

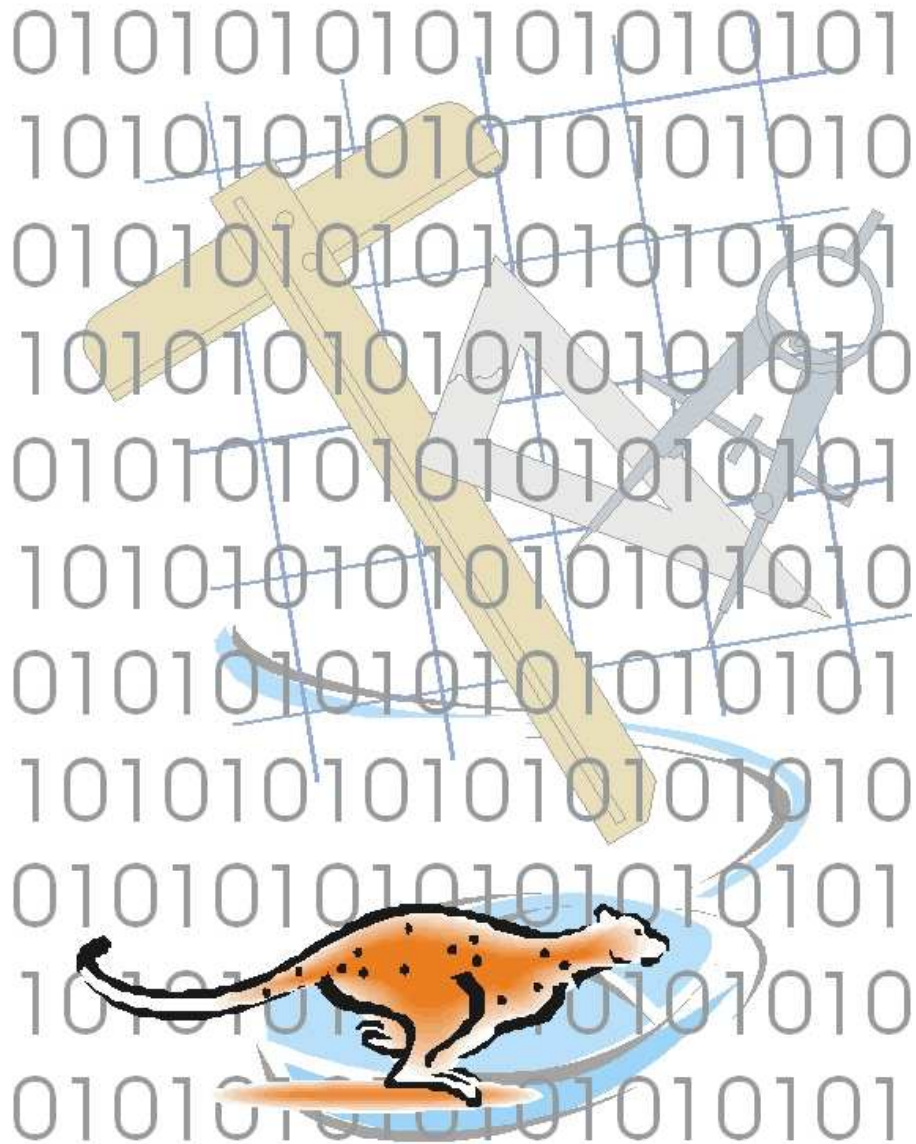
uCheetah!

6 Times Faster Than any Human

(It makes you feel like you are cheating!)

User Guide

VERSION CE-03 AUGUST 2022



“ My philosophy is to provide tools to people so that their work becomes more streamlined and efficient, thus enabling them to reach higher levels of standardisation and control. In this process, they are empowered to be completely independent and familiar with their working environment, ultimately resulting in the saving of man-hours. This is achieved through enhancing their knowledge with specific, targeted training, and the efficient use of customised tools, which they themselves have been involved in developing. ” - *JAF*

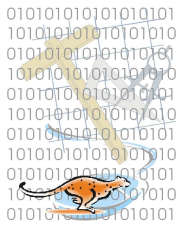
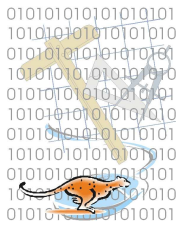


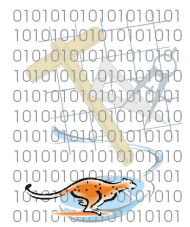
TABLE OF CONTENTS

| | | |
|------------------------|---------------------------------------|------------|
| <i>PART I</i> | INTRODUCTION | 4-5 |
| | Private Files | |
| | Changes to System Configuration | |
| | Licensing | |
| | Example Data/Files | |
| | Obtaining a License to use uCheetah | |
| <i>PART I.a</i> | INSTALLATION | 6 |
| <i>PART II</i> | USING UCHEETAH | 6 |
| <i>PART III</i> | CUSTOMISED UTILITIES | 7 |
| <u>III.1</u> | <u>DRAWING</u> | |
| III.1.a | Map Cells | 8 |
| | <i>Place standard mapping symbols</i> | |
| | DipTank | |
| | Grave | |
| | Hut | |
| | Tower | |
| | Manhole | |
| | Pole | |
| | Reservoir | |
| | North | |
| | TelPole | |
| | Tree | |
| | Trig | |
| | Well | |
| | Windmill | |
| | Water Main | |
| | Eskom Logo | |



III.1 DRAWING (Cont.)

| | | |
|----------------|---|------|
| III.1.b | Map Areas <i>Define and fill areas with standard mapping symbols</i> Lands IrLands Trees ConifTr Marsh Rocky Orchard IrrOrch Plantn Bush | 9-10 |
| III.1.c | Map Linear <i>Place standard linear features</i> Tel Line Tel Cable Pipeline UG Cable Camp Fence Sec Fence Farm Bdy SubDv Bdy Wall Powline D/C Pline | 11 |
| III.1.d | Map Curves <i>Place standard curve-type features</i> Track Road Donga Embank Edge Bush Line Trees Line Conif Foot Path Rail Line Terrace | 12 |



III.2 NATIONAL STANDARDS

| | |
|--|----|
| Summary | 13 |
| III.2.a Stays <i>Specific methods regarding the placement of Stays</i> | 14 |
| III.2.b EL-Box (Equivalent Length Graphic) <i>Method for generating an EL-Box Graphic</i> | 15 |
| III.2.c Automated Span Lengths and Pole Placement <i>Automated Placing of Span Lengths and Poles</i> | 16 |

III.3 SURVEY

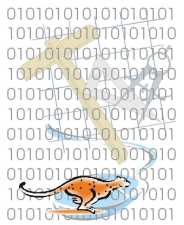
| | |
|--|-------|
| III.3.a CadCodes <i>Create and Place Rural Structure Codes</i> | 18-19 |
| III.3.b ColmPlot <i>Imports Geographical ASCII data</i> | 20 |
| III.3.c Import Co-ordinates <i>Import XYZ Co-ordinates From ASCII or Text File</i> | 21-24 |
| III.3.d Export Co-ordinates <i>Exports Text Items' Co-ordinates to ASCII file in various formats</i> | 25-26 |
| III.3.h Lo-Grid <i>Create YX Grid Lines</i> | 27-28 |

III.4 UTILITIES

| | |
|--|----|
| III.4.a Restore Default Cell Library <i>Restores necessary uCheetah Cell Libraries</i> | 29 |
| III.4.b Restore Eskom Line-style Libraries <i>Restores necessary uCheetah Cell Libraries</i> | 29 |
| III.4.b Create Levels 1 To 63 <i>Creates Levels 1 to 63 for backward compatibility</i> | 30 |

III.5 INFO

| | |
|---|----|
| III.5.a License Info <i>Displays your current License Information</i> | 31 |
| III.5.b About uCheetah <i>Highlights a couple of tips to avoid problems when using uCheetah</i> | 32 |



PART I INTRODUCTION

uCheetah is a set of utilities, mainly customised for the Eskom Survey Drawing Office environment.

All routines are written using the Bentley SDK and Microsoft Visual Studio (C++).

DGN files must include levels 1-63, and preferably be configured as 100:1 working units, with units set as m:cm, and display of 2 decimal places. If the working units are not set up like this, then some of the routines will simply not work or behave erratically.

Private Files.

uCheetah uses one cell library exclusively:- c:\uCheetah-CE\uCheetah.cel. It is recommended that the user does not add new cells to this library, as they will be lost whenever uCheetah is updated or re-installed.

The main aim of developing uCheetah, is to reduce the number of man-hours spent on drawing tasks. Users are encouraged to put forward any proposals that support this aim. Most repetitive tasks can be automated, which saves man-hours and reduces boredom.

Changes to System Configuration.

uCheetah files must reside on the C:\> drive: in the 'uCheetah-CE' folder:
Viz: C:\uCheetah-CE\

uCheetah does not put hidden 'marks' in design files, nor attach hidden identification to any design file elements.

Licensing.

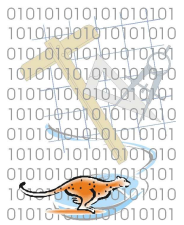
All the MDL (*.ma) files associated with uCheetah will only execute from a licensed uCheetah installation.

Example Data/Files.

Some sections of this manual refer to example data, supplied for testing, or better understanding of the usage of any particular routine. All example data will be located in the directory 'C:\uCheetah-CE\Examples\'

Obtaining a Licence to use uCheetah.

In order to be able to use uCheetah, a licensed version of the software will be created for you. In order to obtain the licence, first complete the Data Request Form available as "uCheetahData.exe". This can be forwarded to you via email, or is in the c:\uCheetah-CE\RequestForm\ folder. It is also available via download from <http://www.johnfrancis.co.za/Download.html>.



Fill in the data fields in the form, save the data to an ASCII file and email the resultant ASCII file to johnfrancis@iafrica.com, for processing.

