

CAiCE Release Notes – Visual Transportation 10, SP5

Resolved Incidents

| Command/Item | Description |
|---|--|
| Custom Line Styles | Custom line style scales were incorrect for both sheet composer and Export to Screen Graphics (Defect 651256) |
| Custom Line Styles | Only the first custom linestyle found in the drawing would be used in the DGN |
| Drafting => Store/Edit Extended Text Elements | When the user clicks the Store button in the Store Edit Extended Text dialog the Font Attributes for Color changes to -521 and the Font changes to a value of -15. (Defect 597786) |
| Drafting => Store/Edit Extended Text Elements | When text is placed either by the Power Tool Place button or the Digitize All button the following error is displayed Rotation: "Error in Input- Please Correct". (Defect 598654) |
| Drafting => Store/Edit Extended Text Elements | Using the System Category to build a macro to display a Point Name, Lat, and Long only displays the name when previewed or stored. (Defect 598660) |
| DTM=>DTM Database Manager | In DTM Manager doing when performing a crossing breakline check, the report will list the breaklines by number and a corresponding chain. The chain that is listed is not the same as the breakline number that is reported. (Defect 575278) |
| DTM=>Edit=>DTM Points | If you snap to a point and then click the 'Digitize' button, then right click to cancel the digitize operation, the X and Y coordinate values are replaced with 0.0000. (Defect 580087) |
| DTM=>Save DTM points and Breaklines to SRV | The command doesn't replace the previous 'last command' used for the right-click popup menu.(Defect 588281) |
| DTM=>Save DTM Points and Breaklines to SRV | The point numbering is not incremented for the first non-chain point in the SRV file. (Defect 599712) |
| File=>Export Translators=>To Intergraph/MicroStation=>Screen Graphics to V7/V8 DGN File | Contours with a text height of 0 are labeled in V7, V8 MicroStation. (Defect 597579) |
| File=>Export Translators=>To Intergraph/MicroStation=>Screen Graphics to V7/V8 DGN File | The Text Height to Width ratio used in the export to DGN was being calculated incorrectly |
| File=>Export Translators=>To Intergraph/MicroStation=>Screen Graphics to V8 DGN File | The "Save Screen Graphics to DGN File" dialog does not remember the previous inputs values. |
| File=>Export Translators=>To Intergraph/MicroStation=>Screen | The customer needs the ability to map the degree symbol character ID in |

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| Graphics to V8 DGN File | CAiCE to the equivalent character ID in MicroStation. (Defect 655764) |
| File=>Export Translators=>To SDR/Leitz=>Profiles | The command does not recognize the LA value for asymmetrical vertical curves. It only reads LB and assumes the curve is symmetrical. (Defect 574560, WisDOT HD HD179138) |
| File=>Import Translators=>From Intergraph/MicroStation=>V8 CEL File to Cell Library | CAiCE crashes when converting a V8 cell file to a CAiCE cell library. (Defect 653492) |
| File=>Import Translators=>From Intergraph/MicroStation=>V8 DGN File to Geometry Elements | Imported text from v8 DGN (Geometry Text) is large if it is more than 1 line of text. (Defect 574962) |
| File=>Import Translators=>From Intergraph/MicroStation=>V8 DGN File to Geometry Elements | The Use Individual Cell Names is not functioning when importing from a V8 DGN file. (Defect 597752) |
| File=>Import Translators=>From Intergraph/MicroStation=>V8 DGN File to Geometry Elements | A V7 DGN translation table does not work when importing V8 DGN files. (Defect 597753) |
| File=>Import Translators=>From Intergraph/MicroStation=>V8 DGN File to Geometry Elements | When loading a translation table file and copying a row without first loading the DGN display an error message. (Defect 606153) |
| File=>Print Composed Sheets | Colors defined in the CAiCE color table with RGB = {255,255,255} still appear white in the print composed sheets preview, except for color 0, which is inverted to black (Defect 1017710, 572892) |
| File=>Print Composed Sheets | When exporting a sheet to MicroStation V8, the file is not stored in the Project Directory by default. (Defect 594887) |
| Files=>Flexible File Format=>Read | When reading in a point file that has descriptions with spaces Flex File reads only the first word.(Defect 598938) |
| Files=>Import Translators=>From SDMs=>V3.4 Alignment File | When an 3.4 SDMS ALI file is created in a directory other then the project directory the superelevation (.SPL) file is not created for the alignment being exported. (Defect,597580) |
| Files=>Project=>Reset | Revised the "Reset project' message to read. "Resetting the project removes all elements from the project database. The UNDO operation does NOT apply to this command. Are you sure that you want to continue?"" (Defect 602031) |
| Geometry => Curves => Store => Concentric | After the new curve is stored the name in the New Curve field reverts to the name of the curve that is in the Current Curve box. (Defect 599906) |
| Geometry=>Geometry Chain=>Copy Offset Parallel Chain | Stationing problem along the offset chain - the spiral length of the original SCS is carried over onto the offset SCS and even though the spirals are obviously different lengths, the graphical stationing and reports incorrectly show the spiral as the same length as the original. (Defect 597767) |

