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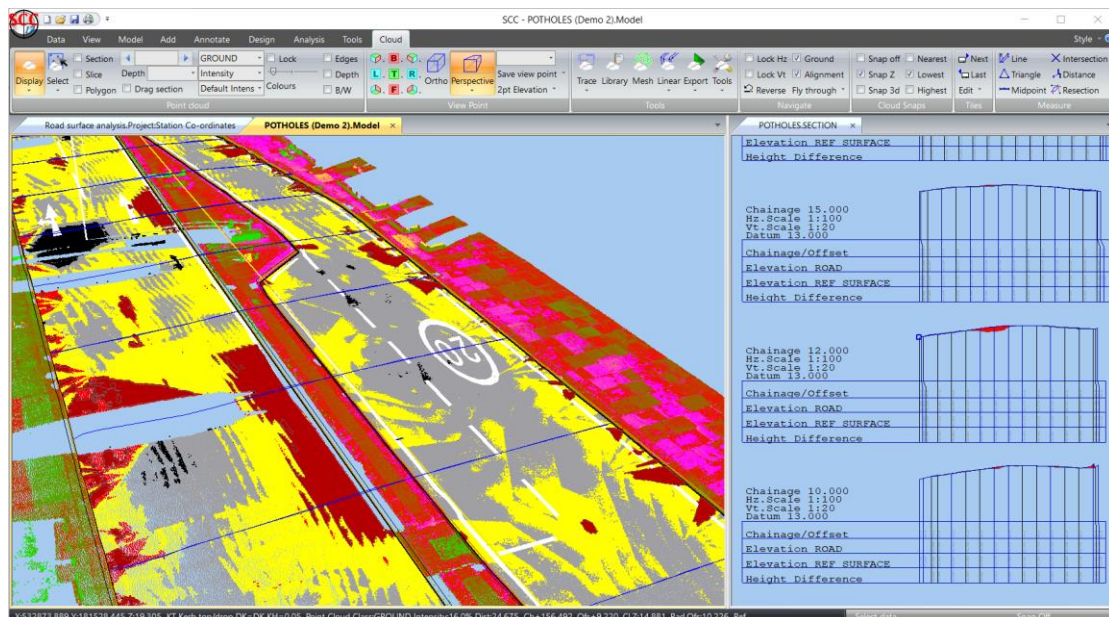
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**Date:** September 2019  
**Re:** SCC 13.17.4


We are pleased to announce a new interim release of SCC with SCC 13.17.4. This release contains the following modifications from SCC 13.15.1;

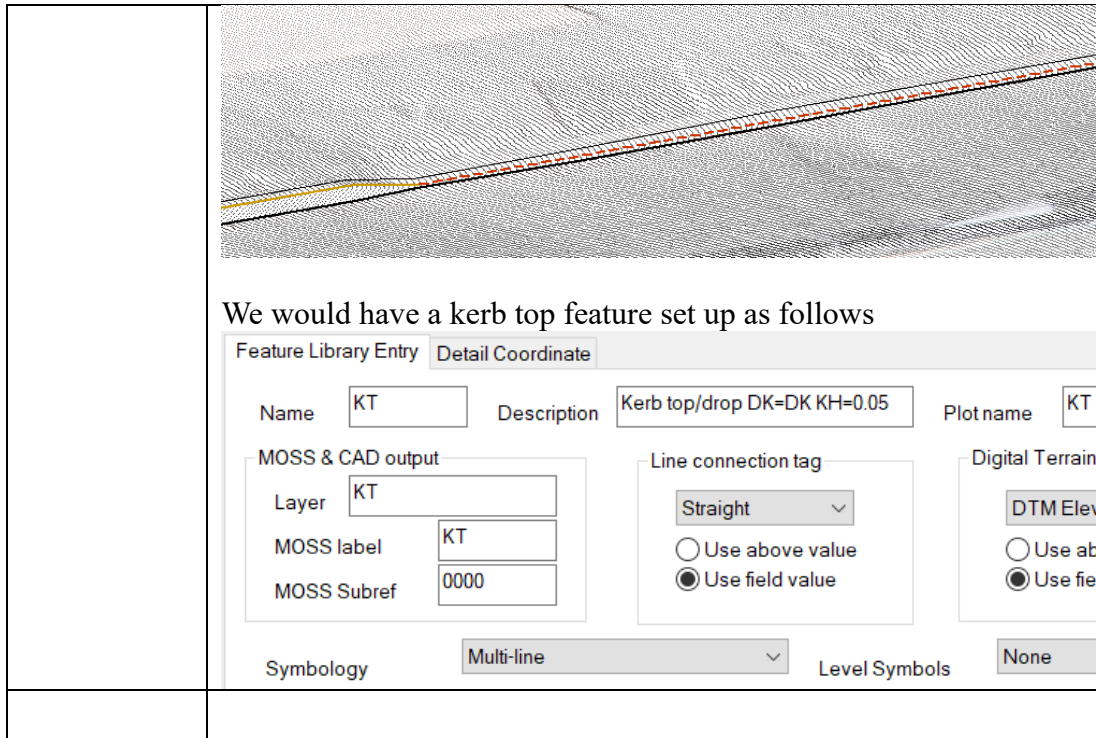
- A new simple automated kerb extraction tool has been added for extracting complex kerb lines from mobile LIDAR in suburban and urban areas. This comes with tools to help tidy up junctions and missing detail due do scan shadows from parked cars. See the following [video tutorial](#) for more details.