A screenshot of a software window titled "uCheetahData". The window contains a "Data Request Form For uCheetah Software Configuration". The form includes a "License SEED Information" field with the value "A40E-D4B4". Below this are several input fields for "Company Name", "Contact Person", "Contact Numbers", "Contact Email", and four "Address Line" fields. At the bottom, there are four buttons: "Confirm" (with a confirmation message), "Accept Terms and Conditions" (with a confirmation message), "Save To ASCII File", and "Exit".

uCheetahData

Data Request Form For uCheetah Software Configuration

License SEED Information
A40E-D4B4

Company Name:

Contact Person:

Contact Numbers:

Contact Email:

Address Line 1:

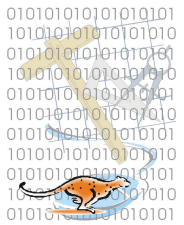
Address Line 2:

Address Line 3:

Address Line 4:

-->> CONFIRMED that the uCheetah Software will be used on THIS computer.

Terms and Conditions Accepted

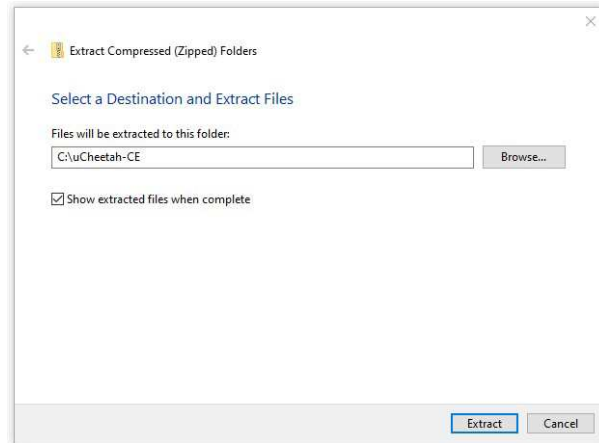


PART I.a INSTALLATION

To install uCheetah:

Create a new folder on your C:\ Drive called **C:\uCheetah-CE**

Unzip the supplied .zip file into the **C:\uCheetah-CE** folder.



With MicroStation CLOSED, Run **C:\uCheetah-CE\Setup.bat** – this will enable MicroStation to correctly load the uCheetah utilities.

PART II USING uCheetah

Launching the application.

Use the MicroStation Menus:-

Utilities->MDL Applications: Select UCHEETAH under ‘Available Applications’, then click ‘Load’. You may need to “Browse” to C:\uCheetah-CE\MdlApps\ to find the uCheetah.ma file.

OR

In the key-in window, type:- MDL LOAD UCHEETAH

A Function Key can be assigned for the loading of uCheetah.

Once the Main uCheetah Dialog Box is displayed, the utilities are available via a series of pull-down menus.

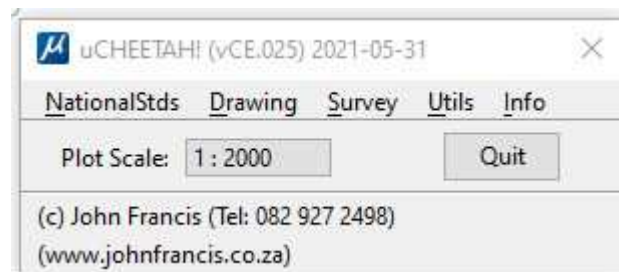
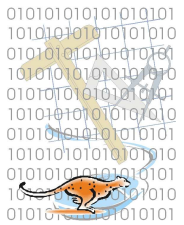


Fig. 1: Main uCheetah Dialog Box

Selecting ‘Quit’ will unload uCheetah, and all options loaded from ‘NationalStds’ and ‘Drawing’. Routines loaded from ‘Survey’ will remain loaded if ‘Quit’ is selected.



PART III CUSTOMISED UTILITIES

These utilities are grouped into three main categories, NationalStd, Drawing and Survey. The NationalStd and ‘Drawing’ sections are particularly relevant to Eskom, as they are in accordance with the Eskom Standards. The ‘Survey’ section is more generalised.

III.1 DRAWING

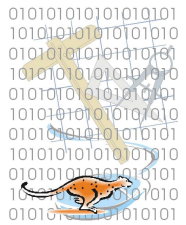
These tools provide a means of generating mapping symbology for map features. They are particularly useful for compiling spanning plans/detail sheets and profile strip survey drawings. The ‘uCheetah’ dialog box must not be closed while any items under ‘Drawing’ are open. There are four groups of routines, as follows:

- Map Cells*** Individual map symbols, representing features that exist on the ground, and other map information symbols.

- Map Areas*** Filling of an area, defined by the user, with an array of symbols representing the feature that exist on the ground.

- Map Linear*** These routines place symbols along user-defined linear elements, synonymous with MicroStation LINE elements.

- Map Curves*** These routines place symbols along user-defined curve elements, synonymous with MicroStation CURVE elements.



III.1.a Map Cells

In the uCheetah Dialog Box, select 'Drawing->Map Cells'.

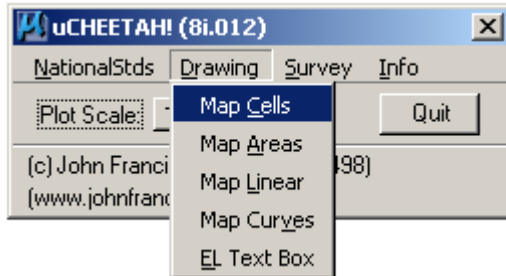


Fig. 2: Map Cells Selection

The Map Cells Dialog Box will be displayed, as such:

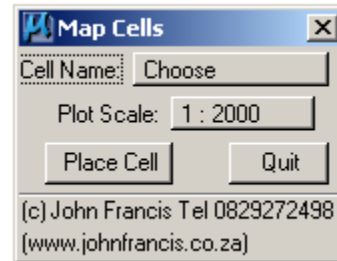


Fig. 3: MapCells Dialog Box

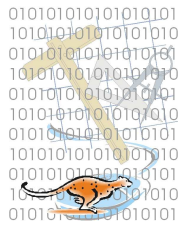
Click on 'Choose', in the MapCells dialog box to select which cell is to be placed. The available options are:

- DipTank
- Dipping Tank*
- Grave
- Hut
- Tower
- Major Line Tower Position*
- Manhole
- Pole
- General Power Pole*
- Reservoir
- North
- North Arrow*
- TelPole
- Telephone Pole*
- Tree
- Trig
- Trig Beacon*
- Well
- Windmill
- Water Main
- Eskom Logo

Select the scale that the drawing will be plotted at.

Select 'Place Cell'.

Place the cell in the drawing, using a Data point.



III.1.b Map Areas

In the uCheetah Dialog Box, select 'Drawing->Map Areas'.

The Map Areas Dialog Box will be displayed, as such:

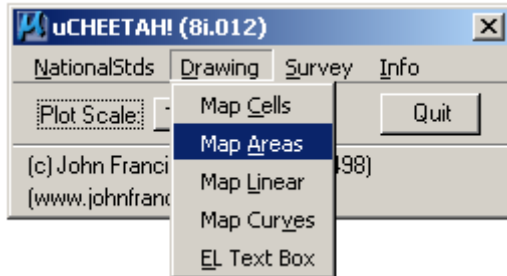


Fig. 4: Map Areas Selection

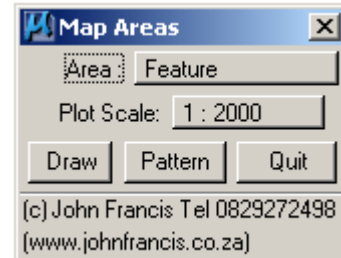


Fig. 5: Map Areas Dialog Box

Click on 'Feature', in the Map Areas dialog box to select which Area Symbol is to be used. The available options are:

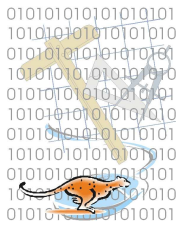
- Lands
 - Cultivated Lands*
- IrLands
 - Irrigated Lands*
- Trees
 - ConifTr
 - Coniferous Trees*
- Marsh
- Rocky
 - Rocky Outcrop*
- Orchard
 - Cultivated Orchard*
- IrrOrch
 - Irrigated Orchard*
- Plantn
 - Plantation*
- Bush

Select the scale that the drawing will be plotted.

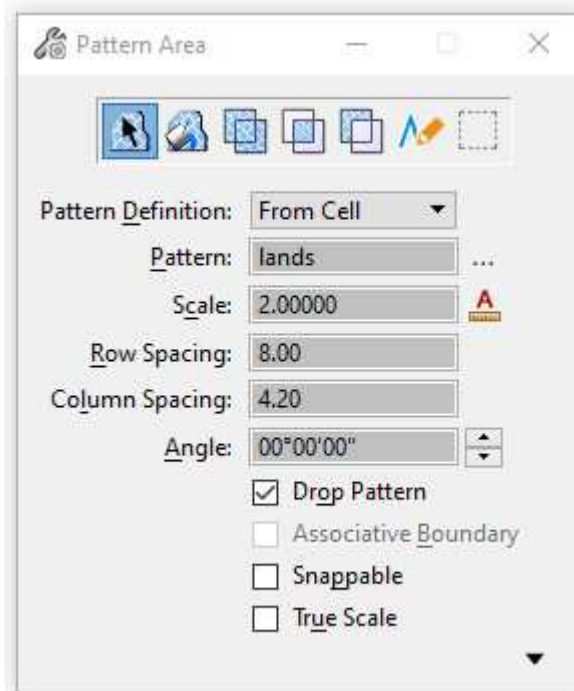
Select 'Draw', then define the area, using Data points as if you were drawing a fence.

Once the 'shape' is closed, click on the 'Pattern' button to do the actual patterning inside the area. The area will be filled with the Feature pattern as selected.

