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MSO V3.01

Release Notes

23rd August 2023

Version Highlights

1. Added support for the new *Surpac* DSLS licensing system.

2. Administration privileges no longer needed for licensing functions.

3. Support for US Imperial measurement system has been implemented.

4. String file input fields no longer require a separate ID portion.

5. Support for processing GPS data using a Geoid has been implemented.

6. Upload can handle binary format string and DTM files.

7. Updates to the *LandXML* format for upload.

8. Improvements to the upload macro interface have been made.

9. Import/Export stations now supports later Access versions.

10. Minor compatibility issues in later versions of *Surpac* have been addressed.

11. Latest version of Forward Station application now available under the *MSO* installation folder.

New Major Version

Please note that this version V3.01 represents a major version change and you will require new license tokens. Token files will be distributed via email to your site. If you have not received the new tokens please contact support@minesolutions.com

Recommendations

The following versions of *Surpac* have been tested with *MSO* and appear to be stable;

- Surpac V6.9+
- Surpac 2019 (V7.0+)
- Surpac 2020 (V7.2+)
- Surpac 2020 (V7.3+)
- Surpac 2021 (V7.4+)
- Surpac 2022 (V7.5+)
- Surpac 2023 (V7.6+)

Version Details

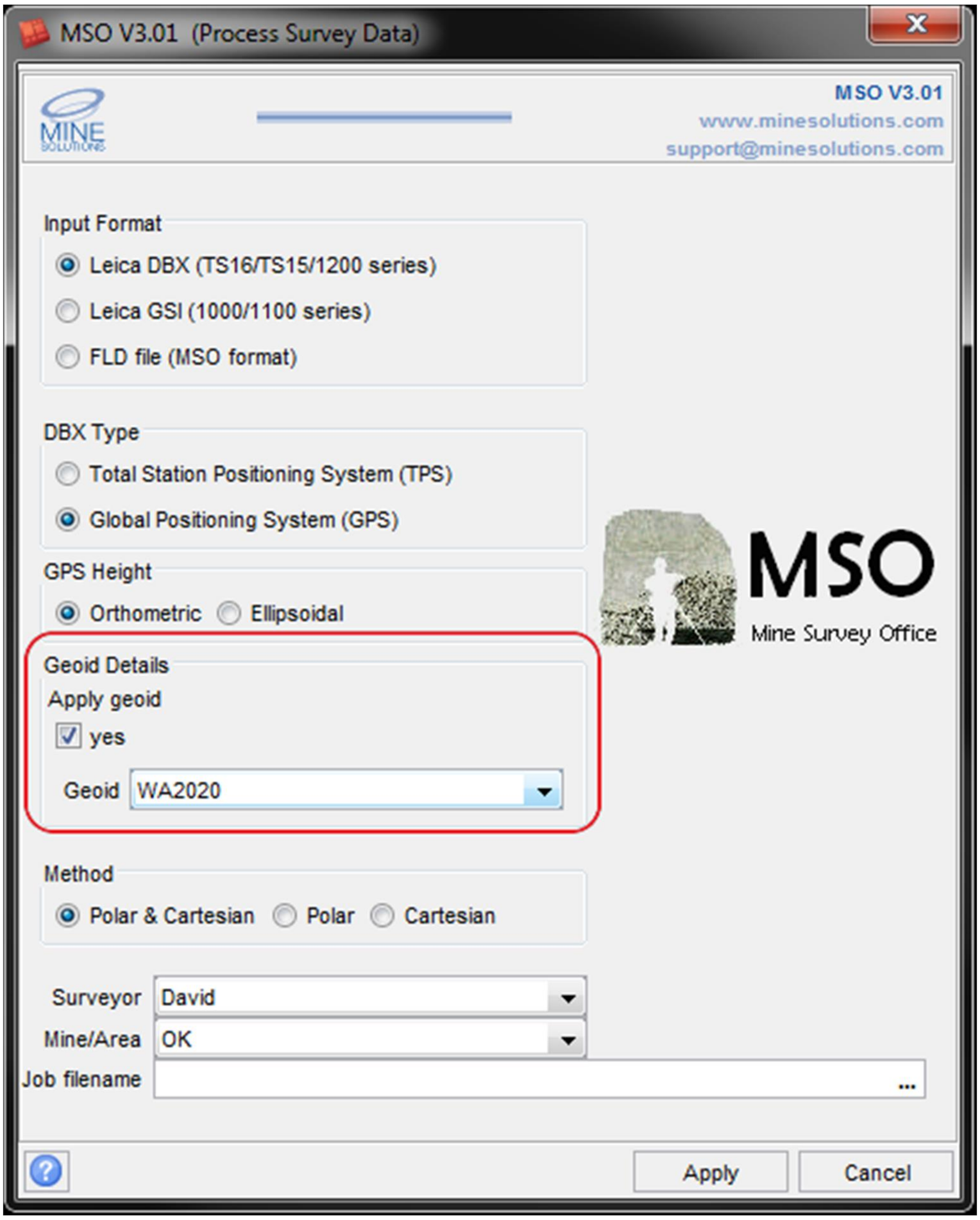
Support for the new *Dessault Systemes* Licensing Systems (DSLS) has been implemented. This will operated in the same way as the sentinel system where an 8 character hexadecimal code is used to identify your *Surpac* license. The *FlexiSurv* license key is then associated with this ID.