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| Geometry=>Geometry Chains=>Insert Station Equations | The Insert Station Equations command does not use the Prefix and Feature Code for inserted points, or curves. (Defect 597568) |
| Geometry=>Geometry Chains=>Store/Edit | The description field gets deleted if a chain point is snapped to using the At field in the dialog and the point is updated. (Defect 577059) |
| Geometry=>Geometry Chains=>Store/Edit | If you use the picker control for the Point List and chose Insert a Gap, the entire object list string is replaced with ",,". (Defect 600170) |
| Geometry=>Points=>Delete | When using the SnapW option to collect the list of points to be deleted, the data written to the project's _undo.kcm file does not include the description. (Defect 579971) |
| Geometry=>Points=>Locate at Station-Offsets | The command doesn't support ASCII Station List Files. (Defect 597864) |
| Geometry=>Profiles=>Smoothed Profiles | Help file doesn't match the command for Smoothed Profile. (Defect 602188) |
| Geometry=>Survey Chains=>Break Geometry=>Survey Chains=>Join | Snap to a chain and it disappears from the screen.(Defect 646584) |
| LandXML Toolbox | DTM triangles are being incorrectly exported as breaklines instead of faces and breaklines are stored as survey chains instead of breaklines. (Defect 597582) |
| LandXML Toolbox | The LandXML read defaults to overwrite rather than to rename/use next available. (Defect 598712) |
| Macro => Save Design | The dialog box title for the Macro => Save Design command displays "Save the entire design as a serious of template applied at each cross section station..." (Defect 599909) |
| Macro=>Run Template; Macro=>Run Design | When running a template or design (vrs) where the profile or horizontal alignment specified in the VRD/VRS is not correct for the EAR file in use, you will still get the message PGL not found, but it will also runs the template and insert fragments at the first station using the current PGL settings. (Defect 597564) |
| MicroStation V8 with CADLinks | CADLinks w/ v8 is not drawing alignments correctly. (Defect 594604) |
| MicroStation V8 with CADLinks | Shape objects were not being exported to DGN using the Sheet Composer (Defect 651253) |
| Project Manager=>Project=>Delete | After importing a segment, deleting the project, recreate the project and then re-importing the segments the point list for the survey chain gets messed up. However, if you close CAiCE after deleting the project and then come back in and recreate the project and import the segments, the importation works fine. (Defect 599922) |

