LP360 for Windows version 2013.1 now incorporates two tools that were previously only available in LP360 for ArcGIS. These two tools are **Elevation Conflation/Classify** and **Classify by Features**. Both tools require an LP360 Standard Level License. The addition of these tools allows users to perform lengthy batch processing without needing to tie up an Arc license during processing.

**Figure 1 - New Elevation Conflation/Classify and Classify by Features Tools**

**Classify by Features** is a useful way of assigning classifications to points using a spatial relationship to other features. Any vector layer that exists in the Map can be used to classify points that are either within a specified distance of polygon, linear, or point features or any points completely within a polygon feature.

The ability to perform 3D Classification is also available. This option allows the user to classify points within a 3D-distance to points or polyline features. Additionally, for polygons that are 3D-enabled, users are able to classify points that are above, below, on, or within a distance of a surface that is generated from those polygons.

In the **Classify by Features** dialog, specify the distance to be used in the classification and specify the class to convert the LiDAR points to. Click **Classify** to complete the process.
The Elevation Conflation/Classify dialog (activated when you click ) allows the user to obtain elevation values for feature geometry using LIDAR data. Depending upon the geometry type, users have four different conflation methods available: Summarize Z, Drape, Retaining Wall, or Downstream Constraint. (Retaining Wall and Downstream Constraint can only be used with polyline vector geometry).

Additional customization of the Conflation Method allows a user to dictate the assignment of values. For instance, if the Summarize Z option is selected, a new dialog in which additional parameters can be specified will appear. In Figure 4, the method chosen runs by computing one Z value for each vertex within the input geometry. The Z value to be calculated is the Surface Z, which is the Z value obtained from the TIN surface of the LIDAR data.
Figure 4 - Conflation Method Options

The Conflation tool may also classify data during the conflation process in the same manner as the Classify by Features tool. The LAS files will need to be opened for Read/Write permissions in order for the tool to work when the classification option has been selected. For the purpose of maintaining the ability to quality control the results, it is recommended that users run the Conflation and the Classify tools in two separate steps.

Modify Point Filter defines the source LIDAR points that will be used during the Conflation process. Modify Breakline Enforcement allows for additional breaklines to be introduced into the surface, which will have an effect on the Conflation result. The last step is to define the output vector file by specifying an output location. LP360 does not alter the original vector file.
These two tools provide a powerful way of extracting elevation information from your LIDAR dataset and conflating those with data that was possibly produced in another manner. One example might be collecting breaklines from orthophotography and then conflating it with the LIDAR data to add the elevation values. The Classify Features tool provides for bulk reclassification inside hydro or other closed features, as well as buffering capabilities to avoid TIN anomalies that can be encountered when two datasets that have slightly differing elevation values near the same XY position are merged. Additionally, having these tools in the LP360 for Windows version will enable users to run larger processes faster when using LP360 for Windows (64-bit).

Additionally, having these tools in LP360 for Windows (64 bit) not only allows users to run larger processes faster but also provides them with the added flexibility of choice.