



DAT/EM Systems International
8240 Sandlewood Place, Suite 101
Anchorage, Alaska USA 99507
Phone (907) 522-3681
Support Department Email: support@datem.com
Web: www.datem.com

The following changes have been made to the **DAT/EM CAPTURE FOR ARCGIS product only** between Release 6.5 and Release 6.6. Please review these revisions made to the software and update your software to implement changes.

As always, DAT/EM welcomes comments and suggestions from you, our clients, so please don't hesitate to contact our support department at support@datem.com, or by calling in or faxing us with your requests.

Operating Systems

Release 6.6 is supported on Windows XP Professional and Windows 7 Ultimate or Professional operating systems. Testing no longer occurs for Windows 2000 or VISTA Ultimate. If you have a question, please contact Support.

Hardware Locks/Dongles

Please install Microsoft Updates and Service Packs for your operating system before applying lock reset programs. Network licensing should have the same Sentinel driver version on both the server and the local computers running the software.

DAT/EM Capture for ArcGIS

The following changes were made to DAT/EM Capture for ArcGIS:

Compatible with 32-bit versions of ArcGIS 9.1, 9.2, 9.3.1, and 10.0 (each with the latest service packs installed)

1. It is now possible to set a field value from the DAT/EM Keypad, other touch device, or digitizer button. Syntax:

SetFieldValue Layername:FieldName:value

For example,

SetFieldValue Obstacle:Description:Building.

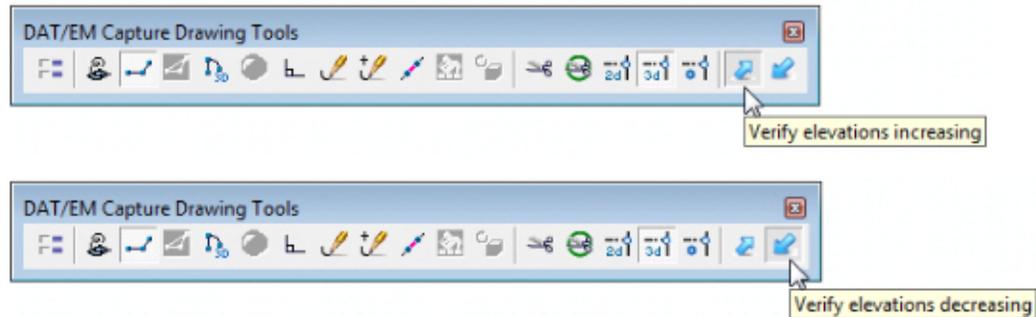
Fields and values that contain spaces must be grouped with quotes, for example:

SetFieldValue Obstacle: "Description field with spaces": "Multiplex residential".

It supports using the field alias instead of the field name. For example, **SetFieldValue Obstacle: "Alias of Description Field": "Single family home"** where "Alias of Description Field" is the field alias.

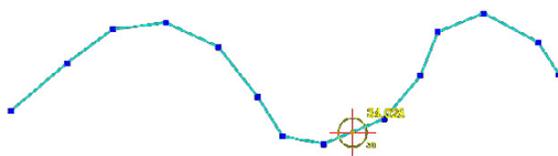
2. **CutPolygonTask** is a new keyword to use on the DAT/EM Keypad, other touch device, or digitizer button. It is the same as setting the task to **Cut Polygon Features** on the ArcMap 9.x Editor toolbar or setting **Cut** from the ArcMap 10.x DAT/EM Capture Drawing Tools toolbar. Suggestion: Add **Draw Arc**, **Draw PointToPoint**, or **Draw Square** to **CutPolygonTask** to activate both polygon cutting and a DAT/EM drawing tool.
3. **Use DAT/EM tools to clip with interpolated Z** is a new variation on the previously existing DAT/EM clip tool. Both tools clip interior rings into polygons. The method used to draw the interior ring is the same as for the older clip tool. Both of these tools are located on the DAT/EM Capture Drawing Tools toolbar.
 - The older clip tool, , draws the interior ring at the stereoplotter elevation. This has not changed.
 - The new "interpolated Z" version, , matches the Z of each vertex of the interior ring to the Z interpolated at the closest location on the exterior ring.