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| Project Manager=>Segment=>Import | When importing an SDMS CAL file, if the total number of characters added to the point description buffer exceeds 79, CAiCE will crash. (Defect 600895) |
| Settings=>Load Settings From | The curve display settings are not being loaded when the command is used. (Defect 571362) |
| Sheet Composer | Sheet Composer is not exporting the correct colors when using the "ByLevel" option (Defect 655766) |
| Sheet Composer | Custom line styles are being exported to DGN using the Sheet Composer and the Export Screen Graphic command using the "ByLevel" option |
| Snap Procedure | Hitting the F3/F4 button during a snap procedure displays an unused dialogs. (Defect 607097) |
| StationList Picker Control | This picker control includes a 'from database' option that inserts a point name into the textbox portion of the control. Instead of just inserting the name of the point, the point should be checked against the active alignment and a station value should be placed in the control.(Defect 579301) |
| Survey Data Editor | Unable to start OBM Editor if Office 2003 is installed. (Defect 583832) |
| Tools => Database Explorer | Can not read a KCM file that has Read-only attributes. (Defect 597856) |
| Tools=>Database Explorer | Problem writing out a KCM file (Defect 598241) |
| Tools=>Edit Feature Table | The level field in the feature table currently allows 4 characters. With unlimited levels now supported in MicroStation v8, this field needs to be expanded to support up to 10 characters." (Defect 596003) |
| VBA Objects | The KcSelectionList object didn't have any code implemented to handle a kcProfile object in VBA. (Defect 638119) |
| VBA Objects | Application.kcupdategraphics method doesn't work for x-section screen. (Defect 603423) |
| VBA Objects | The Loadini and Saveini VBA methods to not seem to work. (Defect 590663) |
| View=>CAiCE (.CDG) Background File | When the CDG buffer is too small terrain profiles won't view. (Defect 605725) |
| View=>Geometry Chains | Geometry Chains are drawn incorrectly when patterning with cells. (Defect 603000) |
| View=>geometry=>Curves | When viewing curve with very small delta angle the curve gets displayed as a circle and not a small arc. (Defect 1043574) |
| View=>Geometry=>Lines | Viewing geometry lines doesn't utilize the 'within window' option. (Defect 564842, 981020) |
| View=>MicroStation V7 (DGN) Background File/ View=>MicroStation V8 (DGN) Background File | When the Use Current Settings for Attributes option is turned on and the color set to 15 the graphics is displayed in a completely different color. (Defect 597577) |

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| View=>MicroStation V8 (.DGN) Background File | There is no option to "Use Current Settings for Attributes" when viewing a V8 DGN file (Defect 597882) |
| View=>X-Sections=>On X-Section Sheets | Box mislabeled on dialog for viewing cross sections. The Origin text field is labeled "Origin X,Y Position", but actually interprets the entry as N, E or Y,X. (Defect 599910) |
| X-Section=>Edit/View X-Section: Edit=>Surface=>Fill Gaps | Problem resolving closed areas and filling gaps in an EAR file. (Defect 591191) |
| X-Section=>Edit/View X-Section: Edit=>Surface=>Copy Surface to Other Station | Invoking this command does nothing (Defect 597574) |
| X-Sections=> Store X-Section from Scanlines and DTM | The incorrect station is inserted into EAR file (Defect 604663) |
| X-Sections=>Add Utilities to X-Sections=>To EAR File | When utilities are added to the EAR file and plotted on cross-section sheets, extra lines show up from utility points on one section to utility points on the next. (Defect 597862) |
| X-Sections=>Store from Station-Offset-Elevation File | When the reference alignment has over lap station equation the SOE file cannot be imported. (Defect 597603) |
| X-Sections=>X-Section Reports=>Endarea Volumes | The earthwork volumes are incorrect when the stations are within 0.01 of each other. (Defect 602569) |

New Functionality

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| File=>Export Translators=>To Intergraph/MicroStation=>Screen Graphics to V8 DGN File | <p>Implemented a new function in the export to v8 routine that allows you to re-map text characters by their ASCII codes. This allows you to keep the degree symbol set to char 176 in the CAiCE application, but export it to char 94 in MicroStation so that it will display properly in the MicroStation font.</p> <p>This feature allows an infinite number of characters to be mapped for substitution. A new table was added to %kctables%\dgn\v8 that contains the character mapping data. If the table is missing, the mapping function is skipped over, so the changes will be completely transparent to most users.</p> |
| File=>Export Translators=>To Intergraph/MicroStation=>Screen Graphics to V8 DGN File | Implemented a new silent export function to the MicroSServer library that allows a programmer to silently export a v8 DGN file from their own macros by including the library as a reference. This function is completely transparent to the end user. All settings are passed to the function as parameters, so the interface for the macro developer is nice and clean. |
| File=>Export Translators=>To Intergraph/MicroStation=>Screen Graphics to V8 DGN File | Added debugging code at various points in the MicroSServer.lib and CADLinksv8_1.mvba libraries that produce extra error messages, create log files, etc. |