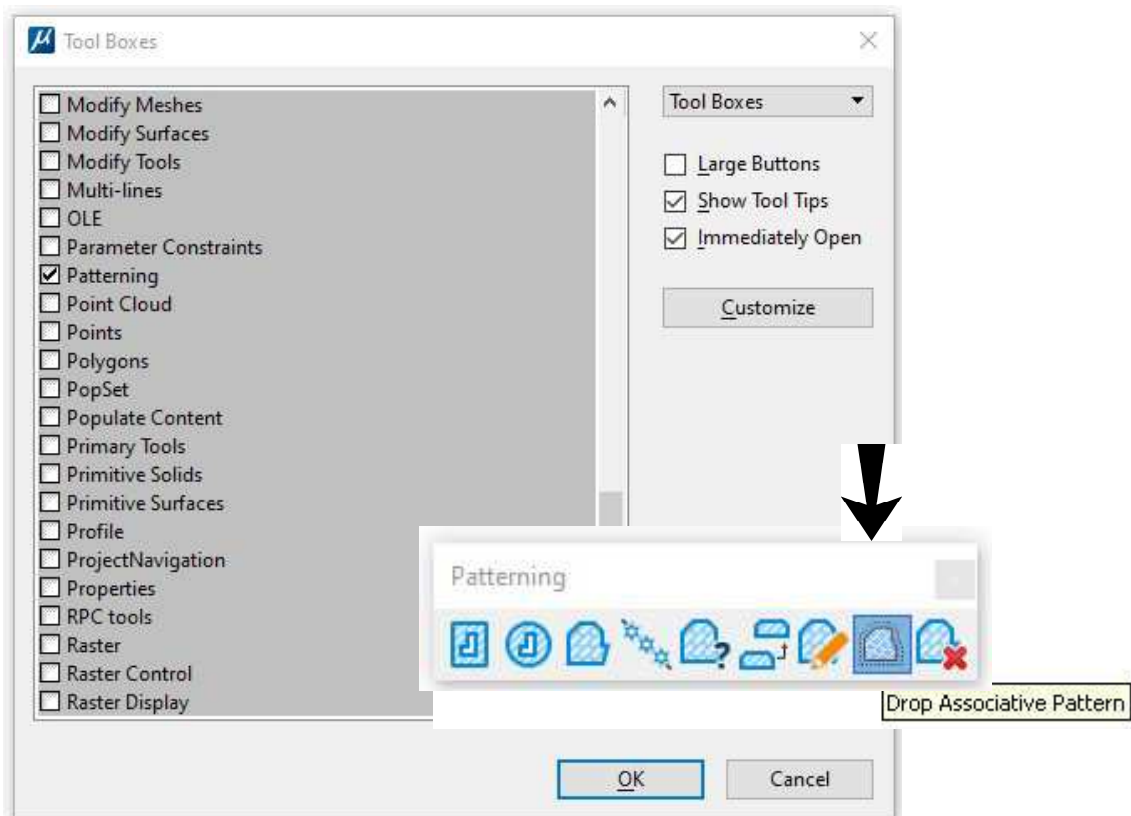
Hint! Depending on your MicroStation settings, the patterns can behave in various ways. If the pattern mode is 'Associative' then a border will be left around the pattern area, as a 'shape'. If associative mode is off, there will be no border. To toggle the mode on or off, invoke the standard area-pattern dialog box and select or de-select the 'Associative Pattern' toggle, prior to

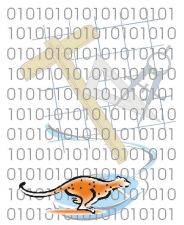


drawing your own area patterns. Or select the “Drop Pattern” toggle button, then patterns will be drawn without a border.



To remove a border around your pattern, you will need to ‘Drop’ the pattern association. Firstly, open the ‘Patterning’ toolbox from ‘Files/Settings/Toolboxes/Patterning’, then select the ‘Drop Associative Pattern’ icon, and select the pattern in the view. The outside shape element can now be deleted. The pattern elements remain a graphic group, and can be manipulated as a whole if the Graphic-Group lock is on.





III.1.c Map Linear

In the uCheetah Dialog Box, select 'Drawing->Map Linear'.

The Map Linear Dialog Box will be displayed, as such:

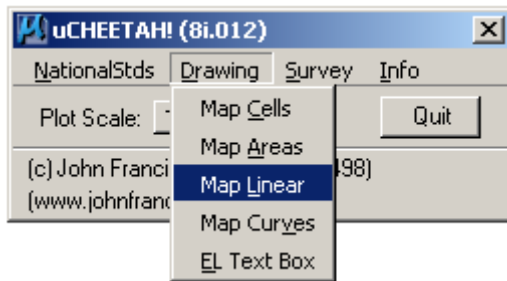


Fig. 6: Map Linear Selection

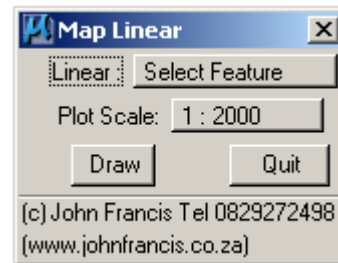


Fig. 7: Map Linear Dialog Box

Click on 'Feature', in the Map Linear dialog box to select which Linear Symbol is to be used. The available options are:

| | |
|--------------------------------------|---|
| Tel Line <i>Telephone Line</i> | Farm Bdy <i>Farm Boundary</i> |
| Tel Cable <i>Telephone Cable</i> | SubDv Bdy <i>Sub-Divisional Boundary</i> |
| Pipeline | Wall |
| UG Cable <i>Underground Cable</i> | Powline <i>General Power-line</i> |
| Camp Fence | D/C Pline <i>Double Circuit Power-Line</i> |
| Sec Fence <i>Security Fence</i> | |

Select the scale that the drawing will be plotted .

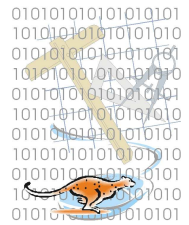
Select 'Draw'.

Place a series of Data points as if you were drawing a linestring.

Once the 'Reset' button is pressed, the line will be patterned with the Feature as selected.

The last two Data Points determine the orientation of the symbols on the placed linestring. If the last Data Point is to the right of the previous one, then the symbol orientation will be to the top of the screen. If the last Data Point is to the left of the previous one, then the symbol orientation will be to the bottom of the screen.

Hint – If you wish the symbols in the patterned area to be 'snappable', then prior to using this routine, open the 'Patterns' tool menu, and select 'Snappable Pattern' in the pattern settings dialog box.



III.1.d Map Curves

In the uCheetah Dialog Box, select 'Drawing->Map Curves'.

The Map Curves Dialog Box will be displayed, as such:

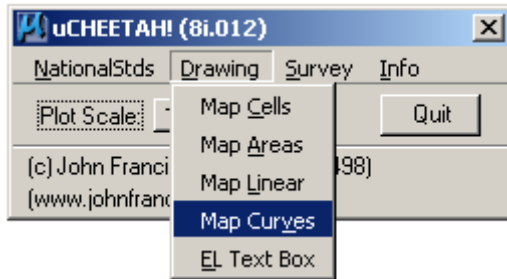


Fig.8: Map Curves Selection

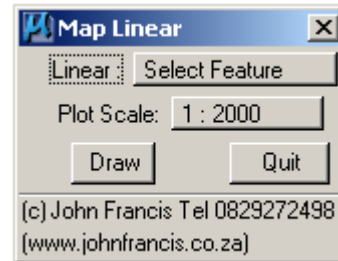


Fig. 9: Map Curves Dialog Box

Click on 'Feature', to select which Curve Symbol is to be used. The available options are:

- Track
- Road
- Donga
- Embank
 - Embankment*
- Edge Bush
 - Edge of Bush*
- Line Trees
 - Line of Trees*
- Line Conif
 - Line of Coniferous Trees*
- Foot Path
- Rail Line
 - Railway Line*
- Terrace

Select the scale that the drawing will be plotted.

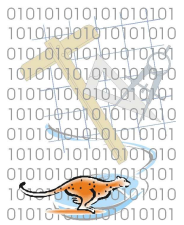
Select 'Draw'.

Place a series of Data points as if you were drawing a curvestring.

Once the 'Reset' button is pressed, the curve will be patterned with the Feature as selected.

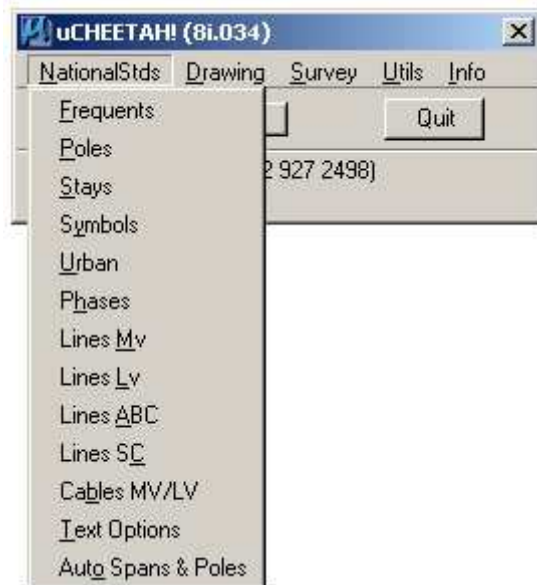
The last two Data Points determine the orientation of the symbols on the placed curvestring. If the last Data Point is to the right of the previous one, then the symbol orientation will be to the top of the screen. If the last Data Point is to the left of the previous one, then the symbol orientation will be to the bottom of the screen.

Hint – If you wish the symbols in the patterned area to be 'snappable', then prior to using this routine, open the 'Patterns' tool menu, and select 'Snappable Pattern' in the pattern settings dialog box.



III.2 NationalStds (National Standards)

These tools are used for drawing all MV and LV infrastructure, typically used in electrification drawings. Most of the items in the menu operate in a similar manner, with few exceptions, however, the operations are simple and self-explanatory.



Selecting 'Frequents' above will produce the dialog box on the right below.