- New reports and workflow has been added for automated extraction of potholes from mobile LIDAR. See the following [tutorial video](#) for details;

- The automated break-line extraction tool has been enhanced to also allow for automated extraction of road and path edges. See **Cloud / Linear / Break lines and paths**
- The automated crash barrier extraction tool has been enhanced to also support automatic extraction of top of rail. This is ideal for developing an initial alignment for automated rail extraction, speeding up this process. See **Cloud / Linear / Crash barriers and rails**
- The copy parallel tool has been updated to allow selection of partial input string. This makes it ideal for high speed extraction of double yellow lines from kerbs obtained from the kerb extraction tool and can be seen in that tutorial video. Another [video here](#) shows it used to speed up production of yellow boxes
- Default option buttons for all linear extraction tools now set defaults to work with tutorial data in installation folder and videos on you tube channel.
- A new symbology, Multiline, has been added to allow strings to be drawn as multiple parallel lines based on dimensions, or as a single line with different representation along different segments based on a dimension. Details of extra features are provided in the remarks as follows

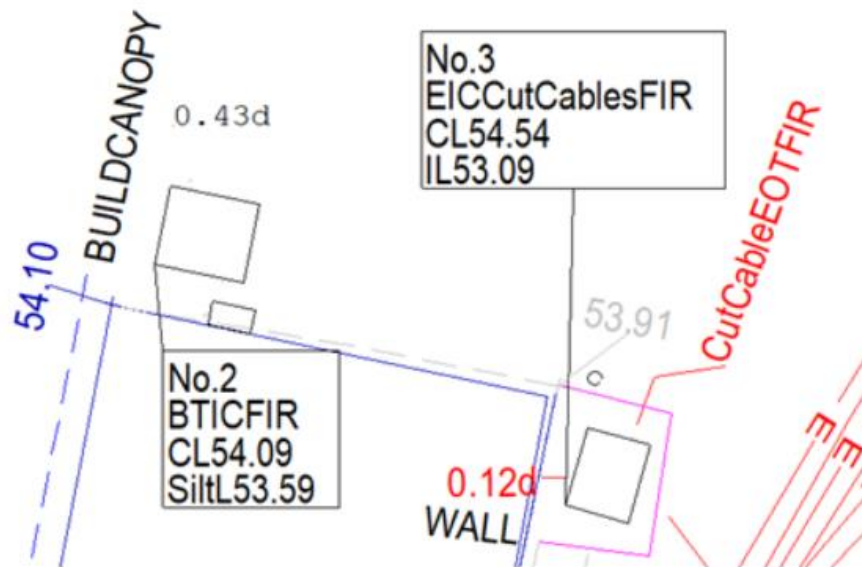
/LR1=<Feature name>	<p>Extra parallel strings are drawn left and right of the centre line at a distance of d1 from the centre line using the feature given, e.g. a remark of /LR1=FENCE would draw a three point line as shown below</p> 
/LR2=<Feature name>	As above but using d2
/LR3=<Feature name>	As above but using d3
/L1, L2, L3	As above but line is only drawn on the left of the centre line
/R1, R2, R3	As above but line is only drawn on the right of the centre line
/DK=<Drop kerb feature name> /KH=<Minimum kerb height>	<p>Change the line style from that used for a kerb top to that used from a drop kerb once d1 falls below the specified minimum kerb height. Note that the automated kerb extraction populates d1 with kerb height to suit this style of coding. For example to get the drop kerb generated as shown below</p>