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| | To activate the log file error reporting in export screen graphics to v8 or convert v8 CEL to CCL, double click on the dialog and select the 'log file' debug mode. |
| LandXML Toolbox | Implemented a new silent export function for the LandXML library. This function allows the macro developer to specify all selection settings and pass them to the LandXML export routine as parameters of the new function. All structures used as parameters are exposed as public types. |
| LandXML Toolbox | Implemented a new silent import function that is a slight variation on the existing silent export function in the LandXML library. In this function, you get to specify the XML filename. ALL data is read into the project database from the XML file. |
| X-Sections=>Edit/View X-Sections: Edit=>Utility Point=>Delete | A new command was added to the x-section editor |

Changes to Command Behavior (MicroStation V8 interface):

- **DebugMode options have been added to the following commands:**
 - File=>Export Translators=>To Intergraph/MicroStation=>Screen Graphics to v8 DGN File
 - File=>Import Translators=>From Intergraph/MicroStation=>V8 CEL File to Cell Library

To activate the Debug Mode, double click on the command's form outside of any of the controls on the form (i.e. on a blank area of the form). A dialog box that prompts you to set the debug mode options will come up. You have the option of sending messages to a log file, sending them to the screen via message box pop-ups, or you can turn the debug mode off.

- **File=>Import Translators=>From Intergraph/MicroStation=>V8 CEL File to Cell Library**

Two dummy seed files have been added to the %CAICE%\MDL folder – one for English units projects and one for metric. When launching the MicroStation server to convert the cell library, the appropriate file is opened as the active application prior to performing the conversion. This resolved an issue on certain machines where MicroStation would crash in server mode during the cell file conversion.

- **V8 DGN File Creation (all methods): DGNCharIDMap.tbl**

A character mapping table has been added to the %KCTABLES%\DGN\V8 directory (DGNCharIDMap.tbl). This table, if present and not empty, will allow the end user/CAD standards manager to substitute certain characters for other characters when exporting text to a v8 DGN. For example, if you are using char id 176 as the degree symbol in CAiCE, but your font in MicroStation requires you to use character 94 for this symbol; you can add a line to the table to cause CAiCE to substitute character 94 for every instance of character 176 when writing out the DGN file. The character codes correspond to the ASCII character set. Valid ID numbers range from 0 to 255. DO NOT specify a value outside of this range. Also note that there is no provision in the code to prevent you from substituting non-printing or special characters. Please refer to the Microsoft VBA documentation accessible through the VBA Editor for the ASCII character set.

- **File=>Export Translators=>To Intergraph/MicroStation=>Screen Graphics to v8 DGN File**

The Text Width/Height ratio behavior was modified so that the text width would be calculated by multiplying the specified ratio by the text height specified for the element in CAiCE. The old behavior had this relationship backwards...the text height value was being assigned to the width and the height was being calculated as the ratio times the width.

KCLandXML.lib Changes - VBA

New Features Specification:

'data types:

```
Public Type SelectionCriteriaType
    ImportMe As Boolean
    Objects As String
    Features As String
    Segments As String
    Zones As String
    OptionsFeatureObjects As Boolean
    OptionsGroundObjects As Boolean
    OptionsSectionObjects As Boolean
    OptionsUsersObjects As Boolean
End Type
```

```
Public Type AlignmentCriteriaType
    ImportMe As Boolean           'only checked at array idx = 0
    AlignmentName As String      'one object name only
    Super As Boolean
    TerrainProfile As String     'single FULLY QUALIFIED filename
    DesignProfile As String      'one object name only
    XSectionList As String      'comma delineated list of filenames (files located in
                                CAiCE 'project directory => no path should be specified)
                                example: "CL1.EAR,CL1FIN.EAR,...". EAR File must
                                be based on 'the alignment specified for this record.
End Type
```

```
Public Type DTMCriteriaType
    ImportMe As Boolean
    DTMList As String           'comma separated list
End Type
```

' public variables:

```
Public NullSelectionCriteria As SelectionCriteriaType
Public NullAlignmentCriteria(0) As AlignmentCriteriaType
Public NullDTMCriteria As DTMCriteriaType
```