4. In previous versions, if the cursor got within snapping distance of a true circle object (not a DAT/EM-drawn segmented "circle"), an error message would appear for every possible snap position. The user would be required to "OK" each message. This message has been removed.
5. **Verify elevations decreasing** and **Verify elevations increasing** are two new monotonicity settings that work together with DAT/EM drawing tools. When on with a drawing tool, they check the previously digitized elevation and do not allow lower (for **Verify elevations increasing**) or higher (for **Verify elevations decreasing**) elevations to be digitized. These are found on the DAT/EM Capture Drawing Tools toolbar:

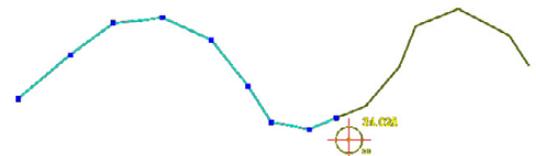


Along with these monotonicity settings are two new keywords, **MonoDown** and **MonoUp**, to activate them from the DAT/EM KEYPAD, other touch device, or digitizer button. **MonoDown** turns on the **Verify elevations decreasing** option. **MonoUp** turns on the **Verify elevations increasing** option.

6. DAT/EM's version of **Cut Polygon** (Cut Polygon with a DAT/EM drawing tool) has several improvements:
 - a. The DAT/EM **Draw Stream** tool has been activated for use drawing the cut line. **Draw Stream** may be used exclusively or toggled to/from other active DAT/EM drawing tools.
 - b. The **Trace Multiple** drawing tool is automatically deactivated if the task is set to Cut Polygon Features (9.x) or Cut (10.x). Trace Multiple is not compatible with cutting polygons.
 - c. Undo now works to undo segments or arcs from the cutting edge while it is being drawn.
 - d. Undo used after cutting a polygon successfully reverts back to the polygon's original state.
 - e. Cut Polygon no longer crashes when using the DAT/EM arc drawing tool to draw the cutting edge.
 - f. **CutPolygonTask** is a new keyword to use on the DAT/EM KEYPAD, other touch device, or digitizer button. See 2 on page 1 above for more details.
7. The **Clip Polyline** tool can now cut a polyline into two separate, end-snapped polylines. To do this, pick twice in the same location. Note that the tool still has its original two functions as well: Clip off the shorter end of the polyline and clip into two polylines separated by a gap.