Computer administrator privileges are no longer required to register your license tokens eliminating the need for IT to be involved.

MSO now supports both the metric and imperial measurement systems. A new set of format files has been created to process the jobs. The determination of the measurement used is as set in your *Surpac* default preferences.

The old *Surpac* file convention of location name and id have been removed from *MSO* forms. Now any valid string filename can be used.

You can now process GPS data using a *Leica* format Geoid file (.gem). In order to enable *MSO* to identify Geoid files copy the file(s) into the either the C:\MineSolutions\MSO\Custom or the MSO_SHARE: directory if you have one. Once done when processing GPS Data you can then select the required Geoid to apply to your job.



MSO V3.01 (Process Survey Data)

MSO V3.01
www.minesolutions.com
support@minesolutions.com

Input Format
● Leica DBX (TS16/TS15/1200 series)
○ Leica GSI (1000/1100 series)
○ FLD file (MSO format)

DBX Type
○ Total Station Positioning System (TPS)
● Global Positioning System (GPS)

GPS Height
● Orthometric ○ Ellipsoidal

Geoid Details
Apply geoid
☑ yes
Geoid: WA2020

Method
● Polar & Cartesian ○ Polar ○ Cartesian

Surveyor: David
Mine/Area: OK
Job filename:

The *MSO* upload function now supports binary format string and DTM files. Previous versions would crash if binary files were used as inputs.

Minor updates to the internal *LandXML* format used for uploading have been made.

The upload macro interface had an issue when extracting stations from the survey database. The database query constraints form would appear awaiting user intervention. This has been rectified such that user macros can now run without user interaction. The macro interface is described at the end of this document.

The utility functions to import or export stations to a csv file now support both the old .mdb *MS Access* database and the newer .accdb format.

A few minor compatibility issues in later versions of *Surpac* have been addressed.

The latest version of Forward Station is available under the C:\MineSolutions\MSO\ForwardStation directory.

Request for Enhancements

If there are any new features that you would like to see in upcoming versions of *MSO* please email support@minesolutions.com your requests or telephone David on +618 9312 6158.

MSO requires you the users input in order for it to grow and improve into the future. Your comments and suggestions are encouraged and are welcome.

Upload Macro Interface

It is possible to incorporate the MSO upload options into a custom macro to assist with site specific requirements. This requires an intermediate level of Tcl/Scl macro experience.