We would have a kerb top feature set up as follows

Feature Library Entry		Detail Coordinate
Name	KT	Description
Kerb top/drop DK=DK KH=0.05		Plot name
KT		
MOSS & CAD output		Line connection tag
Layer	KT	Straight
MOSS label	KT	<input type="radio"/> Use above value
MOSS Subref	0000	<input checked="" type="radio"/> Use field value
Symbology		Digital Terrain
Multi-line		DTM Elev
Level Symbols		<input type="radio"/> Use ab
		<input checked="" type="radio"/> Use fiel

- New annotation tools have been added to interactively draw boxes around selected text and to add a line to link the text back to the survey point



- A new tool has been added to the survey spread sheet to compute invert levels, surface levels, water levels and silt levels either using values from remarks or

values stored in d1,d2 and/or d3. The computed results can either be stored back to a dimension or output to a compound remark (MTEXT) as shown above. This can be accessed via **Survey / Tools / Invert levels**

- The feature wizard now supports automatic boxing and linking of multi-line text
- The curve fitting options have been updated to support fitting by segment length rather than number of points. This also has angular limits to this, so that there will be at least one point added every 10 degrees for small radius curves and no more than every 1 degree for large radius curves. This means a default interpolation distance of 1m - 2m works well in most cases in terms of well-defined curves and low point count. This can be accessed through **Settings / Coordinate reduction options**
- A new linear interpolation option has been added to the level computation for curve fitting. Levels can now be computed based on mean value, plane fit, smooth interpolation or linear interpolation.
- The model user interface has been improved to highlight the entire string for all functions that require string selection and searched based on distance to string rather than distance to nearest point on string. Cursor sizes for alignment and partial string selection have also been increased slightly to accommodate higher resolution displays
- Status bar now shows classification separately from point feature in point clouds and also displays radial separation from alignment in real time as well as height difference and orthogonal separation.
- The option to sort points by radius for wriggle surveys has been enhanced to allow radial filters, where points outside of a given range of radii get eliminated.
- The option to extract a grid of levels has been updated to allow the levels either be stored to a dataset, the current model or a new model
- The tool to cut sections through point clouds from an alignment is now considerably faster and uses all available processor cores
- The smoothing of ground sections through point clouds has been improved and results in less noise over vegetated areas
- Least squares adjustment now includes creation of height difference entries for intersecting ray observations to allow height adjustment where no distances have been observed
- The EACDS rivers output has been updated to support the latest version of the format and retested against the EA verification tools.
- An option has been added to the general options dialog to control whether cut of fill is positive when annotating isopachyte models.
- The areas by gradient report to include ranges to make the report easier to read
- A new point cloud option has been added to toggle locked points on and off
- Two-point symbols now use centre and radius point rather than insert points on two circle strings, such as those created using the extract cylindrical features tool
- The extract cylindrical feature tool has been updated to search for and delete overlapping objects, which typically tend to be the same object on the ground.
- A new cylindrical objects parameter file, *C:\SCC\Roads.PointFeatureRules*, has been added to use two point features, with corresponding features set up in the template *C:\SCC\ Mobile LIDAR (Roads).Project*