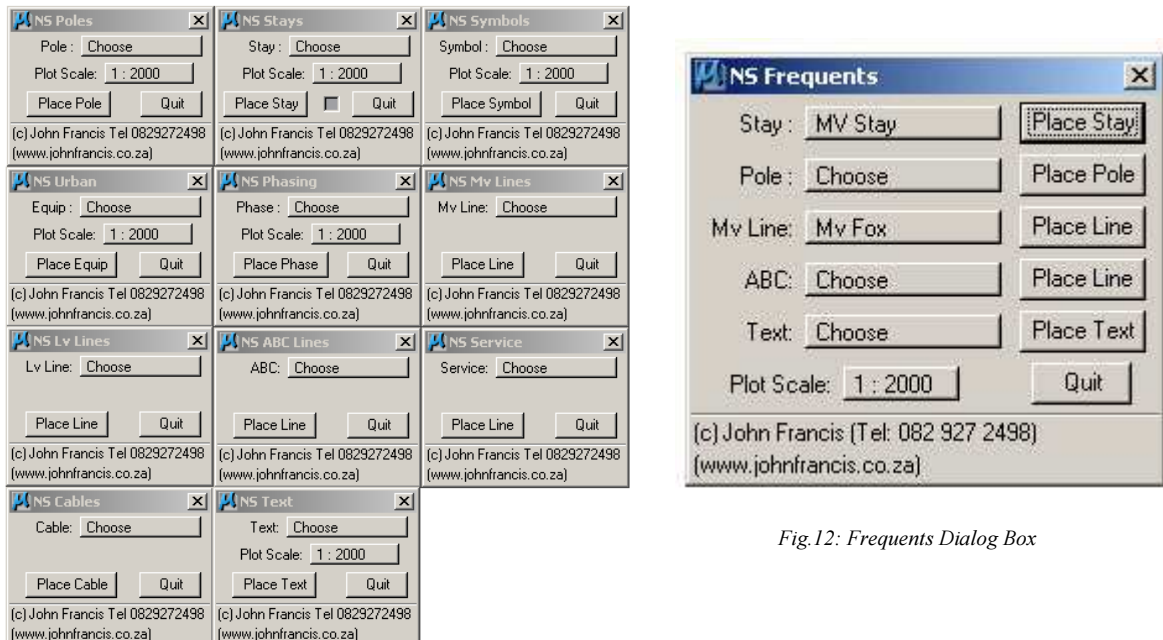
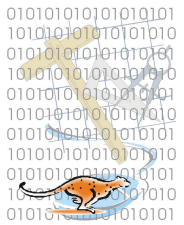


Fig.12: Frequents Dialog Box

Fig.13: NS Standards' Dialog Boxes

Each category under NationalStds has its own dialog box, but the 'Frequents' dialog box is also supplied, which incorporates the most commonly used items in the National Standards' options.



III.2.a Stays

The Stays Utility has an additional option via the Check-Box between the ‘Place Stay’ and ‘Quit’ buttons. By ‘Checking’ this box, the stay will be placed in the opposite direction to normal. i.e. Usually, the stay will be placed in the same direction as the indicator line determined by the user. With the box ‘Checked’, the stay will be rotated by 180 °.

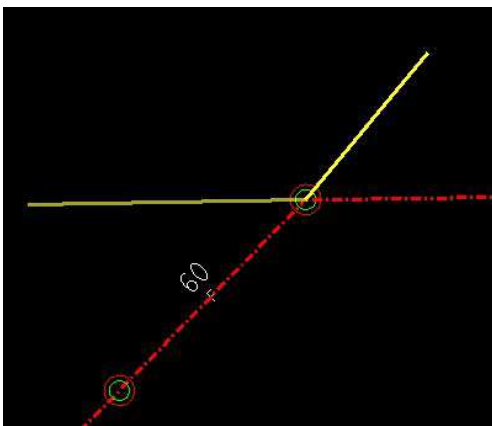


Fig.14: Stay Placement Normal

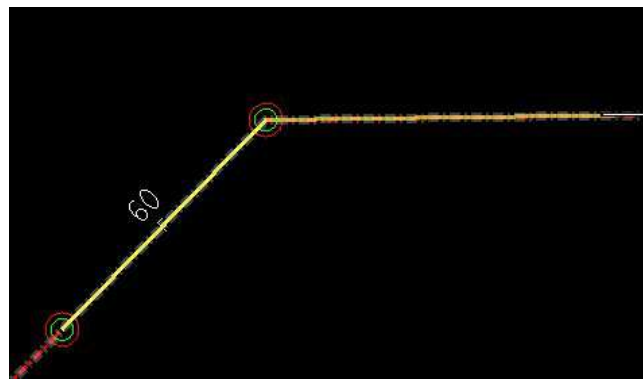


Fig.15: Stay Placement 180°

Both methods will yield the same result, but the ‘Checked’ method, will ensure that the stay is at exactly the same angle as the line, without having to estimate, as with the ‘un-Checked’ method.

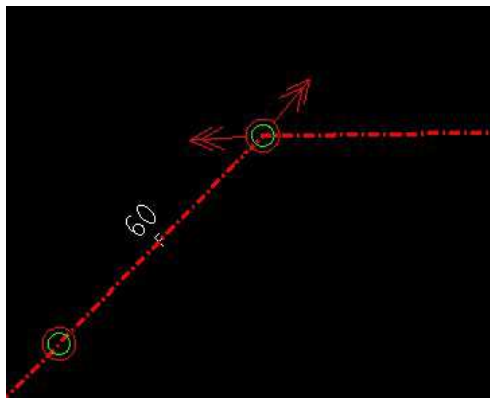
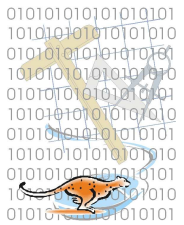


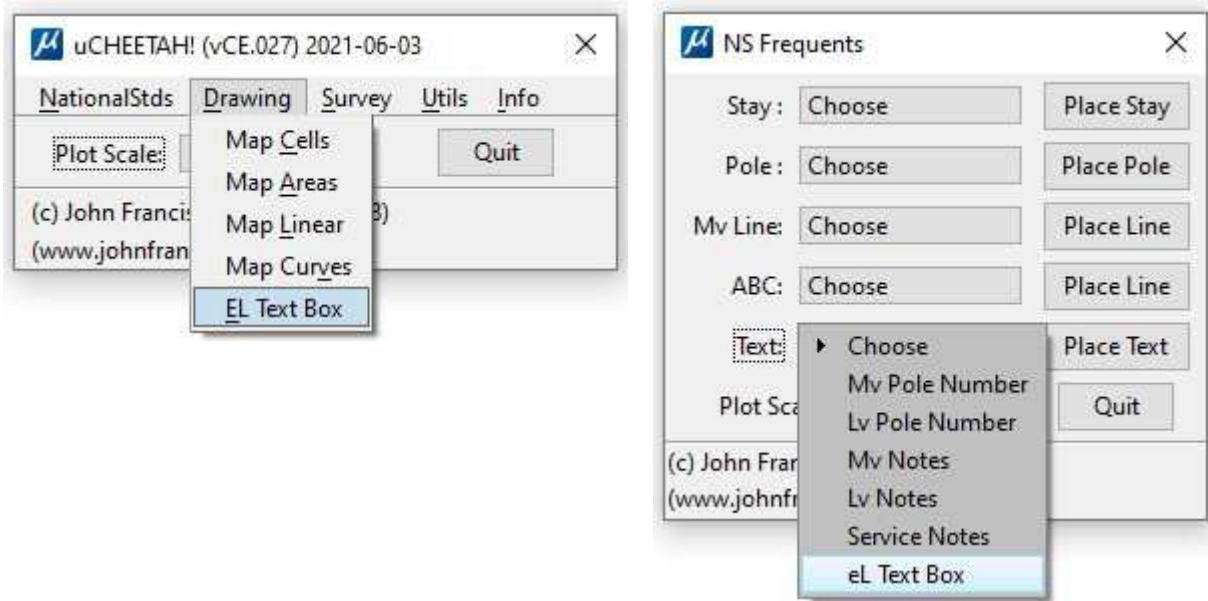
Fig.15: Stay Placement Result

For this to work when using the ‘Stay’ options in the ‘Frequents’ dialog box, then this ‘NS Stays’ box must first be opened, to set the Check-Box. The ‘NS Stays’ box can then be closed, but will need to be opened again to toggle the Check-box off when required.

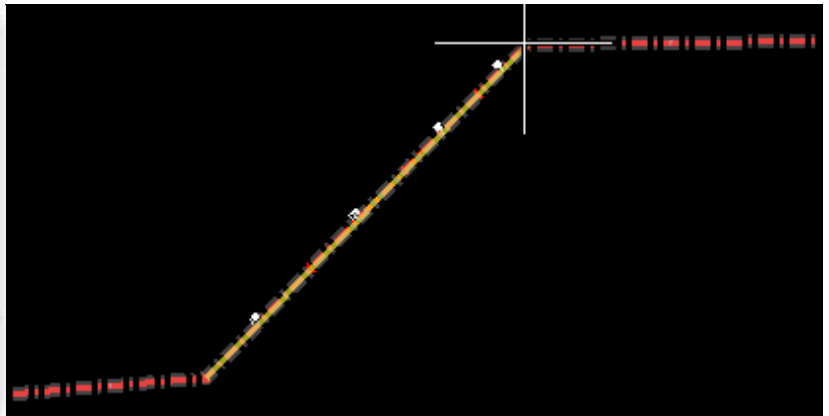


III.2.b EL Box (Equivalent Length Graphic)

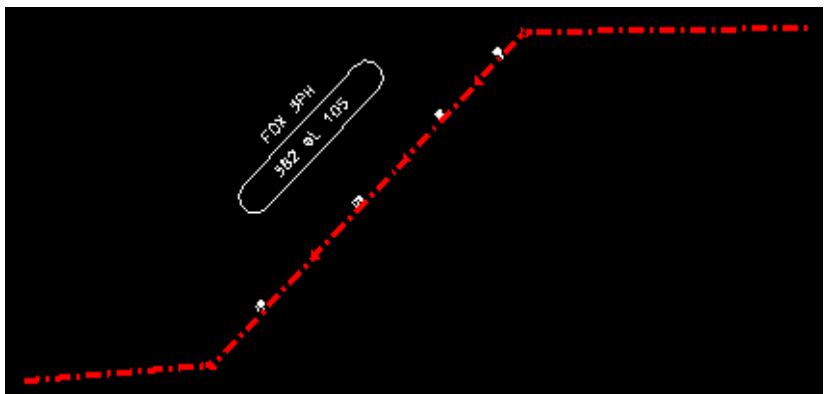
The EL Box placement utility can be found in two places:

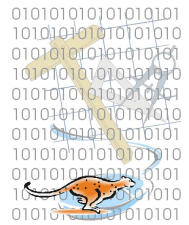


Text can entered into the box, and when 'Place eL' is selected, a direction line (as in the placement of stays) can be given, for the orientation of the graphic placement. The eL graphic will then be available on the cursor for placement in a convenient place in the drawing. *Tip: Snap on existing lines to set the eL Graphic parallel to the relevant line section.*



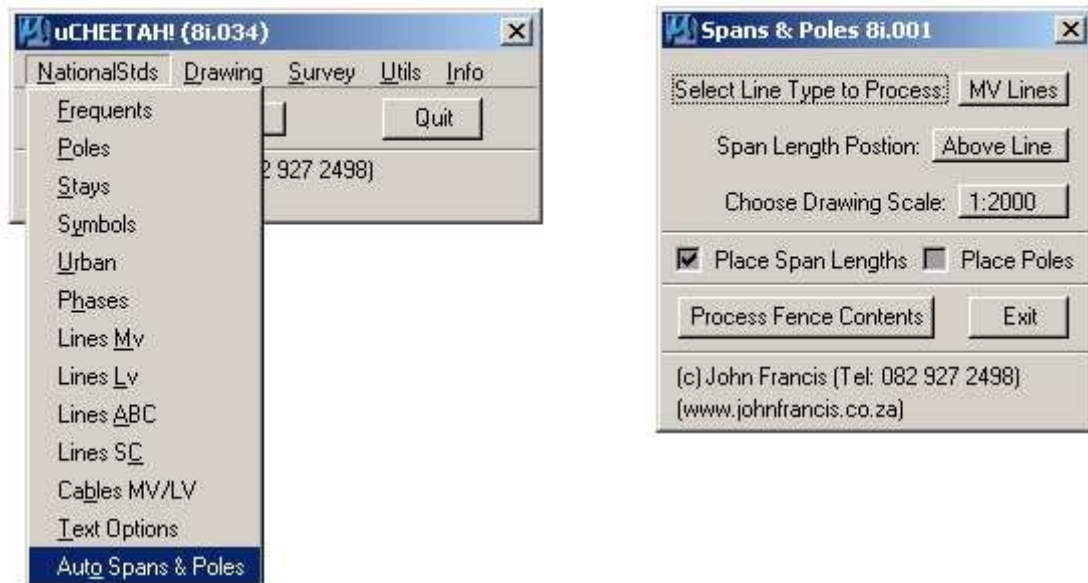
The eL Graphic is a 'Graphic Group' and can be manipulated (moved/deleted) as a unit, if the Graphic Group Lock is ON.





III.2.c Auto Span Lengths and Pole Placement

The Span Lengths Utility enables the automated placement of Span Lengths.



The choice available (MV or LV Lines), **ONLY sets the TEXT settings** specifically, i.e. Level 16 for LV and Level 17 for MV. This routine does not determine whether a line is either MV or LV, based on the line's symbology. MV Poles will be placed if "MV Lines" is selected, LV Poles if "LV Lines" is selected. Click in the Check-Box for placement of poles. All lines in the fence will be processed, so switch off the levels containing any lines which should not be processed, e.g. LV17 (eL Text Box).

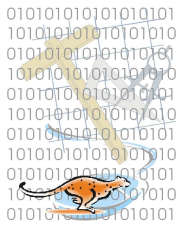
The span lengths can be placed either Above or Below the line.

NOTE! The Scale setting is not linked to the general "uCheetah" Scale setting, as this is a separate routine – so be careful.

Usage: Place a Fence (any shape) around the lines for which span lengths need to be calculated. Obviously, MV and LV must be processed separately, so turn on/off the relevant levels as you require. For example, make the level which has the MV lines the Active Level, and switch off all the other levels (except LV17, which is for MV Notes/Text). Place a fence around the lines to be processed, and select "Process Span Lengths". Do the same for LV. Fence 'Clip' mode does not work with this routine.

Some fiddling, ingenuity and common sense will be required when processing MV/LV lines on shared structures – where they are drawn parallel, in order for the span lengths to be displayed in the correct position and with the correct value.

Poles are placed at the end of each line segment, so some cleaning up may be required. Obviously, MV/LV combination poles will need to be placed manually, and clearing away of the auto-placed poles on the MV-over-LV sections will need to be carried out first.



III.3 SURVEY

These tools are routines which enhance the functionality of MicroStation. They assist the user by automating tasks which would otherwise take a long time to complete. Once any of the options on the ‘Survey’ menu are selected, the main ‘uCheetah’ menu may be closed if desired. Included here are the following:

CadCodes

Create and Place Rural Structure Codes

ColmPlot

Imports Geographical Co-ordinates to DGN

Import Co-ordinates

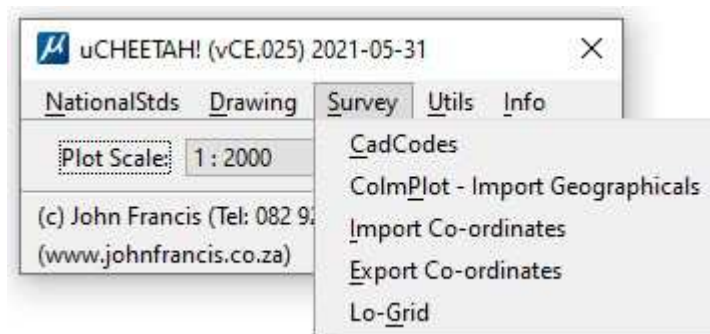
Import YXZ Co-ordinates From ASCII or Text File

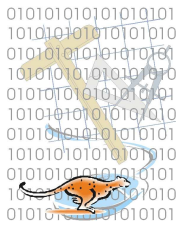
Export Co-ordinates

Extracts Text CO-ords to ASCII File (Text, Y, X, Ht)

Lo-Grid

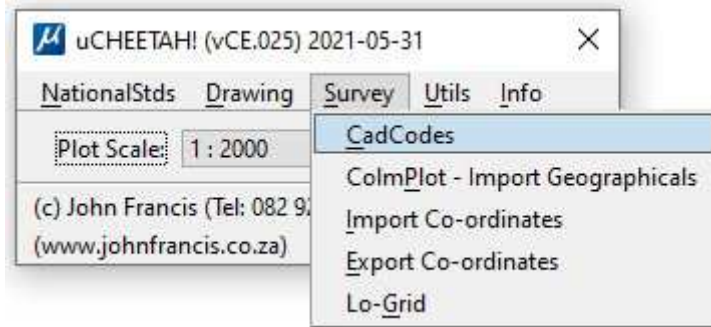
Create YX Grid Lines



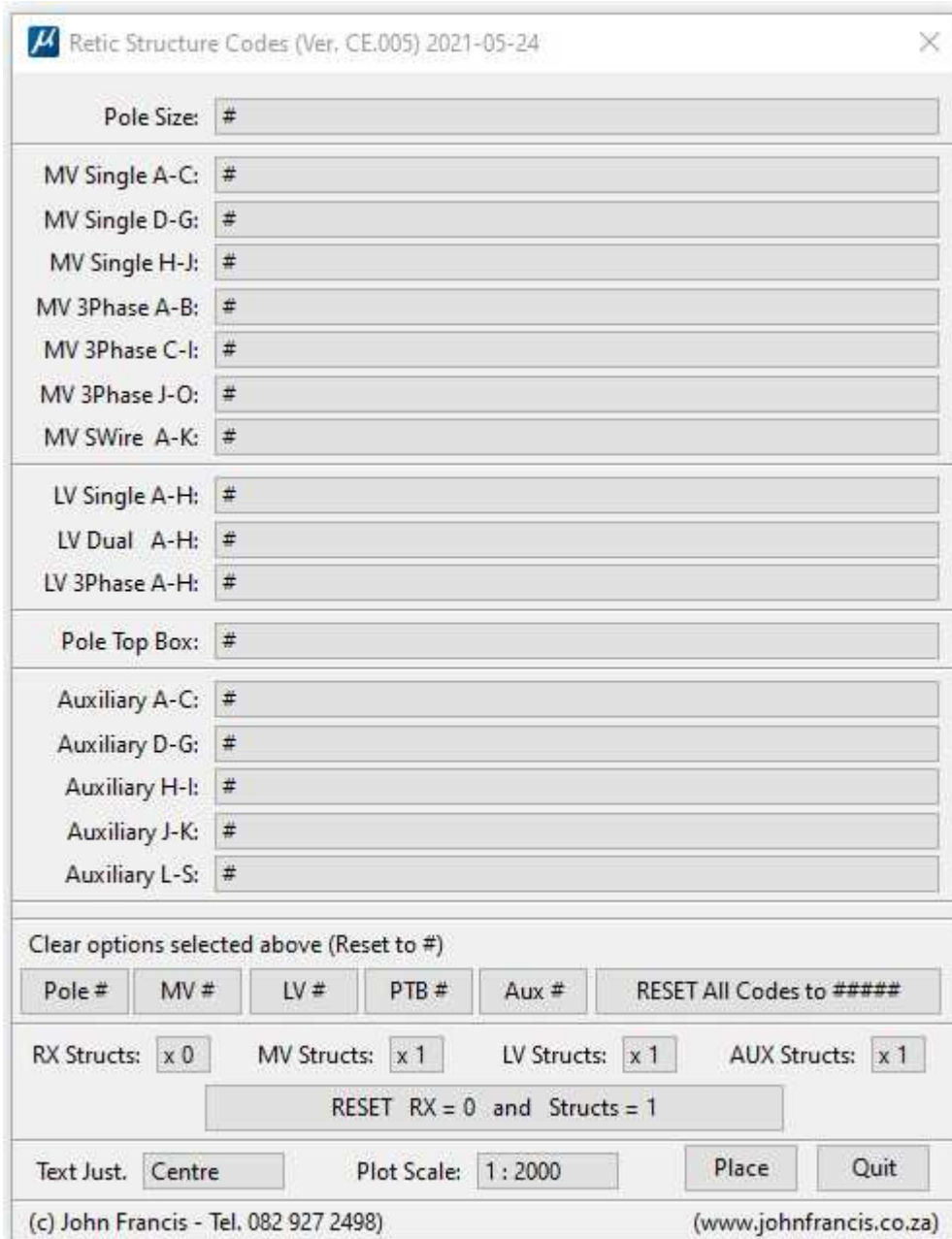


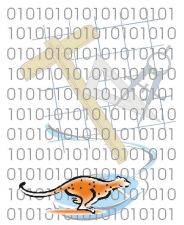
III.3.a CadCodes

In the uCheetah Dialog Box, select 'Survey->CadCodes'.



