSHOW. Valid values are:

From AutoCAD Registry

Do Not Show Proxy

Show Proxy Image

Show Proxy Box

An alternative is an integer value such as 0 - show image, 1 - show box or 2 - do not show. The default setting is 1.

MS_DWG_PROXY_VIEW - Sets a view to be displayed for a multi-view proxy. Valid values are:

qoT

Front

Left

Isometric

MS_DWG_REFERENCE_CONVERT - Converts reference files to DWG files. Valid values are ON (or no value) or OFF.

MS_DWG_REFERENCE_COPYLEVEL - Sets the conditions to copy reference levels during merge: only if they are not in the target file, if they are overridden, or always copy. Valid values are If Not Found, If Overrides Exist, or Always.

MS_DWG_REFERENCE_COPYNESTED - Copies live nested reference attachments to the target file when merging. Valid values are ON (or no value) or OFF.

MS_DWG_REFERENCE_EXTERNAL - Saves external reference file attachments to be an Xref attachment (retained), merged, merged as a block, or omitted. Valid values are:

Retain

Merge

Merge To Cell

Omit

MS_DWG_REFERENCE_MASKED - Saves masked reference file attachments to be an Xref attachment (retained), merged, merged as a block, or omitted. Valid values are:

Retain

Merge

Merge To Cell

Omit

MS_DWG_REFERENCE_MERGE_DISPLAYEDLEVELSONLY - Merges reference levels only if they are displayed. Valid values are ON (or no value) or OFF.

MS_DWG_REFERENCE_OPTIMIZEDCLIP - Optimizes reference clipping when merged. Valid values are ON (or no value) or OFF.

MS_DWG_REFERENCE_SELF - Saves self-referenced file attachments to be an Xref attachment (retained), merged, merged as a block, or omitted. Valid values are:

Retain

Merge

Merge To Cell

Omit

MS_DWG_RENDER_LIGHTSOURCE_OPEN - Sets to use light source for rendering. Valid values are ON (or no value) or OFF.

MS_DWG_RENDER_MATERIAL_OPEN - Sets to use materials for rendering. Valid values are ON (or no value) or OFF.

MS_DWG_2D_UNFILLED_3OR4SIDED_SHAPE - Converts 2D unfilled triangles and quadrangles to polyline, face, polyface mesh, or region entities. Valid values are:

"Face" Entity

"Region" Entity

Polyface Mesh

ne

MS_DWG_2D_UNFILLED_5ORMORESIDED_SHAPE - Converts 2D unfilled polygons to polyline, polyface mesh, or region entities. Valid values are:

"Region" Entity

Polyface Mesh

Polyline

MS_DWG_2D_UNFILLED_COMPLEX_SHAPE - Converts 2D unfilled complex shapes to polyline, polyface mesh, or region entities. Valid values are:

"Region" Entity

Polyface Mesh

Polyline

MS_DWG_2D_UNFILLED_GROUPHOLE - Converts 2D unfilled group hole elements to polyface mesh or region entities. Valid values are:

"Region" Entity

Polyface Mesh

MS_DWG_3D_UNFILLED_3OR4SIDED_SHAPE - Converts 3D unfilled triangles and quadrangles to polyline, face, polyface mesh, or region entities. Valid values are:

"Face" Entity

"Region" Entity

Polyface Mesh

Polyline

MS_DWG_3D_UNFILLED_5ORMORESIDED_SHAPE - Converts 3D unfilled polygons to polyline, polyface mesh, or region entities. Valid values are:

"Region" Entity

Polyface Mesh

Polyline

MS_DWG_3D_UNFILLED_COMPLEX_SHAPE - Converts 3D unfilled complex shapes to polyline, polyface mesh, or region entities. Valid values are:

"Region" Entity

Polyface Mesh

Polyline

MS_DWG_3D_UNFILLED_GROUPHOLE - Converts 3D unfilled group hole elements to polyface mesh or region entities. Valid values are:

"Region" Entity

Polyface Mesh

MS_DWG_ACS_TO_UCS - Converts ACS to UCS. Valid values are ON (or no value) or OFF.

MS_DWG_BLOCKDEF_ON_LAYERO - Saves the block definitions on layer "0." Valid values are ON (or no value) or OFF.

MS_DWG_BLOCKNAMES_FROM_TRIFORMA_PARTS - Sets the block names from TriForma parts. Valid values are ON (or no value) or OFF.

MS_DWG_BYBLOCK_COLOR - Sets the block definitions to use the color BYBLOCK. Valid values are ON (or no value) or OFF.

MS_DWG_BYBLOCK_LINETYPE - Sets the block definitions to use line type BYBLOCK. Valid values are ON (or no value) or OFF.

MS_DWG_BYBLOCK_WEIGHT - Sets the block definitions to use line weight BYBLOCK. Valid values are ON (or no value) or OFF.

MS_DWG_CONSTRUCTION_CLASS - Sets the elements of the construction class to "Construction" layer, "Defpoints" layer, element's own layer, invisible, or omits them. Valid values are:

Save To "Construction" Layer

Save To "Defpoints" Layer

Save

Save As Invisible

Omit

MS_DWG_CONVERT_RSC_FONTS - Converts and creates SHX files from RSC fonts. Valid values are ON (or no value) or OFF.

MS_DWG_CREATE_SEPARATE_SHEETS - When a DGN file containing sheet models is saved to DWG, the sheets are usually saved to separate layouts within the DWG file. If this variable is set, the sheets are saved to separate DWG files with the file name created by appending the model name to the original file name. Valid values are ON (or no value) or OFF.

MS_DWG_CURVED_SOLIDSURFACE - Converts curved solids and surfaces to wireframe, polyface mesh or ACIS entities. Valid values are:

Wireframe

Polyface Mesh

ACIS Entity

MS_DWG_CURVES - Converts curves to spline curves or polyline curves. Valid values are:

Spline Entity

Polvline

MS_DWG_DROP_LABELLINES - When present, a label line dimension will be dropped to single line text when saved to DWG. By default, a label line will become an mtext. If a label line's text positions are important, dropping them to a single line may be desired. Set this variable to any value to turn it on. It is off by default.

MS_DWG_DROP_UNSUPPORTED_LS - Drops line styles that are not supported by DWG file format. The most possible custom line styles DWG format allows are those with characters in them. Any other types are incompatible. Valid values are ON (or no value) or OFF.

MS_DWG_EMPTY_EDF_TO_SPACE - Converts blank enter data fields to spaces. Valid values are ON (or no value) or OFF.

MS_DWG_FARREFDEPENDENCY - If set to 0 (the default), DWG named groups work as they do in DWG, that is, elements from a reference file are not supported by group. This is a DWG limitation. If set to 1, you can work around that limitation, that is, elements in reference files can be selected and saved in named groups. However, these groups still will not work in AutoCAD. If these groups and elements are edited in AutoCAD, they may not function anymore when the DWG file is reopened in MicroStation.

¹⁴⁰ DWG_FILE_CODEPAGE - Sets the DWG file codepage. Valid values are 1252 (English), 1251 (Cyrillic), 1253 (Greek), 1254 (Turkish), 1255 (Hebrew), 1256 (sic), 1257 (Baltic), 1258 (Vietnam), 874 (Thai), 932 (Japanese), 936 (Simplified Chinese), 949 (Korean), or 950 (Traditional Chinese).

MS_DWG_FILLED_3OR4SIDED_SHAPE - Converts filled triangles and quadrangles to solid, polyface mesh, region or hatch entities. Valid values are:

"Solid" Entity

"Region" Entity

"Hatch" Entity

Polyface Mesh

MS_DWG_FILLED_5ORMORESIDED_SHAPE - Converts filled polygons to polyface mesh, region or hatch entities. Valid values are:

"Region" Entity

"Hatch" Entity

Polyface Mesh

MS_DWG_FILLED_COMPLEX_SHAPE - Converts filled complex shapes to polyline, region or hatch entities. Valid values are:

"Region" Entity

"Hatch" Entity

Polyline

MS_DWG_FLAT_SOLIDSURFACE - Converts flat solids and surfaces to wireframe, polyface mesh or ACIS entities. Valid values are:

Wireframe

Polyface Mesh

ACIS Entity

MS_DWG_FORCE_POSITIVE_ARCS - For arcs, changes clockwise orientation to counter clockwise. Valid values are ON (or no value) or OFF.

MS_DWG_FORCE_ZERO_ZCOORDINATE - Sets the z-coordinate of an element to have a zero value. Valid values are ON (or no value) or OFF.

MS_DWG_INDEXCOLOR_TO_TRUECOLOR - Converts index color to true color. Valid values are ON (or no value) or OFF.

MS_DWG_LEADER_HOOKLINE - If set, an inline elbow displays on notes that did not have an elbow when first created.

MicroStation allows a note to be placed without an inline elbow (a hook line in AutoCAD) when the inline toggle is unchecked, but AutoCAD does not. This type of note (for instance, a leader without a hook line) saved to DWG will retain correct graphical presentation, and will operate properly in AutoCAD. However, the audit tool will generate an error (annotation ID not null). The audit error can be resolved by setting this configuration variable to 1. However, the original graphical presentation will be lost (the hook line will appear).

MS_DWG_LEVEL_DISPLAY - Sets the view number from which the level display will be used for the layer's on/off status. Valid values is a number from 0 through 8.

MS_DWG_LEVELDISP_FOR_VPORTFREEZE - Saves the level display status per view to viewport layer thaw/freeze status. Valid values are ON (or no value) or OFF.

MS_DWG_LEVELSYMBOLOGY_OVERRIDE - Overrides the element symbology from the level symbology. Valid values are ON (or no value) or OFF.

MS_DWG_LINEARPATTERN_CLASS - Sets the elements of the linear pattern class to "Linear Patterned" layer, "Defpoints" layer, element's own layer, invisible, or omits them. Valid values are:

Save To "Linear Patterned" Laver

Save To "Defpoints" Layer

Save

Save As Invisible

Omit

MS_DWG_LINECODE_SCALE - Scales the line code. Valid value is a positive real number.

MS_DWG_LOGICALNAME_TO_XREFNAME - Saves the reference attachment logical name as the block name of an Xref file. Valid values are ON (or no value) or OFF.