'public functions:

```
Public Function SilentWriter(PointSelectionCriteria As SelectionCriteriaType,
    SChainSelectionCriteria As SelectionCriteriaType, DTMCriteria As DTMCriteriaType,
    ParcelSelectionCriteria As SelectionCriteriaType, AlignmentCriteria() As AlignmentCriteriaType,
    FormatOnSeparateLines As Boolean, XMLFileName As String) As Long
```

```
Public Function SilentReader(XMLFile As String) As Boolean
```

Notes:

Public data types:

- SelectionCriteriaType
This is used to populate the members of a KcSelectionSet internally. Create one for each object category you want to import except alignments and DTM's (i.e. if you want to import points and parcels, you would instantiate two variables of this type). Also make sure you set the .ImportMe field value to 'True'.
- AlignmentCriteriaType
This is used to store the alignment selection criteria info. You will have to declare an array of this type to pass to the SilentWriter function. If you have only one alignment to export, you still must use an array:


```
Dim AlignCriteria As AlignmentCriteriaType
```


The .ImportMe field is only checked for the first array element (idx = 0).
- DTMCriteriaType
This is used to store the list of DTM's you want to import. You must set the .ImportMe value to 'True'.

Public Variables:

- NullSelectionCriteria
This variable is provided so that you do not need to waste time or memory creating local variables as placeholders for object categories you do not wish to export. Simply pass this variable to the SilentWriter function for each category you do not wish to import. This variable will not work for the alignment or DTM categories.
- NullAlignmentCriteria
This is a single element array created for the same reason as the NullSelectionCriteria variable, only for the 'Alignment' category.
- NullDTMCriteria
This variable was created for the same reason as the NullSelectionCriteria variable, only for the 'DTM' category.

Public Functions:

- **SilentWriter**

This function will allow you to export selected elements from your CAiCE database to LandXML. The input parameters simulate the settings available in the LandXML Writer macro, including the selection criteria.

Parameter:

PointSelectionCriteria

Data Type:

SelectionCriteriaType

Notes:

Use similar to KcSelectionSet object. The 'ImportMe' field should be set to a value of 'True' to cause the selection set to be recognized.

SChainSelectionCriteria

SelectionCriteriaType

Use similar to KcSelectionSet object. The '.ImportMe' field should be set to a value of 'True' to cause the selection set to be recognized.

DTMCriteria

DTMCriteriaType

The '.DTMList' field should contain a comma separated list of VALID DTM surface names. No spaces or punctuation are allowed. Do not use a leading or trailing comma. The '.ImportMe' field should be set to a value of 'True' to cause the selection set to be recognized.

ParcelSelectionCriteria

SelectionCriteriaType

Use similar to KcSelectionSet object. The '.ImportMe' field should be set to a value of 'True' to cause the selection set to be recognized.

AlignmentCriteria()

AlignmentCriteriaType

You must pass an array variable of the correct data type to this parameter. Each array element should contain the entire selection criteria for one and only one alignment.

In addition to the alignment name, you may specify a single terrain profile (fully qualified filename), a single design profile, and a comma separated list of EAR files. EAR files should be located in the project directory. Do not specify a path for these files. The list is comma separated with no leading or trailing commas or

spaces (spaces in the filename are OK). The alignment specified must match the alignment used to create the EAR file.

The '.ImportMe' field should be set to a value of 'True' to cause the selection set to be recognized.

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| FormatOnSeparateLines | Boolean | This parameter directly corresponds with a checkbox on the KcLandXML Writer macro main form. |
| XMLFileName | String | This is the file you want to write to. It should be a fully qualified filename. |
| Return Value: | Long | Returns the value of the err.number object. Returns 0 for successful execution. |

- **SilentReader** This function currently imports ALL valid data from the specified LandXML file.