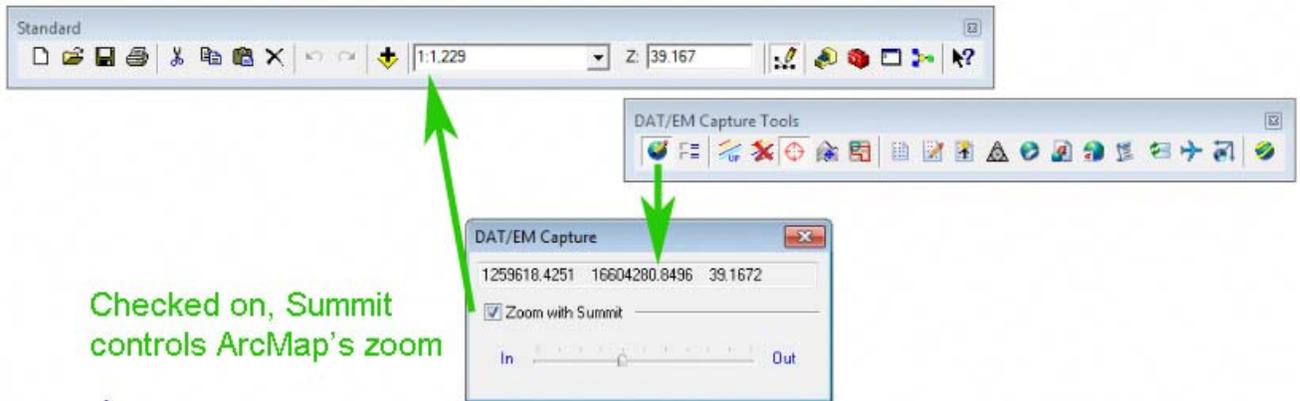


Activate Clip Polyline and pick twice in the same location

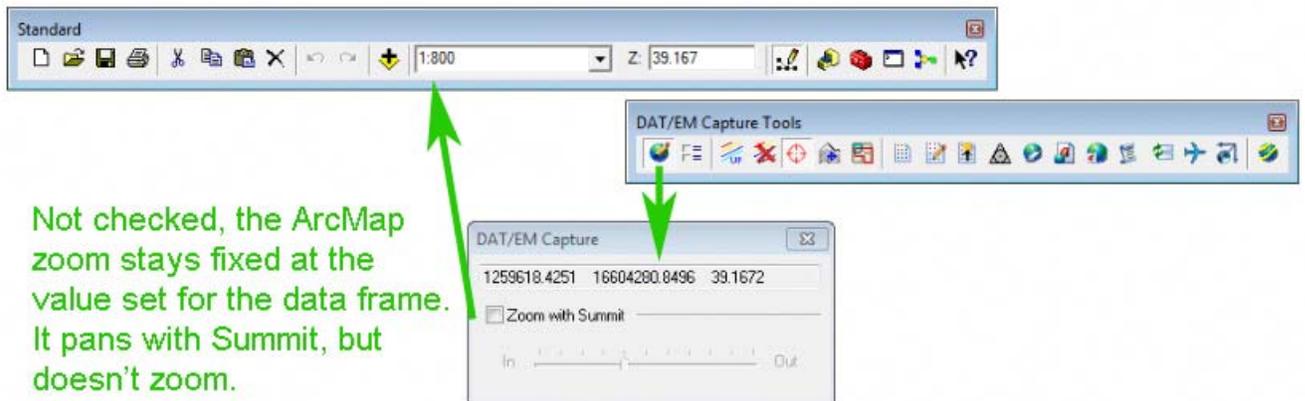


The result is two end-snapped polylines

8. Some redraws after edits, such as after using Field Update, would draw the edited object at Z=0 in SUMMIT's superimposition (SI). A further SI Update would redraw it at the correct elevation. This has been fixed to draw the object at the correct elevation immediately after the edit.
9. There is a new **Zoom with Summit** checkbox in the DAT/EM Capture coordinates dialog.
 - **Zoom with Summit** checked on (previous functionality), the ArcMap view zooms in and out when SUMMIT zooms in and out, with a relative scale set by the slider in the DAT/EM Capture dialog.



- **Zoom with Summit** unchecked (new functionality), the ArcMap view does not change scale when SUMMIT zooms; it stays at the scale set on the Standard toolbar.



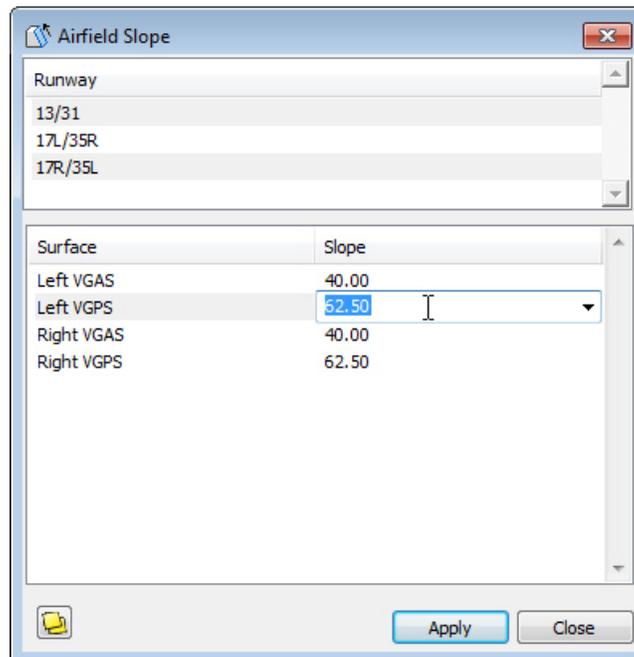
Note that the ArcMap view always *pans* with SUMMIT, no matter how **Zoom with Summit** is set.

10. Airfield3D has the following updates:

- a. There is a new Airfield Slope dialog that allows you to change the slope of the Left and right VGPS and VGAS surfaces or reset them to the 18B defaults. Several customers requested differently sloped surfaces in these areas to temporarily work with non-18B specifications. Start Airfield3D on the ArcMap

side. Select the  Airfield Slope button from the lower edge of the dialog. Select one or more runways from the **Runway** list. Set the desired slope from the **Slope** list for the particular surfaces below. Either select a value from the menu or key in a new value. Select **Apply** to activate the different slope settings. All surfaces for all runways will be recalculated and redrawn. In Summit's superimposition, all runways will be reset to checked on and all OEIs (One Engine Inoperable) surfaces will be unchecked. You may then check and uncheck any surfaces using the Airfields dialog in Summit.