MS_DWG_NONDEF_DESIGNMODEL_ATTACHMENTS - Merges the attachments of a non-default design model or merges them as block references. Valid values are:

Merge

Merge To Cell

Omit

MS_DWG_NONDEFAULT_DESIGNMODEL - Saves non-default design models to separate files, layout models (paper space), or ignore them if their attachments are not merged. Valid values are:

Create Separate Files

Create Paper Space

Ignore If Not Merged

MS_DWG_NONPLANAR_POLYLINES - Converts a nearly planar line string to a 2D or 3D polyline. A nearly planar line string is strictly non-planar, but its vertex deviation is small enough to be treated as planar such that it is allowed to become a 2D polyline. Valid values are ON (or no value) or OFF.

MS_DWG_ONE_BLOCK_FOR_DUP_CELLS - Creates one block definition for all type-2 cells that are found to be the same. Valid values are ON (or no value) or OFF.

MS_DWG_OVERLAY_FOR_REFERENCES - Creates overlays for reference attachments (no live nesting). Valid values are ON (or no value) or OFF.

MS_DWG_PATTERN_CLASS - Sets elements of pattern class to "Pattern" layer, "Defpoints" layer, element's own layer, invisible, or omits them. Valid values are: Save To "Pattern" Layer

Save To "Defpoints" Layer

Save

Save As Invisible

Omit

MS_DWG_PFACE_MESH_ANGLE - Sets an angular tolerance for polyface mesh conversion. Valid value is a real value in degrees between 0 and 90.

MS_DWG_PLANARPOLYLINES - Converts a planar line string to a 2D or 3D polyline. A planar line string has all its vertices lined up to form a unique plane. They do not have to be on an orthogonal plane; they can be on any plane in space. Valid values are:

lyline

ne

MS_DWG_REFERENCE_CONVERT - Converts reference files to DWG files. Valid values are ON (or no value) or OFF.

MS_DWG_REFERENCE_COPYLEVEL - Sets the conditions to copy reference levels during merge: only if they are not in the target file, if they are overridden, or always copy. Valid values are:

If Not Found

If Overrides Exist

Always

MS_DWG_REFERENCE_COPYNESTED - Copies live nested reference attachments to the target file when merging. Valid values are ON (or no value) or OFF.

MS_DWG_REFERENCE_EXTERNAL - Saves external reference file attachments to be an Xref attachment (retained), merged, merged as a block, or omitted.

Retain

Merae

Merge To Cell

Omit

MS_DWG_REFERENCE_MASKED - Saves masked reference file attachments to be an Xref attachment (retained), merged, merged as a block, or omitted. Valid values are:

Retain

Merge

Merge To Cell

Omit

MS_DWG_REFERENCE_MERGE_DISPLAYEDLEVELSONLY - Merges reference levels only if they are displayed. Valid values are ON (or no value) or OFF.

MS_DWG_REFERENCE_OPTIMIZEDCLIP - Optimizes reference clipping when merged. Valid values are ON (or no value) or OFF.

MS_DWG_REFERENCE_SELF - Saves self-referenced file attachments to be an Xref attachment (retained), merged, merged as a block, or omitted. Valid values are:

Retain

Merge

Merge To Cell

Omit

MS_DWG_RENDER_LIGHTSOURCE_SAVE - Saves rendering light sources. Valid values are ON (or no value) or OFF.

MS_DWG_RENDER_MATERIAL_SAVE - Saves rendering materials. Valid values are ON (or no value) or OFF.

MS_DWG_SAVE_DIMENSION_SETTINGS - Saves active dimension settings, such as the one listed as Style-none in dimension style dialog. Valid values are ON (or no value) or OFF.

MS_DWG_SAVE_FILE_SETTINGS - Saves file settings such that non-DWG settings can round-trip back. Valid values are ON (or no value) or OFF.

MS_DWG_SAVE_FRONTBACK_CLIPS - Saves front-back clippings. Valid values are ON (or no value) or OFF.

MS_DWG_SAVE_REFERENCE_PATH - Tells MicroStation whether/how to save paths for reference attachments. Valid values are:

When saving to same directory

Relative to Master File

Neve

MS_DWG_SAVE_UNITS - Sets the file units to be saved. Valid values are:

Master Units

Sub Units

Arch./Engineering

a unit defined in file units.def

MS_DWG_SCALE_BLOCKS - Scales the block definitions. Valid values are ON (or no value) or OFF.

MS_DWG_SHEETBACKGROUND_COLOR - Sets the background color for sheet models. Valid values are Red, Green, Blue, where each of these color values is an integer between 0 and 255.

MS_DWG_SHX_OUTPUT_PATH - Sets the path to place converted SHX files. Valid value is a path or folder name.

MS_DWG_SOURCEVIEWGROUP - Used to specify a view group name, rather than using the active view group, to save the level display on/off status per view to DWG's global layer display. Because DWG does not support per-view level display, if multiple view groups (for example, the default design model and sheet models) use different per-view level display, only one can be saved as the global layer display for all models.

When this configuration variable is not set, the active view group determines the global layer display status. When it is set with a valid view group name, that view group determines the global layer display status. When it is set with an invalid view group name, the first view group that points to a sheet model in the file determines the global layer display status. This can be useful if you are saving files in a batch, and each file has only one sheet model which is not always the active model.

This configuration variable takes effect only if MS_DWG_LEVEL_DISPLAY is set.

MS_DWG_TEXTSTYLE_NAME_TEMPLATE - Sets a text string template to convert text style name. Valid value is a text string that may contain a place holder %s for the font name

MS_DWG_VERSION - Sets DWG version to be saved. Valid values are 11, 12,13, 14, 2000, 2000i, 2002, 2004, 2005, 2006, 2007, 2008, 2009.

MS_DWG_VPORT_LAYER_FROM_CLIP - Sets the layer of viewport entity from the clipping element.

Viewport entities are represented as reference attachments in MicroStation - the viewport level is extracted from the reference attachment. If no level is set for the reference attachment then by default the viewport is assigned to layer 0. However, if this variable is set and a clip element is present, then the viewport layer is extracted from the clip element.

MS_DWGINSERTLAYER - Specifies the layer to which normal (unshared) cells and reference attachments are assigned when saving the open DGN file in DWG format. If this configuration variable is not defined, layer 0 is used. Valid values are ON (or no value) and OFF.

MS_DWGSAVEAPPLICATIONDATA - Linkage data and type 66 application elements can be saved from DGN to DWG. If set, the applications are stored as XRECORDS and the linkages as XDATA. Valid values are ON (or no value) and OFF. The default is off.

MS_DXF_PRECISION - Sets the number of decimal places for real numbers when saving file to DXF. Valid value is an integer number between 1 and 16.

Design Applications

MS_DGNAPPS - List of MDL applications to load automatically when a DGN file is opened.

Design History

MS_DESIGN_HISTORY_COMMIT_ON_SAVE - Specifies whether changes are committed to design history when the file is saved.

MS_DESIGN_HISTORY_COMMIT_ON_CLOSE - Specifies whether changes are committed to design history before the file is closed.

MS_DESIGN_HISTORY_COMMIT_ON_MODEL_SWITCH - Specifies whether changes are committed to design history when the model is switched.

MS_DESIGN_HISTORY_OWNERSHIP_WARNING - Specifies whether you are prompted to confirm that you will take ownership of all uncommitted changes. You must close and restart for this change to take effect.

MS_DESIGN_HISTORY_COLORS - Specifies the symbology to use when identifying changed and unchanged elements. The value must be a list of up to six symbology descriptors, in the following order: added; deleted; changed; pre-changed; conflicts; background. A symbology descriptor is: {color,weight,style,transparency}, where color is a menu color index between 0 and 31, weight is a line weight between 0 and 31, style is a line style index between 0 and 7, and transparency is a value between 0 and 255. Use -1 for each aspect of element symbology that should not be changed. For example, {2,31,200}; {1,3,1,200}; {3,3,1,200}; {6,3,1,200}; {-1,-1,-1,-1} will draw a dotted hallo around affected elements in green, red, blue, cyan, or yellow without changing their symbology. The curly brackets may be omitted if only a color is specified. The default is: 2; 4; 1; 3; 6; 10 which means added elements are drawn in solid green, deleted in red, changed in blue, pre-changed in cyan, conflicts in yellow, and unchanged elements in medium gray.

MS_DESIGN_HISTORY_REVISION_NUMBER_FORMAT - Allows you to change the appearance of the revision numbers. You must close and restart for this change to take effect.

MS_DESIGN_HISTORY - Allows users to create, delete, commit, browse, add tags, change descriptions, change authors, combine, retire, set version format, set version, and automatically upgrade design history. You must close and restart for this change to take effect.

MS_DESIGN_HISTORY_COMMIT_DOC_PROPERTIES - If set to 1 (the default), design history tracks changes to document properties such as Title, Author and Comment.

Distributed DGN

MS_DISTRIBUTED_DGN_COMMIT_ON_SAVE - Specifies whether changes are committed to the distributed DGN when the file is saved.

MS_DISTRIBUTED_DGN_COMMIT_ON_CLOSE - Specifies whether changes are committed to the distributed DGN before the file is closed.

MS_DISTRIBUTED_DGN_AUTO_FOCUS_ON_NEW_CONFLICTS - Specifies whether the Conflicts dialog opens when the Refresh Local Copy command detects a new conflict. The default is on.

MS_DISTRIBUTED_DGN_CONFLICT_BY - Specifies how conflicts should be detected. MODEL detects conflicts within the same model. GG detects conflicts involving the same graphic group. Default is MODEL

Engineering Links

MS_WEBLIB_HISTORY - History file for the Weblib shared library.

MS_BOOKMARKS_IMAGE - Bookmark file for remote images.

MS_BOOKMARKS_RSC - Bookmark file for remote resource files.

MS_BOOKMARKS_ARCHIVE - Bookmark file for remote archives.

MS_BOOKMARKS_CELL - Bookmark file for remote cell libraries.

MS_BOOKMARKS_DGN - Bookmark file for remote DGN files.

MS_REFAGENTDATA - File containing URL information for the Reference Agent.

MS_WEBKIOSKMODE - Set to 1 to turn on kiosk mode.

MS_WEBTYPESFILE - Specifies a file that contains special handling instructions for various file types.

MS_WEBFILES_DIR - Directory in which copies of remote files are stored.