MSO macro variables

Note that the macro variables described below are case sensitive as are the values they can be set to.

msoAutomode

Setting this variable to a value of 1 will invoke the macro interface. In this mode the normal upload form is not displayed as it is assumed your macro will provide all required inputs using the variables described below.

msoOutputFormat

This variable determines the output format to create. It must be set to one of the following values

DBX - create the DBX database files
GSI - create a GSI file
FLD - create a field file
DXF - create a DXF file
RefSet – create RefSet files according the MSO configuration

The following variables are used when msoOutputFormat is set to DBX, GSI, or FLD.

msoInputType

The input type determines the data you want to upload. It must be set to one of the following

STR – Upload points from a string file
SDB – upload station coordinates from a survey database
DTM – upload stakeout data from a DTM file

msoInputFile

Set the input file according to the setting of msInputType. This will be either a string file (.str), a survey database (.sdb), or a DTM file (.dtm). Note that the filename must be valid and contain the file extension.

msoOutputDir

This variable determines the directory to place the generated output. It would usually be set to the appropriate directory on the SD card (ie E:\DBX)

msoJobName

Name to identify the job you are uploading. If your MSO configuration is set to use the job name as a directory then a subdirectory of this name will be created under the directory specified in msoOuptDir.

The following variables are used when msoOutputFormat is set to DXF.

msoDxfFile

Name the dxf file to create. This is usually placed directly onto the SD card (ie E:/Data/area1.dxf)

msoStrFile

This is a Tcl array that contains any number of string files that you want to upload into the dxf file. The array indexes must be sequential and begin at element 0. An example

```
set msoStrFile(0) “drive1.str”
set msoStrFile(1) “drive2.str”
set msoStrFile(2) “drive3.str”
```

msoStrRange

This is an optional array that may accompany the msoStrFile array. If it does not exist then all strings from the specified string file will be uploaded. If it does exists then only the string numbers specified in the range will be uploaded. An example

```
set msoStrRange(0) “1,5;20”
set msoStrRange(1) “1”
set msoStrRange(2) “100;105”
```

The following variables are used when msoOutputFormat is set to RefSet. Note that all other RefSet options are determined by your settings in the MSO configuration File

msoInputFile

Set the input file according to the setting of msInputType. This will be either a string file (.str), a survey database (.sdb), or a DTM file (.dtm). Note that the filename must be valid and contain the file extension.

msoPtId

This variable determines where to get the point Id from. It must be set to either PTNo/D1/D2/D3/D4/D5/D6/D7/D8/D9. When set to PTNo the point numbering is sequential from point 1.

msoJobName

Name to identify the job you are uploading. If your MSO configuration is set to use the job name as a directory then a subdirectory of this name will be created under the directory specified in msoOuptDir.

source MS_MSO:mso_create.tbc

Placing this statement into your macro will invoke the MSO upload function. Note that you must have set the various MSO variables according to the descriptions above prior to using this statement.

Macro Examples

```
# create a DBX job from a string file

set msoAutomode 1            ;# this turns mso automatic mode on
set msoOutputFormat DBX      ;# the output format to use
set msoInputType STR         ;# process a string file
set msoInputFile lev1.str    ;# the string file to use as input
set msoOutputDir E:/DBX      ;# the output directory on the SD card
set msoJobName setout        ;# the job name to use

source MS_MSO:mso_create.tbc ;# call MSO upload
```

```
# Upload stations to DBX from a survey database
```

```
set msoAutomode 1             ;# this turns mso automatic mode on
set msoOutputFormat DBX       ;# the output format to use
set msoInputType SDB          ;# process a string file
set msoInputFile DB:stns.sdb ;# the string file to use as input
set msoOutputDir E:/DBX       ;# the output directory on the SD card
set msoJobName stations       ;# the job name to use

source MS_MSO:mso_create.tbc ;# call MSO upload
```

```
# create a DXF file from string files

set msoAutomode 1             ;# this turns mso automatic mode on
set msoOutputFormat DXF       ;# the output format to use
set msoDxfFile E:/Data        ;# the output directory on the SD card
set msoStrFile(0) “lev1.str” ;# first string file
set msoStrRange(0) “1,5”      ;# only include strings 1 to 5 from lev1
set msoStrFile(1) “lev2.str” ;# the second string file (load all strings)

source MS_MSO:mso_create.tbc ;# call MSO upload
```