A new Dialog Box will appear as follows:



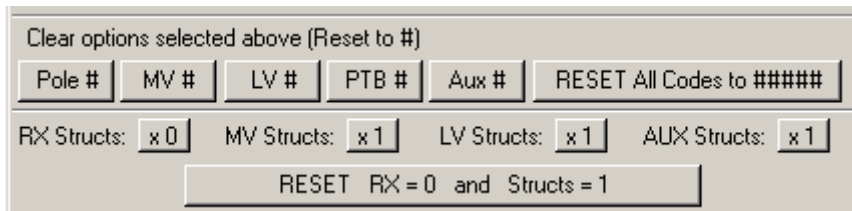


This utility assists the user to ‘build’ the 5-digit code used to describe a Rural Line Structure.

- The code consists of five characters:
- 1 Pole Size
 - 2 MV Equipment
 - 3 LV Equipment
 - 4 Pole Top Box
 - 5 Auxiliary Equipment

The dialog box above is divided into five sections, corresponding to the five characters. Choose one option in each section, to build the code.

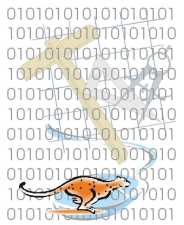
Choose a multiplier for the structures if desired.
Select the Text Justification desired.
Reset selections using the buttons below.



Select the scale that the drawing will be plotted at.
Note: This scale option is not related to the uCheetah Scale setting.

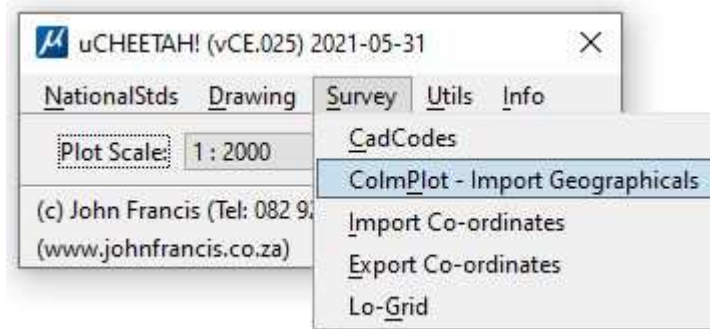
Select ‘Place’.

Position the CODE where desired in the drawing, using a Data Point.

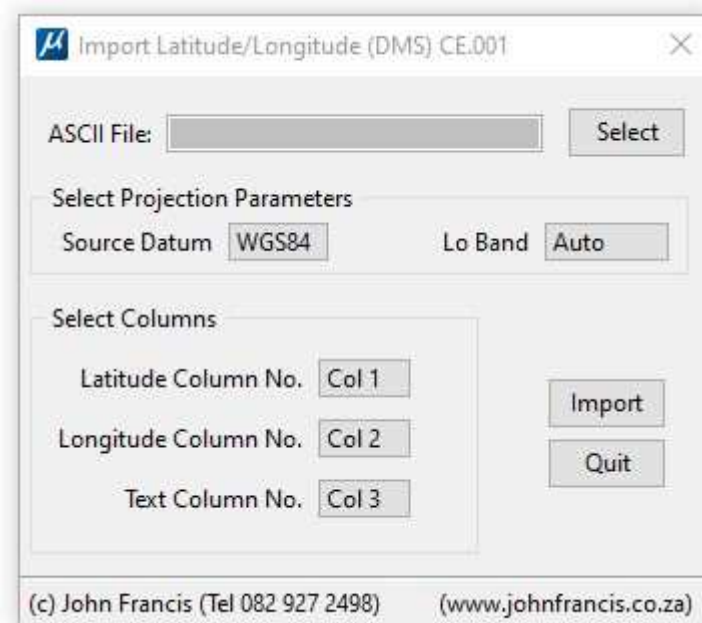


III.3.b ColmPlot (Column Plot)

In the uCheetah Dialog Box, select 'Survey->ColmPlot'.



A new Dialog Box will appear as follows:



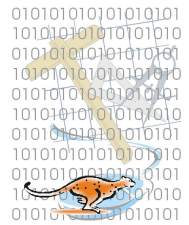
This utility will import ASCII Geographical co-ordinates. The format of the ASCII file must be as per the example file 'colmplot2.asc'. Basically: Lat,Long,Descr,, (Two commas at the end of each line, conforms to an Eskom Standard Format).

Set the desired Text Size, Level, Colour, etc.

Select the Datum of the ASCII data. (The same Datum will be used to create the DGN file).

Select which columns the Latitude, Longitude and Text items are in.

Select 'Import'.

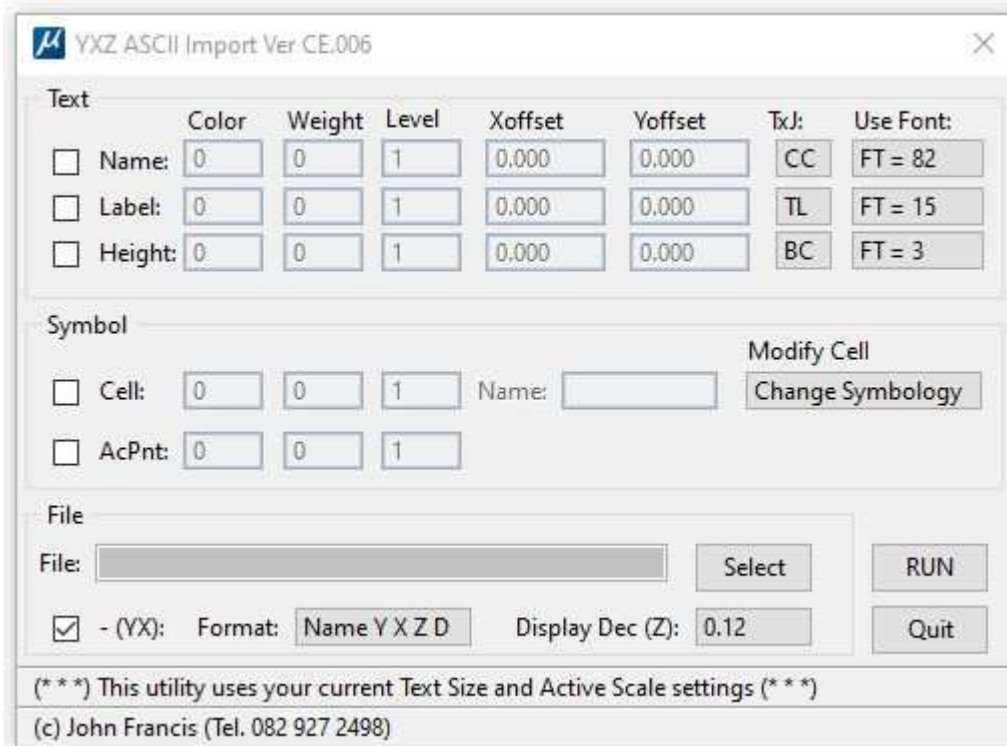


III.3.d Import Co-ordinates

In the uCheetah Dialog Box, select 'Survey->Import Co-ordinates'.



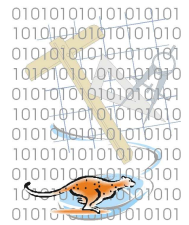
A new Dialog Box will appear as follows:



'Import Co-ordinates' will import points from an ASCII file, into the design file.

The user has the option of placing a cell at the co-ordinates listed in the ASCII file, or the *text (usually the point's name)* associated with the co-ordinates. Alternatively, both a cell, *and* the text may be placed.

'ASCII' is the anagram for 'American Standard Code for Information Interchange'. It is basically a plain text file (not binary), that can be viewed and edited in any plain text editor, such as notepad. If any 'hieroglyphics' are visible when viewing an ASCII file, then the file is not ASCII.



Requirements:

- 1) ASCII file in proper format.
- 2) The cell library in which the desired CELL resides, must be attached.

Text

This program uses the current text settings, i.e. size, justification and font.

If the text is to be plotted at any specific size for a desired scale output, then the text size must be calculated and set prior to clicking 'Run'.

Check the box on the left in the Text area, if you wish the Point Name to be plotted. Key in the desired Colour, Weight and Level that must be used for the text.

Offset: If the text/PtName is to be plotted offset from the actual co-ordinate, usually if a cell was placed on the actual co-ordinate, then use these offset values to offset the text. The 'X' & 'Y' offsets are not based on the Lo co-ordinate, system, but on the Screen Co-ordinate system. I.e. X is negative to the left, and positive to the right. Y is negative towards the bottom of the screen, and positive to the top. The values keyed-in must be in metres.

Symbol (Cell)

Check the box on the left in the Symbol area, if you wish a CELL to be plotted. Key in the desired Colour, Weight and Level that the cell must be placed on. Key in the name of the cell in the 'Name' field. The correct cell library must be attached.

This program uses the current active scale when placing the cell. If the cell is to be plotted at any specific size for a desired scale output, then the active scale, in relation to the cell size, the active scale must be calculated and set using 'AS= ', prior to clicking 'Run'.