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| Parameter: XMLFile | Data Type: String | Notes: File to import. Must be fully qualified filename. |
| Return Value: | Boolean | Always returns True. |

Examples:

```
Private Sub testalign()  
  Dim AlignmentData(1) As AlignmentCriteriaType  
  With AlignmentData(0)  
    .AlignmentName = "CL1"  
    .DesignProfile = "CL1"  
    .TerrainProfile = "C:\support\kcddata\SR22\CL1.PF$"  
    .XSectionList = "CL1.EAR,CL1FIN.EAR"  
    .Super = True  
    .ImportMe = True  
  End With  
  
  With AlignmentData(1)  
    .AlignmentName = "KC1"  
    .ImportMe = True  
  End With  
End Sub
```

End With

```
MsgBox CStr(SilentWriter(NullSelectionCriteria, NullSelectionCriteria, NullDTMCriteria,  
NullSelectionCriteria, AlignmentData, False, "TestAlign.xml"))
```

End Sub

Private Sub TestDTM()

```
Dim DTMCriteria As DTMCriteriaType
```

```
DTMCriteria.ImportMe = True
```

```
DTMCriteria.DTMList = "EXIST,TEST"
```

```
MsgBox CStr(SilentWriter(NullSelectionCriteria, NullSelectionCriteria, DTMCriteria,  
NullSelectionCriteria, NullAlignmentCriteria, False, "TestDTM.xml"))
```

End Sub

Private Sub TestParcels()

```
Dim ParcelCriteria As SelectionCriteriaType
```

```
With ParcelCriteria
```

```
.ImportMe = True
```

```
.Features = ALL
```

```
.Objects = "KC1"
```

```
.Segments = ALL
```

```
.Zones = ALL
```

```
End With
```

```
MsgBox CStr(SilentWriter(NullSelectionCriteria, NullSelectionCriteria, NullDTMCriteria,  
ParcelCriteria, NullAlignmentCriteria, False, "TestParcels.xml"))
```

End Sub

Private Sub TestReader()

```
MsgBox CStr(SilentReader("C:\support\kccdata\sr22\testalign.xml"))
```

End Sub

MicroServer.lib Changes - VBA

New Features Specification:

'public functions:

```
Public Function ExportScrnGraphicsToV8DGN(SeedFile As String, CellFile As String, DGNFile  
As String, LineStyleScale As String, TextRatio As String, Optional SetColorByLevel As  
Boolean = False, Optional SetLineStyleByLevel As Boolean = False, Optional  
SetLineWeightByLevel As Boolean = False, Optional UseUserDefinedStyle As Boolean =  
True) As Long
```

Notes:

Public data types:

- NONE

Public Variables:

- NONE

Public Functions:

- **ExportScrnGraphicsToV8DGN:**

This function will allow you to export screen graphics to a MicroStation v8 DGN file from a VBA macro without having to bring up the command dialog. All options given in the dialog are made available to the macro programmer as parameters in the function specification.

| Parameter: | Data Type: | Notes: |
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| SeedFile | String | Seed file used to create the output DGN file. |
| CellFile | String | Cell file used to create the output DGN file. |
| DGNFile | String | The DGN file to create. |
| LineStyleScale | String | Linestyle scale used for custom linestyles in the DGN. This is a string value, however, it must be able to be converted to a numeric value (i.e. numbers and "." only). |
| TextRatio | String | This ration is used to calculate the WIDTHof the text in the DGN as a function of the height specified in CAiCE. |
| SetColorByLevel | Boolean | Optional. Default value = FALSE. Overrides current graphics object color setting and forces ALL elements to be created with ByLevel color in the DGN file. |
| SetLineStyleByLevel | Boolean | Optional. Default value = FALSE. Overrides current graphics object color setting and forces ALL elements to be created with ByLevel color in the DGN file. |
| SetLineWeightByLevel | Boolean | Optional. Default value = FALSE. Overrides current graphics object color setting and forces ALL elements to be created with ByLevel color in the DGN file. |
| UseUserDefinedStyle | Boolean | Optional. Default value = TRUE. Currently ignored in this command, however, the intention is to enable custom linestyles. Custom linestyles are always used if set up properly in CAiCE and pre-defined in MicroStation. |
| Return Value: | Long | Returns the value of the err.number object. |

Returns 0 for successful execution.
Returns -1 if for some reason it is
unable to write data to one of the
internal CAiCE variables.