MS_WEBDOWNLOADDIR - Sets the directory in which WWW downloads are stored.

MS_BROWSERMAKECHILDWINDOW - When set to 1, the current browser is reparented inside of the main window, allowing the viewer to always be seen.

MS_USEEXTERNALBROWSER - Sets an external browser.

Extensions

MS_GROUPPANELPREF - Defines the location of the file that stores the saved state of group panels in various dialogs. These include dialogs such as View lutes, and stores the open state of the groups, as well as any custom settings that the dialog can associate with the groups.

MS_TASKDIALOGPREF - Defines the location of the file used to store preferences about the Tasks dialog between sessions. This file stores info such as the last active task, the last active task dialog, and the task layout mode. Users should not modify this file.

MS_DOCKINGPREF - Defines the location of the file that stores docking preferences such as which dialogs are docked, where they are docked, and the size of the docking areas.

MS_SKETCHUP_IMAGE - Stores the texture images that are embedded in the sketchup files when the sketchup file is saved as a DGN file.

MS_SELECTSERVICESHOME - URL of Bentley SELECTservices homepage.

MS_DWG_OBJECT_APP - Lists Object Enabler MDL applications to be loaded. It is currently set to use applications that enable Architectural Desktop and AutoPlant objects (AdtDirectApp and RebisDirectapp). Users should not need to change this setting.

MS_GPSDEVICES - Specifies the GPS devices supported by MicroStation. It should not be changed by users.

MS_GEOCOORDINATE_USERLIBRARIES - This configuration variable is string of the form "LibraryPath1[ShortName1]; LibraryPath2[ShortName2]", where LibraryPath is the file name of the library, and [ShortName] optionally specifies the identifier that appears in the Select Geographic Coordinate System dialog. For example, suppose a consultant worked with the California and Oregon Departments of Transportation, and each supplied a library of custom Geographic Coordinate Systems. This configuration variable might contain "PROJ_GEODATA:CaltransCoordSystems.dty[Caltrans];PROJ_GEODATA:OregonDOT.dty[Oregon DOT]". Here the configuration variable PROJ_GEODATA is a project-level configuration variable selecting a directory. If the ShortName is not specified, the root of the file name is used

If no directory is specified in LibraryPath, the directory specified by the MS_GEOCOORDINATE_DATA configuration variable is used.

MS_GEOCOORDINATE_REPROJECTIONSETTINGS - Directory where MicroStation stores the reprojection settings. There is rarely a need for users to change it.

MS_GEOCOORDINATE_REFSETTINGS - Directory where MicroStation stores the default reference reprojection settings. There is rarely a need for users to change it

MS_GEOCOORDINATE_FAVORITESFILES - Directory set aside for quick access to geographic coordinate systems. The contents of this directory appear in the Favorites folder on the Select Geographic Coordinate System dialog's Library tab.

MS_GEOCOORDINATE_DATA - Directory where MicroStation GeoCoordinate data is installed.

MS_PROCESSEXCEPTIONLOG - MicroStation exception.log and "minidump.dmp" management.

MS_PROPERTYENABLER_APPS - Lists the applications to be loaded that are required for displaying properties in the Element Information dialog

MS_CUSTOMIZE_REPORT_STYLESHEET - Defines the file name and location for HTML reports on templates and customizations. The default style sheet is named "customizereport.xsl" and is stored in "..\Bentley\WorkSpace\System\Data".

MS_HANDLER_LOAD - Used to control element handlers. This variable should not be changed by users.

MS_FONTCONFIGFILE - Specifies the full path of the font configuration file. Default path is "\$(MS_SYSFONTDIR)/MstnFontConfig.xml".

MS_SELECTBY - Defines the directory for the selectby.rsc file to be written to and read from. The selectby.rsc is used by the Select by Attributes tool to save and retrieve sets of selection criteria. The default setting is MS_SELECTBY=\$(_USTN_HOMEROOT)

MS_BUTTONMENU - Defines the file name that holds the mouse button menu. The default name is "default.btnmenu" located in the MS_DATA directory.

MS_ECFRAMEWORK_SCHEMAS - Stores list of directories in which MicroStation searches for EC Schemas. This variable should not be changed by users.

MS_RASTER_DEF_DIR - If absent, there is no Effect. If present, defines the default directory to which the Attach Raster Reference menu will point to (Default raster file open directory).

MS_ACIS - Directory containing the ACIS subsystem.

MS_SYSFONTDIR - Directory containing the system fonts.

MS_ICONRSCLIST - Directories containing .rsc files for icons.

MS_ICONLIBRARYLIST - Directories containing .dll files for icons.

MS_ICONPATH - Directories containing files for icons.

 ${\tt EC_EXTENSION_ASSEMBLIES-Used} \ for internal\ implementation. \ Do\ not\ modify.$

MS_CLRUICULTURE - Used for internal implementation. Do not modify.

MSDIR_INSTALLED - Directory where MicroStation is installed.

File Saving

MS_DGNAUTOSAVE - Determines the frequency, in seconds, of the auto-save timer.

MS_V7AUTOSAVE - Determines the frequency, in seconds, of the auto-save timer for V7 format files. If set to zero, no auto save is done while the file is open. The file is automatically saved on exit or when switching to a different file.

 $MS_V7AUTOSAVE_NODIALOG-Automatically saves the V7 format files and skips the dialog to defer the auto-save operation.$

MS_V7BACKUPV8 - Automatically creates a backup of a V7 file in the V8 format. If set to true, a file is created in the same directory with the extension .v8.

MS_DWGAUTOSAVE - Determines the frequency, in seconds, of the auto-save timer for DWG and DXF format files. If set to zero, no auto save is done while the file is open. The file is automatically saved on exit or when switching to a different file.

 ${\tt MS_DWGAUTOSAVE_NODIALOG-Automatically\ saves\ the\ DWG\ and\ DXF\ format\ files\ and\ skips\ the\ dialog\ to\ defer\ the\ auto-save\ operation.}$

Levels

LEVEL_DISPLAY_FORMAT - Level Display Format Specifies the formatting that the level name uses when the level lists display, including in PDF plots. If N, the level name is used. If D, the level description is used; if C, the level code is used. More than one value can be specified.

EVEL_LIB_DIR - Defines the default directory to look for when exporting levels or importing levels to/from a .csv, .dgn or .dgnlib file.

MS_LEVEL_EDIT_NESTED_ATTACHMENT_LEVELS - If set, lets you edit the attributes of levels in nested reference attachments. Can be set to a value of "1" without the quotes.

MS_V7_LEVEL_NAME_PREFIX V7 to V8 - Defines the prefix to apply to unnamed levels when a V7 design file is upgraded to a V8 DGN file.

MS_V7TOV8_CSVNAME V7 to V8 L - Defines the .csv file, which controls how levels are mapped when a V7 design file is upgraded to a V8 DGN file.

MS_V7TOV8_DELETE_UNUSED_LEVELS V7 to V8 - If set to 1, then all unused levels are deleted when a V7 design file is upgraded to a V8 DGN file. This variable is ignored if the "V7 to V8 Level CSV File" variable is set.

MS_LEVEL_SEED_LEVEL_NAME - Can be set to the name of a seed level. This can be a level in the master file, or a level in a DGNLIB library file. If the variable is not set, the default level is the seed level. When a new level is create, it takes the attributes of the seed level.

MS_LEVEL_LOAD_ATTACHMENT_FILTERS - If defined, then level-filters of reference attachments are loaded.

MS_LEVEL_CREATE_FROM_SEED_ATTRIBUTE_LIST - Controls the set of attributes of the seed level that are copied to the new level. Attributes can be one or more of the following attributes as a comma separated list: OverrideSymbology, OverrideColor, OverrideStyle, OverrideWeight, ByLevelSymbology, ByLevelStyle, ByLevelWeight,ByLevelMaterial, OverrideMaterial, GlobalFreeze, Lock, Plot.

MS_LEVEL_EDIT_ATTRIBUTE_LIST - Controls which level attributes can be edited or overridden (instead of using operating system privileges for the entire level library). The attributes to be edited can be one or more of the following as a comma separated list: Override Symbology (OverrideColor, OverrideStyle, OverrideWeight), ByLevelSymbology, (ByLevelColor, ByLevelStyle, ByLevelWeight), GlobalDisplay, GlobalFreeze, Lock and Plot. OverrideSymbology encompasses OverrideColor, OverrideStyle and OverrideWeight. ByLevelSymbology encompasses ByLevelColor, ByLevelStyle and ByLevelWeight, ByLevelMaterial, OverrideMaterial. Each attribute accepts a "Library" or "Reference" prefix. Without the prefix, the attribute will be editable for both references and library levels.

MS_LEVEL_SYNC_ATTRIBUTE_LIST - Control Level Attributes Synch Affects the DGNLIB UPDATE LEVELS CUSTOM and REFERENCE SYNCHRONIZE LEVELS DEFAULT keyins. This variable controls the list of level attributes that will sync when any of the above key-ins is executed. The attributes can be one or more of the following as a comma separated list: OverideSymbology, OverrideColor, OverrideStyle, OverrideWeight, ByLevelSymbology, ByLevelColor, ByLevelStyle, ByLevelWeight, ByLevelMaterial, OverrideMaterial, GlobalDisplay, GlobalFreeze, Lock, Plot.

MS_LEVEL_AUTO_SYNC_ATTRIBUTE_LIST - Controls the list of level attributes that will automatically synchronize when a file is opened. The attributes can be one or more of the following as a comma separated list: OverideSymbology, OverrideColor, OverrideStyle, OverrideWeight, ByLevelSymbology, ByLevelColor, ByLevelStyle, ByLevelWeight, ByLevelMaterial, OverrideMaterial, GlobalDisplay, GlobalFreeze, Lock, Plot. Each of the above attributes can take a "Reference" or "Library" prefix. If the prefix is not used, both reference and level library levels will be synchronized.

MS_REF_REATTACH_LEVEL_SYNC_ATTRIBUTE_LIST - Specifies the list of level attributes that will sync when a reference is reattached. The attributes can be one or more of the following as a comma separated list: OverideSymbology, OverrideColor, OverrideStyle, OverrideWeight, ByLevelSymbology, ByLevelColor, ByLevelStyle, ByLevelWeight, ByLevelMaterial, OverrideMaterial, GlobalDisplay, GlobalFreeze, Lock, Plot.