File

Key-in the ASCII file name which will be used, or select it via the 'Select' option. See the rules regarding ASCII file formats above.

ASCII File Format:

PtName Y X Z D

or

Y X Z PtName

E.g.:

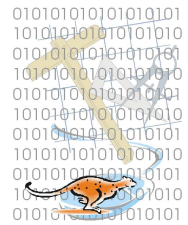
S001 -78234.42 3218336.65 254.32 rock

S002 -78106.22 3218332.23 252.34 mh

or

-78234.42 3218336.65 254.32 rock

-78106.22 3218332.23 252.34 mh



ASCII File rules:

There must be at least one space between the fields (columns).

There can be many spaces, but there must be at least one.

The data does not have to be in straight columns, just as long as there is at least one space between the fields.

The spaces must not be TABS.

There must be a 'Z' value (4th field/column), even if it is 0.

There must not be any spaces in the PtName field. If your ASCII file has names with spaces in, they must be replaced with underscores(_) or hyphens (-).

The decimal character must be a point, not a comma.

The Fields/Columns must not be separated by commas, only spaces.

Input Data Format

-(YX) Co-Ords Check this box if the signs of the Y,X co-ordinates in the ASCII file must be changed before plotting. I.e. The Eskom standard specifies that X co-ords must display as negative in MicroStation. If the X Co-ord value in the ASCII file is positive, then this box should be checked.

ASCII Format

Name Y X Z is used if PtName is the 1st Field/Column in the ASCII file.

See example file 'NYXZ-EG.TXT'

Y X Z Name is used if PtName is the 4th Field/Column in the ASCII file.

See example file 'YXZN-EG.TXT'

Once all selections have been made, select 'Run', and the program will run, and indicate in the MicroStation Command Window, how many points were plotted.

Example

YXZ ASCII Import Ver CE.006

Text

| | Color | Weight | Level | Xoffset | Yoffset | TxJ: | Use Font: |
|---|-------|--------|-------|---------|---------|------|-----------|
| <input checked="" type="checkbox"/> Name: | 0 | 0 | 1 | 350.000 | 21.600 | CC | FT = 82 |
| <input type="checkbox"/> Label: | 0 | 0 | 1 | 0.000 | 0.000 | TL | FT = 15 |
| <input type="checkbox"/> Height: | 0 | 0 | 1 | 0.000 | 0.000 | BC | FT = 3 |

Symbol

Cell: 0 0 1 Name:

AcPnt: 0 0 1

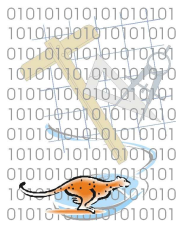
File

File:

- (YX): Format: Display Dec (Z):

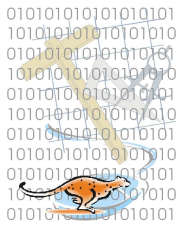
(**) This utility uses your current Text Size and Active Scale settings (**)

(c) John Francis (Tel. 082 927 2498)



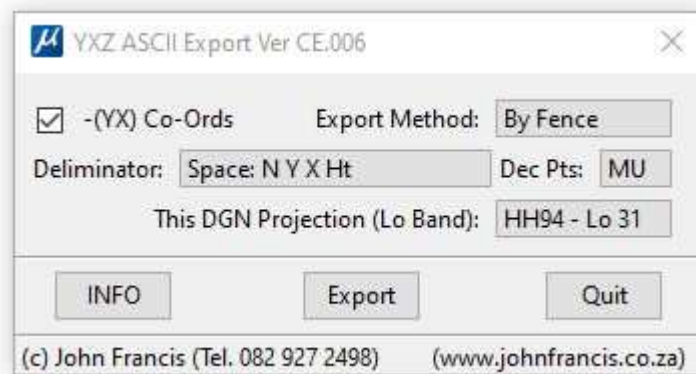
Attach Cell Library 'UCHEETAH-CE'
Set Text Size to 130 (TX=130)
Set Active Scale to 50 (AS=50)
Load 'Imp-XYZ' mdl application.
Check boxes to plot both 'Text' and 'Symbol'
Use X-Offset of 350, and Y-Offset of 21.6
Use Cell named 'TRIG'
Use example ASCII File 'NYXZ-EG.TXT'
Select ASCII Format 'Name Y X Z'
Select 'Run' to import the ASCII File.

Note the Text offset from the Trig Cell.



III.3.f Export Text Items to ASCII File

In the uCheetah Dialog Box, select ‘Survey->Exp-WGS84(DMS)’.



With this routine, it is possible to export text items to an ASCII file in various formats.

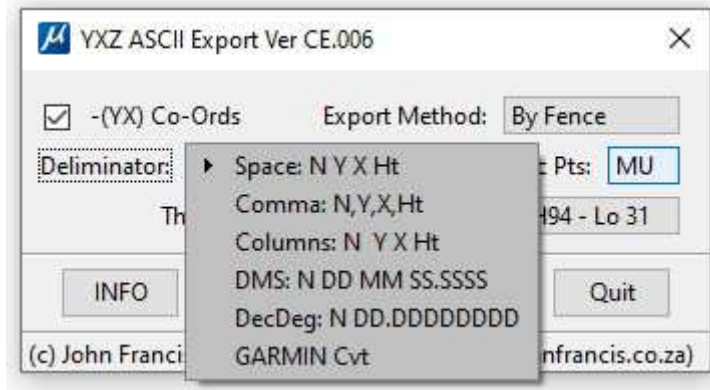
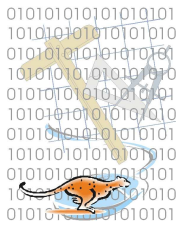


Fig. 23: Exp-NYXZ Field Delimiter Options

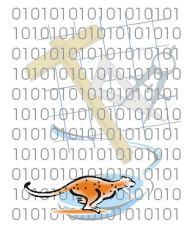
By ‘Checking’ the ‘-[YX] Co-Ords’ box, the output co-ordinates will have their signs reversed. Output fields can be separated by a comma, single space or in column format.

Text items to be exported can be specified by means of a fence, or all the text items in the Dgn File.



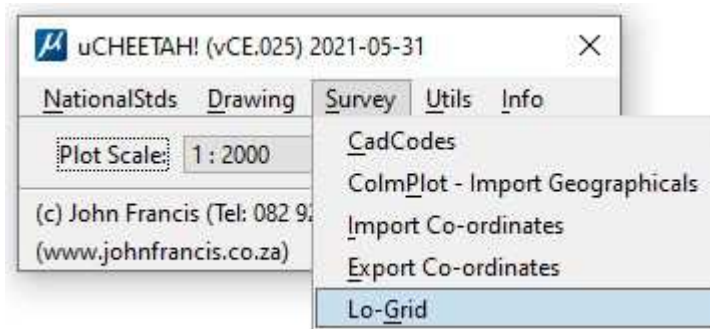
These formats are self-explanatory, except for the GARMIN Cvt format. This format is for importing co-ordinates into the Garmin MapSource software, as waypoints. The MapSource Software can then be used to transfer the “Waypoints” to a Garmin hand-held GPS receiver. The MapSource software is supplied with any Garmin GPS device, when purchasing such a device.

The file exported via this routine cannot be imported directly to the MapSource software, but must first be converted to a Garmin POI data format.

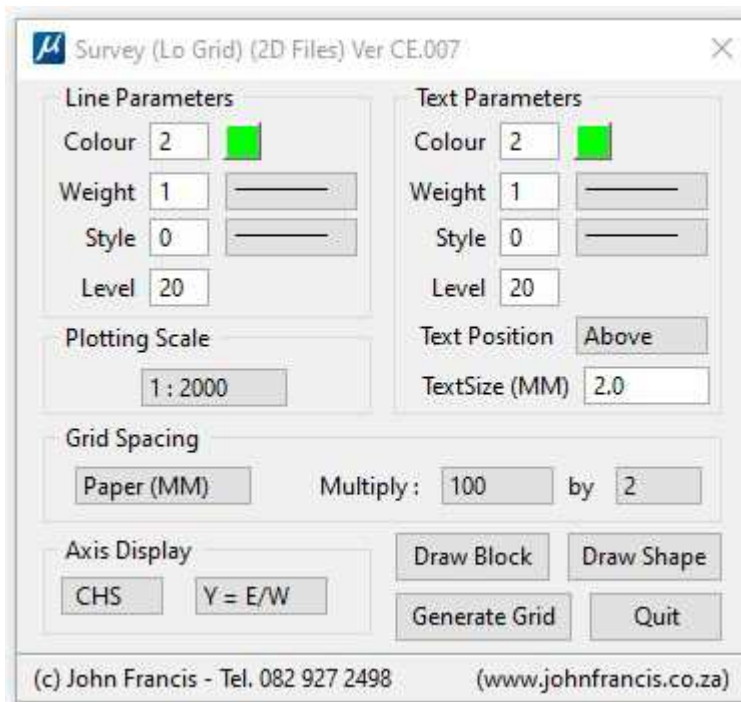


III.3.h Lo-Grid

In the uCheetah Dialog Box, select 'Survey->Lo-Grid'.



A new Dialog Box will appear as follows:

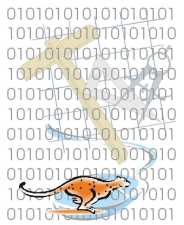


For 3D Files, a fence cannot be used. Use “Draw Block” or “Draw Shape”, then select “Generate Grid”.

For 2D files, either a Fence (Block or Shape), or the “Draw Block/Shape” may be used.

The default settings are typical for 1:2000 plans.

Place a fence (2D Files) around the area where the grid is required. The fence can be irregular or a standard rectangular fence. Alternatively, use “Draw Block/Shape”.



Line Parameters

Select desired element attributes for the grid lines.

Text Parameters

Select desired element attributes for the Y&X Grid Values

TextSize will be the size of the text when plotted on paper at the selected scale.

Plotting Scale

Choose the desired scale that the final paper plot will be done.

Note: This scale option is not related to the uCheetah Scale setting.

