Tools, Tips, and Workflows

What's New in LP-360 EXP Release 2015-1?
LP360

B S A U | **A W G**

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Revision 1.0

We will soon be posting the first experimental release of LP360 for 2015. Recall that an experimental release (EXP) is available to customers with current LP360 maintenance contracts. The release is labeled EXP because we include features that are not completely final in terms of capabilities and user experience.

We have really been busy with LP360 since the last 2014 release. I think this is now the finest tool on the market for desktop LIDAR data processing as well as volumetric analysis for data collected via dense image matching (DIM). Recall that you receive two licenses with your LP360 software; one for using LP360 as an extension in ArcMap and the second for running LP360 as a stand-alone, 64 bit Windows application.

Below is a summary list of the new features appearing in LP360 EXP-2015-1 (versions are Stand Alone, SA, ArcMap and All):

Feature	*Purpose*	*Versions*	*Level[1]*
Attribute Editor - Directly view and edit attributes of a shape file.	This is very useful for quickly viewing the attribute tables of tools such as the Point Statistics PCT. It is also very handy for quickly naming stockpiles when doing volumetric analysis.	SA	B
Schema Editor - Directly edit the schema of the DBF associated with a shape file.	Useful for doing things such as removing extraneous fields from the Volume schema (stuff that a customer does not want to see in Reckon, for example)	SA	S
Performance enhancements for display updates.	This allows the "Performance Settings" to be increased, allowing higher resolution display. The memory footprint has been reduced by 50% and drawing speed increased by an equivalent amount.	All	B
Input/Output Manager (IOM) free-form editing. You can now edit any row in IOM without first selecting that row's association in the PCT settings dialog.	This eases the use of IOM by allowing the user to edit all rows in a single session without the need to find the associated field in a PCT dialog. An ease of use enhancement.	All	B

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[1] Standard and sUAS are synonymous in licensing level

B LP360 Basic Edition
S LP360 Standard Edition
U LP360 sUAS Edition
A LP360 Advanced Edition

A ArcGIS
W Windows
G GeoCue

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Feature	Purpose	Versions	Level[1]
Attribute Editor Point Cloud Task – This PCT allows one to modify, add, delete and prompt for input values for attributes associated with a shape file.	Useful for workflows where the user is required to input attribute data. For example, I use it in the Volumetrics workflow to prompt the user for the name of the stockpile.	All	S
Per class attribute flags – This allows a display filter to specify different flags for different classes.	This will no doubt be necessary for USGS QC workflows. We can now, for example, say display only ground points with the Overlap flag set but display vegetation regardless of flag setting.	All	B
Modeless "Live View" display filter – This is a new modeless dialog for creating class filters for display. It also allows setting color, point size, flags. This allows the user to change filters by pressing a button associated with the desired class. It has a dynamic mode that updates the display in real time. The dialog is modeless so it can stay up at all times.	Faster, more intuitive interaction with the display. Will significantly improve the QC experience by significantly reducing button clicks. This is a *major* new feature.	All	B
Planar surface statistics PCT – Attributes a user drawn polygon with planar extraction statistics.	The primary reason for this PCT is as the nucleus of a QC tool for USGS. It will define the best fit plane and compute goodness of fit values. These are stored as attributes on the shape file. It will also serve initially as a diagnostic tool to allow us to more easily set planar filter settings for roofline extraction (and eventually be the algorithm for training the planar filter)	All	B
Ground Cleaner PCT – Used to clean up areas where the ground classification has left unclassified patches. It can also be used for automatic ground extraction in localized areas.	Ground clean-up, automatic classification of stockpiles. This can be chained in a macro with the height filter following to classify conveyors over stockpiles.	All	S

Feature	*Purpose*	*Versions*	*Level[1]*
Feature Edit tools – Used to select and delete features	New tool bar in standalone. We previously could not delete features in standalone, short of deleting the entire layer. This is a new tool bar with a Select tool and a Delete Selected Feature tool. It will eventually grow into a bona fide feature editor. It is primarily needed for deleting misplaced toe polygons in a volumetrics workflow	SA	S
Volume Output – You can now set the computation mode and units on the Volume tab of the volumetrics PCT.	A stockpile volume is Cut, not Cut-Fill. We used to hard code the Volume attribute to Cut-Fill. The user can now select any of the four possible combinations. In addition, the user can specify the output units as cubic feet, yards or meters, regardless of the map units (linear units remain in the map units). This corrects the volume computation for stockpiles and eliminates the need for users to do unit conversions in a spreadsheet.	All	S
Override Z in 3D digitizing	This feature allows the user to drive Z to a user selected level in the profile view when performing 3D digitizing such as conflation. It is needed when drawing a stockpile toe that needs to be under the surface (for example, when a stockpile is against a containment wall).	SA	S
Coordinate Reference System (CRS) utility Dialog	A new command to define horizontal and vertical coordinate system is added to Standalone. This allows to insert the correct WKT or EPSG in the LAS header. Note that it does not perform coordinate conversions (yet!). One can also output a prj file for use in workflows such as posting data to Reckon.	All	B