MS_UPDATE_KEEP_UNUSED_LIBRARY_LEVELS - If not set or set to 0, then unused library levels will be deleted when keying in DGNLIB UPDATE LEVELS. If set to 1, keying in DGNLIB UPDATE LEVELS will not delete all unused library levels. If set to 2, keying in DGNLIB UPDATE LEVELS will delete only unused library levels that are not synchronized with the open DGN file.

MS_LEVEL_ALLOW_LIBRARY_LEVEL_EDIT Edit - Allows you to edit library levels when it is not yet used in master-file. If not set, then a library level can be edited only when if it is used. If set then a library level that is not yet copied into the master-file can be edited. On editing, the library level will be copied into the master-file.

MS_LEVEL_PICKER_WIDTH - Sets the width, in pixels, of the level picker in the Attributes toolbox.

MDI

MS_RDE_SYSINC -Text to be inserted at the beginning of the command line by the resource compiler DLM. Generally used to specify the location of include files.

MS_DBGSOURCE - Location of source code for MDL applications (used by MDL debugger).

MS_MDLTRACE - If set, additional debugging print statements are provided when debugging MDL applications.

 ${\tt MS_DEBUGFAULT-If} \ set, automatically invoke the debugger when a fault is detected while an {\tt MDL} \ application is active.$

MS_DEBUG - If set to an integer with bit 1 on, do not time out.

MS_TRAP - Exception handling flag - "ALL" (default), "MDL," or "NONE."

OLE

MS_OLESERVE_EMBED_REFFILES - If set, references are embedded along with the master DGN file.

Operation

MS_COMPRESS_OPTIONS "Compress Options Selections" Specifies file compression options. If set, the specified options override the selections in the Compress Options dialog.

MS_AUTORESTORESTATUSBAR "Auto-restore Status Bar" If set to 1, the status bar is restored to its default appearance whenever the pointer is moved within.

MS_FKEYMNU "Function Key Menu" Open function key menu file.

MS_ACCUDRAWKEYS "AccuDraw Shortcuts" Text file listing AccuDraw shortcut keys.

MS_SAVEMENU "Attached Menus" File containing information about attached menus.

 ${\tt MS_APPMEN~"Application~Menus"} \ {\tt Location~of~application~and~sidebar~menus}.$

VORKSPACEOPTS "Workspace Options" Sets how the File Open dialog displays workspace options: 0 or not set (default) = workspace remains same; 1 = space options visible but disabled; 2 = workspace options hidden, MM resized.

MS_USECOMMANDWINDOW "Use Command Window" If set, 0 sets the status bar interface, and 1 sets the Command Window interface. If not set, the Style setting in the File Open dialog determines the interface style.

MS_MAINMENUDOCKINGBESIDE "Allow Docking Beside Main Menu" If set to 0 or not set (default), the main menu bar spans the entire width of the application window. If set to a value other than zero, toolboxes and dockable dialogs can be docked along the main menu bar.

MS_FILEHISTORY "File History" If set, MicroStation saves the last four files and directories for each file type.

MS_READONLY "Read Only" If set, the active DGN file is read-only.

MS_WORKMODE "Work Mode" Workmode activates/disables certain functions in order to produce a more compatible design at the end. Setting this variable to DWG will disable some creation tools that may result in elements that are incompatible with the DWG file format. Setting it to DGN (default) will gain full functional capacity in creating elements. You must restart MicroStation to see the effect of a changed value.

MS_IMMEDIATEUPDATE "Window Immediate Update" If set, view windows will immediately update when other windows are moved or resized over them.

MS_OPENV7 "Open V7 Files" Controls MicroStation's behavior when opening V7-format design files. If not set or set to 0, the file opens with an alert dialog that provides an option to upgrade the file to V8 DGN format. If set to 1, the file is upgraded to V8 DGN format and opened. If set to 2, the file is opened in read-only mode. If set to 3, the file is opened in V7 workmode.

MS_DISABLE_FILE_ICONS "Disable File Open Icons" If set, the Show File Icons check box is not shown in the File Open, New, and Open dialogs. Also, the setting is turned off thereby preventing the display of file list icons. The effect is not evident until you restart MicroStation.

MS_SOURCENAME_PROPERTY "Save the SOURCE file property" If set, the SOURCE file property can be set to the name of the source file. By default, only the name and extension of the source file are saved. Set to 0 to disable the SOURCE property. Set to FULL to save the full path of the source file.

MS_DISABLE_FILE_THUMBNAIL "Disable File Open Thumbnail" If set, thumbnail images of files are not displayed in the File Open and Open dialogs.

MS_IDLETIMEOUT "Exit MicroStation When Idle" If set, specifies the number of minutes of inactivity to wait before exiting MicroStation. The minimum value is 30 minutes.

MS_POPUPDIALOGCLOSEDELAY "Popup Dialog Close Delay" Specifies the time, in milliseconds, to wait before closing a pop-up dialog. The valid range is 0-120 (0-2 seconds). The default value is 30 (0.5 seconds).

MS_FULLPATHINTITLEBAR "Full Path in Title Bar" If set, the full file specification of the open file, including path, is displayed in the MicroStation application window title bar.

MS_NO_VIEW_ANIMATION "Disable Tile/Cascade Animation" If on, the animation of view tile and cascade is disabled.

MS_LIBRARY_SAVEDVIEW_FILTER "Saved Views Library Filter" Specifies a set of saved views to exclude from the user interface. The filter is applied only to views found in libraries. For filter syntax see the MicroStation help topic 'Defining and Deleting Filters' for string expressions.

Printing

MS_DEFAULT_PLTCFG_FILE - Name of printer driver configuration (.pltcfg or .plt) file that loads, rather than last one used.

MS_PENTABLE - Search path for pen table files.

MS_PENTABLE_DISABLECOLOR - Controls the color of a disabled section in a pen table; default is medium gray.

MS_PENTABLE_IMPORTCTB_NOPENMAP - When importing CTB files, allows the proper color-to-width resymbolization of multi-colored elements.

MS_PENTABLE_IMPORTEMPTYSECTIONS - During AutoCAD plot style table imports, ignores pen table sections that have no effect. If set to 1, empty sections are created.

MS_PENTABLE_SEARCH_LEVEL_LIBRARIES - If set to 0, level libraries are not included when searching for level names defined in the pen table.

MS_PENTABLE_SLOTNUM_MATCH_APPLIES_TO_CHILD - Controls how the pen table reference slot number match applies to the parent reference and its children

MS_PLNONAME - Enables/disables the insertion of the DGN name in the output file.

MS_PLT_ABBREVIATE_BORDER_FILENAME - If set to 0, the filenames included in the plot border text are not abbreviated.

MS_PLT_AREA_PRIORITY - If set to 1, sheet definitions in the model take priority over the active fence.

MS_PLT_AUTOAREA_RESULT_LIMIT - Defines the maximum number of print definitions to be created when searching for multiple shapes or cells. The default limit is 500.

 ${\tt MS_PLT_AUTO_FIT_VIEW-Controls\ the\ setting\ for\ the\ print\ area\ mode}.$

MS_PLT_ENABLE_AUTO_ORIENT - If set to 0, does not manipulate the paper orientation in order to achieve the best fit.

MS_PLT_ENABLE_AUTO_ROTATE - If set to 0, does not manipulate the plot rotation in order to achieve the best fit.

MS_PLT_ENABLE_PRESERVE_SCALE - If set to 0, does not preserve the current plot scale when a new view, fence or paper size is selected.

MS_PLT_ENABLE_SCALE_CLIPPING - If set to 0, does not reduce the plot fence or sheet size to accommodate the specified scale factor.

MS_PLT_FORM_SCALE_PRIORITY - If set to 1, the default form scale is reapplied whenever the paper size changes.

 $MS_PLT_INVERT_WHITE_COLORS - Allows you to override the colors that are automatically inverted from white to black.$

MS_PLT_MAX_ON_NEW_AREA - If set to 1, the print size is maximized automatically when the print area changes.

MS_PLT_PREVIEW_PLOTBOXCOLOR - Specifies the color of the print bounding box rectangle in the preview window.

MS_PLT_PREVIEW_PLOTFENCECOLOR - Specifies the color of the print fence shape in the preview window.

 ${\tt MS_PLT_PREVIEW_USABLEAREACOLOR-Specifies\ the\ color\ of\ the\ usable\ area\ rectangle\ in\ the\ preview\ window.}$

LT_SCALE_METHOD - Determines how the print scale displays in the Print dialog.

MS_PLT_SET_LAYOUT_FROM_SHEET - If set to 0, the Print dialog layout is not automatically set when a sheet definition is loaded and the current print area is Sheet

MS_PLT_SET_PLOT_STYLE_TABLE_FROM_SHEET - If set to 0, plot style tables specified in the sheet definition are not attached to the plot.

MS_PLT_SET_UNITS_FROM_SHEET - If set to 0, the Print dialog's units are not automatically set from the sheet definition when the current print area is Sheet.

MS_PLT_SHOW_PRINT_STATUS - If on, a print status dialog opens when a job is being printed. You can cancel the print job.

MS_PLT_SYSPRT_DEFAULT_FORM - Name of form that is used when a default system printer opens.

MS_PLT_SYSPRT_DEFAULT_PRINTER - Name of printer that is used when a default system printer opens.

MS_PLT_SYSPRT_DEFAULT_TRAY - Name of tray that is used when a default system printer opens.

MS_PLT_SYSPRT_PLTFILE - Name of printer driver configuration (.pltcfg or .plt) file that is used when Windows driver is selected.

MS_PLT_THUMBNAIL_PREVIEW_TIMEOUT - Controls how long the thumbnail preview in the Print dialog paints before stopping to allow the rest of the dialog to refresh. The default is 10 seconds.

MS_PLT_UPDATE_FIELDS - Controls when fields are updated prior to printing or previewing. If set to 0 or undefined, fields are not updated prior to either printing or previewing. If set to 1, fields are updated prior to printing. If set to 2, fields are updated prior to both printing and previewing.

MS_PLTCFG_PATH - Specifies the search path for printer driver configuration (.pltcfg or .plt) files.

MS_PLTDLG_ALLOW_FORM_SIZE_EDIT - If set to 1, the size of the selected form may be modified via the Print dialog.