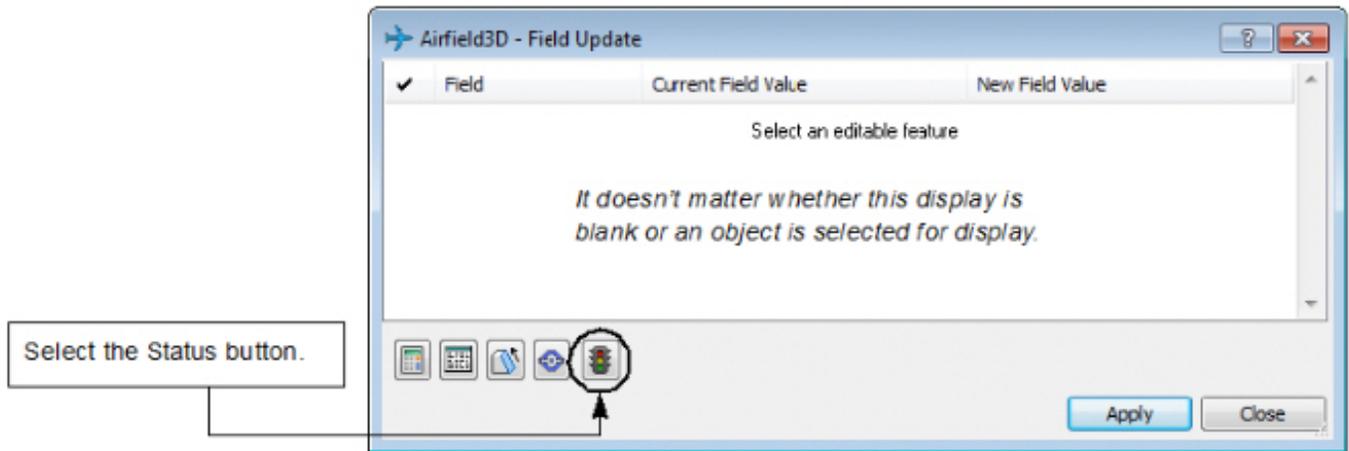
To reset the values to the 18B defaults, select the reset button, .



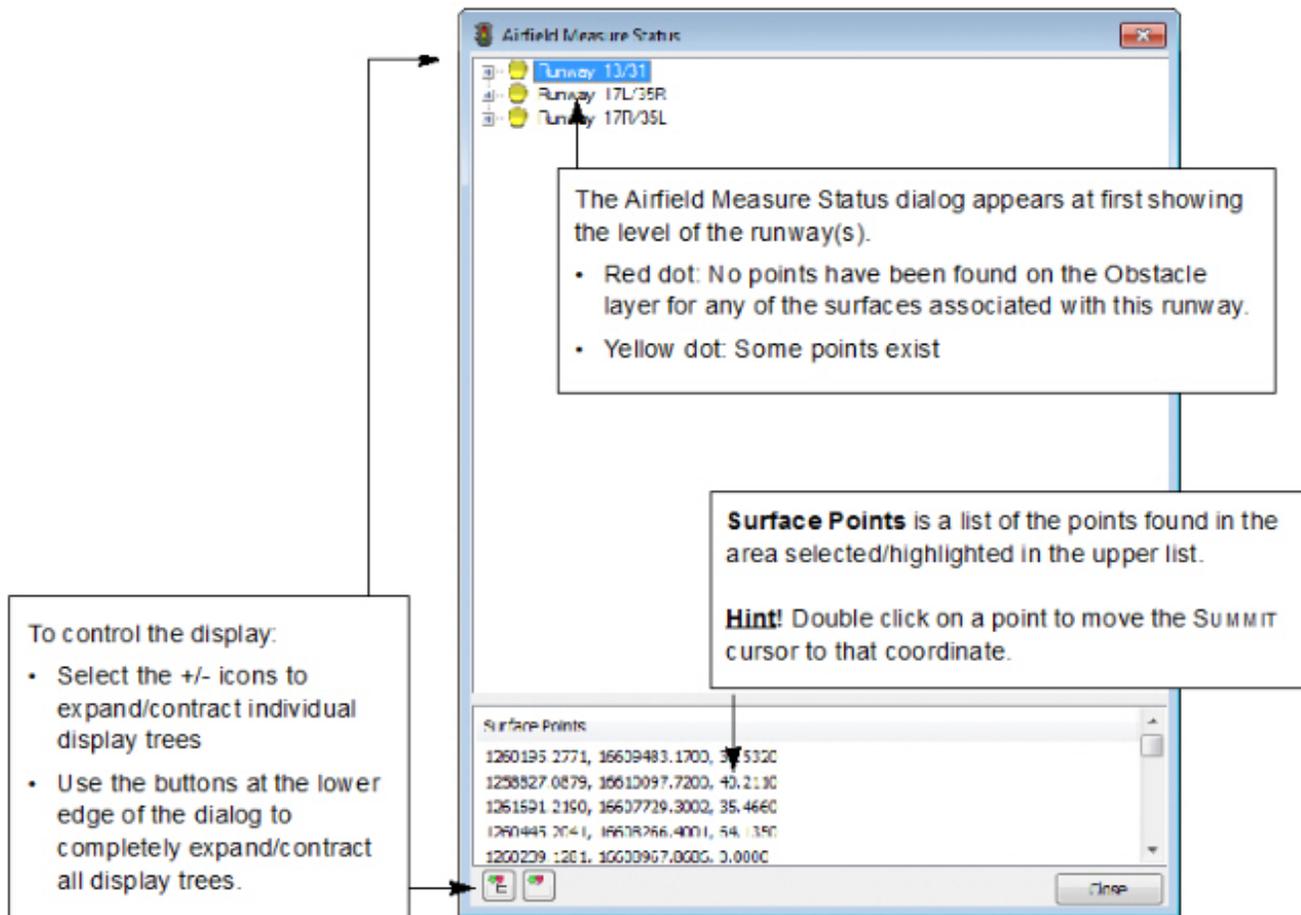
- b. The **SetFieldValue** option mentioned in item 1 on page 1 above may be especially useful for Airfield3D tasks.
- c. The **Natural** and **Manmade** settings have been removed from the **Airfield3D – Field Update** dialog. These settings made the user decide whether or not to measure the height of the objects for the “Above Ground Level” field. Measuring the height of an object is necessary for manmade features only. Now this is determined automatically when the “Obstacle Type” field is set.
- d. Airfield3D has a new status tracking tool called **Measure Status**. Use it to quickly see whether enough points have been digitized within each surface area. Points on the Obstacle layer are counted and displayed, and the areas are color coded as follows:

-  Red dot: No points in area.
-  Yellow dot: At least one point, but not enough points, in area.
-  Green dot: Enough points to meet the 18B standards for the area.

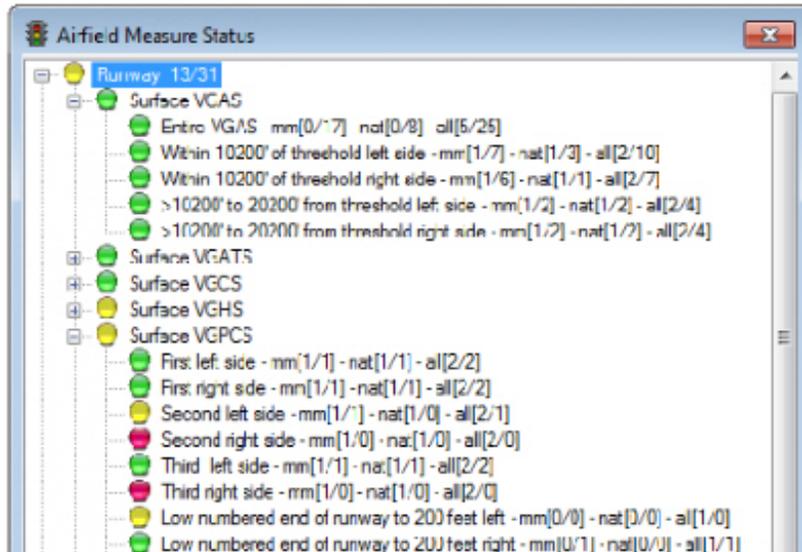
To use the **Measure Status** tool, select the stoplight-like button on the Airfield3D - Field Update dialog:



The **Airfield Measure Status** dialog appears. Get information and/or move the cursor as described in the graphics below:



When the list is expanded, information about individual surfaces is visible:



Color Key:

- Red dot: No points found in the area.
- Yellow dot: At least one point found, but not enough for the area.
- Green dot: Enough points found. The ultimate goal is to see a green dot next to every display.

Abbreviations, Types of Points:

- mm = man made feature
- nat = natural feature
- all = man made plus natural features

Number displays such as [0/17]:

- In a display such as "[0/17]", the number on the left is the number of points required by the 18B. The number on the right is the number of points that were found.
- In the "all" display, the number on the left may sometimes be higher than the number of required "mm" (man made) plus the number of required "nat" (natural) features. "All" shows that the indicated number of points must exist, but for some areas, they can be any mixture of man made and natural features. There may or may not be a requirement that at least one must be natural or at least one must be man made.
- For example, if the display shows a yellow dot with "mm[1/4] - nat[1/0] - all[2/4]", you see that there are excess man made features (1 is required, but 4 found), and not enough natural features (1 is required, but 0 found). In this case, you might double click on a point in the lower list to get the cursor into the general area, then digitize one additional natural feature. The dot would then be green with a display, "mm[1/4] - nat[1/1] - all[2/5]".