- E57 import speed has been improved significantly
- Drawing speed for large dense point clouds has been improved
- The TIFF import now supports a wider range of TIFF formats
- The POTREE export has been enhanced to support colour scale bars
- The point cloud snap nearest option on the ribbon now snaps to nearest point to the mouse on screen rather than nearest point to the viewer
- The trimble feature library export now uses advanced survey codes where they're present
- The default number of decimals displayed on lat/long has been increased
- A new option has been added to the GPS X,Y,Z to support lat, long, height files in Inertial mapper format
- The model data selection dialog now allows selecting by groups. New kerb and rail functionality groups related strings, i.e. matching top and bottom of kerbs, so you can delete, copy and paste etc.. in one operation
- A new option has been added to audit the feature library which checks for incorrect symbol names and line styles
- A new mobile LIDAR project template has been added with additional road markings and other related features and groups, see **C:\SCC\ *Mobile LIDAR (Roads).Project***
- New rail tracing templates and libraries added for Topcon mobile LIDAR.
- When creating an alignment from string, the name is now based on the string details
- Rail tracing now adds all rail features to library with default colours if they're not already present
- Keyboard shortcuts for model string creation to update and link strings have been added to sections
- Online help has been updated for new functionality
- A new version of the hasp device driver has been added to support the latest Windows updates
- A new version of the Microsoft C++ runtimes has been included to support the latest Windows updates. This also fixes an installation bug occurring on non-English versions of Windows.
- A new warning is issued when creating a license request without a valid email address
- Alignment from string tool centre line template point is now always labelled CL
- Bug fix, wide lines were being thinned on acute corners
- Bug fix, a resource leak was happening on big jpegs that could lead to graphics issues over extended processing times
- Bug fix, Combined GPS and total station on the same string in Geomax data was not working
- Bug fix, going to model and E57 and cancelling out without picking a file caused a crash
- Bug fix, the decimate and proximate point filters were not working on 13.15.1
- Bug fix, the place text dialog was not displaying properly on 13.15.1
- Bug fix, going into a traverse setup and picking the at station from the drop down was causing the RO station to be created if it did not already exist

- Bug fix, long text link were being generated when annotating the four point on a 3pt rectangle
- Bug fix, feature list drop down in the overhead line extraction tool was unpopulated
- Bug fix, point cloud derived sections with no annotation were not being annotated with chainage in plan
- Bug fix, in-line text was not being displayed correctly in non-plan views
- Bug fix, search and replace was not defaulting to the current field on no-default sheet layouts.

This release is available for immediate download using the links below;

Full install (1.5gb): [www.atlas-files.com/scc-users/setup-scc-13-17-4.exe](http://www.atlas-files.com/scc-users/setup-scc-13-17-4.exe)

Update (160mb): [www.atlas-files.com/scc-users/setup-scc-13-17-4-update.exe](http://www.atlas-files.com/scc-users/setup-scc-13-17-4-update.exe)

MSI full (1.6gb): [www.atlas-files.com/scc-users/setup-scc-13-17-4.zip](http://www.atlas-files.com/scc-users/setup-scc-13-17-4.zip)

MSI update (1.6gb): [www.atlas-files.com/scc-users/setup-scc-13-17-4-update.zip](http://www.atlas-files.com/scc-users/setup-scc-13-17-4-update.zip)

Please note running these installations requires administrator privileges to properly install all components and that all components (SCC, Faro SDK, Trimble Link Engine, HASP driver and VS service packs) must all be installed for the installation to work. SCC r13 with the ribbon interface is currently supported on 64 bit versions of Windows 7 or later. SCC r13 classic is available for 64 and 32 bit versions of Windows 7 or later.



We have a youtube channel of video tutorials covering most of the typical uses of SCC here We are regularly adding to this channel so if there is any specific area you would like to see covered by a video tutorial, please let us know. Please subscribe to our channel to keep updated with new material.

If you would like a demonstration of the new features or any existing features of SCC we can be contacted at 003531 4958714 (Ireland), or in the UK via +44 (0)1767 666100 (Visual-ize). The SCC r13 brochure can be downloaded [here](#)

If there are any new features you would like to see added to SCC or have any problems with any of the existing features we'd be delighted to hear from you.



To keep up to date with developments in SCC please join our user forum [here](#) or Linked In group [here](#)