MS_PLTDLG_CLOSE_AFTER_PLOT - If set to 1, the Print dialog closes automatically after a print job is performed successfully.

MS_PLOTDLG_DEF_PENTABLE - Defines the default pen table that is loaded.

MS_PLTDLG_DISABLE_PREFERENCES_DIALOG - If set to 1, the Preferences menu item is not displayed on the Settings menu.

MS_PLTDLG_ENABLE_SAVE_CONFIG - Disables the Print dialog Save Configuration menu items.

MS_PLTDLG_KEEPVIEWFLAGSONFENCECHANGE - When a new fence is placed, controls the setting for resetting or preserving current print attributes.

MS_PLTDLG_SETUPSYSPRT_ENABLE_PRINT - Controls the print behavior of the Configure Windows Printer icon.

MS_PLTDLG_SHOW_ACCURATE_PREVIEW_ROTATION - If set to 1, the Preview dialog displays the plot in its current rotation.

MS_PLTDLG_SHOW_BASIC_LAYOUT_CONTROLS - If set to 1, the Print dialog's Rotation field and Mirror option menu are hidden. The orthogonal print Rotation option menu is displayed instead.

MS_PLTDLG_UNLOADONCLOSE - Controls the load/unload of the Plot dialog on closing.

MS_PLTFILE_EDITOR - Controls with editor is used when you select File > Edit Printer Driver Configuration in the Print dialog.

MS_PLTFILES - Directory for printing output files.

MS_PRINTDEF_PATH - Specifies the search path for print definition (.pset or .ini) files.

Protection

MS_PROTECTION_ENABLE -

- Set to 0 to disable file protection (default)
- Set to 1 to enable password or certificate protection
- Set to 2 to enable password protection
- Set to 3 to enable certificate protection

MS_PROTECTION_V8_COMPATIBILITY -

- Set to 0 to use stronger encryption, producing protected files that pervious versions cannot open (default)
- \bullet Set to 1 to enable previous versions to open protected files and create licenses

MS_PROTECTION_LICENSE_ENABLE -

- Set to 0 to disable license creation
- Set to 1 to enable password licenses
- Set to 2 to enable certificate licenses
- Set to 4 to enable Everyone licenses
- Set to 7 to enable all types of licenses (default)

Add individual values together to enable two or more license types.

 ${\tt MS_PROTECTION_PASSWORD_MIXED-A\ password\ containing\ a\ mixture\ of\ letters\ and\ numbers.}$

MS_PROTECTION_PASSWORD_MINIMUM - Sets the minimum length of a file protection password. The default is 5.

MS_PROTECTION_NOENCRYPT_THUMBNAIL - The thumbnail is an image of the last used view of the design file. The image is displayed by Windows File Explorer and File Open dialog.

MS_PROTECTION_NOENCRYPT_PROPERTIES - Set to 1, tells the Protect command to leave file properties unencrypted or set to 0 to allow Protect encrypt file properties.

Primary Search Paths

MS_DGNLIBLIST - List of DGN libraries.

)EF -Search path(s) for DGN files.

VFDIR -Search path(s) for references.

MS_MDLAPPS - Search path(s) for MDL applications displayed in the MDL dialog.

MS_MDL - Search path(s) for MDL applications or external programs loaded by MDL applications.

MS_ADDINPATH - Search path for managed Addln assemblies that are used outside of MicroStation's application base or configured privatePath.

MS_ADDIN_DEPENDENCYPATH - Search path for managed assemblies that are used by AddIns outside of MicroStation's application base or configured privatePath. Directories should not be listed here and in MS_ADDINPATH.

MS_MACRO - Search path for macros.

MS_RSRCPATH - Search path(s) for resource files loaded by MDL applications.

MS_GUIDGNLIBLIST - Directories containing DGN library files that store tool, toolbox, task, menu, and icon customizations.

MS_LIBRARY_PATH - Search path for dynamic link libraries.

RDL_DIR - Location and/or extension of the Bentley Redline-generated redline file. Defaults to the name of the open DGN file but with the suffix ".rdl," instead of ".dgn," in the same directory as the open DGN file.

DWGRDL_DIR - Location and/or extension of the Bentley Redline-generated DWG redline file. Defaults to the name of the open DWG file with "_redline" inserted before ".dwg." in the same directory as the open DWG file.

MS_FILTER_LIB_DIR - Directory containing filter data files.

MS_LINFILELIST - Directory containing linestyle files.

Reference

MS_REF_DEFAULTATTACHDIRECTORY - If set, the Attach Reference dialog defaults to this directory, rather than the directory of the last attached reference.

MS_REF_DEFAULTSETTINGS - Controls the default settings for reference attachments. This variable is set to a comma-separated list of key=value pairs - for example: snap=1,locate=0,trueScale=1,scaleLineStyles=0.

Recognized keys and values include: display=0|1, snap=0|1, locate=0|1, treatAsElement=0|1, attachMethod=coincident|world, useLights=0|1, saveRelativePath=0|1, scaleLineStyles=0|1, ignoreWhenNesting=0|1, displayRasterRefs=0|1, displayBoundary=0|1, newLevelDisplay=fromconfiglalways|never, nestMode=live|copy|none, nestDepth=,nestOverrides=allow|always|never, plotAs3D=0|1.

Also, to store the complete path to V7 files for newly attached references, set the variable to complete path v7=1.

MS_DISALLOWFULLREFPATH - If set, MicroStation does not save the full path to references. By default, MicroStation stores both an abbreviated (portable) path and the full path to references.

MS_REF_NEWLEVELDISPLAY - If set, MicroStation displays newly created levels in references. By default, when new levels are created in a model that is referenced by another model, the new levels are not displayed when the referencing model is opened. Newly created models are considered until "Save settings" is performed. This functionality only works when both the master file and referenced files are in the V8 file format.

MS_NEST_COLORADJUSTMENT - If set to any value, the nested reference color adjustments at each level are multiplied by this value. If not set, the color adjustment for the top level reference controls the color adjustment for all nested references.

MS_REF_DONTHILITEFORMANIP - By default, MicroStation highlights all elements in a reference file when the reference is manipulated. If this variable is set to any value, this highlighting is disabled. Disabling speeds up the reference manipulations but makes it more difficult to see which references are being manipulated.

Raster

MS_IMGPROJECT_DIR - If the project is untitled, its name is changed to the name of the active design file with the PRJ extension and this project file is saved in the same directory as the design file.

You can also define the workspace variable MS_IMGPROJECT_DIR for the directory where you want to keep your projects.

If this variable is defined, the project will be saved in this directory with the name of the active design plus the PRJ extension.

If the variable is not defined, the default is the same directory as the design file.

MS_RASTER_IBIT_WORKMODE - If defined and set to 1, harmonizes monochrome raster display so they are handled like raster reference attachments. If undefined or set to 0, has no effect.

MS_RASTER_DEF_DIR - If absent: has no effect.

If present: Defines the default directory to which the Attach Raster Reference menu will point (Default raster file open directory)

MS_RASTER_DEFAULT_APPLYROTATION_FROMV7 - Controls default value for the "Apply Rotation and Affinity" toggle when importing a V7 design file for which this value was never set.

If absent or set to 0: Default is FALSE.

If set to any other value: Default is TRUE.

MS_RASTER_DEFAULT_LEVEL - Defines the level for raster elements when upgrading to MicroStation V8i. The value is the LevelName.

MS_RASTER_DEFAULTSCALE - If defined and set to 1, a raster without georeference that is attached without the use of the Place Interactively check box has the following scale assigned: scale factor = MS_RASTER_DEFAULTSCALE and the pixel size is deduced from the scale factor and DPI.

If undefined, a raster without georeference that is attached without the use of the Place Interactively check box has the following scale assigned: 1 pixel = 1 sub-unit and the scale factor is deduced from pixel size and DPI.

If defined and set to any other value, the value is invalid and MS_RASTER_DEFAULTSCALE is ignored (same behavior as undefined).

MS_RASTER_DEFAULTSISTER -If set to 0 or 1, HGR is the default sister file.

If set to 2, WorldFile is the default sister file.

MS_RASTER_DISABLE_IPPCONNECTION - If undefined, the default socket server port 1924 is used. If defined, the socket port 1924 is ignored.

MS_RASTER_EPSGTABLE_PATH - Enables geotiff positioning using the location parameters found in ASCII files provided on request.

The required ASCII files are:

- "CoordSysData.txt "
- "ProjectionData.txt"
- "UnitsData.txt"

If undefined or set to 0, hard-coded tables are used.

If set to 1, ASCII files are used.

MS_RASTER_IMG_CHANNELS - Sets the band number to use for Red, Green, Blue and Alpha channels when a file whose format is IMG is attached. The `O´ value can be set for the Alpha channel if none is required. When this variable is defined, all attached Erdas IMG rasters will use the same band order. The default value is: MS_RASTER_IMG_CHANNELS 1 2 3 4.

MS_RASTER_IMG_STRETCH - Sets the band number to use for Red, Green, Blue and Alpha channels when a file whose format is IMG is attached. The `O´ value can be set for the Alpha channel if none is required. When this variable is defined, all attached Erdas IMG rasters will use the same band order. The default value is: MS_RASTER_IMG_CHANNELS 1 2 3 4.

MS_RASTER_INTERGRAPH_FILE_IGNORE_LUT - The LUT is a block of information included in Intergraph filse to define Contrast\Brightness.

If absent or set to 0: The LUT information in the file is interpreted.

If set to 1 or other values: The LUT information is ignored.

MS_RASTER_LOADMODE - Sets how memory management for raster will be handled.

If set to 0 = LOADMODE_AUTOMATIC

If set to 1 = LOADMODE CACHE

If set to 2 = LOADMODE_RAM

If set to 3 = LOADMODE STANDARD

If set to 5 = LOADMODE_THRESHOLD

AUTOMATIC - Internet files are loaded with the cache mode. For all other file types, if there is enough memory space, the RAM mode is used. Otherwise the STANDARD mode is used.

CACHE - Generates a cache for all file dimensions and types.

RAM - Loads the raster in RAM.

STANDARD - Loads the images like Active Image would do (other set of rules).

THRESHOLD - Loads the raster in RAM or generates a cache according to the size of the file.