Grid Spacing

The grid spacing can be specified in two ways, either in units on the ground, or units(mm) on the plotted paper, which is the most common.

The ground units choice is handy if somebody wishes to count all the houses in, for example, 1Km block areas.

The 'Multiply' option is used to specify how many grid-spacing units. The default is 200, which is 200mm on the final paper plot.

Any combination of 'Multiply' figures can be used to get the required units. For example, the instead of '100 by 2', '50 by 4' could be used to get the same result.

Axis Display

Choose either 'CHS' or 'AS-IS'.

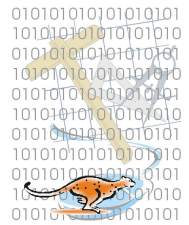
CHS will cause the Grid Values to be opposite that of the actual design file values. i.e. '-X' co-ords will be positive '+X' on the Grid.

AS-IS will cause the Grid Values to be the same as the actual design file values.

$Y=E/W$ or $Y=N/S$

Always use $Y=E/W$, as this is the standard for South Africa.

$Y=N/S$ is provided as an option, should there ever be reason to display grids on some user-defined local system.

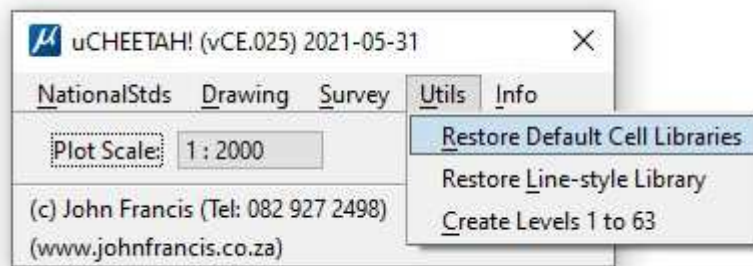


III.4 UTILITIES

People make mistakes, so these tools assist in rectifying some issues.

III.4.a Restore Default Cell Libraries

In the uCheetah Dialog Box, select 'Utils-> Restore Default Cell Libraries'.



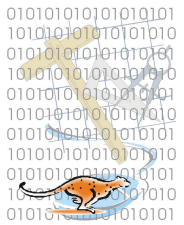
This will replace the default cell libraries required for uCheetah to function correctly. Use this when the required cells do not appear in your drawing when choosing to place them via the uCheetah sub-menus.

III.4.a Restore Eskom Line-style Libraries

In the uCheetah Dialog Box, select 'Utils-> Restore Default Line-style Libraries'.

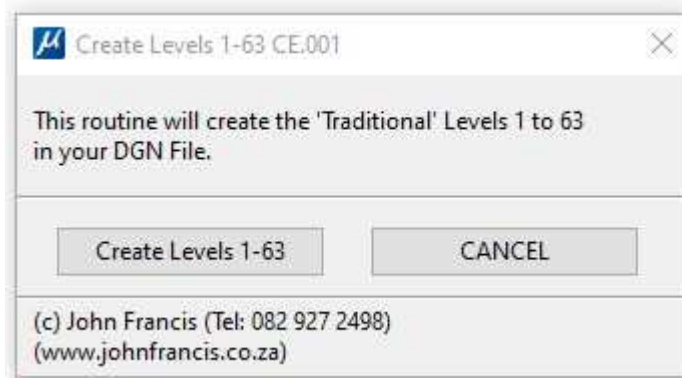
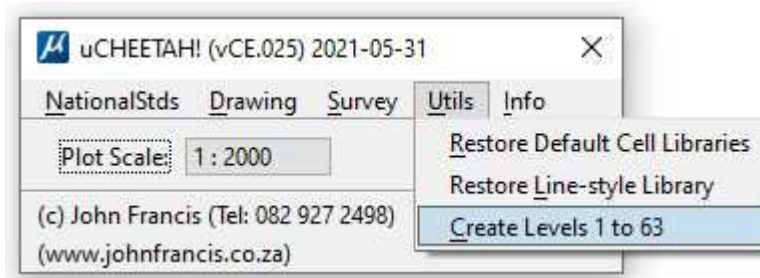


This will replace the default cell libraries required for uCheetah to function correctly. Use this when the required cells do not appear in your drawing when choosing to place them via the uCheetah sub-menus.



III.4.c Create Levels 1 to 63

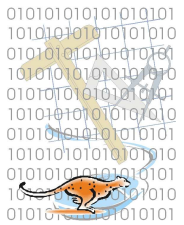
In the uCheetah Dialog Box, select 'Utils-> Create Levels 1 to 63'.



uCheetah requires that Levels 1-63 exist in the DGN file, as per earlier versions of MicroStation, where levels 1-63 existed as a default.

This routine will create levels Numbered 1 to 63.

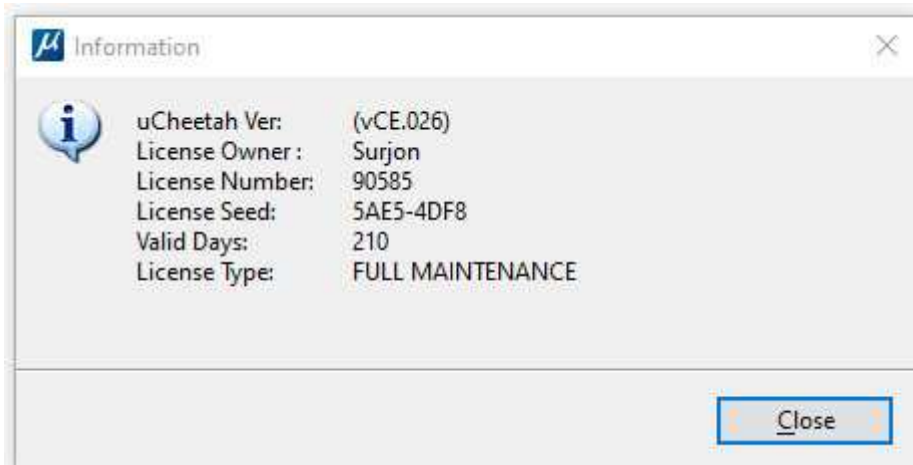
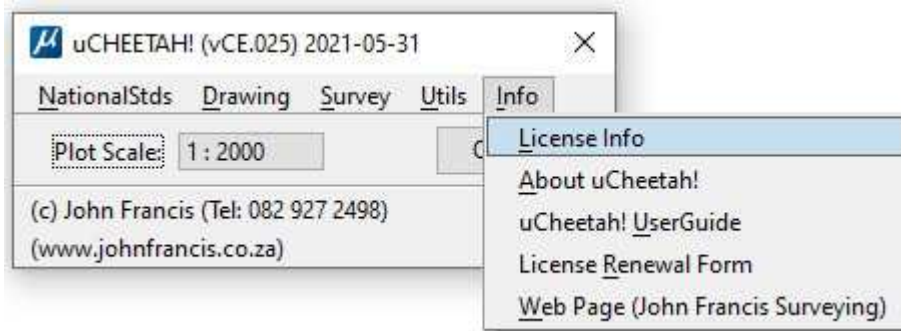
Basically, if your DGN file is missing Levels Numbered 1-63, then you are not using the correct Eskom Standard Seed file, so you should have someone assist you in correcting your system setup.



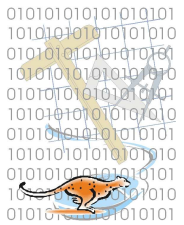
III.5 INFO

III.5.a **License Info**

In the uCheetah Dialog Box, select 'Info-> License Info'.

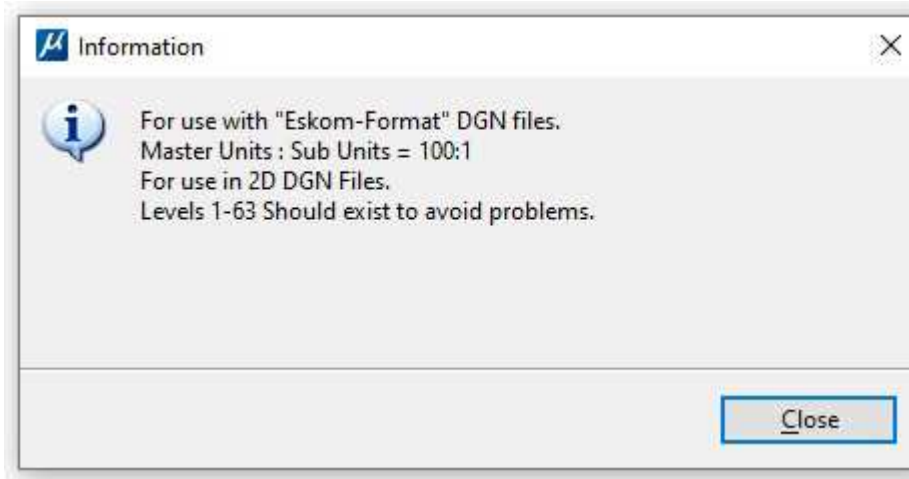
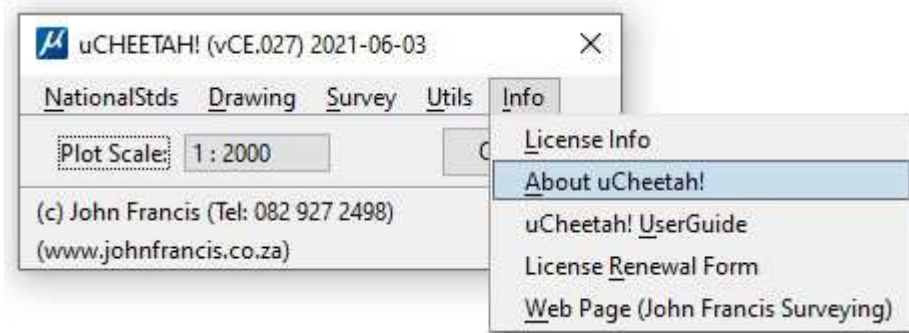


This will display information about the current license and its validity.



III.5.b About uCheetah

In the uCheetah Dialog Box, select 'Info-> About uCheetah'.



This will display some useful information to avoid problems when using uCheetah.