MS RASTER MEMCONTROL - If absent: Do not allow to tune memory.

If present: Allow memory tuning (displays Memory Management dialog when Raster Manager loads; adds Settings>Memory menu item to Raster Manager dialog).

MS_RASTER_NOSHARING - Manages the automatic creation of .sharing.tmp files for concurrent access of the same raster file by various instances of MicroStation. If undefined or set to 0, .sharing.tmp files are generated.

If set to 1, .sharing.tmp file generation is off.

MS_RASTER_OPENREADONLY - Used to change the Preferences settings to force the opening of rasters in read-only mode.

If absent: No effect.

If set to 0: Raster files open in read/write mode.

If set to 1: Raster files always open in read-only mode and bypass the Preferences settings.

MS_RASTER_OPTIMIZE_OVERWRITE - Used by the Rastfix utility to fix Tiff 16 bits per channel.

If set to 0 or absent: Never overwrite existing tags.

If set to 1: Always overwrite existing tags.

MS_RASTER_PROJECT_VIEW_INDEPENDENT_TO_BACK_PLANE - If set to 0 or Absent: View independent rasters will display anywhere in the view following their display priority settings (2D DGNs) or their position in 3D space (3D DGNs).

If set to 1: View independent rasters will display in the back of the view.

MS_RASTER_SAVEAUTO - Enables Raster Manager Automatic Save mode when closing a DGN or detaching a raster.

If undefined or set to 0, Save Auto is off.

If set to 1, Save Auto is enabled and the user will not be prompted to update the raster for changes made to the location info of the file.

MS_RASTER_TIFFINVERT - If defined and set to a non-zero value, inverts the foreground/background color allocation of monochrome tiff files when the raster is attached.

MS_RASTER_TRANSPARENCY - If defined and set to 1, Raster Manager sets the background transparency value, as specified in the Raster Manager Transparency dialog. Possible values are 0 to 255, where 255 is 100% transparency.

If undefined or set to 0, has no effect.

MS_RASTER_UNLOAD_AFTER_DGN_READ - If set to 1: On element open (dgn/reference load), close the source raster files after they have been opened. The files will be listed in the Raster Manager dialog but not displayed.

Otherwise: has no effect.

MS_RASTER_USERFILEFORMATS - User Defined" File" Sets the extensions of the file formats you want to use as the default user-defined file format filter when opening a Raster Manager open dialog. Each extension should be separated by a semicolon (;) with no trailing semicolon.

MS_RASTER_VIEWSAVEASDWG - When exporting to DWG, controls whether the raster is displayed.

If set to 0 or undefined, the raster is displayed in View 1.

If set to 1 to 8, the raster is displayed in the specified view.

If set to 9, the raster is displayed in at least one view.

If set to 10, the raster is displayed in all views.

MS_RFDIR - The standard search path for reference file, used when trying to find relative path names of a raster attachments.

RASTMNGR_PROJECT_NO_IMPORT - If absent or set to 0: Projects attached to a design file will be imported automatically in raster attachments when the design file is opened.

to 1: Raster Manager will NOT automatically import raster project attachments in raster reference attachments. Use this when you do not want Raster ager to modify DGN attachments (like in a server in non-graphics mode).

RASTMNGR_PROJECT_READ_ALL - If absent or set to 0: Raster Manager will read only Image Manager and Raster Manager projects. If set to 1: Raster Manager will read all project files no matter which product they were created with.

Rendering/Images

MS_DEFAULT_TO_EXTERNAL_MATERIALS- if set to 1 this will cause MicroStation to default to using external materials and should not prompt to switch to internal materials.

MS_LOCAL_MATERIALS -Serves the same function as the Copy Materials Locally On Use toggle in the Settings menu of the Material Editor dialog. If set to 1, materials are made local on use and the DGN file defaults to a local table if one does not exist already (as it would if Copy Materials On Use was enabled).

If set to zero, or undefined, then localization of used materials is controlled by the Copy Materials Locally On Use toggle. Local material support is new in the V8 XM Edition and is not supported by earlier versions.

MS_MTBL - Search path(s) for material tables.

MS_MATERIAL - Search path(s) for material palettes.

MS_PATTERN - Search path(s) for pattern maps.

MS_BUMP - Search path(s) for bump maps.

MS_IMAGE - Search path(s) for images.

MS_IMAGEOUT - Directory in which image files created with Utilities > Image > Save and Utilities > Image > Capture are stored.

MS_SHADOWMAP - Directory where shadow maps will be read from and written to.

MS_LIGHTING - Directory where IES lighting data will be stored.

MS_LIGHTLIST - Directory that lists the location of predefined lights.

MS_RENDERLOG - File in which rendering statistics are logged.

MS_PTDIR - Working directory for temporary Particle Tracing files.

MS_SHARED_DR_DIR - Working directory for shared rendering files, including Particle Tracing and Radiosity files.

MS_IMAGE_EDITOR - Default program to be used to edit an image file. The program is activated by double-clicking in the preview area of the Map Editor dialog.

MS_MATERIAL_PREVIEW_BACKGROUND - Image to be used for the background of material previews in the Material Editor.

MS_FILTEREDCODECS - List of codecs that should not display when exporting a movie from the animator.

MS_RENDERV7MATERIALS - If set to 1, materials are rendered as they were in V7. Most affected are translucency, transparency, specularity, and diffuse as applied to pattern maps.

MS_DISABLE_RPCBROWSER - If set to 1, the RPC Thumbnail Browser is disabled.

Security

 ${\tt MS_SECURITY_LEVEL-Security\ level\ for\ loading\ and\ running\ applications\ in\ MicroStation}.$

MS_SECURITY_SPC - Path where MicroStation can find the Software Publishing Certificates used to digitally sign the applications that can be loaded in MEDIUM security mode.

Seed Files

MS_PLANVIEWSEEDNAME - Name of seed view for creating plan views.

MS_ELEVATIONVIEWSEEDNAME - Name of seed view for creating elevation views.

 ${\tt MS_DETAILVIEWSEEDNAME-Name\ of\ seed\ view\ for\ creating\ detail\ views.}$

 ${\tt MS_SECTIONVIEWSEEDNAME-Name\ of\ seed\ view\ for\ creating\ section\ views.}$

MS_VIEWSEEDFILE - Name of seed file for creating views. By default, seed views in ustation.dgnlib are used.

MS_VIEWGROUPSEED - Name of file containing seed view group for models without a view group.

MS_VIEWGROUPSEEDNAME - Name of seed view group for models without a view group.

 $\ensuremath{\mathsf{MS_DWGSEED}}$ – Seed file used to create DWG file.

 ${\tt MS_DWGSEED_OVERRIDE} \ {\tt -} \ {\tt Seed} \ {\tt file} \ {\tt used} \ {\tt to} \ {\tt override} \ {\tt MS_DWGSEED} \ {\tt or} \ {\tt the} \ {\tt user-selected} \ {\tt DWG} \ {\tt seed} \ {\tt file}.$

MS_SEEDFILES - Search path(s) for all seed files.

 ${\sf MS_DESIGNSEED-Default\ seed\ file}.$

MS_TRANSEED - Default seed file for DWG, CGM, IGES, OBJ, and 3DS translations.

MS_TRANSEED_OVERRIDE - Determines whether a user can modify the DGN Seed File setting on the DWG Open Options dialog.

When the variable is not set or set to 0, the first time that the dialog opens, the default DGN Seed File is set by the MS_TRANSEED configuration variable. The user can choose a different seed file.

When the variable is set to 1, the user can only use the DGN seed file identified by MS_TRANSEED. The user cannot choose a different seed file.

When the variable is set to 2, the default DGN seed fie is set by MS_TRANSEED at the beginning of each session. The user can choose a different seed file g the session.

INIO_CELL_SEEDFILE - Seed file used when creating or upgrading cell libraries.

MS_SHEETSEED - Seed file used when creating drawing sheets.

MS_USERPREFSEED - Name of seed file used to create user preference resource file.

MS_DESIGNMODELSEED - Name of file containing the seed model for the new design models.

MS_DESIGNMODELSEEDNAME - Name of seed model for new design models.

MS_SHEETMODELSEED - Name of file containing seed model for new sheet models.

MS_SHEETMODELSEEDNAME - Name of seed model for new sheet

MS_DWGSHEETMODELSEED - Name of file containing seed model for new sheet models in DWG files.

MS_DWGSHEETMODELSEEDNAME - Name of seed model for new sheet models in DWG files.

Spelling

MS_SPELLINGUSERDICTIONARY - Specifies the user dictionary.

MS_SPELLINGLANGUAGE - Specifies the language. Valid languages are: AmericanEnglish, BritishEnglish, Brazilian (Brazilian Portuguese), Danish, Dutch, Finnish, French, German, Italian, Norwegian, Spanish.

MS_SPELLINGDICTIONARYPATH - Specifies the directory to search for core dictionaries.

Standards Checker

MS_STANDARDSCHECKER_SETTINGSFILE - Sets the *.dgnlib file used for standards checking. If this variable is set, the specified file is always used for standards checking.

MS_STANDARDSCHECKER_SETTINGSNAME - Sets the name of the settings to use (within the file specified by

MS_STANDARDSCHECKER_SETTINGSFILE - If this variable is set, you cannot select different named settings.

MS_STANDARDSCHECKER_OUT "Standards Checker Report Directory" Default directory for standards checker reports.

MS_STANDARDSCHECKER_STYLESHEET - If this variable is set, it specifies the XML style sheet that is used to view the Standards Checker XML report. This variable can be either a file or a URI (Universal Resource Identifier) that can be used by the browser to locate the style sheet. If this variable is not set, the XML style sheet in \$(_USTN_WORKSPACEROOT)\$ system/data/standardschecker.xsl is used.

MS_STANDARDSCHECKER_APPS - The list of MDL applications that are loaded when the Standards Checker utility is started.

Symbology

MS_FONTPATH - Path or list of paths that contain RSC, SHX, or TrueType font files.

MS_SYMBRSRC - List of symbology resource files - last one in list has highest priority.

System Environment

MS_CONFIG - Main MicroStation configuration file - sets up all configuration variables.

RSC_COMP - Text string to be inserted at the beginning of the command line by the resource compiler (used to specify where to search for include files).

MDL_COMP - Text string to be inserted at the beginning of the command line by the MDL compiler (used to specify where to search for include files).

BMAKE_OPT - Command line options for BMAKE. Used to search for bmake include (.mki) files.

MS_DEBUGMDLHEAP - If set (to the base name of an MDL application or "ALL), use extended malloc for debugging.

Tags

MS_TAGOUTPUT - Output directory for tag data.

MS_TAGREPORTS -Output directory for tag reports.

MS_TAGTEMPLATES - Directory containing tag report templates

Temp and Backup Files

MS_DWG_BACKUP - Directory for DWG backup (.bak) files. If this variable is not set, the files are placed in the same directory as the DWG file.

MS_NO_DWG_BACKUP - If set to 1, a .bak file is not created when a DWG or DXF file is edited.

MS_BACKUP - Default directory for backup files.

MS_TMP - Directory for temporary files created and deleted by MicroStation.

MS_SCR - Directory for scratch files created by MicroStation.

Translation

MS_CGMIN - Input directory for CGM translations

MS_CGMOUT - Output directory for CGM translations.

MS_CGMLOG - Output directory for CGM log files.

MS_CGMTABLES - Directory containing the CGM translation tables.

MS_CGMINSET - Settings file for the CGMIN application.

MS_CGMOUTSET - Settings file for the CGMOUT application.

MS_IGESIN - Input directory for IGES translations.

MS_IGESOUT - Output directory for IGES translations

MS_IGESLOG - Output directory for IGES log files.

MS_IGESINSET - Settings file for IGES import.

MS_IGESOUTSET - Settings file for IGES export.

MS_STEPOUT - Output directory for Step translations.

MS_STEPLOG -Output directory for Step log files.

MS_ROSEDB -Rose database directory.

User Commands

MS_UCM - Search path(s) for user commands (UCMs).

MS_INIT - Name of a user command to executed at startup

MS_EXIT - Name of a user command to executed at exit

MS_NEWFILE - Name of a user command to executed when a DGN file is opened

MS_APP - Search path(s) of applications started from "TSK" statements.

VBA

MS_VBASAVEONRUN - If set to 1, automatically saves modified VBA projects every time it starts running a VBA program.

MS_VBAAUTOLOADPROJECTS - Names of the projects that are opened when the VBA dialog is opened.

 ${\tt MS_VBASEARCHDIRECTORIES-Directories\ that\ are\ searched\ when\ opening\ an\ existing\ VBA\ project.}$

MS_VBANEWPROJECTDIRECTORY - Directory that is used when a new project is created.

Uncategorized configuration variables

HISTORY_MAX_MINOR_VERSIONS The number of minor versions for the Limit History command to preserve in the history file. MSDIR MicroStation root installation directory.

MSLOCAL Specifies the base directory path for where the required writable portions (that is, local for a network installation) of MicroStation are installed.

MS_80TRUETYPESCALE If set to 1, TrueType fonts using nonstandard TrueType definitions will display as they did prior to V8.

MS_81TEXTNODEMIRRORING If set, MicroStation uses the V8.1 method for mirroring a selection with Mirror Text turned off.

When this option is on, two problems can occur:

- some style runs (collections of characters with the same text styles applied) may be reversed when mirrored about the Y axis (vertical)
- line order is reversed in multi-line text when the element is mirrored about the X axis (horizontal)

MS_ALWAYSRELATIVEREFPATH If set (to any value), MicroStation always turns on the Save Relative Path toggle and disables it so that it cannot be turned off. It will save relative paths whenever possible.

MS_AUTO_UPDATE_FIELDS Controls the rules for updating fields in the active model. If set to ALWAYS, the fields are always kept up to date. If set to NEVER, the fields are never updated. If not set or set to FOLLOWMODELFLAG, the model's Update Fields Automatically property determines if fields are updated for that

MS_BASICEXT_LOAD List of MDL applications that implement extensions to the BASIC language (MS_BASIC_LOAD).

MS_CMDTABLE_LOAD List of MDL applications that will have their key-in tables auto-loaded.

MS_CMDWINDRSC Command Window resource file. Default is used if undefined.

 ${\tt MS_CODESET\ MDL\ application\ for\ handling\ multi-byte\ character\ sets.}$

CUSTOMFONTCREATION_ENABLE If set to 1, MicroStation uses a custom font to render text characters that cannot be rendered using the font with which a lement was placed.

DATA Directory for data files created or used by MicroStation.

MS DEFCHARTRAN Default character translation table.

MS_DEFAULTSHEETRGB Allows you to specify a different background color, which is used when you create the first sheet model. Expects an RGB triplet separated by commas.

MS_DESIGNFILTER Default file filter for the File Open, Open, and Save As dialogs. If MS_DESIGNFILTER is not defined, the default filter is "*.dgn".

MS_DGNOUT Directory containing DGN files created as a result of "on the fly" translation from other file formats.

MS_DIMLEGACYPOINTORDER If set to 1, the dimensioning tools use the legacy data point sequence for placing linear and angular dimensions (StartPoint - ExtensionPoint - EndPoint).

MS_DISABLEWINDOWGHOSTING (For use on Windows Vista or later) If set to 1 or ON, disables the window ghosting mechanism in the Windows OS for the MicroStation process. Windows creates a ghost window for the application's windows when it determines that an application has been unresponsive for at least five seconds. Several MicroStation features, such as Print/Plot and Image Save, may require a long span of continuous processing time, resulting in the activation of these ghost windows and the associated undesirable side effects in the user interface. Turning off the window ghosting for the process prevents these undesirable effects.

MS_DISALLOWRELATIVEREFPATH When set to 1, you cannot save a relative path for a reference. The Save Relative Path check box is removed from the Attach Reference dialoa.

MS_DWG_CREATE_SEPARATE_SHEETS If set, if a DGN contains sheet models, the sheet models are saved to separate DWG files with the file name created by appending the model name to the original file name. If not set, the sheets are saved to separate layouts within the DWG file.

MS_DWG_DISCARD_INVAID If set, entities that are outside the DGN design plane are discarded and will not be written back to the DWG file on the next file save. If the variable is not set, MicroStation ignores these entities.

MS_DWG_FEETUNIT_AS_ARCHENG If set, when a DGN file with Working Units set to Feet-Inches, Format set to Master Units, and Units on the Save As DWG/DXF Options dialog set to Master Units, the resulting DWG file has Engineering or Architectural units in AutoCAD. (If not set, the units are Decimal or Fractional.)

MS_DWG_LEADER_HOOKLINE If set, an inline elbow is displayed on notes.

MicroStation allows a note to be placed without an inline elbow (a hook line in AutoCAD) when the inline toggle is unchecked, but AutoCAD does not. This type of note (for instance, a leader without a hook line) saved to DWG will retain correct graphical presentation, and will operate properly in AutoCAD.

MS_DWGINSERTLAYER Specifies the layer to which normal (unshared) cells and reference attachments are assigned when saving the open DGN file in DWG format. If this configuration variable is not defined, layer 0 is used.

MS_DWG_LWDEFAULT Controls the width of the default line weight. The default value is 0 for unweighted default lines. Valid values are 0, 5, 9, 13, 15, 18, 20, 25, 30, 35, 40, 50, 53, 60, 70, 90, 100, 106, 120, 140, 158, 200, 211.

MS_DWGOMITUNIQUEEXTENSION If more than one file with the same name is present in the same directory, appends the extension to the output filename when saving the file.

MS_DWGPATFILE Filename containing AutoCAD Pattern Definitions.

MS_DWG_PRE2004_COLOR_TABLE Sets the color table for DWG files in MicroStation. In version 2004, AutoCAD began displaying indexed colors with a slightly different (generally lighter) colors. MicroStation also uses these new colors unless this variable is set.

MS_DWG_PROXYSHOW Controls the display of proxy objects within a DWG drawing. Default setting is 1, display complete graphics. Set to 0 for no graphics and 2 for bounding box display only.

 ${\tt MS_DWGREF_ALLOWMASTERCOLORS\ Defines\ how\ MicroStation\ uses\ color\ tables\ for\ DWG/DXF\ files\ attached\ as\ references.}$

MS_DWGSEED_OVERRIDE Determines whether a user can modify the DWG Seed File setting on the Save As DWG/DXF Options dialog.

When the variable is not set or set to 0, the first time that the dialog opens, the default DWG seed file is set by the MS_DWGSEED configuration variable. The user can choose a different seed file

When the variable is set to 1, the user can only use the DWG seed file identified by MS_DWGSEED. The user cannot choose a different seed file.

When the variable is set to 2, the default DWG seed file is set by MS_DWGSEED at the beginning of each MicroStation session. The user can choose a different seed file during the session.

MS_DWGSYSTEMDATA Identifies the directory containing the DWG settings file Dwgsettings.rsc. Overrides the directory specified by MS_DWGDATA. The display and plotting color tables (DwgDisplayColor.tbl and DwgPlotColors.tbl) can also be controlled by placing them in this directory.

MS_DWG_VPORT_LAYER_FROM_CLIP Defines the viewport level in DWG files.

Viewport entities are represented as reference attachments in MicroStation - the viewport level is extracted from the reference attachment. If no level is set for the reference attachment then by default the viewport is assigned to layer 0. However, if this variable is set and a clip element is present, then the viewport layer is extracted from the clip element.

MS_DWG_VPORT_MAP_LOCATE_OFF_TO_LOCKED If set, the Display locked status of a viewport entity is mapped to the Locate setting of the reference attachments that represent this viewport. In this case, a viewport with Display locked off will have Locate turned off - and changing the Locate status of the reference attachment will change the Display Locked status of the viewport.

 ${\tt MS_GUIHAND\ Identifies\ auxiliary\ handlers}.$

MS_HELPLOAD_APPLICATION Determines which application help is based on. Current options are HTMLHelp (default), or StaticWeb. StaticWeb refers to static HTML pages on a website.

MS_HELPLOAD_SERVER Specifies the root location of the help content. Defaults to \$(USTN_DOCUMENTATIONROOT), but can be set to a file server or URL. This variable does not determine if you are using uncompiled HTMLHelp content. If you set this variable, the value of MS_HELPLOAD_SERVER should be the location containing the product directory (i.e., MicroStation)

MS_HELPPATH Path to help resource files.

 ${\tt MS_INGRFILE_REGISTRATION}\ User\ defined.$

Sets File Georeference priority over attachment location for Intergraph raster formats, essentially CIT, C29, C30, C31, COT, RLE, TG4 and RGB raster formats. If undefined or set to 0, there is no effect.

If set to 1, enables File Georeference priority for rasters.

NITAPPS List of initial start-up MDL applications.

MS_MERGE_DISPLAYEDLEVELSONLY Modifies the behavior of the Copy Levels During Merge setting on the Save As DWG/DXF Options dialog, References tab. When set to 1, if reference levels are not displayed, the reference elements on those levels are not merged into the output file.

If not set, the reference merge process translates elements on levels even when the levels are not displayed.

MS_NO_POSITION_MAPPING_HINTS If set to I, the keyboard navigational aids will not display when is clicked.

MS_NOTEAUTOUPDATE Controls the list of settings that will be propagated to existing notes when a dimension style is saved. To propagate all settings, set to All. To control individual settings, list attributes in a comma-separated list.

MS_OLDUSERLICENSE File that contains old user license information. Required for when installing a product upgrade.

MS_OPENDESIGNFILEFILTER Initial file filter list for the File Open and Open dialogs.

MS_OPENREFFILEFILTER Initial file filter for the Attach Reference File dialog.

MS_ORACLEPREFETCH Specifies the number of rows pre-fetched from the database, maximum 65535. For example if MS_ORACLEPREFETCH is set to 1000, there will be 1000 rows of data returned to the client and cached. If this configuration variable is not set, one row is pre-fetched. Setting MS_ORACLEPREFETCH can result in improved query performance over high latency networks, such as Wide Area Networks (WANs).

MS_PLOTBORDER_TIME_FORMAT Changes the date and time format for printed outputs from Windows Regional Settings to another format. Set to v7.0 to use the v7.0 format.

MS_PLT_NORASTERTRANSPARENCY User defined.

If defined, disables raster transparency settings when generating print files with drivers that do not support transparency (mainly postscript drivers). This prevents inflating the size of printed output, thus improving printing speeds.

MS_REF_USECLIP_FROZENLEVEL If set, MicroStation uses clipping elements on frozen levels. Note: If the file is saved to DWG and opened in AutoCAD, it will look different since AutoCAD ignores clip elements on frozen levels.

MS_REFCOLORTABLE If defined and set to 1, MicroStation always uses the reference's color table. If defined and set to any value other than 1, MicroStation never uses the reference's color table. If not defined, MicroStation uses the user preference to determine whether or not to use the reference's color table.

MS_REF_CYCLECHECK If set to 0, MicroStation skips the circular reference check for DGN files. This variable does not affect DWG files.

MS_RIGHTLOGICKB If set to 1, keyboard input is right to left.

MS_RSRC Main MicroStation resource file. Typically set to "ustation.rsc."

MS_SESSION_DEBUG Used to start session debug prior to the loading of the database server. By setting this configuration variable, you can receive immediate debug information from the consumer DLL. MS_SESSION_DEBUG can be used with all the database servers. A value of 1 enables receipt of debug information from the database server and the corresponding DLL - ORACLE, ODBC, or OLEDB. A value of 0 enables receipt of debug information only from the DLL.

MS_SETMGR_CREATELEVELS When turned on, Settings Manager creates levels if they are not found in the master file or a level library. When off or missing, Settings Manager will not change the level but display a warning message.

MS_SIGNATURE_DISPLAY_UNVERIFIED Controls how an unverified digital signature is crossed out. Value is color weight style strikeout where:

color = a number, specifying the menu color identifier number

weight = a number specifying the line weight of the annotation

style = a number specifying the style

strikeout = how to strike out the signature

• "X" Draw an X over the signature

"-" Draw a line through the middle of the signature

The default is a heavy solid red X over the signature. This is represented by 4 7 0 $\rm X$

To draw a heavy solid blue line through the signature, use the following: 1 7 0 -.

MS_SIGNATURE_SHOW_FULL_NAME If on, MicroStation displays the full subject and issuer name from the signer's certificate in the element information balloon for a digital signature element.

MS_SMARTSOLID Specifies the directory path for the SmartSolid subsystem.

MS_SNAPMODE_SOURCE If set to 0 (the default), MicroStation saves the snapmode data to the DGN file. If set to 1, the data is saved to the userprefs file.

MS_SNAP_TANGENT_POINT_DEFAULT The snap mode used to compute the location of a perpendicular or tangent point snap. Applies only when perpendicular or tangent point is the default snap mode. Possible values are:

b - bisector

i - intersection

k - keypoint

m - midpoint

m1 - multisnap1

m2 - multisnap2

m3 - multisnap3

The default is 'k' (keypoint).

MS_SOURCENAME_PROPERTY If set, the SOURCE file property can be set to the name of the source file. By default, only the name and extension of the source file are saved. Set to 0 to disable the SOURCE property. Set to FULL to save the full path of the source file.

MS_TEXT_AUTOSTACKFRACTIONS_ALIGNMENT Sets the alignment for stacked fractions, when the Fractions advanced text style setting is on. Values are: 1 = Top

2 = Center (Normal for DWG files. The default if the configuration variable is not defined.)

3 = Bottom

MS_TEXT_AUTOSTACKFRACTIONS_TYPE Sets the type for stacked fractions, when the Fractions advanced text style setting is on. Values are:

1 = Normal

2 = Diagonal (Normal for DWG files. The default if the configuration variable is not defined.)

Normal Center

EXT_STACKFRACTIONS_SCALE The value is the percentage scale factor for stacked fractions. (70 is normal for DWG files, and is the default if this guration variable is not defined.)

MS_THUMBNAIL Stores a thumbnail image in each DGN file that can be seen in the MicroStation file open dialogs, as well as Windows Explorer. Can be used to control the behavior of thumbnail generation.

MS_USERLICENSE File containing user license information.

MS_USERPREF User preference resource file.

MS_USERPREF_APPS Set by application configuration files to add user preferences to standard dialogs.

MS_VBAV8TOV7DIALOG Specifies the name of a VBA macro that opens a dialog to collect information to be used in translating a DGN file from V8 to V7 format.

MS_VBAV8TOV7FILTER Specifies the name of a VBA macro that sets up a translation filter.

MS_VIEWATTRIBUTES_PLUGIN_ASSEMBLIES List of assemblies to search in for view attributes dialog plugin groups.

PZIP_OUT Specifies default directory for creation of Packager files.

NOTE: This Document may not be complete. New Variables will be added when applicable.

It would be helpful if the variables added in V8i were highlighted in some way, also if a list of variables removed from V8i was published. Are there any other unpublished V8i variables?

The variable MS_RASTER_DEFAULTSCALE is spelled wrong, there is an extra "E". It should be MS_RASTERDEFAULTSCALE. (fixed by mechamb on 12/30/2010)

Following variables have been duplicated in one or more sections and/or have inconsistent definitions:

MS_DWG_REFERENCE_CONVERT

MS_DWG_REFERENCE_COPYLEVEL

MS_DWG_REFERENCE_COPYNESTED

MS_DWG_REFERENCE_EXTERNAL

MS_DWG_REFERENCE_MASKED

MS_DWG_REFERENCE_MERGE_DISPLAYEDLEVELSONLY

MS_DWG_REFERENCE_OPTIMIZEDCLIP

MS_DWG_REFERENCE_SELF

MS_TRANSEED_OVERRIDE

MS_WORKMODE

MS_DWG_OBJECT_APP

MS_RASTER_DEF_DIR

MS DWGAUTOSAVE

MS_DWGAUTOSAVE_NODIALOG

MS_RFDIR

MS_DWGSEED

MS_DWGSEED_OVERRIDE

MS_DWGSHEETMODELSEED

MS_DWGSHEETMODELSEEDNAME

MS_STANDARDSCHECKER_SETTINGSFILE

MS_NO_DWG_BACKUP

MS_DWG_CREATE_SEPARATE_SHEETS

MS_DWG_DISCARD_INVAID

MS_DWG_FEETUNIT_AS_ARCHENG

MS_DWG_PRE2004_COLOR_TABLE

MS_DWG_PROXYSHOW

MS_DWG_VPORT_LAYER_FROM_CLIP

MS_DWG_VPORT_MAP_LOCATE_OFF_TO_LOCKED

MS_DWGINSERTLAYER

MS_DWGOMITUNIQUEEXTENSION

MS_DWGPATFILE

MS_DWGREF_ALLOWMASTERCOLORS

MS_DWGSEED_OVERRIDE

MS_DWGSYSTEMDATA

MS_MERGE_DISPLAYEDLEVELSONLY

MS_SOURCENAME_PROPERTY

Many of these were duplicated in the "Uncategorized" section and should be in the "DWG/DXF" section. If you would like a complete list in Excel email John C. Stickney.

I am trying to organize all the variables for V8i and have some variables that are not listed above. I'm not sure where I originally found out about them. Are they valid variables in V8i? If so, why are they not included above? Are there other "undocumented" variables not listed above for use in V8i?

MS_DWGSAVETEXTSTYLETEMPLATENAME

MS DWGNOUNITSALERT

MS_RSCFONTDATA

" 'C LEVEL_USE_ASCII_NAME_SORT

MS_HIDE_LIBRARY_SOURCE_NAMES
MS_ALTKEYACTIVATESMENU
MS_NATIVEMAINMENU

Thanks.

See also

Other Language Sources

Deutsch

Bentley[®]

Original Author: Melissa Hook

Copy Permalink

Attachments

TSG-Logo.png

Most Useful

EVD Reporting Guide

1079897 views • 10mo ago • ★★★☆☆

Learn More - Application use will be limited

145984 views • 12mo ago • $\star\star\star\star$

Learn More - Sign in Required

145014 views • 5mo ago • ★★★☆☆

Foundational Blueprints – Onboarding and Adoption

8136 views • 12mo ago • ★★★☆☆

SES Activation

194815 views • 12mo ago • ★★★☆

Bentley Explore

Start a Discussion

Academic & Learning Communities

Bentley LEARN

Support

Secure File Upload

All Forums

Support Portal

Subscriptions

Knowledge Base

Service Outages

Product Communities

Events

Bentley

Privacy & Legal Terms

Terms of Use

Cookies

Contact Us

© 2025 - Bentley Systems, Incorporated

